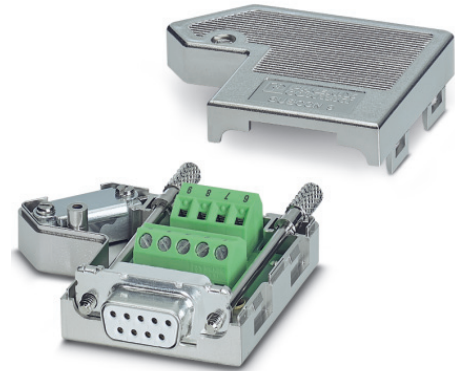


SUBCON...SH



D-SUB connector with screw terminal block connection for fieldbus systems



Data sheet
106282_en_03

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1 Description

The **SUBCON...SH** D-SUB series comprises connectors for point-to-point connections with cable entries in 9-, 15-, and 25-pos. pin or socket design.

The 9-pos. version is especially suitable for INTERBUS. A whole host of further applications are opened up by having all the connections assigned to their own 1 mm² screw terminal block.

You can place the connection block either in the upper or the lower shell. This enables the cable entry under 35° from the right or left side. The metalized housing also ensures a high shielding level against electromagnetic interference.

Features

- For universal use
- Assembly under field conditions
- High level of EMC
- Cable entry can be selected flexibly
- Easy mounting due to knurled screws
- Short mounting screw as an accessory when space is limited

D-SUB	Connection	Type	Item No.	Link to item
9-pos.	Socket	SUBCON 9/F-SH	2761499	phoenixcontact.com/product/2761499
	Pin	SUBCON 9/M-SH	2761509	phoenixcontact.com/product/2761509
15-pos.	Socket	SUBCON 15/F-SH	2761596	phoenixcontact.com/product/2761596
	Pin	SUBCON 15/M-SH	2761606	phoenixcontact.com/product/2761606
25-pos.	Socket	SUBCON 25/F-SH	2761619	phoenixcontact.com/product/2761619
	Pin	SUBCON 25/M-SH	2761622	phoenixcontact.com/product/2761622

Observe these notes



WARNING: Explosion hazard when used in potentially explosive areas

Follow the instructions given here during installation and observe the safety notes.



Make sure you always use the latest documentation.


It can be downloaded at phoenixcontact.com/products.

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3 Ordering data

9-pos. connectors	Type	Item No.	Pcs./Pkt.
D-SUB connector, 9-pos., one cable entry under 35°, universal type for all systems, pin assignment: 1, 2, 3, 4, 5, 6, 7, 8, 9 to screw connection terminal block			
Socket	SUBCON 9/F-SH	2761499	1
Pin	SUBCON 9/M-SH	2761509	1
15-pos. connectors	Type	Item No.	Pcs./Pkt.
D-SUB connector, 15-pos., one cable entry under 35°, universal type for all systems, pin assignment: 1, 2, 3, ..., 14, 15 to screw connection terminal block			
Socket	SUBCON 15/F-SH	2761596	1
Pin	SUBCON 15/M-SH	2761606	1
25-pos. connectors	Type	Item No.	Pcs./Pkt.
D-SUB connector, 25-pos., one cable entry under 35°, universal type for all systems, pin assignment: 1, 2, 3, ..., 24, 25 to screw connection terminal block			
Socket	SUBCON 25/F-SH	2761619	1
Pin	SUBCON 25/M-SH	2761622	1
Accessories	Type	Item No.	Pcs./Pkt.
Optional mounting screw, without knurl for narrow installation conditions, slotted head, length: 40 mm, UNC 4-40 thread. Scope of supply: 1 bag of 20 screws			
Screwdriver, slotted, VDE-insulated, size: 0.4 x 2.5 x 80 mm, 2-component handle, with non-slip grip	SZS 0,4X2,5 VDE	1205037	10

 Information on the **SUBCON-PLUS-...** D-SUB series with two cable entries can be found at [phoenixcontact.com/products](https://www.phoenixcontact.com/products)

4 Safety regulations and installation notes



WARNING:

Observe the following safety notes when using the connector.

