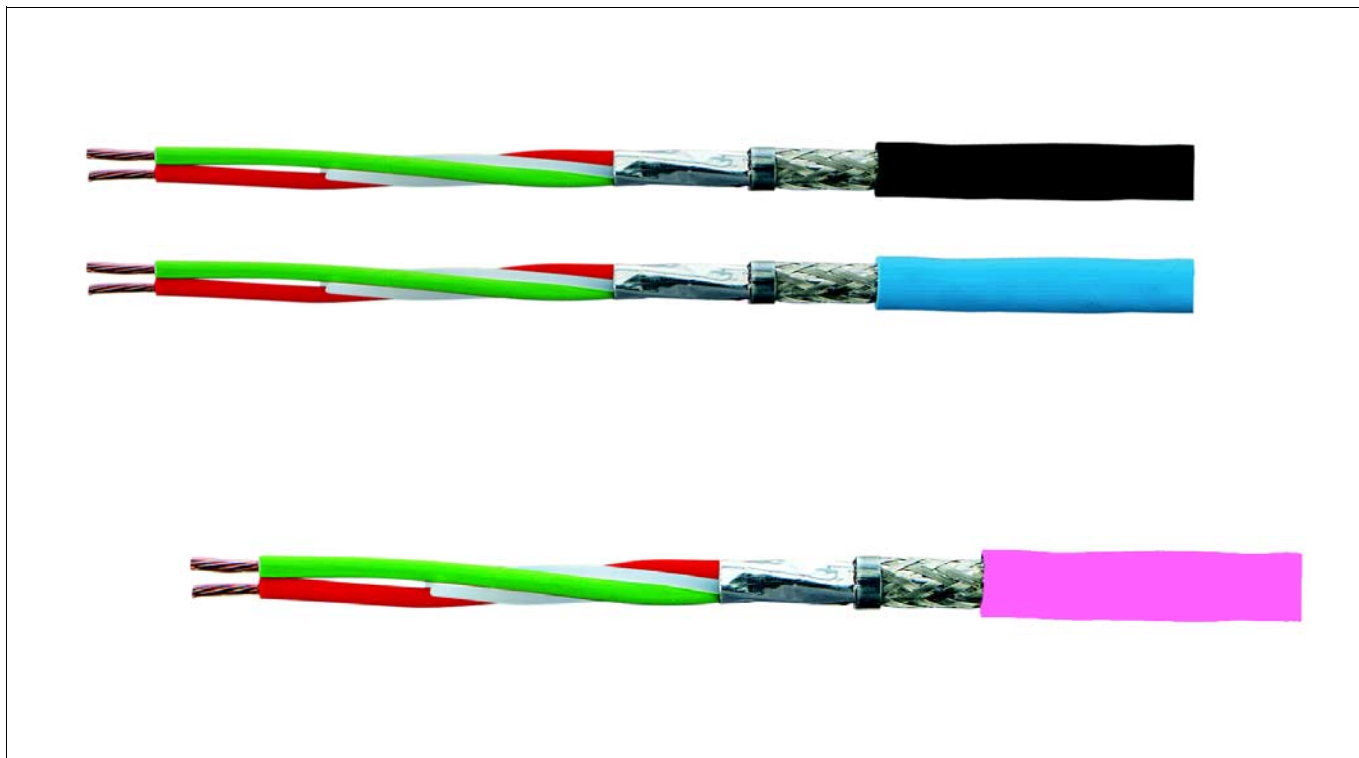


PROFIBUS cable

for PROFIBUS-PA and -DP

10/63-6.46 EN



CPN 080/CPE 080-Ex PROFIBUS-PA basis cable AWG 18, 0.88 mm²

Use

For fixed installation indoor and outdoor, on racks and in conduits.

Application

Fieldbus cable for PROFIBUS-PA with additional power supply for the devices, suitable for insulation displacement connections, M12 connectors, PG 9 or M16 glands.

Construction

- Conductor
 - stranded bare copper, AWG 18, 0.88 mm²
- Insulation
 - cellular polyethylene with skin layer of polyethylene
- Colour
 - a-core: green
 - b-core: red
- Screen
 - one side plastic coated aluminium tape, metallic surface outside in contact with a tinned copper braid
- Outer sheath
 - polyvinylchlorid, colour blue (is) or black
- Cable marking
 - IEC 61158-2 31.25 kbit/s FIELDBUS CABLE
- Overall diameter
 - approx. 7.9 mm
- Weight
 - approx. 75 kg/km

Physical properties and fire behaviour

- Max. pulling tension
 - 90 N
- Min. bending radius
 - 60 mm repeated bending
 - 40 mm single bending
- Operating temperature range
 - 40 °C...+70 °C during operation
 - 5 °C...+50 °C for installation
- UV-resistant
 - UL 1581 section 1200
- Oil-resistant
 - ICEA S 61-402
- Flame retardant
 - IEC 60332, part 3



Electrical properties at 20 °C			
Conductor resistance (loop)	maximum	Ω/km	43.6
Mutual capacitance	nominal	nF/km	60
Capacitance unbalance to earth	maximum	pF/km	2000
Impedance		Ω	100 ±20
Attenuation at 39 kHz	maximum	dB/km	3.0
Propagation delay change (7.9 kHz...39 kHz)	maximum	µs/km	1.7
Test voltage (core/core and core/screen)		V	1000
Rated voltage	maximum	V	300

CPN 150/CPE 150-Ex PROFIBUS-PA long-distance cable, 1.5 mm²

Use

For fixed installation indoor and outdoor, on racks and in conduits.

