Specification sheet

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

- Universal Ex-separator for all 4 … 20 mA/HART sensors (use in Ex-area is optional)
- Complete HART transmissibility enables access to the sensor settings
- Simple mounting through carrier rail as well as detachable, coded terminals
- Universal all-current power supply unit for supplying the device and the connected sensor

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	
– 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 (-15 %, +10 %)
Max. power consumption	3 W (15 VA)
Sensor input	
Number of sensors	1 x 4 … 20 mA/HART (5 x HART multidrop)
Input type	Active (sensor power supply by VEGATRENN 141)
Terminal voltage	21 … 16.5 V DC at 4 … 20 mA
Off-load voltage	24 V DC (+/- 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	< 15.5 V DC
Residual ripple of the output current	< 50 µA RMS
Current on the input in case of short-circuit	< 10 µA
Ambient conditions	
Ambient temperature at the installation site of the instrument	-20 … +60 °C (-4 … +140 °F)
Electrical protective measures	
Protection rating	IP20
Overvoltage category (IEC 61010-1)	
Protection class	II
Pollution degree	2

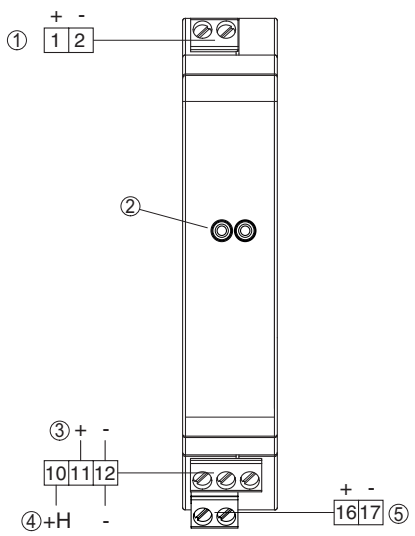
Approvals

Worldwide approvals are available for VEGA instruments, e.g. for use in hazardous areas, on ships or in hygienic applications.

The technical data in the respective safety instructions are valid for approved instruments (e.g. with Ex approval). In some cases, these data can differ from the data listed herein.

You can find detailed information on the existing approvals with the appropriate product on our homepage.

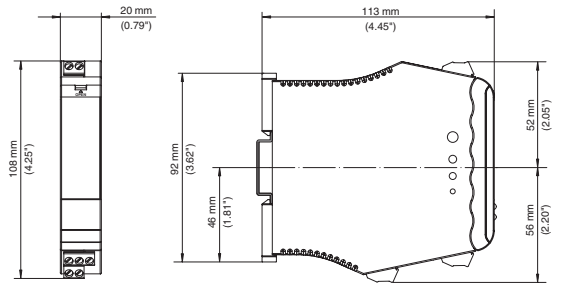
Electrical connection



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.

In the download section of our homepage you'll find operating instructions, product information, industry brochures and approval documents as well as device and adjustment software.

Contact

You can find your personal contact person at VEGA on our homepage under " *Contact*".