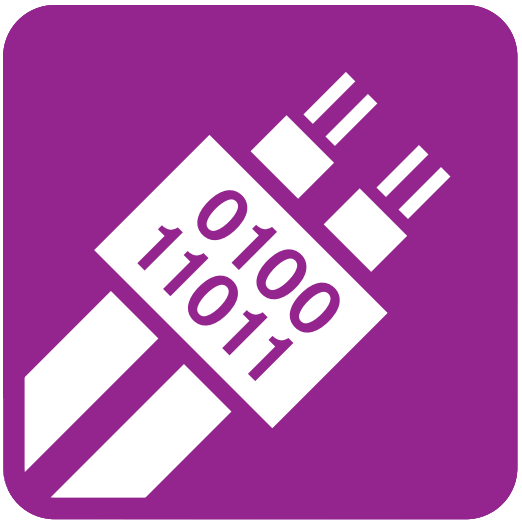
UNITRONIC®

Data communication systems



UNITRONIC® 100

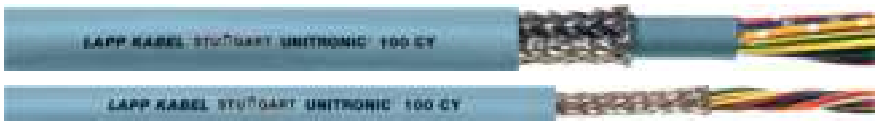
Control and signal cable with small cross-sections

Info

- **UNITRONIC® colour code with protective conductor**

UNITRONIC® 100 CY

Screened control and signal cable with small cross-sections



Application range

- These control and signal cables are used in the milliampere range for computer systems, electronic control equipment, office machines, balances etc. and wherever the thinnest possible control cables are required.

Product features

UNITRONIC® 100

- Robust, flexible and resistant outer sheath
- Small outer diameter despite high number of cores
- Flame-retardant according to IEC 60332.1.2
- 3 cores with earth wire (green-yellow) 2 cores (black/blue)

UNITRONIC® 100 CY

- Robust, flexible and resistant outer sheath
- Small outer diameter despite high number of cores
- Cable similar to UNITRONIC® 100, but with copper braiding
- Flame-retardant according to IEC 60332.1.2
- 3 cores with earth wire (green-yellow) 2 cores (black/blue)

Approvals

RoHS

Design

UNITRONIC® 100

- Fine-wire/multi-wire (0.34 mm²) strand made of bare copper wires
- Core insulation made of PVC
- Outer sheath made of PVC Outer sheath colour: grey (RAL 7001)

UNITRONIC® 100 CY

- Fine-wire/multi-wire (0.34 mm²) strand made of bare copper wires
- Core insulation made of PVC
- Inner sheath made of PVC
- For the cross section of 0.14 mm², a polyester tape is used underneath the screen braiding instead of the inner sheath.
- Tinned-copper braiding
- Outer sheath made of PVC Outer sheath colour: grey (RAL 7001)

Technical data

Core identification code
Refer to Appendix T7 for the UNITRONIC® colour codes

Mutual capacitance
Approx. 120 nF/km

Peak operating voltage
(not for power applications):
500 V

Based on
VDE 0814: (DIN 47414)
or VDE 0812

Specific insulation resistance
> 10 GOhm x cm

Inductivity
approx. 0.7 mH/km

Conductor stranding
Stranded, fine-wire
0.34 mm², 7-wire

Minimum bending radius
UNITRONIC® 100
For flexible use:
15 x outer diameter
Fixed installation: 4 x outer diameter
UNITRONIC® 100 CY
For flexible use: 20 x outer diameter
Fixed installation: 6 x outer diameter

Test voltage
Core/core: 1500 V

Protective conductor
Green-yellow

Temperature range
Fixed installation: -30 °C to +80 °C
Occasional flexing: -5°C to +70°C

Article number	Number of cores and mm² per conductor	Outer diameter (mm)	Copper index (kg/km)	Weight (kg/km)
UNITRONIC® 100				
0028009	2 x 0,14	3.0	2.8	12
0028010	3 x 0,14	3.2	4.2	17
0028011	4 x 0,14	3.4	5.4	19
0028012	5 x 0,14	3.7	7.0	22
0028014	7 x 0,14	4.0	9.8	27
0028015	10 x 0,14	5.0	14.0	41
0028019	24 x 0,14	7.2	33.6	94
0028020	27 x 0,14	7.4	36.5	107
0028023	40 x 0,14	8.9	54.0	152
0028025	52 x 0,14	10.0	72.8	198
0028030	3 x 0,25	3.8	7.5	21
0028031	7 x 0,25	4.9	17.5	48
0028032	10 x 0,25	6.4	25.0	77
0028033	14 x 0,25	6.9	35.0	95
0028034	16 x 0,25	7.3	40.0	112
0028035	21 x 0,25	8.5	52.5	139
0028036	24 x 0,25	9.0	60.0	163
0028037	27 x 0,25	9.2	67.5	171
0028038	30 x 0,25	9.9	75.0	187
0028039	36 x 0,25	10.7	90.0	235
0028040	40 x 0,25	11.6	100.0	266

Article number	Number of cores and mm² per conductor	Outer diameter (mm)	Copper index (kg/km)	Weight (kg/km)
0028041	44 x 0,25	12.0	110.0	290
0028042	52 x 0,25	12.5	130.0	343
0028044	61 x 0,25	13.3	152.5	398
0028047	3 x 0,34	4.2	10.5	33
0028048	7 x 0,34	5.5	22.8	62
0028050	14 x 0,34	7.8	47.6	118
0028051	16 x 0,34	8.3	54.4	131
0028054	27 x 0,34	10.8	88.0	208
0028056	36 x 0,34	12.1	118.0	292
0028057	40 x 0,34	13.1	131.0	330
0028059	52 x 0,34	14.6	170.0	424
UNITRONIC® 100 CY				
0034006	2 x 0,14	3.7	12.0	20
0034007	3 x 0,14	3.9	13.0	28
0034008	4 x 0,14	4.1	14.3	33
0034009	5 x 0,14	4.4	15.5	38
0034010	7 x 0,14	4.7	20.3	49
0034011	10 x 0,14	5.7	34.3	66
0034012	14 x 0,14	6.3	32.0	80
0034013	16 x 0,14	6.6	40.9	90
0034016	27 x 0,14	8.1	70.6	148
0031031	3 x 0,25	5.4	20.2	48
0031066	4 x 0,25	5.7	24.0	61
0031067	5 x 0,25	6.3	29.0	72
0031032	7 x 0,25	6.7	37.6	82
0031033	10 x 0,25	8.2	48.8	129
0031034	14 x 0,25	8.7	64.6	147
0031068	2 x 0,34	5.6	20.0	45
0031048	3 x 0,34	5.8	24.1	62
0031069	4 x 0,34	6.4	29.0	65
0031070	5 x 0,34	6.9	42.0	95
0031049	7 x 0,34	7.3	50.0	106
0031050	10 x 0,34	9.0	67.7	167
0031052	16 x 0,34	10.5	95.0	219

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Copper price basis: EUR 150/100kg. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: coil ≤ 30 kg or ≤ 250 m, otherwise drum
Please specify the preferred type of packaging (e.g. 1 x 500 m drum or 5 x 100 m coils).
Photographs are not to scale and do not represent detailed images of the respective products.

■ Accessories

UNITRONIC® 100

- Universal strip stripping and cutting tool refer to page 906
- STAR STRIP stripping tool refer to page 906

UNITRONIC® 100 CY

- SKINTOP® MS-SC-M refer to page 668
- Multipurpose shears A and B refer to page 902
- Universal strip stripping and cutting tool refer to page 906
- STAR STRIP stripping tool refer to page 906

UNITRONIC® LiYY

Data transmission cable with colour code acc. to DIN 47100

Info

- **The classic for multi-functional use**

Benefits

- Space-saving installation due to small cable diameters
- Multifunctional application possibilities
- Depending on the quantity, the outer sheath can also be produced in other colours to match your application needs

Application range

- UNITRONIC® LiYY is also used as a control and signal cable in electronics of computer systems, electronic control equipment, office machines, balances, etc.
- Dry or damp rooms
- Occasional flexing

Product features

- Despite the large number of cores, LiYY data cables have small outer diameters
- Core colour code in accordance with DIN 47100 but no colour repetition
- Flame-retardant according to IEC 60332.1.2

Approvals

RoHS

Design

- Fine-wire/multi-wire (0.34 mm²) strand made of bare copper wires
- Core insulation made of PVC
- Outer sheath made of PVC
  Outer sheath colour: pebble grey (RAL 7032)

Technical data

Core identification code
DIN 47100 without colour repetition, refer to Appendix T9

Mutual capacitance
Approx. 120 nF/km

Peak operating voltage
(not for power applications)
at 0.14 mm²: 350 V
at ≥ 0.25 mm²: 500 V

Based on
VDE 0812

Specific insulation resistance
> 20 GOhm x cm

Inductivity
approx. 0.65 mH/km

Conductor stranding
Stranded, fine-wire
0.34 mm², 7-wire

Minimum bending radius
For flexible use: 10 x outer diameter

Test voltage
At 0.14 mm²: 1200 V
> 0.14 mm²: 1500 V

Temperature range
Fixed installation: -40°C to +80°C
Flexing: -5°C to +70°C

Article number	Number of cores and mm² per conductor	Outer diameter (mm)	Copper index (kg/km)	Weight (kg/km)
UNITRONIC® LiYY				
0028202	2 x 0.14	3.2	2.7	13.2
0028203	3 x 0.14	3.4	4.0	16
0028204	4 x 0.14	3.6	5.4	18.9
0028205	5 x 0.14	3.9	6.7	22.2
0028207	7 x 0.14	4.2	9.4	28.4
0028208	8 x 0.14	4.9	10.2	35.2
0028210	10 x 0.14	5.2	13.5	41.2
0028212	12 x 0.14	5.6	16.2	48.4
0028214	14 x 0.14	5.8	18.9	52.9
0028216	16 x 0.14	6.1	21.6	59.1
0028220	20 x 0.14	7.0	27.0	70.8
0028225	25 x 0.14	7.8	33.6	87.2
0028236	36 x 0.14	8.6	48.6	126.8
0028237	37 x 0.14	8.9	49.7	118
0028240	40 x 0.14	9.3	54.0	139.1
0028250	50 x 0.14	10.4	67.5	170.9
0028256	56 x 0.14	10.7	78.4	187
0028302	2 x 0.25	3.8	4.8	18
0028303	3 x 0.25	4.0	7.2	22
0028304	4 x 0.25	4.3	9.6	26.2
0028305	5 x 0.25	4.7	12.0	31
0028307	7 x 0.25	5.1	16.8	42
0028308	8 x 0.25	6.2	19.2	49.2
0028310	10 x 0.25	6.8	24.0	58
0028312	12 x 0.25	7.0	28.8	67
0028314	14 x 0.25	7.3	33.6	75.3
0028316	16 x 0.25	7.7	38.4	84.3
0028318	18 x 0.25	8.1	43.2	93
0028320	20 x 0.25	8.6	48.0	102
0028325	25 x 0.25	9.6	60.0	134
0028330	30 x 0.25	10.3	72.0	155
0028332	32 x 0.25	10.7	76.8	164
0028336	36 x 0.25	11.1	86.4	182.2
0028337	37 x 0.25	11.4	88.8	185
0028340	40 x 0.25	12.0	96.1	200
0028350	50 x 0.25	12.9	120.0	257.1
0028402	2 x 0.34	4.2	6.6	25
0028403	3 x 0.34	4.4	9.9	31
0028404	4 x 0.34	4.8	13.1	43.2
0028405	5 x 0.34	5.5	16.5	53.8
0028407	7 x 0.34	5.9	22.8	62
0028408	8 x 0.34	7.1	26.1	73.1
0028410	10 x 0.34	7.6	32.6	82
0028412	12 x 0.34	7.8	39.1	102

Article number	Number of cores and mm² per conductor	Outer diameter (mm)	Copper index (kg/km)	Weight (kg/km)
0028414	14 x 0.34	8.2	45.7	109
0028416	16 x 0.34	8.7	52.0	127
0028420	20 x 0.34	9.6	65.2	159.3
0028421	21 x 0.34	10.4	68.6	167
0028425	25 x 0.34	11.2	81.6	190
0028430	30 x 0.34	11.6	98.0	226
0028436	36 x 0.34	12.5	118.0	284
0028440	40 x 0.34	13.5	131.0	317
0028450	50 x 0.34	15.0	163.0	407
0028502	2 x 0.50	4.7	9.6	40
0028503	3 x 0.50	5.0	14.4	47
0028504	4 x 0.50	5.6	19.2	56
0028505	5 x 0.50	6.1	24.0	65
0028507	7 x 0.50	6.9	33.6	82
0028508	8 x 0.50	8.0	38.4	90
0028510	10 x 0.50	8.6	48.0	117
0028512	12 x 0.50	8.9	58.0	133
0028516	16 x 0.50	10.2	77.0	170
0028520	20 x 0.50	11.4	96.0	214
0028525	25 x 0.50	12.3	120.0	265
0028530	30 x 0.50	13.2	144.0	304
0028540	40 x 0.50	15.8	192.0	392
0028602	2 x 0.75	5.1	14.4	48
0028603	3 x 0.75	5.6	21.6	57
0028604	4 x 0.75	6.1	28.8	69
0028605	5 x 0.75	6.9	36.0	78
0028607	7 x 0.75	7.5	50.0	112
0028608	8 x 0.75	8.7	58.0	126
0028610	10 x 0.75	9.4	72.0	149
0028612	12 x 0.75	10.1	86.0	176
0028616	16 x 0.75	11.2	115.0	218
0028620	20 x 0.75	12.4	144.0	274
0028625	25 x 0.75	14.0	180.0	285
0028702	2 x 1.00	5.6	19.2	55
0028703	3 x 1.00	5.9	29.0	70
0028705	5 x 1.00	7.3	48.0	98
0028802	2 x 1.50	6.8	29.0	74
0028803	3 x 1.50	7.2	43.0	89
0028804	4 x 1.50	7.8	58.0	105

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Copper price basis: EUR 150/100kg. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: coil ≤ 30 kg or ≤ 250 m, otherwise drum
Please specify the preferred type of packaging (e.g. 1 x 500 m drum or 5 x 100 m coils).
Photographs are not to scale and do not represent detailed images of the respective products.

■ Similar products

- UNITRONIC® LiYY (TP) refer to page 264

■ Accessories

- STAR STRIP stripping tool refer to page 906

UNITRONIC® LiYY A

Data transmission cable with colour code acc. to DIN 47100 - UL/CSA recognized

Info

- **A for Advanced**
  here: UL and CSA approvals

Benefits

- For the North American market
- For various applications

Application range

- Wiring of devices, machines and plants intended for export to the North American market or countries where UL-/CSA approved cables are used.

Product features

- Flame-retardant according to IEC 60332.1.2 & CSA FT1
- Colour-coded in accordance with DIN 47100
- Can be used for Maxi TERMI-POINT® wiring

Approvals

RoHS

Design

- Multi-wire strand made of tinned copper wires
- Core insulation: Based on PVC
- Outer sheath made of special PVC compound
  Outer sheath colour: dark grey (chrome)

Technical data

Core identification code
DIN 47100 without colour repetition, refer to Appendix T9

Approvals
UL AWM Style 2464
CSA AWM I/II A

Peak operating voltage
(not for power applications)
300 V

Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
Stranded, 7-wire

Minimum bending radius
For flexible use:
15 x outer diameter

Test voltage
1500 V

Temperature range
Fixed installation: -40°C to +80°C
Flexing: -5°C to +70°C

Article number	Number of cores and AWG per conductor	Number of cores and mm² per conductor	Outer diameter (mm)	Copper index (kg/km)	Weight (kg/km)
UNITRONIC® LiYY A					
0022403	3 x AWG26/7	3 x 0.14	3.8	4.2	19.7
0022404	4 x AWG26/7	4 x 0.14	4.0	5.6	23
0022405	5 x AWG26/7	5 x 0.14	4.3	7.0	25
0022408	8 x AWG26/7	8 x 0.14	5.1	11.2	34
0022412	12 x AWG26/7	12 x 0.14	5.7	16.8	47
0022416	16 x AWG26/7	16 x 0.14	6.3	22.4	58
0022421	21 x AWG26/7	21 x 0.14	7.1	29.4	63
0022502	2 x AWG24/7	2 x 0.23	4.0	4.6	26.2
0022505	5 x AWG24/7	5 x 0.23	4.8	11.3	39.4
0022508	8 x AWG24/7	8 x 0.23	5.7	16.5	52.5
0022512	12 x AWG24/7	12 x 0.23	6.6	27.6	72.2
0022602	2 x AWG22/7	2 x 0.34	4.8	6.8	32.8
0022603	3 x AWG22/7	3 x 0.34	5.0	10.2	35
0022604	4 x AWG22/7	4 x 0.34	5.4	13.6	45.9
0022605	5 x AWG22/7	5 x 0.34	5.9	17.0	55.8
0022607	7 x AWG22/7	7 x 0.34	6.4	23.3	68.9
0022608	8 x AWG22/7	8 x 0.34	7.0	27.2	75.5
0022612	12 x AWG22/7	12 x 0.34	8.5	40.8	103
0022616	16 x AWG22/7	16 x 0.34	9.5	54.4	131.2
0022624	24 x AWG22/7	24 x 0.34	11.3	81.6	190
0022632	2 x AWG20/7	2 x 0.50	5.3	11.2	29
0022642	2 x AWG19/19	2 x 0.75	5.9	15.0	48

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Copper price basis: EUR 150/100kg. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil 152 m; Drum 305 m
TERMI-POINT® is a registered trademark of AMP
Photographs are not to scale and do not represent detailed images of the respective products.

UNITRONIC® LiYCY

Screened data transmission cable with colour code acc. to DIN 47100

Benefits

- Overall braid minimises electrical interference
- Multifunctional application possibilities

Application range

- Screened cables with small dimensions are suitable for use in computer systems, instrumentation technology, office equipment, balances.
- Dry or damp rooms

Product features

- Colour-coded in accordance with DIN 47100
- Flame-retardant according to IEC 60332.1.2

Approvals

RoHS

Design

- Fine-wire/multi-wire (0.34 mm²) strand made of bare copper wires
- Core insulation made of PVC
- Tinned-copper braiding
- Outer sheath made of PVC
  Outer sheath colour: pebble grey (RAL 7032)

Technical data

Core identification code
DIN 47100 without colour repetition, refer to Appendix T9

Mutual capacitance
C/C approx. 120 nF/km
C/S: approx. 160 nF/km

Peak operating voltage
(not for power applications)
at 0.14 mm²: 350 V
at ≥ 0.25 mm²: 500 V

Based on
VDE 0812

Specific insulation resistance
> 20 GOhm x cm

Inductivity
approx. 0.65 mH/km

Conductor stranding
Stranded, fine-wire
0.34 mm², 7-wire

Minimum bending radius
For flexible use: 15 x outer diameter
Fixed installation: 6 x outer diameter

Test voltage
At 0.14 mm²: 1200 V
> 0.14 mm²: 1500 V

Temperature range
Fixed installation: -40°C to +80°C
Flexing: -5°C to +70°C

Article number	Number of cores and mm² per conductor	Outer diameter (mm)	Copper index (kg/km)	Weight (kg/km)
UNITRONIC® LiYCY				
0034302	2 x 0.14	3.9	12.0	20
0034303	3 x 0.14	4.1	13.0	28
0034304	4 x 0.14	4.3	14.3	33
0034305	5 x 0.14	4.6	15.5	38
0034306	6 x 0.14	4.9	18.2	38
0034307	7 x 0.14	4.9	19.0	49
0034308	8 x 0.14	5.8	21.2	56
0034310	10 x 0.14	6.1	28.5	66
0034312	12 x 0.14	6.3	30.4	78
0034314	14 x 0.14	6.7	32.0	80
0034315	15 x 0.14	6.9	37.8	86
0034316	16 x 0.14	7.0	43.0	90
0034318	18 x 0.14	7.3	48.8	104
0034320	20 x 0.14	7.7	53.9	116
0034321	21 x 0.14	7.9	55.5	121
0034325	25 x 0.14	8.4	63.0	149
0034328	28 x 0.14	8.5	66.1	153
0034330	30 x 0.14	8.7	69.0	158
0034332	32 x 0.14	9.0	73.6	164
0034336	36 x 0.14	9.3	83.0	183
0034340	40 x 0.14	10.4	87.5	210
0034344	44 x 0.14	10.7	110.5	225
0034350	50 x 0.14	11.1	122.5	253
0034402	2 x 0.25	4.5	16.0	32
0034403	3 x 0.25	4.7	21.0	37
0034404	4 x 0.25	5.0	24.0	41.3
0034405	5 x 0.25	5.6	29.0	51.2
0034406	6 x 0.25	6.0	30.0	58
0034407	7 x 0.25	6.0	37.0	65
0034408	8 x 0.25	7.1	42.0	73
0034410	10 x 0.25	7.5	46.0	82
0034412	12 x 0.25	7.7	53.0	98
0034414	14 x 0.25	8.0	59.0	99
0034415	15 x 0.25	8.3	61.0	111
0034416	16 x 0.25	8.4	64.0	124
0034418	18 x 0.25	8.8	83.0	143
0034420	20 x 0.25	9.3	88.0	152.3
0034421	21 x 0.25	9.6	93.0	161
0034425	25 x 0.25	10.7	114.0	172
0034428	28 x 0.25	10.8	126.0	181.1
0034430	30 x 0.25	11.0	132.0	189
0034432	32 x 0.25	11.4	138.0	203
0034436	36 x 0.25	11.8	148.0	220
0034440	40 x 0.25	12.7	157.0	248

DIN colour code

Article number	Number of cores and mm² per conductor	Outer diameter (mm)	Copper index (kg/km)	Weight (kg/km)
0034450	50 x 0.25	13.8	178.0	318
0034461	61 x 0.25	15.0	205.0	365.2
0034502	2 x 0.34	4.9	21.0	37
0034503	3 x 0.34	5.1	27.0	49
0034504	4 x 0.34	5.7	28.0	59
0034505	5 x 0.34	6.2	30.0	66
0034506	6 x 0.34	6.8	45.0	79
0034507	7 x 0.34	6.8	48.0	83
0034508	8 x 0.34	7.8	52.0	94
0034510	10 x 0.34	8.3	74.0	129.2
0034512	12 x 0.34	8.5	80.0	142
0034514	14 x 0.34	8.9	86.0	154
0034515	15 x 0.34	9.2	90.0	155
0034516	16 x 0.34	9.4	94.0	160
0034518	18 x 0.34	10.2	103.0	173
0034520	20 x 0.34	10.7	112.0	192
0034521	21 x 0.34	11.1	116.0	199.2
0034525	25 x 0.34	11.9	135.0	259
0034528	28 x 0.34	12.0	153.0	280
0034530	30 x 0.34	12.3	159.0	291.1
0034532	32 x 0.34	13.0	165.0	305
0034536	36 x 0.34	13.4	179.0	331
0034540	40 x 0.34	14.8	200.0	365
0034550	50 x 0.34	15.9	235.0	431
0034602	2 x 0.50	5.6	29.0	54
0034603	3 x 0.50	5.9	38.0	67
0034604	4 x 0.50	6.3	43.0	77
0034605	5 x 0.50	7.0	51.0	90
0034606	6 x 0.50	7.6	59.0	104
0034607	7 x 0.50	7.6	65.0	112
0034608	8 x 0.50	8.7	70.0	135
0034610	10 x 0.50	9.3	88.0	160
0034612	12 x 0.50	9.6	99.0	177
0034618	18 x 0.50	11.8	134.0	239
0034620	20 x 0.50	12.1	149.0	276
0034625	25 x 0.50	13.7	211.0	352
0034630	30 x 0.50	14.5	230.0	397
0034702	2 x 0.75	6.0	38.0	64
0034703	3 x 0.75	6.3	49.0	76
0034704	4 x 0.75	7.0	58.0	92
0034705	5 x 0.75	7.6	67.0	109
0034707	7 x 0.75	8.2	100.0	156
0034710	10 x 0.75	10.5	130.0	187
0034712	12 x 0.75	10.8	154.0	218
0034718	18 x 0.75	13.0	195.0	327
0034725	25 x 0.75	15.3	280.0	454
0034730	30 x 0.75	15.8	312.0	486
0034802	2 x 1.00	6.3	43.0	72
0034803	3 x 1.00	6.8	56.0	90
0034804	4 x 1.00	7.3	68.0	109
0034805	5 x 1.00	8.0	79.0	126
0034807	7 x 1.00	8.6	118.0	171
0034810	10 x 1.00	11.1	140.0	228
0034812	12 x 1.00	11.4	168.0	259
0034818	18 x 1.00	13.4	252.0	389
0034825	25 x 1.00	16.2	335.0	517
0034902	2 x 1.50	7.5	58.0	90
0034903	3 x 1.50	7.9	74.0	115
0034904	4 x 1.50	8.5	108.0	153
0034905	5 x 1.50	9.3	129.0	176
0034907	7 x 1.50	10.5	164.0	220
0034912	12 x 1.50	13.7	254.0	376
0034918	18 x 1.50	16.3	350.0	519
0034925	25 x 1.50	19.9	550.0	901

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Copper price basis: EUR 150/100kg. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: coil ≤ 30 kg or ≤ 250 m, otherwise drum
Please specify the preferred type of packaging (e.g. 1 x 500 m drum or 5 x 100 m coils).
Photographs are not to scale and do not represent detailed images of the respective products.

■ Similar products

- UNITRONIC® LiYCY (TP) refer to page 265

■ Accessories

- SKINTOP® MS-SC refer to page 719
- Multipurpose shears A and B refer to page 902

UNITRONIC® LiYCY A

Screened data transmission cable with colour code acc. to DIN 47100 – UL/CSA recognized

Info

- **A for Advanced here: UL and CSA approvals**

Benefits

- Overall braid minimises electrical interference
- For the North American market
- Can be used for Maxi TERMI-POINT® wiring

Application range

- Wiring of devices, machines and plants intended for export to the North American market or countries where UL-/CSA approved cables are used.

Product features

- Colour-coded in accordance with DIN 47100
- Flame-retardant according to IEC 60332.1.2 & CSA FT1

Approvals

Design

- Multi-wire strand made of tinned copper wires
- Core insulation: Based on PVC
- Tinned-copper braiding
- Outer sheath made of special PVC compound Outer sheath colour: dark grey (chrome)

Technical data

Core identification code
DIN 47100 without colour repetition, refer to Appendix T9

Approvals
UL AWM Style 2464
CSA AWM I/II A

Peak operating voltage
(not for power applications)
300 V

Specific insulation resistance
> 20 GOhm x cm

Minimum bending radius
For flexible use:
15 x outer diameter

Test voltage
1500 V

Temperature range
Fixed installation: -40°C to +80°C
Flexing: -5°C to +70°C

Article number	Number of cores and AWG per conductor	Number of cores and mm² per conductor	Outer diameter (mm)	Copper index (kg/km)	Weight (kg/km)
UNITRONIC® LiYCY A					
0044602	2 x AWG26/7	2 x 0.14	4.3	15.6	29.5
0044604	4 x AWG26/7	4 x 0.14	4.7	18.0	33
0044652	2 x AWG24/7	2 x 0.23	4.7	17.6	36.1
0044655	5 x AWG24/7	5 x 0.23	5.5	28.5	51
0044658	8 x AWG24/7	8 x 0.23	6.4	31.1	72.2
0044662	12 x AWG24/7	12 x 0.23	7.3	51.8	96
0044702	2 x AWG22/7	2 x 0.34	5.5	17.6	32
0044703	3 x AWG22/7	3 x 0.34	5.7	21.2	36
0044704	4 x AWG22/7	4 x 0.34	6.1	27.3	44
0044705	5 x AWG22/7	5 x 0.34	6.6	30.8	53
0044707	7 x AWG22/7	7 x 0.34	7.1	46.4	71
0044712	12 x AWG22/7	12 x 0.34	8.9	66.8	120
0044716	16 x AWG22/7	16 x 0.34	9.8	83.9	145
0044721	21 x AWG22/7	21 x 0.34	11.3	109.4	170
0044732	2 x AWG20/7	2 x 0.50	6.0	24.4	41
0044733	3 x AWG20/7	3 x 0.50	6.3	29.9	47
0044735	5 x AWG20/7	5 x 0.50	7.3	49.2	72
0044738	8 x AWG20/7	8 x 0.50	8.5	70.8	102
0044850	7 x AWG18/19	7 x 1.00	8.9	93.2	160.8
0044851	10 x AWG18/19	10 x 1.00	11.5	130.9	200
0044912	12 x AWG16/19	12 x 1.50	13.7	248.6	375

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Copper price basis: EUR 150/100kg. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil 152 m; Drum 305 m
TERMI-POINT® is a registered trademark of AMP
Photographs are not to scale and do not represent detailed images of the respective products.

Similar products

- UNITRONIC® LiYCY (TP) A refer to page 266

Accessories

- KS 15 cable shears refer to page 903

UNITRONIC® LiYY (TP)

Data transmission cable with colour code acc. to DIN 47100 and twisted pairs

Info

- TP = twisted pair

Benefits

- Twisted pair (TP) decouples the cable circuits

Application range

- Electronic devices tend to leave little room for installing cables, meaning short travel distances and small bending radii are required. This cable ideally meets these requirements.
- Dry or damp rooms

Product features

- Twisted in pairs to reduce decoupling. As a result, additional screening is often not required.
- Colour-coded in accordance with DIN 47100
- Flame-retardant according to IEC 60332.1.2

Approvals

RoHS

Design

- Fine-wire strand made of bare copper wires
- Core insulation made of PVC
- TP structure
- Outer sheath made of PVC
  Outer sheath colour: pebble grey (RAL 7032)

Technical data

Core identification code
DIN 47100, refer to Appendix T9

Mutual capacitance
Approx. 120 nF/km

Peak operating voltage
(not for power applications)
at 0.14 mm²: 350 V
at ≥ 0.25 mm²: 500 V

Based on
VDE 0812

Specific insulation resistance
> 20 GOhm x cm

Inductivity
approx. 0.65 mH/km

Conductor stranding
Fine copper wire strands

Minimum bending radius
For flexible use: 10 x outer diameter

Test voltage
At 0.14 mm²: 1200 V
> 0.14 mm²: 1500 V

Temperature range
Fixed installation: -40°C to +80°C
Flexing: -5°C to +70°C

Article number	Number of pairs and conductor cross section (mm²)	Outer diameter (mm)	Copper index (kg/km)	Weight (kg/km)
UNITRONIC® LiYY (TP)				
0035101	2 x 2 x 0.14	4.8	5.4	25.5
0035102	3 x 2 x 0.14	4.9	8.0	32
0035103	4 x 2 x 0.14	5.5	10.7	38.5
0035104	5 x 2 x 0.14	5.7	13.4	45.5
0035105	6 x 2 x 0.14	6.2	16.1	51
0035108	10 x 2 x 0.14	8.0	26.9	77.5
0035110	12 x 2 x 0.14	8.2	32.3	94.5
0035113	16 x 2 x 0.14	9.1	43.0	110.5
0035160	2 x 2 x 0.25	6.1	9.6	38
0035161	3 x 2 x 0.25	6.2	14.4	48
0035162	4 x 2 x 0.25	6.9	19.2	59
0035163	6 x 2 x 0.25	7.8	28.8	80
0035164	8 x 2 x 0.25	9.2	38.4	98
0035165	10 x 2 x 0.25	10.3	48.0	115
0035170	2 x 2 x 0.5	7.9	19.2	72
0035171	3 x 2 x 0.5	8.0	28.8	83
0035172	4 x 2 x 0.5	8.7	38.4	115
0035174	8 x 2 x 0.5	12.2	76.8	206
0035175	10 x 2 x 0.5	13.2	96.0	247

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Copper price basis: EUR 150/100kg. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: coil ≤ 30 kg or ≤ 250 m, otherwise drum
Please specify the preferred type of packaging (e.g. 1 x 500 m drum or 5 x 100 m coils).
Photographs are not to scale and do not represent detailed images of the respective products.

Similar products

- For special applications with additional screening, UNITRONIC® LiYCY (TP) is recommended

Accessories

- KS 15 cable shears refer to page 903

UNITRONIC® LiYCY (TP)

Screened data transmission cable with colour code acc. to DIN 47100 and twisted pairs

Info

- TP = twisted pair

Benefits

- Overall braid minimises electrical interference
- Twisted pair (TP) decouples the cable circuits

Application range

- Can be used multifunctional in electronics of computer systems, electronic control equipment, office machines, balances, etc.
- Dry or damp rooms

Product features

- Data transmission cable with good shielding effect
- Good protection against capacitive interference from electric fields (e.g. power cable)
- Colour-coded in accordance with DIN 47100
- Flame-retardant according to IEC 60332.1.2

Approvals

RoHS

Design

- Fine-wire strand made of bare copper wires
- Core insulation made of PVC
- TP structure
- Tinned-copper braiding
- Outer sheath made of PVC
  Outer sheath colour: pebble grey (RAL 7032)

Technical data

Core identification code
DIN 47100, refer to Appendix T9

Mutual capacitance
C/C approx. 120 nF/km
C/S: approx. 160 nF/km

Peak operating voltage
(not for power applications)
at 0.14 mm²: 350 V
at ≥ 0.25 mm²: 500 V

Based on
VDE 0812

Specific insulation resistance
> 20 GOhm x cm

Inductivity
Approx. 0.50 mH/km

Conductor stranding
Fine copper wire strands

Minimum bending radius
For flexible use:
15 x outer diameter
Fixed installation: 6 x outer diameter

Test voltage
At 0.14 mm²: 1200 V
> 0.14 mm²: 1500 V

Temperature range
Fixed installation: -40°C to +80°C
Flexing: -5°C to +70°C

Article number	Number of pairs and mm² per conductor	Outer diameter (mm)	Copper index (kg/km)	Weight (kg/km)
UNITRONIC® LiYCY (TP)				
0035131	2 x 2 x 0.14	5.7	18.5	39
0035141	3 x 2 x 0.14	5.8	23.0	48
0035132	4 x 2 x 0.14	6.2	26.6	54
0035133	6 x 2 x 0.14	7.1	48.5	85
0035150	8 x 2 x 0.14	8.2	53.7	97
0035134	10 x 2 x 0.14	8.7	59.0	110
0035135	12 x 2 x 0.14	8.9	66.0	142
0035136	16 x 2 x 0.14	10.2	79.0	154
0035142	20 x 2 x 0.14	11.3	97.0	184
0035137	25 x 2 x 0.14	12.5	113.0	238
0035800	2 x 2 x 0.25	6.3	28.0	54
0035801	3 x 2 x 0.25	7.1	39.6	68.5
0035802	4 x 2 x 0.25	7.6	44.9	81
0035803	6 x 2 x 0.25	8.5	69.5	115
0035804	8 x 2 x 0.25	10.3	76.9	130
0035805	10 x 2 x 0.25	11.0	102.0	158
0035806	12 x 2 x 0.25	11.3	120.0	190
0035807	16 x 2 x 0.25	12.5	146.5	238
0035808	25 x 2 x 0.25	16.1	205.0	344
0035810	2 x 2 x 0.5	8.6	48.1	93
0035811	3 x 2 x 0.5	8.7	73.7	129
0035812	4 x 2 x 0.5	9.4	82.0	146
0035813	6 x 2 x 0.5	11.1	110.0	198
0035814	8 x 2 x 0.5	13.1	139.0	259
0035816	12 x 2 x 0.5	14.9	198.3	354
0035817	16 x 2 x 0.5	16.5	240.0	459
0035820	2 x 2 x 0.75	8.5	58.0	106
0035821	3 x 2 x 0.75	9.4	84.0	140
0035822	4 x 2 x 0.75	10.7	108.0	179
0035827	5 x 2 x 0.75	11.1	126.0	215
0035823	6 x 2 x 0.75	12.1	146.0	246
0035824	8 x 2 x 0.75	14.7	180.0	305
0035825	12 x 2 x 0.75	16.2	261.0	456
0035830	2 x 2 x 1	9.0	84.0	142
0035831	3 x 2 x 1	10.4	96.0	173
0035832	4 x 2 x 1	11.3	121.0	212
0035836	5 x 2 x 1	11.8	161.0	266

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Copper price basis: EUR 150/100kg. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: coil ≤ 30 kg or ≤ 250 m, otherwise drum
Please specify the preferred type of packaging (e.g. 1 x 500 m drum or 5 x 100 m coils).
Photographs are not to scale and do not represent detailed images of the respective products.

Similar products

- UNITRONIC® Li2YCY (TP) fine-wired refer to page 286
- UNITRONIC® CY PiDY (TP) refer to page 283
- We recommend our UNITRONIC® CY PiDY (TP) if paired screening is required due to crosstalk attenuation.

Accessories

- SKINTOP® MS-SC-M refer to page 668
- Multipurpose shears A and B refer to page 902
- STAR STRIP stripping tool refer to page 906

UNITRONIC® LiYCY (TP) A

Screened data transmission cable with colour code acc. to DIN 47100 and twisted pairs - UL/CSA recognized

Info

- **A for Advanced here: UL and CSA approvals**

Benefits

- For the North American market
- Data transmission cable with good shielding effect
- Overall braid minimises electrical interference
- Twisted pair (TP) decouples the cable circuits
- Can be used for Maxi TERMI-POINT® wiring

Application range

- Wiring of devices, machines and plants intended for export to the North American market or countries where UL-/CSA approved cables are used.

Product features

- Colour-coded in accordance with DIN 47100
- Flame-retardant according to IEC 60332.1.2 & CSA FT1

Approvals

Design

- Multi-wire strand made of tinned copper wires
- Core insulation: Based on PVC
- TP structure
- Tinned-copper braiding
- Outer sheath made of special PVC compound Outer sheath colour: dark grey (chrome)

Technical data

Core identification code
DIN 47100 without colour repetition, refer to Appendix T9

Approvals
UL AWM Style 2464
CSA AWM I/II A

Peak operating voltage
(not for power applications)
300 V

Specific insulation resistance
> 20 GOhm x cm

Test voltage
1500 V

Temperature range
Fixed installation: -40°C to +80°C
Flexing: -5°C to +70°C

Article number	Number of cores and AWG per conductor	Number of pairs and mm² per conductor	Outer diameter (mm)	Copper index (kg/km)	Weight (kg/km)
UNITRONIC® LiYCY (TP) A					
0066202	2 x 2 x AWG26/7	2 x 2 x 0.14	5.7	18.0	45.9
0066204	4 x 2 x AWG26/7	4 x 2 x 0.14	6.4	24.0	58
0066205	5 x 2 x AWG26/7	5 x 2 x 0.14	6.6	30.0	58
0066208	8 x 2 x AWG26/7	8 x 2 x 0.14	7.9	53.0	85
0066210	10 x 2 x AWG26/7	10 x 2 x 0.14	8.7	55.0	106
0066212	12 x 2 x AWG26/7	12 x 2 x 0.14	8.9	64.0	113
0066216	16 x 2 x AWG26/7	16 x 2 x 0.14	10.2	87.0	149
0066232	2 x 2 x AWG24/7	2 x 2 x 0.23	6.1	24.5	57
0066233	3 x 2 x AWG24/7	3 x 2 x 0.23	6.7	28.9	62
0066234	4 x 2 x AWG24/7	4 x 2 x 0.23	6.9	33.5	70
0066235	5 x 2 x AWG24/7	5 x 2 x 0.23	7.5	46.3	91
0066238	2 x 2 x AWG22/7	2 x 2 x 0.34	7.4	38.0	45
0066239	3 x 2 x AWG22/7	3 x 2 x 0.34	8.1	45.1	64
0066240	4 x 2 x AWG22/7	4 x 2 x 0.34	8.8	54.6	75
0066242	2 x 2 x AWG20/7	2 x 2 x 0.5	8.2	49.7	93
0066243	3 x 2 x AWG20/7	3 x 2 x 0.5	9.1	60.1	102
0066244	4 x 2 x AWG20/7	4 x 2 x 0.5	10.2	78.7	120
0066262	2 x 2 x AWG19/19	2 x 2 x 0.75	9.0	65.2	140

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Copper price basis: EUR 150/100kg. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil 152 m; Drum 305 m
TERMI-POINT® is a registered trademark of AMP
Photographs are not to scale and do not represent detailed images of the respective products.

Accessories

- DATA STRIP stripping tool refer to page 907

UNITRONIC® PUR CP

Screened data transmission cable with PUR outer sheath for harsh conditions

Benefits

- Data transmission cable with PUR sheath for increased mechanical stress, wear- and tear-resistant,
- Overall braid minimises electrical interference
- Increased durability under harsh conditions thanks to robust PUR outer sheath

Application range

- 7-wire stranded conductor can be used for Maxi TERMI-POINT® wiring (for this product the 0,34mm² version only)
- Further development of the UNITRONIC® range for harsher ambient conditions where robust and screened cables in small dimensions are required.

Product features

- Low-adhesive surface
- PUR outer sheath is resistant to most oilsand hydraulic fluids
- Special notch and tear-resistance
- Colour-coded in accordance with DIN 47100
- Flame-retardant according to IEC 60332.1.2

Approvals

RoHS

Design

- Fine-wire/multi-wire (0.34 mm²) strand made of bare copper wires
- Core insulation made of PVC
- Tinned-copper braiding
- Outer sheath made of PUR
  Outer sheath colour: pebble grey (RAL 7032)

Technical data

Core identification code
DIN 47100, refer to Appendix T9

Mutual capacitance
C/C approx. 120 nF/km
C/S: approx. 160 nF/km

Peak operating voltage
(not for power applications) 250 V

Based on
VDE 0812

Specific insulation resistance
> 20 GOhm x cm

Inductivity
approx. 0.65 mH/km

Conductor stranding
Stranded, fine-wire
0.34 mm², 7-wire

Minimum bending radius
For flexible use: 15 x outer diameter
Fixed installation: 6 x outer diameter

Test voltage
At 0.14 mm²: 1200 V
> 0.14 mm²: 1500 V

Temperature range
Fixed installation: -30 °C to +80 °C
Flexing: -5°C to +70°C

Article number	Number of cores and mm² per conductor	Outer diameter (mm)	Copper index (kg/km)	Weight (kg/km)
UNITRONIC® PUR CP				
0032801	3 x 0.25	4.7	21.0	40
0032802	4 x 0.25	5.0	24.0	44
0032803	5 x 0.25	5.6	29.0	55
0032804	7 x 0.25	6.0	37.0	68
0032805	10 x 0.25	7.5	46.0	85
0032806	12 x 0.25	7.7	59.0	91
0032810	2 x 0.34	4.9	21.0	40
0032812	4 x 0.34	5.7	28.0	63
0032813	5 x 0.34	6.2	30.0	69
0032814	7 x 0.34	6.8	48.0	86
0032821	3 x 0.50	5.9	38.0	70
0032822	4 x 0.50	6.3	43.0	80
0032823	5 x 0.50	7.0	51.0	94
0032824	7 x 0.50	7.6	65.0	115
0032825	10 x 0.50	9.3	88.0	140
0032830	2 x 0.75	6.0	38.0	67
0032831	3 x 0.75	6.3	49.0	79
0032834	7 x 0.75	8.2	100.0	160
0032836	12 x 0.75	10.8	154.0	225

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Copper price basis: EUR 150/100kg. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: coil ≤ 30 kg or ≤ 250 m, otherwise drum
Please specify the preferred type of packaging (e.g. 1 x 500 m drum or 5 x 100 m coils).
TERMI-POINT® is a registered trademark of AMP
Photographs are not to scale and do not represent detailed images of the respective products.

Similar products

- UNITRONIC® PUR CP (TP) refer to page 268

Accessories

- SKINTOP® MS-SC-M refer to page 668
- SMARTSTRIP stripping tool refer to page 907

UNITRONIC® PUR CP (TP)

Screened data transmission cable with PUR outer sheath and twisted pairs for harsh conditions

Info

- TP = twisted pair

Benefits

- Data transmission cable with PUR sheath for increased mechanical stress, wear- and tear-resistant,
- Overall braid minimises electrical interference
- Twisted pair (TP) decouples the cable circuits
- Increased durability under harsh conditions thanks to robust PUR outer sheath

Application range

- For harsh environmental conditions where robust and screened cables with small dimensions are necessary

Product features

- Low-adhesive surface
- PUR outer sheath is resistant to most oilsand hydraulic fluids
- Special notch and tear-resistance
- Colour-coded in accordance with DIN 47100
- Flame-retardant according to IEC 60332.1.2

Approvals

RoHS

Design

- Fine-wire strand made of bare copper wires
- Core insulation made of PVC
- TP structure
- Tinned-copper braiding
- Outer sheath made of PUR
  Outer sheath colour: pebble grey (RAL 7032)

Technical data

Core identification code
DIN 47100, refer to Appendix T9

Mutual capacitance
C/C approx. 120 nF/km
C/S: approx. 160 nF/km

Peak operating voltage
(not for power applications) 250 V

Based on
VDE 0814: (DIN 47414)
or VDE 0812

Specific insulation resistance
> 20 GOhm x cm

Inductivity
approx. 0.65 mH/km

Conductor stranding
Fine copper wire strands

Minimum bending radius
For flexible use:
15 x outer diameter
Fixed installation: 6 x outer diameter

Test voltage
At 0.14 mm²: 1200 V
> 0.14 mm²: 1500 V

Temperature range
Fixed installation: -30 °C to +80 °C
Flexing: -5°C to +70°C

Article number	Number of pairs and conductor cross section (mm²)	Outer diameter (mm)	Copper index (kg/km)	Weight (kg/km)
UNITRONIC® PUR CP (TP)				
0032850	2 x 2 x 0.25	6.3	28.0	54
0032851	3 x 2 x 0.25	7.1	40.0	66
0032852	4 x 2 x 0.25	7.6	45.0	81
0032854	6 x 2 x 0.25	8.5	70.0	115
0032860	2 x 2 x 0.5	8.6	48.0	93
0032861	3 x 2 x 0.5	8.7	74.0	129
0032862	4 x 2 x 0.5	9.4	82.0	146
0032864	6 x 2 x 0.5	11.1	110.0	198
0032872	4 x 2 x 0.75	10.7	108.0	179
0032873	5 x 2 x 0.75	11.1	126.0	215

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Copper price basis: EUR 150/100kg. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: coil ≤ 30 kg or ≤ 250 m, otherwise drum
Please specify the preferred type of packaging (e.g. 1 x 500 m drum or 5 x 100 m coils).
Photographs are not to scale and do not represent detailed images of the respective products.

Accessories

- SKINTOP® MS-SC-M refer to page 668
- SMARTSTRIP stripping tool refer to page 907

UNITRONIC® LiHH

Halogen-free data transmission cable with colour code acc. to DIN 47100

Benefits

- Halogen-free: to protect human life and valuable assets in the event of a fire, through low smoke density and low amount of corrosive gases

Application range

- Suitable for areas with a high density of people, e.g. public buildings or transport systems, as well as high-value property that must be protected in the event of a fire.
- For data processing, measurement and control engineering, safety related systems and as electronics cable
- 7-wire stranded conductor can be used for Maxi TERMI-POINT® wiring (for this product the 0,34mm² version only)
- Dry or damp rooms

Product features

- Robust outer sheath makes the cable resistant
- Small outer diameters despite a high number of cores
- Low smoke zero halogen (LSZH)
- Colour-coded in accordance with DIN 47100
- Flame-retardant according to IEC 60332.1.2

Approvals

RoHS

Design

- Fine-wire/multi-wire (0.34 mm²) strand made of bare copper wires
- Core insulation made of special halogen-free compound
- Outer sheath made of special halogen-free compound
  Outer sheath colour: pebble grey (RAL 7032)

Technical data

Core identification code
DIN 47100 without colour repetition, refer to Appendix T9

Mutual capacitance
Approx. 80 nF/km

Peak operating voltage
(not for power applications) 250 V

Based on
VDE 0812

Specific insulation resistance
> 20 GOhm x cm

Inductivity
approx. 0.65 mH/km

Conductor stranding
Stranded, fine-wire
0.34 mm², 7-wire

Minimum bending radius
For flexible use: 10 x outer diameter
Fixed installation: 6 x outer diameter

Test voltage
1200 V

Temperature range
Fixed installation: -30 °C to +80 °C
Flexing: -5°C to +70°C

Article number	Number of cores and mm² per conductor	Outer diameter (mm)	Copper index (kg/km)	Weight (kg/km)
UNITRONIC® LiHH				
0037100	2 x 0.14	3.4	2.7	12
0037101	3 x 0.14	3.6	4.0	15
0037102	4 x 0.14	3.8	5.4	17
0037103	5 x 0.14	4.1	6.7	22
0037104	6 x 0.14	4.4	8.1	25
0037105	7 x 0.14	4.4	9.4	26
0037106	8 x 0.14	5.1	10.8	29
0037107	10 x 0.14	5.4	13.4	35
0037108	12 x 0.14	5.8	16.1	43
0037109	20 x 0.14	7.2	26.8	73
0037110	25 x 0.14	8.0	34.6	91
0037120	2 x 0.25	4.0	4.8	22
0037121	3 x 0.25	4.2	7.2	25
0037122	4 x 0.25	4.5	9.6	28
0037123	5 x 0.25	4.9	12.0	34
0037124	6 x 0.25	5.3	14.4	39
0037125	7 x 0.25	5.3	16.8	42
0037126	8 x 0.25	6.4	19.2	50
0037127	10 x 0.25	7.0	24.0	60
0037128	12 x 0.25	7.2	28.8	67
0037129	16 x 0.25	7.9	38.4	85

Article number	Number of cores and mm² per conductor	Outer diameter (mm)	Copper index (kg/km)	Weight (kg/km)
0037140	2 x 0.34	4.4	6.5	28
0037141	3 x 0.34	4.6	9.8	30
0037142	4 x 0.34	5.0	13.1	40
0037143	5 x 0.34	5.7	16.3	44
0037144	7 x 0.34	6.1	22.8	60
0037146	10 x 0.34	7.8	32.6	80
0037147	12 x 0.34	8.0	39.2	97
0037150	2 x 0.5	4.9	9.6	31
0037151	3 x 0.5	5.2	14.4	37
0037152	4 x 0.5	5.8	19.2	45
0037153	5 x 0.5	6.3	24.0	58
0037154	7 x 0.5	7.0	33.6	72
0037155	12 x 0.5	9.1	57.6	117
0037160	2 x 0.75	5.3	14.4	41
0037162	4 x 0.75	6.3	28.8	60
0037163	5 x 0.75	7.1	36.0	70
0037164	7 x 0.75	7.7	50.4	85
0037165	12 x 0.75	10.4	86.4	165
0037171	3 x 1	6.1	28.8	57
0037172	4 x 1	6.6	38.4	67
0037181	3 x 1.5	7.4	43.2	72
0037182	4 x 1.5	8.0	57.6	87

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Copper price basis: EUR 150/100kg. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: coil ≤ 30 kg or ≤ 250 m, otherwise drum
Please specify the preferred type of packaging (e.g. 1 x 500 m drum or 5 x 100 m coils).
TERMI-POINT® is a registered trademark of AMP
Photographs are not to scale and do not represent detailed images of the respective products.

Similar products

- UNITRONIC® LiHCH refer to page 270

Accessories

- KT 11 cable shears refer to page 903
- DATA STRIP stripping tool refer to page 907

UNITRONIC® LiHCH

Screened halogen-free data transmission cable with colour code acc. to DIN 47100

Benefits

- Halogen-free: to protect human life and valuable assets in the event of a fire, through low smoke density and low amount of corrosive gases
- Overall braid minimises electrical interference

Application range

- Suitable for areas with a high density of people, e.g. public buildings or transport systems, as well as high-value property that must be protected in the event of a fire.
- For data processing, measurement and control engineering, safety related systems and as electronics cable
- For use in computer systems, instrumentation systems, office equipment, balances - wherever screened, halogen-free, small-diameter cables are needed.
- 7-wire stranded conductor can be used for Maxi TERMI-POINT® wiring (for this product the 0,34mm² version only)

Product features

- Low smoke zero halogen (LSZH)
- Flame-retardant according to IEC 60332.1.2
- Colour-coded in accordance with DIN 47100

Approvals

RoHS

Design

- Fine-wire/multi-wire (0.34 mm²) strand made of bare copper wires
- Core insulation made of special halogen-free compound
- Tinned-copper braiding
- Outer sheath made of special halogen-free compound
  Outer sheath colour: pebble grey (RAL 7032)

Technical data

Core identification code
DIN 47100 without colour repetition, refer to Appendix T9

Mutual capacitance
C/C approx. 80 nF/km
C/S approx. 120 nF/km

Peak operating voltage
(not for power applications) 250 V

Based on
VDE 0812

Specific insulation resistance
> 20 GOhm x cm

Inductivity
approx. 0.65 mH/km

Conductor stranding
Stranded, fine-wire
0.34 mm², 7-wire

Minimum bending radius
For flexible use:
15 x outer diameter
Fixed installation: 6 x outer diameter

Test voltage
1200 V

Temperature range
Fixed installation: -30 °C to +80 °C
Flexing: -5°C to +70°C

Article number	Number of cores and mm² per conductor	Outer diameter (mm)	Copper index (kg/km)	Weight (kg/km)
UNITRONIC® LiHCH				
0037302	2 x 0.14	4.1	12.0	22
0037303	3 x 0.14	4.3	14.1	25
0037304	4 x 0.14	4.5	15.9	29
0037306	6 x 0.14	5.1	22.0	35
0037307	7 x 0.14	5.1	24.0	38
0037308	8 x 0.14	6.0	26.0	41
0037312	12 x 0.14	6.5	30.4	78
0037316	16 x 0.14	7.2	43.0	90
0037325	25 x 0.14	8.7	63.0	149
0037402	2 x 0.25	4.7	15.0	25
0037403	3 x 0.25	4.9	18.0	30
0037404	4 x 0.25	5.2	22.0	35
0037406	6 x 0.25	6.2	30.0	49
0037407	7 x 0.25	6.2	32.0	52
0037408	8 x 0.25	7.3	35.0	58
0037410	10 x 0.25	7.7	42.0	81
0037425	25 x 0.25	10.9	114.0	172
0037502	2 x 0.34	5.1	17.0	30
0037503	3 x 0.34	5.3	21.0	35
0037504	4 x 0.34	5.9	25.0	42
0037505	5 x 0.34	6.4	30.0	53
0037507	7 x 0.34	7.0	42.0	73
0037508	8 x 0.34	8.0	45.0	84
0037510	10 x 0.34	8.5	63.0	101

Article number	Number of cores and mm² per conductor	Outer diameter (mm)	Copper index (kg/km)	Weight (kg/km)
0037516	16 x 0.34	9.6	94.0	160
0037525	25 x 0.34	12.1	144.0	259
0037602	2 x 0.5	5.8	29.0	38
0037603	3 x 0.5	6.1	35.0	47
0037604	4 x 0.5	6.5	45.0	67
0037605	5 x 0.5	7.2	50.0	76
0037606	6 x 0.5	7.8	59.0	84
0037607	7 x 0.5	7.8	68.0	91
0037608	8 x 0.5	8.9	75.0	135
0037610	10 x 0.5	9.5	93.0	131
0037612	12 x 0.5	9.8	99.0	177
0037618	18 x 0.5	11.7	134.0	239
0037625	25 x 0.5	13.9	211.0	352
0037702	2 x 0.75	6.2	35.0	45
0037703	3 x 0.75	6.5	46.0	69
0037704	4 x 0.75	7.2	56.0	80
0037705	5 x 0.75	7.8	70.0	99
0037707	7 x 0.75	8.3	90.0	120
0037802	2 x 1	6.5	43.0	72
0037803	3 x 1	7.0	56.0	90
0037804	4 x 1	7.5	68.0	109
0037807	7 x 1	8.8	118.0	171
0037902	2 x 1.5	7.7	58.0	90
0037903	3 x 1.5	8.1	74.0	115
0037905	5 x 1.5	9.5	129.0	176

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Copper price basis: EUR 150/100kg. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: coil ≤ 30 kg or ≤ 250 m, otherwise drum
Please specify the preferred type of packaging (e.g. 1 x 500 m drum or 5 x 100 m coils).
TERMI-POINT® is a registered trademark of AMP
Photographs are not to scale and do not represent detailed images of the respective products.

