VEGAMET 391

Signal conditioning and display instrument for level sensors

Application area

The VEGAMET 391 signal conditioning instrument powers the connected 4 … 20 mA/HART sensor, processes and displays the measured values. The VEGAMET 391 is ideal for simple control tasks in level, gauge and process pressure measurement as well as inventory management (VMI) and remote enquiry. Comprehensive adjustment functions allow individual adaptations to the respective application. In water/wastewater management, the instrument stands out with special functions such as pump switching, flow volume measurement, tendency functions and totalizer.

Your benefit

- Equal use of all pumps through integrated pump management
- Completely integrated functional unit for flow volume measurement
- Simple integration into the Intranet/Extranet via integrated web server

Function

The VEGAMET 391 signal conditioning instrument powers any individual 4 … 20 mA/HART sensor and processes its measured value. Through an adjustment on VEGAMET, this measured value can be individually scaled/linearised and transferred to connected instruments via the current output. Six operating relays are available as limit alarms. Optional interfaces offer the possibility of remote enquiry of measured values. With the built-in webserver, the measured values can be made available in a network.

Technical data

Series	Instrument for mounting into front panel, switching cabinet or housing
Connection terminals	
− Type of terminal	Pluggable spring-loaded terminal with coding
− Max. wire cross-section	2.5 mm² (AWG 14)
Operating voltage	20 … 253 V AC, 50/60 Hz, 20 … 253 V DC
Max. power consumption	7 VA; 3 W

Sensor input

Number of sensors	1 x 4 … 20 mA (HART)
Type of input (selectable)	
− Active input	Sensor supply through VEGAMET 391
− Passive input	Sensor has an own power supply
Measured value transmission (switchable with RS232/Ethernet interface option)	
− 4 … 20 mA	analogue for 4 … 20 mA sensors
− HART protocol	digital for HART sensors
Deviation	
− Accuracy	±20 µA (0.1 % of 20 mA)

Relay outputs

Quantity	6 x operating relay
Switching voltage	min. 10 mV DC, max. 250 V AC/60 DC
Switching current	min. 10 µA DC, max. 3 A AC, 1 A DC
Breaking capacity	min. 50 mW, max. 500 VA, max. 54 W DC

Current output

Range	0/4 … 20 mA, 20 … 0/4 mA
Max. load	500 Ω

USB interface

Plug connection	Mini-B (4-pole)
USB specification	2.0 (Fullspeed)

Ethernet interface (optional)

Quantity	1 x, cannot be combined with RS232
Data transmission	10/100 MBit

RS232 interface (optional)

Quantity	1 x, cannot be combined with Ethernet

Indicators

Measured value indication	
− Graphic-capable LC display, with lighting	65 x 32 mm, digital and quasianalogue display
− Max. indicating range	-99999 … 99999
LED displays	
− Status, operating voltage	1 x LED green
− Status, fault signal	1 x LED red
− Status operating relay 1 … 6	6 x LED yellow

Ambient conditions

Ambient temperature	
− Instrument in general	-20 … +60 °C (-4 … +140 °F)
− USB interface	0 … +60 °C (32 … +140 °F)

Electrical protective measures

Protection rating	
− Front	IP 65
− Instrument	IP 20

Specification sheet
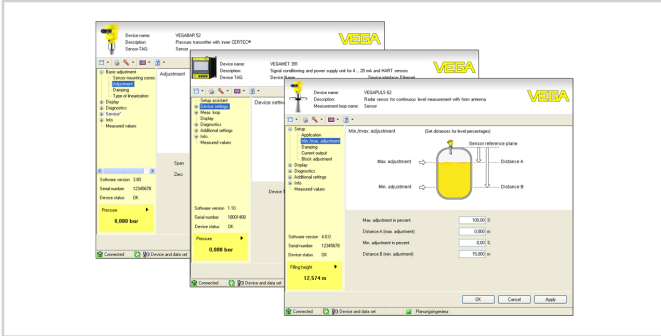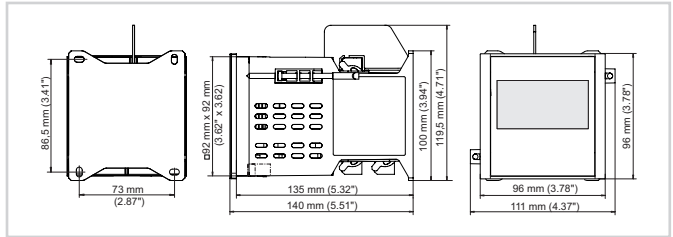
Approvals

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

Operation

The adjustment of VEGAMET 391 is menu-driven via four keys in the front and a clear, graphic-capable LC display with background lighting. As an alternative, parameter adjustment of the instrument is also possible via the adjustment software PACTware and the respective DTM.

Electrical connection

Connection VEGAMET 391 with two-wire sensor

1   *Internal relay 1*
2   *Internal relay 2*
3   *Internal relay 3*
4   *Internal relay 4*
5   *Internal relay 5*
6   *Internal relay 6*
7   *4 … 20 mA current output*
8   *Voltage supply of VEGAMET 391*
9   *Measurement data input with sensor supply (active input)*
10 *Connection for VEGACONNECT for sensor parameter adjustment*
11 *Measurement data input (passive input), not with Ex-ia version*
12 *Digital input 1 … 4*
13 *Common ground for digital input 1 … 4*
14 *4 … 20 mA/HART sensor (two-wire version)*

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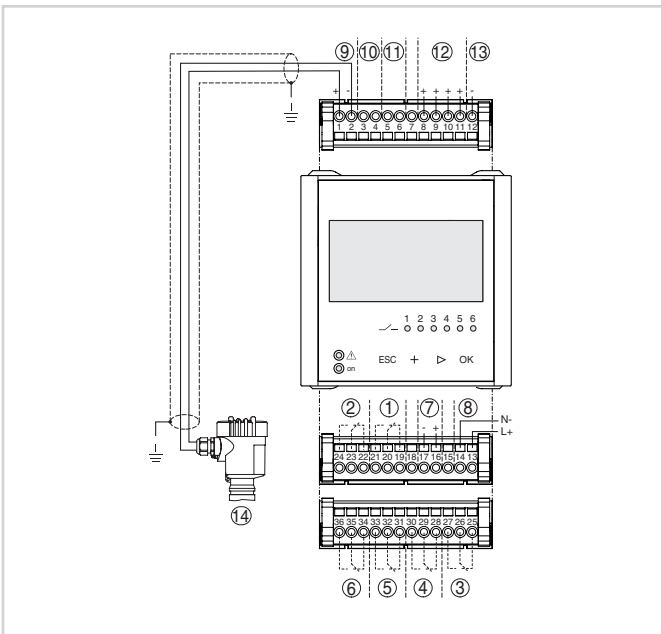
Dimensions

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/downloads 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.