

**Product information**

**Controller**

# Differential Controller GIR 230 ... / DIF



- Choose between 3 input types
- Temperature difference sensor 1 – sensor 2
- Self-monitoring and diagnostic system

## Characteristics

The GIR 230 ... / DIF is a microprocessor-controlled displaying, monitoring and regulating device for universal use. The device has 2 inputs for standard signals, Pt1000 or NTC. The difference between both inputs (sensor 1 – sensor 2) is displayed and used for all regulating uses. The GIR 230 ... / DIF provides 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 GIR 230 ... 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
NS	0..10 V	0..10 V	
	420 mA	4..20 mA	
	0..20 mA	0..20 mA	
Pt1000	Pt1000	-200..+850 °C	2-wire connection
NTC	NTC, 10K	-40.0..+120.0 °C	2-wire

### Switching outputs

Design type	Outputs	Switching functions
NS	2x relay outputs	2-point
Pt1000	230V switching, (normally-open)	3-point
NTC	1x NPN output, ground switching (open collector)	2-point with alarm
		3-point with alarm min/max alarm

### Accuracy

NS : < 0.2 % FS ±1digit  
 Pt1000 : < 0.5 % FS ±1digit  
 NTC : < 0.5 % FS ±1digit

### Measuring rate

NS : 100 measurements / second  
 Pt1000 : 4 measurements / second  
 NTC : 4 measurements / second

Power supply : 230 V, 50/60 Hz  
 Power consumption : 2 VA  
 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

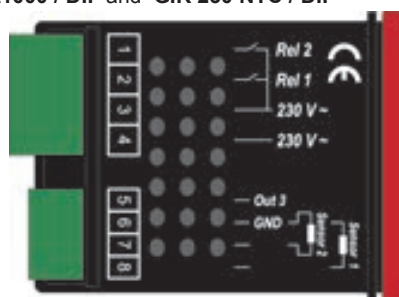
Operation : via 3 buttons  
 Electric connection : via screw / clamp terminals: 2-pole for interface and 9-pole for remaining connections wire cross section from 0.14..1.5 mm<sup>2</sup>  
 Protection class : front IP54

## Dimensions

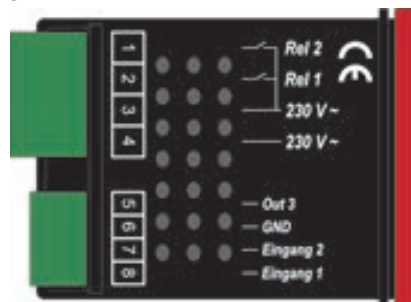
**Housing** : glass fibre reinforced Noryl front panel: polycarbonate buttons: ABS  
**Size** : 24 x 48 mm (H x W)  
**Mounting depth** : approx. 65 mm (incl. screw / clamp terminals)  
**Panel mounting** : by VA fixing clamps  
**Allowed panel thickness** : from 1..10 mm  
**Panel cutout** : 21.7 x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

## Connection diagram

### GIR 230 Pt1000 / DIF and GIR 230 NTC / DIF



### GIR 230 NS / DIF - ...



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**Product information**

**Controller**

**Design types**

NS	Standard signal input differential controller with 2 inputs for standard signal (4..20 mA, 0..20 mA, 0..10 V)
Pt	Resistance input differential controller with 2 inputs for Pt1000
NT	Differential controller with 2 inputs for NTC

**Ordering code**

GIR230  / DIF -

<b>1. Design type</b>	
NS	standard signal input
Pt	resistance input
NT	NTC input
<b>2. Measuring input ONLY at type NS (GIR 230 NS / DIF ...)</b>	
420A	input signal: 4..20 mA
020A	input signal: 0..20 mA
010V	input signal: 0..10 V