



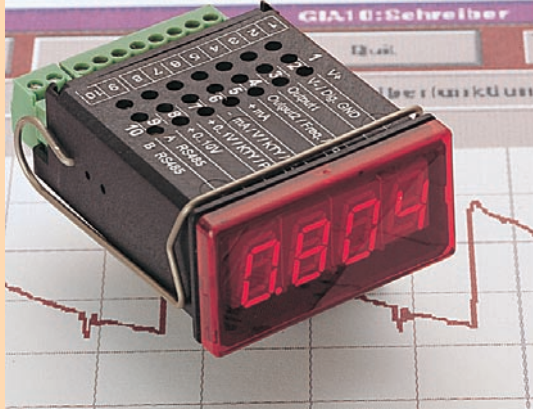
SGIA

unequalled top-quality miniature-format technology 24 x 48 mm

- scale freely adjustable
- self diagnosis (permanently active) and self-calibration
- probe damage or probe short-circuit detection, detection in case values are no longer within min./max range
- inexpensive software EBS9M. Together with a personal computer the GIA10N is a combination of recorder, data memory, long-term monitoring, and large digit display unit so far unrivalled in price and versatility.
- simultaneous recording of up to 9 channels with EBS9M

- top-quality for an extraordinarily low price
- 9 different inputs selectable
- standard RS485 interface

- easy to operate
- utmost precision
- filter can be switched on/off
- high interference immunity
- 2 switching outputs with 6 different output responses for measuring, control and monitoring functions
- probe damage, probe short-circuit monitoring, monitoring if values are within meas. range
- adjustable alarm delay
- prescaler can be connected for frequency or counter function
- wide range of supply voltages: 9 to 28 V DC



CE In accordance with EN50081-1 and EN50082-2 for unrestricted use in residential and industrial areas

- Minimum size!
- Maximum performance !

SGIA

Specification :

Display range: -1999 up to 9999 digits (recommended range of indication for standard signal: max. 2000 digit)

-40.0 up to 110.0°C (for KTY 87-205)

-50 up to +600°C (for Pt 1000)

Display range limit monitoring: you have a choice between: "LI 1": max. value must not be exceeded or "LI 0": values below/above min./max. values permissible within the working range of the A/D converter.

Scaling: scale freely adjustable (start value, end value and decimal point)

Setting up via keyboard (keys accessible underneath removable front cover) or via standard interface RS 485

Accuracy: ±0.5% ±1 digit (standard signals, resistance and frequency inputs). Transmission of counter signals immediately and without faults.

Sensor inputs: selection via keyboard or interface

1. Standard signals

- 4 to 20 mA; Ri = 50 Ohm
- 0 to 20 mA; Ri = 50 Ohm
- 0 to 1 V; Ri = 30 kOhm
- 0 to 10 V; Ri = 300 kOhm

2. Resistance input:

for temperature measurements (2-wire). Two sensor characteristics implemented. You have a choice between: KTY87-205 (-40...110.0 °C) resolution: 0.1°C, Pt 1000 (-50...600 °C) resolution: 1°C digital zero offset via front side keyboard
Please note: connection of any temperature probe with measuring transducer (Pt 100, NiCr-Ni, PtRh-Pt etc.) can be realised by means of standard signal input

3. Frequency input: 0 to 9999 Hz, resolution 1Hz. Max. frequency and corresponding max. value indicated (scale) freely adjustable. Application: eg. frequency measurements, flow, flow rate (current values), rotational speed, velocity etc..

4. Counter input: display max. 9999, up-counter/down-counter up to max. 32000 pulses, scaling by entering number of pulses to be indicated. Prescaler can be switched on (programmable from 1 to 255) Pulse frequency up to 20 pulses/sec., for max. prescaler up to 5100 pulses/sec.. Cascadability of 2 or more GIA10N, thus, an unlimited counting range can be realised (extension 4 digits per device).

Application for e.g. flow rate (total quantity counter), piece counter, pulse counter, distance counter/meter, sum counter etc.)

