

# Economy Panelmeter EP 9648

Industry standard signals 0/4-20mA; 0-10V; PT100

## Features

- Input programmable
- Display range voltage, current -1999 ... 2000 Digit  
RTD, Pt100 -100.0 ... 200.0, or -100 ... 400 °C
- LED Display 14.2 mm red, yellow, green, blue  
or 20.3mm red
- Indicating range and decimal point  
free programmable
- Conversion rate programmable 8/s, 2/s, 0.5/s
- Self-acting display brightness (Option)
- Analog output 0 ... 10 V DC
- Front protection IP65



EP9648 with LED Display 14.2mm



EP9648 with LED Display 20.3mm

## General

The Economy Panelmeter EP9648 is a technical advancement of the DP9648. With universal input conditions and easy programming the panelmeter becomes a powerful instrument for monitoring, measurement and control applications. As highlight the device offers a self-acting display brightness. A built-in photo sensor controls the ambient brightness and corrects the display brightness.

## Technical Data

### Power supply

Supply voltage	: 230/115 V AC 50/60 Hz ±10 % or 24 V DC ±20 %
Power consumption	: 3 VA
Working temperature	: -10 ... +60 °C
Rated voltage	: 250V ~ acc. VDE 0110 between input, output/supply voltage Degree of pollution 2, over-voltage categoric III
Test voltage	: 4 kV=, between input, output/supply voltage
CE - conformity	: EN55022, EN60555, IEC61000-4-3/4/5/11/13

### Input

Current input	: 0/4 ... 20 mA	Ri 10 Ω	overload max. 3-times
Voltage input	: 0 ... 10 V	Ri 100 kΩ	overload max. 3-times
RTD (Pt100)	: -100...400°C	sensor current < 1mA (no self heating)	
Accuracy	: voltage/current	±0.1 %, ±1 Digit;	
	RTD (Pt100)	±0.2 °C, ±1 Digit	

### Temperature coefficient

Voltage/current	: 0.005 %/K
RTD (Pt100)	: 0.01 °C/K

### Display

Display	: LED 14.2 mm red, yellow, green, blue or 20.3 mm red
Indicating range	: -1999 ... 2000 Digit, leading zero suppression
Decimal point	: programmable
Overflow indication	: overflow " -1999 " or " 9999 " flashing with 2 Hz
Display brightness (Option)	: step less from 2 ... 100 %, with photo sensor

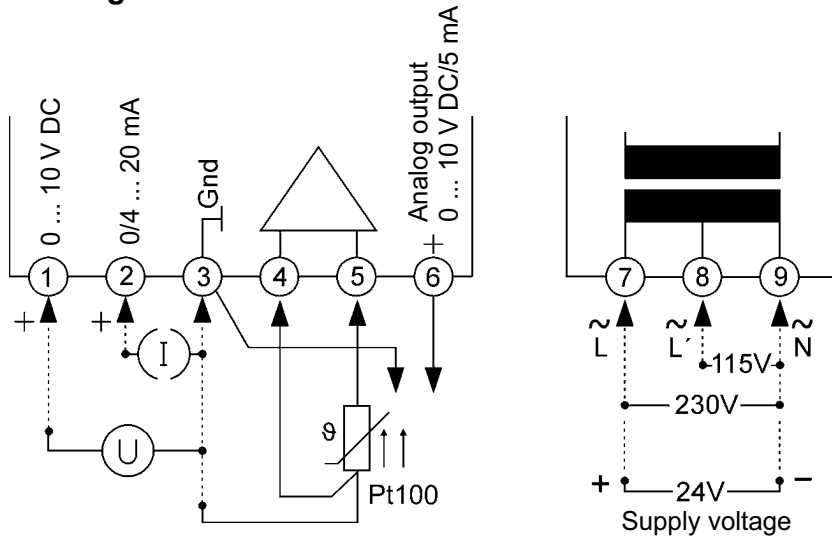
### Analog output

Voltage	: 0 ... 10 V DC max. 5 mA, linearized, short circuit proof
Accuracy	: 0.1 %
Temperature coefficient	: 0.005 %/K

