

## Universal PID-Controller for DIN-Rail URDR

- PID-Controller for mounting on DIN-Rail
- Universal AC/DC power supply
- Universal input für process signals, thermocouple, RTD
- 2-line LED display
- Easy programming via software or push buttons
- Analogue output or SSR output
- 2 alarm outputs



URDR

This compact universal controller for DIN-Rail mounting is an all-rounder. With the universal input for the most common temperature sensors and process signals combined with the universal power supply and the newest programming and control technologies, this PID-controller is the best solution for sophisticated applications. This controller is usable as a classic PIC controller, as well as a signal conditioner (18 different input signals and a galvanic isolated analogue output)

Beside the excellent price/performance-ratio, this controller convinces with his robust housing and brilliant display.

### Display: 2-line LED-Display

Upper line: Process value, 4-digit, green with 10.2 mm digits  
 Lower line: Setpoint, 4-digit, red with 7,6 mm digits

**Indicators:** Eight red indicators for relays outputs, alarm status, serial communication and tuning..

- C1, C2 ON, when output is active.  
C1 as relay/SSR/mA/voltoutput or C1 (opening) and C2 (closing) for electronic valves
- A1, A2,A3 ON, when alarm is active
- MAN ON, when the function "manual" is switched on
- TUN ON, when controller is in "autotune" mode
- REM ON when serial communication is active

**Buttons:** 3 push buttons for programming and setting up the setpoints.

**Input ranges:** Configuration of the input signal via software or push buttons.

Thermocouples type K, S, R, J; internal cold junction (from 0 °C to 50 °C; accuracy of cold junction 0,1 °C/°C)  
 RTD: Pt100, Pt500, Pt1000, Ni100, PTC1K, NTC10K  
 Linear inputs: 0 V to 10 V, 0/4 mA to 20 mA, 0 mV to 40 mV  
 Potentiometer: 1 kOhm to 6/160 kOhm

**Accuracy:** Tolerance at 25 °C +/-0.2 % ± 1 digit for thermocouple input, RTD input and analogue input signal.

**Measuring rate:** Programmable up to 4,1 msec. (242 Hz).

**User input:** ( switchable via contact input signal).

Alternative usable functions: Hold/freeze values, selecting setpoint 1 to 4, activating tuning function.

**Thermal amperometer input:** max. 50 mA with 80 msec. Cycle.

**Excitation:** +12 VDC @ 30 mA

**Relay output:** 1 change over relay with 5 A @ 250 VAC. Programmable as controller output for heating/cooling and/or alarm

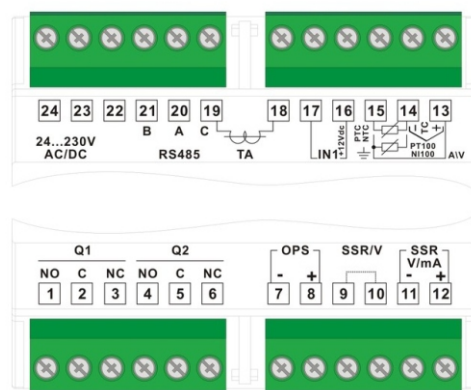
**Analogue/SSR-output:** Selectable via jumper. Programmable analogue output 0 VDC to 10 VDC or 0/4 mA to 20 mA with a resolution of 4.000 steps. Programmable as controller output or retransmission process/setpoint value. SSR-output 12 VDC @ max. 30 mA.

**Communication port:** RS485 with Modbus RTU as slave.

### Supply:

24VAC/DC to 230 VAC/DC +/-15 %, 50/60Hz; 5,5 VA

### Wiring plan:



**Protection class:** IP20 from the front and back plane.

**Housing:** Blue and robust plastic case. Plastic front panel with silicone pad..

**Dimensions:** W 72 mm x H 908 mm x D 64 mm.

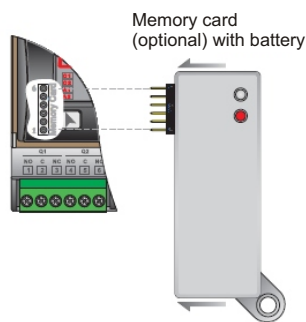
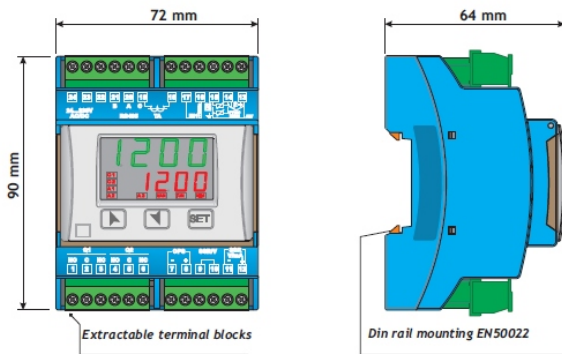
**Connection:** Via removable terminal block. .

**Ambient conditions:** Operating temperature: 0 °C to +45 °C; relative humidity 35 % to 95 % rF, non condensing..

**Weight:** 165 gramms

**Scope of delivery:** Controller, manual..

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**Programming:** The controller will be programmed via push buttons or Windows™-software. The memory card is battery powered. With this technology you can programm the controller without powering it up (up to 1000 programm cycles with one battery).

**Functionality:**

Control algorithms: ON - OFF with hysteresis, P, P.I., P.I.D., P.D. time proportioned, dead band. Additionally open / close logic for motorized valves

**Tuning:**

Manual or automatic tuning selectable.

**Alarm modes:** Absolute / Threshold, band, High / Low deviation. Alarm with optional manual reset. Standby and hysteresis programmable

**Second controller output (cooling):** Programmable instead of alarm output with P, P.I., P.I.D., P.D. time proportioned with dead band.

**Data protection:** Lock of command / alarm setpoint - Access to parameters by password.

**Order codes**

Type	Order-No.
Universal controller, DIN Rail, 24 to 230VAC/VDC	URDR0001
<b>Accessories</b> Programming module with USB cable Software download under: <a href="http://www.wachendorff.de/wp/dpc_dow_epg_sof.html">http://www.wachendorff.de/wp/dpc_dow_epg_sof.html</a>	SFUR0KIT