Similar products

- UNITRONIC® LiHCH (TP) refer to page 271

Accessories

- SKINTOP® MS-SC-M refer to page 668
- Multipurpose shears A and B refer to page 902

UNITRONIC® LiHCH (TP)

Screened halogen-free data transmission cable with colour code acc. to DIN 47100 and twisted pairs

Info

- TP = twisted pair

Benefits

- Halogen-free: to protect human life and valuable assets in the event of a fire, through low smoke density and low amount of corrosive gases
- Overall braid minimises electrical interference
- Twisted pair (TP) decouples the cable circuits

Application range

- Suitable for areas with a high density of people, e.g. public buildings or transport systems, as well as high-value property that must be protected in the event of a fire.
- For data processing, measurement and control engineering, safety related systems and as electronics cable
- For use in computer systems, instrumentation systems, office equipment, balances - wherever screened, halogen-free, small-diameter cables are needed.

Product features

- Low smoke zero halogen (LSZH)
- Flame-retardant according to IEC 60332.1.2
- Colour-coded in accordance with DIN 47100

Approvals

RoHS

Design

- Fine-wire strand made of bare copper wires
- Core insulation made of special halogen-free compound
- TP structure
- Tinned-copper braiding
- Outer sheath made of special halogen-free compound
  Outer sheath colour: pebble grey (RAL 7032)

Technical data

Core identification code
DIN 47100 without colour repetition, refer to Appendix T9

Mutual capacitance
C/C approx. 80 nF/km
C/S approx. 120 nF/km

Peak operating voltage
(not for power applications) 250 V

Based on
VDE 0812

Specific insulation resistance
> 20 GOhm x cm

Coupling
At 1 kHz: approx. 300 pF/100 m

Inductivity
approx. 0.65 mH/km

Conductor stranding
Fine copper wire strands

Minimum bending radius
For flexible use:
15 x outer diameter
Fixed installation: 6 x outer diameter

Test voltage
1200 V

Temperature range
Fixed installation: -30 °C to +80 °C
Flexing: -5°C to +70°C

Article number	Number of cores and mm² per conductor	Outer diameter (mm)	Copper index (kg/km)	Weight (kg/km)
UNITRONIC® LiHCH (TP)				
0038302	2 x 2 x 0.14	5.9	18.5	39
0038303	3 x 2 x 0.14	6.0	23.0	48
0038304	4 x 2 x 0.14	6.4	26.6	54
0038306	6 x 2 x 0.14	7.3	48.5	85
0038308	8 x 2 x 0.14	8.4	53.7	97
0038310	10 x 2 x 0.14	8.9	59.0	110
0038312	12 x 2 x 0.14	9.1	66.0	142
0038316	16 x 2 x 0.14	10.4	79.0	154
0038320	20 x 2 x 0.14	11.5	97.0	184
0038325	25 x 2 x 0.14	12.7	113.0	238
0038402	2 x 2 x 0.25	7.2	28.0	54
0038403	3 x 2 x 0.25	7.3	39.6	66
0038404	4 x 2 x 0.25	7.8	44.9	81
0038406	6 x 2 x 0.25	8.7	69.5	115
0038408	8 x 2 x 0.25	10.5	76.9	130

Article number	Number of cores and mm² per conductor	Outer diameter (mm)	Copper index (kg/km)	Weight (kg/km)
0038412	12 x 2 x 0.25	11.5	120.0	190
0038416	16 x 2 x 0.25	12.7	146.5	238
0038602	2 x 2 x 0.5	8.8	48.1	93
0038603	3 x 2 x 0.5	8.9	73.7	129
0038604	4 x 2 x 0.5	9.6	82.0	146
0038606	6 x 2 x 0.5	11.3	110.0	198
0038608	8 x 2 x 0.5	13.3	139.0	259
0038612	12 x 2 x 0.5	15.1	198.3	354
0038616	16 x 2 x 0.5	16.7	240.0	459
0038702	2 x 2 x 0.75	9.5	58.0	106
0038703	3 x 2 x 0.75	9.6	84.0	140
0038704	4 x 2 x 0.75	10.9	108.0	179
0038708	8 x 2 x 0.75	14.9	180.0	305
0038802	2 x 2 x 1	10.5	84.0	142
0038803	3 x 2 x 1	10.6	96.0	173
0038804	4 x 2 x 1	11.5	121.0	212
0038805	5 x 2 x 1	12.0	161.0	266

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Copper price basis: EUR 150/100kg. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: coil ≤ 30 kg or ≤ 250 m, otherwise drum
Please specify the preferred type of packaging (e.g. 1 x 500 m drum or 5 x 100 m coils).
Photographs are not to scale and do not represent detailed images of the respective products.

Accessories

- SKINTOP® MS-SC-M refer to page 668
- Multipurpose shears A and B refer to page 902

UNITRONIC® 300 / UNITRONIC® 300 CY

Control and signal cables with small cross sections - UL/CSA listed

Info

- **Unscreened + screened control and signal cables for industrial applications**
- **PLTC = Power Limited Tray Cable**

Benefits

- Several approvals, such as UL Type PLTC, UL CMG, UL Oil Res I, CSA CMG and CE.
- For the North American market

Application range

- Control and signal cables for internal and external wiring

Product features

- UV-resistant and oil-resistant cable (OIL RES I)
- AWG24 has no PLTC approval
- Exposed run for AWG18 & AWG16
- PLTC for trays (“Exposed Run”/Open Wiring) Allows cabling without cable duct.

Approvals

CE SP UL RoHS

Design

- Fine-wire strand made of tinned-copper wires
- Core insulation made of PVC compound
- UNITRONIC® 300 CY with overall foil tape wrapping, drain wire, tin-plated copper braiding (75 % coverage)
- Oil-resistant, grey PVC outer sheath

Technical data

Core identification code
refer to Appendix T9

Approvals
UL CMG, PLTC, Open Wiring, AWM 2464, Oil Res I
CSA CMG/FT4, CSA AWM II A/B, NOM SCFI 1994

Minimum bending radius
During installation: 4 x cable diameter
Screened: 6 x outer diameter

Nominal voltage
according to UL: 300 V
IEC: not for power transmission

Test voltage
2000V

Temperature range
-25 °C to +105 °C

Article number	Article designation	Number of cores and AWG size	Outer diameter (mm)	Copper index (kg/km)	Weight (kg/km)
UNITRONIC® 300					
301602	UNITRONIC® 300	2 x AWG16	6.7	25.0	83
301802	UNITRONIC® 300	2 x AWG18	6.1	18.3	61
302006	UNITRONIC® 300	6 x AWG20	7.5	29.5	97
302204	UNITRONIC® 300	4 x AWG22	5.0	13.7	33
302210	UNITRONIC® 300	10 x AWG22	7.0	34.2	67
302220	UNITRONIC® 300	20 x AWG22	9.0	68.5	116
302225	UNITRONIC® 300	25 x AWG22	10.5	85.6	142
UNITRONIC® 300 CY					
301602S	UNITRONIC® 300 CY	2 x AWG16	7.6	50.6	101
301606S	UNITRONIC® 300 CY	6 x AWG16	9.9	105.7	210
301802S	UNITRONIC® 300 CY	2 x AWG18	6.8	37.2	75
301803S	UNITRONIC® 300 CY	3 x AWG18	7.3	49.1	85
301804S	UNITRONIC® 300 CY	4 x AWG18	7.9	59.6	104
301825S	UNITRONIC® 300 CY	25 x AWG18	16.8	278.4	448
302002S	UNITRONIC® 300 CY	2 x AWG20	6.3	28.3	60
302004S	UNITRONIC® 300 CY	4 x AWG20	7.3	40.2	88
302006S	UNITRONIC® 300 CY	6 x AWG20	8.4	55.1	119
302206S	UNITRONIC® 300 CY	6 x AWG22	6.4	35.7	68

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Copper price basis: EUR 150/100kg. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil 152 m; Drum 305 m
Photographs are not to scale and do not represent detailed images of the respective products.

Similar products

- ÖLFLEX® TRAY II refer to page 49
- ÖLFLEX® TRAY II CY refer to page 50

Accessories

- Universal strip stripping and cutting tool refer to page 906
- STAR STRIP stripping tool refer to page 906

UNITRONIC® FD

Highly flexible data transmission cable with PVC outer sheath for power chain use

Benefits

- Optimized cable construction for power chain use

Application range

- Automated production processes require data transmission cables that offer high flexibility and durability
- UNITRONIC® FD series cables are specially designed for power chain use

Product features

- The PVC outer sheath prevents adhesion to other cables in the power chain
- Flame-retardant according to IEC 60332.1.2
- Please follow the installation guidelines in Appendix T3.

Approvals

RoHS

Design

- Extra-fine wire strand made of bare copper wires
- Core insulation made of PVC
- Outer sheath made of PVC
  Outer sheath colour: grey (RAL 7001)

Technical data

Core identification code
DIN 47100, refer to Appendix T9

Mutual capacitance
C/C: approx. 100 nF/km

Peak operating voltage
(not for power applications)
350 V

Based on
VDE 0812

Specific insulation resistance
> 20 GOhm x cm

Inductivity
approx. 0.65 mH/km

Conductor stranding
Stranded, extra-fine wire in accordance with VDE 0295, single wire diameter 0.1 mm

Minimum bending radius
For flexible use:
5 x outer diameter

Test voltage
1500 V

Temperature range
Fixed installation: -40°C to +70°C
Flexing: -5°C to +70°C

Article number	Number of cores and mm² per conductor	Outer diameter (mm)	Copper index (kg/km)	Weight (kg/km)
UNITRONIC® FD				
0027841	3 x 0.14	4.1	4.2	26
0027842	4 x 0.14	4.4	5.6	31
0027843	5 x 0.14	4.7	7.0	35
0027844	7 x 0.14	5.4	9.8	50
0027845	10 x 0.14	6.4	14.0	63
0027846	14 x 0.14	6.5	19.6	77
0027847	18 x 0.14	7.1	25.2	91
0027848	25 x 0.14	8.6	35.0	125
0027855	2 x 0.25	4.6	5.0	27
0027856	3 x 0.25	4.7	7.5	33
0027857	4 x 0.25	5.1	10.0	40
0027858	5 x 0.25	5.6	12.5	51
0027859	7 x 0.25	6.4	17.5	51
0027860	10 x 0.25	7.7	25.0	84
0027861	14 x 0.25	7.8	35.0	108
0027863	18 x 0.25	8.8	45.0	130
0027865	25 x 0.25	10.8	62.5	178
0027870	2 x 0.34	4.9	6.8	30
0027871	3 x 0.34	5.2	10.2	43
0027872	4 x 0.34	5.7	13.6	57
0027873	5 x 0.34	6.2	17.0	65
0027874	7 x 0.34	7.1	23.8	85
0027875	10 x 0.34	8.8	34.0	117
0027876	14 x 0.34	8.9	47.6	151
0027877	18 x 0.34	10.0	61.2	182
0027878	25 x 0.34	12.3	85.0	250

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Copper price basis: EUR 150/100kg. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: coil ≤ 30 kg or ≤ 250 m, otherwise drum
Please specify the preferred type of packaging (e.g. 1 x 500 m drum or 5 x 100 m coils).
Photographs are not to scale and do not represent detailed images of the respective products.

Similar products

- UNITRONIC® FD CY refer to page 274
- UNITRONIC® FD P plus refer to page 275

UNITRONIC® FD CY

Screened highly flexible data transmission cable with PVC outer sheath for power chain use

Benefits

- Optimized cable construction for power chain use
- Overall braid minimises electrical interference

Application range

- Automated production processes require data transmission cables that offer high flexibility and durability, as well as excellent screening
- UNITRONIC® FD series cables are specially designed for power chain use

Product features

- The PVC outer sheath prevents adhesion to other cables in the power chain
- Flame-retardant according to IEC 60332.1.2
- Please follow the installation guidelines in Appendix T3.

Approvals

RoHS

Design

- Extra-fine wire strand made of bare copper wires
- Core insulation made of PVC
- Tinned-copper braiding
- Outer sheath made of PVC
  Outer sheath colour: grey (RAL 7001)

Technical data

Core identification code
DIN 47100, refer to Appendix T9

Mutual capacitance
C/C approx. 110 nF/km
C/S: approx. 110 nF/km

Peak operating voltage
(not for power applications)
350 V

Based on
VDE 0812

Specific insulation resistance
> 20 GOhm x cm

Inductivity
approx. 0.65 mH/km

Conductor stranding
Stranded, extra-fine wire in accordance with VDE 0295, single wire diameter 0.1 mm

Minimum bending radius
For flexible use: 7.5 x outer diameter

Test voltage
1500 V

Temperature range
Fixed installation: -40°C to +70°C
Flexing: -5°C to +70°C

Article number	Number of cores and mm² per conductor	Outer diameter (mm)	Copper index (kg/km)	Weight (kg/km)
UNITRONIC® FD CY				
0027411	3 x 0.14	4.7	14.1	37
0027412	4 x 0.14	5.0	15.5	42
0027413	5 x 0.14	5.4	18.3	47
0027414	7 x 0.14	6.0	27.6	70
0027416	10 x 0.14	7.0	39.3	90
0027418	14 x 0.14	7.1	45.3	106
0027420	18 x 0.14	7.7	54.1	123
0027422	25 x 0.14	9.2	68.4	163
0027425	2 x 0.25	5.1	14.9	39
0027426	3 x 0.25	5.4	18.8	46
0027427	4 x 0.25	5.8	21.3	53
0027428	5 x 0.25	6.2	31.0	71
0027429	7 x 0.25	7.0	39.6	75
0027431	10 x 0.25	8.5	53.9	114
0027434	14 x 0.25	8.6	64.2	141
0027436	18 x 0.25	9.4	78.4	167
0027438	25 x 0.25	11.4	101.0	221
0027440	2 x 0.34	5.6	16.1	47
0027441	3 x 0.34	5.9	28.7	63
0027442	4 x 0.34	6.3	35.7	81
0027443	5 x 0.34	6.8	39.1	89
0027444	7 x 0.34	7.7	52.7	117
0027446	10 x 0.34	9.4	67.4	155
0027448	14 x 0.34	9.5	85.3	194
0027450	18 x 0.34	10.7	99.7	225
0027452	25 x 0.34	12.9	155.0	327

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Copper price basis: EUR 150/100kg. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: coil ≤ 30 kg or ≤ 250 m, otherwise drum
Please specify the preferred type of packaging (e.g. 1 x 500 m drum or 5 x 100 m coils).
Photographs are not to scale and do not represent detailed images of the respective products.

Similar products

- UNITRONIC® FD CP plus refer to page 276

Accessories

- SKINTOP® MS-SC-M refer to page 668
- STAR STRIP stripping tool refer to page 906

UNITRONIC® FD P plus

Highly flexible data transmission cable with PUR outer sheath

Info

- **Flexible at low temperatures**
- **Low capacitance**
- **Halogen-free**

Benefits

- Optimized cable construction for power chain use
- Wide temperature range for applications in harsh climatic environments
- High mechanical strength

Application range

- Highly flexible data cable with PUR outer sheath, meets the highest service life requirements, even under harsh climatic conditions.
- Multifunctional-use, e.g. for packaging industry and storage and retrieval units

Product features

- PUR outer sheath, tear and notch-resistant, resistant to mineral oils and abrasion when used in power chains
- Flexible down to -40 °C
- The cable is halogen-free and has low capacitance
- Flame-retardant according to IEC 60332.1.2
- Adhesion-free, resistant to hydrolysis and microbes

Approvals

RoHS

Design

- Extra-fine wire strand made of bare copper wires
- Core insulation: Based on Polyolefin
- Outer sheath made of special PUR compound Outer sheath colour: grey (RAL 7001)

Technical data

Core identification code
DIN 47100, refer to Appendix T9

Mutual capacitance
C/C approx. 60 nF/km

Peak operating voltage
(not for power applications) 250 V

Specific insulation resistance
> 5 GOhm x km

Inductivity
approx. 0.65 mH/km

Conductor stranding
Stranded, extra-fine wire in accordance with VDE 0295, single wire diameter 0.1 mm

Minimum bending radius
For flexible use:
5 x outer diameter

Test voltage
1500 V

Temperature range
-40 °C to +80 °C

Article number	Number of cores and mm² per conductor	AWG size	Outer diameter (mm)	Copper index (kg/km)	Weight (kg/km)
UNITRONIC® FD P plus					
0028650	3 x 0.14	26 AWG	4.1	4.1	25
0028651	4 x 0.14	26 AWG	4.4	5.6	30
0028652	5 x 0.14	26 AWG	4.7	7.0	34
0028653	7 x 0.14	26 AWG	5.4	9.8	48
0028654	10 x 0.14	26 AWG	6.4	14.0	60
0028655	14 x 0.14	26 AWG	6.5	19.6	74
0028656	18 x 0.14	26 AWG	7.1	25.2	87
0028657	25 x 0.14	26 AWG	8.6	35.0	120
0028658	2 x 0.25	24 AWG	4.5	5.0	27
0028659	3 x 0.25	24 AWG	4.7	7.5	32
0028660	4 x 0.25	24 AWG	5.1	10.0	39
0028661	5 x 0.25	24 AWG	5.6	12.5	49
0028662	7 x 0.25	24 AWG	6.4	17.5	61
0028663	10 x 0.25	24 AWG	7.7	25.0	80
0028664	14 x 0.25	24 AWG	7.8	35.0	103
0028665	18 x 0.25	24 AWG	8.8	45.0	125
0028666	25 x 0.25	24 AWG	10.8	62.5	171
0028667	2 x 0.34	22 AWG	4.9	6.8	33
0028668	3 x 0.34	22 AWG	5.2	10.2	41
0028669	4 x 0.34	22 AWG	5.7	13.6	55
0028670	5 x 0.34	22 AWG	6.2	17.0	62
0028671	7 x 0.34	22 AWG	7.1	23.8	80
0028672	10 x 0.34	22 AWG	8.8	34.0	110
0028673	14 x 0.34	22 AWG	8.9	47.6	144
0028674	18 x 0.34	22 AWG	10.0	61.2	175
0028675	25 x 0.34	22 AWG	12.3	85.0	239

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Copper price basis: EUR 150/100kg. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: coil ≤ 30 kg or ≤ 250 m, otherwise drum
Please specify the preferred type of packaging (e.g. 1 x 500 m drum or 5 x 100 m coils).
Photographs are not to scale and do not represent detailed images of the respective products.

Accessories

- SMARTSTRIP stripping tool refer to page 907

UNITRONIC® FD CP plus

Screened highly flexible data transmission cable with PUR outer sheath - UL/CSA-listed

Info

- Flexible at low temperatures
- Low capacitance
- Halogen-free

Benefits

- Wide temperature range for applications in harsh climatic environments
- High mechanical strength
- Approval: UL/CSA type CMX in accordance with UL 444 and CSA C22.2 no. 214-02
- Optimized cable construction for power chain use
- Overall braid minimises electrical interference

Application range

- Highly flexible data transmission cable complies with the most stringent service life requirements, even in harsh climatic conditions, UL/CSA-approved
- Multifunctional-use, e.g. for packaging industry and storage and retrieval units
- Ideal for export-oriented machinery and equipment manufacturers
- For the North American market

Product features

- The cable is halogen-free and has low capacitance
- PUR outer sheath, tear and notch-resistant, resistant to mineral oils and abrasion when used in power chains
- Adhesion-free, resistant to hydrolysis and microbes
- Flexible down to -40 °C
- Flame-retardant according to IEC 60332-1-2 and VW-1 acc. to UL-1581

Approvals

c UL us RoHS

Design

- Extra-fine wire strand made of bare copper wires
- Core insulation: Based on Polyolefin
- Tinned-copper braiding
- Outer sheath made of special PUR compound Outer sheath colour: grey (RAL 7001)

Technical data

Core identification code
DIN 47100, refer to Appendix T9

Approvals
CMX (UL/CSA)

Mutual capacitance
C/C approx. 60 nF/km

Peak operating voltage
(not for power applications) 250 V

Specific insulation resistance
> 5 GOhm x km

Inductivity
approx. 0.65 mH/km

Conductor stranding
Stranded, extra-fine wire in accordance with VDE 0295, single wire diameter 0.1 mm

Minimum bending radius
For flexible use: 7.5 x outer diameter

Test voltage
Core/core: 1500 V
Core/screen: 500 V

Temperature range
-40 °C to +80 °C

Article number	Number of cores and mm² per conductor	AWG size	Outer diameter (mm)	Copper index (kg/km)	Weight (kg/km)
UNITRONIC® FD CP plus					
0028880	2 x 0.14	26 AWG	4.5	11.2	33
0028881	3 x 0.14	26 AWG	4.7	14.1	36
0028882	4 x 0.14	26 AWG	5.1	15.5	40
0028883	5 x 0.14	26 AWG	5.4	18.3	45
0028884	7 x 0.14	26 AWG	6.0	27.8	67
0028885	10 x 0.14	26 AWG	7.0	39.3	87
0028886	14 x 0.14	26 AWG	7.1	45.3	102
0028887	18 x 0.14	26 AWG	7.7	54.1	118
0028888	25 x 0.14	26 AWG	9.2	68.4	157
0028889	2 x 0.25	24 AWG	5.1	14.9	38
0028890	3 x 0.25	24 AWG	5.4	18.8	45
0028891	4 x 0.25	24 AWG	5.8	21.3	52
0028892	5 x 0.25	24 AWG	6.2	31.0	69
0028893	7 x 0.25	24 AWG	7.0	39.6	84
0028894	10 x 0.25	24 AWG	8.5	53.9	109
0028895	14 x 0.25	24 AWG	8.6	64.2	136
0028896	18 x 0.25	24 AWG	9.4	78.4	161
0028897	25 x 0.25	24 AWG	11.4	101.0	213
0028898	2 x 0.34	22 AWG	5.6	18.1	45
0028899	3 x 0.34	22 AWG	5.9	28.7	61
0028900	4 x 0.34	22 AWG	6.3	35.7	77
0028901	5 x 0.34	22 AWG	6.8	39.1	83
0028902	7 x 0.34	22 AWG	7.7	52.7	109
0028903	10 x 0.34	22 AWG	9.4	67.4	147
0028904	14 x 0.34	22 AWG	9.5	85.8	186
0028905	18 x 0.34	22 AWG	10.7	99.7	216
0028906	25 x 0.34	22 AWG	12.9	155.0	314

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Copper price basis: EUR 150/100kg. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: coil ≤ 30 kg or ≤ 250 m, otherwise drum
Please specify the preferred type of packaging (e.g. 1 x 500 m drum or 5 x 100 m coils).
Photographs are not to scale and do not represent detailed images of the respective products.

Similar products

- UNITRONIC® FD CP (TP) plus refer to page 277

Accessories

- SKINTOP® MS-SC-M refer to page 668
- STAR STRIP stripping tool refer to page 906

UNITRONIC® FD CP (TP) plus

Screened highly flexible data transmission cable with PUR outer sheath and twisted pairs - UL/CSA-listed

Info

- **Flexible at low temperatures**
- **Low capacitance**
- **Halogen-free**

Benefits

- Wide temperature range for applications in harsh climatic environments
- High mechanical strength
- Approval: UL/CSA type CMX in accordance with UL 444 and CSA C22.2 no. 214-02
- Overall braid minimises electrical interference
- Twisted pair (TP) decouples the cable circuits

Application range

- Ideal for export-oriented machinery and equipment manufacturers
- Power chains
- Linear robots
- Automated handling equipment
- For the North American market

Product features

- The cable is halogen-free and has low capacitance
- PUR outer sheath, tear and notch-resistant, resistant to mineral oils and abrasion when used in power chains
- Adhesion-free, resistant to hydrolysis and microbes
- Flexible down to -40°C
- Flame-retardant according to IEC 60332-1-2 and VW-1 acc. to UL-1581

Approvals

c UL us RoHS

Design

- Extra-fine wire strand made of bare copper wires
- Core insulation: Based on Polyolefin
- TP structure
- Tinned-copper braiding
- Outer sheath made of special PUR compound Outer sheath colour: grey (RAL 7001)

Technical data

Core identification code
DIN 47100, refer to Appendix T9

Approvals
CMX (UL/CSA)

Mutual capacitance
Up to 0.5 mm²: 60 nF/km
Up to 1.0 mm²: 70 nF/km

Peak operating voltage
(not for power applications) 250 V

Specific insulation resistance
> 5 GOhm x km

Inductivity
approx. 0.65 mH/km

Conductor stranding
Stranded, extra-fine wire, Class 6, in accordance with VDE 0295

Minimum bending radius
7.5 x outer diameter

Test voltage
Core/core: 1500 V
Core/screen: 500 V

Temperature range
-40 °C to +80 °C

Article number	Number of pairs and mm² per conductor	AWG size	Outer diameter (mm)	Copper index (kg/km)	Weight (kg/km)
UNITRONIC® FD CP (TP) plus					
0030910	2 x 2 x 0.14	26 AWG	6.2	19.4	42
0030911	3 x 2 x 0.14	26 AWG	6.5	23.4	53
0030912	4 x 2 x 0.14	26 AWG	7.0	27.1	59
0030913	5 x 2 x 0.14	26 AWG	7.6	37.4	75
0030914	6 x 2 x 0.14	26 AWG	7.8	49.4	91
0030915	8 x 2 x 0.14	26 AWG	9.1	54.8	109
0030916	10 x 2 x 0.14	26 AWG	10.5	60.1	120
0030962	1 x 2 x 0.25	24 AWG	5.1	14.0	27
0030919	2 x 2 x 0.25	24 AWG	7.3	32.0	60
0030920	3 x 2 x 0.25	24 AWG	7.7	38.4	72
0030921	4 x 2 x 0.25	24 AWG	8.6	43.2	85
0030922	5 x 2 x 0.25	24 AWG	9.3	51.5	103
0030923	6 x 2 x 0.25	24 AWG	9.6	71.8	131
0030924	8 x 2 x 0.25	24 AWG	11.3	74.4	155
0030925	10 x 2 x 0.25	24 AWG	13.0	90.0	186
0030926	14 x 2 x 0.25	24 AWG	13.2	111.2	219
0030963	1 x 2 x 0.34	22 AWG	5.6	20.0	36
0030928	2 x 2 x 0.34	22 AWG	8.2	41.0	81
0030929	3 x 2 x 0.34	22 AWG	8.7	52.0	101
0030930	4 x 2 x 0.34	22 AWG	9.5	59.0	119
0030932	6 x 2 x 0.34	22 AWG	11.0	86.2	165
0030933	8 x 2 x 0.34	22 AWG	12.8	107.3	221
0030934	10 x 2 x 0.34	22 AWG	14.9	131.1	274
0030964	1 x 2 x 0.5	20 AWG	6.2	22.0	47
0030937	2 x 2 x 0.5	20 AWG	9.3	50.0	99
0030938	3 x 2 x 0.5	20 AWG	10.1	71.8	130
0030939	4 x 2 x 0.5	20 AWG	11.1	74.4	148
0030940	5 x 2 x 0.5	20 AWG	12.3	84.5	168
0030941	6 x 2 x 0.5	20 AWG	12.7	99.6	194
0030942	8 x 2 x 0.5	20 AWG	15.1	144.3	284
0030943	10 x 2 x 0.5	20 AWG	17.2	176.0	343
0030944	14 x 2 x 0.5	20 AWG	17.5	215.4	401
0030965	1 x 2 x 0.75	19 AWG	6.6	34.0	61
0030946	2 x 2 x 0.75	19 AWG	10.2	60.0	112
0030947	3 x 2 x 0.75	19 AWG	10.9	85.7	157
0030948	4 x 2 x 0.75	19 AWG	12.2	93.6	172
0030950	6 x 2 x 0.75	19 AWG	14.2	130.4	231
0030951	8 x 2 x 0.75	19 AWG	16.4	192.2	342
0030952	10 x 2 x 0.75	19 AWG	19.3	258.0	466
0030953	14 x 2 x 0.75	19 AWG	19.8	316.6	545
0030955	1 x 2 x 1	18 AWG	7.0	42.0	71
0030956	2 x 2 x 1	18 AWG	11.0	73.0	129
0030957	3 x 2 x 1	18 AWG	11.9	93.6	169
0030958	4 x 2 x 1	18 AWG	13.1	117.8	204
0030959	5 x 2 x 1	18 AWG	14.7	139.0	237

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Copper price basis: EUR 150/100kg. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: coil ≤ 30 kg or ≤ 250 m, otherwise drum
Please specify the preferred type of packaging (e.g. 1 x 500 m drum or 5 x 100 m coils).
Photographs are not to scale and do not represent detailed images of the respective products.

Accessories

- STAR STRIP stripping tool refer to page 906

UNITRONIC® EB CY (TP)

Screened data transmission cable with twisted pairs and blue outer sheath

Info

- **Hazard protection type -i- is required where there is a risk of explosion**

Benefits

- Overall braid minimises electrical interference
- Twisted pair (TP) decouples the cable circuits

Application range

- Reliable data transmission in intrinsically safe circuits
- In EMC-sensitive environments (electromagnetic compatibility)

Product features

- Complies with VDE 0165 Section 12.2.2.6. Marking of cables for hazard type -i- (intrinsically safe) is specified
- Decoupling of circuits by means of twisted-pair (TP) design (crosstalk effects)
- Flame-retardant according to IEC 60332.1.2

Approvals

RoHS

Design

- Fine-wire strand made of bare copper wires
- Core insulation made of PVC
- TP structure
- Tinned-copper braiding
- Outer sheath made of PVC
  Outer sheath colour: sky blue (RAL 5015)

Technical data

Core identification code
DIN 47100, refer to Appendix T9

Mutual capacitance
C/C approx. 100 nF/km
C/S approx. 140 nF/km

Peak operating voltage
(not for power applications)
900 V

Based on
VDE 0812

Specific insulation resistance
> 20 GOhm x cm

Inductivity
approx. 0.65 mH/km

Conductor stranding
Strand, fine-wire in accordance with VDE 0295, Class 5/IEC 60228 Cl. 5

Minimum bending radius
For flexible use:
15 x outer diameter
Fixed installation: 6 x outer diameter

Test voltage
2500 V

Temperature range
Fixed installation: -30 °C to +80 °C
Flexing: -5°C to +70°C

Article number	Number of pairs and conductor cross section (mm²)	Outer diameter (mm)	Copper index (kg/km)	Weight (kg/km)
UNITRONIC® EB CY (TP)				
0012620	2 x 2 x 0.75	8.7	58.0	106
0012621	3 x 2 x 0.75	9.6	84.0	140
0012622	4 x 2 x 0.75	10.9	108.0	179
0012624	6 x 2 x 0.75	12.3	146.0	246
0012626	10 x 2 x 0.75	16.1	220.0	392

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Copper price basis: EUR 150/100kg. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: coil ≤ 30 kg or ≤ 250 m, otherwise drum
Please specify the preferred type of packaging (e.g. 1 x 500 m drum or 5 x 100 m coils).
Photographs are not to scale and do not represent detailed images of the respective products.

Accessories

- Multipurpose shears A and B refer to page 902
- SKINTOP® K-M ATEX plus blue refer to page 661

UNITRONIC® EB JE-LiYCY...BD

Screened data transmission cable with blue outer sheath for industrial electronics

Benefits

- UNITRONIC® EB JE-LiYCY...BD is a connecting cable for electronics used in measurement and control engineering, and can also be used as pulse and data transmission cable
- Can be used for Maxi TERMI-POINT® wiring
- Overall braid minimises electrical interference
- Twisted pair (TP) decouples the cable circuits

Application range

- Industrial electronics
- Measurement and control technology
- For fixed installation on and under plaster, in dry and damp rooms.
- For outdoor use this cable should be installed under plaster only.

Product features

- Complies with VDE 0165 Section 12.2.2.6. Marking of cables for hazard type -i- (intrinsically safe) is specified
- Flame-retardant according to IEC 60332.1.2
- The 2-pair version (2 x 2 x 0.5) is twisted into a star quad
- Printed text may differ from illustration

Approvals

RoHS

Design

- Multi-wire strand made of bare copper wires
- Core insulation made of PVC
- TP structure
- Tinned-copper braiding
- Outer sheath made of PVC
  Outer sheath colour: sky blue (RAL 5015)

Technical data

Core identification code
according to VDE 0815, refer to Appendix T10

Mutual capacitance
Approx. 100 nF/km

Peak operating voltage
(not for power applications) 225 V

Based on
VDE 0815

Coupling
Approx. 200 pF/100 m

Inductivity
approx. 0.65 mH/km

Conductor stranding
Stranded, multi-wire, VDE 0295, Class 2/IEC 60228 Class 2.

Minimum bending radius
For flexible use:
15 x outer diameter
Fixed installation: 6 x outer diameter

Test voltage
Core/core: 500 V
Core/screen: 2000 V

Loop resistance
max. 78.4 ohm/km

Temperature range
Fixed installation: -40°C to +70°C
Flexing: -5°C to +70°C

Article number	Number of pairs and conductor cross section (mm²)	Outer diameter (mm)	Copper index (kg/km)	Weight (kg/km)
UNITRONIC® EB JE-LiYCY...BD				
0034220	2 x 2 x 0.5	7.5	51.0	95
0034221	4 x 2 x 0.5	10.0	87.0	155
0034222	8 x 2 x 0.5	13.0	144.0	260
0034223	12 x 2 x 0.5	15.5	193.0	340
0034224	16 x 2 x 0.5	17.0	249.0	430
0034225	20 x 2 x 0.5	18.5	298.0	495
0034226	24 x 2 x 0.5	20.5	348.0	605
0034227	32 x 2 x 0.5	22.5	441.0	738
0034228	40 x 2 x 0.5	24.0	531.0	845

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Copper price basis: EUR 150/100kg. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: coil ≤ 30 kg or ≤ 250 m, otherwise drum
Please specify the preferred type of packaging (e.g. 1 x 500 m drum or 5 x 100 m coils).
TERMI-POINT® is a registered trademark of AMP
Photographs are not to scale and do not represent detailed images of the respective products.

Accessories

- Multipurpose shears A and B refer to page 902
- SKINTOP® K-M ATEX plus blue refer to page 661
- STAR STRIP stripping tool refer to page 906

UNITRONIC® EB JE-Y(ST)Y 0,8 BD

Static screened installation cable with blue outer sheath for industrial electronics

Info

- **Hazard protection type -i- is required where there is a risk of explosion**

Benefits

- Aluminium-laminated plastic foil static screen with tin-plated drain wire minimises the interference of high frequency, electromagnetic field

Application range

- Connecting cable for measurement and control technology
- Industrial electronics
- For fixed installation on and under plaster, in dry and damp rooms.
- For outdoor use this cable should be installed under plaster only.

Product features

- Complies with VDE 0165 Section 12.2.2.6. Marking of cables for hazard type -i- (intrinsically safe) is specified
- Flame-retardant according to IEC 60332.1.2
- 2 cores twisted into a pair, and 4 pairs into units (for 2 x 2 x 0.8 as star quad cable)
- Printed text may differ from illustration

Approvals

RoHS

Design

- Solid bare copper conductor
- Core insulation made of PVC
- TP structure
- Foil wrapping, static screening made of aluminium-laminated plastic film with copper drain wire
- Outer sheath made of PVC
  Outer sheath colour: sky blue (RAL 5015)

Technical data

Core identification code
according to VDE 0815, refer to Appendix T10 on “Ring Printing”

Mutual capacitance
Approx. 100 nF/km

Peak operating voltage
(not for power applications) 225 V

Based on
VDE 0815

Insulation resistance
> 100 MOhm

Coupling
Approx. 200 pF/100 m

Inductivity
approx. 0.65 mH/km

Conductor stranding
Single-wire solid conductor, 0.8 mm Ø
0.8 mm: 0.50 mm²

Minimum bending radius
Fixed installation: 6 x outer diameter

Test voltage
Core/core: 500 V
Core/screen: 2000 V

Loop resistance
max. 73.2 Ohm/km

Temperature range
Fixed installation: -40°C to +70°C

Article number	Number of pairs and conductor diameter (mm)	Outer diameter (mm)	Copper index (kg/km)	Weight (kg/km)
UNITRONIC® EB JE-Y(ST)Y 0.8 BD				
0034120	2 x 2 x 0.8	6.0	25.0	60
0034121	4 x 2 x 0.8	8.5	45.0	100
0034122	8 x 2 x 0.8	11.0	85.0	165
0034123	12 x 2 x 0.8	13.0	126.0	240
0034125	20 x 2 x 0.8	16.0	206.0	360
0034126	32 x 2 x 0.8	20.0	327.0	555

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Copper price basis: EUR 100/100kg. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: coil ≤ 30 kg or ≤ 250 m, otherwise drum
Please specify the preferred type of packaging (e.g. 1 x 500 m drum or 5 x 100 m coils).
Photographs are not to scale and do not represent detailed images of the respective products.

Accessories

- SKINTOP® K-M ATEX plus blue refer to page 661

UNITRONIC® LiYCY-CY

Screened data transmission cable with individually screened cores

Benefits

- Overall braid minimises electrical interference
- Individually screened cores minimise crosstalk between cables routed in parallel

Application range

- When a lossless transmission of data has to be guaranteed in fields with strong interference, cables with individually-screened cores and an additional overall screening are used.
- Dry or damp rooms

Product features

- Data transmission cable with double copper screening
- Wire-screen can be used as outer conductor
- The cable remains flexible despite multiple screening
- Flame-retardant according to IEC 60332.1.2

Approvals

RoHS

Design

- Fine-wire strand made of bare copper wires
- Core insulation made of PVC
- Tinned-copper braiding for each core
- Inner sheath made of PVC over each screened core
- Tinned-copper braiding
- Outer sheath made of PVC
  Outer sheath colour: pebble grey (RAL 7032)

Technical data

Core identification code
DIN 47100, refer to Appendix T9

Mutual capacitance
Approx. 230 nF/km

Peak operating voltage
(not for power applications) 250 V

Based on
VDE 0812

Specific insulation resistance
> 20 GOhm x cm

Inductivity
Approx. 0.2 mH/km

Conductor stranding
Fine copper wire strands

Minimum bending radius
For flexible use:
15 x outer diameter

Test voltage
1200 V

Temperature range
Fixed installation: -30 °C to +80 °C
Flexing: -5°C to +70°C

Article number	Number of cores and mm² per conductor	Outer diameter (mm)	Copper index (kg/km)	Weight (kg/km)
UNITRONIC® LiYCY-CY				
0032302	2 x 0.25	6.5	41.5	69
0032303	3 x 0.25	7.1	53.0	106
0032304	4 x 0.25	7.7	65.0	130
0032305	5 x 0.25	8.4	78.0	161
0032307	7 x 0.25	10.0	94.0	196

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Copper price basis: EUR 150/100kg. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: coil ≤ 30 kg or ≤ 250 m, otherwise drum
Please specify the preferred type of packaging (e.g. 1 x 500 m drum or 5 x 100 m coils).
Photographs are not to scale and do not represent detailed images of the respective products.

Similar products

- UNITRONIC® CY PiDY (TP) refer to page 283

Accessories

- SKINTOP® MS-SC-M refer to page 668
- Multipurpose shears A and B refer to page 902
- Universal strip stripping and cutting tool refer to page 906
- DATA STRIP stripping tool refer to page 907

UNITRONIC® LiFYCY (TP)

Screened miniature data transmission cable

Info

- TP = twisted pair

Benefits

- TP structure minimises crosstalk
- Overall braid minimises electrical interference

Application range

- For protection against high-frequency interference, screened, fine-wire cables are used in many devices.
- Additional decoupling through TP structure.
- Examples: microelectronics, hearing aids etc.

Product features

- Very small dimensions
- Colour-coded in accordance with DIN 47100
- Flame-retardant according to IEC 60332.1.2

Approvals

RoHS

Design

- Extra-fine wire strand made of bare copper wires
- Core insulation made of PVC
- TP structure
- Tinned-copper braiding
- Outer sheath made of PVC
  Outer sheath colour: pebble grey (RAL 7032)

Technical data

Core identification code
DIN 47100, refer to Appendix T9

Mutual capacitance
C/C approx. 80 nF/km
C/S approx. 120 nF/km

Peak operating voltage
(not for power applications) 150 V

Based on
VDE 0812

Specific insulation resistance
> 20 GOhm x cm

Coupling
At 1 kHz: approx. 300 pF/100 m

Inductivity
approx. 0.65 mH/km

Conductor stranding
Stranded, extra-fine wire,
cross-section 0.08 mm²

Minimum bending radius
7.5 x outer diameter

Test voltage
800 V

Temperature range
Fixed installation: -30°C to +70°C
Flexible use: -5°C to +50°C

Article number	Number of cores and mm² per conductor	Outer diameter (mm)	Copper index (kg/km)	Weight (kg/km)
UNITRONIC® LiFYCY (TP)				
0034231	4 x 2 x 0.08	5.1	19.4	37
0034233	8 x 2 x 0.08	6.7	23.7	76

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Copper price basis: EUR 150/100kg. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: coil ≤ 30 kg or ≤ 250 m, otherwise drum
Please specify the preferred type of packaging (e.g. 1 x 500 m drum or 5 x 100 m coils).
Photographs are not to scale and do not represent detailed images of the respective products.

Accessories

- SKINTOP® MS-SC-M refer to page 668
- EASY STRIP 2 stripping and cutting tool refer to page 905
- Multipurpose shears A and B refer to page 902
- DATA STRIP stripping tool refer to page 907

UNITRONIC® CY PiDY (TP)

Screened data transmission cable with copper-wrapped twisted pairs

Info

- **PiDY = Pairs with copper wire wrapping and PVC sheath**
- **TP = twisted pair**

Benefits

- TP structure minimises crosstalk
- Individually screened pairs and the overall braid minimise electrical interference enormously

Application range

- Cable should be used in areas with high levels of electromagnetic interferences
- For fixed installation and flexible use
- Dry or damp rooms

Product features

- The cable remains flexible despite multiple screening
- Flame-retardant according to IEC 60332.1.2
- Colour-coded in accordance with DIN 47100

Approvals

RoHS

Design

- Fine-wire strand made of bare copper wires
- Core insulation made of PVC
- Cores twisted into pairs
- Copper wrapping over pairs
- Inner sheath made of PVC over screened pairs
- Tinned-copper braiding
- Outer sheath made of PVC
  Outer sheath colour: pebble grey (RAL 7032)

Technical data

Core identification code
DIN 47100, refer to Appendix T9

Mutual capacitance
C/C approx. 120 nF/km
C/S: approx. 160 nF/km

Peak operating voltage
(not for power applications)
350 V

Based on
VDE 0812

Specific insulation resistance
> 20 GOhm x cm

Inductivity
approx. 0.65 mH/km

Conductor stranding
Stranded conductor, fine-wire

Minimum bending radius
Fixed installation: 6 x outer diameter

Test voltage
1200 V

Loop resistance
< 160 Ohm/km

Temperature range
Fixed installation: -30°C to +70°C
Flexible use: -5°C to +50°C

Characteristic impedance
Approx. 65 Ohm

Article number	Number of cores and mm² per conductor	Outer diameter (mm)	Copper index (kg/km)	Weight (kg/km)
UNITRONIC® CY PiDY (TP)				
0034250	2 x 2 x 0.25	9.3	59.6	112
0034251	3 x 2 x 0.25	9.8	72.7	136
0034252	4 x 2 x 0.25	11.1	88.2	168
0034253	5 x 2 x 0.25	11.8	103.8	201
0034254	6 x 2 x 0.25	12.8	125.7	244
0034255	7 x 2 x 0.25	14.1	143.6	274
0034256	8 x 2 x 0.25	15.4	161.0	325
0034257	10 x 2 x 0.25	17.1	186.8	342
0034258	12 x 2 x 0.25	18.3	239.5	416
0034259	16 x 2 x 0.25	20.3	316.7	542

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Copper price basis: EUR 150/100kg. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: coil ≤ 30 kg or ≤ 250 m, otherwise drum
Please specify the preferred type of packaging (e.g. 1 x 500 m drum or 5 x 100 m coils).
Photographs are not to scale and do not represent detailed images of the respective products.

Similar products

- UNITRONIC® Li2YCY PiMF refer to page 288

Accessories

- SKINTOP® MS-SC-M refer to page 668
- Universal strip stripping and cutting tool refer to page 906
- STAR STRIP stripping tool refer to page 906

UNITRONIC® LiYD 11Y

Data transmission cable with copper wrapping and PUR outer sheath

Benefits

- UNITRONIC® LiYD 11Y has an overall screening which prevents external electrical interference and guarantees precise pulse transmission.
- PUR outer sheath is highly resistant to mineral oils and abrasion

Application range

- Cables are intended for use in industrial environments, where screened cables are required. They have very small cross-sections and have excellent mechanical and chemical resistance.

Product features

- Cut and abrasion-resistant PUR outer sheath
- The PUR outer sheath is resistant to wear and tear.
- Flame-retardant according to IEC 60332.1.2
- Spiral versions are also availabe except for the 7-core version

Approvals

RoHS

Design

- Extra-fine wire strand made of bare copper wires
- Core insulation made of PVC
- Screening: wrapped with bare copper wires
- Outer sheath made of PUR
  Outer sheath colour: black (RAL 9005)

Technical data

Core identification code
DIN 47100 without colour repetition, refer to Appendix T9

Mutual capacitance
C/C approx. 140 nF/km
C/S approx. 150 nF/km

Peak operating voltage
(not for power applications) 250 V

Based on
VDE 0812

Specific insulation resistance
> 20 GOhm x cm

Inductivity
approx. 0.65 mH/km

Conductor stranding
Stranded, extra-fine wire

Minimum bending radius
For flexible use:
10 x outer diameter
Fixed installation:
6 x outer diameter

Test voltage
1200 V

Temperature range
Fixed installation: -30 °C to +80 °C
Flexing: -5°C to +70°C

Article number	Number of cores and mm² per conductor	Outer diameter (mm)	Copper index (kg/km)	Weight (kg/km)
UNITRONIC® LiYD 11Y				
0033202	2 x 0.14	4.1	9.6	20
0033203	3 x 0.14	4.3	11.0	25
0033204	4 x 0.14	4.5	12.0	27
0033205	5 x 0.14	4.8	14.4	33
0033206	6 x 0.14	5.5	17.6	38
0033207	7 x 0.14	5.9	21.5	41
0033212	12 x 0.14	7.2	33.2	62
0033218	18 x 0.14	8.0	44.2	83
0033302	2 x 0.25	4.7	11.8	25
0033303	3 x 0.25	5.3	15.6	31
0033304	4 x 0.25	5.6	18.2	36
0033305	5 x 0.25	6.0	21.4	42
0033306	6 x 0.25	6.8	26.1	49
0033312	12 x 0.25	8.4	48.1	81

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Copper price basis: EUR 150/100kg. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: coil ≤ 30 kg or ≤ 250 m, otherwise drum
Please specify the preferred type of packaging (e.g. 1 x 500 m drum or 5 x 100 m coils).
Photographs are not to scale and do not represent detailed images of the respective products.

Similar products

- UNITRONIC® SPIRAL refer to page 235

Accessories

- Multipurpose shears A and B refer to page 902
- Universal strip stripping and cutting tool refer to page 906
- DATA STRIP stripping tool refer to page 907

UNITRONIC® ST

Static screened data transmission cable similar to UL AWM 2092

Benefits

- Aluminium-laminated plastic foil static screen with tin-plated drain wire minimises the interference of high frequency, electromagnetic field

Application range

- UNITRONIC® ST data transmission cables are especially designed for the transmission of the smallest measurement and control signals at minimal space requirements.
- For fixed and limited flexible installation
- For use in dry, damp and wet rooms

Product features

- Protection against interferences at medium and high frequencies by aluminium foil, combination of flexibility and good screening (normal requirements).
- Flame-retardant according to IEC 60332.1.2

Approvals

RoHS

Design

- 7-wire tinned stranded copper conductor
- Core insulation made of polyethylene (PE)
- Plastic-laminated aluminium foil with tinned copper drain wire
- Outer sheath made of PVC
  Outer sheath colour: pebble grey (RAL 7032)

Technical data

Core identification code
1: transparent 2: black (3: red)

Mutual capacitance
C/C approx. 90 nF/km
C/S approx. 160 nF/km

Peak operating voltage
(not for power applications):
500 V

Based on
UL 2092 / 2093

Specific insulation resistance
> 5 GOhm x km

Inductivity
approx. 0.65 mH/km

Minimum bending radius
10 x outer diameter

Test voltage
1500 V

Temperature range
Fixed installation: -40°C to +80°C
Flexing: -5°C to +70°C

Characteristic impedance
Approx. 95 Ohm

Article number	Number of conductors and AWG size	Conductor cross-section (mm²)	Core insulation material	Outer sheath material	Outer diameter (mm)	Copper index (kg/km)	Type no.
UNITRONIC® ST							
0033000	2 x AWG 20/7	0.52	PE	PVC	5.2	17.2	Belden 8762
0033001	3 x AWG 20/7	0.52	PE	PVC	5.3	23.0	Belden 8772

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Copper price basis: EUR 150/100kg. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: coil ≤ 30 kg or ≤ 250 m, otherwise drum
Please specify the preferred type of packaging (e.g. 1 x 500 m drum or 5 x 100 m coils).
Photographs are not to scale and do not represent detailed images of the respective products.

Accessories

- Universal strip stripping and cutting tool refer to page 906
- DATA STRIP stripping tool refer to page 907

UNITRONIC® Li2YCY (TP)

Screened data transmission cable mit PE core insulation, 7-wire strands and twisted pairs

UNITRONIC® Li2YCY (TP) fine-wired

Screened data transmission cable mit PE core insulation, fine wire strands and twisted pairs

UNITRONIC® Li2YCYv (TP)

Screened data transmission cable mit PE core insulation, reinforced outer sheath and twisted pairs

Benefits

- 7-wire stranded conductor (UNITRONIC® Li2YCY (TP) and UNITRONIC® Li2YCYv (TP)) can be used for Maxi TERMI-POINT® wiring
- Overall braid minimises electrical interference
- TP structure minimises crosstalk

Application range

- The UNITRONIC® Li2YCYv (TP) model with reinforced black outer sheath (Yv) is suitable for indoors and outdoors, as well as direct burial in the ground.
- UNITRONIC® Li2YCY (TP) is particularly suitable for wiring data systems with transmission rates up to 10 Megabits per second, and is qualified for the RS422 and RS485 interfaces.
- Cables of this type are intended for limited flexible use, and for fixed installation in dry or damp interiors

Product features

- Flame-retardant according to IEC 60332.1.2

Approvals

RoHS

Design

UNITRONIC® Li2YCY (TP)

- 7-wire tinned stranded copper conductor
- Core insulation made of polyethylene (PE)
- TP structure
- Tinned-copper braiding
- Outer sheath made of PVC
  Outer sheath colour: pebble grey (RAL 7032)

UNITRONIC® Li2YCY (TP) fine-wired

- Similar to UNITRONIC® Li2YCY (TP), but with fine-wire conductor design

UNITRONIC® Li2YCYv (TP)

- Similar to UNITRONIC® Li2YCY (TP), but with reinforced PVC outer sheath (Yv)
- Outer sheath colour: black (RAL 9005)

Technical data

Core identification code
DIN 47100, refer to Appendix T9

Mutual capacitance
UNITRONIC® Li2YCY (TP)
At 800 Hz: max. 60 nF/km

Peak operating voltage
(not for power applications) 250 V

Based on
UNITRONIC® Li2YCY (TP)
VDE 0812

Specific insulation resistance
> 5 GOhm x km

Inductivity
UNITRONIC® Li2YCY (TP)
approx. 0.65 mH/km

Conductor stranding
UNITRONIC® Li2YCY (TP)
Stranded conductor, based on VDE 0881, 7-wire
UNITRONIC® Li2YCY (TP) fine-wired
Stranded conductor, fine-wire
UNITRONIC® Li2YCYv (TP)
Stranded conductor, based on VDE 0881, 7-wire

Minimum bending radius
For flexible use:
15 x outer diameter
Fixed installation: 6 x outer diameter

Short-range crosstalk attenuation
Up to 1 MHz min. 50 dB
Up to 10 MHz min. 40 dB

Test voltage
UNITRONIC® Li2YCY (TP)
Core/core: 2000 V
Core/screen: 1000 V

Temperature range
Fixed installation: -30 °C to +80 °C
Flexing: -5°C to +70°C

Characteristic impedance
100 Ohm +- 15

Article number	Number of pairs and mm² per conductor	Outer diameter (mm)	Copper index (kg/km)	Weight (kg/km)
UNITRONIC® Li2YCY (TP)				
0031320	2 x 2 x 0,22	6.5	24.2	59
0031321	3 x 2 x 0,22	7.1	28.6	66
0031322	4 x 2 x 0,22	7.3	34.2	78
0031323	8 x 2 x 0,22	9.1	70.0	125
0031324	10 x 2 x 0,22	10.4	76.0	143
0031335	1 x 2 x 0,34	5.8	20.0	44
0031325	2 x 2 x 0,34	7.7	34.1	79
0031326	3 x 2 x 0,34	8.9	43.0	89
0031327	4 x 2 x 0,34	8.7	47.0	101

Article number	Number of pairs and mm² per conductor	Outer diameter (mm)	Copper index (kg/km)	Weight (kg/km)
0031328	8 x 2 x 0,34	11.0	85.8	176
0031336	1 x 2 x 0,5	6.3	29.0	53
0031330	2 x 2 x 0,5	8.5	37.0	85
0031331	3 x 2 x 0,5	9.3	55.0	105
0031332	4 x 2 x 0,5	9.6	60.0	122
0031333	8 x 2 x 0,5	12.7	113.3	213
0031334	10 x 2 x 0,5	14.8	154.0	261
UNITRONIC® Li2YCY (TP) fine-wire				
0031370	1 x 2 x 0,25	5.7	14.0	38
0031371	2 x 2 x 0,25	6.9	28.0	56
0031372	3 x 2 x 0,25	7.5	39.6	64
0031373	5 x 2 x 0,25	8.3	50.0	93
UNITRONIC® Li2YCYv (TP) black for outdoor installation and direct burial				
0031350	2 x 2 x 0,22	8.1	24.2	79
0031351	3 x 2 x 0,22	8.7	28.6	93
0031352	4 x 2 x 0,22	8.8	34.2	100
0031353	8 x 2 x 0,22	10.7	70.0	156
0031354	10 x 2 x 0,22	12.0	76.0	185
0031365	1 x 2 x 0,34	7.4	20.0	69
0031355	2 x 2 x 0,34	9.3	34.1	102
0031356	3 x 2 x 0,34	10.0	43.0	117
0031357	4 x 2 x 0,34	10.3	52.8	130
0031358	8 x 2 x 0,34	12.6	85.8	206
0031366	1 x 2 x 0,5	7.9	29.0	79
0031360	2 x 2 x 0,5	10.1	37.0	120
0031361	3 x 2 x 0,5	10.9	55.0	142
0031362	4 x 2 x 0,5	11.2	60.0	160
0031363	8 x 2 x 0,5	13.9	113.3	251
0031364	10 x 2 x 0,5	16.0	148.0	303

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Copper price basis: EUR 150/ 100kg. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: coil ≤ 30 kg or ≤ 250 m, otherwise drum
Please specify the preferred type of packaging (e.g. 1 x 500 m drum or 5 x 100 m coils).
TERMI-POINT® is a registered trademark of AMP
Photographs are not to scale and do not represent detailed images of the respective products.

