

VS-FSBPXS-OE-94S/0,5 WCP - Device connector rear mounting



1426045

<https://www.phoenixcontact.com/us/products/1426045>

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 documentation. Our general terms of use for downloads are valid.



Device connector rear mounting, Ethernet CAT6_A (10 Gbps) CAT6_A, 8-position, Socket, straight, M12-SPEEDCON, X-coding, on free cable end, Bus line, cable length: 0.5 m, For railway applications, this item is expected to be lead-free from Q2 2026 in accordance with RoHS II without exception 6c (Pb < 0.1%), a lead-free alternative is possible on request in advance

Your advantages

- Preassembled with cables in various standard lengths for immediate use
- Customer-specific assemblies and cable lengths can be supplied
- Sealed on the cable side for optimum tightness of seal
- Cable designs for all common networks and fieldbuses
- For high transmission safety: shield connection to the housing with optional EMC nut

Commercial data

| | |
|--------------------------------------|---------------|
| Item number | 1426045 |
| Packing unit | 1 pc |
| Minimum order quantity | 50 pc |
| Product key | ABQDGI |
| GTIN | 4055626436791 |
| Weight per piece (including packing) | 68.4 g |
| Weight per piece (excluding packing) | 53.316 g |
| Country of origin | DE |

VS-FSBPXS-OE-94S/0,5 WCP - Device connector rear mounting



1426045

<https://www.phoenixcontact.com/us/products/1426045>

Technical data

Notes

| | |
|---------------------|--|
| Notes on operation | The electrical and mechanical data specified assume that the connector pair is correctly locked and mounted. If the connector is unlocked and if there is a danger of contamination, the connector must be sealed using a protective cap > IP54. Influences arising from litz wires, cables or PCB assembly must also be taken into consideration. |
| Note on the contact | Contact connection method: Crimp connection |

Safety note

| | |
|-------------|--|
| Safety note | WARNING: The connectors may not be plugged in or disconnected under load. Ignoring the warning or improper use may damage persons and/or property. |
| | • WARNING: Commission properly functioning products only. The products must be regularly inspected for damage. Decommission defective products immediately. Replace damaged products. Repairs are not possible. |
| | • WARNING: Only electrically qualified personnel may install and operate the product. They must observe the following safety notes. The qualified personnel must be familiar with the basics of electrical engineering. They must be able to recognize and prevent danger. The relevant symbol on the packaging indicates that only personnel familiar with electrical engineering are allowed to install and operate the product. |
| | • The products are suitable for applications in plant, controller, and electrical device engineering. |
| | • When operating the connectors in outdoor applications, they must be separately protected against environmental influences. |
| | • Assembled products may not be manipulated or improperly opened. |
| | • Only use mating connectors that are specified in the technical data of the standards listed (e.g. the ones listed in the product accessories online at phoenixcontact.com/products). |
| | • When using the product in direct connection with third-party manufacturers, the user is responsible. |
| | • For operating voltages > 50 V AC, conductive connector housings must be grounded |
| | • Ensure that when laying the cable, the tensile load on the connectors does not exceed the upper limit specified in the standards. |
| | • Observe the corresponding technical data. You will find information: <ul style="list-style-type: none">o On the producto On the packing labelo In the supplied documentationo Online at phoenixcontact.com/products under the product |
| | • Only use tools recommended by Phoenix Contact |
| | • Use a protective cap to protect connectors that are not in use. The suitable accessories are available online in the accessory |

VS-FSBPXS-OE-94S/0,5 WCP - Device connector rear mounting



1426045

<https://www.phoenixcontact.com/us/products/1426045>

| | |
|--|---|
| | section of the product at phoenixcontact.com/products |
| | <ul style="list-style-type: none">• Ensure that the protective or functional ground has been properly connected.• VDE 0100/1.97 § 411.1.3.2 and DIN EN 60 204/11.98 § 14.1.3 are applicable when combining several circuits in a cable and/or connector• The connector warms up in normal operation. Depending on the ambient conditions, the surface of the connector can continue to warm up. In this case, the user is responsible for posting warnings (e.g. DIN EN ISO 13732-1:2008-12). |

