Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!

# Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832
Email & Skype: info@chipsmall.com Web: www.chipsmall.com
Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China

# Sensor/Actuator cable - SAC-4P-MS/10,0-28R SCO RAIL - 1407313

Please be informed that the data shown in this PDF Document is generated from our Online Catalog. Please find the complete data in the user's documentation. Our General Terms of Use for Downloads are valid
(http://phoenixcontact.com/download)

Sensor/Actuator cable, 4-position, PE-X halogen-free, black, shielded, Plug straight M12 SPEEDCON, A-coded, on free cable end, Cable length: 10 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 radiation-cross-linked cables satisfy the most stringent 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

## Key Commercial Data

| | |
|---|---|
| Packing unit | 1 STK |
| GTIN | 4 046356 774291 |
| GTIN | 4046356774291 |

## Technical data

### Dimensions

| | |
|---|---|
| Length of cable | 10 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 | 250 V |
| Number of positions | 4 |
| Insulation resistance | ≥ 100 MΩ |
| Coding | A - standard |
| Standards/regulations | M12 connector IEC 61076-2-101 |

# Sensor/Actuator cable - SAC-4P-MS/10,0-28R SCO RAIL - 1407313

## Technical data

### General

| | |
|---|---|
| | Shock, vibration EN 50155 |
| Status display | No |
| Protective circuit/component | Unwired |
| Overvoltage category | II |
| Degree of pollution | 3 |
| Insertion/withdrawal cycles | ≥ 100 |
| Torque | 0.4 Nm (M12 connector) |

### Material

| | |
|---|---|
| Flammability rating 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 |
| Standards/regulations | PA 6.6: Fire protection in rail vehicles - requirement sets R22, R23, and R24 acc. to DIN EN 45545-2 (Risk level HL1 - HL3) |

### Standards and Regulations

| | |
|---|---|
| Standard designation | M12 connector |
| Standards/regulations | IEC 61076-2-101 |
| Standard designation | Shock, vibration |
| Standards/regulations | EN 50155 |
| Flammability rating according to UL 94 | V0 |

### Cable

| | |
|---|---|
| Cable type | Shielded black RADOX® |
| Cable type (abbreviation) | 28R |
| Conductor cross section | 4x 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 |
| Overall twist | 4 wires, twisted |
| Shielding | Tinned copper braided shield |
| External sheath, color | black |
| External cable diameter D | 5.4 mm ±0,3 mm |
| Minimum bending radius, fixed installation | 3 x D |
| Minimum bending radius, flexible installation | 4 x D |
| Cable weight | 56 kg/km |
| Outer sheath, material | PE-X |
| Material conductor insulation | PE-X |

# Sensor/Actuator cable - SAC-4P-MS/10,0-28R SCO RAIL - 1407313

## Technical data

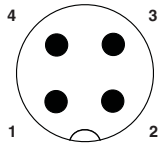
### Cable

| | |
|---|---|
| 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) |
| | ≤ 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.) |
| 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) |
| Flame resistance | EN 60332-1-2 |
| | EN 50266 |
| | EN 50305, 9.1.2 |
| | 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) |
| Halogen-free | According to EN 50267-2-1 |
| Resistance to oil | according to IRM 902, 72 h at 100 °C |
| Other resistance | Resistance to fuels according to IRM 903, 168 h at 70 °C |
| Concentration of fumes | BS 6853 D.8.7 |
| | EN 61034-2 |
| | UL 1685, 12 (FT4) |
| Fume corrosiveness | EN 50267-2-2 |
| Fume toxicity | BS 6853 B.1 |
| | EN 50305, 9.2 |
| Ambient temperature (operation) | -50 °C ... 120 °C (cable, fixed installation) |
| | -25 °C ... 90 °C (cable, flexible installation) |

## Drawings

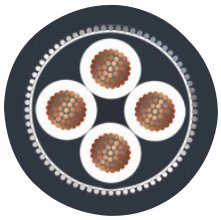
# Sensor/Actuator cable - SAC-4P-MS/10,0-28R SCO RAIL - 1407313

Schematic diagram



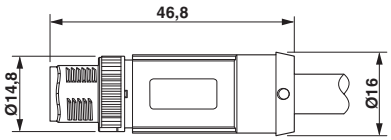

Pin assignment M12 plug, 4-pos., A-coded, view plug side

Cable cross section



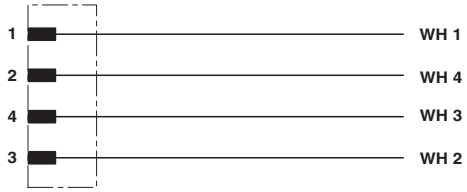
Shielded black RADOX® [28R]

Dimensional drawing




M12 SPEEDCON plug, straight, shielded

Circuit diagram




Contact assignment of the M12 plug

Phoenix Contact 2017 © - all rights reserved
http://www.phoenixcontact.com

PHOENIX CONTACT GmbH & Co. KG
Flachsmarktstr. 8
32825 Blomberg
Germany
Tel. +49 5235 300
Fax +49 5235 3 41200
http://www.phoenixcontact.com