Accessories

- SKINTOP® MS-SC-M refer to page 668
- Multipurpose shears A and B refer to page 902
- STAR STRIP stripping tool refer to page 906
- STEEL GUN HT-338 cable tie pliers refer to page 963
- LS steel cable ties refer to page 961

UNITRONIC® Li2YCY PiMF

Screened data transmission cable mit PE core insulation and pairs in metalfoil

Benefits

- Data transmission cable with low capacitance, pair screening and overall copper braiding
- 7-wire stranded conductor can be used for Maxi TERMI-POINT® wiring
- Individually screened pairs and the overall braid minimise electrical interference enormously
- TP structure minimises crosstalk

Application range

- UNITRONIC® Li2YCY PiMF with individual screening of the pairs is particularly suitable for wiring data systems and controls in large industrial plants, for the transmission of sensitive signals and high bit rates for enhanced requirements in near-end cross-talk attenuation and high electrical interference in the circuits
- For measurement value transmission and serial 2-wire interfaces
- Cables of this type are intended for limited flexible use, and for fixed installation in dry or damp interiors

Product features

- Flame-retardant according to IEC 60332.1.2

Approvals

RoHS

Design

- 7-wire or fine wire (1mm²) tinned stranded copper conductor
- Core insulation made of polyethylene (PE)
- Cores twisted into pairs
- Foil wrapping, static screening made of aluminium-laminated plastic film with copper drain wire for each pair
- Bare copper screen braiding
- Outer sheath made of PVC
  Outer sheath colour: pebble grey (RAL 7032)

Technical data

Core identification code
0.22 mm²-0.5 mm²:
according to DIN 47100, see table T9
1.0 mm²: see design data

Mutual capacitance
At 800 Hz:
0.22 mm² max. 70 nF/km
0.34 mm² max. 70 nF/km
0.5 mm² max. 75 nF/km
1.0 mm² max. 85 nF/km

Peak operating voltage
(not for power applications) 250 V

Insulation resistance
> 5 GOhm x km

Inductivity
Approx. 0.4 mH/km

Conductor stranding
7- or fine-wired strand
according to VDE 0881

Minimum bending radius
Fixed installation: 10 x outer diameter

Short-range crosstalk attenuation
Up to 1 MHz min. 80 dB

Test voltage
Core/core: 2000 V
Core/screen: 1000 V

Temperature range
Fixed installation: -30 °C to +80 °C
Flexing: -5°C to +70°C

Characteristic impedance
at f > 1 MHz: approx. 85 Ohm

Article number	Number of pairs and mm² per conductor	Outer diameter (mm)	Copper index (kg/km)	Weight (kg/km)
UNITRONIC® Li2YCY PiMF				
7-wire				
0034040	2 x 2 x 0.22	7.7	33.0	75.4
0034041	3 x 2 x 0.22	8.1	42.0	86
0034042	4 x 2 x 0.22	8.7	50.0	99
0034043	8 x 2 x 0.22	10.9	85.0	161.4
0034044	10 x 2 x 0.22	12.5	100.0	186.4
0034045	2 x 2 x 0.34	9.0	43.0	70
0034046	3 x 2 x 0.34	9.4	55.0	85
0034047	4 x 2 x 0.34	9.8	64.0	103
0034048	8 x 2 x 0.34	12.9	127.0	191
0034049	10 x 2 x 0.34	14.9	150.0	230
7-wire				
0034060	2 x 2 x 0.5	8.5	51.0	96
0034061	3 x 2 x 0.5	10.4	66.0	116
0034062	4 x 2 x 0.5	11.3	71.0	141
0034063	5 x 2 x 0.5	11.8	92.0	180
0034064	8 x 2 x 0.5	14.5	153.0	271
0034065	10 x 2 x 0.5	16.6	182.0	327
Fine wire				
0034070	2 x 2 x 1	9.9	82.0	126
0034071	3 x 2 x 1	11.8	109.0	156
0034072	4 x 2 x 1	12.7	133.0	193
0034073	10 x 2 x 1	19.7	326.0	492

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Copper price basis: EUR 150/100kg. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: coil ≤ 30 kg or ≤ 250 m, otherwise drum
Please specify the preferred type of packaging (e.g. 1 x 500 m drum or 5 x 100 m coils).
TERMI-POINT® is a registered trademark of AMP
Photographs are not to scale and do not represent detailed images of the respective products.

Accessories

- STAR STRIP stripping tool refer to page 906
- KS 20 cable shears refer to page 904

RE-2Y(ST)Yv

Instrumentation cable with reinforced outer sheath

Benefits

- Aluminium-laminated plastic foil static screen with tin-plated drain wire minimises the interference of high frequency, electromagnetic field
- TP structure minimises crosstalk

Application range

- RE-2Y(ST)Yv is intended for use when modern process computers have to process large volumes of data, e.g. high-capacity computer systems in waste incineration plants or sewage treatment plants.
- These cables are suitable for fixed installation in dry or damp rooms, and the version with a black outer sheath can also be used outdoors or for direct burial.

Product features

- Colour: black (based on RAL 9005) or blue for intrinsically safe systems (based on RAL 5015)
- Flame-retardant according to IEC 60332.1.2
- Printed text may differ from illustration

Approvals

RoHS

Design

- 7-wire bare stranded copper conductor, PE core insulation, cores twisted into pairs, pairs in layers plus 1 core for communication (core colour: orange)
- The communication core is omitted on single-pair versions
- Foil wrapping, static screening made of aluminium-laminated plastic film with tinned drain wire
- Reinforced PVC outer sheath

Technical data

Core identification code
a-core: black; b-core: white
with consecutive numbers:
1-1, 2-2, 3-3, 4-4 etc.
Three-way version: black, white, red

Mutual capacitance
(guideline values at 800 Hz):
C/C: 0.5 mm²: max. 75 nF/km
(guideline values at 800 Hz):
C/C: 1.3 mm²: max. 100 nF/km

Peak operating voltage
300 V (not for power applications)

Insulation resistance
> 5 GOhm x km

Conductor resistance
0.5 mm²: max. 39.2 ohm/km
1.3 mm²: max. 14.3 ohm/km

Minimum bending radius
Fixed installation: 7.5 x outer diameter

Short-range crosstalk attenuation
At 60 kHz: min. 0.88 dB/km

Test voltage
Core/core: 2000 V
Core/screen: 1000 V

Temperature range
Fixed installation: -40°C to +70°C
Flexible use: -5°C to +50°C

Characteristic impedance
approx. 100 ohms

Article number	Number of pairs and mm² per conductor	Outer diameter (mm)	Copper index (kg/km)	Weight (kg/km)
RE-2Y(ST)Yv 0.5 mm² blue				
0032400	1 x 2 x 0.5	7.2	15.0	74
0032401	2 x 2 x 0.5	9.5	30.0	117
0032402	4 x 2 x 0.5	11.1	50.0	140
0032403	8 x 2 x 0.5	13.4	90.0	215
0032405	12 x 2 x 0.5	15.5	130.0	280
0032407	20 x 2 x 0.5	17.9	210.0	385
0.5 mm² black				
0032411	1 x 2 x 0.5	7.2	15.0	74
0032412	2 x 2 x 0.5	9.5	30.0	117
0032413	4 x 2 x 0.5	11.1	50.0	140
0032414	8 x 2 x 0.5	13.4	90.0	215
0032415	10 x 2 x 0.5	14.5	110.0	220
0032417	16 x 2 x 0.5	17.0	170.0	352
0032418	20 x 2 x 0.5	17.9	210.0	385
0032420	36 x 2 x 0.5	22.6	370.0	656
0032421	48 x 2 x 0.5	27.1	490.0	854
1.3 mm² blue				
0032422	1 x 2 x 1.3	8.6	31.0	102
0032423	2 x 2 x 1.3	11.5	62.0	161
0032424	4 x 2 x 1.3	13.8	114.0	230
0032425	8 x 2 x 1.3	16.9	218.0	377
0032426	12 x 2 x 1.3	19.3	322.0	520
0032427	16 x 2 x 1.3	22.8	426.0	656
0032428	24 x 2 x 1.3	27.5	684.0	952
0032429	1 x 3 x 1.3	9.1	44.0	116
1.3 mm² black				
0032430	1 x 2 x 1.3	8.6	31.0	102
0032431	2 x 2 x 1.3	11.5	62.0	161
0032432	4 x 2 x 1.3	13.8	114.0	230
0032433	8 x 2 x 1.3	16.9	218.0	377
0032434	12 x 2 x 1.3	19.3	322.0	515
0032435	16 x 2 x 1.3	22.8	426.0	656
0032436	24 x 2 x 1.3	27.5	684.0	995

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Copper price basis: EUR 150/100kg. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: coil ≤ 30 kg or ≤ 250 m, otherwise drum
Please specify the preferred type of packaging (e.g. 1 x 500 m drum or 5 x 100 m coils).
Photographs are not to scale and do not represent detailed images of the respective products.

RE-2Y(ST)Yv PiMF

Instrumentation cable with reinforced outer sheath and pairs in metalfoil

Benefits

- Aluminium-laminated plastic foil static screen with tin-plated drain wire minimises the interference of high frequency, electromagnetic field
- Twisted pair (TP) decouples the cable circuits

Application range

- RE-2Y(ST)Y PiMF is intended for use when modern process computers have to process large volumes of data, e.g. high-capacity computer systems in waste incineration plants or sewage treatment plants.
- These cables are suitable for fixed installation in dry or damp rooms, and the version with a black outer sheath can also be used outdoors or for direct burial.

Product features

- Computer cable with screened pairs and reinforced outer sheath
- Colour: black (based on RAL 9005) or blue for intrinsically safe systems (based on RAL 5015)
- Flame-retardant according to IEC 60332.1.2
- Printed text may differ from illustration

Approvals

RoHS

Design

- 7-wire bare stranded copper conductor, PE core insulation, cores twisted into pairs, pair screening made of aluminium-laminated plastic foil with bare copper drain wire, PiMF marking using numbered foil, pairs in layers and 1 core for communication (core colour: orange)
- The communication core is omitted on single-pair versions
- Aluminium-laminated plastic foil static screen with tinned drain wire
- Reinforced PVC outer sheath

Technical data

Core identification code
a-core: black; b-core: white
with consecutive numbers:
1-1, 2-2, 3-3, 4-4 etc.

Mutual capacitance
(at 800 Hz max):
C/C: 0.5 mm²: 75 nF/km
(at 800 Hz max):
C/C: 1.3 mm²: 100 nF/km

Peak operating voltage
(not for power applications)
300 V

Insulation resistance
> 5 GOhm x km

Inductivity
max. 0.75 mH/km

Conductor resistance
0.5 mm²: max. 39.2 ohm/km
1.3 mm²: max. 14.2 ohm/km

Minimum bending radius
Fixed installation: 7.5 x outer diameter

Short-range crosstalk attenuation
At 60 kHz: min. 1.02 dB/km

Test voltage
Core/core: 2000 V
Core/screen: 600 V

Temperature range
Fixed installation: -40°C to +70°C
Flexible use: -5°C to +50°C

Characteristic impedance
approx. 100 ohms

Article number	Number of pairs and mm² per conductor	Outer diameter (mm)	Copper index (kg/km)	Weight (kg/km)
RE-2Y(ST)Yv PiMF 0.5 mm² blue				
0032438	2 x 2 x 0.5	10.0	35.0	128
0032439	4 x 2 x 0.5	11.6	60.0	170
0032441	10 x 2 x 0.5	15.9	136.0	246
0032442	12 x 2 x 0.5	16.7	161.0	351
0032443	16 x 2 x 0.5	19.1	212.0	430
0032444	20 x 2 x 0.5	19.9	262.0	496
0032446	36 x 2 x 0.5	25.5	465.0	850
0.5 mm² black				
0032448	2 x 2 x 0.5	10.0	35.0	128
0032449	4 x 2 x 0.5	11.6	60.0	170
0032450	8 x 2 x 0.5	14.4	121.0	261
0032451	10 x 2 x 0.5	15.9	136.0	246
0032452	12 x 2 x 0.5	16.7	161.0	351
0032453	16 x 2 x 0.5	19.1	212.0	430
0032456	36 x 2 x 0.5	25.5	465.0	850
1.3 mm² blue				
0032458	2 x 2 x 1.3	12.4	68.0	184
1.3 mm² black				
0032464	2 x 2 x 1.3	12.4	68.0	184
0032465	4 x 2 x 1.3	14.2	124.0	269
0032466	8 x 2 x 1.3	18.5	239.0	442
0032467	12 x 2 x 1.3	22.2	353.0	593
0032469	24 x 2 x 1.3	29.0	697.0	1104

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Copper price basis: EUR 150/100kg. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: coil ≤ 30 kg or ≤ 250 m, otherwise drum
Please specify the preferred type of packaging (e.g. 1 x 500 m drum or 5 x 100 m coils).
Photographs are not to scale and do not represent detailed images of the respective products.

RD-Y(ST)Y

Static screened data transmission cable for control technology

Benefits

- In order to reduce costs, the multi-wire stranded copper cable has been provided for Maxi TERMI-POINT® connecting technology. This wiring method (semi-automatic) considerably reduces the time and the costs required for installation.
- Aluminium-laminated plastic foil static screen with tin-plated drain wire minimises the interference of high frequency, electromagnetic field
- Twisted pair construction permits largely interference-free operation (decoupling).

Application range

- RD-Y(St)Y is used as a data transmission cable for applications such as control centres, monitoring systems and control units
- Designed for fixed installations and installations in enclosed rooms.

Product features

- Colour: grey (based on RAL 7000) or blue for intrinsically safe systems (based on RAL 5015)
- Printed text may differ from illustration

Approvals

RoHS

Design

- 7-wire bare stranded copper conductor
- Core insulation made of PVC
- Cores twisted into pairs,
  4 pairs twisted into a bundle,
  bundles in layers,
  bundles labelled using numbered foil
- Aluminium-laminated plastic foil static screen with tinned drain wire
- Outer sheath made of PVC

Technical data

Core identification code

Pair no. 1: a-conductor: blue
b-conductor: red
Pair no. 2: a-conductor: grey
b-conductor: yellow
Pair no. 3: a-core: green
b-core brown
Pair no. 4: a-core: white
b-core black

Mutual capacitance
At 800 Hz:
≤ 100 nF/km
The values may be exceeded by 20 % on cables with up to 4 double cores.

Peak operating voltage
(not for power applications) 225 V

Insulation resistance
Core/core ≥ 100 mOhm x km
Core/screen ≥ 100 MOhm x km

Conductor resistance
(loop): ≤ 73.6 Ohm/km

Cable attenuation/attenuation
At 1 kHz: approx. 1.2 dB/km
At 10 kHz: approx. 3.0 dB/km

Minimum bending radius
Fixed installation: 7.5 x outer diameter

Short-range crosstalk attenuation
At 10 kHz and 500 m cable length: min. 60 dB

Test voltage
50 Hz, 2 min. C/C: 2000 V
50 Hz, 2 min. C/S: 2000 V

Temperature range
Fixed installation: -40°C to +70°C
Flexible use: -5°C to +50°C

Characteristic impedance
At 1 kHz: approx. 370 ohm
At 10 kHz: approx. 130 ohm

Article number	Number of pairs and mm² per conductor	Number of bundles	Outer diameter (mm)	Copper index (kg/km)	Weight (kg/km)
RD-Y(ST)Y grey					
0032470	2 x 2 x 0.5		6.5	25.0	65
0032471	4 x 2 x 0.5	1	9.0	45.0	110
0032472	8 x 2 x 0.5	2	11.5	85.0	180
0032474	16 x 2 x 0.5	4	15.5	165.0	310
0032475	24 x 2 x 0.5	6	19.0	245.0	450
0032476	32 x 2 x 0.5	8	21.0	325.0	560
0032477	48 x 2 x 0.5	12	25.5	485.0	810
RD-Y(ST)Y blue					
0032479	2 x 2 x 0.5		6.5	25.0	65

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Copper price basis: EUR 150/100kg. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: coil ≤ 30 kg or ≤ 250 m, otherwise drum
Please specify the preferred type of packaging (e.g. 1 x 500 m drum or 5 x 100 m coils).
MAXI-TERMI-POINT® is a registered trademark of AMP
Photographs are not to scale and do not represent detailed images of the respective products.

Accessories

- STAR STRIP stripping tool refer to page 906

JE-Y(ST)Y ...BD

Static screened installation cable for industrial electronics

Benefits

- Perfect for cost-effective installation, e.g. connections with insulation displacement technology (IDC).
- Aluminium-laminated plastic foil static screen with tin-plated drain wire minimises the interference of high frequency, electromagnetic field
- Twisted pair (TP) decouples the cable circuits

Application range

- JE-Y(St)Y...BD is a connection cable for fixed installation in industrial control systems, as required in measurement, control, signalling and data applications
- For fixed installation on and under plaster, in dry and damp rooms.
- For outdoor use this cable should be installed under plaster only.

Product features

- The 2-pair version (2 x 2 x 0.8) is twisted into a star quad
- Flame-retardant according to IEC 60332.1.2
- Printed text may differ from illustration

Approvals

RoHS

Design

- Solid bare copper conductor
- Core insulation: Based on PVC
- 2 cores twisted into a pair, and 4 pairs into units (for 2 x 2 x 0.8 as star quad cable)
- Foil wrapping,
  static screening made of aluminium-laminated plastic film with copper drain wire
- Outer sheath made of PVC
  Outer sheath colour: pebble grey (RAL 7032)

Technical data

Core identification code
according to VDE 0815, refer to Appendix T10

Approvals
VDE 0815

Mutual capacitance
max. 100 nF/km

Peak operating voltage
(not for power applications) 225 V

Insulation resistance
> 100 MOhm x km

Inductivity
approx. 0.65 mH/km

Conductor stranding
Single-wire (solid conductor)
0.8 mm: 0.50 mm²

Minimum bending radius
Fixed installation: 6 x outer diameter

Test voltage
Core/core: 500 V
Core/screen: 2000 V

Loop resistance
73.2 ohm/km

Temperature range
Fixed installation: -30°C to +70°C
Flexible use: -5°C to +50°C

Article number	Number of cores and cable diameter (mm)	Outer diameter (mm)	Copper index (kg/km)	Weight (kg/km)
JE-Y(ST)Y...BD				
0034190	2 x 2 x 0.8	6.0	25.0	60
0034191	4 x 2 x 0.8	8.5	45.0	96
0034192	8 x 2 x 0.8	11.0	85.0	158
0034193	12 x 2 x 0.8	13.0	126.0	225
0034194	16 x 2 x 0.8	14.5	166.0	290
0034195	20 x 2 x 0.8	16.0	206.0	350
0034197	40 x 2 x 0.8	22.0	407.0	660

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Copper price basis: EUR 100/100kg. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: coil ≤ 30 kg or ≤ 250 m, otherwise drum
Please specify the preferred type of packaging (e.g. 1 x 500 m drum or 5 x 100 m coils).
Photographs are not to scale and do not represent detailed images of the respective products.

Similar products

- UNITRONIC® EB JE-Y(ST)Y 0,8 BD refer to page 280

Accessories

- STAR STRIP stripping tool refer to page 906

JE-LiYCY ...BD

Screened data transmission cable for industrial electronics

Benefits

- Can be used for Maxi TERMI-POINT® wiring
- Overall braid minimises electrical interference
- TP structure minimises crosstalk

Application range

- Connection cable for use in electronics and in measurement, control and signal applications
- This cable is also used as a pulse and data transmission cable
- JE-LiYCY...BD has also proved to be an efficient connection cable for telephone systems, e.g. paging and intercom systems.
- For fixed installation on and under plaster, in dry and damp rooms.
- For outdoor use this cable should be installed under plaster only.

Product features

- The 2-pair version (2 x 2 x 0.5) is twisted into a star quad
- Flame-retardant according to IEC 60332.1.2
- Printed text may differ from illustration

Approvals

RoHS

Design

- 7-wire bare stranded copper conductor
- Core insulation: Based on PVC
- 2 cores twisted into a pair, and 4 pairs into units (for 2 x 2 x 0.5 as star quad cable)
- Bundles twisted in layers,
  foil wrapping,
  screening braid made of tinned copper wires
- Outer sheath made of PVC
  Outer sheath colour: pebble grey (RAL 7032)

Technical data

Core identification code
according to VDE 0815, refer to Appendix T10

Approvals
VDE 0815

Mutual capacitance
max. 100 nF/km

Peak operating voltage
(not for power applications) 225 V

Insulation resistance
> 100 MOhm x km

Inductivity
approx. 0.65 mH/km

Conductor stranding
Multi-wire, 7 x 0.3, refer to Appendix T11

Minimum bending radius
Fixed installation: 5 x outer diameter

Test voltage
Core/core: 500 V
Core/screen: 2000 V

Loop resistance
78.4 Ohm/km

Temperature range
Fixed installation: -30°C to +70°C
Flexible use: -5°C to +50°C

Article number	Number of pairs and conductor cross section (mm²)	Outer diameter (mm)	Copper index (kg/km)	Weight (kg/km)
JE-LiYCY...BD				
0034200	2 x 2 x 0.5	7.5	51.0	70
0034201	4 x 2 x 0.5	10.0	87.0	155
0034202	8 x 2 x 0.5	13.0	144.0	260
0034208	12 x 2 x 0.5	15.5	195.0	340
0034203	16 x 2 x 0.5	17.0	249.0	430
0034210	20 x 2 x 0.5	18.5	298.0	495
0034204	24 x 2 x 0.5	20.5	348.0	605
0034212	32 x 2 x 0.5	22.5	441.0	738

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Copper price basis: EUR 150/ 100kg. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: coil ≤ 30 kg or ≤ 250 m, otherwise drum
Please specify the preferred type of packaging (e.g. 1 x 500 m drum or 5 x 100 m coils).
MAXI-TERMI-POINT® is a registered trademark of AMP
Photographs are not to scale and do not represent detailed images of the respective products.

Similar products

- UNITRONIC® EB JE-LiYCY...BD refer to page 279

Accessories

- SKINTOP® MS-SC-M refer to page 668
- Universal strip stripping and cutting tool refer to page 906
- STAR STRIP stripping tool refer to page 906

J-Y(ST)Y ..LG Indoor Cable

Installation cable in accordance with VDE 0815

Benefits

- Indoor telephone cables transmit analogue or digital signals
- Aluminium-laminated plastic foil static screen with tin-plated drain wire minimises the interference of high frequency, electromagnetic field
- TP structure minimises crosstalk

Application range

- In news and communication applications, the following connections can be installed: telephone, telefax, telex, standard modems for postal services; burglar and fire alarm systems (cf. fire alarm cables); communication and paging systems; access control, time and data control systems
- Can be used in dry and wet interiors for fixed installation on and under plaster

Product features

- The 2-paired versions = star quad cable design
- Flame-retardant according to IEC 60332.1.2
- Printed text may differ from illustration

Approvals

RoHS

Design

- Solid bare copper conductor
- Core insulation: Based on PVC
- Cores twisted in pairs, foil wrapping and static screen made of aluminium-laminated plastic film with copper drain wire over the cable core
- PVC-based outer sheath
  Outer sheath colour: pebble grey (RAL 7032)

Technical data

Core identification code
according to VDE 0815, refer to Appendix T10

Approvals
VDE 0815

Peak operating voltage
(not for power applications)
300 V

Insulation resistance
> 100 MOhm x km

Coupling
(800 Hz): K1: 80% ≤ 300 pF/100m

Conductor cross-section in
0.6 mm: 0.28 mm²
0.8 mm: 0.50 mm²

Cable attenuation/attenuation
0.6 mm: 1.7 dB/km
0.8 mm: 1.1 dB/km

Minimum bending radius
10 x outer diameter

Test voltage
Core/core: 800 V
Core/screen: 800 V

Loop resistance
0.6 mm: max. 130 ohm/km
0.8 mm: max. 73.2 ohm/km

Temperature range
Fixed installation: -30°C to +70°C

Article number	Number of double cores	Outer diameter (mm)	Copper index (kg/km)	Weight (kg/km)
J-Y(ST)Y...LG copper conductor 0.6 mm				
1591300	1	5.0	6.9	30
1591301	2	5.5	13.0	40
1591302	3	6.3	18.0	50
1591303	4	6.7	24.0	60
1591304	5	7.2	30.0	70
1591305	6	7.5	35.0	80
1591306	8	8.0	46.0	90
1591307	10	9.0	58.0	110
1591308	12	9.5	71.0	130
1591310	16	10.5	93.0	160
1591311	20	11.0	116.0	190
1591312	24	11.5	139.0	220
1591313	30	13.0	172.0	280
1591314	40	15.0	229.0	350
1591315	50	17.0	286.0	430
1591316	60	18.0	342.0	500
1591318	100	23.0	568.0	850
J-Y(ST)Y...LG copper conductor 0.8 mm				
1591500	1	6.0	11.0	40
1591501	2	7.0	21.0	60
1591502	3	8.5	31.0	80
1591503	4	9.0	41.0	100
1591504	5	9.5	52.0	120
1591505	6	10.5	62.0	140
1591506	8	11.5	82.0	170
1591507	10	13.0	102.0	220
1591508	12	14.0	123.0	250
1591510	16	15.5	164.0	320
1591511	20	16.5	204.0	380
1591512	24	19.0	244.0	460
1591513	30	20.0	304.0	560
1591514	40	22.5	405.0	710

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Copper price basis: EUR 100/100kg. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: coil ≤ 30 kg or ≤ 250 m, otherwise drum
Photographs are not to scale and do not represent detailed images of the respective products.

Similar products

- J-2Y(ST)Y ...ST III BD refer to page 296

Accessories

- Universal strip stripping and cutting tool refer to page 906
- STAR STRIP stripping tool refer to page 906

J-Y(ST)Y ...LG Fire Alarm Cable

Installation cable in accordance with VDE 0815 with red outer sheath

Info

- **Installation cable with a red outer sheath in accordance with VDE 0815**

Benefits

- The cable is marked with the phrase “Fire alarm cable” at regular intervals on the sheath. It is therefore used especially for installation in fire alarm systems.
- Aluminium-laminated plastic foil static screen with tin-plated drain wire minimises the interference of high frequency, electromagnetic field
- TP structure minimises crosstalk

Application range

- This installation cable is used to transmit signals.
- For fixed installation on and under plaster, in dry and damp rooms.
- For outdoor use this cable should be installed under plaster only.

Product features

- The 2-paired versions = star quad cable design
- Flame-retardant according to IEC 60332.1.2
- Printed text may differ from illustration

Approvals

RoHS

Design

- Solid bare copper conductor
- Core insulation: Based on PVC
- Cores twisted in pairs,
  pairs twisted together,
  foil wrapping over cable core,
  static screen made of aluminium-laminated plastic film with copper drain wire
- PVC-based outer sheath
  Outer sheath colour: flame red (RAL 3000)

Technical data

Core identification code
according to VDE 0815, refer to Appendix T10

Peak operating voltage
(not for power applications)
300 V

Based on
VDE 0815

Insulation resistance
> 100 MOhm x km

Coupling
(800 Hz): K1: 80% ≤ 300 pF/100m

Conductor cross-section in
0.8 mm: 0.50 mm²

Cable attenuation/attenuation
0.8 mm: 1.1 dB/km

Minimum bending radius
Fixed installation:
10 x outer diameter

Test voltage
Core/core: 800 V
Core/screen: 800 V

Loop resistance
max. 73.2 Ohm/km

Temperature range
Fixed installation: -30°C to +70°C

Article number	Number of pairs and conductor diameter (mm)	Outer diameter (mm)	Copper index (kg/km)	Weight (kg/km)
J-Y(ST)Y...LG red				
1708001	1 x 2 x 0.8	6.0	11.0	40
1708002	2 x 2 x 0.8	7.0	21.0	60
1708004	4 x 2 x 0.8	9.0	41.0	100
1708006	6 x 2 x 0.8	10.5	62.0	140
1708010	10 x 2 x 0.8	13.5	102.0	220
1708020	20 x 2 x 0.8	16.5	204.0	380

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Copper price basis: EUR 100/100kg. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: coil ≤ 30 kg or ≤ 250 m, otherwise drum
Photographs are not to scale and do not represent detailed images of the respective products.

Accessories

- STAR STRIP stripping tool refer to page 906
- KS 20 cable shears refer to page 904

J-2Y(ST)Y ...ST III BD

Installation cable in accordance with VDE 0815 with PE core insulation

Benefits

- Suitable for data transmission rates of up to 16 Mbits/s
- Aluminium-laminated plastic foil static screen with tin-plated drain wire minimises the interference of high frequency, electromagnetic field

Application range

- Examples of use: for connecting EDP system units or for circuits for airfield lighting, ISDN private branch exchanges, operating data acquisition, operating data entry, access control and time recording systems, industrial electronics, all designed for maximum security and speed
- Can be used in dry and wet interiors for fixed installation on and under plaster

Product features

- Design: in accordance with DIN VDE 0815 table 4, type JE-Y(ST)Y...BD but with PE core insulation
- The bundle structure means 2 pairs are twisted into a star quad.
- Flame-retardant according to IEC 60332.1.2
- Printed text may differ from illustration

Approvals

RoHS

Design

- Solid bare copper conductor
- Core insulation made of polyethylene (PE)
- Foil wrapping, static screening made of aluminium-laminated plastic film with copper drain wire
- Outer sheath made of PVC
  Outer sheath colour: pebble grey (RAL 7032)

Technical data

Core identification code
according to VDE 0815, refer to Appendix T10

Mutual capacitance
(800 Hz) max. 52 nF/km

Peak operating voltage
(not for power applications)
300 V

Based on
VDE 0815

Insulation resistance
> 5 GOhm x km

Coupling
K1: 98 % <400 pF/300 m
K9-12: 98 % < 100 pF/300 m

Conductor cross-section in
0.6 mm: 0.28 mm²

Cable attenuation/attenuation
At 16 MHz: < 8 dB/100 m

Minimum bending radius
Fixed installation: 10 x outer diameter

Short-range crosstalk attenuation
4-16 MHz: 2-pair ≥ 45 dB
4-16 MHz: >2-pair ≥ 20 dB

Test voltage
Core/core: 500 V
Core/screen: 2000 V

Loop resistance
max. 130 ohm/km

Temperature range
Fixed installation: -30°C to +70°C

Characteristic impedance
100 Ohm +- 15 %

Article number	Number of pairs and conductor diameter (mm)	Outer diameter (mm)	Copper index (kg/km)	Weight (kg/km)
J-2Y(ST)Y...ST III BD				
0034171	2 x 2 x 0.6	5.5	13.0	40
0034173	4 x 2 x 0.6	7.5	24.0	60
0034175	8 x 2 x 0.6	8.5	46.0	90
0034176	10 x 2 x 0.6	9.5	58.0	148
0034178	20 x 2 x 0.6	13.5	116.0	190
30017810	50 x 2 x 0.6	18.0	288.0	412
30017811	100 x 2 x 0.6	25.8	570.0	650

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Copper price basis: EUR 100/100kg. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: coil ≤ 30 kg or ≤ 250 m, otherwise drum
Photographs are not to scale and do not represent detailed images of the respective products.

Similar products

- UNITRONIC® Li2YCY (TP) refer to page 286

Accessories

- STAR STRIP stripping tool refer to page 906

J-H(ST)H ...BD

Halogen-free installation cable in accordance with VDE 0815

Benefits

- Used to meet enhanced fire protection requirements concerning protection of people and high-value property
- Does not emit any toxic or corrosive gases in the event of fire and resists the spread of fire
- Aluminium-laminated plastic foil static screen with tin-plated drain wire minimises the interference of high frequency, electromagnetic field
- TP structure minimises crosstalk

Application range

- This halogen-free, flame-retardant installation cable with static screen is used for telephone, data and signal transmission in subscriber stations and private branch exchange construction for telephone systems; on dry and wet premises as well as on and under plaster.

Product features

- No flame-propagation according to IEC 60332-3-24 respectively IEC 60332-3-25 (Flame spread on vertical cable or wire bundle)
- Halogen-free and flame-retardant installation cable in accordance with VDE 0815
- Variant with 2 double cores twisted as star quad
- Printed text may differ from illustration

Approvals

RoHS

Design

- Solid bare copper conductor
- Core insulation made of special halogen-free compound
- Cores twisted into pairs
- Foil wrapping,
  static screening made of aluminium-laminated plastic film with copper drain wire
- Outer sheath made of special halogen-free compound
  Outer sheath colour: grey (RAL 7001)

Technical data

Core identification code
according to VDE 0815, refer to Appendix T10

Approvals
VDE 0815

Mutual capacitance
max. 120 nF/km

Peak operating voltage
(not for power applications)
300 V

Insulation resistance
>100 MOhm x km

Coupling
K1: approx. 300 pF/100 m
K9-12: approx. 100 pF/100 m

Minimum bending radius
Fixed installation: 6 x outer diameter

Test voltage
Core/core: 800 V
Core/screen: 800 V

Loop resistance
0.6 mm: max. 130 ohm/km
0.8 mm: max. 73.2 ohm/km

Temperature range
Fixed installation: -30°C to +70°C

Conductor cross-section
0.6 mm: 0.28 mm²

Article number	Number of pairs and conductor diameter (mm)	Outer diameter (mm)	Copper index (kg/km)	Weight (kg/km)
J-H(ST)H-BD				
3022220	2 x 2 x 0,6	8.0	14.1	65
3022221	4 x 2 x 0,6	10.0	25.4	100
3022222	6 x 2 x 0,6	11.0	37.0	117
3022223	10 x 2 x 0,6	12.0	59.0	155
30017787	2 x 2 x 0,8	9.0	25.0	77
30017788	4 x 2 x 0,8	11.0	45.0	135

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Copper price basis: EUR 100/100kg. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: coil ≤ 30 kg or ≤ 250 m, otherwise drum
Photographs are not to scale and do not represent detailed images of the respective products.

J-H(ST)H ...BD Fire Alarm Cable

Halogen-free installation cable in accordance with VDE 0815 with red outer sheath

Info

- **The halogen-free and flame retardant fire alarm cable in accordance with VDE 0815**

Benefits

- Used to meet enhanced fire protection requirements concerning protection of people and high-value property
- Does not emit any toxic or corrosive gases in the event of fire and resists the spread of fire
- Aluminium-laminated plastic foil static screen with tin-plated drain wire minimises the interference of high frequency, electromagnetic field
- TP structure minimises crosstalk

Application range

- This halogen-free, flame-retardant installation cable with static screen is used for telephone, data and signal transmission in subscriber stations and private branch exchange construction for telephone systems; on dry and wet premises as well as on and under plaster.

Product features

- No flame-propagation according to IEC 60332-3-24 respectively IEC 60332-3-25 (Flame spread on vertical cable or wire bundle)
- Printed text may differ from illustration
- Variant with 2 double cores twisted as star quad

Approvals

RoHS

Design

- Solid bare copper conductor
- Core insulation made of special halogen-free compound
- Cores twisted into pairs
- Foil wrapping,
  static screening made of aluminium-laminated plastic film with copper drain wire
- Outer sheath made of special halogen-free compound
  Outer sheath colour: flame red (RAL 3000)

Technical data

Core identification code
according to VDE 0815, refer to Appendix T10

Mutual capacitance
max. 120 nF/km

Peak operating voltage
(not for power applications)
300 V

Based on
VDE 0815

Insulation resistance
>100 MOhm x km

Coupling
K1: approx. 300 pF/100 m
K9-12: approx. 100 pF/100 m

Minimum bending radius
Fixed installation: 6 x outer diameter

Test voltage
Core/core: 800 V
Core/screen: 800 V

Loop resistance
max. 73.2 Ohm/km

Temperature range
Fixed installation: -30°C to +70°C

Conductor cross-section
0.8 mm: 0.50 mm²

Article number	Number of pairs and conductor diameter (mm)	Outer diameter (mm)	Copper index (kg/km)	Weight (kg/km)
J-H(ST)H...BD				
30017798	2 x 2 x 0,8	9.0	25.0	77
30017801	10 x 2 x 0,8	15.0	106.0	250

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Copper price basis: EUR 100/100kg. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: coil ≤ 30 kg or ≤ 250 m, otherwise drum
Photographs are not to scale and do not represent detailed images of the respective products.

A-2Y(L)2Y ...ST III BD Telephone Outdoor Cable

A-2YF(L)2Y ...ST III BD Outdoor Cable

Application range

- Do not install cables that are meant to be placed in ducts or for direct burial in areas exposed to fire hazards

Product features

- Outer sheath colour: black (RAL 9005)

Design

A-2Y(L)2Y ...ST III BD Telephone Outdoor Cable

- Solid bare copper conductor
- Core insulation made of polyethylene (PE)
- 5 star-quads are twisted into each basic unit, which is then twisted together with the main unit to form the cable core
- Paper tape wrapping
- Laminated sheath with aluminium-coated plastic tape, PE outer sheath

A-2YF(L)2Y ...ST III BD Outdoor Cable

- Similar to A-2Y(L)2Y, but with petroleum-jelly filling, laminated sheath made of aluminium-coated plastic tape, and black PE outer sheath

Technical data

Core identification code
According to VDE 0816, refer to T 10

Mutual capacitance
At 800 Hz: max. 52 nF/km

Peak operating voltage
(not for power applications) 225 V

Impedance
At 800 Hz 0.6 mm: approx. 720 Ohm
At 800 Hz 0.8 mm: approx. 520 Ohm

Based on
VDE 0816

Insulation resistance
A-2Y(L)2Y ...ST III BD Telephone Outdoor Cable
> 5.0 Gohm-km
A-2YF(L)2Y ...ST III BD Outdoor Cable
> 1.5 Gohm-km

Coupling
K1: 98 % <400 pF/300 m
K9-12: 98 % < 100 pF/300 m

Conductor cross-section in
0.6 mm: 0.28 mm²
0.8 mm: 0.50 mm²

Cable attenuation/attenuation
A-2Y(L)2Y ...ST III BD Telephone Outdoor Cable
At 800 Hz 0.6 mm: approx. 1.04 dB/km
At 800 Hz 0.8 mm: approx. 0.78 dB/km
A-2YF(L)2Y ...ST III BD Outdoor Cable
At 800 Hz 0.6 mm: approx. 1.0 dB/km
At 800 Hz 0.8 mm: approx. 0.8 dB/km

Minimum bending radius
10 x outer diameter

Test voltage
Core/core: 500 V
Core/screen: 2000 V

Loop resistance
0.6 mm: 130 ohm/km
0.8 mm: 73.2 ohm/km

Temperature range
During installation: -20 °C to +50 °C
After installation: ≤ +70 °C

Article number	Number of double cores	Outer diameter (mm)	Copper index (kg/km)	Weight (kg/km)
A-2Y(L)2Y...STIII BD copper conductor 0.6 mm				
1591050	2	10.5	11.0	80
1591051	4	11.0	23.0	125
1591052	6	11.5	34.0	130
1591053	10	13.0	57.0	165
1591054	20	16.0	113.0	265
1591055	30	18.0	170.0	355
1591056	40	19.5	226.0	440
1591057	50	21.0	283.0	525
1591058	70	23.5	396.0	705
1591061	200	36.5	1,131.0	1755
1591063	300	42.5	1,696.0	2525
A-2Y(L)2Y...ST III BD copper conductor 0.8 mm				
1591150	2	8.6	20.0	100
1591151	4	10.9	40.0	160
1591152	6	13.5	60.0	175
1591153	10	15.0	101.0	235
1591163	14	16.5	141.0	296
1591154	20	18.0	201.0	390
1591155	30	21.0	302.0	540
1591156	40	23.5	402.0	680
1591157	50	25.0	503.0	835
A-2YF(L)2Y...ST III BD copper conductor 0.6 mm				
1591028	2	8.3	11.0	67
1591029	4	10.4	23.0	104
1591030	6	12.0	34.0	140
1591031	10	14.0	57.0	190
1591032	20	17.5	113.0	310
1591033	30	20.0	170.0	430
1591035	50	24.5	283.0	660
1591037	100	31.5	565.0	1225
A-2YF(L)2Y...ST III BD copper conductor 0.8 mm				
1591217	2	8.8	20.0	83
1591218	4	11.2	40.0	134
1591221	6	13.5	60.0	195
1591222	10	15.5	101.0	275
1591223	20	19.5	201.0	475
1591224	30	22.5	302.0	665
1591225	40	25.5	402.0	860
1591226	50	27.5	503.0	1050
1591228	100	36.5	1,005.0	1985

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Copper price basis: EUR 150/100kg. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: coil ≤ 30 kg or ≤ 250 m, otherwise drum
Photographs are not to scale and do not represent detailed images of the respective products.

Accessories

- SKINTOP® MS-SC-M refer to page 668
- Multipurpose shears A and B refer to page 902
- STAR STRIP stripping tool refer to page 906

New

UNITRONIC® BUS ASI

Info

- "LD" = Long Distance

Benefits

- The new BUS ASI LD 2 x 2.5 (Long Distance) allows even modules located further away to be connected.
  AS-I power supplies can be reduced. The BUS ASI LD is downwards-compatible with version 1.5.
- The rubber versions are halogen-free

Application range

- Communication at sensor/actuator level
- UNITRONIC® Fieldbus sensor-/actuator wiring
- For fixed installation as well as occasional flexing at free, non-continuously recurring movement without tensile load
- The TPE version has an oil-resistant outer sheath. It is suitable for wet areas, in particular in conjunction with water-soluble cooling lubricants.

Product features

- Data and power are transmitted via an unscreened, geometrically coded two-core flat cable (protection against polarity reversal).
- The conductor is contacted by "piercing technology" within the ASI modules.
- The sensors are connected to the ASI modules (coupling modules) using round cables (connection cables).

Approvals

RoHS

- ASI is standardised Europe-wide in EN 50295 and internationally in IEC 62026-2.
- PVC version has UL/CSA (CMG) approval.

Design

- Extra-fine wire, tinned copper strands
- Core insulation: blue and brown
- Profiled outer sheath made of rubber (G), thermoplastic elastomers (TPE) or PVC
- Colour: yellow (RAL 1023) or black (RAL 9005)
- Colour: red (RAL 3000)

Technical data

Approvals
UL/CSA version: CMGc(UL)us or (UL)CL2 or AWM 300V FT4 approval

Peak operating voltage
Yellow: 300 V (not for power applications)
Black: 300 V (not for power applications)
Red: 300 V

Conductor resistance
1.5 mm²: max. 13.7 Ohm/km
2.5 mm²: max. 8.21 Ohm/km

Minimum bending radius
Fixed installation: 12 mm
Flexible use 24 mm

Test voltage
Core/core: 2000 V

Temperature range
Dependent on outer sheath material:
PVC: -30°C to +90°C
Other materials: -40°C to +85°C
During installation:
PVC -20 °C to +90 °C
Other materials:
-30 °C to +85 °C

Article number	Article designation	Outer sheath material	Outer sheath colour	Application	Number of cores and mm² per conductor	Copper index (kg/km)	Weight (kg/km)
For fixed and flexible applications (19-wire stranded conductor)							
2170228	UNITRONIC® BUS ASI (G)	EPDM (rubber)	yellow	Data and power transmission	2 x 1,5	29.0	85
2170229	UNITRONIC® BUS ASI (G)	EPDM (rubber)	black	Transmission of 30 V DC auxiliary power	2 x 1,5	29.0	85
2170371	UNITRONIC® BUS ASI LD (G)	EPDM (rubber)	yellow	Data and power transmission	2 x 2,5	48.0	85
2170372	UNITRONIC® BUS ASI LD (G)	EPDM (rubber)	black	Transmission of 30 V DC auxiliary power	2 x 2,5	48.0	85
2170230	UNITRONIC® BUS ASI (TPE)	TPE	yellow	Data and power transmission	2 x 1,5	29.0	64
2170231	UNITRONIC® BUS ASI (TPE)	TPE	black	Transmission of 30 V DC auxiliary power	2 x 1,5	29.0	64
2170232	UNITRONIC® BUS ASI (TPE)	TPE	red	Transmission of 230 V AC auxiliary power	2 x 1,5	29.0	64
2170842	UNITRONIC® BUS ASI (PVC) A	PVC UL/CSA (CMG)	yellow	Data and power transmission	2 x 1,5	29.0	70
2170843	UNITRONIC® BUS ASI (PVC) A	PVC UL/CSA (CMG)	black	Transmission of 30 V DC auxiliary power	2 x 1,5	29.0	70

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Copper price basis: EUR 150/100kg. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Lapp Kabel is a member of the AS-International Association
Photographs are not to scale and do not represent detailed images of the respective products.

Accessories

- SKINTOP® DIX-M AUTOMATION refer to page 673
- Universal strip stripping and cutting tool refer to page 906
- AS-i clip clamp / AS-i End sealing refer to page 967
- AS-I STRIP special stripping tool refer to page 908
- AS-I STRIP special
- SKINTOP® DIX ASI

New

UNITRONIC® BUS ASI FD

Highly flexible application

Info

- "FD" = suitable for power chains
- "LD" = Long Distance

Benefits

- The new BUS ASI LD 2 x 2.5 (Long Distance) allows even modules located further away to be connected.
  AS-I power supplies can be reduced. The BUS ASI LD is downwards-compatible with version 1.5.
- For highly flexible applications (power chains, moving machine parts)
- High oil-resistance

Application range

- Communication at sensor/actuator level
- UNITRONIC® Fieldbus sensor-/actuator wiring

Product features

- PUR versions are halogen-free according to IEC 60754-1
- Flame-retardant according to IEC 60332-1-2, UL FT-2 flame test
- Data and power are transmitted via an un-screened, geometrically coded two-core flat cable (protection against polarity reversal).
- The conductor is contacted by "piercing technology" within the ASI modules.
- The sensors are connected to the ASI modules (coupling modules) using round cables (connection cables).

Approvals

- ASI is standardised Europe-wide in EN 50295 and internationally in IEC 62026-2.
- TPE variant: UL AWM Style 2103 CSA AWM II A/B
- PUR versions: UL AWM Style 20549

Design

- Extra-fine wire, tinned copper strands
- Core insulation: blue and brown
- Profiled outer sheath: TPE or PUR
- Colour: yellow (RAL 1023) or black (RAL 9005)

Technical data

Peak operating voltage
300 V (not for power applications)

Conductor resistance
1.5 mm²: max. 13.7 Ohm/km
2.5 mm²: max. 8.21 Ohm/km

Minimum bending radius
Fixed installation: 12 mm
Flexing without fixing: 24 mm
Flexing with fixing: 60 mm (15 x D)

Test voltage
Core/core: 2000 V

Temperature range
Fixed installation:
-40°C to +80°C (TPE +105°C)
Flexing – without fixing:
-30 °C to +70 °C (TPE +105 °C)

Article number	Article designation	Outer sheath material	Outer sheath colour	Application	Number of cores and mm² per conductor	Copper index (kg/km)	Weight (kg/km)
For highly flexible applications (power chains, moving machine parts)							
2170311	UNITRONIC® BUS ASI FD P FRNC	PUR UL/CSA (AWM)	yellow	Data and power transmission	2 x 1,5	29.0	64
2170312	UNITRONIC® BUS ASI FD P FRNC	PUR UL/CSA (AWM)	black	Transmission of 30 V DC auxiliary power	2 x 1,5	29.0	64
2170317	UNITRONIC® BUS ASI LD FD P		yellow	Data and power transmission	2 x 2,5	48.0	74
2170318	UNITRONIC® BUS ASI LD FD P		black	Transmission of 30 V DC auxiliary power	2 x 2,5	48.0	74
2170830	UNITRONIC® BUS ASI FD (TPE) A	TPE UL/CSA (AWM)	yellow	Data and power transmission	2 x 1,5	29.0	64
2170831	UNITRONIC® BUS ASI FD (TPE) A	TPE UL/CSA (AWM)	black	Transmission of 30 V DC auxiliary power	2 x 1,5	29.0	64

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Copper price basis: EUR 150/100kg. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Lapp Kabel is a member of the AS-International Association
Photographs are not to scale and do not represent detailed images of the respective products.

Accessories

- SKINTOP® DIX-M AUTOMATION refer to page 673
- Universal strip stripping and cutting tool refer to page 906
- AS-i clip clamp / AS-i End sealing refer to page 967
- AS-I STRIP special stripping tool refer to page 908
- AS-I STRIP special
- SKINTOP® DIX ASI

UNITRONIC® BUS PB

Fixed installation

Info

- **Lapp Kabel is a member of the PROFIBUS User Organisation (PNO)**
- **A for Advanced here: UL and CSA approvals**

Application range

- For fixed installation
  Maximum electromagnetic screening
- Dry or damp rooms
- Item nos. 2170233, 2170333, 2170820, 2170824, 2170826 are all UV-resistant

Product features

- These bus cables can be used for PROFIBUS-DP as well as for PROFIBUS-FMS and FIP
- Based on the bit rates listed, in accordance with PNO specifications the following maximum cable lengths for a bus segment apply (cable type A, PROFIBUS-DP):
  93.75 kbit/s = 1200 m
  187.5 kbit/s = 1000 m
  500 kbit/s = 400 m
  1.5 Mbit/s = 200 m
  12.0 Mbit/s = 100 m

Approvals

RoHS

- In accordance with DIN 19245 and EN 50170, e.g. for SIEMENS SIMATIC NET, also suitable for FIP (Factory Instrumentation Protocol)

Design

- FC: “Fast Connect” cable design
- P: Polyurethane
  H: Halogen-free
- PE: polyethylene, e.g. for the food and beverage industry
- 7-W: 7-wire, e.g. for applications where vibrations occur
- COMBI: Data transmission and power supply in one cable

Technical data

Approvals
See below for UL approval type

Resistant
UV-resistant products
Item nos. 2170233, 2170333, 2170820, 2170824, 2170826 are all UV-resistant

Mutual capacitance
(800 Hz): max. 30 nF/km

Peak operating voltage
(not for power applications) 250 V

Conductor resistance
(loop): max. 133 ohm/km

Minimum bending radius
Fixed installation: see data sheet

Test voltage
Core/core: 1500 V

Characteristic impedance
150 ± 15 Ohm

Article number	Article designation	Number of pairs and conductor diameter (mm)	Outer diameter (mm)	Copper index (kg/km)	Weight (kg/km)
For fixed installation - conventional cable assembly					
2170220	UNITRONIC® BUS PB	1 x 2 x 0.64	8.0	30.1	74
2170233	UNITRONIC® PB PE	1 x 2 x 0.64	8.0	30.1	57
2170226	UNITRONIC® BUS PB H 7-W	1 x 2 x 0.64	8.0	30.1	55
2170225	UNITRONIC® BUS PB COMBI 7-W	1 x 2 x 0,64 Ø + 3 x 1,0 mm²	9.8	59.0	92
For fixed installation - UL/CSA CMX approval					
2170219	UNITRONIC® BUS PB A	1 x 2 x 0.64	8.0	30.1	57
For fixed installation - UL/CSA CMG approval					
2170824	UNITRONIC® BUS PB 7-W A	1 x 2 x 0.64	8.0	30.1	55
For fixed installation - “Fast Connect” cable assembly					
2170333	UNITRONIC® BUS PB PE FC	1 x 2 x 0.64	8.0	26.0	67
For fixed installation - UL/CSA CMX approval					
2170330	UNITRONIC® BUS PB P FC	1 x 2 x 0.64	8.0	26.0	71
For fixed installation - “Fast Connect” cable assembly - UL/CSA CMG approval					
2170820	UNITRONIC® BUS PB FC	1 x 2 x 0.64	8.0	26.0	84
2170826	UNITRONIC® BUS PB 7-W FC	1 x 2 x 0.64	8.0	26.0	67
2170326	UNITRONIC® BUS PB-H FC	1 x 2 x 0.64	8.0	26.0	72

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Copper price basis: EUR 150/100kg. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: coil ≤ 30 kg or ≤ 250 m, otherwise drum
Please specify the preferred type of packaging (e.g. 1 x 500 m drum or 5 x 100 m coils).
SIMATIC NET® is a registered trademark of Siemens AG
Lapp Kabel is a member of the PROFIBUS user organisation (PNO)
Photographs are not to scale and do not represent detailed images of the respective products.

Similar products

- UNITRONIC® BUS PB ROBUST refer to page 303
- UNITRONIC® BUS PB 105 refer to page 303

Accessories

- FC Strip stripping tool refer to page 908

UNITRONIC® BUS PB ROBUST

Fixed installation

Benefits

- Robust PROFIBUS cable for use under harsh environmental conditions

Application range

- For use for PROFIBUS-DP or FIP in harsh industrial environments
- Fixed installation

Product features

- Significantly extended use and application areas, water and chemical resistance for use in industrial conditions.
- High resistance to tensides, soaps etc.
- UV-resistant
- Flame-retardant according to IEC 60332.1.2

- Based on the bit rates listed, in accordance with PNO specifications the following maximum cable lengths for a bus segment apply (cable type A, PROFIBUS-DP):
  93.75 kbit/s = 1200 m
  187.5 kbit/s = 1000 m
  500 kbit/s = 400 m
  1.5 Mbit/s = 200 m
  12.0 Mbit/s = 100 m

Approvals

RoHS

Design

- Solid and bare copper conductor
- Foam Skin - core isolation (O2YS)
- Overall screening with copper braid and plastic-laminated aluminium foil
- Tin-plated copper wire braiding
- With conventional cable design, but with an outer sheath made of special TPE

Mutual capacitance
(1 kHz): approx. 28.5 nF/km

Peak operating voltage
(not for power applications) 250 V

Minimum bending radius
Fixed installation: 75 mm

Test voltage
Core/core: 1500 V
Core/screen: 1500 V

Temperature range
-40 °C to +80 °C

Characteristic impedance
(3 - 20 MHz): 150 ± 15 Ohm

Article number	Article designation	Number of pairs and conductor diameter (mm)	Outer diameter (mm)	Copper index (kg/km)	Weight (kg/km)
For fixed installation					
2170620	UNITRONIC® BUS PB ROBUST	1 x 2 x 0.64	8.0	26.0	55

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Copper price basis: EUR 150/100kg. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: coil ≤ 30 kg or ≤ 250 m, otherwise drum
Please specify the preferred type of packaging (e.g. 1 x 500 m drum or 5 x 100 m coils).
SIMATIC® is a registered trademark of SIEMENS AG. FIP is a registered trademark of World FIP
Lapp Kabel is a member of the PROFIBUS user organisation (PNO)
Photographs are not to scale and do not represent detailed images of the respective products.

UNITRONIC® BUS PB 105

Fixed installation

Benefits

- A standard PROFIBUS cable can only be used up to a max. temperature of 80°C
- This enables an extended area of application

Application range

- Cable has been designed for use in factory halls where temperatures up to max. 105°C may occur.

Product features

- Flame-retardant according to IEC 60332.1.2
- Oil-resistant

Approvals

RoHS

Design

- Stranded conductor, 7-wire, bare
- Core insulation: PP
- Overall screening with copper braid and plastic-laminated aluminium foil
- Tin-plated copper wire braiding
- PVC outer sheath for use up to 105°C

Suitable connectors

- EPIC® Data connectors 312

Technical data

Mutual capacitance
Approx. 28.5 nF/km

Peak operating voltage
max. 100 V (not for power applications)

Minimum bending radius
Fixed installation: 45 mm once
Flexing: 65 mm

Test voltage
Core/core: 1500 V
Core/screen: 1500 V

Temperature range
-30°C to +105°C

Characteristic impedance
(3 - 20 MHz): 150 ± 15 Ohm

Article number	Article designation	Number of pairs and conductor diameter (mm)	Outer diameter (mm)	Copper index (kg/km)	Weight (kg/km)
2170630	UNITRONIC® BUS PB 105	1 x 2 x 0.64	8.0	30.1	72

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Copper price basis: EUR 150/100kg. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Lapp Kabel is a member of the PROFIBUS user organisation (PNO)
Photographs are not to scale and do not represent detailed images of the respective products.

