

OM 371RTD



2003-3-en

- **3 ¾ digit projection**
- **Pt 100; 500; 1 000; Ni 1 000; 10 000**
- **-99,9° ... 399,9° C**
- **Dual comparator**
- **Digital filter**
- **Size of DIN 96 x 48 mm**
- **Power supply 230 VAC**

Options

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

Description

The OM 371RTD model is a 3 ¾ digit panel programmable thermometer for sensors Pt 100; 500; 1 000, Ni 1 000; 10 000.

The instrument is based on an 8-bit controller with precise A/D converter, that secures high accuracy, stability and easy operation of the instrument.

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

Output

Limits 2 relays with switching contact, The limits have both adjustable hysteresis and optional delay of the switch-on. Reaching the limits is signalled by LED and at the same time by the switch-on of the relevant relay.

Operation

The instrument is set and controlled by five control keys located on the front panel. All programmable settings of the instrument are realised in two adjusting modes.

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 display shows the measured units (°C).

Options

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:	-999...3999, red or green 14-segment LED, digit height 14 mm
Decimal point:	fixed
Brightness:	adjustable - in Configuration/User menu

INSTRUMENT ACCURACY

Tempco:	60 ppm/°C
Accuracy:	±0,2 % of range + 1 digit
Rate:	1,3 - 2,5 - 5 - 10 - 20 - 40 measurements/s
Resolution:	0,1°C
Watch-dog:	reset after 1,2 s
Function:	Hold - stop measuring (upon contact) 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	-999...3999
Hysteresis:	0...999
Delay:	0...99,9 s
Outputs:	2 relays with switch-on (switch-off) contact (250 VAC/30 VDC, 3 A) - the relay function is adjustable in Configuration menu upon request SSR (250 VAC, 1 A) or open collector may be fitted

DATA OUTPUTS

Data format:	rate 600...115 200 Baud 7 bit + even parity + 1 stop bit (DIN MessBus) 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/0/4...20 mA (compensation of conduct up to 600 Ohm)

POWER SUPPLY

24; 110; 230 VAC, 50/60 Hz, ±10 %, 5 VA
10...30 VDC/max. 300 mA, (24 VDC/110 mA), isolated
- power supply is protected by a fuse inside the instrument

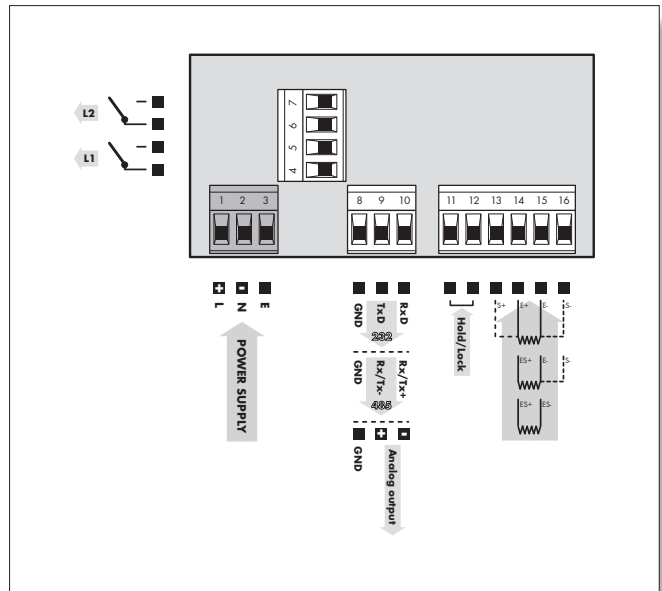
MECHANIC PROPERTIES

Material:	Noryl GFN2 SE1, incombustible UL 94 V-I
Dimensions:	96 x 48 x 120 mm
Panel cut:	90,5 x 45 mm

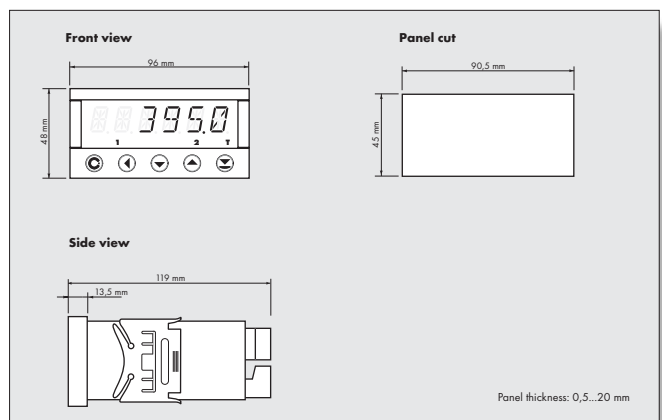
OPERATING CONDITIONS

Connection:	connector terminal board, conductor section up to 1,5/2,5 mm ²
Stabilization period:	within 15 minutes after switch-on
Working temperature:	0°...60°C
Storage temperature:	-10°...85°C
Covering:	IP65 (front panel only)
Construction:	safety class I
Electrical safety:	EN 61010-1, A2
Overvoltage category:	for pollution degree II III. - instrument power supply, relay outputs (300 V) II. - input, output (300 V)
EMC:	EN 61000-3-2+A12; EN 61000-4-2, 3, 4, 5, 8, 11; EN 55022, A1, A2

Connection



Dimensions



Order code

