



# Universal Displaying Device

# GIA 2000

easy operability - high accuracy - economic price

Temperature display, pressure control, tachometer, flow meter, etc., etc.



- Universal inputs for normalized signals, frequency, Pt100, Pt1000 and thermocouples
- integrated isolated power supply for meas. transducer (24V / 22mA)
- extensive self-monitoring and diagnostic system
- Serial interface - EASYBus (max. 240 devices can be combined)
- Limit functions, digital filter, min-/max value memory

## Specification

**Measuring input:** universal input for

- **Normalized signal:** 4-20mA, 0-20mA, 0-1V, 0-2V, 0-10V, 0-50mV
- **Resistance thermometer:** Pt100 (3-wire), Pt1000 (2-wire)
- **Thermocouples:** types J, K, N, S, T
- **Frequency:** TTL-signal, switching contact
- **Flow, Rotational speed:** TTL-signal, switching contact
- **Counter up / down:** TTL-signal, switching contact
- **Serial interface**

**Measuring rate:** approx. 100 meas. / sec. (for norm. signal and frequency) resp. approx. 4 meas. / sec. (for temperature)

### Measuring resp. display ranges, resolution:

**Temperature:** (display unit selectable: °C or °F)

- Pt100:** -200 ... + 850°C or - 50.0 ... +200.0°C
- Pt1000:** -200 ... + 850°C
- type J:** -170 ... + 950°C or - 70.0 ... +300.0°C
- type K:** -270 ... +1372°C or - 70.0 ... +250.0°C
- type N:** -270 ... +1350°C or -100.0 ... +300.0°C
- type S:** - 50 ... +1750°C
- type T:** -270 ... + 400°C or - 70.0 ... +200.0°C

**Norm. signals:** -1999 ... 9999 digit, scale freely adjustable

- **recommended range:** ≤ 2000 digit

**Frequency:** 0.000 Hz ... 10 kHz, display freely scaleable

**Rotational speed:** 0.000 U/min ... 9999 U/min,  
selectable prescaler: 1-1000

**Counter up/down:** counter value remains on power loss  
0 ... 9999 (10 Mio. with prescaler),  
pulse frequency: ≤ 10kHz

**Serial interface:** Displaying and controlling from values coming via the serial interface.

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

- **Norm. signal:** < 0.2 % f.s. ±1digit (at 0-50mV: < 0.3% f.s. ±1digit)
- **Resistance thermometer:** < 0.3 % f.s. ±1digit
- **Thermocouples:** < 0.3 % f.s. ±1digit (at type S: < 0.5% f.s. ±1digit)
- **Point of comparison:** ± 1 °C
- **Frequency, rotational speed, counter:** < 0.1 % f.s. ±1digit

### Analog output: (option)

freely scaleable analogue output 0-20mA/4-20mA or 0-10V

**Display:** approx. 13 mm high, 4-digit red LED-display

**Min-/max-value memory:** the max- and min value will be stored.

**Interface:** serial interface, elect. isolated, EASYBus compatible

**Power supply for sensor:** integrated isolated power supply for measuring transducer: 24 V DC ±5%, 22mA (for dc-supply 18 V DC)

**Miscellaneous:** permanent self-monitoring, digital filter function, measuring range boundary (limit)

**Voltage supply:** 230 V AC, 50/60 Hz (standard)  
optionally other supply voltages are possible

**Power consumption:** approx. 5 VA

**Operating temperature:** -20 to +50 °C

**Relative humidity:** 0 to 80 %RH (non condensing)

**Storage temperature:** -30 to +70 °C

**Housing:** standard rack type housing 48 x 96 mm (front frame)  
installation depth: approx. 115 mm (incl. screw-type/plug-in terminals)

**Panel mounting:** by fixing clamps  
Panel cutout: 43.0<sup>+0.5</sup> x 90.5<sup>+0.5</sup> mm (H x W)

**Electrical connection:** via screw-type/plug-in terminals  
cable diameters from 0.14 to 1.5 mm<sup>2</sup>.

**Protection class:** front side IP54, with optional sealing IP65

**Electromagnetic immunity (EMC):** EN61326 (appendix A, class B)

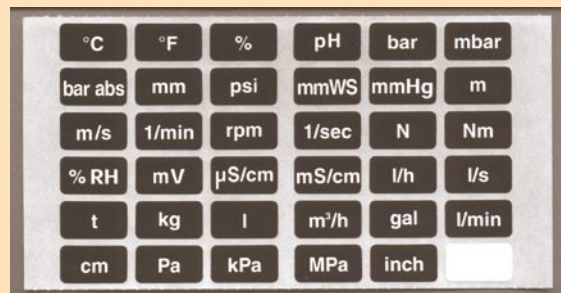
## Options (upon upcharge)

- **12VDC** voltage supply = 12 VDC (11-14V) <sup>1)</sup>
  - **24VDC** voltage supply = 24 VDC (22-27V) <sup>1)</sup>
  - **24VAC** voltage supply = 24 VAC ±5%
  - **115VAC** voltage supply = 115 VAC ±5%
  - **AAG020** analog output 0-20 mA, 4-20 mA (reversible) <sup>1)</sup>
  - **AAG010** analog output 0 - 10 V <sup>1)</sup>
- 1) For analog output with option 12VDC o. 24VDC add. upcharge

## Accessories

**GGD 4896** additional sealing for panel mounting IP65

**EAK 36** Unit stickers (black with white text)  
for 36 different units for lettering of display devices.



**EBW 1** interface converter EASYBus => RS232 (p.r.t. page 74)

**EBS 9M** software for recording and archiving  
of the measuring values (p.r.t. page 39).

**Temperature probes** p.r.t. page 101 - 110, 112, 113

for other accessories p.r.t. page 54/55, 76/77