Product properties

| | |
|----------------------|-------------------------|
| Product type | Data cable preassembled |
| Application | Railway applications |
| Number of positions | 8 |
| No. of cable outlets | 1 |
| Coding | X |
| Thread type | M12 |

Insulation characteristics

| | |
|----------------------|-----|
| Overvoltage category | III |
| Degree of pollution | 3 |

Interfaces

| | |
|----------------------|--------------------------------------|
| Bus system | Ethernet |
| Signal type/category | Ethernet CAT6 _A , 10 Gbps |

Electrical properties

| | |
|---|--|
| Rated surge voltage | 0.8 kV |
| Contact resistance | ≤ 3 mΩ |
| Insulation resistance | ≥ 100 MΩ |
| Nominal voltage U _N | 50 V AC |
| | 60 V DC |
| Nominal current I _N | 0.5 A (Plug/socket in accordance with IEC 61076-2-101, cable technical data is to be observed) |
| Transmission medium | Copper |
| Transmission speed | 10 Gbps |
| Transmission characteristics (category) | CAT6 _A |

Mechanical properties

Mechanical data

| | |
|-----------------------------|-------|
| Insertion/withdrawal cycles | ≥ 100 |
|-----------------------------|-------|

Material specifications

| | |
|--|----|
| Flammability rating according to UL 94 | V0 |
|--|----|

VS-FSBPXS-OE-94S/0,5 WCP - Device connector rear mounting

1426045

<https://www.phoenixcontact.com/us/products/1426045>

Connection data

Connection technology

| | |
|-------------------|----------|
| Connection method | Bus line |
|-------------------|----------|

Conductor connection

| | |
|-------------------------|-----------------------------------|
| Contact connection type | Socket |
| Connection method | Bus line |
| Tightening torque | 2 Nm ... 3 Nm (Installation-side) |

Connector

Connection 1

| | |
|-------------------|----------|
| Head design | Socket |
| Head cable outlet | straight |
| Head thread type | M12 |
| Head locking type | SPEEDCON |
| Coding | X |

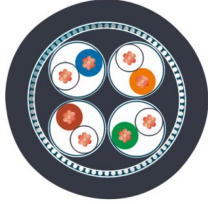
Connection 2

| | |
|-------------|----------------|
| Head design | free cable end |
|-------------|----------------|

Cable/line

| | |
|--------------|-------|
| Cable length | 0.5 m |
|--------------|-------|

Ethernet BETAtrans® railway application CAT7 [94S]

| | |
|---------------------------------|--|
| Dimensional drawing |  |
| Cable weight | 59 kg/km |
| Copper weight | 28 kg/km |
| Number of positions | 8 |
| Shielded | yes |
| Cable type | Ethernet BETAtrans® railway application CAT7 [94S] |
| Conductor structure | 4x2xAWG26/7; S/FTP |
| Signal runtime | 4.4 ns/m |
| Signal speed | 0.78 c |
| Conductor structure signal line | 7x 0.16 mm |
| AWG signal line | 26 |