Filter: (selectable via keyboard or interface) 0 = no interference rejection (approx. 2 to 3 measurements/sec)

- 1 = interference rejection filter active (approx. 1.5 sec delay)
- 2 = interference rejection filter active (same as 1, in addition, indication of fault code in case of permanent measurement interference).

Interface: RS 485 interface supplied as standard. Networking of up to 16 devices via this 2-wire interface (devices no. 0 to 15 can be addressed directly via front-side keyboard or via interface).

Connection to RS 232 interface: via interface adapter GRS 485.

Please note: request for interface interrupts frequency measurement. In case of counter input no interface supported.

Switching outputs: 2 separate open collector outputs (GND switching). Switching current approx. 50 mA, switching voltage max. 30 V.

Configurations: display, 2-level controller, 2-level controller with min./max. alarm, 3-level controller, min./max. alarm detector (separate signals), counter with selector switch

Alarm delay: settings from 0 to 99 minutes

Limitation of set point value: automatic to display range on scale

Monitoring functions: permanent self-diagnosis (integrated reference and permanent supervision for trouble-free operation) Automatic monitoring of sensor damage, short-circuit in probe, values no longer within range (position LI 1).

Segment test: automatic as soon as device is switched on.

Data memory: without power supply connection, all values programmed are stored for at least 10 years (EEPROM).

Power supply: 9 to 28 V DC

Power consumption: max. 60 mA at 12 V DC (without interface)

Housing: glass-fibre reinforced noryl, dimensions: 24 x 48 mm (dimensions of front frame). Mounting depth: approx. 65 mm (incl. screw-type/plug-in terminals)

Panel mounting: using stainless steel spring clip, panel thickness: from 1 to approx. 10 mm. Panel cut-out 21.7^{+0.5} x 45^{+0.5} mm (H x W)

Electric connection: standard via screw-type/plug-in terminal: 2-pin plug for interface and 9-pin plug for other connections, wire diameters from 0.14² to 1.5²

Working temperature: 0 to 50°C

Protection rating: front side IP54 with O-rings as option, IP65 as option

Accessories:

Power supply with switching relay GNR 10. Interface converter GRS 485. Software EBS 9 M.

GGD2448SET

IP65-O-rings (2 pieces)

Temperature probes :

GTF 10 (KTY 87)

