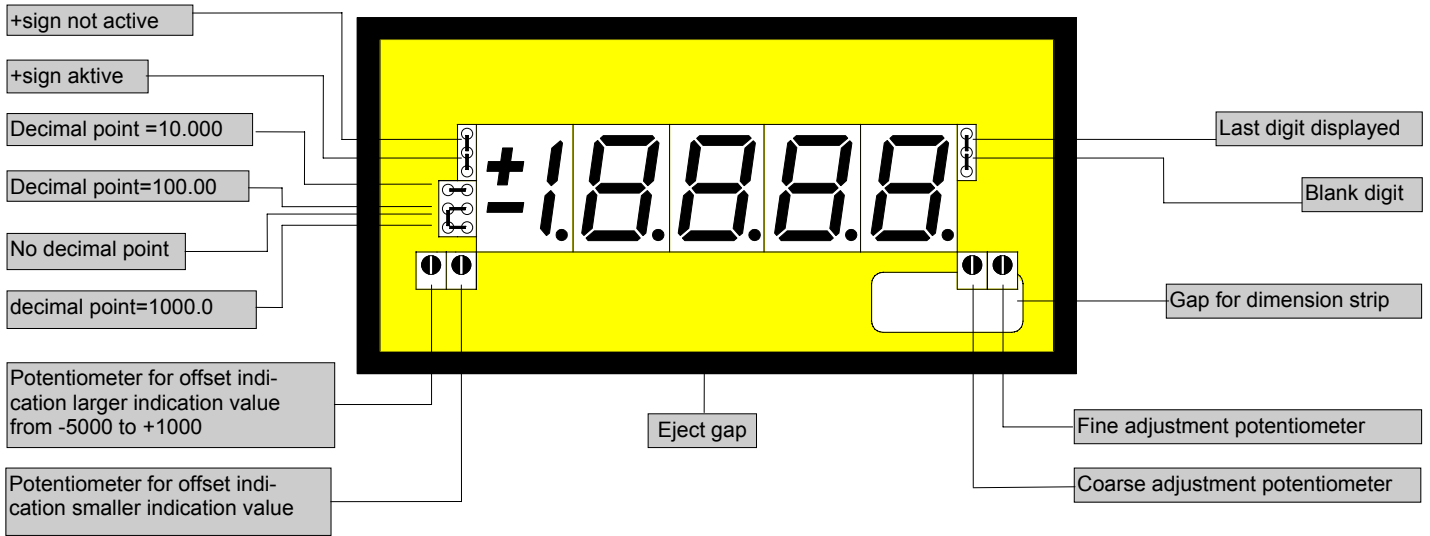


96x48

# Direct voltage, direct current

- Option: sensor supply
- Mounting into panels with thickness up to 50 mm

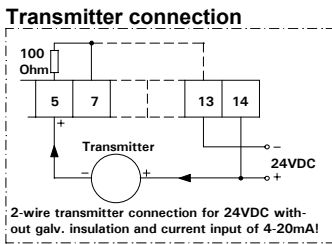
18888



ORDER NUMBER OF TYPE

**DV 4.001.110C**

1	2	3	4	5	6	7	8	9	10	11	12	13	14
10 VDC	50 VDC	200 VDC	0/4-20 mA	200 mA	0 V	-	+	Sensor supply (option)				115 VAC	230 VAC



Power supply 24 VDC  
 - galv. not insulated -  
 (14=plus, 13=minus)

**DV 4.001.130C**

Power supply 24 VDC  
 - galv. insulated -  
 (14=plus, 13=minus)

**DV 4.001.170C**

## Options

- 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)
- Reference: Plus sign, blank digit have to be pretended!**

