

Supplementary instructions

Plug connector ISO 4400

for continuously measuring sensors



Document ID: 30375



VEGA

Contents

- 1 For your safety**
 - 1.1 Appropriate use..... 3
 - 1.2 Impermissible use 3
 - 1.3 General safety instructions 3
 - 1.4 Safety instructions for Ex areas 3
- 2 Product description**
- 3 Mounting**
 - 3.1 Mounting preparations 5
 - 3.2 Installation procedure 5
- 4 Connecting to power supply**
 - 4.1 Connection procedure..... 6
 - 4.2 Wiring plan 7
- 5 Supplement**
 - 5.1 Technical data 8

1 For your safety

1.1 Appropriate use

Plug connectors are accessory parts for level and pressure sensors. They are used for separable connection to power supply/signal processing for two-wire sensors. Those are sensors whose power supply as well as measurement signal are transmitted over one pair of wires.

1.2 Impermissible use

As a rule, it is not allowed to use plug connectors with four-wire instruments. Those are sensors whose power supply and measurement signal are transmitted over two separate pairs of wires.

1.3 General safety instructions

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

1.4 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.

For instruments with Exd or StEx approval, the use of plug connectors is not allowed.

2 Product description

Scope of delivery

The scope of delivery encompasses:

- Instrument plug - to be screwed in the sensor housing
- Angle junction box - for cable connection
- Documentation
 - This supplementary instructions manual

Function

The plug connector is an accessory part for sensors with single or double chamber housing. It is used as separable connection to power supply and signal processing.

Configuration

The plug connector consists of an instrument plug, a multicore, fixed connected cable as well as the corresponding angle junction box. The individual cores are marked with figures for the terminals of the electronics module.

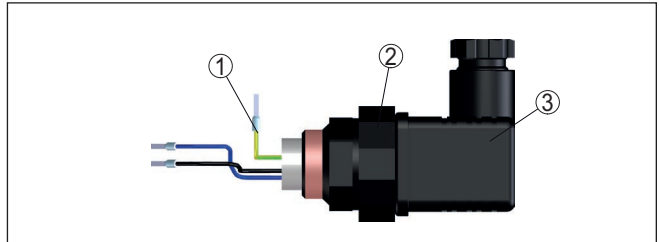


Fig. 1: Configuration plug connector ISO 4400 - Example

- 1 Connection cable
- 2 Instrument plug
- 3 Angle junction box

Area of application

The plug connector is used instead of the cable gland in the single or double chamber housing.

3 Mounting

3.1 Mounting preparations

Tools

The following tools are required for mounting:

- Spanner SW 24 for unscrewing the cable gland
- Screwdriver SW 32 for screwing in the plug

3.2 Installation procedure

Position in the housing

The following illustration shows the position of the cable gland in the respective housing:

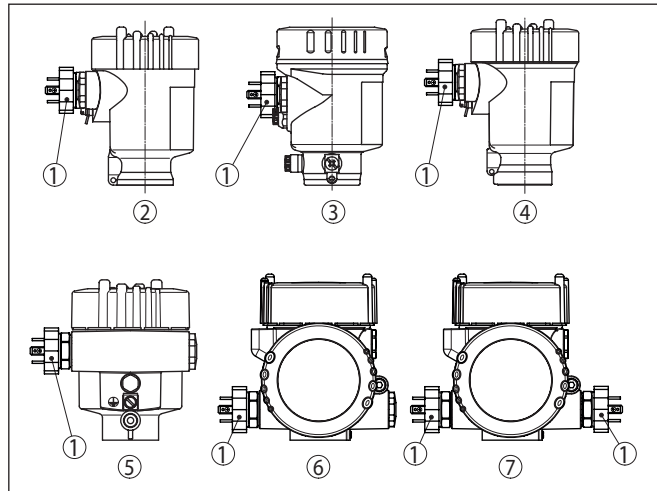


Fig. 2: Position of the plug connector on different instrument versions

- 1 Cable gland
- 2 Single chamber plastic
- 3 Single chamber stainless steel (electropolished)
- 4 Single chamber stainless steel (precision casting)
- 5 Single chamber Aluminium
- 6 Double chamber stainless steel (precision casting), Aluminium
- 7 Double chamber stainless steel (precision casting), Aluminium with additional current output

Installation

Proceed as follows to mount the plug connector:

1. Open the cover of the electronics or connection compartment
2. Unscrew the cable gland
3. Screw in the instrument plug
4. Connect the wires according to chapter "Connect"

The mounting of the plug connector is finished.

