PID controller with integrated SSR DRR450

PID controller that can be plugged into a static relay
For multi-zone systems controlled using RS485 Modbus



KEY FEATURES

- Reduced wiring and assembly time
- Integrated charge current measurement
- Control via RS485 Modbus RTU
- A second programmable output

Description

The DRR450 from Pixsys is a PID thermoregulator without an LCD display, designed to be plugged directly into a single-phase static relay (SSR). Each heating zone thus has its own controller, which is controlled and monitored remotely via the serial connection.

Reduced wiring and assembly time

The direct connection to the power module eliminates the control wiring between the controller and the SSR. The 22.5 mm module mounts on a DIN rail, which allows for the alignment of numerous zones in a compact cabinet.

Integrated charge current measurement

The built-in current transformer monitors the current consumed by the resistance and triggers an alarm in case of a break or defect, valuable information for machines with multiple heating zones.

Control via RS485 Modbus RTU

Each DRR450 communicates as a Modbus RTU slave, with up to 128 nodes on the line. Setpoints, measurements and alarms are managed by the PLC, the operator panel or the SCADA system.

A second programmable output

In addition to the SSR control, a second 24 VDC output is available for an alarm or for the hot/cold dual PID function.

Typical applications

- Injection presses and multi-zone extruders
- Hot ducts and heated molds
- Packaging and thermal welding machines
- Fours and tunnels with multiple zones controlled by an automatic system

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Technical specifications

General characteristics

Order code	DRR450-12A-T128
Format	Module 22.5 mm ESUC series, DIN rail mounting EN50022
Compatibility	Celduc SU series monophasic static relay
Nutrition	24 VDC ±10 % (galvanic isolation 2.5 kV)
Consumption	1 W/VA
Display	None (configuration and supervision via serial connection)
Materials	Polycarbonate V0 case
Weight	Approx. 75 g
Protection index	IP20 enclosure and connectors
Terms of use	0 to 45 °C, 35 to 95 % RH
Certifications	CE

Entrées

Analog input	1 thermocouple input K, J, T, E (resolution 13 bits)
Compensation of cold welding	Automatic, 0 to 50 °C
Precision	±0.2% full scale at 25 °C
Current transformer entry	1 input 50 mA integrated

Outings and communication

SSR command	1 output 5 VDC, 20 mA max. to the static relay
Auxiliary output	1 output 24 VDC, 50 mA max. on the terminal block (alarm or cold)
Communication	RS485, 1200 to 115,200 baud, Modbus RTU, up to 128 nodes

Software functions

Regulatory algorithms	ON/OFF with hysteresis, P, PI, PID, PD time-proportional
Adjustment	Manual or automatic (autotuning)
Alarm modes	Absolute/threshold, band, high/low gap, manual reset and delay optional, loop break alarm
Double PID	Hot/cold
Soft-start	Gradient in degrees/hour or fixed output percentage
Configuration	MyPixsysLab software

Technical advice and quote

DYNATIME SA distributes this product in Switzerland from Marin (NE). Our team helps you choose the right version for your application and sends you a quote quickly.
+41 32 968 15 36 · **info@dynatime.ch** · dynatime.ch/en/catalog/drr450-integrated-ssr/

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