

SAC-5P-MR/ 2,0-28R SCO RAIL - Sensor/actuator cable



1407328

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Sensor/actuator cable, 5-position, PE-X halogen-free, black, shielded (Tinned copper braided shield), Plug angled M12 SPEEDCON, coding: A, Wiring: unwired, on free cable end, cable length: 2 m, For railway applications

Your advantages

- Easy and safe: 100 % electrically tested plug-in components
- Securely locked by special vibration brake
- Resistant to temperature influences – tested for an extended temperature range and for resistance to temperature shocks
- Reliable signal transmission – 360° shielding in environments with electromagnetic interference

Commercial data

Item number	1407328
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	BF03
Product key	BF1CDA
Catalog page	Page 132 (C-4-2013)
GTIN	4046356774444
Weight per piece (including packing)	156.3 g
Weight per piece (excluding packing)	159.9 g
Customs tariff number	85444290
Country of origin	PL

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Technical data

Notes

General	Further products with variable cable type and variable cable length can be found in the accessories section
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Product properties

Product type	Sensor/actuator cable
Number of positions	5
Application	Railway applications
No. of cable outlets	1
Shielded	yes
Coding	A

Insulation characteristics

Overvoltage category	II
Degree of pollution	3

Material specifications

Flammability rating according to UL 94	V0
Material of grip body	PA 6.6
Contact material	CuSn
Contact surface material	Ni/Au
Contact carrier material	PA 6.6
Material for screw connection	Zinc die-cast, nickel-plated

Electrical properties

Insulation resistance	$\geq 100 \text{ M}\Omega$
Nominal voltage U_N	48 V AC
	60 V DC
Nominal current I_N	4 A
Protective circuit	unwired

Mechanical properties

Mechanical data

Insertion/withdrawal cycles	≥ 100
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Signaling

Status display	No
Status display present	No

Connection data

Conductor connection

Tightening torque	0.4 Nm (M12 connector)
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Connector

Connection 1

Type	Plug angled M12 SPEEDCON
Number of positions	5
Locking type	SPEEDCON
Coding type	A

Connection 2

Type	free cable end
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Cable/line

Cable length	2 m
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Shielded black RADOX® [28R]

Dimensional drawing				
Cable weight	70 kg/km			
Number of positions	5			
Shielded	yes			
Cable type	Shielded black RADOX® [28R]			
Conductor structure signal line	19x 0.18 mm			
AWG signal line	20			
Conductor cross section	5x 0.5 mm²			
Wire diameter incl. insulation	1.43 mm			
External cable diameter	6.20 mm ±0.3 mm			
Outer sheath, material	PE-X			
External sheath, color	black			
Conductor material	Tin-plated Cu litz wires			
Material wire insulation	PE-X			
Single wire, color	white 1, white 2, white 3, white 4, white 5			
Overall twist	5 cores, twisted			
Max. conductor resistance	≤ 40.1 Ω/km			
Nominal voltage, cable	600 V AC (Core-ground, U ₀)			
	1000 V AC (Core-ground, U)			
	≤ 720 V AC (core-ground)			
	≤ 1200 V AC (Core-ground, U _m)			
	≤ 900 V DC (Core-ground, V ₀)			

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1407328

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	≤ 1500 V DC (Line-line)
Test voltage	3500 V AC (50 Hz, 5 min.)
	8400 V DC (50 Hz, 5 min.)
Minimum bending radius, fixed installation	3 x D
Minimum bending radius, flexible installation	4 x D
Smallest bending radius, fixed installation	19 mm
Smallest bending radius, movable installation	25 mm
Halogen-free	in accordance with EN 50267-2-1
Flame resistance	EN 60332-1-2
	EN 50266
	EN 60332-3-25
	NF C32-070, 2.1
	NF C32-070, 2.2
	UL 1685, 12 (FT4)
	in accordance with ISO 6722-1 5.22 (UN ECE-R 118.01)
Fume corrosiveness	EN 50267-2-2
Fume toxicity	BS 6853 B.1
	EN 50305, 9.2
Concentration of fumes	BS 6853 D.8.7
	EN 61034-2
	UL 1685, 12 (FT4)
Resistance to oil	according to IRM 902, 72 h at 100 °C
Fire protection in rail vehicles	BS 6853 (Category Ia, Ib, II)
	GM/RT 2130 (Category Ia, Ib, II)
	EN 45545 (Risk level HL1 - HL3)
	DIN 5510 (Fire protection level 1, 2, 3, 4)
	NF F16-101 (Category A1, A2, B)
	NF F16-101 (Class C/F0)
	NFPA 130
	UNI CEI 11170 (Risk level LR1 - LR4)
Other resistance	Resistance to fuels (according to IRM 903, 168 h at 70 °C)
Ambient temperature (operation)	-50 °C ... 120 °C (cable, fixed installation)
	-25 °C ... 90 °C (Cable, flexible installation)

