

# pH and ORP Panelmeter pH9648



- LED-Display 14,2 mm red
- Measuring range programmable -1..+15 pH / ±1500 mV
- Temperature compensation via P100/Pt1000 sensor
- Analog output 0/4..20 mA or 0/2..10 V for pH/ORP
- Max. 4 alarm outputs relay or transistor

## Characteristics

The pH and ORP Panelmeter pH9648 is suitable for pH and ORP measurement in food technology, chemistry within pharmaceutical and sewage-water technology. The pH9648 operates with all common pH- and ORP electrodes. It is recommended to connect the Impedance-Converter pH40 for cable length > 5 m.

## Technical data

### Power supply

Supply voltage : 230 V AC ±10 %; 115 V AC ±10 %;  
24 V AC ±10 % or 24 V DC ±15 %

Power consumption: max. 3.5 VA, with analog output 5 VA

Operating temperature : -10..+55 °C

CE-conformity : EN 61326-1:2013  
EN 60664-1:2007

### Input

#### pH/ORP

Measuring range : -1.00..+15.00 pH or -1500..+1500 mV

$R_i$  : >  $10^{12} \Omega$

Input current : <  $10^{-12}$  A

Accuracy : 0.2 % measuring value, ±2 Digit

pH setup : electrode zero point 4.00..10.00 pH  
slope 40.0..70.0 mV/pH

ORP setup : ± 200 mV

Calibration mode : - 1- or 2-point-calibration

Buffer selection possible:

-Schott

-WTW

-Ingold (Mettler Toledo)

-Puffer acc. to DIN 19266

-or manual buffer input

- Data entering for zero point and slope

- ORP offset

### Temperature

Sensor : RTD, Pt100 or Pt1000,  
(2- or 3-wire connection)

Unit : programmable °C, °F

Measuring range : -40.0..+160.0 °C (-40.0..+320.0 °F)

Accuracy : ± 0.1 %, ±1Digit

Transmitter supply : 24 V DC,  $R_i$  approx. 150  $\Omega$ ,  
max. 50 mA (25 mA with 4 relay outputs)

Display : LED red, 14.2 mm

Parameter display : LED 2-digit red, 7 mm  
(Parameter - and output indicator)

### Output

Relay SPDT : < 250 V AC < 250 VA < 2 A,  
< 300 V DC < 50 W < 2 A

Transistor : < 35 V AC/DC, max. 100 mA,  
short-circuit-proof

Analog output active : 0/4..20 mA burden ≤500  $\Omega$ ;  
0/2..10 V burden > 500  $\Omega$ , isolated  
automatic output changing  
(burden dependent)

Analog output passive : 4..20 mA, ext. burden =  
 $RA[\Omega] \leq (U_B - 5 \text{ V}) \div 0,02 \text{ A}$  ;  
supply voltage 5..30 V DC

Accuracy : 0.1 %

Panel case : DIN 96x48 mm, material PA6-GF; UL94V-0

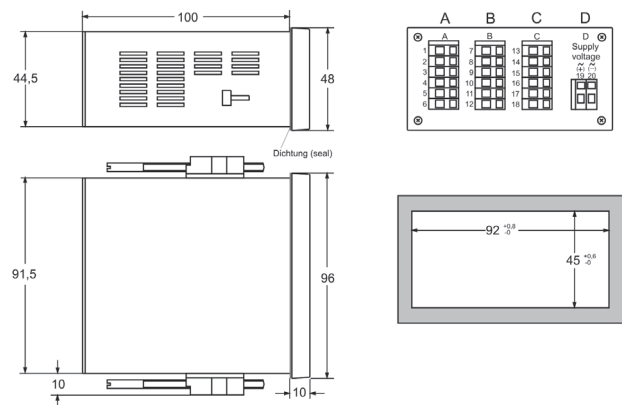
Dimensions : Front 96x48 mm, mounting depth 100 mm,

