

## OM 351RTD



2003-3-en

- **3 1/2 digit projection**
- **Pt 100; 500; 1 000; Ni 1 000; 2226; 10 000**
- **-50,0° ...199,9° /400° C**
- **Digital filter**
- **Size of DIN 96 x 48 mm**
- **Power supply 230 VAC**

### Options

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

### Description

The OM 351RTD is a low-cost 3 1/2 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 A/D converter, that secures good accuracy, stability and easy operation of the instrument.

### Standard functions

#### Programmable display projection

Type Pt 100; 500; 1 000, Ni 1 000; 2 226; 10 000  
Projection -50° ...199,9° C, -50° ...400° C

#### Compensation

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

#### Digital filter

Radius of insensitiv. band of suppressed change of measured value  
Exponen.average from 2...100 measurements

#### External control

Hold display/instrument blocking  
Lock control keys blocking or blocking access into "CM"

### 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).

### Options

**Comparators** are assigned to monitor 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 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	-50,0...199,9°C, -50...400°C
Ni	-30...250°C
Type:	Pt 100; 500; 1 000 - 3 860 ppm/°C (EU) Pt 100 - 3 920 ppm/°C (US) Ni 1000; 2 226; 10 000 - 5 000 (6 180) ppm/°C
Connection:	2, 3 or 4 wire

### PROJECTION

Display:	±1999, red or green 7-segment LED, digit height 14 mm
Decimal point:	fixed
Brightness:	adjustable - in Configuration/User menu

### INSTRUMENT ACCURACY

Tempco:	100 ppm/°C
Accuracy:	±0,2 % of range + 1 digit
Rate:	0,5 - 1,2 - 2,5 - 5 - 10 measurements/s
Resolution:	0,1°/1°C
Watch-dog:	reset after 20 ms
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	±1999
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 1 200...38 400 Baud, 8 bit + no parity + 1 stop bit
RS 232	isolated
RS 485	isolated, addressing (max. 31 instruments)

### ANALOG OUTPUTS

Type:	isolated, programmable with resolution max. 5 000 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 < 100 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 %, 3 VA
12...24 VDC/max. 200 mA, non-isolated (w/o analog output and RSxxx)
10...30 VDC/max. 300 mA, (24 VDC/110 mA), isolated
- power supply is protected by a fuse inside the instrument

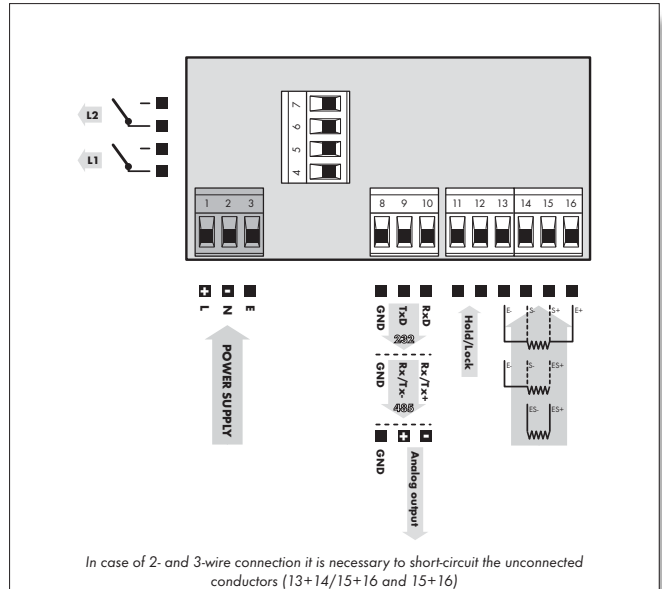
### MECHANIC PROPERTIES

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

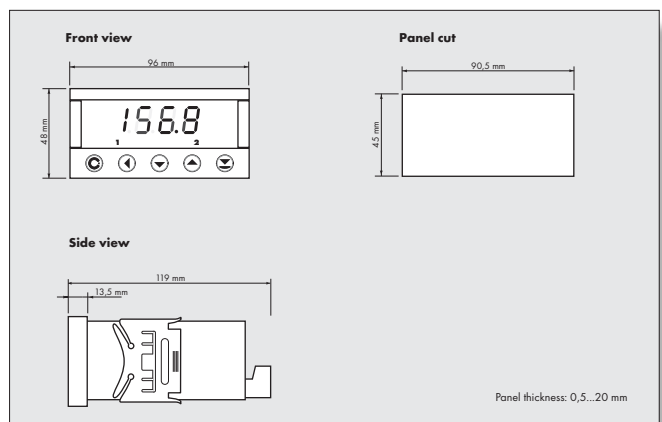
### OPERATING CONDITIONS

Connection:	connector terminal board, conductor section up to 2,5 mm <sup>2</sup>
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
Overtoltage 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



## Dimensions



## Order code

