

## Network cable - SAC-4P-MRDC1/2,0-937/MRDC4 SCO - 1404338


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Network cable, PROFINET, 4-position, RADOX® GKW S, Black RAL 9005, shielded, Plug angled M12 SPEEDCON / IP65, Coding: D, on Plug angled M12 SPEEDCON / IP65, Coding: D, Cable length: 2 m, Outlet direction C1 and C4, Product tested according to customer specification/rail application



### Key commercial data

Packing unit	1 PCE
Minimum order quantity	50 PCE
GTIN	 4 046356 691970
Custom tariff number	85444290
Country of origin	GERMANY

### Technical data

#### Dimensions

Length of cable	2 m
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#### Ambient conditions

Degree of protection	IP65
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#### General data

Rated current at 40°C	4 A
Rated voltage	250 V
Number of positions	4
Signal type/category	PROFINET CAT5 (IEC 11801:2002) PROFINET CAT5e (TIA 568B:2001)
Standards/regulations	M12 connector IEC 61076-2-101
Surge voltage category	II
Pollution degree	3

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### Technical data

#### Characteristics head 1

Head design	Plug angled M12 SPEEDCON / IP65
No. of positions (pin connector pattern)	4
Coding	D (Data)
Color	Black
Material (component)	CuSn (Contact)
	Ni/Au (Contact surface)
	PA (Contact carriers)
	TPU, hardly inflammable, self-extinguishing (Grip)
	Zinc die-cast, nickel-plated (Screw connection)
Shielded	Yes
Contact resistance	≤ 5 mΩ
Insulation resistance	≥ 100 MΩ
Insertion/withdrawal cycles	≥ 100 (Quantity: 500 with Phoenix Contact mating connector)
Torque	0.4 Nm
Ambient temperature (operation)	-40 °C ... 90 °C
Weight	15 g ±5 g

#### Cable

Cable type	PROFINET
Cable type (abbreviation)	937
Signal type/category	PROFINET CAT5 (IEC 11801:2002)
	PROFINET CAT5e (TIA 568B:2001)
Cable structure	1x4xAWG22/7; SF/TQ
Conductor cross section	4x 0.34 mm <sup>2</sup>
AWG signal line	22
Conductor structure signal line	7x 0.25 mm
Core diameter including insulation	approx. 1.5 mm
Wire colors	White, yellow, blue, orange
Overall twist	Star quad
Shielding	Plastic-coated aluminum foil, tinned copper braided shield
External sheath, color	Black RAL 9005
Outer sheath thickness	approx. 1 mm
External cable diameter D	6.6 mm ±0.4 mm
Minimum bending radius, fixed installation	6 x D
Cable weight	70 g/m
Outer sheath, material	RADOX <sup>®</sup> GKW S
Material conductor insulation	RADOX <sup>®</sup> foam skin

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### Technical data

#### Cable

Conductor material	silver-plated Cu litz wires
Conductor resistance	≤ 54 Ω/km
Working capacitance	≤ 65 pF (core-core)
	≤ 100 pF (core-shield)
Wave impedance	100 Ω ± 5 Ω (f = 100 MHz)
Shield attenuation	40 dB (30 MHz ≤ f ≤ 100 MHz)
Coupling resistance	200.00 mΩ/m (f ≤ 30 MHz)
Nominal voltage, cable	300 V
Test voltage, cable	2000 V
Special properties	Fire protection in rail vehicles GM/RT21120
	Fire protection in rail vehicles as per BS 6853 Cable inside vehicle: Cat. Ib, II/cable outside vehicle: Cat. Ia, Ib, II
	Fire protection in rail vehicles as per DIN 5510-2 Fire protection level 1,2,3,4
	Fire protection in rail vehicles NF F16-101 Category, int. A1, A2, B/ext. A1, A2, B
	Fire protection in rail vehicles NF F16-101 Class C/F0
Flame resistance	According to EN 60332-1-2
	According to EN 50266-2-5
Resistance to oil	as per EN 50306-3 section 4.8
Other resistance	Resistance to fuels EN 50306-3 Section 4.9/1.5 kV/1 minute
	Resistance to acids and alkalis EN 50306-3 Section 4.10/1.5 kV/1 minute
Concentration of fumes	According to BS 6853 Annex D
	According to EN 61034-2, IEC 61034-2
Ambient temperature (operation)	-40 °C ... 90 °C (cable, fixed installation)
	-25 °C ... 90 °C (cable, flexible installation)
Ambient temperature (installation)	-25 °C ... 90 °C

### Classifications

#### eCl@ss

eCl@ss 4.0	27250313
eCl@ss 4.1	27250313
eCl@ss 5.0	27143423
eCl@ss 5.1	27061801
eCl@ss 6.0	27061801
eCl@ss 7.0	27061801
eCl@ss 8.0	27061801

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## Classifications

### ETIM

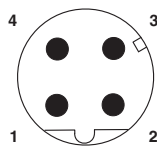
ETIM 3.0	EC001855
ETIM 4.0	EC001855
ETIM 5.0	EC000830

### UNSPSC

UNSPSC 6.01	31251501
UNSPSC 7.0901	31251501
UNSPSC 11	31251501
UNSPSC 12.01	31251501
UNSPSC 13.2	31251501

## Drawings

Schematic diagram



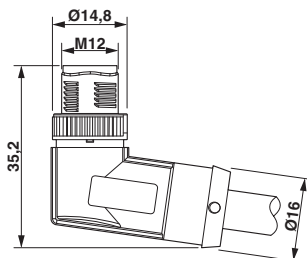
Pin assignment M12 male connector, 4-pos., D-coded, male side

Cable cross section



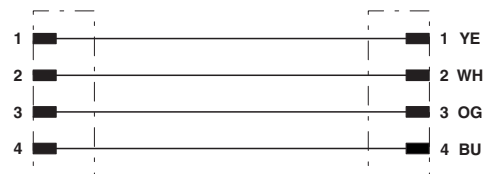
PROFINET [937]

Dimensioned drawing



Plug M12 SPEEDCON, angled, shielded

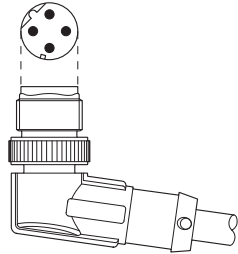
Circuit diagram



Contact assignment of the M12 plugs

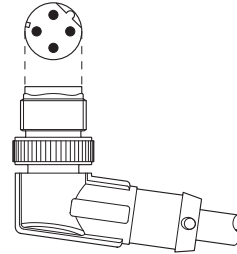
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Schematic diagram



Alignment of the connector pin assignment (C1)

Schematic diagram



Alignment of the connector pin assignment (C4)