Disassembly is carried out in reverse order.

4 Connecting to power supply

4.1 Connection procedure

Proceed as follows:

1. Loosen the screw on the rear of the plug connector
2. Remove angle junction box and sealing from the housing plug
3. Remove the plug insert from the plug housing

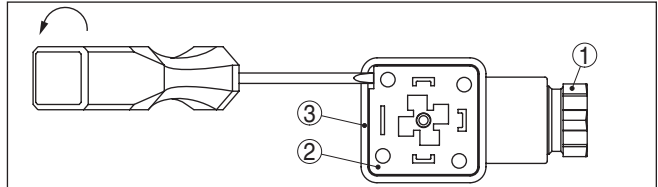


Fig. 3: Loosen the plug insert

- 1 Cable gland
- 2 Plug insert
- 3 Plug housing

4. Remove approx. 5 cm of the cable mantle, strip approx. 1 cm insulation from the individual wires
5. Lead the cable through the cable gland into the plug housing
6. Connect the wire ends to the screw terminals according to the wiring plan

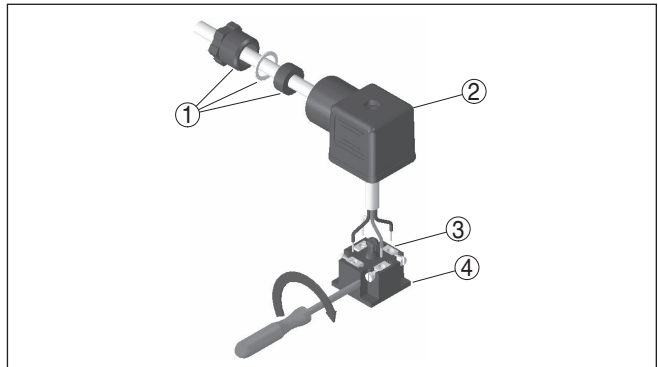


Fig. 4: Connection to the screw terminals

- 1 Cable gland
- 2 Plug housing
- 3 Plug insert
- 4 Plug seal

7. Snap the plug insert into the plug housing and insert the sensor seal
8. Plug the plug connector with sealing onto the instrument plug and tighten the screw

The electrical connection is finished.

4.2 Wiring plan

Contact pins

The illustration shows the assigned pins of the plug connector. The tables show the assignment of the individual contact pins to the terminals of the sensor electronics.

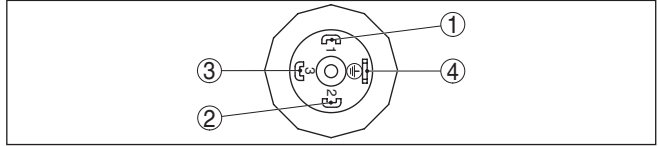




Fig. 5: View to the plug connector - Instrument plug

Voltage supply/Signal output

Contact pin	Colour connection cable in the sensor	Terminal, electronics module	Function/Polarity
1	Black	Terminal 1	Power supply/+
2	Blue	Terminal 2	Power supply/-
3	free	free	free
4	Green/Yellow		Screen

Additional current output

Contact pin	Colour connection cable in the sensor	Terminal, electronics module	Function/Polarity
1	Black	Terminal 7	Power supply/+
2	Blue	Terminal 8	Power supply/-
3	free	free	free
4	Green/Yellow		Screen

5 Supplement

5.1 Technical data

Materials

Contact support	PA
Contact surface	Sn
Housing	PA
Housing seal	NBR

Temperature range

Plug connector - separate	-40 ... +125 °C (-40 ... +257 °F)
Plug - mounted on the sensor	The lowest temperature is applicable

