

# The Measuring and Regulating Device at Mini Format

## GIR 230 ...

easy operability - high accuracy - economy-price



- 5 input executions for choice:
  - normalized signal: 4-20mA, 0-20mA, 0-10V
  - resistor: Pt100 (3-wire), Pt1000 (2-wire)
  - thermo couple: type J, K, N, S, T and 0-50mV
  - frequency
  - NTC
- 2 relay outputs and 1 switching output NPN
- configurable as display or controller (5 switching functions)
- extensive self-monitoring and diagnostic system
- min/max value memory, limit functions, digital filter

### **GIR 230 NS** (normalized signal input)

Controller with meas. input for normalized signal (4-20mA, 0-20mA, 0-10V)

### **GIR 230 Pt** (resistance input)

Controller with measuring input for Pt100 and Pt1000

### **GIR 230 TC** (thermo couple input)

Controller with meas. input for thermo couple and 0-50mV

### **GIR 230 FR** (frequency input)

Controller with measuring input for frequency

### **GIR 230 NTC / DIF**

Difference controller with measuring input for NTC

### **GIR 230 Pt1000 / DIF**

Difference controller with measuring input for Pt1000

### **GIR 230 NTC** (for techn. data p.r.t. page 45)

#### Specification:

#### GIR 230 NS:

**Measuring input:** 4-20mA, 0-20mA, 0-10V

**Display range:** -1999 ... 9999 digit,  
scale freely adjustable

**recommended range:**  $\leq 2000$  digit

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

**Measuring rate:** approx. 100 measurings / sec.

#### GIR 230 Pt:

**Measuring input:** Pt100 (3-wire), Pt1000 (2-wire)

**Measuring ranges, resolution:**

**Pt100:** -200 ... +850°C resp. -50.0 ... +200.0°C

**Pt1000:** -200 ... +850°C

**Accuracy:**  $< 0.5\%$  f.s.  $\pm 1$ digit (at nominal temperature = 25°C)

**Measuring rate:** approx. 4 measurings / sec.

#### GIR 230 TC:

**Measuring input:** types J, K, N, S, T and 0-50mV

**Measuring ranges, resolution:**

**type J:** -170 ... +950°C      **type K:** -270 ... +1350°C

**type N:** -270 ... +1300°C      **type S:** -50 ... +1750°C

**type T:** -270 ... +400°C

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

$< 0.3\%$  f.s.  $\pm 1$ digit (at type S:  $< 0.5\%$  f.s.  $\pm 1$ digit)

**Point of comparison:**  $\pm 1$  °C

**Measuring rate:** approx. 4 measurings / sec.

#### GIR 230 FR:

**Measuring input:** frequency (TTL-signal)

**Display range:** -1999 ... 9999 digit, freely scaleable

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

**Frequency measuring:** 0.000 Hz ... 10 kHz

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

**Counter up/down:** 0 ... 9999 (10 Mio with prescaler)

#### GIR 230 Pt1000 / DIF, GIR 230 NTC / DIF:

**Measuring inputs:** 2 x Pt1000 (2-wire) resp. 2 x NTC

**Meas. ranges, resolution:** **Pt1000:** -200 ... +850°C, 1°C  
**NTC:** -40.0 ... +120.0°C, 0.1°C

**Display:** difference temperature sensor1 - sensor2

**Accuracy:**  $< 0.5\%$  f.s.  $\pm 1$ digit (at nominal temperature = 25°C)

**Measuring rate:** approx. 4 measurings / sec.

**Outputs:** 2 relay outputs, 230V~ switching

**Relay output:** 2 closing contacts, switching power: 5A, 230VAC

**Alarm output:** NPN, open collector, switching power: 30mA, max. 28V

**Controller states:** 2-point, 3-point, 2-point with alarm,  
min/max alarm to 1 output, min/max alarm to 2 outputs

**Switching points, hysteresis, alarm points:** freely selectable

#### Others:

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

**Special:** digital filter function, measuring range boundary (limit)

**Display:** approx. 10 mm high, 4-digit red LED-display

**Attendance:** via 3 buttons

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

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

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

**Power supply:** 230V, 50/60Hz,

**Power consumption:** approx. 2 VA

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

Dimensions: 24 x 48 mm (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:** screw-type/plug-in terminal:

4-pin for power supply and relay outputs and

4-pin for measuring input and alarm output

For wire cross selections from 0.14<sup>2</sup> to 1.5<sup>2</sup>.

**IP rating:** front side IP54 (IP65 upon request)

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

#### Accessories:

**GGD2448SET** O-rings for device mountig IP65 (2 pieces)

**Temperature probes**

p.r.t. page 45, 85 - 94

**Transducer**

p.r.t. page 69 - 84

for other accessories p.r.t. page 52