

VEGATRENN 141

Ex separator for 4 ... 20 mA/HART sensors



Application area

The single channel VEGATRENN 141 is used for galvanic separation, intrinsically safe power supply as well as the signal transmission of Ex approved 4 ... 20 mA/HART sensors in hazardous areas. The separate voltage supply ensures a reliable measured value transmission. The VEGATRENN 141 is used in all industries, also with Ex applications. The VEGATRENN 141 suitable for bidirectional transmission of HART signals. The HART signal can be tapped via the front-mounted HART communication sockets or the terminals. The total transmissibility of HART signals allows unrestricted access to the sensor settings.

Your benefit

- Ex separator for universal use for all 4 ... 20 mA/HART sensors
- Complete HART transmissibility enables access to the sensor settings
- Simple mounting through carrier rail as well as detachable, coded terminals

Function

The Ex separator is used for intrinsically safe power supply of Ex approved 4 ... 20 mA/HART sensors. The current signal from the sensor (4 ... 20 mA) is transferred linearly and galvanically separated to the output.

The VEGATRENN 141 is suitable for bidirectional transmission of HART signals. The HART signal can be tapped via the front-mounted HART communication sockets or the terminals. The total transmissibility of HART signals allows unrestricted access to the sensor settings.

Technical data

General data

Series Module unit for mounting on carrier rails
35 x 7.5 acc. to EN 50022/60715

Connection terminals

- Type of terminal Screw terminal
- Wire cross-section 0.25 mm² (AWG 23) ... 2.5 mm² (AWG 12)

Voltage supply

Operating voltage

- Nominal voltage AC 24 ... 230 V (-15 %, +10 %) 50/60 Hz
- Nominal voltage DC 24 ... 65 V DC (-15 %, +10 %)

Max. power consumption 3 W (15 VA)

Sensor circuit

Number of sensors 1 x 4 ... 20 mA/HART (5x HART multidrop)

Input type Active (sensor power supply by VEGATRENN 141)

Terminal voltage 21 ... 16.5 V with 4 ... 20 mA

Off-load voltage 24 V (+/- 1 V)

Short-circuit current < 26 mA

Residual ripple < 50 mV RMS

Processing circuit

Quantity 1 x 4 ... 20 mA/HART

Type of output active

Off-load voltage < 16.5 V

Residual ripple of the output current < 50 µA RMS

Current on the input in case of short-circuit < 10 µA

Max. connectable load 600 Ohm

Ambient conditions

Ambient temperature at the installation site of the instrument -20 ... +60 °C (-4 ... +140 °F)

Electrical protective measures

Protection rating IP 20

Overvoltage category (IEC 61010-1)

– up to 2000 m (6562 ft) II
above sea level

– up to 5000 m (16404 ft) II - Only with connected overvoltage protection
above sea level

– up to 5000 m (16404 ft) I
above sea level

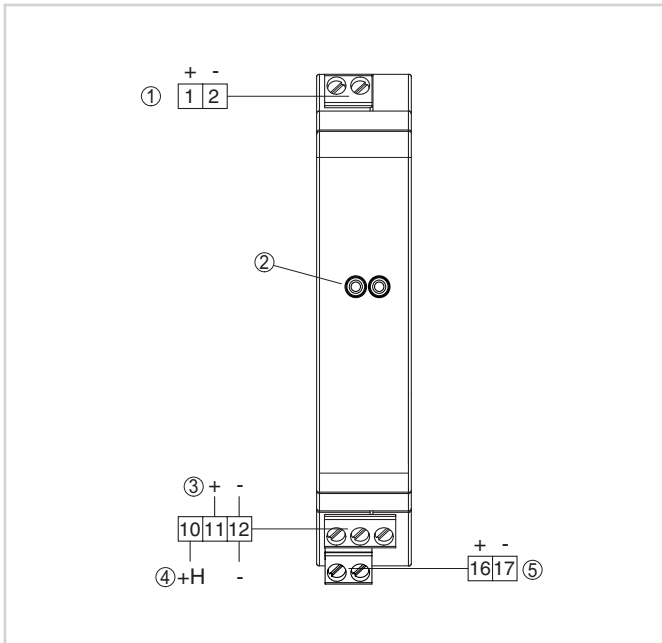
Protection class II

Degree of soiling 2

Approvals

You can find detailed information on the existing approvals in the "configurator" on our homepage at www.vega.com/configurator.

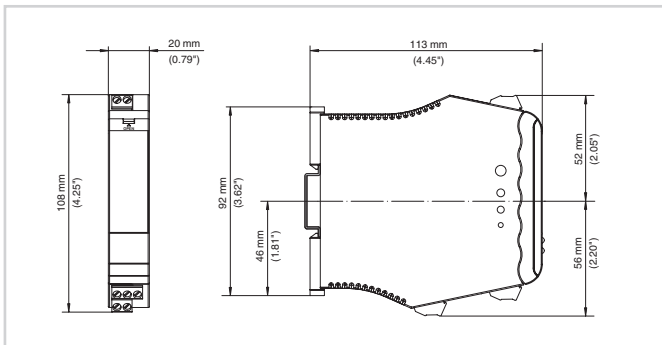
Electrical connection



- 1 Sensor circuit (4 ... 20 mA/HART, Ex area)
- 2 HART communication sockets for connection of a HART handheld, e.g. a VEGACONNECT
- 3 Processing circuit (4 ... 20 mA/HART, active output)
- 4 Processing circuit (4 ... 20 mA/HART, active output with looped HART resistor)
- 5 Voltage supply

You can find details on electrical connection in the instrument operating instructions on our homepage at www.vega.com/downloads.

Dimensions



Dimensions VEGATRENN 141

Information

You can find further information on the VEGA product line on our homepage www.vega.com.

In the download section under www.vega.com you'll find free operating instructions, product information, brochures, approval documents, instrument drawings and much, much more.

Contact

You can find the VEGA agency serving your area on our homepage www.vega.com.