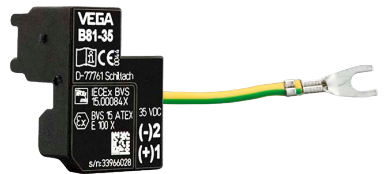


Supplementary instructions

Overvoltage protection module

B81-35



Document ID: 50708



VEGA

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Safety instructions for Ex areas

Please note the Ex-specific safety information for installation and operation in Ex areas. These safety instructions are part of the operating instructions manual and come with the Ex-approved instruments.

Editing status: 2017-02-08

1 For your safety

1.1 Appropriate use

The overvoltage protection module B81-35 is an accessory part for existing plics® sensors.

1.2 General safety instructions

The safety information in the operating instructions manual of the respective sensor must be noted.

2 Product description

Scope of delivery

The scope of delivery encompasses:

- Overvoltage protection module B81-35
- Screwdriver 2 mm
- Documentation
 - This supplementary instructions manual

Application area

The overvoltage protection module B81-35 is an accessory part the following instruments in two-wire technology with detachable terminal block.

- VEGAPULS series 60 from hardware $\geq 2.0.0$, software $\geq 4.0.0$
- VEGAPULS 64, 69
- VEGAFLEX 80 series
- VEGABAR series 80
- VEGADIS 82

It is suitable for the following signal outputs:

- 4 ... 20 mA
- 4 ... 20 mA/HART, 4 ... 20 mA/HART SIL
- Profibus PA, Foundation Fieldbus

The module is used instead of the terminals in the single or double chamber housing.

It consists of a terminal block for the supply and signal cable, a plug connector for the terminals of the sensor electronics and a connection cable for connection to the ground terminal.

The overvoltage protection module B81-35 reduces any voltage surges that may reach the signal cables to a harmless level. It contains as voltage-limiting components a gas conductor for bleeding off impulses of up to 10 kA to ground.

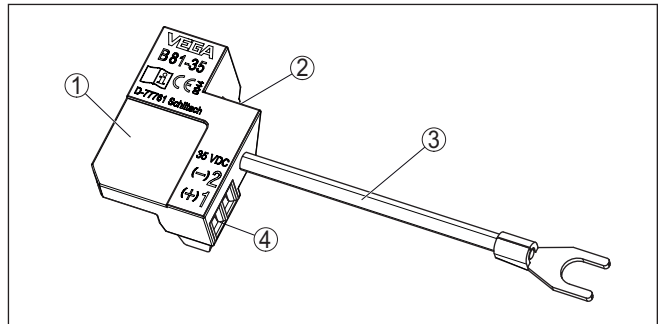


Fig. 1: Configuration, overvoltage protection module B81-35

- 1 Module housing
- 2 Plug connector for terminals of the sensor electronics (bottom side)
- 3 Connection cable for connection to the ground terminal
- 4 Terminal block for supply and signal cable

3 Connecting and mounting

3.1 Connecting

Connection technology

The connection to voltage supply and the signal output is carried out via screw terminals, the connection to the sensor electronics through contact pins in the module housing. The connection to the ground terminal is carried out via a connection cable with cable lug.



Information:

The overvoltage protection module is pluggable and can be removed from the sensor electronics. To do this, lift the overvoltage protection module with a small screwdriver and pull it out.

Connection procedure

Proceed as follows:

1. Unscrew the housing lid
2. If a display and adjustment module is installed, remove it by turning it slightly to the left.
3. Lift the terminal block from the sensor electronics with a screwdriver and pull it off
4. Loosen compression nut of the cable entry gland
5. Remove approx. 10 cm (4 in) of the cable mantle, strip approx. 1 cm (0.4 in) of insulation from the ends of the individual wires
6. Insert the cable into the sensor through the cable entry
7. Connect the wire ends according to the wiring diagram to the screw terminals. You can find the max. wire cross-section under "*Technical data*"
8. Check the hold of the wires in the terminals by lightly pulling on them
9. Connect the connection cable of the overvoltage protection module to the internal ground terminal, connect the external ground terminal to potential equalisation
10. Plug the overvoltage protection module onto the sensor electronics



Fig. 2: Plug the overvoltage protection module onto the sensor electronics - single chamber housing



Fig. 3: Plug the overvoltage protection module onto the sensor electronics - double chamber housing

11. Tighten the compression nut of the cable entry gland. The seal ring must completely encircle the cable
12. Reinsert the display and adjustment module, if one was installed
13. Screw the housing lid back on

The electrical connection is finished.