-40 ... +110 °C

GTF 10 - Pt1000

-50 ... +400 °C

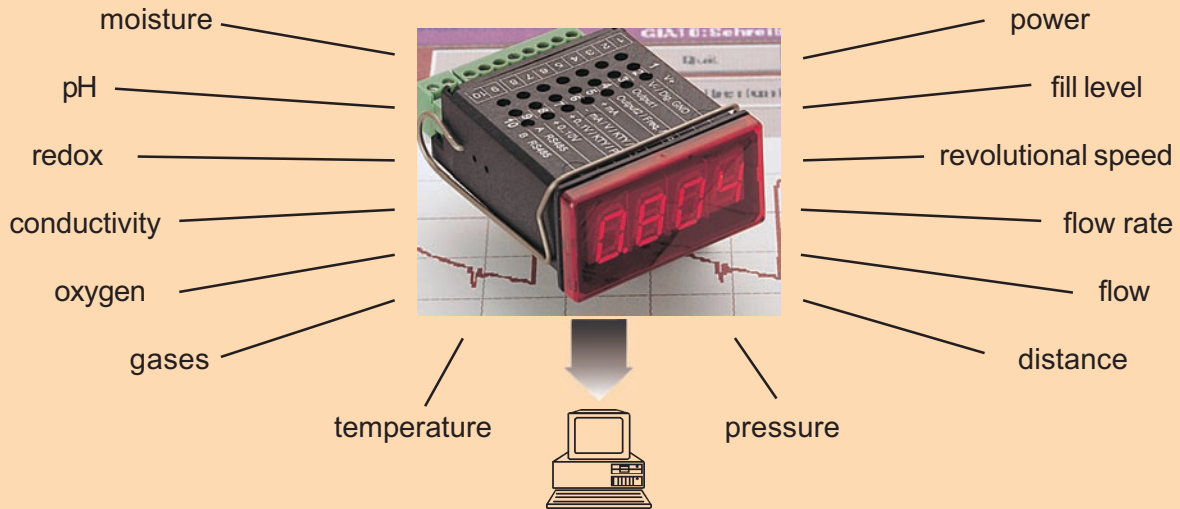
further probes: please refer to page 13

For custom-designed temperature probes p.r.t. p. 88, 92



SGIA

Measuring value display - controlling - monitoring - counting
 recording - large-digit display - long-time monitoring - data memory
 (in connection with a PC and our EBS9M software)



The very device for **display - controlling - monitoring - counting - recording**

- **Measuring/display:** of temperature, pressure, power, moisture, flow, fill level, distance, flow rate, pH, redox, oxygen, conductivity, any concentration of gas, in short: any parameter.
- **Controlling, monitoring:** two-level controller, three-level controller, two-level controller with min./max. alarm, min./max. alarm supervisions (1 output or 2 separate outputs).
- **Counting, controlling** of: pieces, quantities, revolutionary speed, frequency, pulses, events.
- **Analog-digital converter:** digitalisation of analog sensor data and transmission to PC by means of RS 485 interface (supplied as standard). Communication of up to 16 sensors resp. GIA10N via a 2-wire interface.
- **Long-time monitoring/recording:** recording, analysing and monitoring of any parameter during a long-time operation comfortably and in one process using a PC in connection with our software.



picture without power supply device

GRS 485

Interface converter RS232 / RS485

When using the RS 485 2-wire interface (e.g. connected to GIA10N) distances of approx. 1 km or more can be bridged. By means of the GRS485 up to 16 GIA10N's can be connected to the serial interface (25 pol. Dsub) of your PC. (Please order Dsub25 -> Dsub9 adapter if required - GSA 25S-9B) The GRS 485 scope of supply includes a power supply.

GRS 485 ISO

optically isolated interface converter RS232 to RS485

This converter is equipped with an automatic data direction detection. Therefore it is not necessary to set the direction by RS232 handshake lines.

Power supply is integrated: 230V/50Hz

Housing: approx. 112x80x45mm (plus connectors a. cables)
 (9 pole DSUB cable included in scope of supply)
 (if needed order adapter DSUB9 - DSUB25: GSA9S-25B)

Software

EBS 9M (p.r.t. p. 40)

Software (WINDOWS) for 9 GIA10N's to be used as recorder, large-digit display, ...

Power supply units with relay output

GNR 10

Power supply and relay module for GIA10N can be snapped onto top-hat rail

Input: 230V, 50/60Hz (others upon request)

Outputs: ~11V DC (unregulated) for the supply of the GIA10N.

18V DC ±5% (regulated) 25mA for meas. transducer (electrically isolated)

Relay outputs: 2 volt-free changeover contacts, switching current max. 10A ohmic load

Connection: screw-type terminal

Dimensions: 96 x 61 x 60 mm (HxWxD)

GR 10

Relay module for 1 GIA10N can be snapped onto top-hat rail

Input: 12V DC (others e.g. 24VDC upon request)

Relay outputs: 2 volt-free changeover contacts, max. 10A ohmic load, 250V 50/60Hz.

Connection: screw-type terminal

Dimensions: 96 x 61 x 60 mm (HxWxD)

Power supplies

(integrated and plug-in devices)

GNG 12-LE

plug-in power supply (regulated), 12V DC 300 mA for one or several GIA10N's

Input: 230 V 50/60 Hz

Output: 12 V DC regulated, 300 mA

GNG 220

Power supply in snap-on housing for 1 GIA10N

Input: 230V, 50/60Hz

Output: 1 x 12V DC, unregulated

Connection: screw-type terminal

Dimensions: 96 x 48 x 52 mm (HxWxD)

for additional power supplies, etc. p.r.t. p. 56



Customized constructions



fig. shows a GIA10N in water-proof finery housing 80x82x95mm.

Housing

incl. elbow-type plug and mounting.