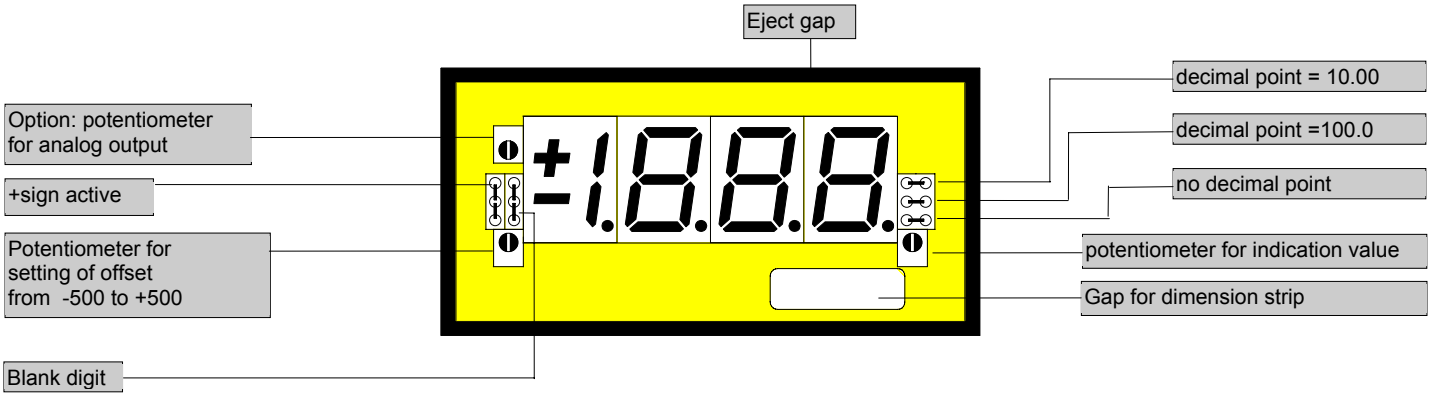
Direct voltage, direct current

- Option: analogue output

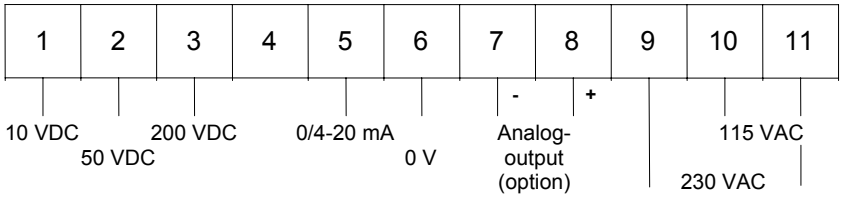
- Mounting into panels with thickness up to 50 mm

72x36

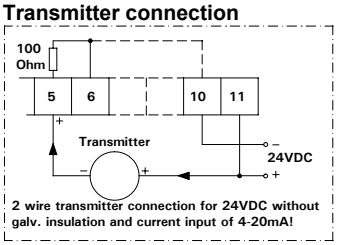
1888



ORDER NUMBER OF TYPE **DV 3.001.610B**



Transmitter connection



power supply 24 VDC **DV 3.001.630B**
- galvanic not insulated - (11=plus, 10=minus)

power supply 24 VDC **DV 3.001.670B**
- galvanic insulated - (11=plus, 10=minus)

Optionen

- green LED
- Protection: IP54
- Protection: IP65 **(see reference)**
- Plug in terminal with protection IP40
- Plug in terminal with protection IP54
- Plug in terminal with protection IP65 **(see reference)**

Protection IP65 in combination with analog output see PVE 4.0x1.6xx

Reference: Decimal point, plus sign, blank digit have to be pretended!

- Analog output 0-10 VDC/10 mA
- Analog output 0-20 mA/load 500 Ω
- Analog output 4-20 mA/load 500 Ω
- Analog output 0-10 VDC/10 mA *(power supply 24 VDC galvanically insulated)*
- Analog output 0-20 mA/load 500 Ω *(power supply 24 VDC galvanically insulated)*
- Analog output 4-20 mA/load 500 Ω *(power supply 24 VDC galvanically insulated)*
- Analog output with customer specified offset