Application

Fieldbus cable for PROFIBUS-PA with additional power supply for the devices, cable with low voltage drop along the line, suitable for PG 11 or M16 glands.

Construction

- Conductor
 - stranded bare copper, 1.5 mm², class 2 acc. to IEC 60228
- Insulation
 - polyethylene
- Colour
 - a-core: green
 - b-core: red
- Screen
 - one side plastic coated aluminium tape, metallic surface outside in contact with a tinned copper braid
- Outer sheath
 - polyvinylchlorid, colour blue (is) or black
- Cable marking
 - IEC 61158-2 31.25 kbit/s FIELDBUS CABLE
- Overall diameter
 - approx. 9.6 mm
- Weight
 - approx. 115 kg/km

Physical properties and fire behaviour

- Max. pulling tension
 - 150 N
- Min. bending radius
 - 75 mm repeated bending
 - 50 mm single bending
- Operating temperature range
 - 40 °C...+70 °C during operation
 - 5 °C...+50 °C for installation
- UV-resistant
 - UL 1581 section 1200
- Oil-resistant
 - ICEA S 61-402
- Flame retardant
 - IEC 60332, part 3



Electrical properties at 20 °C			
Conductor resistance (loop)	maximum	Ω/km	24.2
Mutual capacitance	nominal	nF/km	60
Capacitance unbalance to earth	maximum	pF/km	2000
Impedance		Ω	100 ±20
Attenuation at 39 kHz	maximum	dB/km	2.7
Propagation delay change (7.9 kHz...39 kHz)	maximum	µs/km	1.7
Test voltage (core/core and core/screen)		V	1000
Rated voltage	maximum	V	300

PROFIBUS-DP cable

Type	PCA 010	PCA 011	PCA 012
Features	indoor	outdoor	indoor
	—	UV-resistant	—
	trailing cable, highly flexible	underground cable	fixed installation
	halogen-free	—	—
	flame-retardant to VDE 0472 T804; test class B	flame-retardant	flame-retardant
	resistant to mineral oil and grease	resistant to mineral oil and grease	resistant to mineral oil and grease
Standard designation	1 × 2 × 0.64	1 × 2 × 0.64	1 × 2 × 0.64
Wire diameter mm	0.64	0.64	0.64
Wire CSA mm ²	0.25	0.32	0.32
Loop resistance Ω/km	133	110	110
Charact. impedance Ω with f = 3...20 MHz	150 ± 15	150 ± 15	150 ± 15
Operating capacity nF/m with f = 800 Hz	30	30	30
Operating voltage Vp max.	250	250	250
Wire colour	red and green	red and green	red and green
Sheath material	PUR	PVC	PVC
Sheath diameter mm	8.6	10	7.8
Sheath colour	violet	black	violet
Min. bending radius, mm single bending	—	100	75
Min. bending radius, mm multiple bending	65	—	—
Permissible tensile load N/mm ²	20	—	100
Weight kg/km	approximately 64	approximately 87	approximately 57
Operating temperature °C	-30...+70	-40...+70	-40...+70

The bus cables listed above are best suited for use in PROFIBUS networks, due to their electrical and mechanical capabilities. All cable versions are shielded twisted-pair copper cables. Project-specific requirements and limitations like underground installation, UV-resistance, halogen-free material and others have to be considered when selecting the appropriate cable type for your application. Note that underground cables cannot be connected to PROFIBUS connectors since they have a typical sheath diameter of 10 mm. Therefore, these cables can only connect to the PROFIBUS devices' screw terminals.

¹⁾ incl. no-return cable drum. Lengths over 1000 m on request

Order handling: FAX +49 (0)2056/12-5095

Ordering information			
	Catalog Number		
PROFIBUS-DP Cable			
PCA 010 violet, 1 x 2 x 0.64 cores, 0.25 mm ² , wave impedance 150 Ω/3-20 MHz indoor laying, high-flexible outer diameter 8.6 mm [Not UL/CSA certified]	72721-9001634V ¹⁾ -790 ...m ²⁾ -770 ³⁾		
PCA 011 black, 1 x 2 x 0.64 cores, 0.32 mm ² , wave impedance 150 Ω/3-20 MHz outdoor laying, ground laying possible, UV resistant outer diameter 10 mm [Not UL/CSA certified]	72721-9001635V ¹⁾ -790 ...m ²⁾ -770 ³⁾		
PCA 012 violet, 1 x 2 x 0.64 cores, 0.32 mm ² , wave impedance 150 Ω/3-20 MHz indoor laying, fixed laying outer diameter 7.8 mm [Not UL/CSA certified]	72721-9001636V ¹⁾ -790 ...m ²⁾ -770 ³⁾		

¹⁾ Singel basic price

²⁾ Price per meter. Length in meter to be specified in the order

³⁾ Add-on price for delivery on cable drum (> 60 m)

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