Weight : max. 390 g

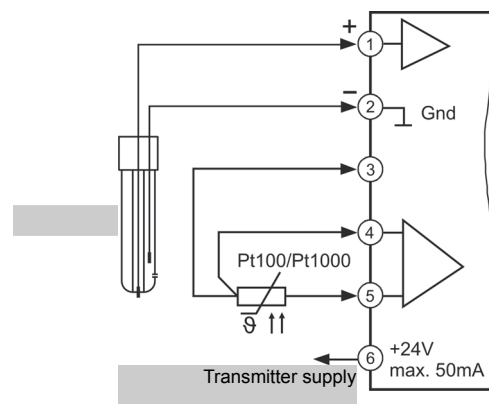
Connection : clamp terminals, 2.5 mm<sup>2</sup> single wire,  
1.5 mm<sup>2</sup> flex wire, AWG14

Protection class : Front IP65, terminals IP20,  
finger save acc. to BGV A3

## Dimensions



## Connection diagram input

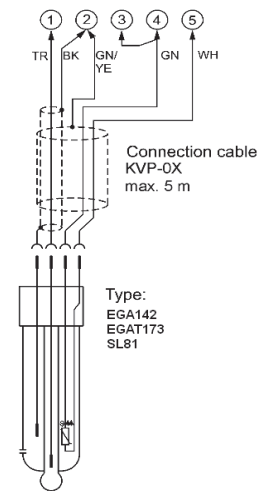


### Ordering code

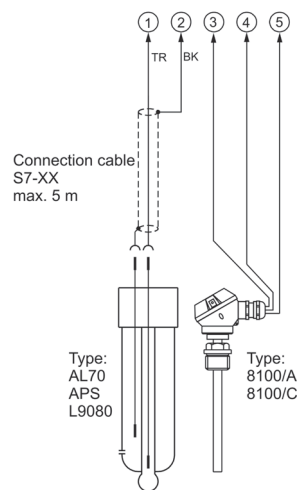
pH9648 -  1. -  2. -  3. -  4. -  5. -  6. -  7.

|   |  |
|---|--|
| <b>1. Terminal strip A</b>                                |  |
| 13  | input pH / ORP electrode,<br>temperature compensation via Pt100 / Pt1000 |
| <b>2. Terminal strip B</b>                                |  |
| 00  | not installed  |
| 2R  | 2 relay outputs  |
| 2T  | 2 electronic outputs   |
| <b>3. Terminal strip C</b>                                |  |
| 00  | not installed  |
| 2R  | 2 relay outputs  |
| 2T  | 2 electronic outputs   |
| AO  | analog output 0/4..20 mA, 0/2..10 V DC                                   |
| 2A  | 2 analog outputs 4..20 mA passive  |
| <b>4. Terminal strip B supply voltage</b>                 |  |
| 0   | 230 V AC $\pm 10\%$ 50-60Hz  |
| 1   | 115 V AC $\pm 10\%$ 50-60Hz  |
| 4   | 24 V AC $\pm 10\%$ 50-60Hz   |
| 5   | 24 V DC $\pm 15\%$   |
| <b>5. Options</b>   |  |
| 00  | without option   |
| <b>6. Unit appears in the unit field</b>                  |  |
| <b>7. Additional text above the display (3x90 mm HxW)</b> |  |

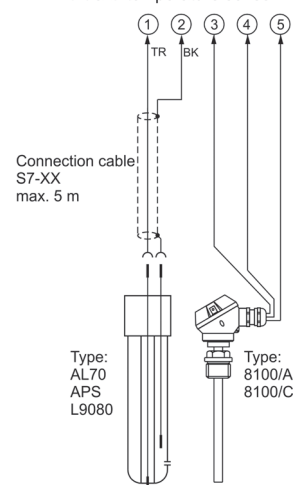
pH-electrode with ext. temperature sensor



pH-electrode with ext. temperature sensor



ORP-electrode with ext. temperature sensor



### Connection examples pH9648

