

# Universal LowCost-LED-Display for Standard Signals and Temperature



Digital display  
for standard signals

**GIA 2448** (for self-adjustment)

**GIA 2448 WE** <sup>1)</sup>  
(settings and calibrations by our works)

1) Please specify as follows upon order:

Input signal, scaling (lower and upper limits), decimal point and supply voltage. (Order to read e.g. GIA2448WE: 4-20mA, 4mA=50.0, 20mA = 100.0, 12VDC)

## Specification:

**Meas. ranges:** 0-20V, 0-10V, 0-2V, 0-1V, 0-200mV, 0-20mA and 4-20mA. (select via soldering jumpers)

**Display range:** -1999 ... +1999 digit  
(adjustable via soldering jumpers and potentiometer)

**Decimal point:** any position by means of soldering jumpers  
(soldering jumpers accessible after removal of front panel)

**Accuracy:**  $\pm 0.2\%$   $\pm 1$  digit (at nominal temperature = 25°C)

**Scan rate:** approx. 3 measurements / sec.

**Display:** 3½-digit, red 10 mm high LED display

**Working temperature:** 0 to 50°C (permissible ambient temperature)

**Relative humidity:** 5 to 95 %RH (non-condensing)

**Storage temperature:** -20 to 70°C

**Voltage supply:** 8 - 20 V DC or 18 - 29 V DC resp.  
8 - 20 V AC or 18 - 29 V AC  
(set via soldering jumper)

**Current supply:** max. 20 mA

**Housing:** glass fibre reinforced Noryl, front panel PC.

**Dimensions:** 24 x 48 mm (H x W) (front frame)

**Mounting depth:** approx. 65 mm (incl. screw-type/plug-in terminal)

**Panel mounting:** with VA-spring clamp.

allowed panel thicknesses from 1 to approx. 10 mm

**Panel cut-out:**  $21.7^{+0.5} \times 45^{+0.5}$  mm (H x W).

**Connection terminal:** 4-pin screw-type/plug-in terminal  
for wire cross sections from 0.14 bis 1.5 mm<sup>2</sup>

**Noise immunity (EMC):** meets EN50081-1 and EN50082-2 requirements, additional fault: <1%

**IP rating:** front side IP54 (with optional O-rings IP65).

## Accessories:

**GNG 220/2-12V** power supply for GIA2448 and GTH2448 (Input: 230VAC ; output: 2 x 12VDC regulated, 30mA each)

**GNG 12/24** power supply  
(Input: 12VDC ; output: 24VDC electrically isolated)

**GNG 24/24** power supply  
(Input: 24VDC ; output: 24VDC electrically isolated)

for additional accessories, transmitter and probes  
p.r.t. pages 54, 55, 72 - 86, 89 - 98, 100, 101



Digital thermometer  
for NiCr-Ni or Pt100

**GTH 2448/1** (NiCr-Ni)

**GTH 2448/2** (Pt100, 1°C)

**GTH 2448/3** (Pt100, 0.1°C)

## Specification:

### Measuring ranges:

GTH2448/1: -50 ... +1150°C (NiCr-Ni)

GTH2448/2: -200 ... +650°C (Pt100, 2-wire)

GTH2448/3: -60,0 ... 199.9°C (Pt100, 2-wire)

### Resolution:

GTH2448/1, GTH2448/2: 1°C

GTH2448/3: 0.1°C

**Accuracy:** (at nominal temperature = 25°C)

NiCr-Ni:  $\pm 1\% \pm 1$  digit (from -20...+550°C and 920...1150°C)  
 $\pm 1.5\% \pm 1$  digit (from 550... 920°C)

Pt100:  $\pm 0.5\% \pm 1$  digit

**Offset compensation:** (for Pt100 - GTH2448/2 and GTH2448/3 only)  
The zero point offset of the sensor (e.g. due to long cables) can be compensated for by means of the spindle trimmer on the backside of the device.

**Display:** 3½-digit, red 10 mm high LED display

**Scan rate:** approx. 3 measurements / sec.

**Working temperature:** 0 to 50°C (permissible ambient temperature)

**Relative humidity:** 5 to 95 %RH (non-condensing)

**Storage temperature:** -20 to 70°C

**Voltage supply:** 8 - 20 V DC or 18 - 29 V DC resp.  
8 - 20 V AC or 18 - 29 V AC  
(set via soldering jumper)

**Current supply:** max. 20 mA

**Housing:** glass fibre reinforced Noryl, front panel PC.

**Dimensions:** 24 x 48 mm (H x W) (front frame)

**Mounting depth:** approx. 65 mm (incl. screw-type/plug-in terminal)

**Panel mounting:** with VA-spring clamp.

allowed panel thicknesses from 1 to approx. 10 mm

**Panel cut-out:**  $21.7^{+0.5} \times 45^{+0.5}$  mm (H x W).

**Connection terminal:** 4-pin screw-type/plug-in terminal  
for wire cross sections from 0.14 bis 1.5 mm<sup>2</sup>

### Noise immunity (EMC):

GTH2448/1: meets EN50081-1 und EN50082-1 requirements

GTH2448/2, GTH2448/3: meets EN50081-1 und EN50082-2 requirements, additional fault: <1%

**IP rating:** front side IP54 (with optional O-rings IP65).

## Accessories:

**GGD 2448 SET** optional O-rings for IP65 (2 pieces)

for additional accessories and probes

p.r.t. pages 54, 55, 89, 91 - 98, 100, 101