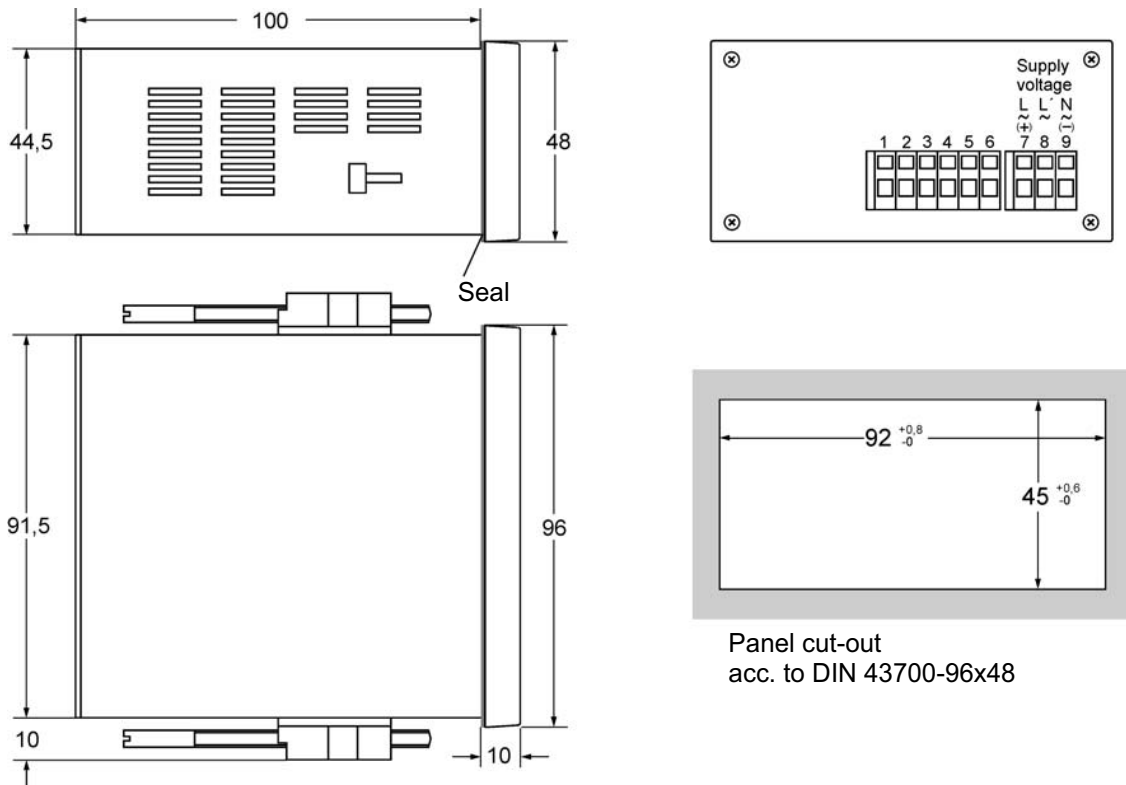
### Case

Dimensions	: DIN 96x48 mm, material PA6-GF; UL94 V-0
Weight	: 300 g
Connection	: clamp terminals, 2 mm <sup>2</sup> single wire, 1.5 mm <sup>2</sup> flexible wire, AWG14
Protection	: front IP65, terminals IP20, finger safe acc. German BGV A3

### Connection diagram

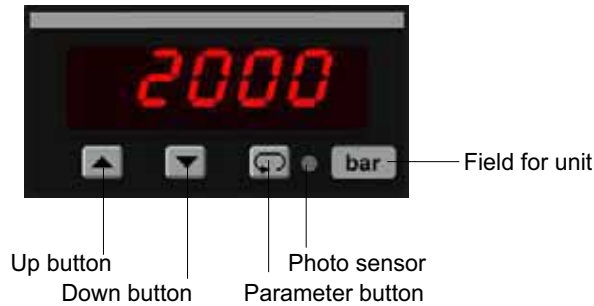


### Dimensions



Panel cut-out  
acc. to DIN 43700-96x48

## Displays and controls



### Description

After switching on the supply voltage, the device initializes itself. The display shows the message *init*.

After the initializing procedure the device is located in the Working level.

Activating the button for more than 2 seconds, the program is located in the Configuration level.

Selection within a parameter or entering data, use buttons and . To change the selected parameter press button again. Setting of the value or selection with button and . Entering data with button .

After finishing the configuration or when longer than 2 minutes no button was pushed, the program jumps back to the working level. Leaving the configuration level is possible at any time by pushing the button for 2 seconds.

### Error codes

Display flashes *Err* input signal is more than 3% outside of the programmed measurement range  
 please ship the panelmeter to factory for repair service.  
*Loc* Program lockout. See configuration page 4.

### Start-up note:

Before the device can be used, it must be configured for the intended use.





















Please note: All parameters can be called if they are not blocked by other programmed parameters and if they are available. Factory settings are shown in the display graphic.



Parameter is only displayed if included (see order code)

## Configuration

Button	Display	Description
 Press 2 sec.		Conversion rate Press button <i>8rE</i> 8 measurements per second <i>2rE</i> 2 measurements per second <i>0.5rE</i> 0.5 measurements per second Selection with button  and . Entering with button .
		Input signal Press button <i>0 - 10,0 - 20,4 - 20,P t</i> Selection with button  and . Entering with button .
		Decimal point position* Press button <i>0 . 0 . 00 . 000</i> Selection with button  and . Entering with button .

Button	Display	Description
↓	St.	Start value for indicating range* Press button  Setting possible from -1999 ... 2000 Digit with button  and  . Entering with button  .
↓	En.	End value for indicating range* Press button  Setting possible from -1999 ... 2000 Digit with button  and  . Entering with button  .
↓	corr.	Indicating correction Press button  Setting possible from -9.9 ... 9.9 Digit with button  and  . Entering with button  .
↓	di	Self-acting display brightness (only with Option 07) Press button  <i>on, off</i> Selection with button  and  . Entering with button  .
↓	code	Code for factory settings.
↓	Loc	Parameter lockout Press button  <i>off</i> : no lock <i>on</i> : Parameter locked Selection with button  and  . Entering with button  .
	2000	Back to the working level *Restrictions for Pt100

### Ordering code

EP9648 -  1. -  2. -  3. -  4. -  5. -  6.

#### 1. Display

1	LED red	14.2 mm
3	LED red	20.3 mm
4	LED yellow	14.2 mm
6	LED green	14.2 mm
8	LED blue	14.2 mm

#### 2. Device type

15	Standard signal 0/4 ... 20 mA, 0 ... 10 V DC and Pt100
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#### 3. Supply voltage

0	115/230 V AC ±10 % 50-60Hz
5	24 V DC ± 20%

#### 4. Options

05	without options
07	self-acting display brightness*

#### 5. Unit (appears on the unit field)

#### 6. Additional text (appears on the face plate in the field for additional text max. 3 mm x 90 mm HxW)

\* only display 1 and 3, red

überreicht durch / presented by :

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