VS-FSBPXS-OE-94S/0,5 WCP - Device connector rear mounting



1426045

<https://www.phoenixcontact.com/us/products/1426045>

| | |
|--|---|
| Conductor cross-section | 4x 2x 0.14 mm ² |
| Wire diameter incl. insulation | 1.05 mm ±0.1 mm |
| External cable diameter | 6.60 mm ±0.2 mm |
| Outer sheath, material | PE-X |
| External sheath, color | black |
| Conductor material | Tin-plated Cu litz wires |
| Material wire insulation | Cell PE |
| Single wire, color | white-blue, white-orange, white-green, white-brown |
| Twisted pairs | 2 cores to the pair |
| Type of pair shielding | Aluminum-lined polyester foil |
| Overall twist | 4 pairs, twisted |
| Max. conductor resistance | ≤ 145 Ω/km |
| Insulation resistance | ≥ 5 GΩ*km |
| Coupling resistance | 5.00 mΩ/m (at 10 MHz) |
| Wave impedance | 100 Ω ±5 Ω (at 100 MHz) |
| Working capacitance | 44 nF (per kilometer) |
| Nominal voltage, cable | 125 V AC (U _o) |
| Test voltage Core/Core | 1000 V AC (50 Hz, 1 min.) |
| Test voltage Core/Shield | 1000.00 V AC (50 Hz, 1 min.) |
| Minimum bending radius, fixed installation | 6 x D |
| Smallest bending radius, fixed installation | 40 mm |
| Tensile strength | ≤ 60 N (temporary) ≤ 15 N (Permanent) |
| Near end crosstalk attenuation (NEXT) | 100 dB (with 1 MHz) 99 dB (at 10 MHz) 95 dB (at 100 MHz) 92 dB (at 200 MHz) 90 dB (at 250 MHz) 83 dB (at 500 MHz) 81 dB (at 600 MHz) 80 dB (at 700 MHz) 77 dB (at 800 MHz) 75 dB (at 900 MHz) 74 dB (at 1000 MHz) 72 dB (at 1100 MHz) 70 dB (at 1200 MHz) |
| Power-summated near end crosstalk attenuation (PSNEXT) | 97 dB (with 1 MHz) 96 dB (at 10 MHz) 92 dB (at 100 MHz) 89 dB (at 200 MHz) 87 dB (at 250 MHz) 80 dB (at 500 MHz) |

VS-FSBPXS-OE-94S/0,5 WCP - Device connector rear mounting



1426045

<https://www.phoenixcontact.com/us/products/1426045>

| | |
|---|-----------------------|
| | 78 dB (at 600 MHz) |
| | 77 dB (at 700 MHz) |
| | 74 dB (at 800 MHz) |
| | 72 dB (at 900 MHz) |
| | 71 dB (at 1000 MHz) |
| | 69 dB (at 1100 MHz) |
| | 67 dB (at 1200 MHz) |
| Return attenuation (RL) | 24 dB (with 1 MHz) |
| | 33.9 dB (at 10 MHz) |
| | 38.3 dB (at 100 MHz) |
| | 35.3 dB (at 200 MHz) |
| | 32.9 dB (at 250 MHz) |
| | 29.7 dB (at 500 MHz) |
| | 30.6 dB (at 600 MHz) |
| | 31 dB (at 700 MHz) |
| | 26.7 dB (at 800 MHz) |
| | 28.6 dB (at 900 MHz) |
| | 27.5 dB (at 1000 MHz) |
| | 26.9 dB (at 1100 MHz) |
| | 26.3 dB (at 1200 MHz) |
| Crosstalk attenuation (ACR) | 100 dB (with 1 MHz) |
| | 99 dB (at 10 MHz) |
| | 93 dB (at 100 MHz) |
| | 88 dB (at 200 MHz) |
| | 86 dB (at 250 MHz) |
| | 78 dB (at 500 MHz) |
| | 74 dB (at 600 MHz) |
| | 72 dB (at 700 MHz) |
| | 69 dB (at 800 MHz) |
| | 67 dB (at 900 MHz) |
| | 65 dB (at 1000 MHz) |
| | 63 dB (at 1100 MHz) |
| | 61 dB (at 1200 MHz) |
| Power-summated crosstalk attenuation (PS-ACR) | 97 dB (with 1 MHz) |
| | 96 dB (at 10 MHz) |
| | 90 dB (at 100 MHz) |
| | 85 dB (at 200 MHz) |
| | 83 dB (at 250 MHz) |
| | 75 dB (at 500 MHz) |
| | 71 dB (at 600 MHz) |
| | 69 dB (at 700 MHz) |
| | 66 dB (at 800 MHz) |