Accessories

- Multipurpose shears A and B refer to page 902

UNITRONIC® BUS PB FRNC FC

Fixed installation

Info

- **FRNC = Flame Retardant Non Corrosive**
  - **Reduction of flame-propagation and density and toxicity of smoke gases in the event of fire**
  - **Minimisation of damage to buildings and production facilities**
  - **Safety for staff and in areas with high density of people**

Benefits

- Halogen-free and highly flame-retardant
- Cables can be used for PROFIBUS-DP as well as PROFIBUS-FMS and FIP
- For use where the combination of a halogen-free outer sheath with properties similar to PUR and enhanced flame-retardance is required
- Fast Connect (FC) cable design

Application range

- This cable provides special advantages for use in sensitive areas where fire propagation must be avoided and the presence of toxic fumes would cause personal injury and damage to equipment.

Product features

- The cable is UL/CSA-approved (CMG)
- Halogen-free
- High flame retardancy in accordance with IEC 60332-3 and FT4
- Oil-resistant
- Based on the bit rates listed, in accordance with PNO specifications the following maximum cable lengths for a bus segment apply (cable type A, PROFIBUS-DP):
  93.75 kbit/s = 1200 m
  187.5 kbit/s = 1000 m
  500 kbit/s = 400 m
  1.5 Mbit/s = 200 m
  12.0 Mbit/s = 100 m

Approvals

c UL us | RoHS | PROFIBUS

Technical data

- **Approvals**
  UL/CSA (CMG)
- **Mutual capacitance**
  Approx. 28.5 nF/km
- **Peak operating voltage**
  (not for power applications) 250 V
- **Minimum bending radius**
  80mm
- **Test voltage**
  Core/core: 1500 V
  Core/screen: 1500 V
- **Temperature range**
  -30°C to +80°C
- **Characteristic impedance**
  (3 - 20 MHz): 150 ± 15 Ohm

Design

- Solid, bare, single-wire copper conductor
- PE core insulation
- Inner sheath, screening foil and braiding
- Thermoplastic outer sheath
- Colour: violet (RAL 4001)

Suitable connectors

- EPIC® Data connectors 312

Article number	Article designation	Number of pairs and conductor diameter (mm)	Outer diameter (mm)	Copper index (kg/km)	Weight (kg/km)
Fixed installation					
2170853	UNITRONIC® BUS PB FRNC FC	1 x 2 x 0.64	8.0	30.1	75

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Copper price basis: EUR 150/100kg. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: coil ≤ 30 kg or ≤ 250 m, otherwise drum
Please specify the preferred type of packaging (e.g. 1 x 500 m drum or 5 x 100 m coils).
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Accessories

- FC Strip stripping tool refer to page 908

UNITRONIC® BUS PB ARM

Fixed installation

Benefits

- EMC-optimised

Application range

- For use for PROFIBUS-DP or FIP in harsh industrial environments
- PROFIBUS® (in accordance with DIN 19245 and EN 50170, e.g. for SIEMENS SIMATIC® NET, also suitable for FIP - Factory Instrumentation Protocol).

Product features

- Flame-retardant according to IEC 60332.1.2
- UV-resistant

Approvals

RoHS | PROFIBUS

Design

- Solid and bare copper conductor
- Foam Skin - core isolation (O2YS)
- Overall screening with copper braid and plastic-laminated aluminium foil
- Overlapping plastic tape
- Copper tape, welded longitudinally
  Outer sheath: PVC

Technical data

- **Mutual capacitance**
  (800 Hz): max. 30 nF/km
- **Peak operating voltage**
  (not for power applications) 100 V
- **Minimum bending radius**
  Fixed installation: 7.5 x outer diameter
  Fixed installation: 3.5 x cable diameter once
- **Test voltage**
  3600 V DC (3 sec.)
- **Temperature range**
  -40 °C to +70 °C
- **Characteristic impedance**
  150 ± 15 Ohm

Article number	Article designation	Number of pairs and conductor diameter (mm)	Outer diameter (mm)	Copper index (kg/km)	Weight (kg/km)
2170247	UNITRONIC® BUS PB ARM	1 x 2 x 0.65	11.1	80.9	131

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Copper price basis: EUR 150/100kg. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: coil ≤ 30 kg or ≤ 250 m, otherwise drum
Please specify the preferred type of packaging (e.g. 1 x 500 m drum or 5 x 100 m coils).
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UNITRONIC® BUS PB Yv

Suitable for outdoor use and direct burial, UV-resistant

Benefits
- Rugged, UV-resistant and weatherproof
- Cables can be used for PROFIBUS-DP as well as PROFIBUS-FMS and FIP

Application range
- PROFIBUS® (in accordance with DIN 19245 and EN 50170, e.g. for SIEMENS SIMATIC® NET, also suitable for FIP - Factory Instrumentation Protocol).

Product features
- Reinforced PVC outer sheath

Approvals
RoHS, PROFIBUS

Design
- Solid and bare copper conductor
- Foam Skin - core isolation (O2YS)
- Overall screening with copper braid and plastic-laminated aluminium foil
- Tin-plated copper wire braiding
- Outer sheath: reinforced PVC, black

Technical data
Mutual capacitance
(800 Hz): max. 30 nF/km

Peak operating voltage
(not for power applications) 250 V

Minimum bending radius
Fixed installation: 75 mm once
Fixed installation: 150 mm

Test voltage
Core/core: 1500 V
Core/screen: 1500 V

Temperature range
Flexible use: -5°C to +50°C
Fixed installation: -40°C to +80°C

Characteristic impedance
150 ± 15 Ohm

Article number	Article designation	Number of pairs and conductor diameter (mm)	Outer diameter (mm)	Copper index (kg/km)	Weight (kg/km)
2170223	UNITRONIC® BUS PB Yv	1 x 2 x 0.64	9.4	30.1	106

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Copper price basis: EUR 150/100kg. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: coil ≤ 30 kg or ≤ 250 m, otherwise drum
Please specify the preferred type of packaging (e.g. 1 x 500 m drum or 5 x 100 m coils).
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UNITRONIC® BUS PB YY

Suitable for outdoor use and direct burial, UV-resistant

Benefits
- Rugged, UV-resistant and weatherproof
- Cables can be used for PROFIBUS-DP as well as PROFIBUS-FMS and FIP

Application range
- PROFIBUS® (in accordance with DIN 19245 and EN 50170, e.g. for SIEMENS SIMATIC® NET, also suitable for FIP - Factory Instrumentation Protocol).

Product features
- Dual PVC outer sheath

Approvals
RoHS, PROFIBUS

Design
- Solid and bare copper conductor
- PE core insulation
- Overall screening with copper braid and plastic-laminated aluminium foil
- Tin-plated copper wire braiding
- PVC outer sheath, violet, OD 7.5 mm
  PVC outer sheath, black, OD 9.5 mm

Technical data
Mutual capacitance
(800 Hz): max. 30 nF/km

Peak operating voltage
(not for power applications) 250 V

Minimum bending radius
Fixed installation: 75 mm once
Fixed installation: 150 mm

Test voltage
Core/core: 1500 V
Core/screen: 1500 V

Temperature range
Flexible use: -5°C to +50°C
Fixed installation: -40°C to +80°C

Characteristic impedance
150 ± 15 Ohm

Article number	Article designation	Number of pairs and conductor diameter (mm)	Outer diameter (mm)	Copper index (kg/km)	Weight (kg/km)
2170236	UNITRONIC® BUS PB YY	1 x 2 x 0.64	9.5	30.1	87

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Copper price basis: EUR 150/100kg. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: coil ≤ 30 kg or ≤ 250 m, otherwise drum
Please specify the preferred type of packaging (e.g. 1 x 500 m drum or 5 x 100 m coils).
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Characteristic impedance: 135 - 165 ohm

UNITRONIC® BUS PB BURIAL FC

Suitable for outdoor use and direct burial, UV-resistant

Benefits

- Fast Connect (FC) cable design
- Rugged, UV-resistant and weatherproof
- Cables can be used for PROFIBUS-DP as well as PROFIBUS-FMS and FIP

Application range

- PROFIBUS® (in accordance with DIN 19245 and EN 50170, e.g. for SIEMENS SIMATIC® NET, also suitable for FIP - Factory Instrumentation Protocol).

Product features

- Second PE outer sheath

Approvals

RoHS

Design

- Solid and bare copper conductor
- Foam Skin - core isolation (O2YS)
- Overall screening with copper braid and plastic-laminated aluminium foil
- Tin-plated copper wire braiding
- PVC outer sheath, violet, OD 8 mm
  PE outer sheath, black, OD 10.8 mm

Technical data

Mutual capacitance
(800 Hz): max. 30 nF/km

Peak operating voltage
(not for power applications) 100 V

Minimum bending radius
Fixed installation: 3.5 x cable diameter once
Fixed installation: 7.5 x cable diameter

Test voltage
3600 V DC (3 sec.)

Temperature range
-40 °C to +60 °C

Characteristic impedance
150 ± 15 Ohm

Article number	Article designation	Number of pairs and conductor diameter (mm)	Outer diameter (mm)	Copper index (kg/km)	Weight (kg/km)
2170323	UNITRONIC® BUS PB BURIAL FC	1 x 2 x 0.64	10.8	26.0	115

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Copper price basis: EUR 150/100kg. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: coil ≤ 30 kg or ≤ 250 m, otherwise drum
Please specify the preferred type of packaging (e.g. 1 x 500 m drum or 5 x 100 m coils).
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Accessories

- FC Strip stripping tool refer to page 908

New

UNITRONIC® BUS PB Y 7-W FC BK

Suitable for outdoor use, UV-resistant

Benefits

- UV and weather-resistant in black
- 7-W: 7-wire, e.g. for applications where vibrations occur
- Fast Connect (FC) cable design
- Cables can be used for PROFIBUS-DP as well as PROFIBUS-FMS and FIP

Application range

- PROFIBUS® (in accordance with DIN 19245 and EN 50170, e.g. for SIEMENS SIMATIC® NET, also suitable for FIP - Factory Instrumentation Protocol).

Product features

- PVC compound TM2 acc. to VDE 0281-1 or HD 21.1
- Resistant to acids, alkalis and certain oils at room temperature

Approvals

RoHS

Design

- Stranded conductor, 7-wire, bare
- Foam Skin - core isolation (O2YS)
- Overall screening with copper braid and plastic-laminated aluminium foil
- Tin-plated copper wire braiding
- PVC outer sheath, black

Suitable tools

- FC Strip stripping tool refer to page 908

Technical data

Mutual capacitance
(800 Hz): max. 30 nF/km

Peak operating voltage
(not for power applications) 250 V

Minimum bending radius
Fixed installation: 8 x outer diameter
Flexing: 15 x outer diameter

Test voltage
Core/core: 1500 V
Core/screen: 1500 V

Temperature range
Flexing: -10°C to +70°C
Fixed installation: -40°C to +80°C

Characteristic impedance
150 ± 15 Ohm

Article number	Article designation	Number of pairs and conductor diameter (mm)	Outer diameter (mm)	Copper index (kg/km)	Weight (kg/km)
2170310	UNITRONIC® BUS PB Y 7-W FC BK	1 x 2 x 0.64	7.8	30.1	80

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Copper price basis: EUR 150/100kg. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: coil ≤ 30 kg or ≤ 250 m, otherwise drum
Please specify the preferred type of packaging (e.g. 1 x 500 m drum or 5 x 100 m coils).
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UNITRONIC® BUS PB FD P

Highly flexible application

Benefits

- For use where the combination of a halogen-free outer sheath with properties similar to PUR and enhanced flame-retardance is required
- For highly flexible applications (power chains, moving machine parts)
- Cables can be used for PROFIBUS-DP as well as PROFIBUS-FMS and FIP

Application range

- PROFIBUS® (in accordance with DIN 19245 and EN 50170, e.g. for SIEMENS SIMATIC® NET, also suitable for FIP - Factory Instrumentation Protocol).

Product features

- Halogen-free
- Flame-retardant according to IEC 60332.1.2
- Oil-resistant

- Based on the bit rates listed, in accordance with PNO specifications the following maximum cable lengths for a bus segment apply (cable type A, PROFIBUS-DP):
  93.75 kbit/s = 1200 m
  187.5 kbit/s = 1000 m
  500 kbit/s = 400 m
  1.5 Mbit/s = 200 m
  12.0 Mbit/s = 100 m

Approvals

RoHS, PROFIBUS

Design

- Foam Skin - core isolation (O2YS)
- Overall screening with copper braid and plastic-laminated aluminium foil
- Tin-plated copper wire braiding
- Outer sheath: PUR compound

Technical data

Mutual capacitance
(800 Hz): max. 30 nF/km

Peak operating voltage
(not for power applications) 250 V

Minimum bending radius
65mm

Test voltage
Core/core: 1500 V

Temperature range
Flexing: -30°C to +70°C
Fixed installation: -40°C to +80°C

Characteristic impedance
150 ± 15 Ohm

Suitable connectors

- EPIC® Data connectors 312

Article number	Article designation	Number of pairs and conductor diameter (mm)	Outer diameter (mm)	Copper index (kg/km)	Weight (kg/km)
For highly flexible applications (e.g. power chains) - conventional cable assembly					
2170222	UNITRONIC® BUS PB FD P 1x2x0,64	1 x 2 x 0.64	8.0	30.1	64

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Copper price basis: EUR 150/100kg. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: coil ≤ 30 kg or ≤ 250 m, otherwise drum
Please specify the preferred type of packaging (e.g. 1 x 500 m drum or 5 x 100 m coils).
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UNITRONIC® BUS PB FD P A

Highly flexible application

Info

- **A for Advanced here: UL and CSA approvals**

Benefits

- For use where the combination of a halogen-free outer sheath with properties similar to PUR and enhanced flame-retardance is required
- Cables can be used for PROFIBUS-DP as well as PROFIBUS-FMS and FIP
- For highly flexible applications (power chains, moving machine parts)

Application range

- PROFIBUS® (in accordance with DIN 19245 and EN 50170, e.g. for SIEMENS SIMATIC® NET, also suitable for FIP - Factory Instrumentation Protocol).

Product features

- Halogen-free
- Flame-retardant according to IEC 60332.1.2
- Oil-resistant

- Based on the bit rates listed, in accordance with PNO specifications the following maximum cable lengths for a bus segment apply (cable type A, PROFIBUS-DP):
  93.75 kbit/s = 1200 m
  187.5 kbit/s = 1000 m
  500 kbit/s = 400 m
  1.5 Mbit/s = 200 m
  12.0 Mbit/s = 100 m

Approvals

cULus, RoHS, PROFIBUS

- Approval: UL/CSA type CMX in accordance with UL 444 and CSA C22.2 no. 214-02

Design

- Stranded bare copper wire
- Foam Skin - core isolation (O2YS)
- Overall screening with copper braid and plastic-laminated aluminium foil

Technical data

Mutual capacitance
(800 Hz): max. 30 nF/km

Peak operating voltage
(not for power applications) 250 V

Minimum bending radius
65mm

Test voltage
Core/core: 1500 V

Temperature range
Flexing: -30°C to +70°C
Fixed installation: -40°C to +80°C

Characteristic impedance
150 ± 15 Ohm

- Screening: wrapped with braided tinned-copper wires
- Outer sheath: PUR compound

Suitable connectors

- EPIC® Data connectors 312

Article number	Article designation	Number of pairs and conductor diameter (mm)	Outer diameter (mm)	Copper index (kg/km)	Weight (kg/km)
2170822	UNITRONIC® BUS PB FD P A	1 x 2 x 0.64	8.0	30.1	58

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Copper price basis: EUR 150/100kg. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: coil ≤ 30 kg or ≤ 250 m, otherwise drum
Please specify the preferred type of packaging (e.g. 1 x 500 m drum or 5 x 100 m coils).
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UNITRONIC® BUS PB FD P FC

Highly flexible application

Benefits

- Fast Connect (FC) cable design
- Cables can be used for PROFIBUS-DP as well as PROFIBUS-FMS and FIP
- For highly flexible applications (power chains, moving machine parts)

Application range

- PROFIBUS® (in accordance with DIN 19245 and EN 50170, e.g. for SIEMENS SIMATIC® NET, also suitable for FIP - Factory Instrumentation Protocol).

Product features

- Flame-retardant according to IEC 60332.1.2
- Oil-resistant
- Based on the bit rates listed, in accordance with PNO specifications the following maximum cable lengths for a bus segment apply (cable type A, PROFIBUS-DP):
  93.75 kbit/s = 1200 m
  187.5 kbit/s = 1000 m
  500 kbit/s = 400 m
  1.5 Mbit/s = 200 m
  12.0 Mbit/s = 100 m

Approvals

- Approval: UL/CSA type CMX in accordance with UL 444 and CSA C22.2 no. 214-02

Design

- Stranded bare copper wire
- Foam Skin - core isolation (O2YS)
- Overall screening with copper braid and plastic-laminated aluminium foil
- Screening: wrapped with braided tinned-copper wires
- Outer sheath: PUR compound

Suitable connectors

- EPIC® Data connectors 312

Technical data

Mutual capacitance
(800 Hz): max. 30 nF/km

Peak operating voltage
(not for power applications) 250 V

Minimum bending radius
Flexing: 15 x outer diameter

Test voltage
3600 V DC (3 sec.)

Temperature range
Flexing: -30°C to +70°C
Fixed installation: -40°C to +80°C

Characteristic impedance
150 ± 15 Ohm

Article number	Article designation	Number of pairs and conductor diameter (mm)	Outer diameter (mm)	Copper index (kg/km)	Weight (kg/km)
2170322	UNITRONIC® BUS PB FD P FC	1 x 2 x 0.64	8.0	26.0	79

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Copper price basis: EUR 150/100kg. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: coil ≤ 30 kg or ≤ 250 m, otherwise drum
Please specify the preferred type of packaging (e.g. 1 x 500 m drum or 5 x 100 m coils).
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Accessories

- FC Strip stripping tool refer to page 908

UNITRONIC® BUS PB FD FRNC FC

Highly flexible application

Benefits

- Fast Connect (FC) system
- For use where the combination of a halogen-free outer sheath with properties similar to PUR and enhanced flame-retardance is required
- For highly flexible applications (power chains, moving machine parts)
- Cables can be used for PROFIBUS-DP as well as PROFIBUS-FMS and FIP

Application range

- For highly flexible use in energy supply chains or permanently moving machines and linear robots
- This cable provides special advantages for use in sensitive areas where fire propagation must be avoided and the presence of toxic fumes would cause personal injury and damage to equipment.

Product features

- The cable is UL/CSA-approved (CMG)
- Halogen-free
- High flame retardancy in accordance with IEC 60332-3 and FT4
- Oil-resistant
- Based on the bit rates listed, in accordance with PNO specifications the following maximum cable lengths for a bus segment apply (cable type A, PROFIBUS-DP):
  93.75 kbit/s = 1200 m
  187.5 kbit/s = 1000 m
  500 kbit/s = 400 m
  1.5 Mbit/s = 200 m
  12.0 Mbit/s = 100 m

Approvals

cULus RoHS PROFIBUS

Design

- Stranded bare copper wire
- Foam Skin - core isolation (O2YS)
- Overall screening with copper braid and plastic-laminated aluminium foil
- Screening: wrapped with braided tinned-copper wires
- Outer sheath: PUR compound

Technical data

Mutual capacitance
nom. 28 nF/km

Peak operating voltage
(not for power applications) 250 V

Minimum bending radius
Fixed installation: 10 x outer diameter
Flexing: 15 x outer diameter

Test voltage
Core/core: 1500 V

Temperature range
Flexing: -30°C to +70°C
Fixed installation: -40°C to +80°C

Characteristic impedance
(3 - 20 MHz): 150 ± 15 Ohm

Suitable connectors

- EPIC® Data connectors 312

Article number	Article designation	Number of pairs and conductor diameter (mm)	Outer diameter (mm)	Copper index (kg/km)	Weight (kg/km)
2170854	UNITRONIC® BUS PB FD FRNC FC	1x2x0,64	8.0	26.0	75

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Copper price basis: EUR 150/100kg. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: coil ≤ 30 kg or ≤ 250 m, otherwise drum
Please specify the preferred type of packaging (e.g. 1 x 500 m drum or 5 x 100 m coils).
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Accessories

- FC Strip stripping tool refer to page 908

UNITRONIC® BUS PB FD P COMBI

Highly flexible application

Benefits

- For use where the combination of a halogen-free outer sheath with properties similar to PUR and enhanced flame-retardance is required
- For highly flexible applications (power chains, moving machine parts)
- Cables can be used for PROFIBUS-DP as well as PROFIBUS-FMS and FIP

Application range

- PROFIBUS® (in accordance with DIN 19245 and EN 50170, e.g. for SIEMENS SIMATIC® NET, also suitable for FIP - Factory Instrumentation Protocol).

Product features

- HYBRID: cable for data transmission + power supply
- Flame-retardant according to IEC 60332.1.2

Approvals

RoHS PROFIBUS

Design

- Cores for Power Supply
  3 x 1.0 mm2 (AWG18)

Technical data

Mutual capacitance
(800 Hz): max. 30 nF/km

Peak operating voltage
(not for power applications) 100 V

Minimum bending radius
Flexing: 145 mm

Test voltage
Core/core: 600 V

Temperature range
Flexible use: -5°C to +50°C
Fixed installation: -40°C to +80°C

Characteristic impedance
150 ± 15 Ohm

Article number	Article designation	Number of pairs and conductor diameter (mm)	Outer diameter (mm)	Copper index (kg/km)	Weight (kg/km)
2170227	UNITRONIC® BUS PB FD P COMBI	1 x 2 x 0.64 Ø + 3 x 1.0 mm²	10.1	59.0	125

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Copper price basis: EUR 150/100kg. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: coil ≤ 30 kg or ≤ 250 m, otherwise drum
Please specify the preferred type of packaging (e.g. 1 x 500 m drum or 5 x 100 m coils).
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UNITRONIC® BUS PB FD P HYBRID

Highly flexible application

Benefits

- For use where the combination of a halogen-free outer sheath with properties similar to PUR and enhanced flame-retardance is required
- For highly flexible applications (power chains, moving machine parts)
- Cables can be used for PROFIBUS-DP as well as PROFIBUS-FMS and FIP

Application range

- PROFIBUS® (in accordance with DIN 19245 and EN 50170, e.g. for SIEMENS SIMATIC® NET, also suitable for FIP - Factory Instrumentation Protocol).

Product features

- HYBRID: cable for data transmission + power supply
- Flame-retardant according to IEC 60332.1.2
- Oil-resistant

Approvals

RoHS

Design

- Cores for Power Supply 4 x 1.5 mm2 (AWG16)

Technical data

Mutual capacitance
(800 Hz): max. 30 nF/km

Peak operating voltage
(not for power applications) 100 V

Minimum bending radius
Flexing: 15 x outer diameter

Test voltage
Core/core: 600 V
Core/screen: 600 V

Temperature range
Flexing: -30°C to +60°C
Fixed installation: -40°C to +70°C

Characteristic impedance
150 ± 15 Ohm

Article number	Article designation	Number of pairs and conductor diameter (mm)	Outer diameter (mm)	Copper index (kg/km)	Weight (kg/km)
2170495	UNITRONIC® BUS PB FD P HYBRID	1 x 2 x 0.64 Ø + 4 x 1.5 mm²	11.3	89.0	148

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Copper price basis: EUR 150/100kg. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: coil ≤ 30 kg or ≤ 250 m, otherwise drum
Please specify the preferred type of packaging (e.g. 1 x 500 m drum or 5 x 100 m coils).
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Photographs are not to scale and do not represent detailed images of the respective products.

UNITRONIC® BUS PB FD Y HYBRID

Highly flexible application

Benefits

- For highly flexible applications (power chains, moving machine parts)
- Cables can be used for PROFIBUS-DP as well as PROFIBUS-FMS and FIP
- CL3 for installation on trays

Application range

- PROFIBUS® (in accordance with DIN 19245 and EN 50170, e.g. for SIEMENS SIMATIC® NET, also suitable for FIP - Factory Instrumentation Protocol).

Product features

- HYBRID: cable for data transmission + power supply

Approvals

cULus RoHS

- With UL/CSA approval (CMG, CL3, SUN RES, Oil Res I)
- Flame-retardant according to CSA FT4 UL Vertical-Tray Flame Test
- Oil-resistant according to UL OIL RES I

Design

- Outer sheath: special PVC compound
- Cores for Power Supply 4 x 1.5 mm2 (AWG16)

Technical data

Peak operating voltage
600 V (not for power applications)

Minimum bending radius
Fixed installation:
10 x cable diameter
Flexing: 15 x outer diameter

Test voltage
Core/core: 2000 V
Core/screen: 2000 V

Temperature range
-5°C to +80°C

Characteristic impedance
150 ± 15 Ohm

Article number	Article designation	Number of pairs and conductor diameter (mm)	Outer diameter (mm)	Copper index (kg/km)	Weight (kg/km)
2170875	UNITRONIC® BUS PB FD Y HYBRID	1 x 2 x 0.64 Ø + 4 x 1.5 mm²	11.3	89.0	155

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Copper price basis: EUR 150/100kg. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: coil ≤ 30 kg or ≤ 250 m, otherwise drum
Please specify the preferred type of packaging (e.g. 1 x 500 m drum or 5 x 100 m coils).
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UNITRONIC® BUS PB TORSION

Highly flexible application

Benefits

- For use where the combination of a halogen-free outer sheath with properties similar to PUR and enhanced flame-retardance is required
- Cables can be used for PROFIBUS-DP as well as PROFIBUS-FMS and FIP

Application range

- PROFIBUS® (in accordance with DIN 19245 and EN 50170, e.g. for SIEMENS SIMATIC® NET, also suitable for FIP - Factory Instrumentation Protocol).

Product features

- TORSION: for torsional stress, e.g. robot application; ± 180° per 1 m
- Halogen-free
- Flame-retardant according to IEC 60332.1.2
- Based on the bit rates listed, in accordance with PNO specifications the following maximum cable lengths for a bus segment apply (cable type A, PROFIBUS-DP):
  93.75 kbit/s = 1200 m
  187.5 kbit/s = 1000 m
  500 kbit/s = 400 m
  1.5 Mbit/s = 200 m
  12.0 Mbit/s = 100 m

Approvals

- Approval: UL type CMX in accordance with UL 444

Design

- PE core insulation

Suitable connectors

- EPIC® Data connectors 312

Technical data

Mutual capacitance
(800 Hz): max. 30 nF/km

Peak operating voltage
(not for power applications)
300 V

Minimum bending radius
Fixed installation:
4 x outer diameter
Flexing: 7.5 x outer diameter

Test voltage
3600 V DC (3 sec.)

Temperature range
Operating temperature: -25°C to 75°C
Storage temp.: -40°C to 80°C

Characteristic impedance
150 ± 15 Ohm

Article number	Article designation	Number of pairs and conductor diameter (mm)	Outer diameter (mm)	Copper index (kg/km)	Weight (kg/km)
2170332	UNITRONIC® BUS PB TORSION	1 x 2 x 0.8	8.0	31.0	66

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Copper price basis: EUR 150/100kg. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: coil ≤ 30 kg or ≤ 250 m, otherwise drum
Please specify the preferred type of packaging (e.g. 1 x 500 m drum or 5 x 100 m coils).
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UNITRONIC® BUS PB FESTOON

Highly flexible application

Benefits

- Cables can be used for PROFIBUS-DP as well as PROFIBUS-FMS and FIP
- CL3 for installation on trays

Application range

- PROFIBUS® (in accordance with DIN 19245 and EN 50170, e.g. for SIEMENS SIMATIC® NET, also suitable for FIP - Factory Instrumentation Protocol).

Product features

- FESTOON: for cable trolley (festoon)
- Based on the bit rates listed, in accordance with PNO specifications the following maximum cable lengths for a bus segment apply (cable type A, PROFIBUS-DP):
  93.75 kbit/s = 1200 m
  187.5 kbit/s = 1000 m
  500 kbit/s = 400 m
  1.5 Mbit/s = 200 m
  12.0 Mbit/s = 100 m

Approvals

- With UL/CSA approval (CMG, CL3, SUN RES, Oil Res I)
- Flame-retardant according to CSA FT4 UL Vertical-Tray Flame Test
- Oil-resistant according to UL OIL RES I

Design

- Outer sheath: special PVC compound

Suitable connectors

- EPIC® Data connectors 312

Technical data

Mutual capacitance
(800 Hz): max. 30 nF/km

Peak operating voltage
600 V (not for power applications)

Minimum bending radius
Flexing: 70 mm
Fixed installation: 30 mm once

Test voltage
Core/core: 2000 V

Temperature range
Flexing: -5°C to +70°C
Fixed installation: -40°C to +80°C

Characteristic impedance
150 ± 15 Ohm

Article number	Article designation	Number of pairs and conductor diameter (mm)	Outer diameter (mm)	Copper index (kg/km)	Weight (kg/km)
2170331	UNITRONIC® BUS PB Festoon	1 x 2 x 0.64	8.0	26.0	64

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Copper price basis: EUR 150/100kg. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: coil ≤ 30 kg or ≤ 250 m, otherwise drum
Please specify the preferred type of packaging (e.g. 1 x 500 m drum or 5 x 100 m coils).
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EPIC® Data PROFIBUS Connectors 35° Screw Terminals

EPIC® Data PROFIBUS Connectors 35° Screw Terminals

Info

- Fully compatible with market standard

Benefits

- Standardised interfaces
- Cost-saving due to quick installation
- Easy to connect
- Small design

Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Control engineering

Product features

- Screw termination
- Adjustable termination resistor is integrated
- Switch can also be operated when the connector is plugged and setting is clearly visible
- When used as a through connector (two cable connections, node) the switch must be in the “OFF” position. If used as a terminating connector (one cable connection, segment end), the switch must be in the “ON” position.
- If the switch is in the “ON” position the outgoing bus cable is disconnected

Approvals

- Sub-D pin assignment in accordance with PROFIBUS

Design

- Sub-D plug, 9-pin
- Metallised housing
- Cable outlet 35°
- For cable diameter: 5.0 to 8.0 mm
- (-PG) With additional programming/diagnostic interface: Sub-D socket, 9-pin

Suitable cables

- Cables for BUS-Systems PROFIBUS-DP/FMS/FIP Page 302
- Cables for BUS-System PROFIBUS-PA Page 326

Technical data

Dimensions
54 mm x 40 mm x 17 mm (LxWxH)

Connection type
Screwing

Degree of soiling
2

Weight
Approx. 40 g

Protection rating
IP20

Cable outlet
35° angled

Terminating resistor
Integrated resistor combination that is connected by a sliding switch

Transmission rate
max. 12 MBit/s

Interfaces
PROFIBUS station:
SUB-D socket, 9-pin
PROFIBUS cable:
4 terminal blocks for wires up to 1.0 mm²

Current consumption
max. 12.5 mA

Permissble ambient conditions
Operating temperature:
0°C to +60°C
Transport and storage temperature:
-25°C to +80°C
Relative humidity:
max. 75 % at +25°C

Supply voltage
4.75 to 5.25 V DC
(supplied from terminal)

Article number	Article designation	Cable outlet	PG	Pieces / PU
EPIC® Data PROFIBUS Connectors				
21700507	ED-PB-35	35°	no	1
21700506	ED-PB-35-PG	35°	yes	1

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
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For detailed technical information please refer to www.lappautomation.com

EPIC® Data PROFIBUS Connectors 35° Fast Connect

Info

- **Fully compatible with market standard**

EPIC® Data PROFIBUS Connectors 35° Fast Connect

Benefits

- Suitable for FC cables
- Standardised interfaces
- Cost-saving due to quick installation
- Easy to connect

Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Control engineering

Product features

- Type FC for solid conductor or 7-wire stranded conductor.
  Type FC-FLEX for 19-wire or 7-wire stranded conductor.
- Adjustable termination resistor is integrated
- Switch can also be operated when the connector is plugged and setting is clearly visible
- If the switch is in the “ON” position the outgoing bus cable is disconnected
- When used as a through connector (two cable connections, node) the switch must be in the “OFF” position. If used as a terminating connector (one cable connection, segment end), the switch must be in the “ON” position.

Approvals

- Sub-D pin assignment in accordance with PROFIBUS

Design

- Sub-D plug, 9-pin
- Metallised housing
- Cable outlet 35°
- For cable diameter:
  5.0 to 8.0 mm
- (-PG) With additional programming/diagnostic
  interface: Sub-D socket, 9-pin

Suitable cables

- Cables for BUS-Systems PROFIBUS-DP/FMS/FIP Page 302
- Cables for BUS-System PROFIBUS-PA Page 326

Suitable tools

- FC Strip stripping tool refer to page 908

Technical data

Dimensions
95 mm x 70 mm x 17 mm (LxWxH)

Connection type
Fast Connect

Degree of soiling
2

Weight
Approx. 50 g

Protection rating
IP20

Cable outlet
35° angled

Terminating resistor
Integrated resistor combination that is connected by a sliding switch

Transmission rate
max. 12 MBit/s

Interfaces
PROFIBUS station:
SUB-D socket, 9-pin
PROFIBUS cable:
FC standard cable,
Ø 0.64 mm

Current consumption
max. 12.5 mA

Permissble ambient conditions
Operating temperature:
0°C to +60°C
Transport and storage temperature:
-25°C to +80°C
Relative humidity:
max. 75 % at +25°C

Supply voltage
4.75 to 5.25 V DC
(supplied from terminal)

Article number	Article designation	Cable outlet	Cable types	PG	Pieces / PU
EPIC® Data PROFIBUS Connectors					
21700511	ED-PB-35-FC	35°	Solid	no	1
21700513	ED-PB-35-PG-FC	35°	Solid	yes	1
21700514	ED-PB-35-FC-FLEX	35°	Flexible	no	1
21700515	ED-PB-35-PG-FC-FLEX	35°	Flexible	yes	1

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EPIC® Data PROFIBUS Connectors 90° Screw Terminals

EPIC® Data PROFIBUS Connectors 90° Screw Terminals

Info

- **Fully compatible with market standard**

Benefits

- Standardised interfaces
- Cost-saving due to quick installation
- Easy to connect
- Small design

Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Control engineering

Product features

- Screw termination
- Adjustable termination resistor is integrated
- Switch can also be operated when the connector is plugged and setting is clearly visible
- When used as a through connector (two cable connections, node) the switch must be in the “OFF” position. If used as a terminating connector (one cable connection, segment end), the switch must be in the “ON” position.
- If the switch is in the “ON” position the outgoing bus cable is disconnected

Approvals

- Sub-D pin assignment in accordance with PROFIBUS

Design

- Sub-D plug, 9-pin
- Metallised housing
- Cable outlet 90°
- For cable diameter: 5.0 to 8.0 mm
- (-PG) With additional programming/diagnostic interface: Sub-D socket, 9-pin

Suitable cables

- Cables for BUS-Systems PROFIBUS-DP/FMS/FIP Page 302
- Cables for BUS-System PROFIBUS-PA Page 326

Technical data

Dimensions
64 mm x 40 mm x 17 mm (LxWxH)

Connection type
Screwing

Degree of soiling
2

Weight
Approx. 40 g

Protection rating
IP20

Cable outlet
90°

Terminating resistor
Integrated resistor combination that is connected by a sliding switch

Transmission rate
max. 12 MBit/s

Interfaces
PROFIBUS station:
SUB-D socket, 9-pin
PROFIBUS cable:
4 terminal blocks for wires up to 1.0 mm²

Current consumption
max. 12.5 mA

Permissble ambient conditions
Operating temperature:
0°C to +60°C
Transport and storage temperature:
-25°C to +80°C
Relative humidity:
max. 75 % at +25°C

Supply voltage
4.75 to 5.25 V DC
(supplied from terminal)

Article number	Article designation	Cable outlet	PG	Pieces / PU
EPIC® Data PROFIBUS Connectors				
21700504	ED-PB-90	90°	no	1
21700503	ED-PB-90-PG	90°	yes	1

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For detailed technical information please refer to www.lappautomation.com

EPIC® Data PROFIBUS Connectors 90° Spring type

Info

- **Fully compatible with market standard**

EPIC® Data PROFIBUS Connectors 90° Spring type

Benefits

- Standardised interfaces
- Cost-saving due to quick installation
- Easy to connect

Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Control engineering

Product features

- Spring-type terminal
- Adjustable termination resistor is integrated
- Switch can also be operated when the connector is plugged and setting is clearly visible
- When used as a through connector (two cable connections, node) the switch must be in the “OFF” position. If used as a terminating connector (one cable connection, segment end), the switch must be in the “ON” position.
- If the switch is in the “ON” position the outgoing bus cable is disconnected

Approvals

- Sub-D pin assignment in accordance with PROFIBUS

Design

- Sub-D plug, 9-pin
- Metallised housing
- Cable outlet 90°
- For cable diameter: 5.0 to 8.0 mm
- (-PG) With additional programming/diagnostic interface: Sub-D socket, 9-pin

Suitable cables

- Cables for BUS-Systems PROFIBUS-DP/FMS/FIP Page 302
- Cables for BUS-System PROFIBUS-PA Page 326

Technical data

Dimensions
65 mm x 48 mm x 16 mm (LxWxH)

Connection type
Spring-type (ST)
Contact is automatically created when the stripped conductor is inserted into the spring terminal. The orange lever must be pressed to break the connection.

Weight
Approx. 40 g

Protection rating
IP20

Cable outlet
90°

Terminating resistor
Integrated resistor combination that is connected by a sliding switch

Transmission rate
max. 12 MBit/s

Interfaces
PROFIBUS station:
SUB-D socket, 9-pin
PROFIBUS cable:
4 spring-type terminals for wires up to 0.5 mm²
(Solid conductor)

Current consumption
max. 12.5 mA

Permissble ambient conditions
Operating temperature:
0°C to +60°C
Transport and storage temperature:
-25°C to +80°C
Relative humidity:
max. 75 % at +25°C

Supply voltage
4.75 to 5.25 V DC
(supplied from terminal)

Article number	Article designation	Cable outlet	Cable types	PG	Pieces / PU
EPIC® Data PROFIBUS Connectors					
21700509	ED-PB-90-ST	90°	Solid	no	1
21700508	ED-PB-90-PG-ST	90°	Solid	yes	1

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EPIC® Data PROFIBUS Connectors 90° Fast Connect

EPIC® Data PROFIBUS Connectors 90° Fast Connect

Info

- Fully compatible with market standard
- Extended temperature range

Benefits

- Suitable for FC cables
- Standardised interfaces
- Cost-saving due to quick installation
- Easy to connect

Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Control engineering

Product features

- Type FC for solid conductor or 7-wire stranded conductor.
  Type FC-FLEX for 19-wire or 7-wire stranded conductor.
- Adjustable termination resistor is integrated
- Switch can also be operated when the connector is plugged and setting is clearly visible
- When used as a through connector (two cable connections, node) the switch must be in the "OFF" position. If used as a terminating connector (one cable connection, segment end), the switch must be in the "ON" position.
- If the switch is in the "ON" position the outgoing bus cable is disconnected

Approvals

- Sub-D pin assignment in accordance with PROFIBUS

Design

- Sub-D plug, 9-pin
- Metallised housing
- Cable outlet 90°
- For cable diameter:
  5.0 to 8.0 mm
- (-PG) With additional programming/diagnostic
  interface: Sub-D socket, 9-pin

Suitable cables

- Cables for BUS-Systems PROFIBUS-DP/FMS/FIP Page 302
- Cables for BUS-System PROFIBUS-PA Page 326

Suitable tools

- FC Strip stripping tool refer to page 908

Technical data

Dimensions
72 mm x 40 mm x 17 mm (LxWxH)

Connection type
Fast Connect

Degree of soiling
2

Weight
Approx. 40 g

Protection rating
IP20

Cable outlet
90°

Terminating resistor
Integrated resistor combination that is connected by a sliding switch

Transmission rate
max. 12 MBit/s

Interfaces
PROFIBUS station:
SUB-D socket, 9-pin
PROFIBUS cable:
FC standard cable,
Ø 0.64 mm

Current consumption
max. 12.5 mA

Permissble ambient conditions
Operating temperature:
-25°C to +70°C
Transport and storage temperature:
-25°C to +80°C
Relative humidity:
max. 75 % at +25°C

Supply voltage
4.75 to 5.25 V DC
(supplied from terminal)

Article number	Article designation	Cable outlet	Cable types	PG	Pieces / PU
EPIC® Data PROFIBUS Connectors					
21700502	ED-PB-90-FC	90°	Solid	no	1
21700501	ED-PB-90-PG-FC	90°	Solid	yes	1
21700528	ED-PB-90-FC-FLEX	90°	Flexible	no	1
21700527	ED-PB-90-PG-FC-FLEX	90°	Flexible	yes	1

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For detailed technical information please refer to www.lappautomation.com

EPIC® Data PROFIBUS Connectors 90° LED Screw Terminals

Info

- **Fully compatible with market standard**

EPIC® Data PROFIBUS Connectors 90° LED Screw Terminals

Benefits

- 3 status LEDs indicate: bus operation, station transmission, terminating resistance
- Simplified troubleshooting
- Standardised interfaces
- Cost-saving due to quick installation
- Easy to connect

Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Control engineering

Product features

- Screw termination
- Adjustable termination resistor is integrated
- Switch can also be operated when the connector is plugged and setting is clearly visible
- When used as a through connector (two cable connections, node) the switch must be in the “OFF” position. If used as a terminating connector (one cable connection, segment end), the switch must be in the “ON” position.
- If the switch is in the “ON” position the outgoing bus cable is disconnected

Approvals

- Sub-D pin assignment in accordance with PROFIBUS

Design

- Sub-D plug, 9-pin
- Metallised housing
- Cable outlet 90°
- For cable diameter: 5.0 to 8.0 mm
- (-PG) With additional programming/diagnostic interface: Sub-D socket, 9-pin

Suitable cables

- Cables for BUS-Systems PROFIBUS-DP/FMS/FIP Page 302
- Cables for BUS-System PROFIBUS-PA Page 326

Technical data

Dimensions
64 mm x 40 mm x 17 mm (LxWxH)

Connection type
Screwing

Degree of soiling
2

Weight
Approx. 40 g

Protection rating
IP20

Cable outlet
90°

Terminating resistor
Integrated resistor combination that is connected by a sliding switch

Transmission rate
max. 12 MBit/s

Interfaces
PROFIBUS station:
SUB-D socket, 9-pin
PROFIBUS cable:
4 terminal blocks for wires up to 1.0 mm²

Current consumption
max. 35 mA

Permissble ambient conditions
Operating temperature:
0°C to +60°C
Transport and storage temperature:
-25°C to +80°C
Relative humidity:
max. 75 % at +25°C

Supply voltage
4.75 to 5.25 V DC
(supplied from terminal)

Article number	Article designation	Cable outlet	PG	Pieces / PU
EPIC® Data PROFIBUS Connectors				
21700530	ED-PB-90-LED	90°	no	1
21700529	ED-PB-90-PG-LED	90°	yes	1

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EPIC® Data PROFIBUS Connectors 90° LED Fast Connect

EPIC® Data PROFIBUS Connectors 90° LED Fast Connect

Info

- **Fully compatible with market standard**

Benefits

- 3 status LEDs indicate: bus operation, station transmission, terminating resistance
- Simplified troubleshooting
- Visual connection control
- Cost-saving due to quick installation
- Easy to connect

Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Control engineering

Product features

- Type FC for solid conductor or 7-wire stranded conductor. Type FC-FLEX for 19-wire or 7-wire stranded conductor.
- Adjustable termination resistor is integrated
- Switch can also be operated when the connector is plugged and setting is clearly visible
- When used as a through connector (two cable connections, node) the switch must be in the “OFF” position. If used as a terminating connector (one cable connection, segment end), the switch must be in the “ON” position.
- If the switch is in the “ON” position the outgoing bus cable is disconnected

Approvals

- Sub-D pin assignment in accordance with PROFIBUS

Design

- Sub-D plug, 9-pin
- Metallised housing
- Cable outlet 90°
- For cable diameter: 5.0 to 8.0 mm
- (-PG) With additional programming/diagnostic interface: Sub-D socket, 9-pin

Suitable cables

- Cables for BUS-Systems PROFIBUS-DP/FMS/FIP Page 302
- Cables for BUS-System PROFIBUS-PA Page 326

Suitable tools

- FC Strip stripping tool refer to page 908

Technical data

Dimensions
64 mm x 40 mm x 17 mm (LxWxH)

Connection type
Fast Connect

Degree of soiling
2

Weight
Approx. 40 g

Protection rating
IP20

Cable outlet
90°

Terminating resistor
Integrated resistor combination that is connected by a sliding switch

Transmission rate
max. 12 MBit/s

Interfaces
PROFIBUS station:
SUB-D socket, 9-pin
PROFIBUS cable:
FC standard cable,
Ø 0.64 mm

Current consumption
max. 35 mA

Permissble ambient conditions
Operating temperature:
0°C to +60°C
Transport and storage temperature:
-25°C to +80°C
Relative humidity:
max. 75 % at +25°C

Supply voltage
4.75 to 5.25 V DC
(supplied from terminal)

Article number	Article designation	Cable outlet	Cable types	PG	Pieces / PU
EPIC® Data PROFIBUS Connectors					
21700547	ED-PB-90-LED-FC	90°	Solid	no	1
21700546	ED-PB-90-PG-LED-FC	90°	Solid	yes	1
21700549	ED-PB-90-LED-FC-FLEX	90°	Flexible	no	1
21700539	ED-PB-90-PG-LED-FC-FLEX	90°	Flexible	yes	1

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For detailed technical information please refer to www.lappautomation.com

EPIC® Data PROFIBUS Connectors ATEX Screw Terminals

Info

- **Fully compatible with market standard**

EPIC® Data PROFIBUS Connectors ATEX Screw Terminals

Benefits

- For use in zone 2 areas with an explosion hazard (explosive gas atmosphere occurs only rarely and briefly)
- Standardised interfaces
- Cost-saving due to quick installation
- Easy to connect

Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Control engineering

Product features

- Screw termination
- Adjustable termination resistor is integrated
- Switch can also be operated when the connector is plugged and setting is clearly visible
- When used as a through connector (two cable connections, node) the switch must be in the “OFF” position. If used as a terminating connector (one cable connection, segment end), the switch must be in the “ON” position.
- If the switch is in the “ON” position the outgoing bus cable is disconnected

Approvals

- Sub-D pin assignment in accordance with PROFIBUS
- DIN EN 60079-0:2006, DIN 60079-15:2005 category 3G zone 2

Design

- Sub-D plug, 9-pin
- Metallised housing
- Cable outlet 90°
- For cable diameter: 5.0 to 8.0 mm
- (-PG) With additional programming/diagnostic interface: Sub-D socket, 9-pin

Suitable cables

- Cables for BUS-System PROFIBUS-PA Page 326

Technical data

Dimensions
64 mm x 40 mm x 17 mm (LxWxH)

Connection type
Screwing

Degree of soiling
2

Weight
Approx. 40 g

Protection rating
IP20

Cable outlet
90°

Terminating resistor
Integrated resistor combination that is connected by a sliding switch

Transmission rate
max. 12 MBit/s

Interfaces
PROFIBUS station:
SUB-D socket, 9-pin
PROFIBUS cable:
4 terminal blocks for wires up to 1.0 mm²

Current consumption
max. 12.5 mA

Permissble ambient conditions
Operating temperature:
0°C to +60°C
Transport and storage temperature:
-25°C to +80°C
Relative humidity:
max. 75 % at +25°C

Supply voltage
4.75 to 5.25 V DC
(supplied from terminal)

Article number	Article designation	Cable outlet	PG	Pieces / PU
EPIC® Data PROFIBUS Connectors				
21700543	ED-PB-90-ATEX	90°	no	1
21700542	ED-PB-90-PG-ATEX	90°	yes	1

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Photographs are not to scale and do not represent detailed images of the respective products.
For detailed technical information please refer to www.lappautomation.com

EPIC® Data PROFIBUS Connectors REPEATER

EPIC® Data PROFIBUS Connectors REPEATER

Info

- **Fully compatible with market standard**
- **A real alternative to conventional PROFIBUS repeaters**

Benefits

- Very flexible in use
- Increases the number of nodes
- Cost-saving due to quick installation
- Easy to connect
- No additional space needed in the cabinet

Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Control engineering

Product features

- Screw termination
- Can be used as a bus extension or spur line
- 5 V power supply from the PROFIBUS connection enables usage on all PROFIBUS devices
- Repeater covers transmission rates from 9.6 KBit/s to 12 MBit/s
- Transmission rate–> max. segment length:

9.6 KBit/s	1000 m
187.5 KBit/s	1000 m
500 KBit/s	400 m
1.5 MBit/s	200 m
3 MBit/s	100 m
12 MBit/s	100 m

Approvals

- Sub-D pin assignment in accordance with PROFIBUS

Design

- Sub-D plug, 9-pin
- Metallised housing
- An external 24 V supply is not necessary
- Status LEDs
- For cable diameter: 5.0 to 8.0 mm

Suitable cables

- Cables for BUS-Systems PROFIBUS-DP/FMS/FIP Page 302
- Cables for BUS-System PROFIBUS-PA Page 326

Technical data

Dimensions
64 mm x 40 mm x 17 mm (LxWxH)

Connection type
Screwing

Degree of soiling
2

Weight
Approx. 40 g

Protection rating
IP20

Cable outlet
90°

Transmission rate
9.6 Kbit/s to 12 MBit/s autodetection

Interfaces
Connection: Sub-D socket, 9-pinPROFIBUS-cable: 4 terminal blocks for wires up to 1.0 mm²Protocol: PROFIBUS DP in accordance with EN 50170

Current consumption
typ. 100 mA

Permissble ambient conditions
Operating temperature:
0°C to +60°C
Transport and storage temperature:
-25°C to +75°C

Supply voltage
+5 V DC

Article number	Article designation	Cable outlet	PG	Pieces / PU
EPIC® Data PROFIBUS Connectors				
21700541	ED-PB-90-RP-PG	90°	yes	1

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
For the detailed manual please refer to www.lappautomation.com
Photographs are not to scale and do not represent detailed images of the respective products.

EPIC® Data PROFIBUS Connectors 180° Screw Terminals

Info

- **Fully compatible with market standard**

EPIC® Data PROFIBUS Connectors 180° Screw Terminals

Benefits

- Standardised interfaces
- Cost-saving due to quick installation
- Easy to connect

Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Control engineering

Product features

- Screw termination
- Adjustable termination resistor is integrated
- Switch can also be operated when the connector is plugged and setting is clearly visible
- When used as a through connector (two cable connections, node) the switch must be in the “OFF” position. If used as a terminating connector (one cable connection, segment end), the switch must be in the “ON” position.
- If the switch is in the “ON” position the outgoing bus cable is disconnected

Approvals

- Sub-D pin assignment in accordance with PROFIBUS

Design

- Sub-D plug, 9-pin
- Metallised housing
- Cable outlet 180° (AX)
- No loose parts
- For cable diameter: 5.0 to 8.0 mm

Suitable cables

- Cables for BUS-Systems PROFIBUS-DP/FMS/FIP Page 302
- Cables for BUS-System PROFIBUS-PA Page 326

Technical data

Dimensions
68 mm x 39.5 mm x 17 mm (LxWxH)

Connection type
Screwing

Degree of soiling
2

Weight
Approx. 40 g

Protection rating
IP20

Cable outlet
180°

Terminating resistor
Integrated resistor combination that is connected by a sliding switch

Transmission rate
max. 12 MBit/s

Interfaces
PROFIBUS station:
SUB-D socket, 9-pin
PROFIBUS cable:
4 terminal blocks for wires up to 1.0 mm²

Current consumption
max. 12.5 mA

Permissble ambient conditions
Operating temperature:
0°C to +60°C
Transport and storage temperature:
-25°C to +80°C
Relative humidity:
max. 75 % at +25°C

Supply voltage
4.75 to 5.25 V DC
(supplied from terminal)

Article number	Article designation	Cable outlet	PG	Pieces / PU
EPIC® Data PROFIBUS Connectors				
21700505	ED-PB-AX	180°	no	1

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Photographs are not to scale and do not represent detailed images of the respective products.
For detailed technical information please refer to www.lappautomation.com

EPIC® Data PROFIBUS Connectors 180° Fast Connect

EPIC® Data PROFIBUS Connectors 180° Fast Connect

Info

- Fully compatible with market standard
- Extended temperature range

Benefits

- Suitable for FC cables
- Standardised interfaces
- Cost-saving due to quick installation
- Easy to connect

Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Control engineering

Product features

- Type FC for solid conductor or 7-wire stranded conductor.
  Type FC-FLEX for 19-wire or 7-wire stranded conductor.
- Adjustable termination resistor is integrated
- Switch can also be operated when the connector is plugged and setting is clearly visible
- When used as a through connector (two cable connections, node) the switch must be in the “OFF” position. If used as a terminating connector (one cable connection, segment end), the switch must be in the “ON” position.
- If the switch is in the “ON” position the outgoing bus cable is disconnected

Approvals

- Sub-D pin assignment in accordance with PROFIBUS

Design

- Sub-D plug, 9-pin
- Metallised housing
- Cable outlet 180° (AX)
- For cable diameter:
  5.0 to 8.0 mm

Suitable cables

- Cables for BUS-Systems PROFIBUS-DP/FMS/FIP Page 302
- Cables for BUS-System PROFIBUS-PA Page 326

Suitable tools

- FC Strip stripping tool refer to page 908

Technical data

Dimensions
70 mm x 35 mm x 17 mm (LxWxH)

Connection type
Fast Connect

Weight
Approx. 50 g

Protection rating
IP20

Cable outlet
180°

Terminating resistor
Integrated resistor combination that is connected by a sliding switch

Transmission rate
max. 12 MBit/s

Interfaces
PROFIBUS station:
SUB-D socket, 9-pin
PROFIBUS cable:
FC standard cable,
Ø 0.64 mm

Current consumption
max. 12.5 mA

Permissble ambient conditions
Operating temperature:
-25°C to +70°C
Transport and storage temperature:
-25°C to +80°C
Relative humidity:
max. 75 % at +25°C

Supply voltage
4.75 to 5.25 V DC
(supplied from terminal)

Article number	Article designation	Cable outlet	Cable types	PG	Pieces / PU
EPIC® Data PROFIBUS Connectors					
21700544	ED-PB-AX-FC	180° axial	Solid	no	1
21700545	ED-PB-AX-FC-FLEX	180° axial	Flexible	no	1

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Photographs are not to scale and do not represent detailed images of the respective products.
For detailed technical information please refer to www.lappautomation.com

New

EPIC® Data PROFIBUS Connectors 90° M12

Info

- **Fully compatible with market standard**

EPIC® Data PROFIBUS Connectors 90° M12

Benefits

- Suitable for assembled M12 PB cables
- Standardised interfaces
- Cost-saving due to quick installation
- Easy to connect

Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Control engineering

Product features

- No loose parts
- Adjustable termination resistor is integrated
- Switch can also be operated when the connector is plugged and setting is clearly visible
- When used as a through connector (two cable connections, node) the switch must be in the “OFF” position. If used as a terminating connector (one cable connection, segment end), the switch must be in the “ON” position.
- If the switch is in the “ON” position the outgoing bus cable is disconnected

Approvals

- Sub-D pin assignment in accordance with PROFIBUS

Design

- Sub-D plug, 9-pin
- 5-pin connector, M12, B-coded
- Metallised housing
- (-PG) With additional programming/diagnostic interface: Sub-D socket, 9-pin

Suitable cables

- PROFIBUS cable: M12 connector on free conductor end Page 391
- PROFIBUS Cable: M12 connector M12 on M12 socket Page 392

Technical data

Dimensions
70 mm x 40 mm x 17 mm (L x W x H)

Connection type
M12

Degree of soiling
2

Weight
approx. 60 g

Protection rating
IP20

Cable outlet
90°

Terminating resistor
Integrated resistor combination that is connected by a sliding switch

Transmission rate
max. 12 MBit/s

Interfaces
PROFIBUS station:
SUB-D socket, 9-pin
PROFIBUS cable:
M12 PB system cabling

Current consumption
max. 12.5 mA

Permissble ambient conditions
Operating temperature:
0°C to +60°C
Transport and storage temperature:
-25°C to +80°C
Relative humidity:
max. 75 % at +25°C

Supply voltage
4.75 to 5.25 V DC
(supplied from terminal)

Article number	Article designation	Cable outlet	Adjustable termination resistance	PG
EPIC® Data PROFIBUS Connectors				
21700521	ED-PB-90-M12	90°	yes	no
EPIC® Data PROFIBUS Connectors				
21700520	ED-PB-90-PG-M12	90°	yes	yes

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Photographs are not to scale and do not represent detailed images of the respective products.
For detailed technical information please refer to www.lappautomation.com

UNITRONIC® BUS LD

Info

- **LD is a LAPP abbreviation for long distance**

Benefits

- UL variant has approval: UL/CSA type CMX acc. to UL 444 and CSA C22.2 no. 214-02

Application range

- For fixed installation
  Maximum electromagnetic screening
- Bus cables for bus systems such as e.g. Modbus, SUCOnet P, Modulink P, VariNet-P)
- Dry or damp rooms

Product features

- The stated bit rates result in the following cable lengths (maximum) of one bus segment:
- 9.6-93.75 kbit/s = 1200m
- 187.5 kbit/s = max. 1,000 m
- 500 kBit/s = max. 400 m
- Flame-retardant according to IEC 60332.1.2

Approvals

RoHS

Design

- Stranded bare 7-wire conductor, colour-coded according to DIN 47100
- Copper braiding
- PVC outer sheath
- Colour: violet (RAL 4001)
- UNITRONIC® BUS LD A as UNITRONIC® BUS LD, but with UL/CSA approval

Technical data

Mutual capacitance
(800 Hz): max. 60 nF/km

Peak operating voltage
(not for power applications) 250 V

Conductor resistance
(loop): max. 186 ohm/km

Minimum bending radius
Fixed installation: 8 x outer diameter

Test voltage
Core/core: 1500 V

Temperature range
Fixed installation: -40°C to +80°C
Flexing: -5°C to +70°C

Characteristic impedance
100 - 120 Ohm

Article number	Article designation	Number of pairs and mm² per conductor	Outer diameter (mm)	Copper index (kg/km)	Weight (kg/km)
for fixed installation					
2170203	UNITRONIC® BUS LD	1 x 2 x 0,22	5.7	18.0	37
2170204	UNITRONIC® BUS LD	2 x 2 x 0,22	7.1	28.0	45
2170205	UNITRONIC® BUS LD	3 x 2 x 0,22	7.2	37.0	72
For fixed installation - UL/CSA CMX approval					
2170803	UNITRONIC® BUS LD A	1 x 2 x 0,22	5.7	18.0	39

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Copper price basis: EUR 150/100kg. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: coil ≤ 30 kg or ≤ 250 m, otherwise drum
Please specify the preferred type of packaging (e.g. 1 x 500 m drum or 5 x 100 m coils).
Modubus is owned by the Modbus-IDA Organisation. SUCOnet P is a registered trademark of the Moeller Group. Modulink P is a registered trademark of Weidmüller GmbH & Co. VariNet is a registered trademark of Pepperl+Fuchs GmbH.
Photographs are not to scale and do not represent detailed images of the respective products.