- The category 3 product is designed for installation in zone 2 potentially explosive areas. It meets the requirements of the following standards:
 - EN/IEC 60079-0, EN/IEC 60079-7
 - You can find detailed information in the declarations of conformity, which are enclosed and are also available on our website in the latest version.
- Installation, operation, and maintenance may only be carried out by qualified electricians. Follow the installation instructions as described.
- When installing and operating the device, the applicable regulations and safety regulations (including national safety regulations) as well as general technical regulations must be observed. The safety-relevant data is listed in this document.
- Observe the specified conditions for use in potentially explosive areas. Also observe the requirements of EN 60079-14.
- Modifying the product is prohibited. Do not repair the product yourself. Instead, replace it with an equivalent product. Repairs may only be carried out by the manufacturer. Follow the specifications in the operating instructions exactly when opening and closing the product. The manufacturer is not liable for damage resulting from non-compliance.
- Do not subject the product to any mechanical and/or thermal stress that exceeds the specified limits.
- The product must be stopped and immediately removed from the potentially explosive area if it is damaged, was subjected to an impermissible load, stored incorrectly, or if it malfunctions.
- The product is not designed for use in potential dust explosion atmospheres.

4.1 Installation in zone 2



WARNING: Explosion hazard when used in potentially explosive areas

Make sure that the following notes and instructions are observed.

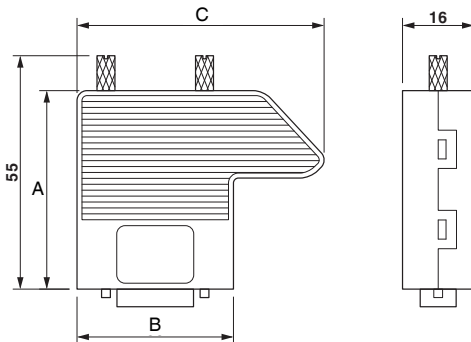
- Use in potentially explosive areas is not permitted in China.
- The device should be installed so that a degree of protection of at least IP54 is achieved in accordance with EN 60529. To this end, a suitable, approved housing that meets the requirements of EN 60079-7 should be used.
- Only devices suitable for operation in Ex zone 2 and the conditions at the installation location may be connected to the circuits in zone 2.
- In potentially explosive areas, only open the product and connect and disconnect cables and connectors when the power is disconnected.
- For safe operation, lockable connectors must have a functional locking mechanism (e.g., locking clip, screw connection, etc.). Insert the locking mechanism. Repair any damaged connectors immediately.
- Only connect one cable to each terminal point.
- Only operate the device in Ex zone 2 when all connectors are fully inserted.
- Use the device in an environment that does not exceed pollution degree 2 in accordance with EN/IEC 60664-1.
- Use transient protection in order that any short-term surge voltage does not exceed 119 V.

5 Technical data

SUBCON...SH	
Connection	
Connector connection	D-SUB socket strip or D-SUB pin strip
Cable entry	35°, either left or right
Connection cross-section of screw terminal blocks	
Rigid	0.14 mm ² ... 1.5 mm ² (AWG 26-16)
Flexible	0.14 mm ² ... 1 mm ² (AWG 26-18)
Insertion cycles	>200
Cable diameter	4 mm ... 10 mm
Mounting screws	4-40 UNC
Maximum tightening torque	0.4 Nm
Pin assignment	All connections 1:1 to screw terminal block
General data	
Degree of protection	IP20
Housing material	ABS, metalized
Nominal current I _N	100 mA
Max. operating voltage	50 V
Ambient conditions	
Temperature range	
Operation	-20°C ... +75°C
Storage/transport	-25°C ... +80°C
Altitude	5000 m
	For restrictions, see the manufacturer's declaration for operation at high altitudes
Approvals	
ATEX	Ⓜ II 3 G Ex ec IIC T4 Gc
Please observe the special installation instructions in the documentation!	PxCIF15ATEX2761499X
UKEX	Ⓜ II 3 G Ex ec IIC T4 Gc
	PxCIMA22UKEX2761499X
Further approvals	Ⓜ CSA
	UL Recognized, File Nr. E238705
Corrosive gas test	ISA-S71.04-1985 G3 Harsh Group A

