

Supply and Interface module

VI156

Mounting direct in hazardous area
PTB 99 ATEX 2085



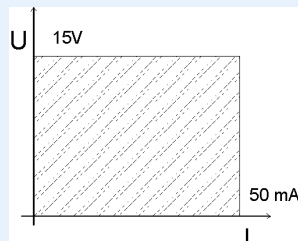
- ☛ Compact supply and interface module for mounting inside hazardous area, replaces the complicated search and selection of single interface components like isolated barriers, zener barriers, EEx i power supplies and Ex d enclosures
- ☛ The VI156 includes:
 - 1 Ex i- power supply (15 V, 50 mA)
 - 2 isolated barriers with relay output
 - 1 electronic open-collector output
 - 2 input converters for operations with non-intrinsically safe signals
 - 1 serial interface TTY / RS232 full duplex (Option)
- ☛ In combination with the DC155 or VZ150 you get a complete dosing control system in hazardous area - without wiring to safe area
- ☛ Wiring without an additional EEx e terminal box, because of certificated EEx e housing
- ☛ Extension with additional EEx e terminals - free purpose terminals for your application (option)

Description

The supply and interface module VI156 allows the DC155 or VZ150 dosing controller to be operated directly with non intrinsically safe signals. This unit can be mounted in the hazardous area too, thus no wiring to the safe area is necessary. All required modules like intrinsically safe input converters and isolated barriers, are integrated.

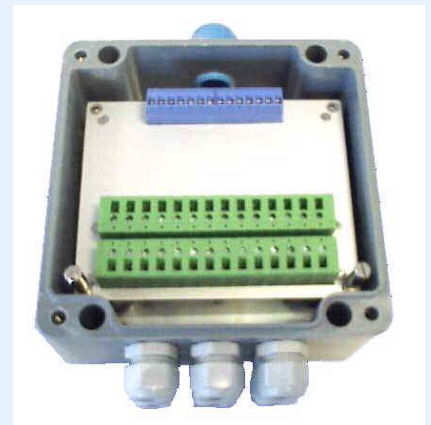
The EEx i- circuit at terminal 32/29-31 supplies the power of 15 V / 50 mA DC with a rectangular characteristic. This satisfy a DC155 or VZ150 with analogous output or TTY- out option. (only one of them; not both).

Non intrinsically safe control signals, e.g. from a DCS or a flow transmitter can be connected via the two input converters (terminal 17/18 respectively 19/20) and intrinsically safe output terminals (34/35 respectively 34/36) to the EEx i dosing controller.



Additional the VI156 has a non intrinsically safe power supply (terminals 13/14; 24 V, 10 mA) to use with passive control signals (e.g. relay contacts or open-collector outputs)

The two isolated barriers with relay output (changeover contacts 250 V AC, 5A) as well as the open collector output ($U < 30 \text{ V}$, $I < 200 \text{ mA}$) can be operated with the three digital outputs of the DC155 (VZ150).



The VI156.x.5.x version has an additional serial interface. This permits the intrinsically safe TTY interface of the DC 155 respectively VZ150 to be coupled with a non intrinsically safe RS232 interface of a printer or higher level control system.

The VI156.x.x.1 version has a 100 mm larger EEx e terminal space with 18 additional EEx e terminals. This terminals are for any use terminal box is unnecessary - your application keeps compact, flexible and well arranged.

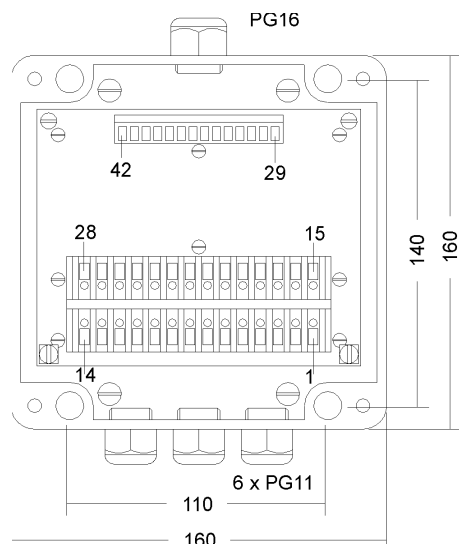
In case of requirement of ex- fuses (e.g. valve fuses) in the application, we offer ex- fuses in many current specifications as well the placement inside the VI156.