UNITRONIC® BUS LD FD P

Info

- **LD is a LAPP abbreviation for long distance**

Benefits

- UL variant has approval: UL/CSA type CMX acc. to UL 444 and CSA C22.2 no. 214-02
- PUR outer sheath, tear and notch-resistant, resistant to mineral oils and abrasion when used in power chains

Application range

- For highly flexible applications (power chains, moving machine parts)
- Bus cables for bus systems such as e.g. Modbus, SUCOnet P, Modulink P, VariNet-P)

Product features

- The stated bit rates result in the following cable lengths (maximum) of one bus segment:
- 9.6-93.75 kbit/s = 1200m
- 187.5 kbit/s = max. 1,000 m
- 500 kBit/s = max. 400 m
- Flame-retardant according to IEC 60332.1.2

Approvals

RoHS

Design

- Stranded conductor, bare, core identification code in accordance with DIN 47100
- Copper braiding
- PUR outer sheath
- Colour: violet (RAL 4001)
- UV-resistant (but colour may change after some time)

Technical data

Mutual capacitance
(800 Hz): max. 60 nF/km

Peak operating voltage
(not for power applications) 250 V

Conductor resistance
(loop): max. 159.8 ohm/km

Minimum bending radius
Fixed installation: 6 x core diameter
One bend at end of core:
3 x cable diameter
Flexing: 15 x outer diameter

Test voltage
Core/core: 1500 V

Temperature range
Fixed installation: -40°C to +80°C
Flexing: -30°C to +70°C

Characteristic impedance
100 - 120 Ohm

Article number	Article designation	Number of pairs and mm² per conductor	Outer diameter (mm)	Copper index (kg/km)	Weight (kg/km)
For highly flexible applications (power chains, moving machine parts)					
2170213	UNITRONIC® BUS LD FD P	1 x 2 x 0,25	6.0	18.0	39
2170214	UNITRONIC® BUS LD FD P	2 x 2 x 0,25	7.9	33.0	65
2170215	UNITRONIC® BUS LD FD P	3 x 2 x 0,25	8.0	39.0	77
For highly flexible applications (e.g. power chains) - with UL/CSA (CMX) approval					
2170813	UNITRONIC® BUS LD FD P A	1 x 2 x 0,25	6.2	18.0	39
2170814	UNITRONIC® BUS LD FD P A	2 x 2 x 0,25	8.3	33.0	65
2170815	UNITRONIC® BUS LD FD P A	3 x 2 x 0,25	8.4	39.0	77

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Copper price basis: EUR 150/100kg. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: coil ≤ 30 kg or ≤ 250 m, otherwise drum
Please specify the preferred type of packaging (e.g. 1 x 500 m drum or 5 x 100 m coils).
Modubus is owned by the Modbus-IDA Organisation. SUCOnet P is a registered trademark of the Moeller Group. Modulink P is a registered trademark of Weidmüller GmbH & Co. VariNet is a registered trademark of Pepperl+Fuchs GmbH.
Photographs are not to scale and do not represent detailed images of the respective products.

Accessories

- SILVYN® CHAIN refer to page [P142668]
- SMARTSTRIP stripping tool refer to page 907

UNITRONIC® BUS PA

Info

- PA = Process Automation
- Variant with UL/CSA CMG

Benefits

- FC (Fast Connect) version is oil and UV-resistant

Application range

- Process-automation application for connecting sensors and actuators - including areas with risks of explosion.
- Fixed installation

Product features

- Bit rate = 31.25 kbit/s. Transmission technology RS485 also possible but bit rate is limited to 1.5 Mbit/s
- Maximum cable length is dependent on several factors (e.g. supply voltage, current demand).
- Technical Data: refer to the overview on “UNITRONIC® Bus Cables”
- Flame-retardant according to IEC 60332.1.2

Approvals

- PROFIBUS® PA is standardised in EN 50170 as PROFIBUS® DP and PROFIBUS® FMS
- Transmission technology for PROFIBUS-PA in accordance with international standard IEC 61158-2
- FC variant with UL/CSA approval (CMG / PLTC)

Design

- UNITRONIC® BUS PA (BU/BK)
  Stranded conductor, core colours: red and green, copper braiding, PVC sheath, colour: blue (intrinsically safe area), colour: black (non-instrinsically safe area)
- UNITRONIC® BUS PA FC (BU/BK)
  Solid core, UL/CSA CMG approval and “Fast Connect” cable design, which enables rapid connection of the IDC connector (Insulation Displacement Connection).

Technical data

Peak operating voltage
(not for power applications) 250 V

Conductor resistance
(loop): max. 44 ohm/km

Minimum bending radius
Fixed installation: 10 x outer diameter

Test voltage
Core/core: 1500 V

Temperature range
Fixed installation:
-30°C to +80°C
During installation: -5°C to +50°C

Characteristic impedance
100 ± 20 Ohm

Article number	Article designation	Number of pairs and cable diameter per conductor in mm	Outer diameter (mm)	Copper index (kg/km)	Weight (kg/km)
For fixed installation - conventional cable assembly					
2170234	UNITRONIC® BUS PA (BU)	1 x 2 x 1,3	8.0	45.0	84
2170235	UNITRONIC® BUS PA (BK)	1 x 2 x 1,3	8.0	45.0	84
For fixed installation - “Fast Connect” cable assembly - UL/CSA CMG approval					
2170334	UNITRONIC® BUS PA FC (BU)	1 x 2 x 1.00	8.0	45.5	103
2170335	UNITRONIC® BUS PA FC (BK)	1 x 2 x 1.00	8.0	45.5	103

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Copper price basis: EUR 150/100kg. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: coil ≤ 30 kg or ≤ 250 m, otherwise drum
Please specify the preferred type of packaging (e.g. 1 x 500 m drum or 5 x 100 m coils).
SIMATIC® is a registered trademark of Siemens AG
Armoured
Photographs are not to scale and do not represent detailed images of the respective products.

Accessories

- Multipurpose shears A and B refer to page 902
- STAR STRIP stripping tool refer to page 906
- FC Strip stripping tool refer to page 908

UNITRONIC® DeviceNet THICK + THIN

Application range

- Fixed installation
- DeviceNet™ connects industrial devices e.g. limit switches, photoelectric switches, valve islands, motor starters, drives, PLCs, etc.

Product features

- Oil-resistant
- Based on proven CAN (Controller Area Network) technology.
- Permissible cable lengths vary with the data rate and the cable thickness
- Refer to data sheet for more details

Approvals

c UL us RoHS DeviceNet

- CMG UL/CSA approval 75°C or PLTC, Sun Res
- FRNC variant with Germanischer Lloyd approval

Design

- A) Halogen-free (2170340 + 2170341)
- B) Polyvinylchloride (PVC) (2170342 + 2170343, 2170362 + 2170363)

Technical data

Core identification code
Data pair: light blue + white
Power supply: red + black

Mutual capacitance
(800 Hz): max. 39.8 nF/km

Peak operating voltage
300 V (not for power applications)

Conductor resistance
Thick (loop): max. 45 ohm/km
Thin (loop): max. 180 ohm/km

Minimum bending radius
Fixed installation: 15 x cable diameter

Test voltage
Core/core: 2000 V

Temperature range
Fixed installation: -25°C to +80°C

Characteristic impedance
120 ohm

Article number	Article designation	Number of pairs and AWG size	Outer diameter (mm)	Copper index (kg/km)	Weight (kg/m)
Halogen-free					
2170340	UNITRONIC® BUS DN THICK FRNC	1x2xAWG18 + 1x2xAWG15	12.2	88.4	195
2170341	UNITRONIC® BUS DN THIN FRNC	1x2xAWG24 + 1x2xAWG22	6.9	33.4	69.5
With PVC outer sheath					
2170342	UNITRONIC® BUS DN THICK Y	1x2xAWG18 + 1x2xAWG15	12.2	88.4	192
2170343	UNITRONIC® BUS DN THIN Y	1x2xAWG24 + 1x2xAWG22	6.9	33.4	66.9

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Copper price basis: EUR 150/100kg. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
FRNC means Flame-Retardant, Non-Corrosive; and DeviceNet is a registered trademark of ODVA.
Lapp Kabel is a member of the PROFIBUS user organisation (PNO)
ECO is the cost-efficient version of article no. 2170342 and 2170343, with a slight modification to the outer sheath and UL/CSA-approved (CMG).
Photographs are not to scale and do not represent detailed images of the respective products.

UNITRONIC® DeviceNet FD THICK+THIN

Highly flexible and UL/CSA-approved

Application range

- For highly flexible applications
- DeviceNet™ connects industrial devices e.g. limit switches, photoelectric switches, valve islands, motor starters, drives, PLCs, etc.

Product features

- Based on proven CAN (Controller Area Network) technology.
- Permissible cable lengths vary with the data rate and the cable thickness
- Refer to data sheet for more details

Approvals

c UL us RoHS DeviceNet™

- PUR: UL/CSA-approved (CMX)
- PVC: UL/CSA CMG 75 °C or PLTC FT4 Sun Res Oil Res

Design

- Polyurethane (PUR) (2170344 + 2170345)
- Polyvinylchloride (PVC) (2170346 + 2170347)

Technical data

Core identification code
Data pair: light blue + white
Power supply: red + black

Mutual capacitance
(800 Hz): max. 39.8 nF/km

Peak operating voltage
300 V (not for power applications)

Conductor resistance
Thick (loop): max. 45 ohm/km
Thin (loop): max. 180 ohm/km

Minimum bending radius
Fixed installation: 7.5 x cable diameter
Flexing: 15 x outer diameter

Test voltage
Core/core: 2000 V

Temperature range
PUR: -40 °C to +80 °C
PVC: -10 °C to +80 °C

Characteristic impedance
120 ohm

Article number	Article designation	Number of pairs and AWG size	Outer diameter (mm)	Copper index (kg/km)	Weight (kg/m)
Version P (PUR)					
2170344	UNITRONIC® BUS DN THICK FD P	1x2xAWG18 + 1x2xAWG15	12.2	94.0	184
2170345	UNITRONIC® BUS DN THIN FD P	1x2xAWG24 + 1x2xAWG22	6.9	33.4	67.7
Version Y (PVC)					
2170346	UNITRONIC® BUS DN THICK FD Y	1x2xAWG18 + 1x2xAWG15	12.2	94.0	195
2170347	UNITRONIC® BUS DN THIN FD Y	1x2xAWG24 + 1x 2xAWG22	6.9	33.4	69.8

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Copper price basis: EUR 150/100kg. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
DeviceNet is a registered trademark of ODVA
Photographs are not to scale and do not represent detailed images of the respective products.

Accessories

- SILVYN® CHAIN refer to page [P142668]
- SMARTSTRIP stripping tool refer to page 907

UNITRONIC® BUS CAN

Info
- CAN = Controller Area Network

UNITRONIC® BUS CAN FD P

Application range

UNITRONIC® BUS CAN
- Fixed installation

UNITRONIC® BUS CAN FD P
- For highly flexible applications

Product features

UNITRONIC® BUS CAN
- Maximum bit rate: 1 Mbit/s for 40 m segment length
- Larger conductor cross-section is necessary with increasing length. Refer to the table below (reference values from ISO 11898).
- ISO 11898 makes recommendations for the segment length, cable cross section and bit rate
- Flame-retardant according to IEC 60332.1.2

UNITRONIC® BUS CAN FD P
- Halogen-free
- Maximum bit rate: 1 Mbit/s for 40 m segment length
- Larger conductor cross-section is necessary with increasing length. Refer to the table below (reference values from ISO 11898).
- ISO 11898 makes recommendations for the segment length, cable cross section and bit rate
- Flame-retardant according to IEC 60332.1.2

Approvals

c UL us RoHS

- Standardised internationally in ISO 11898
- UL/CSA type CMX (UL 444)

Design

UNITRONIC® BUS CAN
- 0.22 + 0.34 + 0.5: bare stranded conductor, 7-wire
  0.75: bare stranded conductor, fine-wire
- Colour-coded in accordance with DIN 47100
- Copper braiding
- PVC outer sheath
- Colour: violet (RAL 4001)

UNITRONIC® BUS CAN FD P
- Stranded bare conductor
- Screening: wrapped with braided copper wires
- PUR outer sheath
- Colour: violet (RAL 4001)
- UV-resistant (but colour may change after some time)

Technical data

Mutual capacitance
UNITRONIC® BUS CAN
(800 Hz): max. 40 nF/km
UNITRONIC® BUS CAN FD P
(800 Hz): max. 60 nF/km

Peak operating voltage
UNITRONIC® BUS CAN
(not for power applications) 250 V
UNITRONIC® BUS CAN FD P
250 V (not for power transmission)

Conductor resistance
UNITRONIC® BUS CAN
(loop):
max. 186 ohm/km
UNITRONIC® BUS CAN FD P
(loop): max. 159.8 ohm/km

Minimum bending radius
UNITRONIC® BUS CAN
Fixed installation: 8 x outer diameter
UNITRONIC® BUS CAN FD P
Flexing: 15 x outer diameter

Test voltage
Core/core: 1500 V

Temperature range
UNITRONIC® BUS CAN
Fixed installation:
-30°C to +80°C
Flexing: -5°C to +70°C
UNITRONIC® BUS CAN FD P
Fixed installation: -40°C to +80°C
Flexing: -30°C to +70°C

Characteristic impedance
120 ohm

Article number	Article designation	Number of pairs/conductor cross section (mm²)	Outer diameter (mm)	Copper index (kg/km)	Weight (kg/km)
for fixed installation					
2170260	UNITRONIC® BUS CAN	1 x 2 x 0,22	5.7	16.7	42.0
2170261	UNITRONIC® BUS CAN	2 x 2 x 0,22	7.6	34.8	68.0
2170263	UNITRONIC® BUS CAN	1 x 2 x 0,34	6.8	25.0	55.0
2170264	UNITRONIC® BUS CAN	2 x 2 x 0,34	8.5	46.4	88.0
2170266	UNITRONIC® BUS CAN	1 x 2 x 0,5	7.5	41.6	90.0
2170267	UNITRONIC® BUS CAN	2 x 2 x 0,5	9.7	59.4	106.0
2170269	UNITRONIC® BUS CAN	1 x 2 x 0,75	8.7	52.7	108.0
2170270	UNITRONIC® BUS CAN	2 x 2 x 0,75	11.5	80.6	142.0
For highly flexible applications (power chains, moving machine parts)					
2170272	UNITRONIC® BUS CAN FD P	1 x 2 x 0,25	6.4	24.0	40.0
2170273	UNITRONIC® BUS CAN FD P	2 x 2 x 0,25	8.4	33.0	65.0
2170275	UNITRONIC® BUS CAN FD P	1 x 2 x 0,34	6.8	32.8	60.0
2170276	UNITRONIC® BUS CAN FD P	2 x 2 x 0,34	9.6	52.4	88.0
2170278	UNITRONIC® BUS CAN FD P	1 x 2 x 0,5	8.0	41.9	74.0
2170279	UNITRONIC® BUS CAN FD P	2 x 2 x 0,5	10.8	59.4	100.0

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Copper price basis: EUR 150/100kg. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: coil ≤ 30 kg or ≤ 250 m, otherwise drum
Please specify the preferred type of packaging (e.g. 1 x 500 m drum or 5 x 100 m coils).
Photographs are not to scale and do not represent detailed images of the respective products.

Accessories

UNITRONIC® BUS CAN
- Multipurpose shears A and B refer to page 902
- SMARTSTRIP stripping tool refer to page 907

UNITRONIC® BUS CAN FD P
- SILVYN® CHAIN refer to page [P142668]
- Multipurpose shears A and B refer to page 902
- SMARTSTRIP stripping tool refer to page 907

EPIC® Data CAN-Bus Connectors 90°

EPIC® Data CAN-Bus Connectors 90°

Info

- Fully compatible with market standard
- CAN, CANopen, DeviceNet™

Benefits

- With additional 24 V DC output to supply external devices (GND = pin 6, CAN V+ = pin 9)
- Cost-saving due to quick installation
- Easy to connect
- Standardised interfaces
- Small design

Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Control engineering

Product features

- Screw termination
- Adjustable termination resistor is integrated
- The integrated, connectable terminal resistors enable the CAN-Bus to be terminated or connected through
- When used as a through connector, the switch must be in the “OFF” position. If used as a terminating connector, the switch must be in the “ON” position.
- No loose parts

Approvals

CE cULus RoHS

Design

- Sub-D plug, 9-pin
- Metallised housing
- For cable diameter: 5.0 to 8.0 mm
- (-PG) With additional programming/diagnostic interface: Sub-D socket, 9-pin

Suitable cables

- Cables for Bus-System CAN Page 329
- Cables for Bus-System DeviceNet Page 327

Technical data

Dimensions
65 mm x 48 mm x 16 mm (LxWxH)

Connection type
Screwing

Degree of soiling
2

Weight
Approx. 40 g

Protection rating
IP20

Cable outlet
90°

Terminating resistor
120 ohms integrated,
and connectable with slide switch

Transmission rate
max. 1 MBit/s

Interfaces
CAN bus station: SUB-D socket, 9-pin
CAN bus cable: 6 terminal blocks for wires up to 1.0 mm²
Sub-D pin assignment:
CAN Low = Pin 2
CAN High = Pin 7
CAN Gnd = Pin 3
GND = Pin 6
CAN V+ = Pin 9

Permissble ambient conditions
Operating temperature:
0°C to +60°C
Transport and storage temperature:
-25°C to +75°C
Relative humidity:
max. 75 % at +25°C

Article number	Article designation	Cable outlet	PG	Pieces / PU
EPIC® data CAN bus connectors				
21700537	ED-CAN-90	90°	no	1
21700536	ED-CAN-90-PG	90°	yes	1

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Photographs are not to scale and do not represent detailed images of the respective products.
For detailed technical information please refer to www.lappautomation.com

EPIC® Data CAN-Bus Connectors 180°

Info

- **Fully compatible with market standard**
- **CAN, CANopen, DeviceNet™**

EPIC® Data CAN-Bus Connectors 180°

Benefits

- Standardised interfaces
- Cost-saving due to quick installation
- Easy to connect

Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Control engineering

Product features

- Screw termination
- Adjustable termination resistor is integrated
- The integrated, connectable terminal resistors enable the CAN-Bus to be terminated or connected through
- When used as a through connector, the switch must be in the “OFF” position. If used as a terminating connector, the switch must be in the “ON” position.
- No loose parts

Approvals

Design

- Sub-D plug, 9-pin
- Metallised housing
- No loose parts
- For cable diameter: 5.0 to 8.0 mm

Suitable cables

- Cables for Bus-System CAN Page 329
- Cables for Bus-System DeviceNet Page 327

Technical data

Dimensions
67.5 mm x 35 mm x 17 mm (LxWxH)

Connection type
Screwing

Degree of soiling
2

Weight
Approx. 40 g

Protection rating
IP20

Cable outlet
180°

Terminating resistor
120 ohms integrated,
and connectable with slide switch

Transmission rate
max. 1 MBit/s

Interfaces
CAN bus station: SUB-D socket, 9-pin
CAN bus cable: 6 terminal blocks for wires up to 1.0 mm²
Sub-D pin assignment:
CAN Low = Pin 2
CAN High = Pin 7
CAN Gnd = Pin 3

Permissble ambient conditions
Operating temperature:
0°C to +60°C
Transport and storage temperature:
-25°C to +75°C
Relative humidity:
max. 75 % at +25°C

Article number	Article designation	Cable outlet	PG	Pieces / PU
EPIC® data CAN BUS connectors				
21700538	ED-CAN-AX	180° axial	no	1

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Photographs are not to scale and do not represent detailed images of the respective products.
For detailed technical information please refer to www.lappautomation.com

UNITRONIC® BUS FF

Benefits

- Cables meet the requirements of ISA/SP50 and the FOUNDATION™ field bus for the cable type A.

Application range

- FOUNDATION™ Fieldbus is used in intrinsically safe areas, especially in the field of Process Automation
- Fixed installation

Product features

- All cables are designed for 105 °C and resistant to sunlight

Approvals

- With UL/CSA approval (CMG/PLTC)

Design

- Lapp bus cables for FOUNDATION™ field bus are available in 4 versions:
- 3-core, unarmoured, with device ground
- 3-core, armoured (longitudinally welded, spiral corrugated copper sheath) with device ground
  Yellow and blue version
- 2-core, not armoured, with device ground

Technical data

Approvals
UL/CSA approval CMG

Peak operating voltage
300 V

Conductor resistance
≤ 24 Ohm/km

Minimum bending radius
15 x outer diameter

Test voltage
1500 V

Temperature range
-40 °C or -25 °C to +105 °C, see data sheet

Characteristic impedance
100 ± 20 Ohm at 31.25 kHz

Article number	Article designation	Number of pairs and cable diameter	Outer diameter (mm)	Copper index (kg/km)	Weight (kg/km)
2170350	UNITRONIC® BUS FF 3	1x2x1.1 + 1x1.1 Ø	7.9	62.0	93
2170351	UNITRONIC® BUS FF 3 ARM (YE)	1x2x1.1 + 1x1.1 Ø	12.3	125.0	182
2170353	UNITRONIC® BUS FF 3 ARM (BU)	1x2x1.1 + 1x1.1 Ø	12.3	125.0	182
2170352	UNITRONIC® BUS FF 2	1 x 2 x 1.1	7.9	53.3	82

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Copper price basis: EUR 150/100kg. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Foundation™ is a trademark of the Fieldbus Foundation
Photographs are not to scale and do not represent detailed images of the respective products.

UNITRONIC® BUS CC

Info

- **Lapp Kabel is a regular member of the user organisation CC-Link Partner Association (CLPA), Japan.**

Benefits

- The CC-Link® system was developed by Mitsubishi Electric Automation, Japan.
- This CC-Link® bus cable has successfully passed the CC-Link® Conformance Test in Japan.

Application range

- CC-Link® (Control & Communication Link) = field bus network, for both control as well as information data to provide efficient, integrated factory and process automation.
- Fixed installation of the CC-Link® network

Product features

- Transmission rate in relation to the distance
- 156 kbit/s 1.200 m
  625 kbit/s 600 m
  2,5 Mbit/s 200 m
  5,0 Mbit/s 110-150 m
  10 Mbit/s 50-100 m

Approvals

- The LAPP CC-Link® cable is UL/CSA-approved (CM or PLTC)

Technical data

Approvals
CM UL/CSA approval 75°C or PLTC Sun Res

Peak operating voltage
300 V rms

Conductor resistance
11 ohm/1,000 ft. (305 m) at 20°C

Minimum bending radius
15 x outer diameter

Test voltage
2000 V

Temperature range
-40°C to +70°C

Characteristic impedance
110 ohm at 1 MHz

Article number	Article designation	Number of cores and AWG size	Outer diameter (mm)	Copper index (kg/km)	Weight (kg/km)
2170360	UNITRONIC® BUS CC	3 x 1 x AWG20	7.7	38.8	76.6

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Copper price basis: EUR 150/100kg. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
CC-Link® is a registered trademark of CC-Link Partner Association, Japan (CLPA)
Photographs are not to scale and do not represent detailed images of the respective products.

UNITRONIC® BUS CC FD P FRNC

Info

- **Lapp Kabel is a regular member of the user organisation CC-Link Partner Association (CLPA), Japan.**

Benefits

- The CC-Link® system was developed by Mitsubishi Electric Automation, Japan.

Application range

- CC-Link® (Control & Communication Link) = field bus network, for both control as well as information data to provide efficient, integrated factory and process automation.
- For highly flexible applications (power chains, moving machine parts)

Product features

- Transmission rate in relation to the distance
- 156 kbit/s 1.200 m
  625 kbit/s 600 m
  2,5 Mbit/s 200 m
  5,0 Mbit/s 110-150 m
  10 Mbit/s 50-100 m

Approvals

- AWM 20233 80°C 300V

Technical data

Approvals
UL AWM Style 20233

Peak operating voltage
300 V rms

Conductor resistance
11 ohm/1,000 ft. (305 m) at 20°C

Minimum bending radius
Fixed installation:
4 x outer diameter
Flexing: 8 x outer diameter

Test voltage
2000 V

Temperature range
-40°C to +80°C

Characteristic impedance
110 ohm at 1 MHz

Article number	Article designation	Number of cores and AWG size	Outer diameter (mm)	Copper index (kg/km)	Weight (kg/km)
2170370	UNITRONIC® BUS CC FD P FRNC	3 x 1 x AWG20	8.5	39.9	84

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Copper price basis: EUR 150/100kg. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
CC-Link® is a registered trademark of CC-Link Partner Association, Japan (CLPA)
Photographs are not to scale and do not represent detailed images of the respective products.

Characteristic impedance: 120 ohm

UNITRONIC® BUS SAFETY

Benefits
- For serial transmission of safety-oriented data

Application range
- For fixed installation and highly flexible applications
- For systems such as SafetyBUS p®, based on the well-known CAN bus system

Product features
- The stated bit rates result in the following cable lengths (maximum) for a bus segment:
- 500 kbit/s = max.100 m
- 250 kbit/s = max. 250 m
- 125 kbit/s = max. 500 m
- 50 kbit/s = max. 1,000 m

Approvals
RoHS

Design
- Stranded conductor, 3 cores twisted, colour-coded in accordance with DIN 47100 (white, brown, green), copper braiding, halogen-free outer sheath
- UNITRONIC® BUS SAFETY FD P is as per UNITRONIC® BUS SAFETY, but also suitable for highly flexible applications
- Flame-retardant according to IEC 60332.1.2

Technical data

Approvals
Version UNITRONIC® BUS SAFETY FC:
AWM Style 2464 (80°C 300 V)

Mutual capacitance
(800 Hz): max. 45 nF/km

Peak operating voltage
(not for power applications) 250 V
(not for power applications) 300 V
(UL AWM version)

Conductor resistance
(loop): max. 52 ohm/km

Minimum bending radius
Fixed installation:
10 x cable diameter

Test voltage
Core/core: 3000 V
Core/core: 2000 V (UL AWM version)

Temperature range
Fixed installation: -30°C to +80°C
Fixed UL (AWM) version:
40°C to +80°C

Characteristic impedance
120 ohm

Article number	Article designation	Number of cores and mm² per conductor	Outer diameter (mm)	Copper index (kg/km)	Weight (kg/km)
for fixed installation					
2170295	UNITRONIC® BUS SAFETY	3 x 0.75	7.6	49.0	68
For highly flexible applications (e.g. power chains)					
2170885	UNITRONIC® BUS SAFETY FD P	3 x 0.75	7.8	49.0	68

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Copper price basis: EUR 150/100kg. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: coil ≤ 30 kg or ≤ 250 m, otherwise drum
Please specify the preferred type of packaging (e.g. 1 x 500 m drum or 5 x 100 m coils).
SafetyBUS p® is a registered trademark of Pilz GmbH & Co.
Photographs are not to scale and do not represent detailed images of the respective products.

Accessories
- FC Strip stripping tool refer to page 908

UNITRONIC® BUS IBS

Info
- IBS - INTERBUS

Benefits
- Certified by INTERBUS CLUB

Application range
- Fixed installation

Product features
- IBS cable - for fixed installation
- Remote bus cable + installation remote bus cable
- The stated bit rates result in the following cable lengths (maximum) of one bus segment: 500 kbit/s = max. 400 m
- Flame-retardant according to IEC 60332.1.2

Approvals
- In accordance with DIN 19258 and EN 50254

Design
- UNITRONIC® BUS IBS
- Stranded conductor, bare, core identification code in accordance with DIN 47100, braided copper, PVC outer sheath, violet (RAL 4001)
- UNITRONIC® BUS IBS P COMBI
- Stranded conductor, bare, core identification code in accordance with DIN 47100 (data), stranded, bare (power supply), copper braid, PUR outer sheath, violet (RAL 4001), halogen-free
- UNITRONIC® BUS IBS A is as per UNITRONIC BUS IBS, but with UL/CSA approval

Technical data
Mutual capacitance
(800 Hz): max. 60 nF/km

Peak operating voltage
(not for power applications) 250 V

Conductor resistance
(loop): max. 186 ohm/km

Minimum bending radius
Fixed installation: 8 x outer diameter

Test voltage
Core/core: 1500 V

Temperature range
Fixed installation:
-30°C to +80°C
Flexing: -5°C to +70°C

Characteristic impedance
100 Ohm

Article number	Cable type	Article designation	Number of pairs and mm² per conductor	Outer diameter (mm)	Copper index (kg/km)	Weight (kg/km)
for fixed installation						
2170206	Remote bus cable (RBC)	UNITRONIC® BUS IBS	3 x 2 x 0.22	7.2	37.0	72
2170208	Installation remote bus cable (INBC)	UNITRONIC® BUS IBS P COMBI	3 x 2 x 0,22 + 3 x 1,0	7.9	60.0	85
For fixed installation - UL/CSA CMX approval						
2170209	Remote bus cable (RBC)	UNITRONIC® BUS IBS A	3 x 2 x 0.22	7.2	37.0	72

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Copper price basis: EUR 150/100kg. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: coil ≤ 30 kg or ≤ 250 m, otherwise drum
Please specify the preferred type of packaging (e.g. 1 x 500 m drum or 5 x 100 m coils).
INTERBUS is a registered trademark of Phoenix Contact GmbH & Co.
Photographs are not to scale and do not represent detailed images of the respective products.

UNITRONIC® BUS IBS Yv

Benefits
- Certified by INTERBUS CLUB

Application range
- Suitable for outdoor use and direct burial

Product features
- IBS cable - for outdoor use or direct burial, UV-resistant (remote bus cable + installation remote bus cable)
- The stated bit rates result in the following cable lengths (maximum) of one bus segment:
- 500 kBit/s = max. 400 m
- Flame-retardant according to IEC 60332.1.2

Approvals
- In accordance with DIN 19258 and EN 50254

Design
- Data: stranded bare conductor, core colours: white-brown/green-yellow/grey-pink
- Power supply: stranded bare conductor, colours: red, blue, green/yellow
- Overall copper wire braiding
- Reinforced PVC outer sheath
- Colour: black (RAL 9005)

Technical data
Mutual capacitance
(800 Hz): max. 60 nF/km

Peak operating voltage
(not for power applications) 250 V

Conductor resistance
(loop): max. 186 ohm/km

Minimum bending radius
Fixed installation: 8 x outer diameter

Test voltage
Core/core: 1500 V

Temperature range
Fixed installation: -40°C to +70°C

Characteristic impedance
100 Ohm

Article number	Cable type	Article designation	Number of pairs and mm² per conductor	Outer diameter (mm)	Copper index (kg/km)	Weight (kg/km)
Suitable for outdoor use and direct burial, UV-resistant						
2170207	Remote bus cable (RBC)	UNITRONIC® BUS IBS Yv	3 x 2 x 0.22	9.3	37.0	94
2170217	Installation remote bus cable (INBC)	UNITRONIC® BUS IBS Yv COMBI	3 x 2 x 0,22 + 3 x 1,0	9.4	60.0	128

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Copper price basis: EUR 150/100kg. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: coil ≤ 30 kg or ≤ 250 m, otherwise drum
Please specify the preferred type of packaging (e.g. 1 x 500 m drum or 5 x 100 m coils).
INTERBUS is a registered trademark of Phoenix Contact GmbH & Co.
Photographs are not to scale and do not represent detailed images of the respective products.

UNITRONIC® BUS IBS FD P

Info

- IBS - INTERBUS

Benefits

- Certified by INTERBUS CLUB

Application range

- For highly flexible use in energy supply chains or permanently moving machines and linear robots
- Dry or damp rooms
- Harsh industrial environment

Product features

- IBS cable - for highly flexible application
- Remote bus cable + installation remote bus cable
- 500 kbit/s = max. 400 m (remote bus cable)
- Max. 50 m (installation remote bus cable)
- PUR outer sheath, tear and notch-resistant, resistant to mineral oils and abrasion when used in power chains

Approvals

- In accordance with DIN 19258 and EN 50254

Design

- **UNITRONIC® BUS IBS FD P**
- Stranded conductor, bare, core identification code in accordance with DIN 47100, braided copper wire for overall screening, PUR outer sheath, violet (RAL 4001), halogen-free, flame-retardant in accordance with IEC 60332-1-2.
- **UNITRONIC® BUS IBS FD P COMBI**
- Bare stranded copper wire conductor, cores twisted to pairs, core colours: white/brown / green/yellow / grey/pink (data). Bare copper wire stranded conductor, core colours: red, blue, green/yellow (power supply).
- Overall screening of braided copper, PUR outer sheath (violet, RAL 4001), halogen-free, flame-retardant according to IEC 60332-1-2.

Technical data

Mutual capacitance
(800 Hz): max. 60 nF/km

Peak operating voltage
(not for power applications) 250 V

Conductor resistance
(loop): max. 159.8 ohm/km

Minimum bending radius
Flexing: 15 x outer diameter

Test voltage
Core/core: 1500 V

Temperature range
Fixed installation: -40°C to +80°C
Flexing: -30°C to +70°C

Characteristic impedance
100 Ohm

Article number	Cable type	Article designation	Number of pairs and mm² per conductor	Outer diameter (mm)	Copper index (kg/km)	Weight (kg/km)
For highly flexible applications (power chains, moving machine parts)						
2170216	Remote bus cable (RBC)	UNITRONIC® BUS IBS FD P	3 x 2 x 0.25	7.9	39.0	64
2170218	Installation remote bus cable (INBC)	UNITRONIC® BUS IBS FD P COMBI	3 x 2 x 0,25 + 3 x 1,0	7.9	62.0	92
For highly flexible applications (e.g. power chains) - with UL/CSA (CMX) approval						
2170818	Installation remote bus cable (INBC)	UNITRONIC® BUS IBS FD P COMBI A	3 x 2 x 0,25 + 3 x 1,0	7.9	62.0	92

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Copper price basis: EUR 150/100kg. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: coil ≤ 30 kg or ≤ 250 m, otherwise drum
Please specify the preferred type of packaging (e.g. 1 x 500 m drum or 5 x 100 m coils).
INTERBUS is a registered trademark of Phoenix Contact GmbH & Co.
Photographs are not to scale and do not represent detailed images of the respective products.

Accessories

- SILVYN® CHAIN refer to page [P142668]
- Multipurpose shears A and B refer to page 902
- SMARTSTRIP stripping tool refer to page 907

UNITRONIC® BUS EIB / KNX

Info

- EIB / European Installation Bus
- KNX/communication in building management

Application range

- The product is designed for use in building management, e.g. for decentralised control of lighting, heating, air-conditioning, ventilation, energy management, blinds, time management, locking systems etc.
- The cable can be laid on or under plaster; in pipes, cable ducts; in dry, damp or wet environments.
- EIB installation mainly consists of sensors/command-transmitters (e.g. light barriers, switches, thermostats, infrared, wind meters, timers), and actuators (e.g. engines, heaters, ventilators, lights, blinds).
- KNX technology was formed from the merging of three established European bus standards: EIP, EHS (household appliances and consumer electronics) and Batibus (heating/ventilation/air conditioning)

Product features

- Serial data transmission
- EIB cable has been tested at 4 kV (1 min.) in a water bath

Approvals

RoHS

Design

- Screened installation cable based on type J-Y(ST)Y according to DIN VDE 0815, solid bare copper conductor, ø 0.8 mm, measurements 2 x 2 x 0.8 ø. 4 solid cores twisted to a star quad; colours of cores: 1st pair red + black, 2nd pair white + yellow.
- Screening: wrapped with aluminium-laminated plastic foil
- PVC-based outer sheath
- Colour: green
- COMBI version with additional power supply cables 3 x 1.5 mm²; core colours: blue, black, green-yellow

Technical data

Mutual capacitance
(800 Hz): max. 100 nF/km

Peak operating voltage
(not for power applications) 250 V

Conductor resistance
(loop): max. 73.2 ohm/km

Minimum bending radius
Fixed installation:
10 x cable diameter

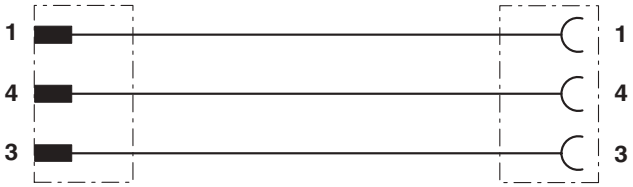
Test voltage
Core/core: 4000 V

Temperature range
Fixed installation: -30°C to +70°C

Article number	Article designation	Number of pairs and mm or mm² per conductor	Outer diameter (mm)	Copper index (kg/km)	Weight (kg/m)
PVC versions					
2170240	UNITRONIC® BUS EIB	2 x 2 x 0.8	6.6	21.0	54
2170242	UNITRONIC® BUS EIB COMBI	2 x 2 x 0,8 mm + 3 x 1,5 mm²	12.7	64.0	128
Halogen-free versions					
2170241	UNITRONIC® BUS EIB H	2 x 2 x 0.8	6.6	21.0	54

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Copper price basis: EUR 100/100kg. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: coil ≤ 30 kg or ≤ 250 m, otherwise drum
Please specify the preferred type of packaging (e.g. 1 x 500 m drum or 5 x 100 m coils).
Photographs are not to scale and do not represent detailed images of the respective products.

S/A cable: M12 connector on free conductor end



S/A cable: M12 connector on free conductor end

Benefits

- Cost-saving due to quick and easy installation
- Space-saving due to compact dimensions
- Fast and easy error tracking
- Standardised interfaces

Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

Product features

- 3-pin connector
- Plug with M12 thread to free conductor end
- The cables have marker carriers
- Free of substances that could hinder paint or varnish
- Suitable for drag chains

Approvals

c UL us RoHS

Design

- Fixed flexible control cable
- Design: 3 x 0.34 mm² (42 x 0.1 mm)
- Core colours: brown, blue, black
- Outer sheath: PUR, halogen-free
- Outer sheath colour: black

Technical data

IP **Protection rating**
IP65/IP68/IP69K

Ambient temperature (operation)
Plug/socket
-25°C to +90°C
Cable, fixed installation
-40°C to +80°C
Cable, flexible installation
-5°C to +80°C

Contact material
CuSn

Contact surface material
Ni/Au

Coding
A - Standard

Knurl material
Zinc die-cast, nickel-plated

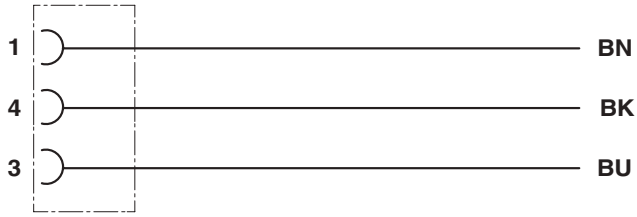
Gripping body material
TPU, flame-retardant, self-extinguishing

Article number	Article designation	Length (m)	Nominal voltage U_N (V)	Nominal current I_N in (A)	PU
Straight connector					
22260221	AB-C3-M12MS-2,0PUR	2	250	4	1
22260222	AB-C3-M12MS-5,0PUR	5	250	4	1
22260249	AB-C3-M12MS-10,0PUR	10	250	4	1
Angled connector					
22260223	AB-C3-M12MA-2,0PUR	2	250	4	1
22260224	AB-C3-M12MA-5,0PUR	5	250	4	1
22260256	AB-C3-M12MA-10,0PUR	10	250	4	1

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Copper price basis: inclusive of copper. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.
Customised cable lengths, outer-sheath materials (e.g. PVC), and types of connectors are available upon request.
Photographs are not to scale and do not represent detailed images of the respective products.
For detailed technical information please refer to the data sheet (www.lappautomation.com)
For the UNITRONIC® field bus type code, please see table T6

New

S/A cable: M12 socket on free conductor end



S/A cable: M12 socket on free conductor end

Benefits

- Cost-saving due to quick and easy installation
- Space-saving due to compact dimensions
- Fast and easy error tracking
- Standardised interfaces

Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

Product features

- 3-pin connector
- Socket with M12 thread to free conductor end
- The cables have marker carriers
- Free of substances that could hinder paint or varnish
- Suitable for drag chains

Approvals

cULus RoHS

Design

- Fixed flexible control cable
- Design: 3 x 0.34 mm² (42 x 0.1 mm)
- Core colours: brown, blue, black
- Outer sheath: PUR, halogen-free/PVC
- Outer sheath colour: black

Technical data

Protection rating
IP65/IP68/IP69K

Ambient temperature (operation)
Plug/socket
-25°C to +90°C (PUR/PVC)
Cable, fixed installation
-40°C to +80°C (PUR)
-25°C to +80°C (PVC)
Cable, flexible installation
-5°C to +80°C (PUR/PVC)

Contact material
CuSn

Contact surface material
Ni/Au

Coding
A - Standard

Knurl material
Zinc die-cast, nickel-plated

Gripping body material
TPU, flame-retardant, self-extinguishing

Article number	Article designation	Length (m)	Nominal voltage U_N (V)	Nominal current I_N in (A)	Status display	PU
Straight socket						
22260257	AB-C3-2,0PUR-M12FS	2	250	4	no	1
22260250	AB-C3-5,0PUR-M12FS	5	250	4	no	1
22260251	AB-C3-10,0PUR-M12FS	10	250	4	no	1
22260080	AB-C3-2,0PVC-M12FS	2	250	4	no	1
22260663	AB-C3-5,0PVC-M12FS	5	250	4	no	1
22260081	AB-C3-10,0PVC-M12FS	10	250	4	no	1
Angled socket						
22260258	AB-C3-2,0PUR-M12FA	2	250	4	no	1
22260259	AB-C3-5,0PUR-M12FA	5	250	4	no	1
22260260	AB-C3-10,0PUR-M12FA	10	250	4	no	1
Straight socket with LEDs						
22260252	AB-C3-2,0PUR-M12FS-2L	2	24	4	2 LEDs	1
22260265	AB-C3-5,0PUR-M12FS-2L	5	24	4	2 LEDs	1
22260266	AB-C3-10,0PUR-M12FS-2L	10	24	4	2 LEDs	1
Angled socket with LEDs						
22260253	AB-C3-2,0PUR-M12FA-2L	2	24	4	2 LEDs	1
22260254	AB-C3-5,0PUR-M12FA-2L	5	24	4	2 LEDs	1
22260255	AB-C3-10,0PUR-M12FA-2L	10	24	4	2 LEDs	1

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Copper price basis: inclusive of copper. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.
Customised cable lengths, outer-sheath materials (e.g. PVC), and types of connectors are available upon request.
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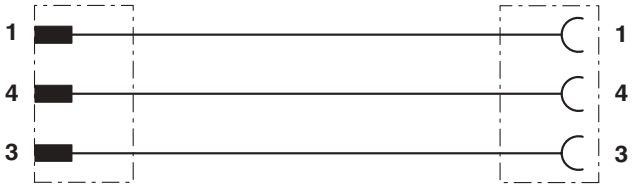
UL approvals can be found in the data sheet (www.lappautomation.com)
For the UNITRONIC® field bus type code, please see table T6

S/A cable: M12 connector on M12 socket



S/A cable: M12 connector on M12 socket

Benefits

- Cost-saving due to quick and easy installation
- Space-saving due to compact dimensions
- Fast and easy error tracking
- Standardised interfaces

Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

Product features

- 3-pin connector
- Plug with M12 thread to socket with M12 thread
- The cables have marker carriers
- Free of substances that could hinder paint or varnish
- Suitable for drag chains

Approvals

c UL us RoHS

Design

- Fixed flexible control cable
- Design: 3 x 0.34 mm² (42 x 0.1 mm)
- Core colours: brown, blue, black
- Outer sheath: PUR, halogen-free
- Outer sheath colour: black

Technical data

IP **Protection rating**
IP65/IP68/IP69K

Ambient temperature (operation)
Plug/socket
-25°C to +90°C
Cable, fixed installation
-40°C to +80°C
Cable, flexible installation
-5°C to +80°C

Contact material
CuSn

Contact surface material
Ni/Au

Coding
A - Standard

Knurl material
Zinc die-cast, nickel-plated

Gripping body material
TPU, flame-retardant, self-extinguishing

Article number	Article designation	Length (m)	Nominal voltage U_N (V)	Nominal current I_N in (A)	Status display	PU
Straight connector to straight socket						
22260233	AB-C3-M12MS-0,3PUR-M12FS	0.3	250	4	no	1
22260234	AB-C3-M12MS-0,6PUR-M12FS	0.6	250	4	no	1
22260235	AB-C3-M12MS-1,0PUR-M12FS	1	250	4	no	1
22260236	AB-C3-M12MS-2,0PUR-M12FS	2	250	4	no	1
Straight connector to angled socket						
22260237	AB-C3-M12MS-0,3PUR-M12FA	0.3	250	4	no	1
22260238	AB-C3-M12MS-0,6PUR-M12FA	0.6	250	4	no	1
22260239	AB-C3-M12MS-1,0PUR-M12FA	1	250	4	no	1
22260240	AB-C3-M12MS-2,0PUR-M12FA	2	250	4	no	1
Straight connector to angled socket with LEDs						
22260261	AB-C3-M12MS-0,3PUR-M12FA-2L	0.3	24	4	2 LEDs	1
22260262	AB-C3-M12MS-0,6PUR-M12FA-2L	0.6	24	4	2 LEDs	1
22260263	AB-C3-M12MS-1,0PUR-M12FA-2L	1	24	4	2 LEDs	1
22260264	AB-C3-M12MS-2,0PUR-M12FA-2L	2	24	4	2 LEDs	1

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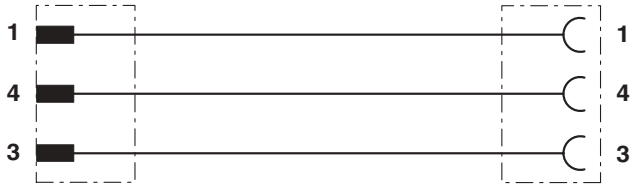
Copper price basis: inclusive of copper. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.
Customised cable lengths, outer-sheath materials (e.g. PVC), and types of connectors are available upon request.
Photographs are not to scale and do not represent detailed images of the respective products.
For detailed technical information please refer to the data sheet (www.lappautomation.com)
For the UNITRONIC® field bus type code, please see table T6

S/A cable: M12 connector on M8 socket



S/A cable: M12 connector on M8 socket

Benefits

- Cost-saving due to quick and easy installation
- Space-saving due to compact dimensions
- Fast and easy error tracking
- Standardised interfaces

Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

Product features

- 3-pin connector
- Plug with M12 thread to socket with M8 thread
- The cables have marker carriers
- Free of substances that could hinder paint or varnish
- Suitable for drag chains

Approvals

cULus RoHS

Design

- Fixed flexible control cable
- Design: 3 x 0.25 mm² (32 x 0.1 mm)
- Core colours: brown, blue, black
- Outer sheath: PUR, halogen-free
- Outer sheath colour: black

Technical data

Protection rating
IP65/IP68/IP69K

Ambient temperature (operation)
Plug/socket
-25°C to +90°C
Cable, fixed installation
-40°C to +80°C
Cable, flexible installation
-5°C to +80°C

Contact material
CuSn

Contact surface material
Ni/Au

Coding
A - Standard

Knurl material
Zinc die-cast, nickel-plated

Gripping body material
TPU, flame-retardant, self-extinguishing

Article number	Article designation	Length (m)	Nominal voltage U_N (V)	Nominal current I_N in (A)	Status display	PU
Straight connector to straight socket						
22260225	AB-C3-M12MS-0,3PUR-M8FS	0.3	60	3	no	1
22260226	AB-C3-M12MS-0,6PUR-M8FS	0.6	60	3	no	1
22260227	AB-C3-M12MS-1,0PUR-M8FS	1	60	3	no	1
22260228	AB-C3-M12MS-2,0PUR-M8FS	2	60	3	no	1
Straight connector to angled socket						
22260229	AB-C3-M12MS-0,3PUR-M8FA	0.3	60	3	no	1
22260230	AB-C3-M12MS-0,6PUR-M8FA	0.6	60	3	no	1
22260231	AB-C3-M12MS-1,0PUR-M8FA	1	60	3	no	1
22260232	AB-C3-M12MS-2,0PUR-M8FA	2	60	3	no	1
Straight connector to angled socket with LEDs						
22260267	AB-C3-M12MS-0,3PUR-M8FA-2L	0.3	24	3	2 LEDs	1
22260268	AB-C3-M12MS-0,6PUR-M8FA-2L	0.6	24	3	2 LEDs	1
22260269	AB-C3-M12MS-1,0PUR-M8FA-2L	1	24	3	2 LEDs	1
22260270	AB-C3-M12MS-2,0PUR-M8FA-2L	2	24	3	2 LEDs	1

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Copper price basis: inclusive of copper. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.
Customised cable lengths, outer-sheath materials (e.g. PVC), and types of connectors are available upon request.
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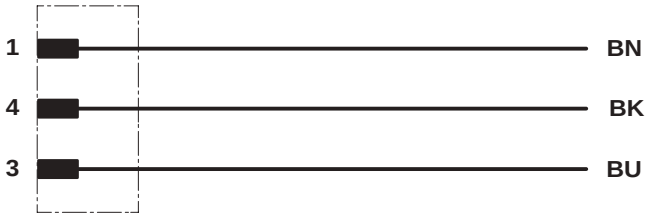
For the UNITRONIC® field bus type code, please see table T6

New

S/A cable: M8 connector on free conductor end



S/A cable: M8 connector on free conductor end

Benefits
- Cost-saving due to quick and easy installation
- Space-saving due to compact dimensions
- Fast and easy error tracking
- Standardised interfaces

Application range
- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

Product features
- 3-pin connector
- Plug with M8 thread to free conductor end
- The cables have marker carriers
- Free of substances that could hinder paint or varnish
- Suitable for drag chains

Approvals
cULus RoHS

Design
- Fixed flexible control cable
- Design: 3 x 0.25 mm² (32 x 0.1 mm)
- Core colours: brown, blue, black
- Outer sheath: PUR, halogen-free/PVC
- Outer sheath colour: black

Technical data
Protection rating
IP65/IP68/IP69K

Ambient temperature (operation)
Plug/socket
-25°C to +90°C (PUR/PVC)
Cable, fixed installation
-40°C to +80°C (PUR)
-25°C to +80°C (PVC)
Cable, flexible installation
-5°C to +80°C (PUR/PVC)

Contact material
CuSn

Contact surface material
Ni/Au

Coding
A - Standard

Knurl material
Zinc die-cast, nickel-plated

Gripping body material
TPU, flame-retardant, self-extinguishing

Article number	Article designation	Length (m)	Nominal voltage U_N (V)	Nominal current I_N in (A)	PU
Straight connector					
22260204	AB-C3-M8MS-2,0PUR	2	60	3	1
22260205	AB-C3-M8MS-5,0PUR	5	60	3	1
22260218	AB-C3-M8MS-10,0PUR	10	60	3	1
22260847	AB-C3-M8MS-2,0PVC	2	60	3	1
22260665	AB-C3-M8MS-5,0PVC	5	60	3	1
22260848	AB-C3-M8MS-10,0PVC	10	60	3	1
Angled connector					
22260053	AB-C3-M8MA-2,0PUR	2	60	3	1
22260987	AB-C3-M8MA-5,0PUR	5	60	3	1
22260055	AB-C3-M8MA-10,0PUR	10	60	3	1

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Copper price basis: inclusive of copper. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.
Customised cable lengths, outer-sheath materials (e.g. PVC), and types of connectors are available upon request.
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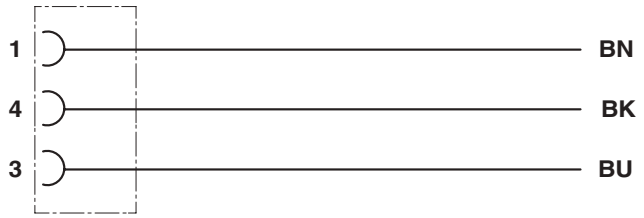
UL approvals can be found in the data sheet (www.lappautomation.com)
For the UNITRONIC® field bus type code, please see table T6

