



Universal LowCost-LED-Display for Standard Signals and Temperature



Digital display
for standard signals

GIA 2448 (for self-adjustment)

GIA 2448 WE ¹⁾
(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:	0-20 V, 0-10 V, 0-2 V, 0-1 V, 0-200 mV, 0-20 mA and 4-20 mA. (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:	±0.2% ±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 (Standard) (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} x 45 ^{+0.5} mm (H x W).
Connection terminal:	4-pin screw-type/plug-in terminal for wire cross sections from 0.14 to 1.5 mm ²
Noise immunity (EMC):	meets EN50081-1 and EN50082-2 requirements, additional fault: <1%
IP rating:	front side IP54 (with optional O-rings IP65).

Option upcharge

- **VAC** voltage supply 8-20 V AC or 18 - 29 V AC set via soldering jumper

Accessories

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

GNG 220/2-12V power supply for GIA 2448 and GTH 2448 (Input: 230 V_{AC} ; output: 2 x 12 V_{DC} regulated, 30 mA each)

GNG 12/24 power supply (Input: 12 V_{DC} ; output: 24 V_{DC} electrically isolated)

GNG 24/24 power supply (Input: 24 V_{DC} ; output: 24 V_{DC} electrically isolated)

for additional accessories, transmitter, probes p.r.t.p. 74-75, 96-119, 121-135



Digital thermometer
for NiCr-Ni, Pt100 or Pt1000

GTH 2448/1 (NiCr-Ni)

GTH 2448/2 (Pt100, 1°C)

GTH 2448/3 (Pt100, 0.1°C)

GTH 2448/4 (Pt1000, 1°C)

GTH 2448/5 (Pt1000, 0.1°C)

Specification

Measuring ranges, Resolution:	
GTH 2448/1:	- 50 ... +1150 °C (NiCr-Ni)
GTH 2448/2:	-200 ... + 650 °C (Pt100, 2-wire)
GTH 2448/3:	-60,0 ... +199.9 °C (Pt100, 2-wire)
GTH 2448/4:	-200 ... + 650 °C (Pt1000, 2-wire)
GTH 2448/5:	-60,0 ... +199.9 °C (Pt1000, 2-wire)
Accuracy: (at nominal temperature = 25°C)	
NiCr-Ni:	±1% ±1 digit (from -20...+550°C and 920...1150°C) ±1.5% ±1 digit (from 550... 920°C)
Pt100, Pt1000:	±0.5°C ±1 digit or ±1°C ±1 digit
Offset compensation: (only for Pt100 and Pt1000) 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 (Standard) (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} x 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 ²
IP rating:	front side IP54 (with optional O-rings IP65).

System solution - complete packages:

KFZ 2000

Exhaust gas temperature set for measurement of exhaust gas temperatures up to 1000 °C in motor vehicles. The Set consists of:



- **GTH 2448/1** NiCr-Ni thermometer with additional over-voltage protection
- **GTF 101-5/30150 / NIMONIC** temperature probe with jacket material: Nimonic 75 (view p.r.t. page 127) Cable length = 3 m (extended cable against upcharge available)
- **GKV 4** clamping ring screw connection (p.r.t. p. 134)