

## ИНДИКАТОРЫ И КОНТРОЛЛЕРЫ GIR 2002, 2002PID

### ТЕХНИЧЕСКИЕ ХАРАКТЕРИСТИКИ

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# Universal Measuring and Regulating Device GIR 2002



- Microprocessor-controlled display, monitoring and regulating device
- Universal input for standard signals, frequency, Pt100/Pt1000 and thermocouples
- Switching outputs variably configurable

## Characteristics

The GIR 2002 is particularly suitable for less complex control systems.

The GIR 2002 is a microprocessor-controlled displaying, monitoring and regulating 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 switching outputs whose switching functions can be configured variably.

The device has a EASYBus interface by default that makes the GIR 2002 to a full-fledged EASYBus module. A additional interface converter allows communicating with a PC.

## Technical data

### Measuring inputs

Standard signals : 0..20 mA, 4..20 mA, 0..50 mV, 0..1 V, 0..2 V and 0..10 V  
 Resistance thermometer : Pt100 (3-wire), Pt1000 (2-wire)  
 Thermocouples : type J, K, N, S, T  
 Frequency, rotation speed  
 Flow  
 Up/down counter  
 Serial interface

### Output functions

Control mode : On / OFF  
 Switching functions : display, 2-point, 3-point, 2-point with min-/max-alarm, min-/max-alarm

### Display

Display : LED display  
 Height : 13 mm  
 Display range : -1999..+9999 digit, initial / final value and decimal point freely selectable  
 Operation : via 4 buttons or via interface

Power supply for transmitter : 24 V DC  $\pm 5\%$ , 22 mA, elec. isolated at DC-supply: 18 V DC  
 Working temperature : -20..+50 °C  
 Electric connection : via screw / clamp terminals cable cross section: 0.14..1.5 mm<sup>2</sup>  
 Protection class : front IP54, with optional sealing: IP65  
 Bus load : 1

## Dimensions

Size : 48 x 96 mm (H x W)  
 Mounting depth : 115 mm (incl. screw / clamp terminals)  
 Panel mounting : by fixing clamps  
 Panel cutout : 43.0 x 90.5 [ $\pm 0.5$  mm] (H x W)

## Design types / options

230A	supply voltage: 230 V AC (standard)
012D	supply voltage: 12 V DC (11..14 V)
024D	supply voltage: 24 V DC (22..27 V)
024A	supply voltage: 24 V AC ( $\pm 5\%$ )
115A	supply voltage: 115 V AC ( $\pm 5\%$ )
R1	output 1 = potential-free relay switching output (normally-open contact, 5 A / 250 V AC)
H1	output 1 = control output for external semiconductor relay (15 mA / 6 V DC)
R2	output 2 = potential-free relay switching output (change-over contact, 10 A / 250 V AC)
H2	output 2 = control output for external semiconductor relay (15 mA / 6 V DC)
R3	additional output 3 = potential-free relay switching output (change-over, 1 A / 40 V AC o. 30 V DC)
H3	additional output 3 = control output for external semiconductor relay (5 mA / 14 V DC)
N3	additional output 3 = elec. isolated npn switching contact (max. 1 A / 30 V DC)
AA1	output 1 = freely scalable analog output 0(4)..20 mA no additional 3 <sup>rd</sup> output possible
AV1	output 1 = freely scalable analog output 0..10 V kein no additional 3 <sup>rd</sup> output possible
AA3	output 3 = freely scalable analog output 0(4)..20 mA
AV3	output 3 = freely scalable analog output 0..10 V
NS/DIF	<b>2-channel differential controller</b> The GIR 2002 NS/DIF ... is a displaying, monitoring and regulating device for difference measurements. The measuring inputs are designed for following standard signals: (2x) 4..20 mA, (2x) 0..20 mA or (2x) 0..10 V Please state your desired input signal at order transaction.
SW	<b>Set-point controller</b> This design type uses the 0..10 V standard signal input as set-point input.

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# Universal Measuring and Regulating Device GIR 2002 PID



- PID control mode
- Universal input for standard signals, frequency, Pt100/Pt1000 and thermocouples
- Switching outputs variably configurable

## Characteristics

The GIR 2002 PID is particularly suitable for less complex control systems which require PID control.

The GIR 2002 PID is a microprocessor-controlled displaying, monitoring and regulating 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 switching outputs whose switching functions can be configured variably.

The device has an EASYBus interface by default that makes the GIR 2002 PID a full-fledged EASYBus module. An additional interface converter allows communicating with a PC.

## Technical data

### Measuring inputs

Standard signals : 0..20 mA, 4..20 mA, 0..50 mV, 0..1 V, 0..2 V and 0..10 V

Resistance thermometer : Pt100 (3-wire), Pt1000 (2-wire)

Thermocouples : type J, K, N, S, T

Frequency, rotation speed

Flow

Up/down counter

Serial interface

### Output functions

Control mode : PID

Switching functions : display, 2-point, 3-point, 2-point with min-/max-alarm, min-/max-alarm

### Display

Display : LED display

Height : 13 mm

Display range : -1999..+9999 digit, initial / final value and decimal point freely selectable

Operation : via 4 buttons or via interface

Power supply for transmitter : 24 V DC  $\pm 5\%$ , 22 mA, elec. isolated at DC-supply: 18 V DC  
 Working temperature : -20..+50 °C  
 Electric connection : via screw / clamp terminals cable cross section: 0.14..1.5 mm<sup>2</sup>  
 Protection class : front IP54, with optional sealing: IP65  
 Bus load : 1

## Dimensions

Size : 48 x 96 mm (H x W)  
 Mounting depth : 115 mm (incl. screw / clamp terminals)  
 Panel mounting : by fixing clamps  
 Panel cutout : 43.0 x 90.5 [ $\pm 0.5$  mm] (H x W)

## Design types / options

230A	supply voltage: 230 V AC (standard)
012D	supply voltage: 12 V DC (11..14 V)
024D	supply voltage: 24 V DC (22..27 V)
024A	supply voltage: 24 V AC ( $\pm 5\%$ )
115A	supply voltage: 115 V AC ( $\pm 5\%$ )
R1	output 1 = potential-free relay switching output (normally-open contact, 5 A / 250 V AC)
H1	output 1 = control output for external semiconductor relay (15 mA / 6 V DC)
R2	output 2 = potential-free relay switching output (change-over contact, 10 A / 250 V AC)
H2	output 2 = control output for external semiconductor relay (15 mA / 6 V DC)
R3	additional output 3 = potential-free relay switching output (change-over, 1 A / 40 V AC o. 30 V DC)
H3	additional output 3 = control output for external semiconductor relay (5 mA / 14 V DC)
N3	additional output 3 = elec. isolated npn switching contact (max. 1 A / 30 V DC)
AA3	output 3 = freely scalable analog output 0(4)..20 mA
AV3	output 3 = freely scalable analog output 0..10 V
SA1	output 1 = continuous output 0(4)..20 mA no additional 3 <sup>rd</sup> output possible
SV1	output 1 = continuous output 0..10 V no additional 3 <sup>rd</sup> output possible
SA3	output 3 = continuous output 0(4)..20 mA
SV3	output 3 = continuous output 0..10 V

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