Electromechanical data

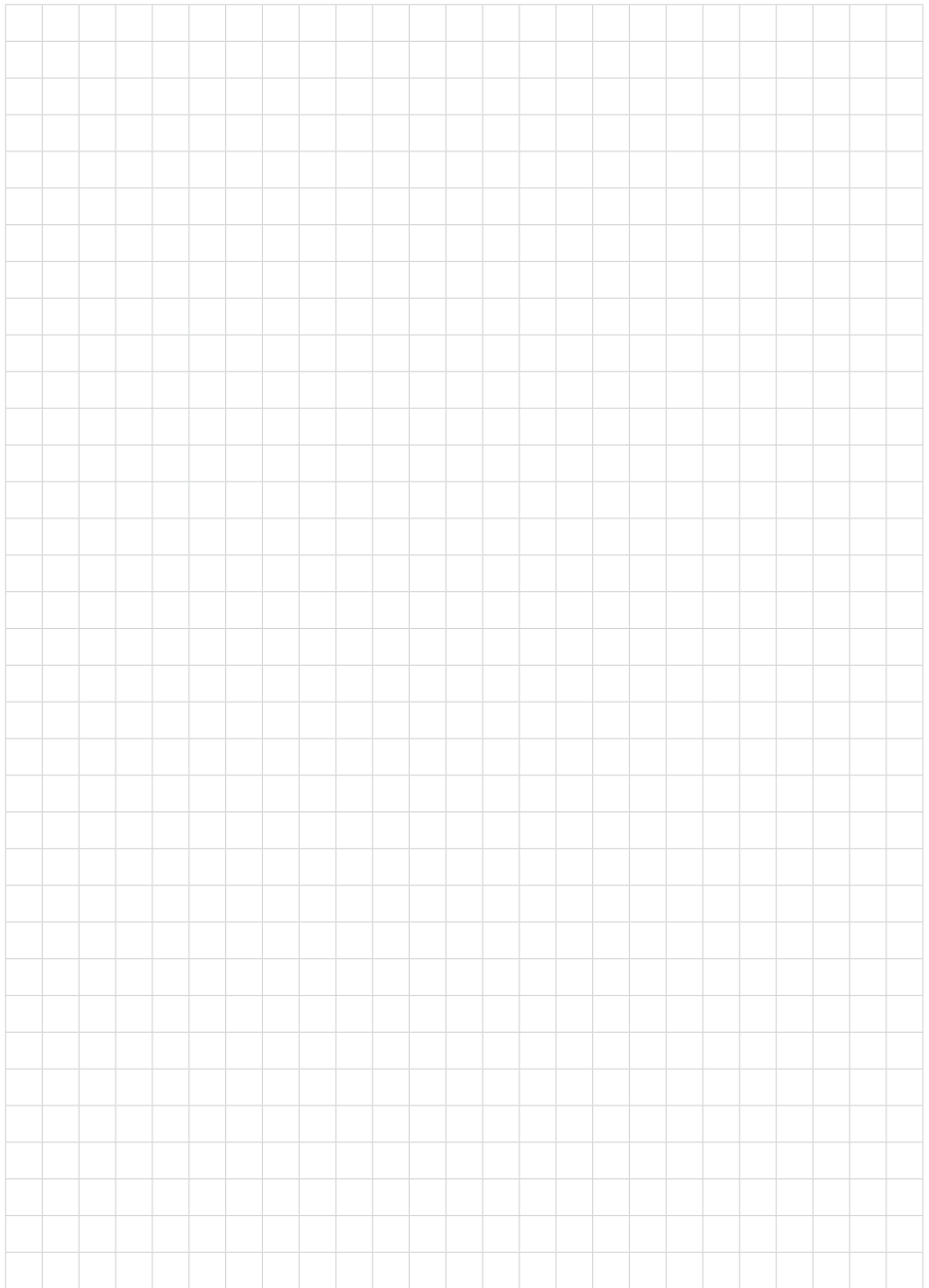
Cable gland	PG 9
Cable diameter	4.5 ... 7 mm
Type of connection	Screws
Wire cross-section	1.5 ² mm