VS-FSBPXS-OE-94S/0,5 WCP - Device connector rear mounting



1426045

<https://www.phoenixcontact.com/us/products/1426045>

| | |
|----------------------------------|---|
| | 64 dB (at 900 MHz) |
| | 62 dB (at 1000 MHz) |
| | 60 dB (at 1100 MHz) |
| | 58 dB (at 1200 MHz) |
| Shield attenuation | 0.25 dB (with 1 MHz) |
| | 0.76 dB (at 10 MHz) |
| | 2.49 dB (at 100 MHz) |
| | 3.69 dB (at 200 MHz) |
| | 4.18 dB (at 100 MHz) |
| | 5.6 dB (at 500 MHz) |
| | 6.74 dB (at 600 MHz) |
| | 7.32 dB (at 700 MHz) |
| | 7.89 dB (at 800 MHz) |
| | 8.5 dB (at 900 MHz) |
| | 9.11 dB (at 1000 MHz) |
| | 9.5 dB (at 1100 MHz) |
| | 9.9 dB (at 1200 MHz) |
| | 60.00 dB (up to 1000 MHz) |
| Halogen-free | in accordance with EN 50267-2-1 |
| | in accordance with EN 60684-2 |
| Flame resistance | in accordance with EN 60332-1-2 |
| | EN 60332-3-25 |
| | in accordance with ISO 14572 5.21 (UN ECE-R 118.01) |
| Concentration of fumes | EN 61034-2 |
| Resistance to oil | in accordance with EN 50306-4, 72 hours at 100°C, IRM 902 |
| Fire protection in rail vehicles | BS 6853 (Internal cable Ia, Ib, II/external cable Ia, Ib, II) |
| | DIN 5510-2 (Fire protection level 1, 2, 3, 4) |
| | EN 45545-2 (Risk level HL1 - HL3) |
| | EN 50306-4 |
| | NF F16-101 (Classification C/F1) |
| | NF F16-101 (Internal cable A1, A2, B/external cable A1, A2, B) |
| | NFPA 130 |
| | PN-K-02511 (Class A) |
| | UIC 564-2 (Class A) |
| Other resistance | Resistant to fuel (in accordance with EN 50306-4, 168 hours at 70°C, IRM 903) |
| | Resistant to ozone (in accordance with EN 50306-4, 72 hours at 40°C, method B, volumetric concentration of 200×10^{-6}) |
| Ambient temperature (operation) | -40 °C ... 80 °C (cable, fixed installation) |

Environmental and real-life conditions

Ambient conditions

IP67

VS-FSBPXS-OE-94S/0,5 WCP - Device connector rear mounting



1426045

<https://www.phoenixcontact.com/us/products/1426045>

| | |
|---|---|
| Degree of protection | IP65 |
| | IP65/IP67 |
| Ambient temperature (operation) (male connector/female connector) | -25 °C ... 85 °C (Plug / socket) |
| | -40 °C ... 85 °C (without mechanical actuation) |
| UL Type Rating | Type 4 (indoor use only) |

Standards and regulations

| | |
|--------------------------|------------------------------|
| Standard designation | M12 circular connector |
| Standards/specifications | according to IEC 61076-2-109 |
| Standard designation | Shock, vibration |
| Standards/specifications | according to EN 50155 |
| Standard designation | Shock, vibration |
| Standards/specifications | according to EN 61373:2011 |