5.1 Dimensions

Figure 1 Dimensions in mm



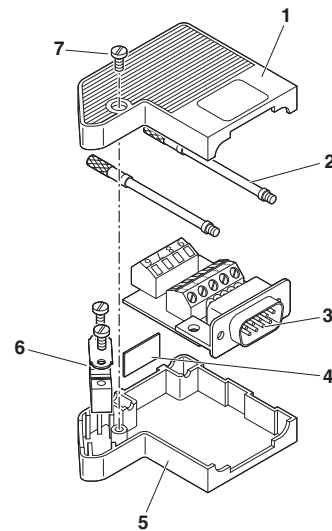
D-SUB	A	B	C
9-pos.	44.5	36	56.5
15-pos.	44.5	44.5	65
25-pos.	49.5	58.5	79

5.2 Connection notes

- **2761499:** The product can be plugged onto 9-pos. D-SUB connectors (male) in accordance with IEC 807-2.
- **2761509:** The product can be plugged onto 9-pos. D-SUB connectors (female) in accordance with IEC 807-2.
- **2761596:** The product can be plugged onto 15-pos. D-SUB connectors (male) in accordance with IEC 807-2.
- **2761606:** The product can be plugged onto 15-pos. D-SUB connectors (female) in accordance with IEC 807-2.
- **2761619:** The product can be snapped onto 25-pos. D-SUB connectors (male) in accordance with IEC 807-2.
- **2761622:** The product can be plugged onto 25-pos. D-SUB connectors (female) in accordance with IEC 807-2.

5.3 Components

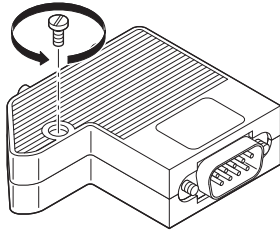
Figure 2 Components



1	Upper housing shell
2	D-SUB mounting screws
3	D-SUB connection
4	Label
5	Lower housing shell
6	Strain relief with reversible clip bracket
7	Housing screw

5.4 Opening the housing

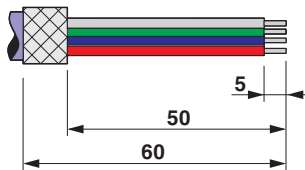
Figure 3 Opening the housing



- Loosen the housing screw.
- Fold the housing up to open it.

5.5 Stripping

Figure 4 Stripping length



The following stripping tool is recommended:

- QUICK WIREFOX 6, item no. 1204384
- Strip the cable according to the specified stripping lengths.
- Shorten the single-core wires depending on the distance to the terminal point.
- Fold back 10 mm of the braided shield over the outer sheath.
- Remove the aluminum foil.

5.6 Connection



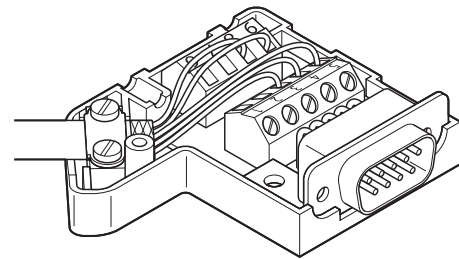
WARNING: Explosion hazard when used in potentially explosive areas

- D-SUB interfaces may only be connected or disconnected when the power is disconnected.
- Tighten the D-SUB mounting screws on all connectors.

The cable entry can take place from the right or left side. The connector in delivery state is pre-assembled for left-hand entry.

Left-hand side cable entry

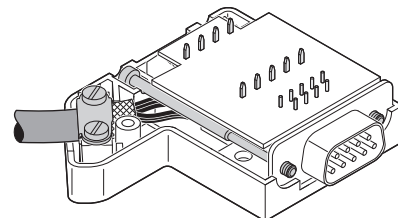
Figure 5 Left-hand side cable entry



- Connect the conductors to the screw terminal blocks.

Right-hand side cable entry

Figure 6 Right-hand side cable entry



- Lift the PCB out of the lower housing shell using a screwdriver.
- Insert the PCB in the upper housing shell.
- Connect the conductors to the screw terminal blocks.

5.7 Strain relief



You can turn the clip bracket over in order to adapt the strain relief to the cable diameter.

- Place the shield under the clip bracket of the strain relief. Screw it tight.
- Close and screw tight the housing half-shells.