Technical Details

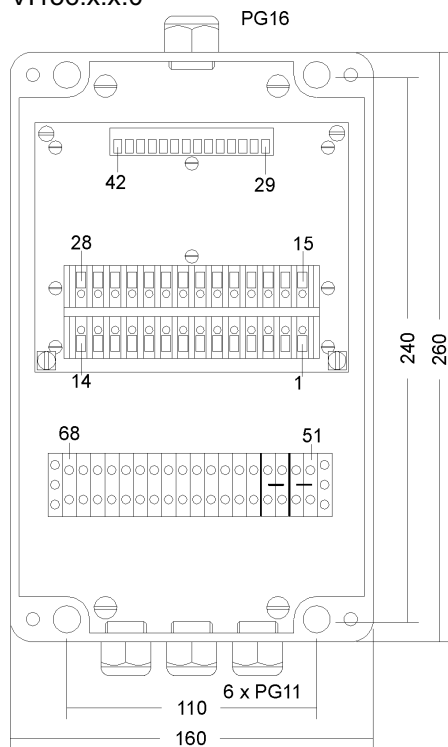
| | |
|--|---|
| Mounting | hazardous area, zone 1 |
| Ex - protection | E Ex e q [ib] IIC T6 |
| EC-type-examination Nr | PTB 99 ATEX 2085 |
| Housing protection | IP 65 |
| Ambient temperature | -20°C ...+40°C |
| Dimensions VI156.X.X.0 VI156.X.X.1 | H x B x T: 160 mm x 160 mm x 90 mm; 260 mm x 160 mm x 90 mm |
| Material | Polyester |
| Main supply (Te. 1-6) | 230, 220, 120, 24 V AC - 48-62 Hz, 24 V DC |
| Power consumption | ca. 5 VA |
| Relay terminals (Te. 7-9, 10-12) | 250 V AC, 5A $\cos \varphi > 0,7$ 30V DC, 5 A |

| | |
|--|---|
| Open-Collector (Kl. 15,16) | $U < 30 \text{ V}$, $I < 200 \text{ mA}$ |
| Control circuits (Te. 17/18, 19/20) | Low: 0.. 2 V, High: 8.. 30 V |
| Serial interface (Te. 21-26) | TTY, RS232, Transceiver active, receiver passive |
| Help power (Te.13,14) | 24V DC, max. 10 mA, non intrinsically safe |
| Intrinsically safe power supply (Te.29-32) | $U_0 = 16,8 \text{ V}$, $I_0 = 55 \text{ mA}$, intrinsically safe |
| Further specifications | see EC-type examination |

Dimensions

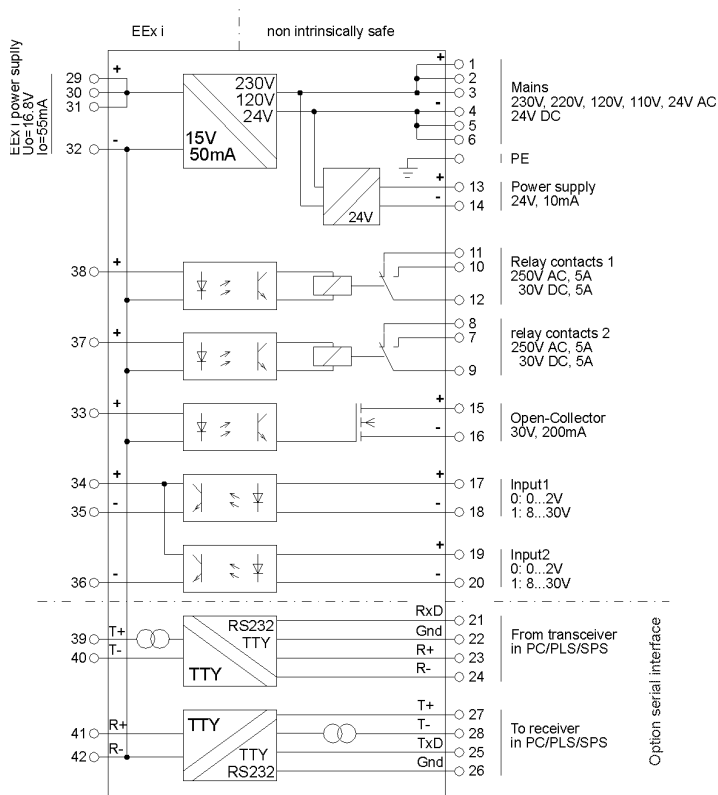


VI156.x.x.0



VI156.x.x.1

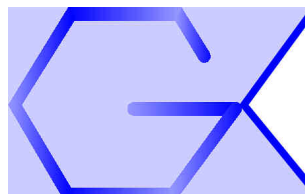
Block diagram



Type code

| | | supply and interface module VI 156 | |
|---|---------------|------------------------------------|----|
| Line voltage: | 230V AC | . | .0 |
| | 120V AC | . | .2 |
| | 24 V AC | . | .5 |
| | 24 V DC | . | .6 |
| <i>more voltages on inquiry</i> | | | |
| Ex TTY/RS232 serial interface: | without | . | .0 |
| | present | . | .1 |
| Extended EEx e terminal space (18 leads): | without | . | .0 |
| | present..... | . | .1 |

Ex- fuses for mounting inside of the VI156 on demand



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