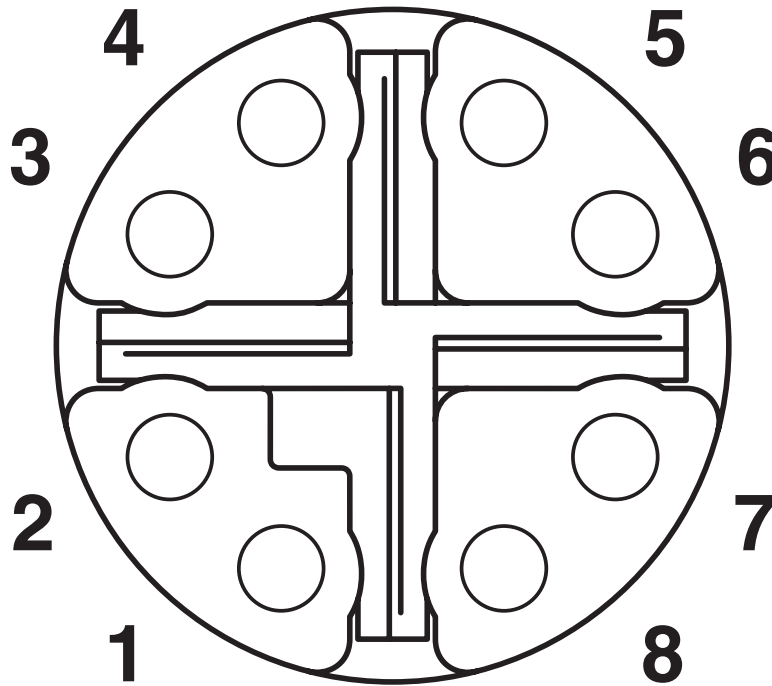
VS-FSBPXS-OE-94S/0,5 WCP - Device connector rear mounting

