

Bus system cable - SAC-3P-M12MR/20,0-961 VA - 1419101

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Bus system cable, PROFIBUS PA (31.25 kbps), 3-position, PVC, blue RAL 5015, shielded, Plug angled M12, A-coded, on free cable end, Cable length: 20 m, For Ex area with high-grade steel knurl



Key Commercial Data

Packing unit	1 pc
Custom tariff number	85444290
Country of origin	Poland

Technical data

Dimensions

Length of cable	20 m
Stripping length of the free conductor end	50 mm

Ambient conditions

Ambient temperature (operation)	-25 °C ... 90 °C (Plug / socket)
Degree of protection	IP65
	IP67
	IP68
	IP69K

General

Note	For applications in circuits of intrinsic safety protection type "i". Electrical values following EN 60079-14.
Rated current at 40°C	4 A
Rated voltage	60 V
Number of positions	3

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Technical data

General

Coding	B - inverse
Signal type/category	PROFIBUS PA, 31.25 kbps
Status display	No
Overvoltage category	II
Degree of pollution	3
Insertion/withdrawal cycles	≥ 100
Torque	0.4 Nm (M12 connector)

Material

Flammability rating according to UL 94	HB
Contact material	CuSn
Contact surface material	Ni/Au
Contact carrier material	TPU GF
Material of grip body	TPU, hardly inflammable, self-extinguishing
Material, knurls	Stainless steel
Sealing material	NBR

Pin assignment

Position = wire color (signal) = position (optional)	1 (Plug) = OG (DATA+)
	3 (Plug) = BU (DATA-)
	4 (Plug) = SR (shield)

Standards and Regulations

Flammability rating according to UL 94	HB
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Cable

Cable type	Fieldbus FOUNDATION/PROFIBUS PA, blue
Cable type (abbreviation)	961
Cable structure	2xAWG18/7 + 1xAWG20/7
Conductor cross section	2x 0.75 mm ² (Signal line)
	1x 0.5 mm ² (Drain wire)
AWG signal line	18
Conductor structure signal line	7x 0.40 mm
Core diameter including insulation	2.24 mm ± 0.05 mm
Thickness, insulation	0.5 mm
Wire colors	Blue, orange
Twisted pairs	2 cores to the pair
Overall twist	One pair with one drain wire and fillers for core
Shielding	Plastic-coated aluminum foil with a drain wire

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Technical data

Cable

Optical shield covering	100 %
External sheath, color	blue RAL 5015
Outer sheath thickness	1 mm
External cable diameter D	7.5 mm ± 0.25 mm
Smallest bending radius, fixed installation	75 mm
Cable weight	56.552 kg/km
Outer sheath, material	PVC
Material conductor insulation	PO (Signal line)
Conductor material	Tin-plated Cu litz wires
Conductor resistance	$\leq 19.35 \Omega/\text{km}$ (Signal line)
	26 Ω/km (shield)
Working capacitance	78 nF (at 1 kHz)
Cable capacity	147 pF/m (at 1 kHz, core/shield)
	$\leq 3.94 \text{ pF/m}$ (capacitance unbalance)
Signal speed	0.66 c
Shield attenuation	3 dB/km (At 39 kHz)
Cable impedance	100 $\Omega \pm 20\%$ (At 31.25 kHz)
Inductance	0.6233 μH (per meter)
Nominal voltage, cable	300 V
Special properties	UL standards PLTC-ER and ITC
Flame resistance	UL 1685 (CSA FT 4)
	UL 1685 (vertical tray)
	UL 1666 (riser)
Ambient temperature (operation)	-40 $^{\circ}\text{C}$... 105 $^{\circ}\text{C}$

Classifications

eCl@ss

eCl@ss 4.0	27060307
eCl@ss 4.1	27060307
eCl@ss 5.0	27061801
eCl@ss 5.1	27060307
eCl@ss 6.0	27279218
eCl@ss 7.0	27279218
eCl@ss 8.0	27279218
eCl@ss 9.0	27060311

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Classifications

ETIM

ETIM 2.0	EC000830
ETIM 3.0	EC000830
ETIM 4.0	EC001855
ETIM 5.0	EC001855

UNSPSC

UNSPSC 6.01	26121616
UNSPSC 7.0901	26121616
UNSPSC 11	26121604
UNSPSC 12.01	26121616
UNSPSC 13.2	26121616

Approvals

Approvals

Approvals

EAC

Ex Approvals

Approvals submitted

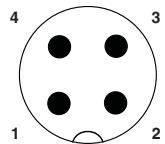
Approval details

EAC

Drawings

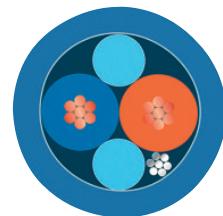
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Schematic diagram



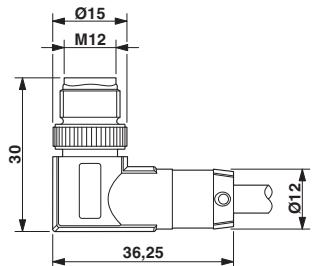
Pin assignment M12 plug, 3-pos., A-coded, view male side

Cable cross section



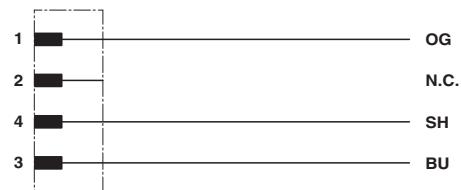
Fieldbus FOUNDATION/PROFIBUS PA, blue [961]

Dimensional drawing



M12 x 1 male plug, angled

Circuit diagram



Contact assignment of the M12 plug

Mouser Electronics

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