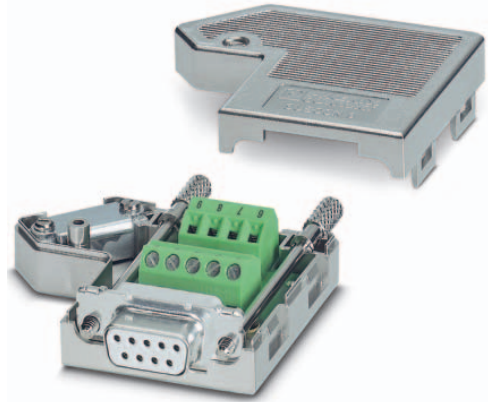


SUBCON...SH



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



Data sheet
106282_en_00

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1 Description

The **SUBCON...SH** D-SUB range 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.

Installing the connection block either in the upper or lower shell makes it possible to enter the cable at an angle of 35° from the right or the left. The metal-plated housing also ensures high shielding against electromagnetic interference.

Features

- Can be used universally
- Assembly under field conditions
- High level of EMC
- Cable entry is flexibly selectable
- Easy assembly thanks to knurled screws
- Short mounting screw as an accessory when space is limited

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



WARNING: Explosion hazard when used in potentially explosive areas

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



Make sure you always use the latest documentation.
It can be downloaded at phoenixcontact.net/products.
This data sheet is valid for all products listed above.

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3 Ordering data

9-pos. connectors

Description	Type	Order No.	Pcs./Pkt.
D-SUB connector, 9-pos. socket, one cable entry 35°, universal type for all systems, pin assignment: 1, 2, 3, 4, 5, 6, 7, 8, 9 to screw connection terminal block	SUBCON 9/F-SH	2761499	1
D-SUB connector, 9-pos., pin, one cable entry 35°, universal type for all systems, pin assignment: 1, 2, 3, 4, 5, 6, 7, 8, 9 to screw connection terminal block	SUBCON 9/M-SH	2761509	1

15-pos. connectors

Description	Type	Order No.	Pcs./Pkt.
D-SUB connector, 15-pos. socket, one cable entry 35°, universal type for all systems, pin assignment: 1, 2, 3, ..., 14, 15 to screw connection terminal block	SUBCON 15/F-SH	2761596	1
D-SUB connector, 15-pos., pin, one cable entry 35°, universal type for all systems, pin assignment: 1, 2, 3, ..., 14, 15 to screw connection terminal block	SUBCON 15/M-SH	2761606	1

25-pos. connectors

Description	Type	Order No.	Pcs./Pkt.
D-SUB connector, 25-pos. socket, one cable entry 35°, universal type for all systems, pin assignment: 1, 2, 3, ..., 24, 25 to screw connection terminal block	SUBCON 25/F-SH	2761619	1
D-SUB connector, 25-pos., pin, one cable entry 35°, universal type for all systems, pin assignment: 1, 2, 3, ..., 24, 25 to screw connection terminal block	SUBCON 25/M-SH	2761622	1

Accessories

Description	Type	Order 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	SUBCON-SHORT-SCREW	2799694	1
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 range with two cable entries can be found at phoenixcontact.net/products.

4 Safety regulations and installation notes



WARNING:

Observe the following safety notes when using the connector.

- The category 3 device is designed for installation in zone 2 potentially explosive areas. It meets the requirements of EN 60079-0:2012 and EN 60079-15:2010.
- 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 directives (including national safety directives) as well as general technical regulations must be observed. The safety data is provided in the package slip and on the certificates (conformity assessment, additional approvals where applicable).
- Do not repair the device yourself; replace it with an equivalent device instead. Repairs may only be carried out by the manufacturer. The manufacturer is not liable for damage resulting from noncompliance.
- The IP20 degree of protection (IEC 60529/EN 60529) of the device is intended for use in a clean and dry environment. Do not subject the device to mechanical strain and/or thermal loads that exceed the specified limits.
- Temporary malfunctions (transients) must not exceed the rated voltage by more than 40%.
- The device is not designed for installation in zone 22.
- If, however, you wish to use the device in zone 22, it must be installed in a housing that complies with IEC/EN 60079-31. For this purpose, observe the maximum surface temperatures. Observe the requirements of IEC/EN 60079-14.