1426045

<https://www.phoenixcontact.com/us/products/1426045>

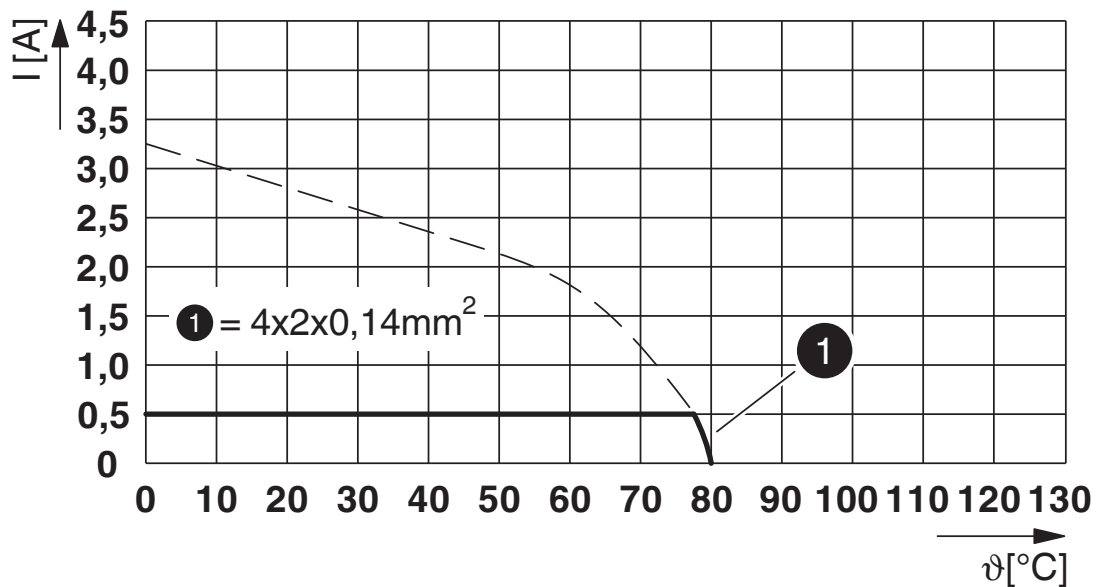
Drawings

Schematic diagram



M12 socket pin assignment, 8-pos, view of socket side

Diagram



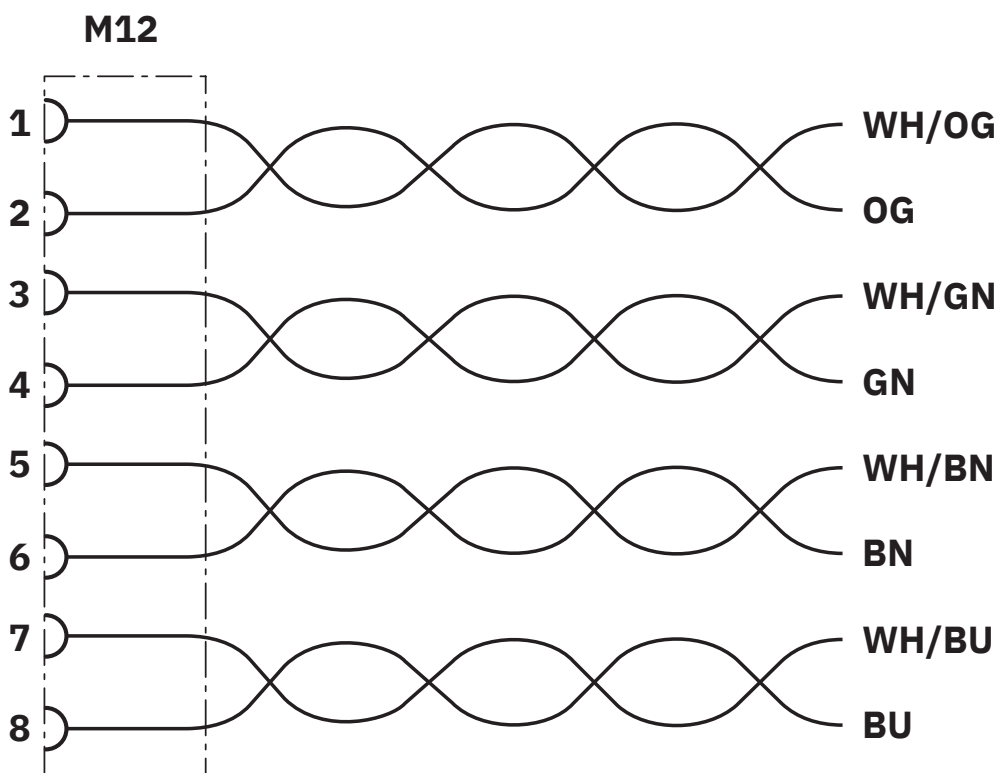
I = current strength, T = ambient temperature

VS-FSBPXS-OE-94S/0,5 WCP - Device connector rear mounting

1426045

<https://www.phoenixcontact.com/us/products/1426045>

Circuit diagram



Contact assignment of the M12 socket

VS-FSBPXS-OE-94S/0,5 WCP - Device connector rear mounting



1426045

<https://www.phoenixcontact.com/us/products/1426045>

Classifications

ECLASS

| | |
|-------------|----------|
| ECLASS-13.0 | 27060311 |
| ECLASS-15.0 | 27060311 |

ETIM

| | |
|-----------|----------|
| ETIM 10.0 | EC001855 |
|-----------|----------|

UNSPSC

| | |
|-------------|----------|
| UNSPSC 21.0 | 26121600 |
|-------------|----------|

VS-FSBPXS-OE-94S/0,5 WCP - Device connector rear mounting



1426045

<https://www.phoenixcontact.com/us/products/1426045>

Environmental product compliance

EU RoHS

| | |
|---|------|
| Fulfills EU RoHS substance requirements | Yes |
| Exemption | 6(c) |

China RoHS

| | |
|--|--|
| Environment friendly use period (EFUP) | EFUP-50 An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required. |
|--|--|

EU REACH SVHC

| | |
|-------------------------------------|--------------------------------------|
| REACH candidate substance (CAS No.) | Lead(CAS: 7439-92-1) |
| SCIP | 87e66644-80cf-4349-8b68-a90fbf833967 |

Phoenix Contact 2026 © - all rights reserved
<https://www.phoenixcontact.com>

Phoenix Contact USA
586 Fulling Mill Road
Middletown, PA 17057, United States
(+717) 944-1300
info@phoenixcon.com