S/A cable: M8 socket on free conductor end



S/A cable: M8 socket on free conductor end

Benefits

- Cost-saving due to quick and easy installation
- Space-saving due to compact dimensions
- Fast and easy error tracking
- Standardised interfaces

Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

Product features

- 3-pin connector
- Socket with M8 thread to free conductor end
- The cables have marker carriers
- Free of substances that could hinder paint or varnish
- Suitable for drag chains

Approvals

c UL us RoHS

Design

- Fixed flexible control cable
- Design: 3 x 0.25 mm² (32 x 0.1 mm)
- Core colours: brown, blue, black
- Outer sheath: PUR, halogen-free
- Outer sheath colour: black

Technical data

Protection rating
IP65/IP68/IP69K

Ambient temperature (operation)
Plug/socket
-25°C to +90°C
Cable, fixed installation
-40°C to +80°C
Cable, flexible installation
-5°C to +80°C

Contact material
CuSn

Contact surface material
Ni/Au

Coding
A - Standard

Knurl material
Zinc die-cast, nickel-plated

Gripping body material
TPU, flame-retardant, self-extinguishing

Article number	Article designation	Length (m)	Nominal voltage U_N (V)	Nominal current I_N in (A)	Status display	PU
Straight socket						
22260202	AB-C3-2,0PUR-M8FS	2	60	3	no	1
22260200	AB-C3-5,0PUR-M8FS	5	60	3	no	1
22260219	AB-C3-10,0PUR-M8FS	10	60	3	no	1
Angled socket						
22260203	AB-C3-2,0PUR-M8FA	2	60	3	no	1
22260201	AB-C3-5,0PUR-M8FA	5	60	3	no	1
22260220	AB-C3-10,0PUR-M8FA	10	60	3	no	1
Angled socket with LEDs						
22260275	AB-C3-2,0PUR-M8FA-2L	2	24	3	2 LEDs	1
22260276	AB-C3-5,0PUR-M8FA-2L	5	24	3	2 LEDs	1
22260277	AB-C3-10,0PUR-M8FA-2L	10	24	3	2 LEDs	1

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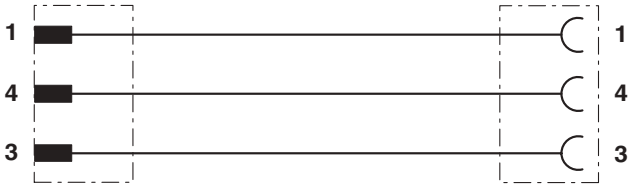
Copper price basis: inclusive of copper. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.
Customised cable lengths, outer-sheath materials (e.g. PVC), and types of connectors are available upon request.
Photographs are not to scale and do not represent detailed images of the respective products.
For detailed technical information please refer to the data sheet (www.lappautomation.com)
For the UNITRONIC® field bus type code, please see table T6

S/A cable: M8 connector on M8 socket



S/A cable: M8 connector on M8 socket

Benefits
- Cost-saving due to quick and easy installation
- Space-saving due to compact dimensions
- Fast and easy error tracking
- Standardised interfaces

Application range
- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

Product features
- 3-pin connector
- Plug with M8 thread to socket with M8 thread
- The cables have marker carriers
- Free of substances that could hinder paint or varnish
- Suitable for drag chains

Approvals
cULus RoHS

Design
- Fixed flexible control cable
- Design: 3 x 0.25 mm² (32 x 0.1 mm)
- Core colours: brown, blue, black
- Outer sheath: PUR, halogen-free
- Outer sheath colour: black

Technical data
Protection rating
IP65/IP68/IP69K

Ambient temperature (operation)
Plug/socket
-25°C to +90°C
Cable, fixed installation
-40°C to +80°C
Cable, flexible installation
-5°C to +80°C

Contact material
CuSn

Contact surface material
Ni/Au

Coding
A - Standard

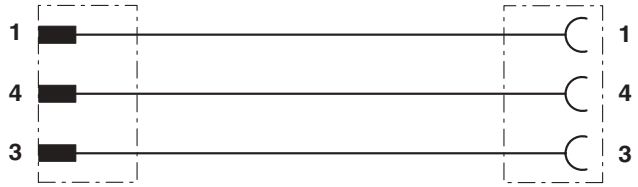
Knurl material
Zinc die-cast, nickel-plated

Gripping body material
TPU, flame-retardant, self-extinguishing

Article number	Article designation	Length (m)	Nominal voltage U_N (V)	Nominal current I_N in (A)	Status display	PU
Straight connector to straight socket						
22260206	AB-C3-M8MS-0,3PUR-M8FS	0.3	60	3	no	1
22260207	AB-C3-M8MS-0,6PUR-M8FS	0.6	60	3	no	1
22260208	AB-C3-M8MS-1,0PUR-M8FS	1	60	3	no	1
22260209	AB-C3-M8MS-2,0PUR-M8FS	2	60	3	no	1
Straight connector to angled socket						
22260210	AB-C3-M8MS-0,3PUR-M8FA	0.3	60	3	no	1
22260211	AB-C3-M8MS-0,6PUR-M8FA	0.6	60	3	no	1
22260212	AB-C3-M8MS-1,0PUR-M8FA	1	60	3	no	1
22260213	AB-C3-M8MS-2,0PUR-M8FA	2	60	3	no	1
Straight connector to angled socket with LEDs						
22260214	AB-C3-M8MS-0,3PUR-M8FA-2L	0.3	24	3	2 LEDs	1
22260215	AB-C3-M8MS-0,6PUR-M8FA-2L	0.6	24	3	2 LEDs	1
22260216	AB-C3-M8MS-1,0PUR-M8FA-2L	1	24	3	2 LEDs	1
22260217	AB-C3-M8MS-2,0PUR-M8FA-2L	2	24	3	2 LEDs	1

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Copper price basis: inclusive of copper. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.
Customised cable lengths, outer-sheath materials (e.g. PVC), and types of connectors are available upon request.
Photographs are not to scale and do not represent detailed images of the respective products.
For detailed technical information please refer to the data sheet (www.lappautomation.com)
For the UNITRONIC® field bus type code, please see table T6

S/A cable: M8 connector on M12 socket



S/A cable: M8 connector on M12 socket

Benefits

- Cost-saving due to quick and easy installation
- Space-saving due to compact dimensions
- Fast and easy error tracking
- Standardised interfaces

Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

Product features

- 3-pin connector
- Plug with M8 thread to socket with M12 thread
- The cables have marker carriers
- Free of substances that could hinder paint or varnish
- Suitable for drag chains

Approvals

c UL us RoHS

Design

- Fixed flexible control cable
- Design: 3 x 0.25 mm² (32 x 0.1 mm)
- Core colours: brown, blue, black
- Outer sheath: PUR, halogen-free
- Outer sheath colour: black

Technical data

Protection rating
IP65/IP68/IP69K

Ambient temperature (operation)
Plug/socket
-25°C to +90°C
Cable, fixed installation
-40°C to +80°C
Cable, flexible installation
-5°C to +80°C

Contact material
CuSn

Contact surface material
Ni/Au

Coding
A - Standard

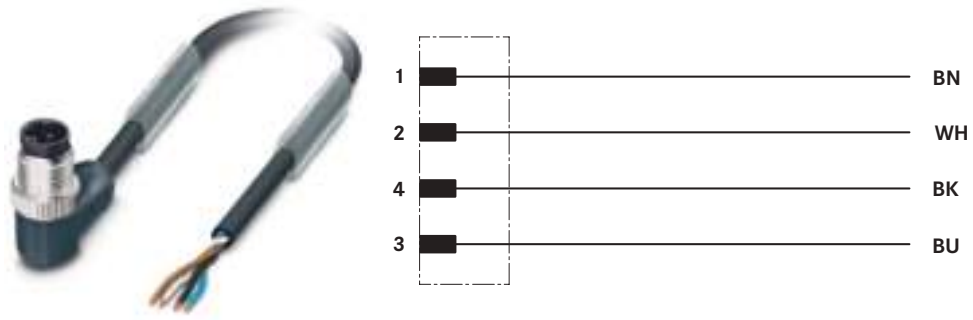
Knurl material
Zinc die-cast, nickel-plated

Gripping body material
TPU, flame-retardant, self-extinguishing

Article number	Article designation	Length (m)	Nominal voltage U_N (V)	Nominal current I_N in (A)	Status display	PU
Straight connector to straight socket						
22260241	AB-C3-M8MS-0,3PUR-M12FS	0.3	60	3	no	1
22260242	AB-C3-M8MS-0,6PUR-M12FS	0.6	60	3	no	1
22260243	AB-C3-M8MS-1,0PUR-M12FS	1	60	3	no	1
22260244	AB-C3-M8MS-2,0PUR-M12FS	2	60	3	no	1
Straight connector to angled socket						
22260245	AB-C3-M8MS-0,3PUR-M12FA	0.3	60	3	no	1
22260246	AB-C3-M8MS-0,6PUR-M12FA	0.6	60	3	no	1
22260247	AB-C3-M8MS-1,0PUR-M12FA	1	60	3	no	1
22260248	AB-C3-M8MS-2,0PUR-M12FA	2	60	3	no	1
Straight connector to angled socket with LEDs						
22260271	AB-C3-M8MS-0,3PUR-M12FA-2L	0.3	24	3	2 LEDs	1
22260272	AB-C3-M8MS-0,6PUR-M12FA-2L	0.6	24	3	2 LEDs	1
22260273	AB-C3-M8MS-1,0PUR-M12FA-2L	1	24	3	2 LEDs	1
22260274	AB-C3-M8MS-2,0PUR-M12FA-2L	2	24	3	2 LEDs	1

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Copper price basis: inclusive of copper. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.
Customised cable lengths, outer-sheath materials (e.g. PVC), and types of connectors are available upon request.
Photographs are not to scale and do not represent detailed images of the respective products.
For detailed technical information please refer to the data sheet (www.lappautomation.com)
For the UNITRONIC® field bus type code, please see table T6

S/A cable: M12 connector on free conductor end



S/A cable: M12 connector on free conductor end

Benefits
- Cost-saving due to quick and easy installation
- Space-saving due to compact dimensions
- Fast and easy error tracking
- Standardised interfaces

Application range
- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

Product features
- 4-pin connector
- Plug with M12 thread to free conductor end
- The cables have marker carriers
- Free of substances that could hinder paint or varnish
- Suitable for drag chains

Approvals
cULus RoHS

Design
- Fixed flexible control cable
- Design: 4 x 0.34 mm² (42 x 0.1 mm)
- Core colours: brown, white, blue, black
- Outer sheath: PUR, halogen-free
- Outer sheath colour: black

Technical data
Protection rating
IP65/IP68/IP69K

Ambient temperature (operation)
Plug/socket
-25°C to +90°C
Cable, fixed installation
-40°C to +80°C
Cable, flexible installation
-5°C to +80°C

Contact material
CuSn

Contact surface material
Ni/Au

Coding
A - Standard

Knurl material
Zinc die-cast, nickel-plated

Gripping body material
TPU, flame-retardant, self-extinguishing

Article number	Article designation	Length (m)	Nominal voltage U_N (V)	Nominal current I_N in (A)	PU
Straight connector					
22260320	AB-C4-M12MS- 2,0PUR	2	250	4	1
22260321	AB-C4-M12MS- 5,0PUR	5	250	4	1
22260342	AB-C4-M12MS-10,0PUR	10	250	4	1
Angled connector					
22260301	AB-C4-M12MA-2,0PUR	2	250	4	1
22260302	AB-C4-M12MA-5,0PUR	5	250	4	1
22260303	AB-C4-M12MA-10,0PUR	10	250	4	1

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Copper price basis: inclusive of copper. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.
Customised cable lengths, outer-sheath materials (e.g. PVC), and types of connectors are available upon request.
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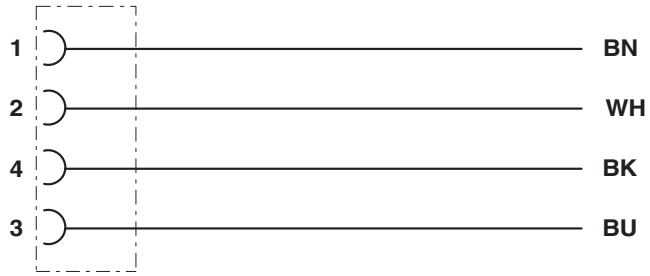
For detailed technical information please refer to the data sheet (www.lappautomation.com)
For the UNITRONIC® field bus type code, please see table T6

New

S/A cable: M12 socket on free conductor end



S/A cable: M12 socket on free conductor end

Benefits

- Cost-saving due to quick and easy installation
- Space-saving due to compact dimensions
- Fast and easy error tracking
- Standardised interfaces

Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

Product features

- 4-pin connector
- Socket with M12 thread to free conductor end
- The cables have marker carriers
- Free of substances that could hinder paint or varnish
- Suitable for drag chains

Approvals

cULus RoHS

Design

- Fixed flexible control cable
- Design: 4 x 0.34 mm² (42 x 0.1 mm)
- Core colours: brown, white, blue, black
- Outer sheath: PUR, halogen-free/PVC
- Outer sheath colour: black

Technical data

Protection rating
IP65/IP68/IP69K

Ambient temperature (operation)
Plug/socket
-25°C to +90°C (PUR/PVC)
Cable, fixed installation
-40°C to +80°C (PUR)
-25°C to +80°C (PVC)
Cable, flexible installation
-5°C to +80°C (PUR/PVC)

Contact material
CuSn

Contact surface material
Ni/Au

Coding
A - Standard

Knurl material
Zinc die-cast, nickel-plated

Gripping body material
TPU, flame-retardant, self-extinguishing

Article number	Article designation	Length (m)	Nominal voltage U_N (V)	Nominal current I_N in (A)	Status display	PU
Straight socket						
22260322	AB-C4- 2,0PUR-M12FS	2	250	4	no	1
22260323	AB-C4- 5,0PUR-M12FS	5	250	4	no	1
22260343	AB-C4-10,0PUR-M12FS	10	250	4	no	1
22260688	AB-C4- 2,0PVC-M12FS	2	250	4	no	1
22260689	AB-C4-5,0PVC-M12FS	5	250	4	no	1
22260685	AB-C4-10,0PVC-M12FS	10	250	4	no	1
Angled socket						
22260324	AB-C4- 2,0PUR-M12FA	2	250	4	no	1
22260325	AB-C4- 5,0PUR-M12FA	5	250	4	no	1
22260341	AB-C4-10,0PUR-M12FA	10	250	4	no	1
22260841	AB-C4- 2,0PVC-M12FA	2	250	4	no	1
22260678	AB-C4-5,0PVC-M12FA	5	250	4	no	1
22260683	AB-C4-10,0PVC-M12FA	10	250	4	no	1
Straight socket with LEDs						
22260344	AB-C4- 2,0PUR-M12FS-2L	2	24	4	2 LEDs	1
22260345	AB-C4- 5,0PUR-M12FS-2L	5	24	4	2 LEDs	1
22260346	AB-C4-10,0PUR-M12FS-2L	10	24	4	2 LEDs	1
Angled socket with LEDs						
22260326	AB-C4- 2,0PUR-M12FA-3L	2	24	4	3 LEDs	1
22260327	AB-C4- 5,0PUR-M12FA-3L	5	24	4	3 LEDs	1
22260340	AB-C4-10,0PUR-M12FA-3L	10	24	4	3 LEDs	1

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Copper price basis: inclusive of copper. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.
Customised cable lengths, outer-sheath materials (e.g. PVC), and types of connectors are available upon request.
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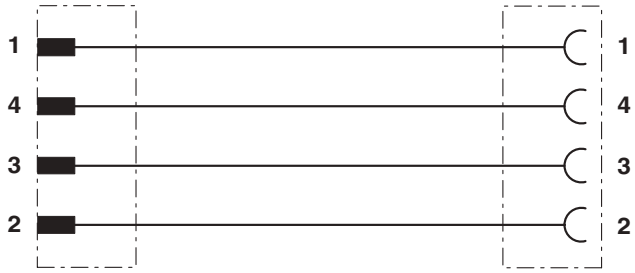
For the UNITRONIC® field bus type code, please see table T6

New

S/A cable: M12 connector on M12 socket



S/A cable: M12 connector on M12 socket

Benefits
- Cost-saving due to quick and easy installation
- Space-saving due to compact dimensions
- Fast and easy error tracking
- Standardised interfaces

Application range
- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

Product features
- 4-pin connector
- Plug with M12 thread to socket with M12 thread
- The cables have marker carriers
- Free of substances that could hinder paint or varnish
- Suitable for drag chains

Approvals
c UL us RoHS

Design
- Fixed flexible control cable
- Design: 4 x 0.34 mm² (42 x 0.1 mm)
- Core colours: brown, white, blue, black
- Outer sheath: PUR, halogen-free/PVC
- Outer sheath colour: black

Technical data

IP **Protection rating**
IP65/IP68/IP69K

Ambient temperature (operation)
Plug/socket
-25°C to +90°C (PUR/PVC)
Cable, fixed installation
-40°C to +80°C (PUR)
-25°C to +80°C (PVC)
Cable, flexible installation
-5°C to +80°C (PUR/PVC)

Contact material
CuSn

Contact surface material
Ni/Au

Coding
A - Standard

Knurl material
Zinc die-cast, nickel-plated

Gripping body material
TPU, flame-retardant, self-extinguishing

Article number	Article designation	Length (m)	Nominal voltage U_N (V)	Nominal current I_N in (A)	Status display	PU
Straight connector to straight socket						
22260328	AB-C4-M12MS- 0,3PUR-M12FS	0.3	250	4	no	1
22260329	AB-C4-M12MS- 0,6PUR-M12FS	0.6	250	4	no	1
22260330	AB-C4-M12MS- 1,0PUR-M12FS	1	250	4	no	1
22260331	AB-C4-M12MS- 2,0PUR-M12FS	2	250	4	no	1
Straight connector to angled socket						
22260332	AB-C4-M12MS- 0,3PUR-M12FA	0.3	250	4	no	1
22260333	AB-C4-M12MS- 0,6PUR-M12FA	0.6	250	4	no	1
22260334	AB-C4-M12MS-1,0PUR-M12FA	1	250	4	no	1
22260335	AB-C4-M12MS-2,0PUR-M12FA	2	250	4	no	1
22260832	AB-C4-M12MS-2,0PVC-M12FA	2	250	4	no	1
22260705	AB-C4-M12MS-5,0PVC-M12FA	5	250	4	no	1
22260833	AB-C4-M12MS-10,0PVC-M12FA	10	250	4	no	1
Angled connector to straight socket						
22260304	AB-C4-M12MA-0,3PUR-M12FS	0.3	250	4	no	1
22260305	AB-C4-M12MA-0,6PUR-M12FS	0.6	250	4	no	1
22260306	AB-C4-M12MA-1,0PUR-M12FS	1	250	4	no	1
22260307	AB-C4-M12MA-2,0PUR-M12FS	2	250	4	no	1
Straight connector to angled socket with LEDs						
22260336	AB-C4-M12MS-0,3PUR-M12FA-3L	0.3	24	4	3 LEDs	1
22260337	AB-C4-M12MS-0,6PUR-M12FA-3L	0.6	24	4	3 LEDs	1
22260338	AB-C4-M12MS-1,0PUR-M12FA-3L	1	24	4	3 LEDs	1
22260339	AB-C4-M12MS-2,0PUR-M12FA-3L	2	24	4	3 LEDs	1

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Customised cable lengths, outer-sheath materials (e.g. PVC), and types of connectors are available upon request.
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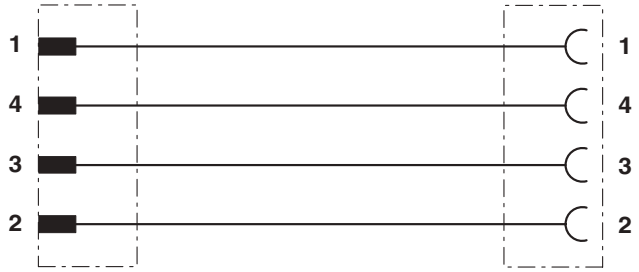
For the UNITRONIC® field bus type code, please see table T6

S/A cable: M12 connector on M8 socket



S/A cable: M12 connector on M8 socket

Benefits

- Cost-saving due to quick and easy installation
- Space-saving due to compact dimensions
- Fast and easy error tracking
- Standardised interfaces

Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

Product features

- 4-pin connector
- Plug with M12 thread to socket with M8 thread
- The cables have marker carriers
- Free of substances that could hinder paint or varnish
- Suitable for drag chains

Approvals

c UL us RoHS

Design

- Fixed flexible control cable
- Design: 4 x 0.25 mm² (32 x 0.1 mm)
- Core colours: brown, white, blue, black
- Outer sheath: PUR, halogen-free
- Outer sheath colour: black

Technical data

Protection rating
IP65/IP68/IP69K

Ambient temperature (operation)
Plug/socket
-25°C to +90°C
Cable, fixed installation
-40°C to +80°C
Cable, flexible installation
-5°C to +80°C

Contact material
CuSn

Contact surface material
Ni/Au

Coding
A - Standard

Knurl material
Zinc die-cast, nickel-plated

Gripping body material
TPU, flame-retardant, self-extinguishing

Article number	Article designation	Length (m)	Nominal voltage U_N (V)	Nominal current I_N in (A)	Status display	PU
Straight connector to straight socket						
22260347	AB-C4-M12MS-0,3PUR-M8FS	0.3	30	3	no	1
22260349	AB-C4-M12MS-0,6PUR-M8FS	0.6	30	3	no	1
22260350	AB-C4-M12MS-1,0PUR-M8FS	1	30	3	no	1
22260348	AB-C4-M12MS-2,0PUR-M8FS	2	30	3	no	1

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Copper price basis: inclusive of copper. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.
Customised cable lengths, outer-sheath materials (e.g. PVC), and types of connectors are available upon request.
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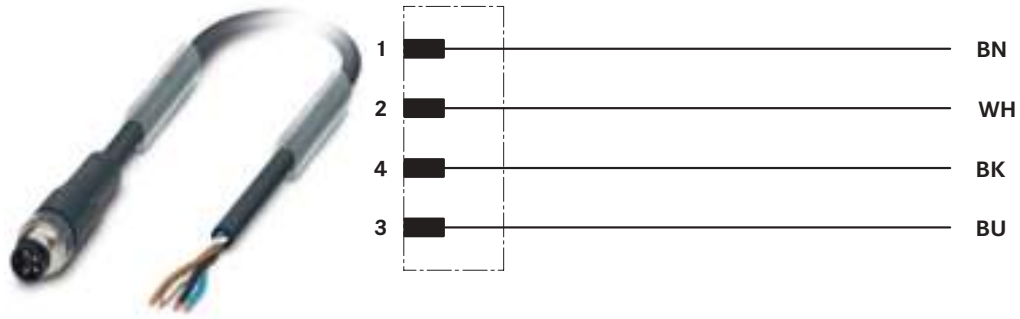
For the UNITRONIC® field bus type code, please see table T6

New

S/A cable: M8 connector on free conductor end



S/A cable: M8 connector on free conductor end

Benefits
- Cost-saving due to quick and easy installation
- Space-saving due to compact dimensions
- Fast and easy error tracking
- Standardised interfaces

Application range
- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

Product features
- 4-pin connector
- Plug with M8 thread to free conductor end
- The cables have marker carriers
- Free of substances that could hinder paint or varnish
- Suitable for drag chains

Approvals
cULus RoHS

Design
- Fixed flexible control cable
- Design: 4 x 0.25 mm² (32 x 0.1 mm)
- Core colours: brown, white, blue, black
- Outer sheath: PUR, halogen-free
- Outer sheath colour: black

Technical data
Protection rating
IP65/IP68/IP69K

Ambient temperature (operation)
Plug/socket
-25°C to +90°C
Cable, fixed installation
-40°C to +80°C
Cable, flexible installation
-5°C to +80°C

Contact material
CuSn

Contact surface material
Ni/Au

Coding
A - Standard

Knurl material
Zinc die-cast, nickel-plated

Gripping body material
TPU, flame-retardant, self-extinguishing

Article number	Article designation	Length (m)	Nominal voltage U_N (V)	Nominal current I_N in (A)	PU
Straight connector					
22260300	AB-C4-M8MS-2,0PUR	2	30	3	1
22260308	AB-C4-M8MS-5,0PUR	5	30	3	1
22260318	AB-C4-M8MS-10,0PUR	10	30	3	1
Angled connector					
22260056	AB-C4-M8MA-2,0PUR	2	30	3	1
22260057	AB-C4-M8MA-5,0PUR	5	30	3	1
22260058	AB-C4-M8MA-10,0PUR	10	30	3	1

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Customised cable lengths, outer-sheath materials (e.g. PVC), and types of connectors are available upon request.
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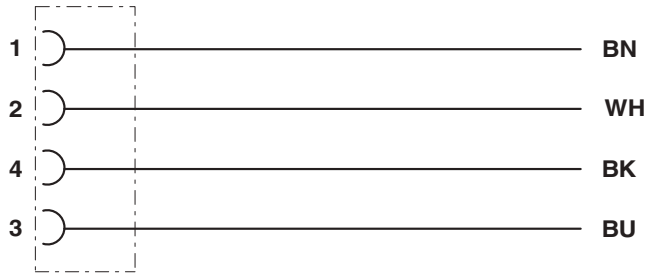
S/A cable: M8 socket on free conductor end



S/A cable: M8 socket on free conductor end

Benefits

- Cost-saving due to quick and easy installation
- Space-saving due to compact dimensions
- Fast and easy error tracking
- Standardised interfaces

Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

Product features

- 4-pin connector
- Socket with M8 thread to free conductor end
- The cables have marker carriers
- Free of substances that could hinder paint or varnish
- Suitable for drag chains

Approvals

cULus RoHS

Design

- Fixed flexible control cable
- Design: 4 x 0.25 mm² (32 x 0.1 mm)
- Core colours: brown, white, blue, black
- Outer sheath: PUR, halogen-free
- Outer sheath colour: black

Technical data

IP **Protection rating**
IP65/IP68/IP69K

Ambient temperature (operation)
Plug/socket
-25°C to +90°C
Cable, fixed installation
-40°C to +80°C
Cable, flexible installation
-5°C to +80°C

Contact material
CuSn

Contact surface material
Ni/Au

Coding
A - Standard

Knurl material
Zinc die-cast, nickel-plated

Gripping body material
TPU, flame-retardant, self-extinguishing

Article number	Article designation	Length (m)	Nominal voltage U_N (V)	Nominal current I_N in (A)	Status display	PU
Straight socket						
22260309	AB-C4- 2,0PUR-M8FS	2	30	3	no	1
22260310	AB-C4- 5,0PUR-M8FS	5	30	3	no	1
22260317	AB-C4-10,0PUR-M8FS	10	30	3	no	1
Angled socket						
22260311	AB-C4- 2,0PUR-M8FA	2	30	3	no	1
22260312	AB-C4- 5,0PUR-M8FA	5	30	3	no	1
22260319	AB-C4-10,0PUR-M8FA	10	30	3	no	1

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Copper price basis: inclusive of copper. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.
Customised cable lengths, outer-sheath materials (e.g. PVC), and types of connectors are available upon request.
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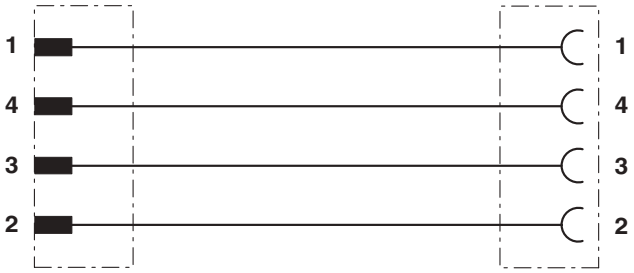
For the UNITRONIC® field bus type code, please see table T6

New

S/A cable: M8 connector on M8 socket



S/A cable: M8 connector on M8 socket

Benefits
- Cost-saving due to quick and easy installation
- Space-saving due to compact dimensions
- Fast and easy error tracking
- Standardised interfaces

Application range
- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

Product features
- 4-pin connector
- Plug with M8 thread to socket with M8 thread
- The cables have marker carriers
- Free of substances that could hinder paint or varnish
- Suitable for drag chains

Approvals
cULus RoHS

Design
- Fixed flexible control cable
- Design: 4 x 0.25 mm² (32 x 0.1 mm)
- Core colours: brown, white, blue, black
- Outer sheath: PUR, halogen-free
- Outer sheath colour: black

Technical data
IP

Protection rating
IP65/IP68/IP69K

Ambient temperature (operation)
Plug/socket
-25°C to +90°C
Cable, fixed installation
-40°C to +80°C
Cable, flexible installation
-5°C to +80°C

Contact material
CuSn

Contact surface material
Ni/Au

Coding
A - Standard

Knurl material
Zinc die-cast, nickel-plated

Gripping body material
TPU, flame-retardant, self-extinguishing

Article number	Article designation	Length (m)	Nominal voltage U_N (V)	Nominal current I_N in (A)	Status display	PU
Straight connector to straight socket						
22260313	AB-C4-M8MS-0,3PUR-M8FS	0.3	30	3	no	1
22260314	AB-C4-M8MS-0,6PUR-M8FS	0.6	30	3	no	1
22260315	AB-C4-M8MS-1,0PUR-M8FS	1	30	3	no	1
22260316	AB-C4-M8MS-2,0PUR-M8FS	2	30	3	no	1
Straight connector to angled socket						
22260059	AB-C4-M8MS-0,3PUR-M8FA	0.3	30	3	no	1
22260060	AB-C4-M8MS-0,6PUR-M8FA	0.6	30	3	no	1
22260061	AB-C4-M8MS-1,0PUR-M8FA	1	30	3	no	1
22260062	AB-C4-M8MS-2,0PUR-M8FA	2	30	3	no	1

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Copper price basis: inclusive of copper. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.
Customised cable lengths, outer-sheath materials (e.g. PVC), and types of connectors are available upon request.
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For the UNITRONIC® field bus type code, please see table T6

S/A cable: M12 connector on free conductor end

S/A cable: M12 connector on free conductor end

Benefits

- Cost-saving due to quick and easy installation
- Space-saving due to compact dimensions
- Fast and easy error tracking
- Standardised interfaces

Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

Product features

- 5-pin connector
- Plug with M12 thread to free conductor end
- The cables have marker carriers
- Free of substances that could hinder paint or varnish
- Suitable for drag chains

Approvals

cULus RoHS

Design

- Fixed flexible control cable
- Design: 5 x 0.34 mm² (42 x 0.1 mm)
- Core colours: brown, white, blue, black, green/yellow
- Outer sheath: PUR, halogen-free
- Outer sheath colour: black

Technical data

Protection rating
IP65/IP68/IP69K

Ambient temperature (operation)
Plug/socket
-25°C to +90°C
Cable, fixed installation
-40°C to +80°C
Cable, flexible installation
-5°C to +80°C

Contact material
CuSn

Contact surface material
Ni/Au

Coding
A - Standard

Knurl material
Zinc die-cast, nickel-plated

Gripping body material
TPU, flame-retardant, self-extinguishing

Article number	Article designation	Length (m)	Nominal voltage U_N (V)	Nominal current I_N in (A)	PU
Straight connector					
22260400	AB-C5-M12MS-2,0PUR	2	60	4	1
22260401	AB-C5-M12MS-5,0PUR	5	60	4	1
22260414	AB-C5-M12MS-10,0PUR	10	60	4	1
Angled connector					
22260402	AB-C5-M12MA-2,0PUR	2	60	4	1
22260403	AB-C5-M12MA-5,0PUR	5	60	4	1
22260417	AB-C5-M12MA-10,0PUR	10	60	4	1

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Copper price basis: inclusive of copper. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.
Customised cable lengths, outer-sheath materials (e.g. PVC), and types of connectors are available upon request.
Photographs are not to scale and do not represent detailed images of the respective products.
For detailed technical information please refer to the data sheet (www.lappautomation.com)
For the UNITRONIC® field bus type code, please see table T6

S/A cable: M12 socket on free conductor end

S/A cable: M12 socket on free conductor end

Benefits

- Cost-saving due to quick and easy installation
- Space-saving due to compact dimensions
- Fast and easy error tracking
- Standardised interfaces

Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

Product features

- 5-pin connector
- Socket with M12 thread to free conductor end
- The cables have marker carriers
- Free of substances that could hinder paint or varnish
- Suitable for drag chains

Approvals

c UL us RoHS

Design

- Fixed flexible control cable
- Design: 5 x 0.34 mm² (42 x 0.1 mm)
- Core colours: brown, white, blue, black, green/yellow
- Outer sheath: PUR, halogen-free
- Outer sheath colour: black

Technical data

Protection rating
IP65/IP68/IP69K

Ambient temperature (operation)
Plug/socket
-25°C to +90°C
Cable, fixed installation
-40°C to +80°C
Cable, flexible installation
-5°C to +80°C

Contact material
CuSn

Contact surface material
Ni/Au

Coding
A - Standard

Knurl material
Zinc die-cast, nickel-plated

Gripping body material
TPU, flame-retardant, self-extinguishing

Article number	Article designation	Length (m)	Nominal voltage U_N (V)	Nominal current I_N in (A)	Status display	PU
Straight socket						
22260404	AB-C5- 2,0PUR-M12FS	2	60	4	no	1
22260405	AB-C5- 5,0PUR-M12FS	5	60	4	no	1
22260415	AB-C5-10,0PUR-M12FS	10	60	4	no	1
Angled socket						
22260406	AB-C5- 2,0PUR-M12FA	2	60	4	no	1
22260407	AB-C5- 5,0PUR-M12FA	5	60	4	no	1
22260418	AB-C5-10,0PUR-M12FA	10	60	4	no	1
Angled socket with LEDs						
22260408	AB-C5- 2,0PUR-M12FA-3L	2	24	4	3 LEDs	1
22260409	AB-C5- 5,0PUR-M12FA-3L	5	24	4	3 LEDs	1
22260416	AB-C5-10,0PUR-M12FA-3L	10	24	4	3 LEDs	1
22260760	AB-C5-25,0PUR-M12FA-3L	25	24	4	3 LEDs	1

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Copper price basis: inclusive of copper. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.
Customised cable lengths, outer-sheath materials (e.g. PVC), and types of connectors are available upon request.
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UL approvals can be found in the data sheet (www.lappautomation.com)
For the UNITRONIC® field bus type code, please see table T6

New

S/A cable: M12 connector on M12 socket

S/A cable: M12 connector on M12 socket

Benefits

- Cost-saving due to quick and easy installation
- Space-saving due to compact dimensions
- Fast and easy error tracking
- Standardised interfaces

Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

Product features

- 5-pin connector
- Plug with M12 thread to socket with M12 thread
- The cables have marker carriers
- Free of substances that could hinder paint or varnish
- Suitable for drag chains

Approvals

cULus RoHS

Design

- Fixed flexible control cable
- Design: 5 x 0.34 mm² (42 x 0.1 mm)
- Core colours: brown, white, blue, black, green/yellow
- Outer sheath: PUR, halogen-free
- Outer sheath colour: black

Technical data

Protection rating
IP65/IP68/IP69K

Ambient temperature (operation)
Plug/socket
-25°C to +90°C
Cable, fixed installation
-40°C to +80°C
Cable, flexible installation
-5°C to +80°C

Contact material
CuSn

Contact surface material
Ni/Au

Coding
A - Standard

Knurl material
Zinc die-cast, nickel-plated

Gripping body material
TPU, flame-retardant, self-extinguishing

Article number	Article designation	Length (m)	Nominal voltage U_N (V)	Nominal current I_N in (A)	Status display	PU
Straight connector to straight socket						
22260410	AB-C5-M12MS-0,3PUR-M12FS	0.3	60	4	no	1
22260411	AB-C5-M12MS-0,6PUR-M12FS	0.6	60	4	no	1
22260412	AB-C5-M12MS-1,0PUR-M12FS	1	60	4	no	1
22260413	AB-C5-M12MS-2,0PUR-M12FS	2	60	4	no	1
Straight connector to angled socket						
22260063	AB-C5-M12MS-0,3PUR-M12FA	0.3	60	4	no	1
22260064	AB-C5-M12MS-0,6PUR-M12FA	0.6	60	4	no	1
22260065	AB-C5-M12MS-1,0PUR-M12FA	1	60	4	no	1
22260066	AB-C5-M12MS-2,0PUR-M12FA	2	60	4	no	1
Straight connector to angled socket with LEDs						
22260067	AB-C5-M12MS-0,3PUR-M12FA-3L	0.3	24	4	3 LEDs	1
22260068	AB-C5-M12MS-0,6PUR-M12FA-3L	0.6	24	4	3 LEDs	1
22260069	AB-C5-M12MS-1,0PUR-M12FA-3L	1	24	4	3 LEDs	1
22260070	AB-C5-M12MS-2,0PUR-M12FA-3L	2	24	4	3 LEDs	1

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Copper price basis: inclusive of copper. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.
Customised cable lengths, outer-sheath materials (e.g. PVC), and types of connectors are available upon request.
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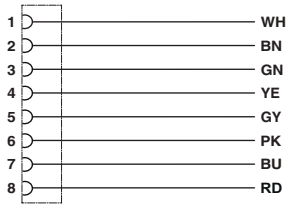
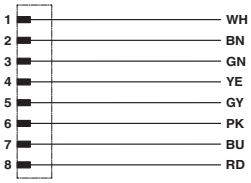
UL approvals can be found in the data sheet (www.lappautomation.com)
For the UNITRONIC® field bus type code, please see table T6

New

S/A cable: M12 connector/socket on free conductor end





S/A cable: M12 connector/socket on free conductor end

Benefits

- Cost-saving due to quick and easy installation
- Space-saving due to compact dimensions
- Fast and easy error tracking
- Standardised interfaces

Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

Product features

- 8-pin connector
- Design: plug/socket with M12 thread to free conductor end
- The cables have marker carriers
- Free of substances that could hinder paint or varnish
- Suitable for drag chains

Approvals

RoHS

Design

- Fixed flexible control cable
- Design: 8 x 0.25 mm² (32 x 0.1 mm)
- Core colours: brown, blue, white, grey, pink, red, yellow, green
- Outer sheath: PUR, halogen-free
- Outer sheath colour: black

Technical data

Protection rating
IP65/IP68/IP69K

Ambient temperature (operation)
Plug/socket
-25°C to +90°C
Cable, fixed installation
-40°C to +80°C
Cable, flexible installation
-5°C to +80°C

Contact material
CuSn

Contact surface material
Ni/Au

Coding
A - Standard

Knurl material
Zinc die-cast, nickel-plated

Gripping body material
TPU, flame-retardant, self-extinguishing

Article number	Article designation	Length (m)	Nominal voltage U_N (V)	Nominal current I_N in (A)	PU
Straight connector					
22260091	AB-C8-M12MS-2,0PUR	2	30	2	1
22260092	AB-C8-M12MS-5,0PUR	5	30	2	1
22260093	AB-C8-M12MS-10,0PUR	10	30	2	1
Angled connector					
22260094	AB-C8-M12MA-2,0PUR	2	30	2	1
22260095	AB-C8-M12MA-5,0PUR	5	30	2	1
22260096	AB-C8-M12MA-10,0PUR	10	30	2	1
Straight socket					
22260726	AB-C8-2,0PUR-M12FS	2	30	2	1
22260728	AB-C8-5,0PUR-M12FS	5	30	2	1
22260729	AB-C8-10,0PUR-M12FS	10	30	2	1
8 pole angled socket					
22260615	AB-C8-5,0PUR-M12FA	5	30	2	1
22260616	AB-C8-10,0PUR-M12FA	10	30	2	1
22260141	AB-C8-2,0PUR-M12FA	2	30	2	1

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Copper price basis: inclusive of copper. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.
Customised cable lengths, outer-sheath materials (e.g. PVC), and types of connectors are available upon request.
Photographs are not to scale and do not represent detailed images of the respective products.
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UL approvals can be found in the data sheet (www.lappautomation.com)
For the UNITRONIC® field bus type code, please see table T6

New

S/A cable: M12 connector on M12 socket

S/A cable: M12 connector on M12 socket

Benefits

- Cost-saving due to quick and easy installation
- Space-saving due to compact dimensions
- Fast and easy error tracking
- Standardised interfaces

Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

Product features

- 8-pin connector
- Plug with M12 thread to socket with M12 thread
- The cables have marker carriers
- Free of substances that could hinder paint or varnish
- Suitable for drag chains

Approvals

RoHS

Design

- Fixed flexible control cable
- Design: 8 x 0.25 mm² (32 x 0.1 mm)
- Core colours: brown, blue, white, grey, pink, red, yellow, green
- Outer sheath: PUR, halogen-free
- Outer sheath colour: black

Technical data

Protection rating
IP65/IP68/IP69K

Ambient temperature (operation)
Plug/socket
-25°C to +90°C
Cable, fixed installation
-40°C to +90°C
Cable, flexible installation
-5°C to 80°C

Contact material
CuSn

Contact surface material
Ni/Au

Coding
A - Standard

Knurl material
Zinc die-cast, nickel-plated

Gripping body material
TPU, flame-retardant, self-extinguishing

Article number	Article designation	Length (m)	Nominal voltage U_N (V)	Nominal current I_N in (A)	PU
Straight connector to straight socket					
22260097	AB-C8-M12MS-0,3PUR-M12FS	0.3	30	2	1
22260098	AB-C8-M12MS- 0,6PUR-M12FS	0.6	30	2	1
22260099	AB-C8-M12MS-1,0PUR-M12FS	1	30	2	1
22260042	AB-C8-M12MS- 2,0PUR-M12FS	2	30	2	1
Straight connector to angled socket					
22260137	AB-C8-M12MS-0,3PUR-M12FA	0.3	30	2	1
22260138	AB-C8-M12MS-0,6PUR-M12FA	0.6	30	2	1
22260139	AB-C8-M12MS1,0PUR-M12FA	1	30	2	1
22260140	AB-C8-M12MS-2,0PUR-M12FA	2	30	2	1

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Copper price basis: inclusive of copper. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.
Customised cable lengths, outer-sheath materials (e.g. PVC), and types of connectors are available upon request.
Photographs are not to scale and do not represent detailed images of the respective products.
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UL approvals can be found in the data sheet (www.lappautomation.com)
For the UNITRONIC® field bus type code, please see table T6

S/A cable: shielded, M12 connector on free conductor end

S/A cable: shielded, M12 connector on free conductor end

Info

- Suitable for drag chains

Benefits

- Cost-saving due to quick and easy installation
- Space-saving due to compact dimensions
- Fast and easy error tracking
- Standardised interfaces

Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

Product features

- 3, 4 and 5-pin version
- Plug with M12 thread to free conductor end
- The cables have marker carriers
- Free of substances that could hinder paint or varnish
- Suitable for drag chains

Approvals

cULus RoHS

Design

- Fixed flexible control cable
- Design:
  3 x 0.34 mm² (42 x 0.1 mm)
  4 x 0.34 mm² (42 x 0.1 mm)
  5 x 0.34 mm² (42 x 0.1 mm)
- Outer sheath: PUR, halogen-free, screened
- Outer sheath colour: black

Technical data

Protection rating
IP65/IP67/IP69K

Ambient temperature (operation)
Plug/socket
-25°C to +90°C
Cable, fixed installation
-25°C to +80°C
Cable, flexible installation
-5°C to +80°C

Contact material
CuSn

Contact surface material
Ni/Au

Coding
A - Standard

Knurl material
Zinc die-cast, nickel-plated

Gripping body material
TPU, flame-retardant, self-extinguishing

Article number	Article designation	Length (m)	Nominal voltage U_N (V)	Nominal current I_N in (A)	PU
3-pin straight connector					
22260453	AB-C3-M12MS- 2,0PUR-SH	2	250	4	1
22260454	AB-C3-M12MS- 5,0PUR-SH	5	250	4	1
22260455	AB-C3-M12MS-10,0PUR-SH	10	250	4	1
4-pin straight connector					
22260459	AB-C4-M12MS- 2,0PUR-SH	2	250	4	1
22260460	AB-C4-M12MS- 5,0PUR-SH	5	250	4	1
22260461	AB-C4-M12MS-10,0PUR-SH	10	250	4	1
5-pin straight connector					
22260465	AB-C5-M12MS- 2,0PUR-SH	2	60	4	1
22260466	AB-C5-M12MS- 5,0PUR-SH	5	60	4	1
22260467	AB-C5-M12MS-10,0PUR-SH	10	60	4	1

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Copper price basis: inclusive of copper. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.
Customised cable lengths, outer-sheath materials (e.g. PVC), and types of connectors are available upon request.
Photographs are not to scale and do not represent detailed images of the respective products.
For detailed technical information please refer to the data sheet (www.lappautomation.com)
For the UNITRONIC® field bus type code, please see table T6

New

S/A cable: shielded, M12 socket on free conductor end

Info

- Suitable for drag chains

S/A cable: shielded, M12 socket on free conductor end

Benefits

- Cost-saving due to quick and easy installation
- Space-saving due to compact dimensions
- Fast and easy error tracking
- Standardised interfaces

Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

Product features

- 3, 4 and 5-pin version
- Socket with M12 thread to free conductor end
- The cables have marker carriers
- Free of substances that could hinder paint or varnish
- Suitable for drag chains

Approvals

cULus RoHS

Design

- Fixed flexible control cable
- Design:
  3 x 0.34 mm² (42 x 0.1 mm)
  4 x 0.34 mm² (42 x 0.1 mm)
  5 x 0.34 mm² (42 x 0.1 mm)
- Outer sheath: PUR, halogen-free, screened
- Outer sheath colour: black

Technical data

Protection rating
IP65/IP67/IP69K

Ambient temperature (operation)
Plug/socket
-25°C to +90°C
Cable, fixed installation
-25°C to +80°C
Cable, flexible installation
-5°C to +80°C

Contact material
CuSn

Contact surface material
Ni/Au

Coding
A - Standard

Knurl material
Zinc die-cast, nickel-plated

Gripping body material
TPU, flame-retardant, self-extinguishing

Article number	Article designation	Length (m)	Nominal voltage U_N (V)	Nominal current I_N in (A)	Status display	PU
3-pin straight socket						
22260450	AB-C3- 2,0PUR-M12FS-SH	2	250	4	no	1
22260451	AB-C3- 5,0PUR-M12FS-SH	5	250	4	no	1
22260452	AB-C3-10,0PUR-M12FS-SH	10	250	4	no	1
3-pin angled socket						
22260071	AB-C3- 2,0PUR-M12FA-SH	2	250	4	no	1
22260072	AB-C3- 5,0PUR-M12FA-SH	5	250	4	no	1
22260073	AB-C3-10,0PUR-M12FA-SH	10	250	4	no	1
4-pin straight socket						
22260456	AB-C4- 2,0PUR-M12FS-SH	2	250	4	no	1
22260457	AB-C4- 5,0PUR-M12FS-SH	5	250	4	no	1
22260458	AB-C4-10,0PUR-M12FS-SH	10	250	4	no	1
22260823	AB-C4-20,0PUR-M12FS-SH	20	250	4	no	1
4-pin angled socket						
22260074	AB-C4- 2,0PUR-M12FA-SH	2	250	4	no	1
22260675	AB-C4- 5,0PUR-M12FA-SH	5	250	4	no	1
22260680	AB-C4-10,0PUR-M12FA-SH	10	250	4	no	1
5-pin straight socket						
22260462	AB-C5- 2,0PUR-M12FS-SH	2	60	4	no	1
22260463	AB-C5- 5,0PUR-M12FS-SH	5	60	4	no	1
22260464	AB-C5-10,0PUR-M12FS-SH	10	60	4	no	1
5-pin angled socket						
22260946	AB-C5- 2,0PUR-M12FA-SH	2	60	4	no	1
22260714	AB-C5- 5,0PUR-M12FA-SH	5	60	4	no	1
22260991	AB-C5-10,0PUR-M12FA-SH	10	60	4	no	1

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Copper price basis: inclusive of copper. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.
Customised cable lengths, outer-sheath materials (e.g. PVC), and types of connectors are available upon request.
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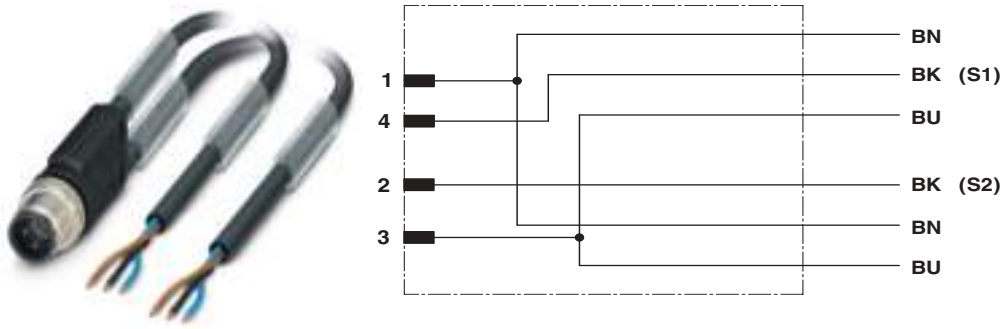
UL approvals can be found in the data sheet (www.lappautomation.com)
For the UNITRONIC® field bus type code, please see table T6

S/A cable: straight M12 Y plug on 2x free conductor end



S/A cable: straight M12 Y plug on 2x free conductor end

Benefits
- Cost-saving due to quick and easy installation
- Space-saving due to compact dimensions
- Fast and easy error tracking
- Standardised interfaces

Application range
- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

Product features
- 4-pin M12 Y connector
- Straight M12 Y plug to 2 conductor ends
- The cables have marker carriers
- Free of substances that could hinder paint or varnish
- Suitable for drag chains

Approvals
cULus RoHS

Design
- Fixed flexible control cable
- Design: 3 x 0.34 mm² (42 x 0.1 mm)
- Core colours: brown, blue, black
- Outer sheath: PUR, halogen-free
- Outer sheath colour: black

Technical data
Protection rating
IP65/IP68/IP69K

Ambient temperature (operation)
Plug/socket
-25°C to +90°C
Cable, fixed installation
-40°C to +80°C
Cable, flexible installation
-5°C to +80°C

Contact material
CuSn

Contact surface material
Ni/Au

Coding
A - Standard

Knurl material
Zinc die-cast, nickel-plated

Gripping body material
TPU, flame-retardant, self-extinguishing

Article number	Article designation	Length (m)	Nominal current I_N in (A)	PU
Y plug to 2 x free conductor end				
22260500	AB-C3-M12Y-2,0PUR	2	4	1
22260513	AB-C3-M12Y-5,0PUR	5	4	1
22260526	AB-C3-M12Y-10,0PUR	10	4	1

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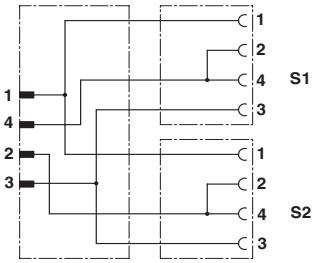
Copper price basis: inclusive of copper. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.
Photographs are not to scale and do not represent detailed images of the respective products.
For detailed technical information please refer to the data sheet (www.lappautomation.com)
For the UNITRONIC® field bus type code, please see table T6

S/A cable: straight M12 Y plug on 2x M12 socket

Info

- PIN 2+4 are bridged on M12 sockets



S/A cable: straight M12 Y plug on 2x M12 socket

Benefits

- Cost-saving due to quick and easy installation
- Space-saving due to compact dimensions
- Fast and easy error tracking
- Standardised interfaces

Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

Product features

- 4-pin M12 Y connector on 2 x M12 socket (4-pin)
- Straight M12 Y plug to 2 conductor ends
- The cables have marker carriers
- Free of substances that could hinder paint or varnish
- Suitable for drag chains

Approvals

cULus RoHS

Design

- Fixed flexible control cable
- Design: 3 x 0.34 mm² (42 x 0.1 mm)
- Core colours: brown, blue, black
- Outer sheath: PUR, halogen-free
- Outer sheath colour: black

Technical data

Protection rating
IP65/IP68/IP69K

Ambient temperature (operation)
Plug/socket
-25 °C to +90 °C
Cable, fixed installation
-40 °C to +80 °C
Cable, flexible installation
-5 °C to +80 °C

Contact material
CuSn

Contact surface material
Ni/Au

Coding
A - Standard

Knurl material
Zinc die-cast, nickel-plated

Gripping body material
TPU, flame-retardant, self-extinguishing

Article number	Article designation	Length (m)	Nominal current I_N in (A)	Status display	PU
Y plug to straight socket					
22260501	AB-C3-M12Y-0,3PUR-M12FS-B	0.3	4	no	1
22260502	AB-C3-M12Y-0,6PUR-M12FS-B	0.6	4	no	1
22260503	AB-C3-M12Y-1,0PUR-M12FS-B	1	4	no	1
22260504	AB-C3-M12Y-2,0PUR-M12FS-B	2	4	no	1
Y plug to angled socket					
22260505	AB-C3-M12Y-0,3PUR-M12FA-B	0.3	4	no	1
22260506	AB-C3-M12Y-0,6PUR-M12FA-B	0.6	4	no	1
22260507	AB-C3-M12Y-1,0PUR-M12FA-B	1	4	no	1
22260508	AB-C3-M12Y-2,0PUR-M12FA-B	2	4	no	1
Y plug to angled socket with LEDs					
22260509	AB-C3-M12Y-0,3PUR-M12FA-2L-B	0.3	4	2 LEDs	1
22260510	AB-C3-M12Y-0,6PUR-M12FA-2L-B	0.6	4	2 LEDs	1
22260511	AB-C3-M12Y-1,0PUR-M12FA-2L-B	1	4	2 LEDs	1
22260512	AB-C3-M12Y-2,0PUR-M12FA-2L-B	2	4	2 LEDs	1

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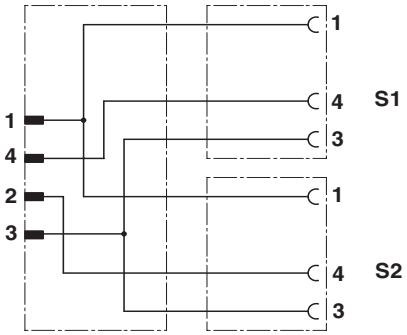
Copper price basis: inclusive of copper. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.
Photographs are not to scale and do not represent detailed images of the respective products.
For detailed technical information please refer to the data sheet (www.lappautomation.com)
For the UNITRONIC® field bus type code, please see table T6

S/A cable: straight M12 Y plug on 2x M8 socket



S/A cable: straight M12 Y plug on 2x M8 socket

Benefits

- Cost-saving due to quick and easy installation
- Space-saving due to compact dimensions
- Fast and easy error tracking
- Standardised interfaces

Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

Product features

- 4-pin M12 Y connector on 2 x M8 socket (3-pin)
- Straight M12 Y plug to 2 conductor ends
- The cables have marker carriers
- Free of substances that could hinder paint or varnish
- Suitable for drag chains

Approvals

cULus RoHS

Design

- Fixed flexible control cable
- Design: 3 x 0.25 mm² (32 x 0.1 mm)
- Core colours: brown, blue, black
- Outer sheath: PUR, halogen-free
- Outer sheath colour: black

Technical data

Protection rating
IP65/IP68/IP69K

Ambient temperature (operation)
Plug/socket
-25°C to +90°C
Cable, fixed installation
-40°C to +80°C
Cable, flexible installation
-5°C to +80°C