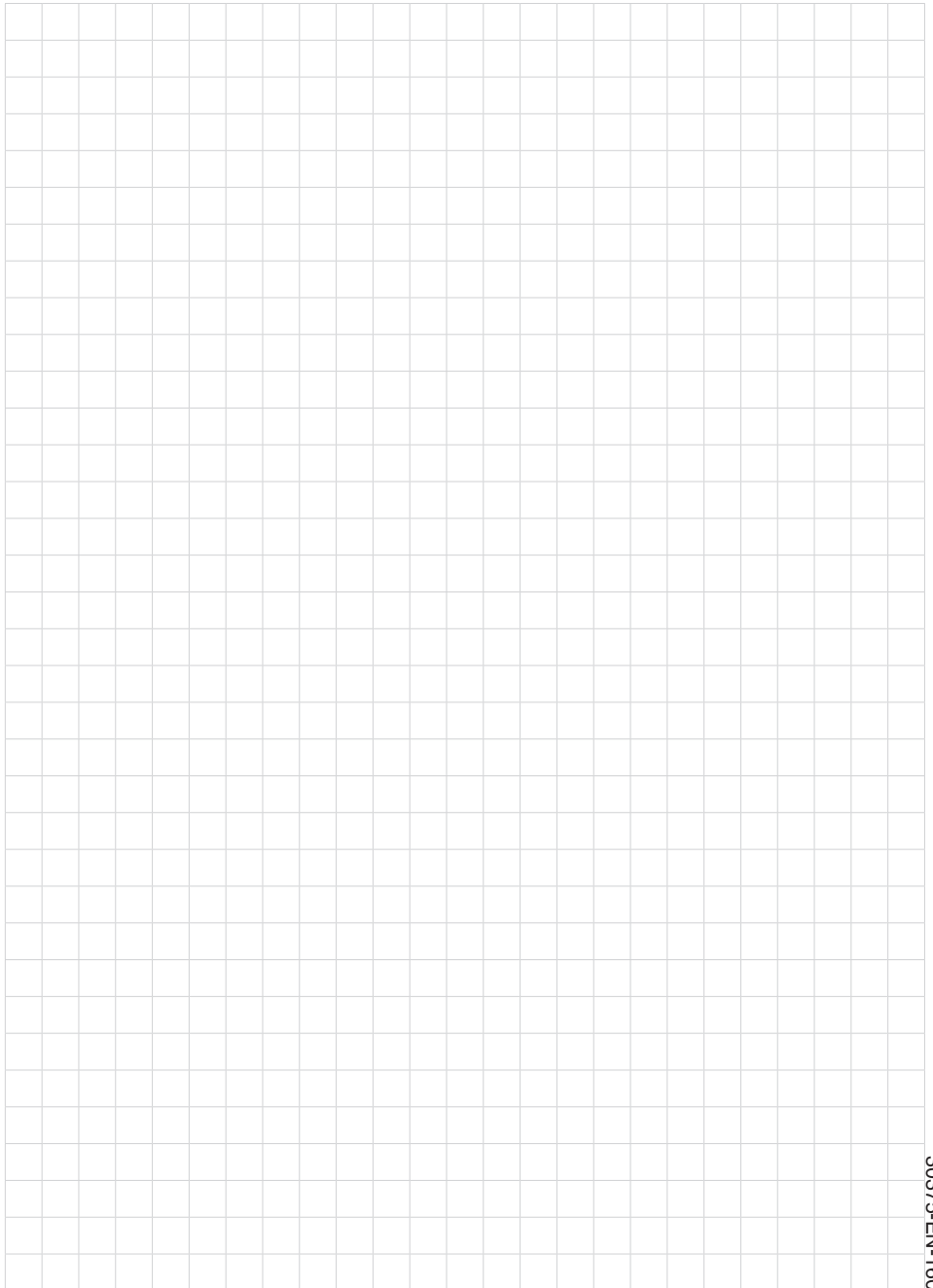
Electrical data

Rated current	16 A
Reference voltage	250 V AC/DC
Degree of soiling	3
Forward resistance	≤ 4 mΩ

Protection rating

Plug connector - separate (connected status)	IP 65
Plug connector - mounted on the sensor (connected status)	The lowest protection category applies





A large grid area for taking notes, consisting of approximately 25 columns and 35 rows of small squares.

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

© VEGA Grieshaber KG, Schiltach/Germany 2016



30375-EN-160405

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