Disassembly is carried out in reverse order.

3.2 Wiring plan

Electronics and terminal compartment

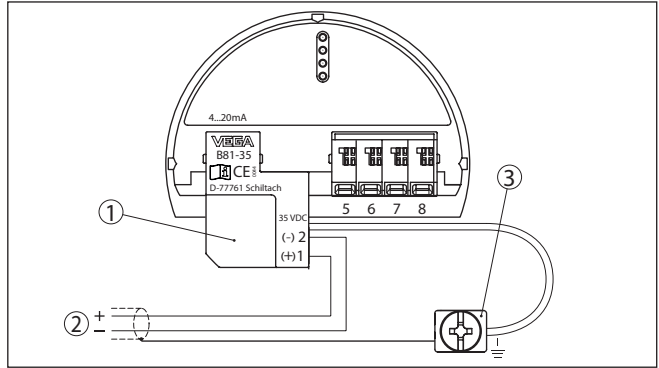


Fig. 4: Electronics and terminal compartment, single chamber housing, terminal compartment, double chamber housing

- 1 Voltage supply/Signal output
- 2 Overvoltage protection module
- 3 Ground terminal for connection of the cable screen and the connection cable of the overvoltage protection module

4 Supplement

4.1 Technical data

Note for approved instruments

The technical data in the respective safety instructions are valid for approved instruments (e.g. with Ex approval). These data can differ from the data listed herein, for example regarding the process conditions or the voltage supply.

General data

Version	Module for inserting into the sensor electronics
Housing material	PA

Ambient conditions

Ambient, storage and transport temperature -40 ... +80 °C (-40 ... +176 °F)

Electrical characteristics

Highest continuous operating voltage	35 V DC
Max. permissible input current	500 mA
Response voltage	> 500 V
Discharge current	< 10 kA (8/20 µs)
Category according to DIN EN 61643-21	C1 (2 kV/1 kA)
Overload failure mode	1
signal transmission	4 ... 20 mA, 4 ... 20 mA/HART, fieldbus

Electromechanical data

Wire cross-section, screw terminals	
– Massive wire	1.5 ² mm
– Stranded wire with end sleeve	0.5 ² mm

Electrical protective measures

Protection rating	
– unassembled	IP 20
– Mounted into the sensor housing	according to housing protection

4.2 Dimensions

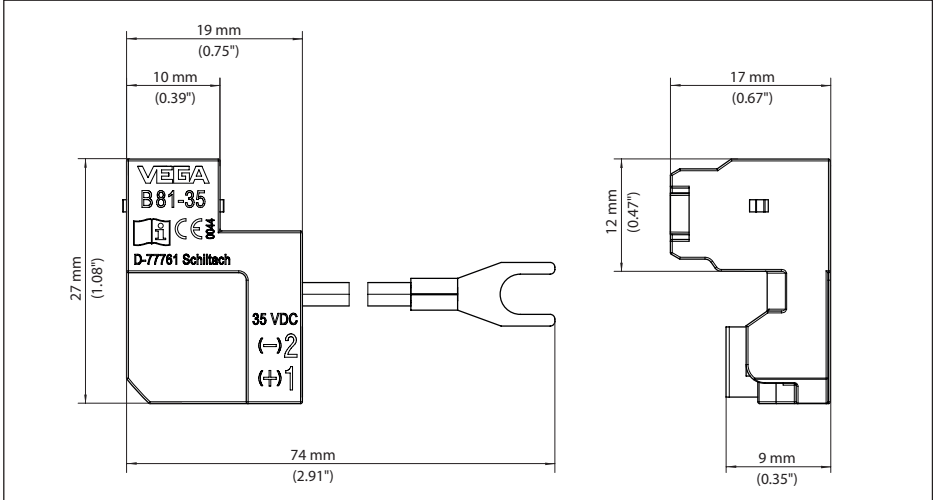


Fig. 5: Dimensions, overvoltage protection module B81-35



Printing date:

VEGA

All statements concerning scope of delivery, application, practical use and operating conditions of the sensors and processing systems correspond to the information available at the time of printing.

Subject to change without prior notice

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50708-EN-170209

VEGA Grieshaber KG
Am Hohenstein 113
77761 Schiltach
Germany

Phone +49 7836 50-0
Fax +49 7836 50-201
E-mail: info.de@vega.com
www.vega.com