Contact material
CuSn

Contact surface material
Ni/Au

Coding
A - Standard

Knurl material
Zinc die-cast, nickel-plated

Gripping body material
TPU, flame-retardant, self-extinguishing

Article number	Article designation	Length (m)	Nominal current I_N in (A)	Status display	PU
Y plug to straight socket					
22260514	AB-C3-M12Y-0,3PUR-M8FS	0.3	3	no	1
22260515	AB-C3-M12Y-0,6PUR-M8FS	0.6	3	no	1
22260516	AB-C3-M12Y-1,0PUR-M8FS	1	3	no	1
22260517	AB-C3-M12Y-2,0PUR-M8FS	2	3	no	1
Y plug to angled socket					
22260518	AB-C3-M12Y-0,3PUR-M8FA	0.3	3	no	1
22260519	AB-C3-M12Y-0,6PUR-M8FA	0.6	3	no	1
22260520	AB-C3-M12Y-1,0PUR-M8FA	1	3	no	1
22260521	AB-C3-M12Y-2,0PUR-M8FA	2	3	no	1
Y plug to angled socket with LEDs					
22260522	AB-C3-M12Y-0,3PUR-M8FA-2L	0.3	3	2 LEDs	1
22260523	AB-C3-M12Y-0,6PUR-M8FA-2L	0.6	3	2 LEDs	1
22260524	AB-C3-M12Y-1,0PUR-M8FA-2L	1	3	2 LEDs	1
22260525	AB-C3-M12Y-2,0PUR-M8FA-2L	2	3	2 LEDs	1

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Copper price basis: inclusive of copper. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.
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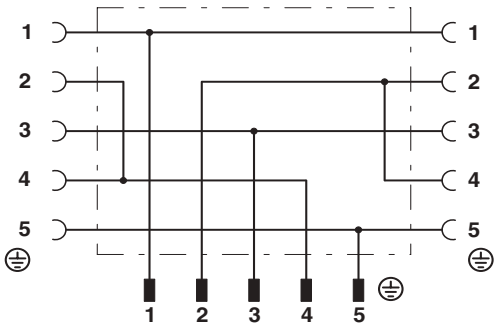
For the UNITRONIC® field bus type code, please see table T6

Y distributor



Y distributor

Benefits

- Cost-saving due to quick and easy installation
- Space-saving due to compact dimensions
- Fast and easy error tracking
- Standardised interfaces

Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

Product features

- M12 and M8 design
- M12 design with screw hole
- Free of substances that could hinder paint or varnish

Approvals

RoHS

Technical data

Protection rating
IP65/IP67

Ambient temperature (operation)
Plug/socket
-25°C to +90°C

Contact material
CuZn

Contact surface material
Ni/Au

Coding
A - Standard

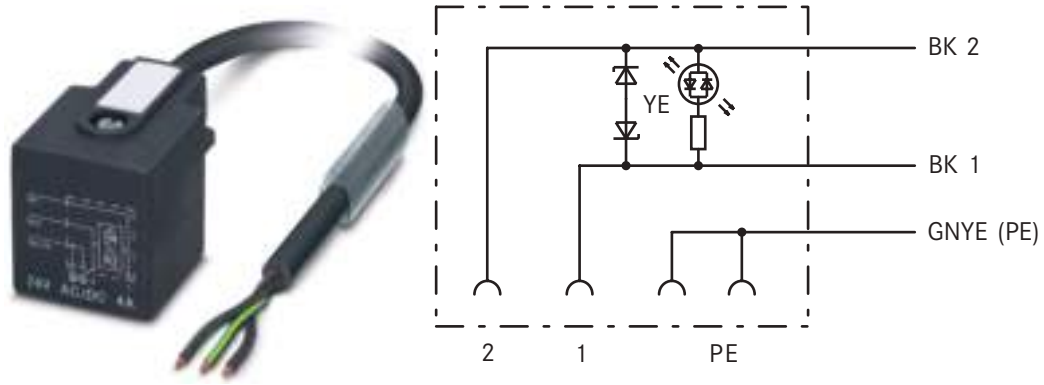
Knurl material
Zinc die-cast, nickel-plated

Gripping body material
TPU, flame-retardant, self-extinguishing

Article number	Article designation	Nominal voltage U_N (V)	Nominal current I_N in (A)	PU
M12 Y distributor, 3-pin, +PE, straight M12 connector to 2 x straight M12 socket, PIN 2+4 bridged				
22260600	AB-C3-M12Y-2XM12FS B E	60	4	5
M12 Y distributor, 3-pin, +PE, straight M12 connector to 2 x straight M12 socket				
22260601	AB-C3-M12Y-2XM12FS E	60	4	5
M12 Y distributor, 5-pin, straight M12 connector to 2 x straight M12 socket, parallel distributor				
22260602	AB-C5-M12Y-2XM12FS V	60	4	5
M8 Y distributor, with 4-pin M8 connector to 2 x 3-pin M8 socket				
22260603	AB-C3-M8Y-2XM8FS	30	3	5
M8 Y distributor, with M8 connector to M8 socket, 3-pin parallel distributor				
22260604	AB-C3-M8Y-2XM8FS V	60	3	5

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Photographs are not to scale and do not represent detailed images of the respective products.
Note: the table value 'Number of pins' corresponds to the number of pins for sockets
For detailed technical information please refer to the data sheet (www.lappautomation.com)
For the UNITRONIC® field bus type code, please see table T6

S/A cable: 3-pos., valve connector on free conductor end



S/A cable: 3-pos., valve connector on free conductor end

Benefits

- Cost-saving due to quick and easy installation
- Space-saving due to compact dimensions
- Fast and easy error tracking
- Standardised interfaces

Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

Product features

- 3-pin valve connector
- With protective circuit (Z diode) PE-bridged
- With LED status indicator (yellow)
- The cables have marker carriers
- Free of substances that could hinder paint or varnish

Approvals

RoHS

Design

- Cable design: 3 x 0.5 mm² (28 x 0.15 mm)
- Core colours: black 1, black 2, green/yellow
- Outer sheath: PUR, halogen-free
- Outer sheath colour: black (RAL 7021)
- Outer diameter: 4.5 mm
- Suitable for drag chains

Technical data

Protection rating
IP 67

Ambient temperature (operation)
Valve connector
-20°C to +85°C
Cable, fixed installation
-40°C to +80°C
Cable, flexible installation
-15°C to +80°C

Contact material
CuSn

Contact surface material
Ag

Coding
A - Standard

Article number	Article designation	Length (m)	Nominal voltage U_N (V)	Nominal current I_N in (A)	Status display	PU
Valve connector type A (18 mm)						
22260584	AB-C3- 2,0PUR-A-1L-S	2	24	4	1 LED	1
22260576	AB-C3- 5,0PUR-A-1L-S	5	24	4	1 LED	1
22260577	AB-C3-10,0PUR-A-1L-S	10	24	4	1 LED	1
Valve connector type B (10 mm)						
22260585	AB-C3- 2,0PUR-B-1L-S	2	24	4	1 LED	1
22260578	AB-C3- 5,0PUR-B-1L-S	5	24	4	1 LED	1
22260579	AB-C3-10,0PUR-B-1L-S	10	24	4	1 LED	1
Valve connector type BI (11 mm)						
22260586	AB-C3- 2,0PUR-BI-1L-S	2	24	4	1 LED	1
22260580	AB-C3- 5,0PUR-BI-1L-S	5	24	4	1 LED	1
22260581	AB-C3-10,0PUR-BI-1L-S	10	24	4	1 LED	1
Valve connector type C (8 mm)						
22260587	AB-C3- 2,0PUR-C-1L-S	2	24	4	1 LED	1
22260582	AB-C3- 5,0PUR-C-1L-S	5	24	4	1 LED	1
22260583	AB-C3-10,0PUR-C-1L-S	10	24	4	1 LED	1
Valve connector type CI (9.4 mm)						
22260588	AB-C3- 2,0PUR-CI-1L-S	2	24	4	1 LED	1
22260574	AB-C3- 5,0PUR-CI-1L-S	5	24	4	1 LED	1
22260575	AB-C3-10,0PUR-CI-1L-S	10	24	4	1 LED	1
22260921						

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Copper price basis: inclusive of copper. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.
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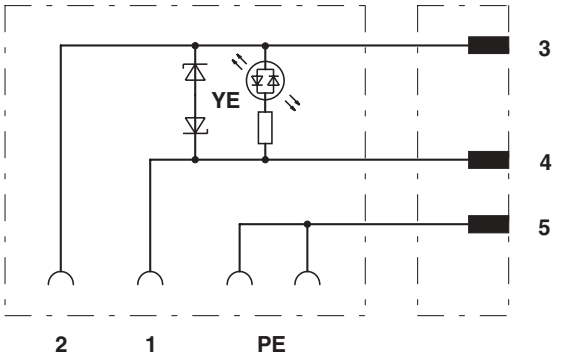
For detailed technical information please refer to the data sheet (www.lappautomation.com)
For the UNITRONIC® field bus type code, please see table T6

S/A cable: 3-pos., valve connector on straight M12 plug



S/A cable: 3-pos., valve connector on straight M12 plug

Benefits

- Cost-saving due to quick and easy installation
- Space-saving due to compact dimensions
- Fast and easy error tracking
- Standardised interfaces

Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

Product features

- 3-pin valve connector
- With protective circuit (Z diode) PE-bridged
- With LED status indicator (yellow)
- The cables have marker carriers
- Free of substances that could hinder paint or varnish

Approvals

RoHS

Design

- Cable design: 3 x 0.5 mm² (28 x 0.15 mm)
- Core colours: black 1, black 2, green/yellow
- Outer sheath: PUR, halogen-free
- Outer sheath colour: black (RAL 7021)
- Outer diameter: 4.5 mm
- Suitable for drag chains

Technical data

Protection rating
IP 67

Ambient temperature (operation)
Valve connector
-20 °C to +85 °C
Connector/socket
-25 °C to +90 °C
Cable, fixed installation
-40 °C to +80 °C
Cable, flexible installation
-15 °C to +80 °C

Contact material
CuSn

Contact surface material
Ni/Au

Coding
A - Standard

Knurl material
Zinc die-cast, nickel-plated

Gripping body material
TPU, flame-retardant, self-extinguishing

Article number	Article designation	Length (m)	Nominal voltage U_N (V)	Nominal current I_N in (A)	Status display	PU
Straight connector to valve connector type A (18 mm)						
22260550	AB-C3-M12MS-0,3PUR-A-1L-S	0.3	24	4	1 LED	1
22260551	AB-C3-M12MS-0,6PUR-A-1L-S	0.6	24	4	1 LED	1
22260552	AB-C3-M12MS-1,0PUR-A-1L-S	1	24	4	1 LED	1
22260553	AB-C3-M12MS-2,0PUR-A-1L-S	2	24	4	1 LED	1
Straight connector to valve connector type B (10 mm)						
22260558	AB-C3-M12MS-0,3PUR-B-1L-S	0.3	24	4	1 LED	1
22260559	AB-C3-M12MS-0,6PUR-B-1L-S	0.6	24	4	1 LED	1
22260560	AB-C3-M12MS-1,0PUR-B-1L-S	1	24	4	1 LED	1
22260561	AB-C3-M12MS-2,0PUR-B-1L-S	2	24	4	1 LED	1
Straight connector to valve connector type BI (11 mm)						
22260554	AB-C3-M12MS-0,3PUR-BI-1L-S	0.3	24	4	1 LED	1
22260555	AB-C3-M12MS-0,6PUR-BI-1L-S	0.6	24	4	1 LED	1
22260556	AB-C3-M12MS-1,0PUR-BI-1L-S	1	24	4	1 LED	1
22260557	AB-C3-M12MS-2,0PUR-BI-1L-S	2	24	4	1 LED	1
Straight connector to valve connector type C (8 mm)						
22260566	AB-C3-M12MS-0,3PUR-C-1L-S	0.3	24	4	1 LED	1
22260567	AB-C3-M12MS-0,6PUR-C-1L-S	0.6	24	4	1 LED	1
22260568	AB-C3-M12MS-1,0PUR-C-1L-S	1	24	4	1 LED	1
22260569	AB-C3-M12MS-2,0PUR-C-1L-S	2	24	4	1 LED	1
Straight connector to valve connector type CI (9.4 mm)						
22260562	AB-C3-M12MS-0,3PUR-CI-1L-S	0.3	24	4	1 LED	1
22260563	AB-C3-M12MS-0,6PUR-CI-1L-S	0.6	24	4	1 LED	1
22260564	AB-C3-M12MS-1,0PUR-CI-1L-S	1	24	4	1 LED	1
22260565	AB-C3-M12MS-2,0PUR-CI-1L-S	2	24	4	1 LED	1

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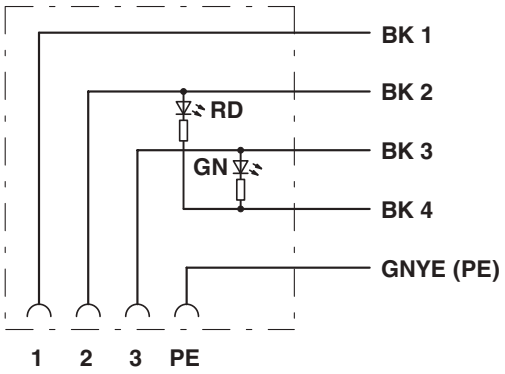
For the UNITRONIC® field bus type code, please see table T6

S/A cable: 5-pos., valve connector on free conductor end, for pressure switch



S/A cable: 5-pos., valve connector on free conductor end, for pressure switch

Benefits

- Cost-saving due to quick and easy installation
- Space-saving due to compact dimensions
- Fast and easy error tracking
- Standardised interfaces

Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

Product features

- 5-pin valve connector
- Valve connector for pressure switch, 18 mm contact spacing
- With display switch state (2 LEDs, red/green)
- The cables have marker carriers
- Free of substances that could hinder paint or varnish

Approvals

RoHS

Design

- Cable design: 5 x 0.5 mm² (28 x 0.15 mm)
- Core colours: black 1, black 2, black 3, black 4, green/yellow
- Outer sheath: PUR, halogen-free
- Outer sheath colour: black (RAL 7021)
- Outer diameter: 5.3 mm
- Suitable for drag chains

Technical data

Protection rating
IP 67

Ambient temperature (operation)
Valve connector
-20°C to +85°C
Cable, fixed installation
-40°C to +80°C
Cable, flexible installation
-15°C to +80°C

Contact material
CuSn

Contact surface material
Ag

Coding
A - Standard

Article number	Article designation	Length (m)	Nominal voltage U_N (V)	Nominal current I_N in (A)	Status display	PU
Valve connector for pressure switch (18 mm)						
22260589	AB-C5-2,0PUR-AD-2L	2	24	4	2 LEDs	1
22260590	AB-C5-5,0PUR-AD-2L	5	24	4	2 LEDs	1
22260591	AB-C5-10,0PUR-AD-2L	10	24	4	2 LEDs	1

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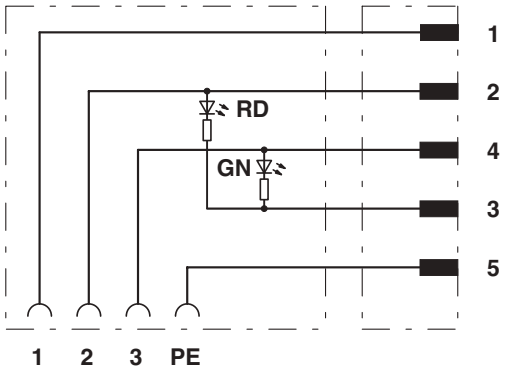
For detailed technical information please refer to the data sheet (www.lappautomation.com)
For the UNITRONIC® field bus type code, please see table T6

S/A cable: 5-pos., valve connector on straight M12 plug, for pressure switch



S/A cable: 5-pos., valve connector on straight M12 plug, for pressure switch

Benefits

- Cost-saving due to quick and easy installation
- Space-saving due to compact dimensions
- Fast and easy error tracking
- Standardised interfaces

Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

Product features

- 5-pin valve connector
- Valve connector for pressure switch, 18 mm contact spacing
- With display switch state (2 LEDs, red/green)
- The cables have marker carriers
- Free of substances that could hinder paint or varnish

Approvals

RoHS

Design

- Cable design: 5 x 0.5 mm² (28 x 0.15 mm)
- Core colours: black 1, black 2, black 3, black 4, green/yellow
- Outer sheath: PUR, halogen-free
- Outer sheath colour: black (RAL 7021)
- Outer diameter: 5.3 mm
- Suitable for drag chains

Technical data

Protection rating
IP 67

Ambient temperature (operation)
Valve connector
-20 °C to +85 °C
Connector/socket
-25 °C to +90 °C
Cable, fixed installation
-40 °C to +80 °C
Cable, flexible installation
-15 °C to +80 °C

Contact material
CuSn

Contact surface material
Ni/Au

Coding
A - Standard

Knurl material
Zinc die-cast, nickel-plated

Gripping body material
TPU, flame-retardant, self-extinguishing

Article number	Article designation	Length (m)	Nominal voltage U_N (V)	Nominal current I_N in (A)	Status display	PU
Straight connector to valve connector for pressure switch						
22260573	AB-C5-M12MS-0,3PUR-AD-2L	0.3	24	4	2 LEDs	1
22260572	AB-C5-M12MS-0,6PUR-AD-2L	0.6	24	4	2 LEDs	1
22260571	AB-C5-M12MS-1,0PUR-AD-2L	1	24	4	2 LEDs	1
22260570	AB-C5-M12MS-2,0PUR-AD-2L	2	24	4	2 LEDs	1

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Copper price basis: inclusive of copper. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.
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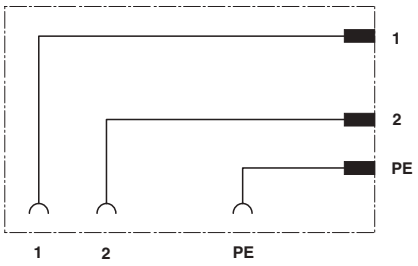
For the UNITRONIC® field bus type code, please see table T6

New

Field mountable valve connectors



Field mountable valve connectors

Benefits

- Cost-saving due to quick and easy installation
- Space-saving due to compact dimensions
- Fast and easy error tracking
- Standardised interfaces

Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

Product features

- 3 and 5-pin valve connector
- The cables have marker carriers
- Free of substances that could hinder paint or varnish
- Connection type: screw connection

Approvals

RoHS

Suitable cables

- UNITRONIC® SENSOR Page 379

Technical data

Protection rating
IP 65

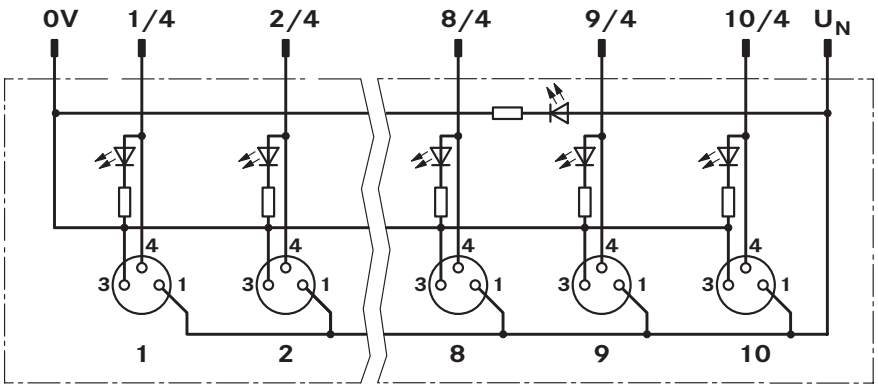
Ambient temperature (operation)
Valve connector
-25°C to +60°C

Standards/stipulations
Valve connector according to EN 175301-803

Article number	Article designation	Nominal voltage U_N (V)	Nominal current I_N in (A)	Status display	Protective circuit	PU
Valve connector type A (18 mm)						
22260048	AB-C3-M16-A	230	10	Without	Without	1
22260050	AB-C3-PG9-A-1L-S	24	4	1 LED	Z diode	1
Valve connector type B (10 mm)						
22260051	AB-C3-PG9-B-1L-S	24	4	1 LED	Z diode	1
Valve connector type BI (11 mm)						
22260052	AB-C3-PG9-BI-1L-S	24	4	1 LED	Z diode	1
Valve connector type C (8 mm)						
22260142	AB-C3-PG9-C-1L-SV	24	1.5	1 LED	Varistor	1
Valve connector type CI (9.4 mm)						
22260143	AB-C3-PG9-CI-1L-SV	24	1.5	1 LED	Varistor	1
Valve connector for pressure switch (18 mm)						
22260049	AB-C5-M16-AD-2L	24	1.5	2 LEDs	Without	1

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Photographs are not to scale and do not represent detailed images of the respective products.
For detailed technical information please refer to the data sheet (www.lappautomation.com)
For the UNITRONIC® field bus type code, please see table T6

S/A box with M8 slots and master cable



S/A box with M8 slots and master cable

Benefits

- Inexpensive and efficient wiring of sensors and actuators
- Instead of numerous individual conductors, one master cable is laid to the control unit
- The master cable is designed as a hybrid that transmits signals and power.
- There are no assembly costs as the master cable is already pre-assembled

Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

Product features

- With fixed master cable connection
- Single-occupied sensor/actuator box
- LEDs indicate the operating mode of the distributor and the status of the sensors
- Free of substances that could hinder paint or varnish

Approvals

c UL us RoHS

Design

- PUR/PVC cable
- Fixed flexible control cable
- Outer sheath colour: black

Suitable tools

- Suitable tools are available upon request (e.g. M8 torque screwdriver)

Technical data

Protection rating
IP65/IP67

Ambient temperature (operation)
-30°C to +80°C
Cable, fixed installation
-40°C to +90°C
Cable, flexible installation
-5°C to 80°C

Current rating per slot
2 A

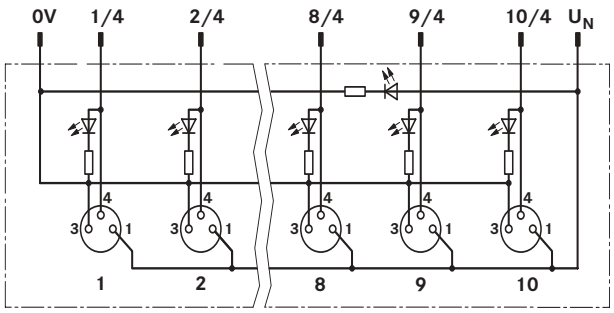
Article number	Article designation	Length (m)	Number of slots	Nominal voltage U_N (V)	SACB total current (A)	Status display	PU
With M8 master cable connection							
22260026	AB-B4-M8L-4-5,0PUR	5.0	4	24	6	With LEDs	1
22260027	AB-B4-M8L-4-10,0PUR	10.0	4	24	6	With LEDs	1
22260028	AB-B6-M8L-6-5,0PUR	5.0	6	24	6	With LEDs	1
22260029	AB-B6-M8L-6-10,0PUR	10.0	6	24	6	With LEDs	1
22260030	AB-B8-M8L-8-5,0PUR	5.0	8	24	6	With LEDs	1
22260031	AB-B8-M8L-8-10,0PUR	10.0	8	24	6	With LEDs	1
22260032	AB-B10-M8L-10-5,0PUR	5.0	10	24	6	With LEDs	1
22260033	AB-B10-M8L-10-10,0PUR	10.0	10	24	6	With LEDs	1

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Copper price basis: inclusive of copper. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.
Photographs are not to scale and do not represent detailed images of the respective products.
For the UNITRONIC® field bus type code, please see table T6
Unused female connectors must be covered with protective caps (see accessories)
For detailed technical information please refer to the data sheet (www.lappautomation.com)

Accessories

- Screw plug for unoccupied sockets refer to page 376

S/A box, M8 slots and master cable connection M16/M12



S/A box, M8 slots and master cable connection M16/M12

Benefits

- Inexpensive and efficient wiring of sensors and actuators
- Instead of numerous individual conductors, one master cable is laid to the control unit
- The detachable screw connection ensures universal pluggability and simple on-site assembly

Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

Product features

- With M12/M16 plug-in connection
- Single-occupied sensor/actuator box
- LEDs indicate the operating mode of the distributor and the status of the sensors
- Free of substances that could hinder paint or varnish

Approvals

cULus RoHS

Suitable cables

- M16 socket with connected master cable Page 374
- M12 socket with connected master cable Page 375

Suitable tools

- Suitable tools are available upon request (e.g. M8 torque screwdriver)

Technical data

Protection rating
IP65/IP67

Ambient temperature (operation)
-30°C to +80°C

Current rating per slot
2 A

Article number	Article designation	Number of slots	Nominal voltage U_N (V)	SACB total current (A)	Status display	PU
With M16, 8-pin master cable connection						
22260034	AB-B4-M8L-4-M16	4	24	6	With LEDs	1
With M16, 10-pin master cable connection						
22260035	AB-B6-M8L-6-M16	6	24	6	With LEDs	1
With M16, 12-pin master cable connection						
22260036	AB-B8-M8L-8-M16	8	24	6	With LEDs	1
With M16, 14-pin master cable connection						
22260037	AB-B10-M8L-10-M16	10	24	6	With LEDs	1
With M12, 8-pin master cable connection						
22260038	AB-B4-M8L-4-M12	4	24	4	With LEDs	1
22260039	AB-B6-M8L-6-M12	6	24	4	With LEDs	1

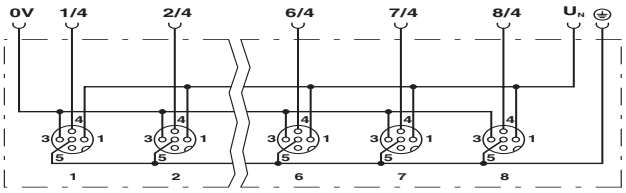
Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Photographs are not to scale and do not represent detailed images of the respective products.
For the UNITRONIC® field bus type code, please see table T6
Unused female connectors must be covered with protective caps (see accessories)
For detailed technical information please refer to the data sheet (www.lappautomation.com)

Accessories

- Screw plug for unoccupied sockets refer to page 376

New

S/A box with M12 slots and master cable



S/A box with M12 slots and master cable

Benefits

- Inexpensive and efficient wiring of sensors and actuators
- Instead of numerous individual conductors, one master cable is laid to the control unit
- The master cable is designed as a hybrid that transmits signals and power.
- There are no assembly costs as the master cable is already pre-assembled

Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

Product features

- With fixed master cable connection
- Single or double-occupied sensor/actuator box
- With M12 quick-locking system, metal thread
- With LED diagnostic indicator
- Free of substances that could hinder paint or varnish

Approvals

cULus RoHS

Design

- PUR/PVC cable
- Fixed flexible control cable
- Outer sheath colour: black

Suitable tools

- Suitable tools are available upon request (e.g. M12 torque screwdriver)

Technical data

Protection rating
IP65/IP67/IP69K

Max. current rating per path
2 A

Current rating per slot
4 A

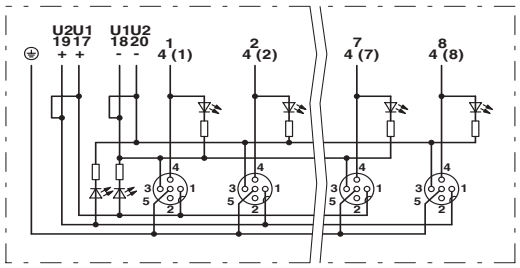
Article number	Article designation	Length (m)	Number of slots	Nominal voltage U_N (V)	SACB total current (A)	Status display	PU
Single-occupied boxes, without LEDs							
22260010	AB-B4-M12-4-5,0PUR	5.0	4	120	12	no	1
22260011	AB-B4-M12-4-10,0PUR	10.0	4	120	12	no	1
22260014	AB-B8-M12-8-5,0PUR	5.0	8	120	12	no	1
22260015	AB-B8-M12-8-10,0PUR	10.0	8	120	12	no	1
Single occupied boxes, with LEDs							
22260018	AB-B4-M12L-4-5,0PUR	5.0	4	24	12	With LEDs	1
22260019	AB-B4-M12L-4-10,0PUR	10.0	4	24	12	With LEDs	1
22260970	AB-B6-M12L-6-5,0PUR	5.0	6	24	12	With LEDs	1
22260022	AB-B8-M12L-8-5,0PUR	5.0	8	24	12	With LEDs	1
22260023	AB-B8-M12L-8-10,0PUR	10.0	8	24	12	With LEDs	1
Double-occupied boxes, without LEDs							
22260012	AB-B4-M12-8-5,0PUR	5.0	4	120	12	no	1
22260013	AB-B4-M12-8-10,0PUR	10.0	4	120	12	no	1
22260016	AB-B8-M12-16-5,0PUR	5.0	8	120	12	no	1
22260017	AB-B8-M12-16-10,0PUR	10.0	8	120	12	no	1
Double-occupied boxes, with LEDs							
22260020	AB-B4-M12L-8-5,0PUR	5.0	4	24	12	With LEDs	1
22260021	AB-B4-M12L-8-10,0PUR	10.0	4	24	12	With LEDs	1
22260024	AB-B8-M12L-16-5,0PUR	5.0	8	24	12	With LEDs	1
22260025	AB-B8-M12L-16-10,0PUR	10.0	8	24	12	With LEDs	1

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Copper price basis: inclusive of copper. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.
Photographs are not to scale and do not represent detailed images of the respective products.
Unused female connectors must be covered with protective caps (see accessories)
For detailed technical information please refer to the data sheet (www.lappautomation.com). For the type code, please refer to table T6.
UL approvals can be found in the data sheet (www.lappautomation.com)

Accessories

- Screw plug for unoccupied sockets refer to page 376

S/A box with M12 slots and master cable connection



S/A box with M12 slots and master cable connection

Info

- For individual master cable assembly

Benefits

- Inexpensive and efficient wiring of sensors and actuators
- Instead of numerous individual conductors, one master cable is laid to the control unit
- The detachable screw connection ensures universal pluggability and simple on-site assembly

Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

Product features

- With detachable screw connection
- Single or double-occupied sensor/actuator box
- With M12 quick-locking system, metal thread
- With LED diagnostic indicator
- Free of substances that could hinder paint or varnish

Approvals

cULus RoHS

Suitable cables

- UNITRONIC® SENSOR master cable bulk stock Page 373

Suitable tools

- Kraftform® adjustable torque screwdriver/ Kraftform Kompakt® Set refer to page 976
- Suitable tools are available upon request (e.g. M12 torque screwdriver)

Technical data

Protection rating
IP65/IP67/IP69K

Ambient temperature (operation)
-30°C to +80°C

Max. current rating per path
2 A

Current rating per slot
4 A

Article number	Article designation	Number of slots	Nominal voltage U_N (V)	SACB total current (A)	Status display	PU
Single-occupied boxes, without LEDs, 4 slots, 1.)						
22260005	AB-B4-M12-4-C	4	120	10	no	1
Single-occupied boxes, without LEDs, 8 slots, 2.)						
22260007	AB-B8-M12-8-C	8	120	10	no	1
Single-occupied boxes, with LEDs, 4 slots, 1.)						
22260001	AB-B4-M12L-4-C	4	24	10	With LEDs	1
Single-occupied boxes, with LEDs, 8 slots, 2.)						
22260003	AB-B8-M12L-8-C	8	24	10	With LEDs	1
Double-occupied boxes, without LEDs, 4 slots, 2.)						
22260006	AB-B4-M12-8-C	4	120	10	no	1
Double-occupied boxes, without LEDs, 8 slots, 3.)						
22260008	AB-B8-M12-16-C	8	120	10	no	1
Double-occupied boxes, with LEDs, 4 slots, 2.)						
22260002	AB-B4-M12L-8-C	4	24	10	With LEDs	1
Double-occupied boxes, with LEDs, 8 slots, 3.)						
22260004	AB-B8-M12L-16-C	8	24	10	With LEDs	1

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Photographs are not to scale and do not represent detailed images of the respective products.
Unused female connectors must be covered with protective caps (see accessories)
For detailed technical information please refer to the data sheet (www.lappautomation.com). For the type code, please refer to table T6.
1.) Compatible master cable: 7038880; 2) Compatible master cable: 7038881; 3.) Compatible master cable: 7038882

Accessories

- Screw plug for unoccupied sockets refer to page 376
- Complete connection hood with 4, 6 or 8 slots refer to page 376

New

UNITRONIC® SENSOR master cable bulk stock

Info

- Customised construction can be supported

Benefits

- Inexpensive and efficient wiring for S/A boxes with detachable master cable connection
- Can be used universally for S/A installations

Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

Design

- UNITRONIC® SENSOR Li9Y11 COMBI
  Conductor: bare copper strand, single wire diameter: 0.1 mm for 0.34 mm², 0.18 mm for 0.5 mm², 0.205 mm for 0.75 mm², 0.15 mm for 1.0 mm². Core insulation: halogen-free PP, outer sheath: halogen-free PUR acc. to DIN VDE 0250 part 818.
- Outer sheath colour: black (similar to RAL 9005)
  Core colors: see data sheet
- AWM UL Style 21198, 80 °C / 300V

Product features

- Cores for Power Supply:
  3 x 0.75 mm² and 3 x 1.0 mm²
- Cores for Signalling cable:
  4 x 0.34 mm², 8 x 0.5 mm², 16 x 0.5 mm²
- Suitable for drag chains
- Halogen-free

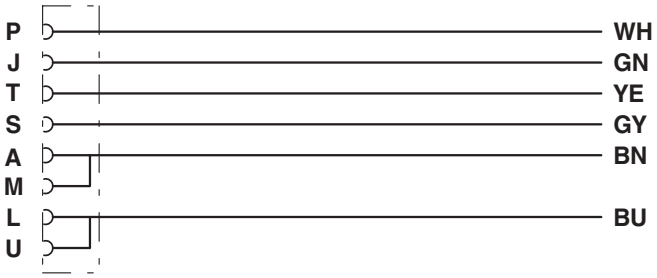
Article number	Article designation	Dimensions (mm²)	Outer diameter (mm)	Core/outer sheath material	Colour	Copper index (kg/km)
UNITRONIC® SENSOR COMBI						
7038880	Li9Y11Y	3 x 0.75 + 4 x 0.34	6.6	PP/PUR	black	34.5
7038881	Li9Y11Y	3 x 1.0 + 8 x 0.5	8.4	PP/PUR	black	67.2
7038882	Li9Y11Y	3 x 1.0 + 16 x 0.5	9.8	PP/PUR	black	105.6

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Copper price basis: EUR 150/100kg. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.
Packaging size: Coil 100m
Cables are printed
Other variations are available upon request.
Photographs are not to scale and do not represent detailed images of the respective products.
For detailed technical information please refer to the data sheet (www.lappautomation.com)

Accessories

- S/A box with M12 slots and master cable connection refer to page 372

M16 socket with connected master cable



M16 socket with connected master cable

Benefits

- Connecting cable for M8 boxes with 4 to 10 slots
- M16 connection

Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

Product features

- Angled socket with M16 thread
- Free of substances that could hinder paint or varnish
- Suitable for drag chains

Approvals

RoHS

Design

- PUR/PVC cable
- Fixed flexible control cable
- Outer sheath colour: black
- Core cross-section for power supply: 0.75 mm²
- Core cross-section for signalling cable: 0.34 mm²

Technical data

Protection rating
IP 67

Ambient temperature (operation)
Plug/socket
-25°C to +90°C
Cable, fixed installation
-40°C to +90°C
Cable, flexible installation
-5°C to 80°C

Contact material
CuZn

Contact surface material
Ni/Au

Coding
A - Standard

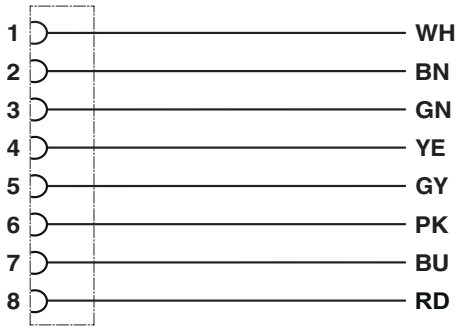
Knurl material
Nickel-plated brass

Gripping body material
TPU, flame-retardant, self-extinguishing

Article number	Article designation	Length (m)	Nominal voltage U_N (V)	Nominal current I_N in (A)	PU
8 pole angled socket, 4 signalling cables, 2 power supply cables					
22260607	AB-C8- 5,0PUR-M16FA	5	125	4	1
22260608	AB-C8-10,0PUR-M16FA	10	125	4	1
10-pin angled-socket, 6 signalling cables, 2 power supply cables					
22260609	AB-C10- 5,0PUR-M16FA	5	125	4	1
22260610	AB-C10-10,0PUR-M16FA	10	125	4	1
12-pin angled socket, 8 signalling cables, 2 power supply cables					
22260611	AB-C12- 5,0PUR-M16FA	5	125	4	1
22260612	AB-C12-10,0PUR-M16FA	10	125	4	1
14-pin angled socket, 10 signalling cables, 2 power supply cables					
22260613	AB-C14- 5,0PUR-M16FA	5	125	4	1
22260614	AB-C14-10,0PUR-M16FA	10	125	4	1

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Copper price basis: inclusive of copper. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.
Customised cable lengths are available upon request.
Photographs are not to scale and do not represent detailed images of the respective products.
For detailed technical information please refer to the data sheet (www.lappautomation.com)
For the UNITRONIC® field bus type code, please see table T6

M12 socket with connected master cable



M12 socket with connected master cable

Benefits

- Connecting cable for M8 boxes with 4 to 6 slots
- M12 connection

Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

Product features

- Angled socket with M12 thread
- Free of substances that could hinder paint or varnish
- Suitable for drag chains

Approvals

RoHS

Design

- PUR/PVC cable
- Fixed flexible control cable
- Outer sheath colour: black
- Core cross section: 0.25 mm²

Technical data

Protection rating
IP65/IP68/IP69K

Ambient temperature (operation)
Plug/socket
-25°C to +90°C
Cable, fixed installation
-40°C to +80°C
Cable, flexible installation
-5°C to +80°C

Contact material
CuZn

Contact surface material
Ni/Au

Coding
A - Standard

Knurl material
Zinc die-cast, nickel-plated

Gripping body material
TPU, flame-retardant, self-extinguishing

Article number	Article designation	Length (m)	Nominal voltage U_N (V)	Nominal current I_N in (A)	PU
8 pole angled socket					
22260615	AB-C8-5,0PUR-M12FA	5	30	2	1
22260616	AB-C8-10,0PUR-M12FA	10	30	2	1

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Copper price basis: inclusive of copper. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.
Customised cable lengths are available upon request.
Photographs are not to scale and do not represent detailed images of the respective products.
For detailed technical information please refer to the data sheet (www.lappautomation.com)
For the UNITRONIC® field bus type code, please see table T6

Screw plug for unoccupied sockets

Screw plug for unoccupied sockets

Benefits

- Protective cap for unused M8/M12 slots
- Protective cap for unused connectors (e.g. S/A boxes)

Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

Product features

- Free of substances that could hinder paint or varnish

Approvals

RoHS

Suitable tools

- Kraftform® adjustable torque screwdriver/ Kraftform Kompakt® Set refer to page 976

Article number	Article designation	PU
M8		
22260606	AB-B-M8-PC	10
M12		
22260605	AB-B-M12-PC	10

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Photographs are not to scale and do not represent detailed images of the respective products.
For detailed technical information please refer to the data sheet (www.lappautomation.com)

Complete connection hood with 4, 6 or 8 slots

Complete connection hood with 4, 6 or 8 slots

Benefits

- Pluggable screw connection as accessory for S/A box with detachable master cable connection
- The detachable screw connection ensures universal pluggability and simple on-site assembly

Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

Product features

- Accessory for S/A box with detachable master cable connection
- With detachable screw connection

Approvals

c UL us RoHS

Suitable tools

- Kraftform® adjustable torque screwdriver/ Kraftform Kompakt® Set refer to page 976

Article number	Article designation	PU
Accessories		
22260009	AB-B-HC	1

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Photographs are not to scale and do not represent detailed images of the respective products.
For detailed technical information please refer to the data sheet (www.lappautomation.com)

New

Field mountable S/A connectors M12

Field mountable S/A connectors M12

Benefits

- Quick and easy on-site assembly
- Creating individual cable lengths
- Standardised interfaces
- No special tools required for connecting the cables (fast-connect designs)

Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

Product features

- 4, 5 and 8-pin version
- Screened and non-screened version
- Fast-connect and screw connection design
- Free of substances that could hinder paint or varnish

Approvals

RoHS

Suitable cables

- Cable for sensor / actuator components Page

Technical data

Protection rating
IP 65/IP 67 (IDC)
IP 67 (screw)

Ambient temperature (operation)
Plug/socket
-25°C to +80°C (IDC)
-25°C to +85°C (piercing)
-40°C to +85°C (screw)

Contact material
CuZn

Contact surface material
CuSnZn

Coding
A - Standard

Article number	Article designation	Number of pins	Min. conductor cross-section, flexible, in mm²	Max. conductor cross-section, flexible, in mm²	Min. cable diameter (mm)	Max. cable diameter (mm)	Nominal voltage U_N (V)	Nominal current I_N in (A)	PU
Straight connector, fast-connect (insulation displacement)									
22260132	AB-C4-M12MS-F0,34	4	0.14	0.34	3.5	6	125	4	1
22260134	AB-C4-M12MS-F0,75	4	0.34	0.75	4	8	250	4	1
Straight connector, screw connection									
22260649	AB-C4-M12MS-PG7	4	0.25	0.75	4	6	250	4	1
22260995	AB-C4-M12MS-PG9	4	0.25	0.75	6	8	250	4	1
22260129	AB-C5-M12MS-PG7	5	0.25	0.75	4	6	60	4	1
22260651	AB-C5-M12MS-PG9	5	0.25	0.75	6	8	60	4	1
22260996	AB-C5-M12MS-PG9-SKINTOP®	5	0.25	0.75	6	8	125	4	1
Straight socket, fast-connect (insulation displacement)									
22260131	AB-C4-M12FS-F0,34	4	0.14	0.34	3.5	6	125	4	1
22260133	AB-C4-M12FS-F0,75	4	0.34	0.75	4	8	250	4	1
Straight socket, screw connection									
22260640	AB-C4-M12FS-PG7	4	0.25	0.75	4	6	250	4	1
22260641	AB-C4-M12FS-PG9	4	0.25	0.75	6	8	250	4	1
22260127	AB-C5-M12FS-PG7	5	0.25	0.75	4	6	60	4	1
22260644	AB-C5-M12FS-PG9	5	0.25	0.75	6	8	60	4	1
22260997	AB-C5-M12FS-PG9-SKINTOP®	5	0.25	0.75	6	8	125	4	1
Angled connector, screw connection									
22260647	AB-C4-M12MA-PG7	4	0.25	0.75	4	6	250	4	1
22260130	AB-C5-M12MA-PG7	5	0.25	0.75	4	6	60	4	1
22260648	AB-C5-M12MA-PG9	5	0.25	0.75	6	8	60	4	1
Angled socket, screw connection									
22260636	AB-C4-M12FA-PG7	4	0.25	0.75	4	6	250	4	1
22260128	AB-C5-M12FA-PG7	5	0.25	0.75	4	6	60	4	1
22260638	AB-C5-M12FA-PG9	5	0.25	0.75	6	8	60	4	1
Straight connector, shielded, screw connection									
22260135	AB-C5-M12MS-PG9-SH	5	0.25	0.75	6	8	60	4	1
22260825	AB-C8-M12MS-PG9-SH	8	0.25	0.75	6	8	30	2	1
Straight socket, shielded, screw connection									
22260136	AB-C5-M12FS-PG9-SH	5	0.25	0.75	6	8	60	4	1
22260826	AB-C8-M12FS-PG9-SH	8	0.25	0.75	6	8	30	2	1

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Photographs are not to scale and do not represent detailed images of the respective products.
For detailed technical information please refer to the data sheet (www.lappautomation.com)
IDC = insulation displacement connector
For the UNITRONIC® field bus type code, please see table T6

New

Field mountable S/A connectors M8

Field mountable S/A connectors M8

Benefits
- Quick and easy on-site assembly
- Creating individual cable lengths
- Standardised interfaces

Application range
- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

Product features
- 3 and 4-pin version
- Fast-connect and screw connection design
- Free of substances that could hinder paint or varnish

Approvals
RoHS

Suitable cables
- Cable for sensor / actuator components
Page

Technical data
Protection rating
IP 65/IP 67 (IDC)
IP 68 (piercing)
IP 67 (screw)

Ambient temperature (operation)
Plug/socket
-25°C to +80°C (IDC)
-25°C to +85°C (piercing)
-40°C to +85°C (screw)

Contact material
CuZn

Contact surface material
Au

Coding
A - Standard

Article number	Article designation	Number of pins	Min. conductor cross-section, flexible, in mm²	Max. conductor cross-section, flexible, in mm²	Min. cable diameter (mm)	Max. cable diameter (mm)	Nominal voltage U_N (V)	Nominal current I_N in (A)	PU
Straight connector, fast-connect (insulation displacement)									
22260993	AB-C3-M8MS-F0,25	3	0.08	0.25	2.5	5	60	4	1
22260985	AB-C3-M8MS-F0,5	3	0.25	0.5	2.5	5	60	4	1
22260043	AB-C4-M8MS-F0,25	4	0.08	0.25	2.5	5	30	4	1
22260044	AB-C4-M8MS-F0,5	4	0.25	0.5	2.5	5	30	4	1
Straight connector, fast-connect (piercing)									
22260122	AB-C3-M8MS-P	3	0.14	0.38	3	5	60	4	1
22260123	AB-C4-M8MS-P	4	0.14	0.38	3	5	30	4	1
Straight connector, screw connection									
22260120	AB-C3-M8MS	3	0.14	0.5	3.5	5	60	4	1
22260121	AB-C4-M8MS	4	0.14	0.5	3.5	5	30	4	1
Straight socket, fast-connect (insulation displacement)									
22260994	AB-C3-M8FS-F0,25	3	0.08	0.25	2.5	5	60	4	1
22260986	AB-C3-M8FS-F0,5	3	0.25	0.5	2.5	5	60	4	1
22260045	AB-C4-M8FS-F0,25	4	0.08	0.25	2.5	5	30	4	1
22260046	AB-C4-M8FS-F0,5	4	0.25	0.5	2.5	5	30	4	1
Straight socket, fast-connect (piercing)									
22260124	AB-C3-M8FS-P	3	0.14	0.38	3	5	60	4	1
22260119	AB-C4-M8FS-P	4	0.14	0.38	3	5	30	4	1
Straight socket, screw connection									
22260125	AB-C3-M8FS	3	0.14	0.5	3.5	5	60	4	1
22260126	AB-C4-M8FS	4	0.14	0.5	3.5	5	30	4	1

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Photographs are not to scale and do not represent detailed images of the respective products.
For detailed technical information please refer to the data sheet (www.lappautomation.com)
IDC = insulation displacement connector
For the UNITRONIC® field bus type code, please see table T6

UNITRONIC® SENSOR

Application range

- Cables for UNITRONIC® field bus sensor/actuator wiring
- Data transmission cable to connect to M8, M12 connectors
- Automation technology
- Mechanical engineering
- Plant engineering

Product features

- Core colour code in accordance with DIN EN 50044
- 3 x 0.34 mm²
  1= brown, 2= blue, 3= black
- 4x 0.34 mm²
  1= brown, 2= white, 3= blue, 4= black
- 5 x 0.25 mm² or 0.34 mm²
  1= brown, 2= white, 3= blue, 4= black, 5= grey
- 8x 0.25mm²
  1= white, 2=brown, 3= green, 4= yellow, 5= grey, 6= pink, 7=blue, 8= red

Approvals

Design

- UNITRONIC® SENSOR LifYY
  Conductor: extra-fine bare copper strand in accordance with DIN VDE 0295 Class 6; core insulation: PVC, outer sheath: PVC
- UNITRONIC® SENSOR DESINA® LifY11Y
  Stranded bare copper conductor, super-fine. In accordance with VDE 0295 Class 6, special PVC insulation, cores twisted in layers, core identification in accordance with DESINA® (brown, white, blue, black). Outer sheath is made of special polyurethane-based compound; yellow colour in acc. to RAL 1021; flame retardant acc. to IEC 60332-1-2. Operating voltage= 48 V, Peak working voltage= 300 V.
- UNITRONIC® SENSOR FD Lif9Y11Y AWM UL Style 20549, 80 °C/300 V. Conductor: Cu strand, bare, extra-fine wire according to DIN VDE 0295 Class 6, core insulation: modified polypropylene (PP), outer sheath: halogen-free polyurethane (PUR), matt, adhesion-free
- UNITRONIC® SENSOR FD series cables are specially designed for use in power chains

Article number	Article designation	Dimensions (mm²)	Outer diameter (mm)	Core/outer sheath material	Colour	Copper index (kg/km)
UNITRONIC® SENSOR						
7038859	S-LifYY	3 x 0.34	4.8	PVC/PVC	black	9.8
7038860	S-LifYY	4 x 0.34	4.8	PVC/PVC	black	13.1
0040434	DESINA	4 x 0.34	5.2	PVC/PUR	yellow (RAL 1021)	13.5
7038861	S-LifY11Y	4 x 0.34	4.8	PVC/PUR	black	13.1
7038862	S-LifY11Y	5 x 0.25	4.9	PVC/PUR	black	12.0
UNITRONIC® SENSOR FD						
7038864	Li9Y11Y	3 x 0.34	4.6	PP/PUR	black	9.8
7038865	Li9Y11Y	4 x 0.34	4.7	PP/PUR	black	13.0
7038866	Li9Y11Y	5 x 0.34	5.1	PP/PUR	black	16.0
7038867	Li9Y11Y	5 x 0.25	4.7	PP/PUR	black	12.0
7038868	Li9Y11Y	8 x 0.25	5.9	PP/PUR	black	19.0

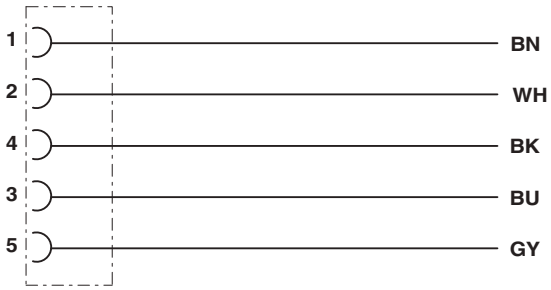
Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Copper price basis: EUR 150/100kg. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Cables are printed
Other variations are available upon request.
Photographs are not to scale and do not represent detailed images of the respective products.

