PHŒNIX CONTACT

Sensor/Actuator cable - SAC-5P- 2,0-28R/FR SCO RAIL - 1407334

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Sensor/Actuator cable, 5-position, RADOX® GKW S halogen-free, black, shielded, free cable end, on Socket angled M12 SPEEDCON, A-coded, Cable length: 2 m, For railway applications

Why buy this product

- ☑ Easy and safe: 100% electrically tested plug-in components
- ☑ Safety thanks to flame retardancy: PA 6.6 grip and RADOX® cable meet the highest requirements
- ☑ 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

SPEEDCON LOCKING

Key commercial data

Packing unit	1 pc
GTIN	4 046356 774505
Weight per Piece (excluding packing)	16.74 g
Custom tariff number	85444290
Country of origin	Poland
Note	Made to Order (non-returnable)

Technical data

Dimensions

Length of cable	2 m

Ambient conditions

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

General

Rated current at 40°C	4 A
Rated voltage	60 V
Number of positions	5

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Technical data

General

Contact resistance	≤ 5 mΩ
Insulation resistance	≥ 100 MΩ
Coding	A - standard
Standards/regulations	M12 connector IEC 61076-2-101
Status display	No
Protective circuit/component	Unwired
Surge voltage category	II
Pollution degree	3
Insertion/withdrawal cycles	≥ 100
Torque	0.4 Nm (M12 connector)

Material

Inflammability class according to UL 94	V0
Contact material	CuSn
Contact surface material	Ni/Au
Contact carrier material	PA 6.6
Material of grip body	PA 6.6
Material, knurls	Zinc die-cast, nickel-plated
Sealing material	NBR

Cable

Cable type	Shielded black RADOX®
Cable type (abbreviation)	28R
Conductor cross section	5x 0.5 mm²
AWG signal line	20
Conductor structure signal line	19x 0.18 mm
Core diameter including insulation	1.43 mm
Wire colors	White 1, white 2, white 3, white 4, white 5
Overall twist	5 cores, twisted
Shielding	Tinned copper braided shield
External sheath, color	black
External cable diameter D	6.2 mm ±0.3 mm
Minimum bending radius, fixed installation	3 x D
Minimum bending radius, flexible installation	4 x D
Cable weight	70 kg/km
Outer sheath, material	RADOX® GKW S
Material conductor insulation	RADOX® TI303
Conductor material	Tin-plated Cu litz wires
Conductor resistance	≤ 40.1 Ω/km
Nominal voltage, cable	600 V AC (Core-ground, U_0)
	1000 V AC (Core-ground, U)

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Technical data

Cable

	≤ 720 V AC (core-ground)
	≤ 1200 V AC (Core-ground, U_m)
	≤ 900 V DC (Core-ground, V_0)
	≤ 1500 V DC (core-core)
Test voltage, cable	3500 V AC (50 Hz, 5 min.)
	8400 V DC (50 Hz, 5 min.)
Special properties	Fire protection in rail vehicles NF F16-101 Category A1, A2, B
	Fire protection in rail vehicles NF F16-101 Class C/F0
	Fire protection in rail vehicles according to DIN 5510 Risk level 1 - 4
	Fire protection in rail vehicles according to CEI 11170 Risk level LR1 - LR4
	Fire protection in rail vehicles according to CEN/TS 45545 Risk level HL1 - HL3
Flame resistance	According to EN 60332-1-2
	according to EN 50305, 9.1.2
Halogen-free	According to EN 50267-2-1
Concentration of fumes	according to EN 61034-2
Fume corrosiveness	according to EN 50267-2-2
Fume toxicity	according to EN 50305, 9.2
Ambient temperature (operation)	-40 °C ... 120 °C (cable, fixed installation)
	-25 °C ... 90 °C (cable, flexible installation)

Classifications

eCl@ss

eCl@ss 4.0	27060306
eCl@ss 4.1	27060306
eCl@ss 5.0	27061801
eCl@ss 5.1	27061801
eCl@ss 6.0	27061801
eCl@ss 7.0	27061801
eCl@ss 8.0	27279218

ETIM

ETIM 3.0	EC001855
ETIM 4.0	EC001855
ETIM 5.0	EC001855

UNSPSC

UNSPSC 6.01	31251501
UNSPSC 7.0901	31251501
UNSPSC 11	31251501

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Classifications

UNSPSC

UNSPSC 12.01	31251501
UNSPSC 13.2	31251501

Accessories

Accessories

Conductor marking

Insert label - PABA WH/15 - 1013151

Insert label, Strip, white, unlabeled, can be labeled with: Plotter, Mounting type: Thread on, Cable diameter: 0.6-50 mm, Lettering field: 15 x 4 mm