Environmental and real-life conditions

Ambient conditions

Degree of protection	IP65
Ambient temperature (operation)	-40 °C ... 85 °C (Plug / socket)

Standards and regulations

M12

Standard designation	M12 connector
Standards/specifications	IEC 61076-2-101

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Standard designation	Shock, vibration
Standards/specifications	EN 50155

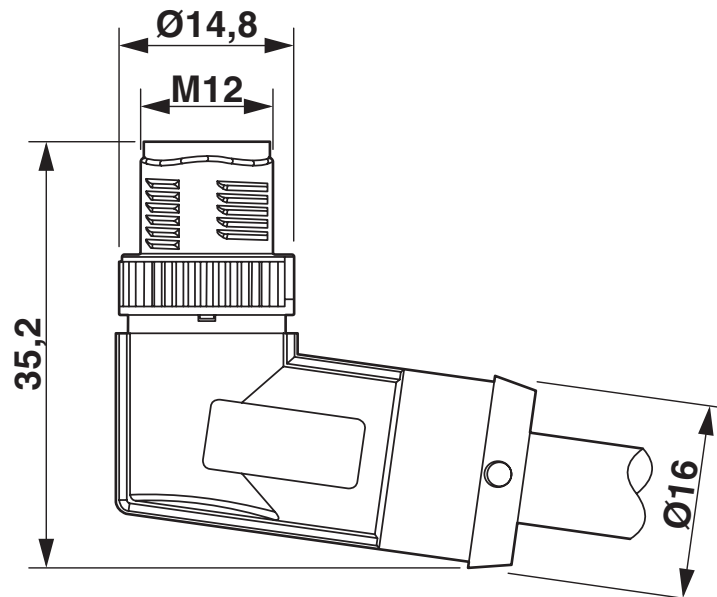
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Drawings

Dimensional drawing



Plug M12 SPEEDCON, angled, shielded

Circuit diagram

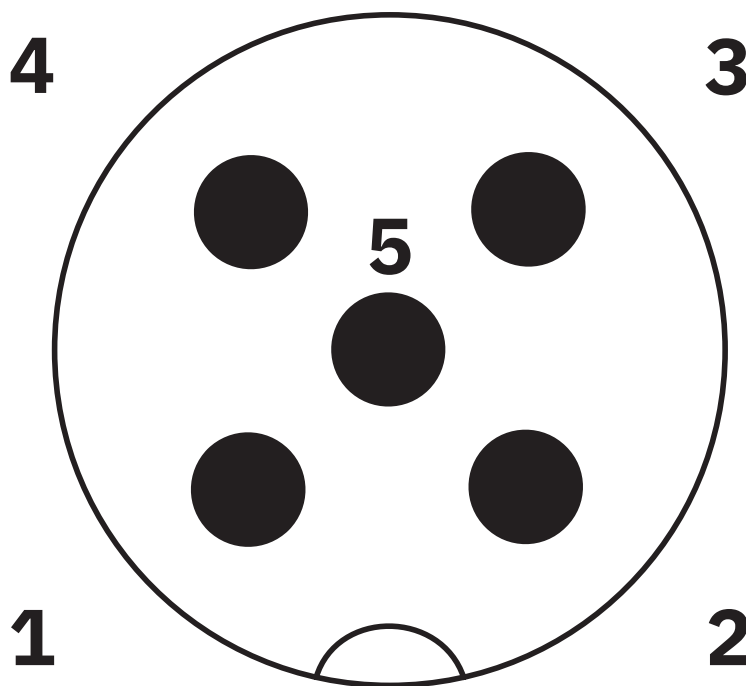


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Schematic diagram



Pin assignment M12 male connector, 5-pos., A-coded, male side

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Approvals

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EAC-RoHS

Approval ID: RU D-DE.HB35.B.00387

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Classifications

ECLASS

ECLASS-11.0	27060311
ECLASS-12.0	27060311
ECLASS-13.0	27060311

ETIM

ETIM 9.0	EC001855
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UNSPSC

UNSPSC 21.0	26121600
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Environmental product compliance

REACH SVHC	Dechlorane Plus
China RoHS	Environmentally friendly use period: unlimited = EFUP-e
	No hazardous substances above threshold values

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