Accessories

- Field mountable S/A connectors M12 refer to page 377
- Field mountable S/A connectors M8 refer to page 378
- STAR STRIP stripping tool refer to page 906
- SMARTSTRIP stripping tool refer to page 907

New

S/A M12 flush-type connectors with M16 fastening thread



S/A M12 flush-type connectors with M16 fastening thread

Benefits

- Flexible connection solutions for individual device concepts
- Simple installation in devices (e.g. cabinet)
- Standardised interfaces

Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

Product features

- M12 panel feed-through with punched-on single litz wires
- Panel feed-through with M16 fastening thread
- Front wall-mounting
- M12 A-coded with quick-locking system
- Free of substances that could hinder paint or varnish
- Can be positioned

Approvals

RoHS

Design

- Halogen-free PUR, single litz wires, l = 0.5 m
- 0,34 mm²

Technical data

Protection rating
IP 67

Ambient temperature (operation)
Plug/socket
-25°C to +85°C

Contact material
CuZn

Contact surface material
Au

Coding
A - Standard

Article number	Article designation	Number of pins	Conductor cross-section (mm²)	Nominal voltage U_N (V)	Nominal current I_N in (A)	PU
M12 flush-type connector pin for front-mounting 1.)						
22260108	AB-C4-M12MS-M16-0,5	4	0.34	250	4	1
22260106	AB-C5-M12MS-M16-0,5	5	0.34	60	4	1
M12 flush-type connector pin for front-mounting, can be positioned 1.)						
22260083	AB-C4-M12MS-M16-PO-0,5	4	0.34	250	4	1
22260084	AB-C5-M12MS-M16-PO-0,5	5	0.34	60	4	1
M12 flush-type connector socket for front-mounting 1.)						
22260107	AB-C4-M12FS-M16-0,5	4	0.34	250	4	1
22260105	AB-C5-M12FS-M16-0,5	5	0.34	60	4	1
M12 flush-type connector socket for front-mounting, can be positioned 1.)						
22260085	AB-C4-M12FS-M16-PO-0,5	4	0.34	250	4	1
22260086	AB-C5-M12FS-M16-PO-0,5	5	0.34	60	4	1

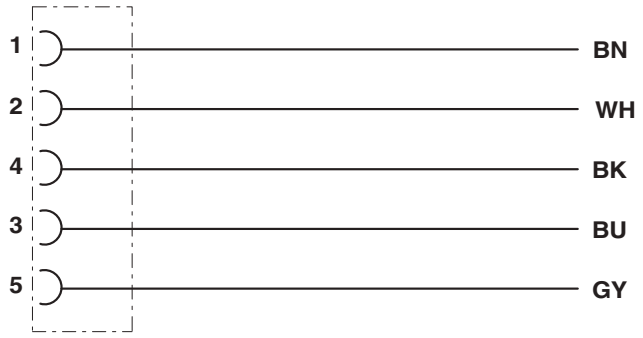
Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Copper price basis: inclusive of copper. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.
Photographs are not to scale and do not represent detailed images of the respective products.
For detailed technical information please refer to the data sheet (www.lappautomation.com)
For the UNITRONIC® field bus type code, please see table T6
1.) with quick-locking system

Accessories

- Fitting nut for flush-type connectors refer to page 382

New

S/A M12 flush-type connectors with PG9 fastening thread



S/A M12 flush-type connectors with PG9 fastening thread

Benefits

- Flexible connection solutions for individual device concepts
- Simple installation in devices (e.g. cabinet)
- Standardised interfaces

Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

Product features

- M12 panel feed-through with punched-on single litz wires
- Panel feed-through with PG9 fastening thread
- Designs for front and rear wall-mounting
- Free of substances that could hinder paint or varnish
- Can be positioned

Approvals

RoHS

Design

- Halogen-free PUR, single litz wires, l = 0.5 m
- 0,34 mm²

Technical data

Protection rating
IP 67

Ambient temperature (operation)
Plug/socket
-25 °C to +85 °C

Contact material
CuZn

Contact surface material
Au

Coding
A - Standard

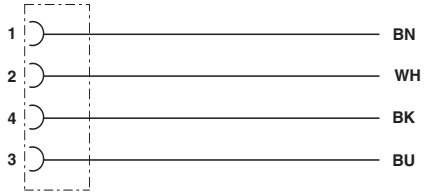
Article number	Article designation	Number of pins	Conductor cross-section (mm²)	Nominal voltage U_N (V)	Nominal current I_N in (A)	PU
M12 flush-type connector pin for rear-mounting (fitting nut included) 1.)						
22260117	AB-C4-DSI-M12MS-PG9-0,5	4	0.34	250	4	1
22260115	AB-C5-DSI-M12MS-PG9-0,5	5	0.34	60	4	1
M12 flush-type connector socket for rear-mounting (fitting nut included) 1.)						
22260118	AB-C4-DSI-M12FS-PG9-0,5	4	0.34	250	4	1
22260116	AB-C5-DSI-M12FS-PG9-0,5	5	0.34	60	4	1
M12 flush-type connector pin for front-mounting 1.)						
22260113	AB-C4-M12MS-PG9-0,5	4	0.34	250	4	1
22260112	AB-C5-M12MS-PG9-0,5	5	0.34	60	4	1
M12 flush-type connector pin for front-mounting, can be positioned 1.)						
22260087	AB-C4-M12MS-PG9-PO-0,5	4	0.34	250	4	1
22260088	AB-C5-M12MS-PG9-PO-0,5	5	0.34	60	4	1
M12 flush-type connector socket for front-mounting 1.)						
22260114	AB-C4-M12FS-PG9-0,5	4	0.34	250	4	1
22260111	AB-C5-M12FS-PG9-0,5	5	0.34	60	4	1
M12 flush-type connector socket for front-mounting, can be positioned 1.)						
22260089	AB-C4-M12FS-PG9-PO-0,5	4	0.34	250	4	1
22260090	AB-C5-M12FS-PG9-PO-0,5	5	0.34	60	4	1

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Copper price basis: inclusive of copper. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.
Photographs are not to scale and do not represent detailed images of the respective products.
For detailed technical information please refer to the data sheet (www.lappautomation.com)
For the UNITRONIC® field bus type code, please see table T6
1.) with quick-locking system

Accessories

- Fitting nut for flush-type connectors refer to page 382

S/A M8 flush-type connectors



S/A M8 flush-type connectors

Technical data

Protection rating
IP 67

Ambient temperature (operation)
Plug/socket
-25°C to +85°C

Contact material
Copper alloy

Contact surface material
Au

Coding
A - Standard

Benefits

- Flexible connection solutions for individual device concepts
- Simple installation in devices (e.g. cabinet)
- Standardised interfaces

Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

Product features

- M8 panel feed-through with punched-on single litz wires
- Panel feed-through with M8 fastening thread
- Front wall-mounting
- Protection rating: IP65/IP67
- Free of substances that could hinder paint or varnish

Approvals

RoHS

Design

- Halogen-free PUR, single litz wires, l = 0.5 m
- 0,25 mm²

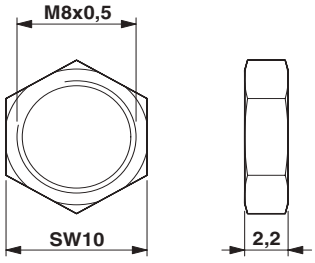
Article number	Article designation	Number of pins	Conductor cross-section (mm²)	Nominal voltage U_N (V)	Nominal current I_N in (A)	PU
M8 flush-type connector pin for front-mounting						
22260100	AB-C3-M8MS-0,5	3	0.25	60	4	1
22260101	AB-C4-M8MS-0,5	4	0.25	30	4	1
M8 flush-type connector socket for front-mounting						
22260102	AB-C3-M8FS-0,5	3	0.25	60	4	1
22260103	AB-C4-M8FS-0,5	4	0.25	30	4	1

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Copper price basis: inclusive of copper. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.
Photographs are not to scale and do not represent detailed images of the respective products.
For detailed technical information please refer to the data sheet (www.lappautomation.com)
For the UNITRONIC® field bus type code, please see table T6

Accessories

- Fitting nut for flush-type connectors refer to page 382

Fitting nut for flush-type connectors



Fitting nut for flush-type connectors

Benefits

- Flat nut as accessory for flush-type connectors

Product features

- Material: nickel-plated brass

Approvals

RoHS

Article number	Article designation	PU
M8 thread (M8 x 0.5 - SW10), h = 2.2 mm		
22260104	AB-C-M8-CN	100
PG9 thread (PG9 - SW18), h = 2.8 mm		
22260109	AB-C-PG9-CN	100
M16 thread (M16 x 1.5 - SW19), h = 2.8 mm		
22260110	AB-C-M16-CN	100
M12 thread, EMC version (M12x1-SW15), h=4.7 mm		
22261062	AB-C-M12-CN-SH	100

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Photographs are not to scale and do not represent detailed images of the respective products.
For detailed technical information please refer to the data sheet (www.lappautomation.com)

Similar products

- SKINDICHT® SM refer to page 741

AS-Interface Modules (IP67)

Info

- With M12 quick-locking system, metal thread
- AS-Interface installation without tools

AS-Interface Modules (IP67)

Benefits

- Standardised interfaces
- For decentralised automation
- Space-saving due to compact dimensions
- Easy to install
- Fast and easy error tracking

Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

Product features

- AS-Interface module slave
- Integration of field bus activation and input/output level
- Digital inputs/outputs with M12 or M8 connection method for sensors/actuators
- Flat cable penetration technique as connection type for M12 module
- M12 connection type for M8 modules
- LED diagnostic and status indicators
- Short circuit/overload protection

Approvals

Suitable cables

- UNITRONIC® BUS ASI Page 300
- UNITRONIC® BUS ASI FD Page 301

Suitable tools

- Suitable tools are available upon request (e.g. M12 torque screwdriver)

Technical data

Fieldbus system
AS-Interface

Connection type
Flat cable penetration technique/M12 connection type

Installation
Panel mounting for M12/M8 modules
Top-hat rail (35 mm) for M12 modules

Number of pins
2

Protection rating
IP67

Protection class
III

Ambient temperature (operation)
-25°C to +70°C

Temperature (storage/transport)
-25 °C to +85 °C

Supply voltage
26.5 V DC PELV to 31.6 V DC PELV

Article number	Article designation	Connection systems (sensor/actuator)	Number of inputs	Number of outputs	Slave type	AS-i specification	Master specification	PU
With digital inputs/outputs, M8, total current: 4 A								
22260759	AB-ASI-M12-DI4DO4-M8-1A	2, 3-wire	4	4	Single-Slave	2	>= 2.0	1
With digital inputs/outputs, M12, total current: 4 A								
22260755	AB-ASI-DI2DO2-M12-2A	2, 3, 4-wire	2	2	A/B-Slave	2.1	>= 2.0	1
22260756	AB-ASI-DI4DO3-M12-2A	2, 3, 4-wire	4	3	A/B-Slave	2.1	>= 2.0	1
22260757	AB-ASI-DI4DO4-M12-2A	2, 3, 4-wire	4	4	A/B-Slave	3	>= 3.0	1
With digital inputs, M8								
22260758	AB-ASI-M12-DI4-M8	2, 3-wire	4		Single-Slave	2	>= 2.0	1
With digital inputs, M12								
22260753	AB-ASI-DI4-M12	2, 3, 4-wire	4		A/B-Slave	2.1	>= 2.0	1
With digital outputs, M12, total current: 4 A								
22260754	AB-ASI-DO4-M12-2A	2, 3-wire		4	Single-Slave	2	>= 2.0	1

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Photographs are not to scale and do not represent detailed images of the respective products.
For the UNITRONIC® field bus type code, please see table T6
Unused female connectors must be covered with protective caps (see accessories)
For detailed technical information please refer to the data sheet or installation instructions (www.lappautomation.com)

Accessories

- Powerkabel M12 refer to page 399
- AS-Interface Distributor refer to page 388
- AS-Interface power supply refer to page 389
- Screw plug for unoccupied sockets refer to page 376

AS-Interface Modules (IP30)

AS-Interface Modules (IP30)

Info
- Fully industrialised

Benefits
- Standardised interfaces
- For decentralised automation
- Space-saving due to compact dimensions
- Easy to install
- Fast and easy error tracking

Application range
- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

Product features
- AS-Interface module slave
- Integration of field bus activation and input/output level
- Metal housing
- Connection by optional screw-plug terminals or spring-plug terminals
- Digital inputs/outputs for connecting sensors/actuators
- LED diagnostic and status indicators
- Short circuit/overload protection

Approvals
RoHS

Suitable cables
- UNITRONIC® BUS ASI Page 300
- UNITRONIC® BUS ASI FD Page 301

Technical data

Fieldbus system
AS-Interface

Dimensions W x H x D (mm)
105 mm x 22.5 mm x 85 mm

Connection type
Plug-in connection for screw-plug terminals or spring-plug terminals

Installation
Top-hat rail (35 mm)

Protection rating
IP30

Protection class
II

Ambient temperature (operation)
-25°C to +60°C

Temperature (storage/transport)
-40°C to +85°C

Permissible humidity (storage/transport)
max. 95 %, not condensing

Supply voltage
26.5 V DC to 31.6 V DC

Article number	Article designation	Connection systems (sensor/actuator)	Number of inputs	Number of outputs	Slave type	AS-i specification	Master specification	PU
4 outputs, 3A relay								
22260807	AB-ASI-DI4DOR4-3A	2, 3-wire	4	4	Single-Slave	3.01	>= 3.0	1
4 outputs 2A								
22260808	AB-ASI-DI4DO4-2A	2, 3-wire	4	4	Single-Slave	3.01	>= 3.0	1
8 Outputs 2A								
22260809	AB-ASI-DI8DO8-2A	2, 3-wire	8	8	Single-Slave	3.01	>= 3.0	1

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Plug terminals are not included, but can be purchased as an accessory.
Photographs are not to scale and do not represent detailed images of the respective products.
For detailed technical information please refer to the data sheet or installation instructions (www.lappautomation.com)
Other AS-Interface modules available on request
For the UNITRONIC® field bus type code, please see table T6

Accessories
- Powerkabel M12 refer to page 399
- AS-Interface Distributor refer to page 388
- AS-Interface counter module refer to page 389
- AS-Interface power supply refer to page 389
- AS-Interface network extension refer to page 390
- AS-Interface plug terminals refer to page 390

PROFIBUS Modules

Info

- **With M12 quick-locking system, metal thread**

PROFIBUS Modules

Benefits

- Standardised interfaces
- For decentralised automation
- Space-saving due to compact dimensions
- Easy to install
- Fast and easy error tracking

Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

Product features

- PROFIBUS interface
- Integration of field bus activation and input/output level
- Connection to PROFIBUS DP using M12 connectors (B-coded)
- Digital inputs/outputs with M12 connection method for sensors/actuators
- LED diagnostic and status indicators
- Flexible power supply concept
- Short circuit/overload protection

Approvals

Suitable cables

- PROFIBUS cable: M12 connector on free conductor end Page 391
- PROFIBUS Cable: M12 connector M12 on M12 socket Page 392

Suitable tools

- Suitable tools are available upon request (e.g. M12 torque screwdriver)

Technical data

Fieldbus system
PROFIBUS-DP

Transmission speed
12 MBit/s
Automatic baud rate detection

Tranmission physics
PROFIBUS-DP-compliant copper cable

Space allocated for address
1 ... 99, can be set from front side

Connection type
2 M12 plug connectors, B-coded

Installation
Panel mounting

Number of pins
5

Protection rating
IP65/IP67 according to IEC 60529

Protection class
Class 3 as per VDE 0106, IEC 61440

Ambient temperature (operation)
-25°C to +60°C

Temperature (storage/transport)
-25 °C to +85 °C

Permissible humidity (storage/transport)
95 %

Transmission rate
9.64 Kbaud to 12 Mbaud automatic detection

Supply voltage
24V DC

Article number	Article designation	Connection systems (sensor/actuator)	Number of inputs	Number of outputs	Maximum output current per channel (A)	PU
With digital inputs/outputs						
22260740	AB-PB-DI4DO4-M12-2A	2, 3, 4-wire	4	4	2	1
22260762	AB-PB-DI8DO8-M12-0,5A	2, 3, 4-wire	8	8	0.5	1
With digital inputs						
22260738	AB-PB-DI8-M12	2, 3, 4-wire	8			1
22260739	AB-PB-DI16-M12	2, 3, 4-wire	16			1
With digital outputs						
22260742	AB-PB-DO8-M12-2A	2, 3-wire		8	2	1

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Photographs are not to scale and do not represent detailed images of the respective products.
For the UNITRONIC® field bus type code, please see table T6
Unused female connectors must be covered with protective caps (see accessories)
For detailed technical information please refer to the data sheet or installation instructions (www.lappautomation.com)

Accessories

- Powerkabel M12 refer to page 399
- ETHERLINE® PROFIBUS DP Ethernet-Gateways refer to page [P125267]
- Screw plug for unoccupied sockets refer to page 376
- BUS M12 connectors that can be assembled refer to page [P149575]
- Terminating resistor M12 for DeviceNet/CANopen/PROFIBUS refer to page 396
- M12 T distributor for PROFIBUS refer to page 397

DeviceNet Modules

DeviceNet Modules

Info

- **With M12 quick-locking system, metal thread**

Benefits

- Standardised interfaces
- For decentralised automation
- Space-saving due to compact dimensions
- Easy to install
- Fast and easy error tracking

Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

Product features

- DeviceNet Interface
- Integration of field bus activation and input/output level
- Connection to DeviceNet™ using M12 connectors (A-coded)
- Digital inputs/outputs with M12 connection method for sensors/actuators
- LED diagnostic and status indicators
- Flexible power supply concept
- Short circuit/overload protection

Approvals

cULus RoHS DeviceNet™

Suitable cables

- DeviceNet/CANopen Cable, M12 connector on free conductor end Page 393
- S/A DeviceNet/CANopen cable, M12 connector on M12 socket Page 394

Suitable tools

- Suitable tools are available upon request (e.g. M12 torque screwdriver)

Technical data

Fieldbus system
DeviceNet

Transmission speed
125 kBit/s, 250 kBit/s, 500 kBit/s
Automatic baud rate detection

Tranmission physics
Copper cable in acc. with 176524 specification

Space allocated for address
0 ... 63, can be set

Connection type
2 M12 plug connectors, A-coded

Installation
Panel mounting

Number of pins
5

Protection rating
IP65/IP67

Protection class
Class 3 as per VDE 0106, IEC 61440

Ambient temperature (operation)
-25°C to +60°C

Temperature (storage/transport)
-25 °C to +85 °C

Permissible humidity (storage/transport)
95 %

Transmission rate
125 kBaud, 250 kBaud, 500 kBaud automatic detection

Supply voltage
24V DC

Article number	Article designation	Connection systems (sensor/actuator)	Number of inputs	Number of outputs	Maximum output current per channel (A)	PU
With digital inputs/outputs						
22260745	AB-DN-DI4DO4-M12-2A	2, 3, 4-wire	4	4	2.0	1
22260763	AB-DN-DI8DO8-M12-0,5A	2, 3, 4-wire	8	8	0.5	1
With digital inputs						
22260743	AB-DN-DI8-M12	2, 3, 4-wire	8			1
22260744	AB-DN-DI16-M12	2, 3, 4-wire	16			1
With digital outputs						
22260747	AB-DN-DO8-M12-2A	2, 3-wire		8	2.0	1

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
DeviceNet is a registered trademark of ODVA
Photographs are not to scale and do not represent detailed images of the respective products.
For the UNITRONIC® field bus type code, please see table T6
Unused female connectors must be covered with protective caps (see accessories)
For detailed technical information please refer to the data sheet or installation instructions (www.lappautomation.com)

Accessories

- Screw plug for unoccupied sockets refer to page 376
- Terminating resistor M12 for DeviceNet/CANopen/PROFIBUS refer to page 396
- S/A T-connector M12 as parallel distributor refer to page 398

CANopen Modules

Info

- **With M12 quick-locking system, metal thread**

CANopen Modules

Benefits

- Standardised interfaces
- For decentralised automation
- Space-saving due to compact dimensions
- Easy to install
- Fast and easy error tracking

Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

Product features

- CANopen Interface
- Integration of field bus activation and input/output level
- Connection to CANopen using M12 connectors (A-coded)
- Digital inputs/outputs with M12 connection method for sensors/actuators
- LED diagnostic and status indicators
- Flexible power supply concept
- Short circuit/overload protection

Approvals

Suitable cables

- DeviceNet/CANopen Cable, M12 connector on free conductor end Page 393
- S/A DeviceNet/CANopen cable, M12 connector on M12 socket Page 394

Suitable tools

- Suitable tools are available upon request (e.g. M12 torque screwdriver)

Suitable connectors

- EPIC® Data Connectors 330

Technical data

Fieldbus system
CANopen

Transmission speed
10, 20, 50, 125, 250, 500, 1000 kBit/s
Automatic baud rate detection

Tranmission physics
Copper cable with optional power supply in acc. with CAN standard

Space allocated for address
1 ... 126, can be set

Connection type
2 M12 plug connectors, A-coded

Installation
Panel mounting

Number of pins
5

Protection rating
IP65/IP67

Protection class
Class 3 as per VDE 0106, IEC 61440

Ambient temperature (operation)
-25°C to +60°C

Temperature (storage/transport)
-25 °C to +85 °C

Permissible humidity (storage/transport)
95 %

Transmission rate
Maximum 1 Mbaud automatic detection

Supply voltage
24V DC

Article number	Article designation	Connection systems (sensor/actuator)	Number of inputs	Number of outputs	PU
With digital inputs/outputs					
22260750	AB-CAN-DI4DO4-M12-2A	2, 3, 4-wire	4	4	1
22260764	AB-CAN-DI8DO8-M12-0,5A	2, 3, 4-wire	8	8	1
With digital inputs					
22260748	AB-CAN-DI8-M12	2, 3, 4-wire	8		1
22260749	AB-CAN-DI16-M12	2, 3, 4-wire	16		1
With digital outputs					
22260752	AB-CAN-DO8-M12-2A	2, 3-wire		8	1

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Photographs are not to scale and do not represent detailed images of the respective products.
For the UNITRONIC® field bus type code, please see table T6
Unused female connectors must be covered with protective caps (see accessories)
For detailed technical information please refer to the data sheet or installation instructions (www.lappautomation.com)

Accessories

- Screw plug for unoccupied sockets refer to page 376
- Terminating resistor M12 for DeviceNet/CANopen/PROFIBUS refer to page 396
- S/A T-connector M12 as parallel distributor refer to page 398

AS-Interface Distributor

AS-Interface Distributor

Info

- Adapter for data and power supply

Benefits

- Inexpensive and efficient wiring for AS-Interface installations
- Space-saving due to compact dimensions
- Easy to install
- Standardised interfaces

Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

Product features

- Passive AS-Interface distributor for 1 or 2 AS-Interface flat cables
- Distributor with integrated M12 socket (A-coded)
- H distributor for distribution from 1 to 2 flat cables
- Distributor with round cable and M12 socket (A-coded)
- Colour: black
- Rated current ≤ 4 A
  (H-distributor: I ≤ 8 A)

Approvals

RoHS

Design

- Fixed flexible control cable
- Design: 4 x 0.34 mm² (42 x 0.1 mm)
- Core colours: brown, white, blue, black
- Outer sheath: PUR, halogen-free
- Outer sheath colour: black

Suitable cables

- UNITRONIC® BUS ASI Page 300
- UNITRONIC® BUS ASI FD Page 301

Technical data

Fieldbus system
AS-Interface

Connection type
Flat cable penetration technique

Installation
Panel mounting

Protection rating
IP 67
(H-distributor: IP69k)

Ambient temperature (operation)
-25°C to +75°C

Article number	Article designation	PU
Distributor with 1 flat cable and integrated 2-pin M12 socket		
22260800	AB-ASI-J-Y-N-M12FS	1
Distributor with 2 flat cables and integrated 4-pin M12 socket		
22260801	AB-ASI-J-Y-B-M12FS	1
H distributor for distribution from 1 to 2 flat cables		
22260802	AB-ASI-J-Y-Y-N	1
Distributor with 1 flat cable, and 1 m PUR round cable to straight 2-pin M12 socket		
22260803	AB-ASI-J-Y-N-PUR-1,0-M12FS	1
Distributor with 1 flat cable, and 2 m PUR round cable to straight 2-pin M12 socket		
22260804	AB-ASI-J-Y-N-PUR-2,0-M12FS	1
Distributor with 2 flat cables, and 1 m PUR round cable to straight 4-pin M12 socket		
22260805	AB-ASI-J-Y-B-PUR-1,0-M12FS	1
Distributor with 2 flat cables, and 2 m PUR round cable to straight 4-pin M12 socket		
22260806	AB-ASI-J-Y-B-PUR-2,0-M12FS	1

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Copper price basis: inclusive of copper. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.
Photographs are not to scale and do not represent detailed images of the respective products.
For detailed technical information please refer to the data sheet (www.lappautomation.com)
For the UNITRONIC® field bus type code, please see table T6

AS-Interface counter module

Info
- **Universal AS-Interface counter module**

AS-Interface counter module

Benefits
- Standardised interfaces
- Easy to install
- Fast and easy assembly
- Compact AS-Interface counter module for counting events, distance and speed measurement

Application range
- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

Product features
- Set-point value of counter reading and pre-switching value can be parameterised via AS-Interface
- Output switching action selectable if preset value is reached
- Detect goods to be counted or measured with any 2 or 3-wire binary sensor
- AS-Interface Version 3.0
- Connection by optional screw-plug terminals or spring-plug terminals

Approvals

Technical data

Fieldbus system
AS-Interface

Connection type
Plug-in connection for screw-plug terminals or spring-plug terminals

Installation
Top-hat rail (35 mm)

Protection rating
IP 20

Protection class
II

Ambient temperature (operation)
-25 °C to +60 °C

Article number	Article designation	PU
22260810	AB-ASI-C	1

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Plug terminals are not included, but can be purchased as an accessory.
Photographs are not to scale and do not represent detailed images of the respective products.
For detailed technical information please refer to the data sheet or installation instructions (www.lappautomation.com)

Accessories
- AS-Interface power supply refer to page 389
- AS-Interface plug terminals refer to page 390

AS-Interface power supply

Info
- **Fully industrialised**

Benefits
- Compact AS-Interface power supply for mounting on top-hat rail
- Easy to install
- Space-saving due to compact dimensions
- For small AS-Interface networks

Application range
- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

Technical data

Fieldbus system
AS-Interface

Connection type
Cage clamp termination: 0.3 - 3.5 mm²

Installation
Top-hat rail (35 mm)

Protection rating
IP 20

Protection class
II

Ambient temperature (operation)
-10 °C to +60 °C

Temperature (storage/transport)
-25 °C to +85 °C

Product features
- Supplies a nominal output current of I_N = 1.0 A
- Primary voltage range: 85 to 265 V AC (50/60 Hz)
- AS-Interface voltage: 29.5 to 31.6 V DC PELV (acc. to IEC61640)
- AS-Interface Specification 3.01
- Short circuit/overload protection

Approvals

Article number	Article designation	PU
22260812	AB-ASI-PS-1A	1

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Photographs are not to scale and do not represent detailed images of the respective products.
PELV ("protective extra low voltage" according to IEC61640)
For detailed technical information please refer to the data sheet or installation instructions (www.lappautomation.com)

AS-Interface network extension

Info
- **With integrated under-voltage limit detection**

Benefits
- Extension of AS-Interface network lengths without additional repeaters
- Every topology is possible
- Standardised interfaces
- Easy to install

Application range
- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

Product features
- AS-Interface network lengths of 100 m to 200 m without repeaters
- Under-voltage limit detection (threshold: app. 26.5 V) flashes if supply voltage is too low.
  - Alarm indication by flashing LED (Part: 22260813)
  - Alarm indication occurs remotely via the AS-Interface to the master (Part: 22260814)
- AS-Interface Specification 3.01
- Diameter: 20 mm; Height: 45 mm
- Can be screwed directly to AS-Interface distributor (see accessories)

Approvals
CE RoHS

Design
- Compact design (Z plug)

Technical data
Fieldbus system
AS-Interface

Connection type
M12 A-coded connectors

Installation
Screw termination

Number of pins
4

Protection rating
IP 67

Ambient temperature (operation)
-25°C to +70°C

Article number	Article designation	PU
With optical voltage indication by green LED		
22260813	AB-ASI-NE200LED	1
With voltage control via response to the master (without LED)		
22260814	AB-ASI-NE200	1

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Photographs are not to scale and do not represent detailed images of the respective products.
For detailed technical information please refer to the data sheet or installation instructions (www.lappautomation.com)

Accessories
- AS-Interface Distributor refer to page 388

AS-Interface plug terminals

Benefits
- Easy to assemble
- Fast-connect adapter terminals
- Enables individual use as tension or screw plug terminals
- Flexible connection solutions

Application range
- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

Product features
- Optional plug terminals for AS-Interface module IP20/IP30

Info
- **Fully industrialised**
- Fast-connect connection type
- 1 packing unit for 12, 16 or 32 contacts
- Black

Approvals
RoHS

Suitable tools
- Kraftform® adjustable torque screwdriver/ Kraftform Kompakt® Set refer to page 976

Article number	Article designation	PU
AS-Interface screw plug terminals, 2 x 16-pin, 0.14-2.5 mm		
22260815	AB-ASI-XS16	1
AS-Interface screw plug terminals, 4 x 4-pin, 0.14-2.5 mm		
22260817	AB-ASI-XS4	1
AS-Interface screw plug terminals, 4 x 3-pin, 0.14-2.5 mm		
22260041	AB-ASI-XS3	1
AS-Interface tension plug terminals, 8 x 4-pin, 0.2-2.5 mm		
22260816	AB-ASI-XT16	1
AS-Interface tension plug terminals, 4 x 4-pin, 0.2-2.5 mm		
22260818	AB-ASI-XT4	1

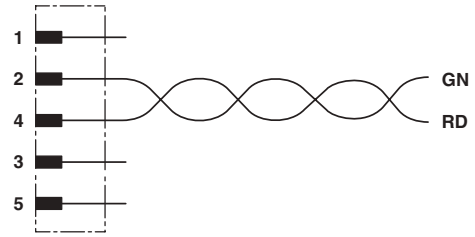
Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Photographs are not to scale and do not represent detailed images of the respective products.
For detailed technical information please refer to www.lappautomation.com

New

PROFIBUS cable: M12 connector on free conductor end

Info

- **Pre-assembled PROFIBUS data network cable**



PROFIBUS cable: M12 connector on free conductor end

Benefits

- Inexpensive and efficient wiring for PROFIBUS installations
- Space-saving due to compact dimensions
- Fast and easy error tracking
- Standardised interfaces

Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

Product features

- 2-pole PROFIBUS cable, shielded
- 5-pin connector, M12 B-coded (inverse) with quick locking system
- Design: socket or plug to free conductor end
- The cables have marker carriers
- Suitable for drag chains

Approvals

RoHS

Design

- Halogen-free PUR, screened cable
- Fixed flexible control cable
- Design: 19 x 0.13 mm
- Core colours: red, green
- Outer sheath colour: violet

Suitable connectors

- EPIC® Data connectors 312
- BUS M12 connectors that can be assembled [P149575]

Technical data

Number of pins
2

Protection rating
IP65/IP67/IP69K

Ambient temperature (operation)
Plug/socket
-25°C to +90°C
Cable, fixed installation
-40°C to +80°C
Cable, flexible installation
-20°C to +80°C

Contact material
CuSn

Contact surface material
Ni/Au

Coding
B - inverse

Knurl material
Zinc die-cast, nickel-plated

Gripping body material
TPU, flame-retardant, self-extinguishing

Core colour
red, green

Outer cable diameter
7,8 mm

Conductor cross-section
0,25 mm²

Outer sheath, colour
violet (RAL 4001)

Outer sheath, material
PUR

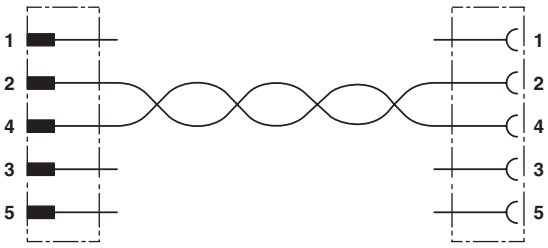
Shielding
Tinned-copper braiding

Article number	Article designation	Length (m)	Nominal current I_N in (A)	Nominal voltage U_N (V)	Number of pins	PU
Straight connector						
22260767	AB-PB-M12MS-2,0PUR	2	4	250	2	1
22260768	AB-PB-M12MS-5,0PUR	5	4	250	2	1
22260769	AB-PB-M12MS-10,0PUR	10	4	250	2	1
Straight socket						
22260770	AB-PB-2,0PUR-M12FS	2	4	250	2	1
22260771	AB-PB-5,0PUR-M12FS	5	4	250	2	1
22260772	AB-PB-10,0PUR-M12FS	10	4	250	2	1
Angled connector						
22260956	AB-PB-M12MA-2,0PUR	2	4	250	2	1

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Copper price basis: inclusive of copper. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.
Customised cable lengths are available upon request.
Photographs are not to scale and do not represent detailed images of the respective products.
For detailed technical information please refer to the data sheet (www.lappautomation.com)
For the UNITRONIC® field bus type code, please see table T6

New

PROFIBUS Cable: M12 connector M12 on M12 socket



PROFIBUS Cable: M12 connector M12 on M12 socket

Info

- PROFIBUS data network cable, ready for connection

Benefits

- Inexpensive and efficient wiring for PROFIBUS installations
- Space-saving due to compact dimensions
- Fast and easy error tracking
- Standardised interfaces

Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

Product features

- 2-pole PROFIBUS cable, shielded
- 5-pin connector, M12 B-coded (inverse) with quick locking system
- Design: plug to socket
- The cables have marker carriers
- Suitable for drag chains

Approvals

RoHS

Design

- Halogen-free PUR, screened cable
- Fixed flexible control cable
- Design: 19 x 0.13 mm
- Core colours: red, green
- Outer sheath colour: violet

Suitable connectors

- EPIC® Data PROFIBUS Connectors 90° M12 323

Technical data

Number of pins
2

Protection rating
IP65/IP67/IP69K

Ambient temperature (operation)
Plug/socket
-25°C to +90°C
Cable, fixed installation
-40°C to +80°C
Cable, flexible installation
-20°C to +80°C

Contact material
CuSn

Contact surface material
Ni/Au

Coding
B - inverse

Knurl material
Zinc die-cast, nickel-plated

Gripping body material
TPU, flame-retardant, self-extinguishing

Core colour
red, green

Outer cable diameter
7,8 mm

Conductor cross-section
0,25 mm²

Outer sheath, colour
violet (RAL 4001)

Outer sheath, material
PUR

Shielding
Tinned-copper braiding

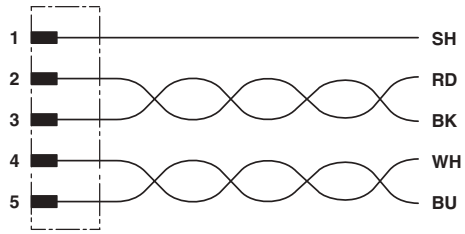
Article number	Article designation	Length (m)	Nominal current I_N in (A)	Nominal voltage U_N (V)	Number of pins	PU
Straight connector to straight socket						
22260955	AB-PB-M12MS-0,2PUR-M12FS	0.2	4	250	2	1
22260773	AB-PB-M12MS-0,3PUR-M12FS	0.3	4	250	2	1
22260774	AB-PB-M12MS-1,0PUR-M12FS	1	4	250	2	1
22260775	AB-PB-M12MS-2,0PUR-M12FS	2	4	250	2	1
22260776	AB-PB-M12MS-5,0PUR-M12FS	5	4	250	2	1
22260777	AB-PB-M12MS-10,0PUR-M12FS	10	4	250	2	1
Angled plug to angled socket						
22260079	AB-PB-M12MA-5,0PUR-M12FA	5	4	250	2	1
22260904	AB-PB-M12MA-10,0PUR-M12FA	10	4	250	2	1
22260905	AB-PB-M12MA-15,0PUR-M12FA	15	4	250	2	1

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Copper price basis: inclusive of copper. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.
Customised cable lengths are available upon request.
Photographs are not to scale and do not represent detailed images of the respective products.
For detailed technical information please refer to the data sheet (www.lappautomation.com)
For the UNITRONIC® field bus type code, please see table T6

DeviceNet/CANopen Cable, M12 connector on free conductor end

Info

- **Pre-assembled DeviceNet/CANopen data network cable**



DeviceNet/CANopen Cable, M12 connector on free conductor end

Benefits

- Cost-effective and efficient wiring of field bus installations, sensors and actuators
- Space-saving due to compact dimensions
- Robust design
- Standardised interfaces

Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

Product features

- 5-pin DeviceNet/CANopen cable, shielded
- M12 A-coded with quick-locking system
- Straight socket or straight plug to free conductor end
- The cables have marker carriers
- Suitable for drag chains

Approvals

RoHS ✓ DeviceNet™
CANopen

Design

- Halogen-free PUR, screened cable
- Fixed flexible control cable
- Design (signal line): 19 x 0.12 mm
- Core colours: red-black, blue-white

Suitable connectors

- EPIC® Data Connectors 330
- Field mountable S/A connectors M12 377

Technical data

Protection rating
IP65/IP67/IP69K

Ambient temperature (operation)
Plug/socket
-25°C to +90°C
Cable, fixed installation
-40°C to +80°C
Cable, flexible installation
-20°C to +80°C

Contact surface material
Ni/Au

Coding
A - Standard

Knurl material
Zinc die-cast, nickel-plated

Gripping body material
TPU, flame-retardant, self-extinguishing

Outer cable diameter
6,7 mm

Conductor cross-section
0,2 mm²

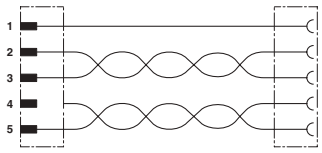
Outer sheath, colour
violet (RAL 4001)

Outer sheath, material
PUR

Article number	Article designation	Length (m)	Nominal voltage U_N (V)	Nominal current I_N in (A)	Number of pins	PU
5-pin straight connector						
22260789	AB-DN-M12MS-2,0PUR	2	60	4	5	1
22260790	AB-DN-M12MS-5,0PUR	5	60	4	5	1
22260791	AB-DN-M12MS-10,0PUR	10	60	4	5	1
5-pin straight socket						
22260792	AB-DN-2,0PUR-M12FS	2	60	4	5	1
22260793	AB-DN-5,0PUR-M12FS	5	60	4	5	1
22260794	AB-DN-10,0PUR-M12FS	10	60	4	5	1

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Copper price basis: inclusive of copper. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.
Customised cable lengths are available upon request.
Photographs are not to scale and do not represent detailed images of the respective products.
For detailed technical information please refer to the data sheet (www.lappautomation.com)
For the UNITRONIC® field bus type code, please see table T6

S/A DeviceNet/CANopen cable, M12 connector on M12 socket



S/A DeviceNet/CANopen cable, M12 connector on M12 socket

Info

- **DeviceNet/CANopen data network cable, ready for connection**

Benefits

- Cost-effective and efficient wiring of field bus installations, sensors and actuators
- Space-saving due to compact dimensions
- Fast and easy error tracking
- Standardised interfaces

Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

Product features

- 5-pin DeviceNet/CANopen cable, shielded
- M12 A-coded with quick-locking system
- Straight plug to straight socket
- The cables have marker carriers
- Suitable for drag chains

Approvals

RoHS DeviceNet™

Design

- Halogen-free PUR, screened cable
- Fixed flexible control cable
- Design (signal line): 19 x 0.12 mm
- Design (voltage line): 19 x 0.15 mm
- Core colours: red-black, blue-white

Technical data

Protection rating
IP65/IP67/IP69K

Ambient temperature (operation)
Plug/socket
-25°C to +90°C
Cable, fixed installation
-40°C to +80°C
Cable, flexible installation
-20°C to +75°C

Contact surface material
Ni/Au

Coding
A - Standard

Knurl material
Zinc die-cast, nickel-plated

Gripping body material
TPU, flame-retardant, self-extinguishing

Outer cable diameter
6,7 mm

Conductor cross-section
0,2 mm²

Outer sheath, colour
violet (RAL 4001)

Outer sheath, material
PUR

Article number	Article designation	Length (m)	Nominal voltage U_N (V)	Nominal current I_N in (A)	Number of pins	PU
Straight connector to straight socket						
22260795	AB-DN-M12MS-0,3PUR-M12FS	0.3	60	4	5	1
22260796	AB-DN-M12MS-1,0PUR-M12FS	1	60	4	5	1
22260797	AB-DN-M12MS-2,0PUR-M12FS	2	60	4	5	1
22260798	AB-DN-M12MS-5,0PUR-M12FS	5	60	4	5	1
22260799	AB-DN-M12MS-10,0PUR-M12FS	10	60	4	5	1

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
DeviceNet is a registered trademark of ODVA
Customised cable lengths are available upon request.
Photographs are not to scale and do not represent detailed images of the respective products.
For detailed technical information please refer to the data sheet (www.lappautomation.com)
For the UNITRONIC® field bus type code, please see table T6

BUS M12 connectors that can be assembled

Info

- For
  - PROFIBUS
  - CANopen
  - DeviceNet
  - PROFINET
  - ETHERNET

BUS M12 connectors that can be assembled

Benefits

- Quick and easy on-site assembly
- Creating individual cable lengths
- Inexpensive and efficient wiring for BUS installations
- Space-saving due to compact dimensions
- Standardised interfaces

Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

Product features

- Screened version
- For CANopen/DeviceNet applications (A-coded)
- For PROFIBUS applications (B-inverse coded)
- For PROFINET applications (D-coded)
- For Ethernet applications (D-coded)

Approvals

RoHS, PROFIBUS, DeviceNet, PROFINET, CANopen

Suitable cables

- Cables for BUS-Systems PROFIBUS-DP/FMS/FIP Page 302
- Cables for Bus-System CAN Page 329
- Cables for Bus-System DeviceNet Page 327
- PROFIBUS cable: M12 connector on free conductor end Page 391
- ETHERLINE® 2-pairs CAT.5/5e Page [P327]

Technical data

Number of pins
5 (PROFIBUS/CANopen/DeviceNet)
4 (PROFINET/ETHERNET)

Protection rating
IP67

Ambient temperature (operation)
Plug/socket
-40 °C to +85 °C

Contact material
CuSn

Contact surface material
Au (PROFIBUS/CANopen/DeviceNet)
Ni/Au (PROFINET/ETHERNET)

Coding
A - CANopen/DeviceNet
B - inverse (PROFIBUS)
D - data (PROFINET/ETHERNET)

Knurl material
Nickel-plated brass

Gripping body material
Zinc die-cast, nickel-plated

Sealing material
NBR (PROFIBUS/CANopen/DeviceNet)
Neoprene (PROFINET/ETHERNET)

Contact carrier material
PA 66

Nominal voltage U_N
60 V

Nominal current I_N
4 A (PROFIBUS/CANopen/DeviceNet)
1,75 A (PROFINET/ETHERNET)

PG screw connection
PG 9 (PROFIBUS/CANopen/DeviceNet)

Article number	Article designation	Min. conductor cross-section, flexible, in mm²	Max. conductor cross-section, flexible, in mm²	Min. conductor cross-section AWG/kcmil	Max. conductor cross-section AWG/kcmil	Min. cable diameter (mm)	Max. cable diameter (mm)	PU
PROFIBUS, 5-pin straight connector, screw connection								
22260653	AB-C5-M12MSB-PG9-SH-AU	0.25	0.75	24	18	6	8.5	1
PROFIBUS, 5-pin straight socket, screw connection								
22260646	AB-C5-M12FSB-PG9-SH-AU	0.25	0.75	24	18	6	8.5	1
PROFINET/ETHERNET, 4-pin straight connector, fast-connection								
22260820	AB-C4-M12MSD-SH	0.14	0.34	26	22	4	8	1
CANopen/DeviceNet, 5-pin straight connector, screw connection								
22260135	AB-C5-M12MS-PG9-SH	0.25	0.75	24	18	6	8	1
CANopen/DeviceNet, 5-pin straight socket, screw connection								
22260136	AB-C5-M12FS-PG9-SH	0.25	0.75	24	18	6	8	1

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
DeviceNet is a registered trademark of ODVA
Photographs are not to scale and do not represent detailed images of the respective products.

Terminating resistor M12 for DeviceNet/CANopen/PROFIBUS

Terminating resistor M12 for DeviceNet/CANopen/PROFIBUS

Info

- Fully industrialised

Benefits

- Inexpensive termination of BUS cables
- Space-saving due to compact dimensions
- Robust design
- Standardised interfaces

Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

Product features

- Free of substances that could hinder paint or varnish
- For DeviceNet und CANopen applications (A-Standard coded)
- For PROFIBUS applications (B-inverse coded)

Approvals

RoHS, DeviceNet, CANopen

Design

- Straight connector M12 with integrated termination resistor

Technical data

Protection rating
IP65/IP67/IP69K

Ambient temperature (operation)
Plug/socket
-25°C to +90°C

Contact material
CuSn

Contact surface material
Ni/Au

Coding
B - inverse (PROFIBUS)
A - Standard (DeviceNet/CANopen)

Knurl material
Zinc die-cast, nickel-plated

Gripping body material
TPU, flame-retardant, self-extinguishing

Contact carrier material
TPU GF

Nominal voltage U_N
60 V

Nominal current I_N
4 A

Article number	Article designation	Nominal current I_N in (A)	Nominal voltage U_N (V)	Coding	Number of pins	PU
For PROFIBUS applications (B-inverse coded)						
22260722	AB-C4-M12MS-PB-TR	4	60	B - inverse	4	5
For DeviceNet und CANopen applications (A-Standard coded)						
22260766	AB-C5-M12MS-DN-TR	4	60	A - Standard	5	5

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For detailed technical information please refer to the data sheet (www.lappautomation.com)
For the UNITRONIC® field bus type code, please see table T6

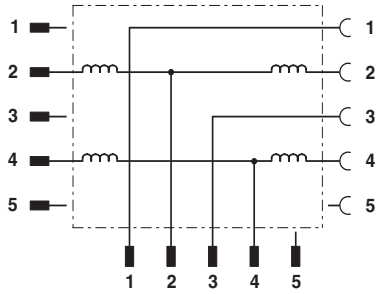
Accessories

- M12 T distributor for PROFIBUS refer to page 397
- S/A T-connector M12 as parallel distributor refer to page 398

M12 T distributor for PROFIBUS

Info

- **Fully industrialised**



M12 T distributor for PROFIBUS

Benefits

- Inexpensive and efficient wiring for PROFIBUS installations
- Space-saving due to compact dimensions
- Robust design
- Standardised interfaces

Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

Product features

- 4-pin PROFIBUS T-connector
- M12 B-coded (inverse)
- Screened version
- M12 plug to M12 plug and M12 socket
- Free of substances that could hinder paint or varnish

Approvals

RoHS

Technical data

Protection rating
IP 67

Ambient temperature (operation)
Plug/socket
-25 °C to +80 °C

Contact material
Copper alloy

Contact surface material
Ni/Au

Coding
B - inverse

Knurl material
Nickel-plated brass

Gripping body material
PUR

Sealing material
VITON®

Contact carrier material
PUR

Nominal voltage U_N
60 V

Nominal current I_N
4 A

Article number	Article designation	Nominal current I_N in (A)	Nominal voltage U_N (V)	Number of pins	PU
22260761	AB-C2-M12T-2XM12FS PB	4	30	4	1

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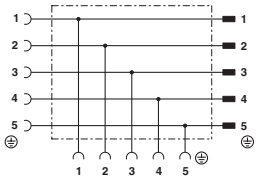
Photographs are not to scale and do not represent detailed images of the respective products.
For detailed technical information please refer to the data sheet (www.lappautomation.com)
For the UNITRONIC® field bus type code, please see table T6

Accessories

- Terminating resistor M12 for DeviceNet/CANopen/PROFIBUS refer to page 396

S/A T-connector M12 as parallel distributor



S/A T-connector M12 as parallel distributor

Info

- For DeviceNet and CANopen!

Benefits

- Cost-effective and efficient wiring of field bus installations, sensors and actuators
- Space-saving due to compact dimensions
- Robust design
- Standardised interfaces

Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

Product features

- 5-pin DeviceNet/CANopen T-Connector
- M12 A-coded
- Parallel distributor with M12 socket to M12 plug and M12 socket
- Free of substances that could hinder paint or varnish

Approvals

RoHS ✓ DeviceNet™ CANopen

Technical data

Number of pins
5

Protection rating
IP65/IP67

Ambient temperature (operation)
Plug/socket
-25°C to +90°C

Contact material
CuZn

Contact surface material
Ni/Au

Coding
A - Standard

Knurl material
Zinc die-cast, nickel-plated

Gripping body material
TPU, flame-retardant, self-extinguishing

Sealing material
NBR

Contact carrier material
TPU GF

Nominal voltage U_N
60 V

Nominal current I_N
4 A

Article number	Article designation	Nominal current I_N in (A)	Nominal voltage U_N (V)	Number of pins	PU
22260765	AB-C5-M12T-2XM12FS DN	4	60	5	5

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For detailed technical information please refer to the data sheet (www.lappautomation.com)
For the UNITRONIC® field bus type code, please see table T6

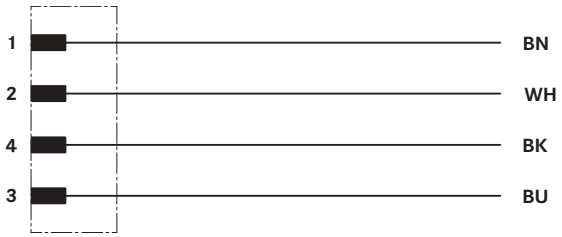
Accessories

- Terminating resistor M12 for DeviceNet/CANopen/PROFIBUS refer to page 396

Power cable: M12 connector on free conductor

Info

- All-purpose



Power cable: M12 connector on free conductor

Benefits

- Cost-effective and efficient wiring of field bus installations, sensors and actuators
- Space-saving due to compact dimensions
- Customise the construction on the free conductor end
- Standardised interfaces

Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

Product features

- 4-pin power cable for field bus applications
- M12 A-coded with quick-locking system
- Straight plug or straight socket to free conductor end
- The cables have marker carriers
- Suitable for drag chains

Approvals

cULus RoHS

Design

- PUR outer sheath
- Fixed flexible control cable
- PVC core insulation
- Design: 4 x 0.75 mm² (42 x 0.15 mm)

Suitable connectors

- Field mountable S/A connectors M12 377

Technical data

Protection rating
IP65/IP67/IP69K

Ambient temperature (operation)
Plug/socket
-25 °C to +90 °C
Cable, fixed installation
-25 °C to +80 °C
Cable, flexible installation
-5 °C to +80 °C

Contact material
CuSn

Contact surface material
Ni/Au

Coding
A - Standard

Knurl material
Zinc die-cast, nickel-plated

Gripping body material
TPU, flame-retardant, self-extinguishing

Core colour
brown, white, blue, black

Outer cable diameter
5,9 mm

Conductor cross-section
0,75 mm²

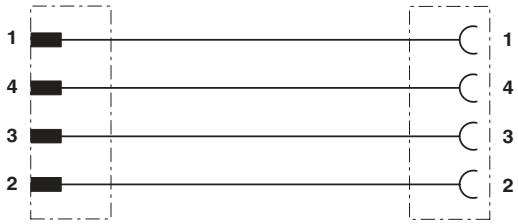
Outer sheath, colour
Black (RAL 9005)

Outer sheath, material
PUR

Article number	Article designation	Length (m)	Nominal current I_N in (A)	Nominal voltage U_N (V)	Number of pins	PU
4-pin straight connector						
22260778	AB-PC4-M12MS-2,0PUR	2	4	250	4	1
22260779	AB-PC4-M12MS-5,0PUR	5	4	250	4	1
22260783	AB-PC4-10,0PUR-M12FS	10	4	250	4	1
4-pin straight socket						
22260781	AB-PC4-2,0PUR-M12FS	2	4	250	4	1
22260782	AB-PC4-5,0PUR-M12FS	5	4	250	4	1
22260780	AB-PC4-M12MS-10,0PUR	10	4	250	4	1

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Copper price basis: inclusive of copper. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.
Customised cable lengths, outer-sheath materials (e.g. PVC), and types of connectors are available upon request.
Photographs are not to scale and do not represent detailed images of the respective products.
For detailed technical information please refer to www.lappautomation.com
For the UNITRONIC® field bus type code, please see table T6

Power cable: straight M12 connector on straight M12 socket



Info

- All-purpose

Power cable: straight M12 connector on straight M12 socket

Benefits

- Cost-effective and efficient wiring of field bus installations, sensors and actuators
- Space-saving due to compact dimensions
- Fast and easy assembly
- Standardised interfaces

Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

Product features

- 4-pin power cable for field bus applications
- M12 A-coded with quick-locking system
- Straight plug to straight socket
- Free of substances that could hinder paint or varnish
- Suitable for drag chains

Approvals

c UL us RoHS

Design

- PUR outer sheath
- Fixed flexible control cable
- PVC core insulation
- Design: 4 x 0.75 mm² (42 x 0.15 mm)

Technical data

Protection rating
IP65/IP67/IP69K

Ambient temperature (operation)
Plug/socket
-25°C to +90°C
Cable, fixed installation
-25°C to +80°C
Cable, flexible installation
-5°C to +80°C

Contact material
CuSn

Contact surface material
Ni/Au

Coding
A - Standard

Knurl material
Zinc die-cast, nickel-plated

Gripping body material
TPU, flame-retardant, self-extinguishing

Outer cable diameter
5,9 mm

Conductor cross-section
0,75 mm²

Outer sheath, colour
Black (RAL 9005)

Outer sheath, material
PUR

Article number	Article designation	Length (m)	Nominal current I_N in (A)	Nominal voltage U_N (V)	Number of pins	PU
Straight connector to straight socket						
22260784	AB-PC4-M12MS-0,3PUR-M12FS	0.3	4	250	4	1
22260785	AB-PC4-M12MS-1,0PUR-M12FS	1	4	250	4	1
22260786	AB-PC4-M12MS-2,0PUR-M12FS	2	4	250	4	1
22260787	AB-PC4-M12MS-5,0PUR-M12FS	5	4	250	4	1
22260788	AB-PC4-M12MS-10,0PUR-M12FS	10	4	250	4	1

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Copper price basis: inclusive of copper. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.
Customised cable lengths, outer-sheath materials (e.g. PVC), and types of connectors are available upon request.
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For detailed technical information please refer to the data sheet (www.lappautomation.com)
For the UNITRONIC® field bus type code, please see table T6

Coaxial - RG

Benefits

- Coaxial cables allow distortion-free and low-attenuation transmission of signals with a high bandwidth.
- High frequencies

Application range

- For applications with limited movements and for fixed installation in dry or damp interiors and outdoors
- For radio and computer systems, as well as all applications related to commercial radio-frequency technology and electronics

Product features

- Flame-retardant according to IEC 60332.1.2

Approvals

RoHS

Design

- Coaxial cables are significantly less sensitive to external interference due to their structure.

Technical data

Dielectric constant

- Polyethylene (PE) 2.3
- Polyethylene, hollow (PE-ho) 1.5
- Polytetrafluoroethylene (PTFE) 2.1

Minimum bending radius
Fixed installation: 6 x outer diameter

Temperature range
Fixed installation: PE outer sheath:
-40°C to +80°C
Fixed installation: PVC outer sheath:
-40°C to +80°C
Fixed installation: fluoroplastic
-55°C to +250°C

Specifications and approvals
Similar to MIL C-17F

Article number	Article designation	Characteristic impedance in ohm	Capacity pF/m	Attenuation approx. dB/100 m at 200 MHz/400 MHz	Propagation rate (%)	Operating voltage 50 Hz eff. kV	Test voltage (kV)	Inner conductor material	Internal Ø	Dielectric material	Dielectric Ø	Outer conductor material	Outer cable sheath	Outer diameter (mm)	Copper index (kg/km)	Weight (kg/km)
2170000	RG-58 C/U	50 +/- 2 Ω	101	24 / 33	66	2.0	5.0	CuLivz	0.90	PE	2.95	Cvz	PVC	4.95	19.1	38
2170001	RG-174 A/U	50 +/- 2 Ω	101	40 / 59	66	1.5	2.0	StCuLibl	0.48	PE	1.52	Cvz	PVC	2.80	5.4	12
2170002	RG-178 B/U	50 +/- 2 Ω	95	63 / 93	70	0.7	2.0	StCuLivs	0.30	PTFE	0.86	Cvs	FEP	1.91	4.4	9
2170003	RG-188 A/U	50 +/- 2 Ω	95	47 / 56	70	1.5	2.0	StCuLivs	0.51	PTFE	1.52	Cvs	PTFE	2.76	8.3	17.5
2170005	RG-213 /U	50 +/- 2 Ω	101	10 / 15	66	5.0	10.0	CuLibl	2.25	PE	7.25	Cbl	PVC	10.30	75.8	157
2170006	RG-214 /U	50 +/- 2 Ω	101	9 / 14	66	5.0	10.0	CuLivs	2.25	PE	7.25	CvsCvs	PVC	10.80	117.8	207
2170007	RG-223 /U	50 +/- 2 Ω	101	23 / 34	66	2.0	3.0	CuMvs	0.89	PE	2.95	CvsCvs	PVC	5.50	38.5	60
2170016	RG-6 A/U	75 +/- 3 Ω	67	14 / 20	66	2.0	5.0	StCuMbl	0.72	PE	4.70	Cbl	PVC	8.40	72.0	120
2170009	RG-11 A/U	75 +/- 3 Ω	67	11 / 16	66	5.0	10.0	CuLivz	1.20	PE	7.30	Cbl	PVC	10.30	55.5	140
2170011	RG-11 A/U outdoor	75 +/- 3 Ω	67	11 / 16	66	5.0	10.0	CuLivz	1.20	PE	7.30	Cbl	PVC	12.10	55.5	170
2170012	RG-59 B/U	75 +/- 3 Ω	67	16.5/23	66	1.7	7.0	StCuMbl	0.60	PE	3.70	Cbl	PVC	6.15	25.0	57
2170010	RG-187 A/U	75 +/- 3 Ω	65	47 / 56	70	1.5	2.0	StCuLivs	0.31	PTFE	1.52	Cvs	PTFE	2.80	7.3	17
2170008	RG-62 A/U	93 +/- 5 Ω	43	15 / 19	75	0.8	2.0	StCuMbl	0.65	PE hollow	3.70	Cbl	PVC	6.15	24.0	52

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Copper price basis: EUR 150/100kg. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Photographs are not to scale and do not represent detailed images of the respective products.

Multi coaxial cabels RG 59 B/U

Benefits

- In extended systems, the use of the RG 59 B/U multi-coaxial cable as a screened supply cable prevents an accumulation of individual cables running in parallel over long distances.
- This saves installation costs and provides greater mechanical protection for the each sensitive cable.

Product features

- Multi-coaxial cables provide an easier installation than individual installation

Approvals

RoHS

Design

- 2 x single coaxial cables type RG 59 B/U
- Twin cable
- PVC outer sheath
- Colour: black

Technical data

Based on
Similar to MIL specification MIL C 17

Minimum bending radius
Fixed installation: 15 x cable diameter

Temperature range
Fixed installation: -40°C to +80°C

Article number	Number of single cables x RG type	Outer diameter (mm)	Copper index (kg/km)	Weight (kg/km)
2170056	2 x RG 59 B/U	6.5 x 13.0	50.0	116

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Copper price basis: EUR 150/100kg. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.
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Photographs are not to scale and do not represent detailed images of the respective products.

Coaxial cabels RGB

Info

- Connecting Cable for Colour Monitors

Benefits

- Low attenuation ensures a longer transmission distance
- Transmission of the red (R), green (G) and blue (B) colour signals

Application range

- Colour monitor cable for PCs and CAD workstations, process visualisation
- For fixed installation in rooms (RGB CY..x Kx 0.4/1.8)
- For highly flexible applications in power chains (energy supply chains) and continuously moving machine components (RGB-FD..x Kx 0.6L/2.4)

Approvals

RoHS

Design

- Conductor: tinned-copper wire
- Dielectric: cellular polyolefin
- Outer conductor: copper braiding or tinned-copper wire wrapping
- Red (R), green (G), blue (B) elements - for RGB 5 x Kx 0.4/1.8 red, green, blue, white, black
- PVC outer sheath

Technical data

Mutual capacitance
60 nF/km

Minimum bending radius
15 x outer diameter

Temperature range
-10 °C to +80 °C
Occasional flexing: -5°C to +70°C

Characteristic impedance
75 Ohm

Article number	Article designation	Outer diameter (mm)	Copper index (kg/km)	Weight (kg/km)
Fixed installation				
0034245	RGB CY 3 x Kx 0,4/1,8 + 3 x 0,25	8.0	51.0	97
0034246	RGB DY 5 x Kx 0,4/1,8	9.7	60.0	132
Flexible and highly flexible applications				
0034247	RGB-FD 3 x Kx 0,6L/2,4	10.8	29.0	100

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Copper price basis: EUR 150/100kg. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Photographs are not to scale and do not represent detailed images of the respective products.

Accessories

- STAR STRIP stripping tool refer to page 906
- DATA STRIP stripping tool refer to page 907