Insert label - PABA YE/15 - 1013698

Insert label, Strip, yellow, unlabeled, can be labeled with: Plotter, Mounting type: Thread on, Cable diameter: 0.6-50 mm, Lettering field: 15 x 4 mm

Insert label - PABA RD/15 - 1013944

Insert label, Strip, red, unlabeled, can be labeled with: Plotter, Mounting type: Thread on, Cable diameter: 0.6-50 mm, Lettering field: 15 x 4 mm

Cutting tools

Diagonal cutter - CUTFOX-S VDE - 1212207

Diagonal cutter for copper and aluminum conductors, VDE-tested

Marker carrier cable

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Accessories

Conductor marker carrier - PATG 2/15 - 1013038

Conductor marker carrier, transparent, unlabeled, Mounting type: slide on, Cable diameter: 2-4 mm, Lettering field: 4 x 15 mm

Conductor marker carrier - PATG 3/15 - 1013041

Conductor marker carrier, transparent, unlabeled, Mounting type: slide on, Cable diameter: 4-7 mm, Lettering field: 4 x 15 mm

Conductor marker carrier - PATG 4/15 - 1013054

Conductor marker carrier, transparent, unlabeled, Mounting type: slide on, Cable diameter: 6-10 mm, Lettering field: 4 x 15 mm

Marker pen

Marker pen - B-STIFT - 1051993

Marker pen, for manual labeling of unprinted Zack strips, smear-proof and waterproof, line thickness 0.5 mm

Protective cap

Screw plug - PROT-M12 MS-PA-CHAIN - 1430899

M12 sealing cap with fixing band, for sensor cables, for free M12 sockets

Safety locking

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Accessories

Locking clip - SAC-M12-EXCLIP-F - 1558991

Screwdriver tools

Adapter insert - TSD-M SAC-BIT ADAPTER - 1212600

Adapter bit for TSD-M...torque tools, E6.3-1/4" drive with 4 mm hexagon to accommodate SAC bits

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Tool - SAC BIT M12-D15 - 1208432

Nut for assembling sensor/actuator cables with M12 connector and for M12 connectors with QUICKON fast connection technology, for 4 mm hexagonal drive

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Stripping tool

Stripping tool - WIREFOX SAC-1 - 1212757

Stripping pliers, for halogen-free sensor/actuator cables (SAC cables), with PUR and PVC insulation, from Ø of 3.2 to 4.4 mm, any stripping length

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Stripping tool - WIREFOX SAC - 1212623

Stripping pliers, for halogen-free sensor/actuator cables (SAC cables), with PUR and PVC insulation, from Ø of 4.4 to 7 mm, any stripping length

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Accessories

Stripping tool - WIREFOX 10 - 1212150

Stripping tool, for cables and conductors from 0.02 - 10 mm², self-adjusting, stripping length of up to 18 mm, cutting capacity of up to 10 mm² stranded/1.5 mm² solid, replaceable stripping blade

Torque tool

Torque screwdriver - TSD 04 SAC - 1208429

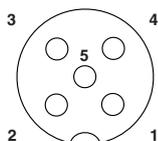Torque screwdriver, with preset torque of 0.4 Nm and 4 mm hexagonal drive for M12 connectors

Torque screwdriver - TSD-M 1,2NM - 1212224

Torque screw driver, accuracy as per EN ISO 6789 standard, adjustable from 0.3 - 1.2 Nm

Drawings

Schematic diagram

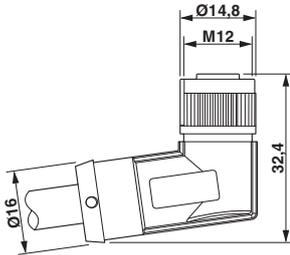Pin assignment M12 socket, 5-pos., A-coded, socket side view

Cable cross section

Shielded black RADOX® [28R]

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Dimensioned drawing

Ø14,8
M12
32,4
Ø16

Socket M12-SPEEDCON, angled, shielded

Circuit diagram

1	———————	WH 1
2	———————	WH 4
4	———————	WH 3
3	———————	WH 2
5	———————	WH 5

Contact assignment of the M12 socket