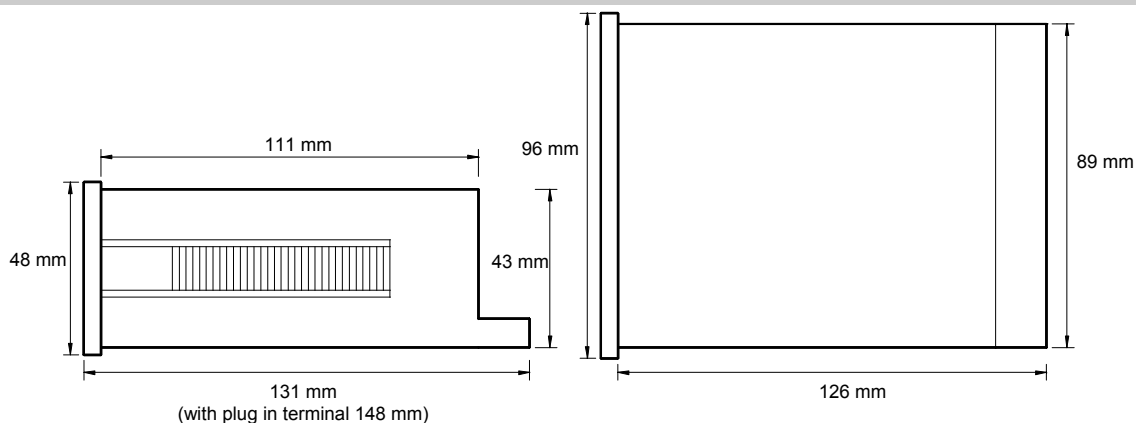
- Sensor supply 24 VDC/50 mA
- Sensor supply 10 VDC/20 mA
- Sensor supply 24 VDC/50 mA *(power supply 24 VDC galvanically insulated)*
- Sensor supply 10 VDC/20 mA *(power supply 24 VDC galvanically insulated)*
- Sensor supply 24 VDC/100 mA
- Sensor supply 10 VDC/120 mA

**With supply voltage AC and (DC galvanically insulated) the sensor supply is galvanically insulated from the measuring input!**

- Measuring input 0-1 mA (1=plus and 7=minus)
- Power supplies 24/48 VAC

# Technical data, handling

<b>Dimensions</b>	Housing	96 x 48 x 134 mm, including screw terminal
	Assembly cut out	92.0 <sup>+0.8</sup> x 45.0 <sup>+0.6</sup> mm
	Fastening	special quick plastic clamp proper to fix in wall thickness up to 50 mm
	Housing material	PC/ABS-plastic blend, colour black, UL94V-0
	Protective system	at the front IP40, connection IP00
	Weight	approx. 0.35 kg
<b>Input</b>	Connection	at the rear side via terminals up to 2.5 mm <sup>2</sup>
	Measuring range	0-10 V, 50 V, 200 V, 0/4-20 mA, 0-200 mA - offset adjustment supported by offset potentiometer and active bridge All ranges are selectable via connection terminal
<b>Output</b>	Input resistance	Ri with 10 V = 55 KΩ      20 mA = 100 Ω 50 V = 290 KΩ      200 mA = 10 Ω 200 V = 1.8 MΩ
	Sensor supply	24 VDC/50 mA – 10 VDC/20 mA (other sensor supplies/performances on demand)
	<b>Accuracy</b>	Resolution: +/- 19999 digit Nonlinearity: +/-0.1% of measuring value, +0.05% of final value Temp. drift: 50 ppm/K Measuring principle: Dual-Slope-Integration
<b>Power Unit</b>	Supply voltage	230/115 VAC +/- 10 % (50-60 Hz), 24 VDC (18-30 V), 24 VDC +/-10 % galvanic insulated
<b>Indication</b>	Power consumption	approx. 5 VA
	Display	LED with 7 segments, 14 mm high, red 4½-digit = indication 19999
	Overflow	blinking "0000"
	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
<b>Ambient conditions</b>	Indication time	1 second
	Working temperature	0 up to + 60 °C
<b>Housing:</b>	Storing temperature	-20 up to + 80 °C



## 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 maximum value indication of 19999, the following minimum input voltages are required at the various measuring inputs:

Measuring input	10 V	50 V	200 V	20 mA	200 mA
U/I min	3.5 V	17 V	68 V	15.5 mA	155 mA
U/I max	20 V	100 V	400 V	25 mA	240 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)

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

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

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

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

**Observe the operational sign!**