

OMD 201RTD



2003-3-en

- **4/6 digit programmable projection**
- **Digit height 57; 100; 125 mm**
- **Pt 100; 500; 1 000; Ni 1 000; 10 000**
- **-99,9° ... 399,9° C**
- **Digital filter**
- **Power supply 230 VAC**

Options

Comparators • Data output • Universal analog output • Power supply 24 VAC, 110 VAC, 10...30 VDC

Description

The OMD 201RTD model is a 4 or 6 digit large display > programmable thermometer for sensors Pt 100; 500; 1 000; Ni 1 000; 10 000.

The instrument is based on an 8-bit processor with very precise A/D converter, that secures high accuracy, stability and easy operation of the instrument. Given the IP64 cover the display is construed also for outdoor application. Connection is executed through cable bushings and also the connector for control keyboard has the necessary protection.

A holder for wall mounting applications may be supplied upon request to large display.

Standard functions

Programmable input

Type Pt 100; 500; 1 000, Ni 1 000; 10 000
Projection -99.9° ...399.9° C

Compensation

Conduct for 2-wire connection
Probes internal connection (conduct resistance in the measuring head)

Digital filters

Radius of insensitiv. band of suppressed change of measured value

External control

Hold display/instrument blocking
Lock control keys blocking
Instrument setting 4 keybutton keyboard with 5 meter cable

Operation

The instrument is set and controlled by four control keys located on an individual box, which is connected with a 5 m cable. All programmable settings of the instrument are realised in two adjusting regimes.

Configuration menu (hereinafter referred to as CM) is protected by an optional number code and contains complete instrument setting

User menu may contain arbitrary programming settings defined in „CM“ with another selective restriction (see, change))

All programmable parameters are stored in the EEPROM memory (they hold even after the instrument is switched off). The measured units may be projected on the 6-digit display.

Options

Comparators are assigned to monitor one or two limit values with relay output. The limits have adjustable hysteresis within the full range of the display as well as selectable delay of the switch-on in the range of 0...99,9 s. Reaching the preset limits is signalled by LED and simultaneously by the switch-on of the relevant relay.

Data outputs are for their rate and accuracy suitable for transmission of the measured data for further projection or directly into the control systems. We offer an isolated RS232 and RS485 with the DIN MessBus/ASCII protocol.

Analog outputs will find their place in applications where further evaluating or processing of measured data is required in external devices. We offer universal analog output with the option of selection of the type of output - voltage/current. The value of analog output corresponds with the displayed data and its type and range are selectable in CM.

Technical data

MEASURING RANGE

Pt	-99,9°...399,9°C
Ni	-30°...250°C
Type:	Pt 100; 500; 1 000 - 3 860 ppm/°C (EU) Pt 100 - 3 920 ppm/°C (US) Ni 1 000; 10 000 - 5 000 ppm/°C Ni 1 000; 10 000 - 6 180 ppm/°C
Connection:	2, 3 or 4 wire

PROJECTION

Display:	4 (100/125 mm) or 6 digit (57/100/125 mm) red/green/orange 7-segment LED, digit height 57, 100 or 125 mm
Decimal point:	adjustable - in Configuration menu
Brightness:	adjustable - in Configuration/User menu

INSTRUMENT ACCURACY

Tempco:	60 ppm/°C
Accuracy:	±0,2 % of range + 1 digit - for range: -999...3999
Rate:	1,3 - 2,5 - 5 - 10 - 20 - 40 measurements/s
Resolution:	0,1°C
Watch-dog:	reset after 1,2 s
Setting:	external keyboard with 5 m cable
Function:	Hold - stop measuring (upon contact) Lock - control keys blocking (upon contact), not simultaneously with Hold function Digital filter - adjustable in Configuration menu
Calibration:	at 25°C and 40 % r.h.

COMPARATOR

Type:	digital, adjustable in programming mode, contact switch-on < 30 ms
Limit 1 and 2	999999, the limits setting depends on the used input section
Hysteresis:	0...99999
Delay:	0...99,9 s
Outputs:	2 relays with switching contact (250 VAC/50 VDC, 3 A)

DATA OUTPUTS

Data format:	rate 600...115 200 Baud, 8 bit + no parity + 1 stop bit (ASCII)
RS 232	isolated
RS 485	isolated, addressing (max. 31 instruments)

ANALOG OUTPUTS

Type:	isolated, programmable with resolution max. 10 000 points, analog output corresponds with the displayed data, output type and range are selectable in CM
Non-linearity:	0,2 % of range
Tempco:	100 ppm/°C
Rate:	response to change of value < 40 ms
Voltage:	0...2 V/5 V/10 V
Current:	0...5 mA/20 mA/4...20 mA (compensation of conduct up to 600 Ohm)

POWER SUPPLY

24; 110; 230 VAC, 50/60 Hz, ±10 %, 15 VA
10...30 VDC/max. 2 A, (24 VDC/0,7 A), isolated
- power supply is protected by a fuse inside the instrument

MECHANIC PROPERTIES

Material:	anodized aluminium, black
Dimensions:	see dimensions
Panel cut:	see dimensions

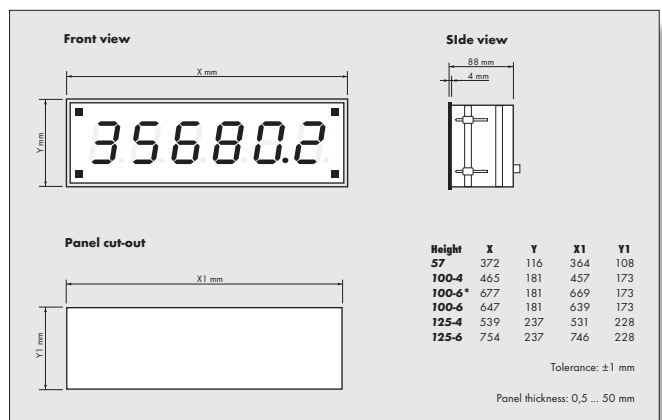
OPERATING CONDITIONS

Connection:	cable bushings, terminal board inside, conductor section up to 2,5 mm ²
Stabilization period:	within 15 minutes after switch-on
Working temperature:	0°...60°C, (storage temperature: -10°...85°C)
Covering:	IP64
Construction:	safety class I
Electrical safety:	EN 61010-1, A2
Overvoltage category:	for pollution degree II III. - instrument power supply, relay output (300 V) II. - input, output (300 V)
EMC:	EN 61000-3-2+A12; EN 61000-4-2, 3, 4, 5, 8, 11; EN 550222, A1, A2

Connection

To maintain the IP65 covering the display connection is realised through bushings directly on the terminal board inside the instrument.
The cable from control keyboard ends by a connector with IP64 covering.

Dimensions



Order code