Installation in potentially explosive areas



WARNING: Explosion hazard when used in potentially explosive areas

Make sure that the following notes and instructions are observed.

- Observe the specified conditions for use in potentially explosive areas. Install the device in a suitable approved housing (with at least IP54 protection) that meets the requirements of EN 60079-15. Also observe the requirements of EN 60079-14.
- Only devices that are designed for operation in ex zone 2 and are suitable for the conditions at the installation location may be connected to the circuits in zone 2.
- The device must be stopped and immediately removed from the Ex area if it is damaged, was subjected to an impermissible load, stored incorrectly or if it malfunctions.
- In potentially explosive areas, only connect and disconnect cables when the power is disconnected.



WARNING: Explosion hazard when used in potentially explosive areas

D-SUB interfaces may only be connected or disconnected when the voltage is disconnected. Screw the D-SUB mounting screws tight on all connectors.

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	
Solid	0.14 mm ² ... 1.5 mm ² (AWG 26-16)
Stranded	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, metal-plated
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 manufacturer's declaration)
Approvals	
UL approval	UL file no. E238705
ATEX (Please follow the special installation instructions in the documentation.)	II 3 G Ex nA IIC T4 Gc X
Other approvals	CSA approval EAC approval

5.1 Dimensions

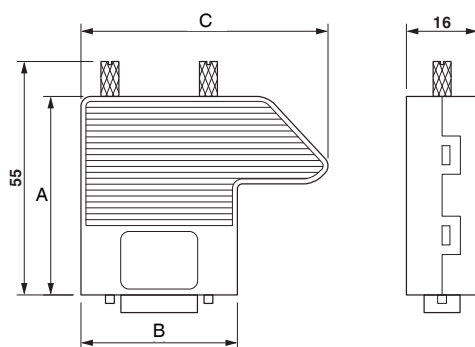


Figure 1 Dimensions in mm

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 Design

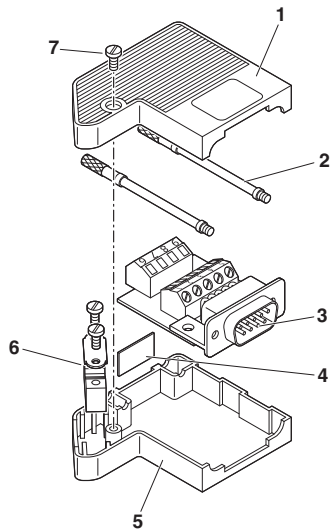


Figure 2 Design

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

5.3 Opening the housing

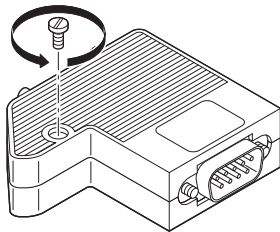


Figure 3 Opening the housing

- Loosen the housing screw.
- Fold the housing upward to open.

5.4 Stripping

The following stripping tool is recommended:

- QUICK WIREFOX 6, Order No. 1204384
- Strip off the conductors. Stripping length: 5 mm

5.5 Connection



WARNING: Explosion hazard when used in potentially explosive areas

D-SUB interfaces may only be connected or disconnected when the voltage is disconnected. Screw the D-SUB mounting screws tight on all connectors.

Cable entry can be from the right or left side. The connector supplied is pre-assembled for left-hand entry.

Left-hand side cable entry

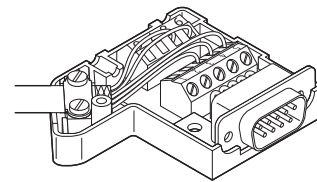


Figure 4 Left-hand side cable entry

- Connect the conductors to the screw terminal blocks.

Right-hand side cable entry

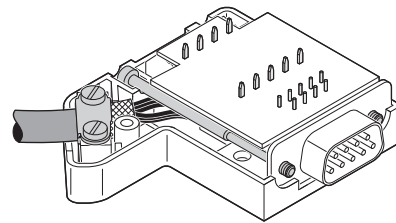


Figure 5 Right-hand side cable entry

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

5.6 Strain relief



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

- Lay the shielding under the clip bracket of the strain relief and screw tight.
- Finally, close and screw tight the housing half shells.
- Attach the label.