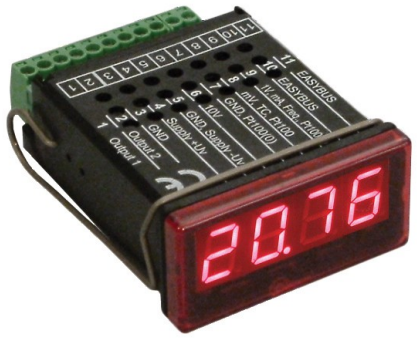
Produktinformation

Universal Measuring and Controlling Device GIA 20 EB



- **Universal inputs for standard signals, frequency, Pt100 / Pt1000 and thermocouples**
- **2 integrated switching outputs**
- **Self-monitoring and diagnostic system**
- **Interface**

Characteristics

The GIA 20 EB is a microprocessor-controlled displaying, monitoring and controlling device for universal use.
It has a universal input for standard signals (0..20 mA, 4..20 mA, 0..50 mV, 0..1 V, 0..2 V and 0..10 V), resistance thermometers (Pt100 and Pt1000), thermocouples (type J, K, N, S and T) and frequency (TTL and switch contact). Additionally it provides functions like rotation speed measurement or counter.
The GIA 20 EB is equipped with switching outputs. The output functions can be configured as 2-point controller, min/max alarm, 3-point controller, 2-point controller with min/max alarm, etc. The relay state is indicated by 2 additional LEDs below the 7-segment display.
The device identifies impermissible operating states like display or system errors and displays a corresponding error code.

Technical data

Measuring inputs

Design type	Input signal	Measuring range	Note
Voltage signal	0..10 V	0..10 V	Ri ≥ 300 kOhm
	0..2 V	0..2 V	Ri ≥ 10 kOhm
	0..1 V	0..1 V	Ri ≥ 10 kOhm
	0..50 mV	0..50 mV	Ri ≥ 10 kOhm
Current signal	4..20 mA	4..20 mA	Ri = ~ 125 Ohm
	0..20 mA	0..20 mA	Ri = ~ 125 Ohm
Resistance	Pt100	-50.0.. +200.0 °C	3-wire connection
	Pt100	-200.. +850 °C	
	Pt1000	-200.. +850 °C	2-wire connection
Thermocouple	NiCr-Ni type K	-270.0.. +1350 °C	
	Pt10Rh-Pt type S	-50.. +1750 °C	
	NiCrSi-NiSi type N	-270.. +1300 °C	
	Fe-CuNi type J	-170.. +950 °C	
	Cu-CuNi type T	-270.. +400 °C	
Frequency	TTL signal	0..10 kHz	
	Switching contact NPN	0..3 kHz	internal pull-up-resistor is switched on
	Switching contact PNP	0..1 kHz	internal pull-down-resistor is switched on
Rotation speed	TTL signal switching contact NPN, PNP	0..9999 U/min	switchable predistributor (1..1000), pulse frequency: max. 600000 pulses/min.
Up / down counter	TTL signal switching contact NPN, PNP	0..9999 U/min	switchable predistributor (1..1000), pulse frequency: max. 10000 pulses/min.

Switching outputs : 2 switch. outputs, not electrically isolated
Switching behavior : selectable: low-side, high-side or push-pull
Connection data : low-side: 28 V / 1 A
high-side: Uv / 200 mA

Output functions

Description	Function	
	Output 1	Output 2
2-point controller	digital 2-point controller	---
3-point controller	digital 2-point controller	digital 2-point controller
2-point controller with min/max alarm	digital 2-point controller	min/max alarm
Min/max alarm, together	---	min/max alarm
Min/max alarm, individual	max alarm	min alarm

Accuracy
Standard signal : < 0.2 % FS ±1digit
(for 0..50 mV: < 0.3 % FS ±1digit)
Resistance thermometer : < 0.5 % FS ±1digit
Thermocouple : < 0.3 % FS ±1digit
(for type S: < 0.5 % FS ±1digit)
Frequency : < 0.2 % FS ±1digit

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https://www.ibericadeautomatismos.com/producto/gia20eb-indicador-de-panel-universal/

Produktinformation

Measuring rate

Standard signal	:	100 measurements / second
Temperature	:	4 measurements / second
Frequency	:	100 measurements / second
Power supply	:	9..28 V DC
Power consumption	:	max. 30 mA (without switching output)
Working temperature	:	-20..+50 °C

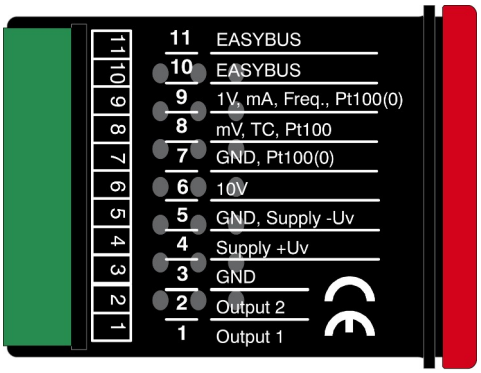
Display

Display	:	red LED display
Height	:	10 mm
Display range	:	-1999..+9999 digit initial / final value and decimal point freely adjustable
Electric connection	:	via screw / clamp terminals: 2-pole for interface and 9-pole for remaining connections wire cross section from 0.14..1.5 mm^2
Protection class	:	front IP54

Dimensions

Housing	:	glass fibre reinforced Noryl front panel: polycarbonate
Size	:	24 x 48 mm (H x W)
Mounting depth	:	approx. 65 mm (incl. screw / clamp terminals)
Panel mounting	:	by VA fixing clamps
Allowed panel thickness	:	from 1..10 mm
Panel cutout	:	21.7 x 45.0 mm [±0.5 mm] (H x W)

Connection diagram



Supply voltages

028	Supply voltage: 9..28 V DC (Standard)
G12	Design type with electrically isolated supply: 11..14 V
G24	Design type with electrically isolated supply: 22..27 V

Ordering code

GIA20EB - 1. - 2.

1.	**Supply voltage**	
	028	9..28 V DC (standard)
	G12	electrically isolated supply: 11..14 V
	G24	electrically isolated supply: 22..27 V
2.	**Option**	
	00	without option

Special design types (upon request)

SA1 **Tare and hold function**
(only for 4..20 mA input)
If the external switch gets closed the display is set to 0 (tare function).
As long as the switch stays closed the display is updated.
Once the switch is opened the display is frozen (hold function).

SA2 **Max value display**
(only for 4..20 mA input)
The currently measured value is displayed if the external switch is closed.
The highest measured value is displayed if the external switch is opened.

SA3 **Frequency input for 10..100 mV**
The device provides a frequency input with connection possibility for:
frequency (10..100 mV signals)

SA4 **Measuring input 0..30V**
The original measuring input 0..10 V is changed to a measuring input for 0..30 V signals. All adjustments for this input have to be done at the menu point 0..10 V.

SA5 **Delayed measured value displaying**
This special design type can be used to suppress short-term perturbations of signal normally changing very slowly.
This special design type influences only standard signal measurements.

Accessories

- **FS3T**
  Front panel with 3 operating buttons:
  for comfortable configuration, if switching points have to be consistently adjusted, for calling the min and max values, etc.
- **GNR 10**
  Power supply and relay module for supplying a GIA 20 EB (input: 230VAC, power supply for device and transmitter, 2 relay outputs)

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