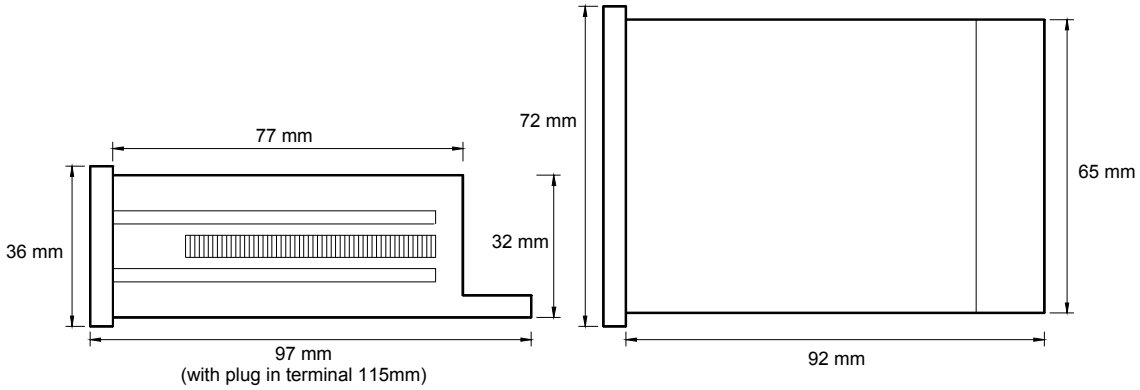
The measuring inputs are not galvanically insulated from the analog output!

- Measuring input 0-1 mA (1=plus and 6=minus)
- Dimension strip selectable (7 characters max.)
- Other power supplies on demand
- Setpoints see type PVE4.0x1.6xx

Technical data, handling

Dimensions	Housing	72 x 36 x 97 mm, including screw terminal
	Assembly cut out	$68.0^{+0.7}$ x $33.0^{+0.6}$ mm
	Fastening	special quick plastic clamp proper to fix in wall thickness up to 50 mm
	Housing material	PC/ABS-plastics blend, colour black, UL94V-0
	Protective system	at the front IP40 connection IP00
	Weight	approx. 0.190 kg
	Connection	at the rear side via terminals up to 2.5 mm^2
Input	Measuring range	0-10 V, 50 V, 200 V, 0/4-20 mA - offset adjustment supported by offset potentiometer All ranges are selectable via connection terminal
	Input resistance	Ri with 10 V ~ 55 KΩ 20 mA ~ 100 Ω 50 V ~ 290 KΩ 200 V ~ 1.8 MΩ
Output	Analogue output	0-10 VDC/10 mA (0.1 % of measuring value, +/-0.05 % of full scale) 0-20 mA, 4-20 mA - load 500 Ohm (0.1 % of measuring value, +/-0.05 % of full scale)
	Offset	fixed on zero point
	Final value	10 V or 20 mA are adjustable for indication range 350 to 1999
Accuracy	Resolution	+/- 1999 digit
	Nonlinearity	+/-0.1 % of measuring value, +/- 1 digit
	Temp. drift	100 ppm/K
	Measuring principle	Dual-Slope-Integration
Power Unit	Supply voltage	230/115 VAC +/- 10 % (50-60 Hz), 24 VDC (18-30 V), 24 VDC +/-10 % galvanic insulated
	Power consumption	max. 5 VA
Indication	Display	LED with 7 segments, 14 mm high, red 3½-digit = indication 1999
	Measuring time	1 second
	Overflow	by showing "**1**" on the fourth digit
	Decimal point	adjustable by bridging on front side
	Blanking	blanking out of last digit (selectable by bridge)
	Plus-sign	selectable by bridging on front side
Ambient conditions	Working temperature	0 up to + 60 °C
	Storing temperature	-20 up to + 80 °C

Housing:



CE-sign
For unlimited use of the instrument within the directives for electromagnetic compatibility 89/336/EC analogue input wires have to be used with shielded cable and cable's shield connected to earth ground at one end only.

Setting

1. Connect the instrument according to the wiring diagram and turn power on.
2. Adjustment of indication value: Remove the front pane by using the eject gap.
3. Set the maximum input voltage/current and adjust the desired indication value by means of the potentiometer.
4. In order to achieve the maximum value indication of 1999, the following minimum input voltages are required at the various measuring inputs:

Measuring input	10 V	50 V	200 V	20 mA
U/I min	3.5 V	17 V	68 V	15.5 mA
U/I max	20 V	100 V	200 V	25 mA

5. With input voltages smaller than U/I min, maximum value indication is not available!
6. Example of offset calculation for open measuring input:
   AA=initial indication value **(-200)**
   MA=initial measuring value **(2 V)**
   AE=final indication value **(600)**
   ME=final measuring value **(10 V)**

$$Offset = AA - \left(\frac{AE - AA}{ME - MA}\right) \times MA$$

$$Offset = -200 - \left(\frac{600 - (-200)}{(10V - 2V)}\right) \times 2V = -\mathbf{400}$$

7. Simplified calculation with 4-20 mA:
   (only for indication 0=4 mA)

$$Offset = -\left(\frac{AE}{4}\right)$$

Observe the operational sign!