

OM 472T/C



- **4 3/4 digit programmable projection**
- **J, K, T, E, B, S, R, N**
- **Aut. compensation of cold junctions**
- **Mathematic functions, Digital filters**
- **Size of DIN 96 x 48 mm**
- **Power supply 230 VAC**

Options

Comparators • Excitation • Data output • Universal analogue output • Real time
Power supply 24 VAC, 110 VAC, 10...30 VDC

Description

The OM 472T/C model is a 4 3/4 digit panel thermometer for thermocouples J, K, T, E, B, S, R and N.

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

Standard functions

Programmable input

Type J, K, T, E, B, S, R and N

Compensation of cold junctions

Type manual or automatic
also performed in „CM“ may be the selection of the type of thermocouple and compensation of cold junctions, which is adjustable (0...99°C) according to temperature in the compensation box or automatic, according to temperature at the input brackets of the instrument

Digital filters

Floating average from 2...30 measurements
Exponen. average from 2...128 measurements
n-th value from 2...255 measurements
Radius of insensitiv. band of suppressed change of measured value

Mathematic functions

Min./max. value registration of min./max. value reached during measurements
Top value the display shows only max. (min.) value for a selected time period
Round up/down setting the projection step for display
Math. operations polynome, 1/x, logarithm, exponential, power, root, sin x

External control

Hold display/instrument blocking
Lock control keys blocking
Resetting MM resetting min/max value to zero

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/°F/K).

Options

Comparators are assigned to monitor one, two, three or four limit values with relay output. The user may select limits regime: LIMIT/DOSING/FROM-TO. 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.

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

Real time is an internal time control of data collection. It is suitable everywhere where it is necessary to register measured data in a given time segment. Up to 65 000 values may be stored in the instrument's memory. Data transmission into PC via serial interface RS232/485.

Technical data

MEASURING RANGE

Type:	J (Fe-CuNi)	-200°...900°C
	K (NiCr-Ni)	-200°...1 300°C
	T (Cu-CuNi)	-200°...400°C
	E (NiCr-CuNi)	-200°...1 000°C
	B (PtRh30-PtRh6)	300°...1 820°C
	S (PtRh10-Pt)	-50°...1 760°C
	R (Pt13Rh-Pt)	-50°...1 740°C
	N (Omegalloy)	-200°...1 300°C

PROJECTION

Display:	±49999, 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
Rate:	0,05 - 0,1 - 0,2 - 0,4 - 0,7 - 1,4 - 2,8 - 5,6 - 8,3 - 16,6 measurements/s
Comp. of cold junc.:	adjustable 0°...99°C or automatic
Resolution:	0,1°C
Projection:	°C/°F/K
Watch-dog:	reset after 1,2 s
Input filters:	floating (2-30) and exp. average, radius of insensitiveness, n-th value (2-255)
Function:	offset, min./max. value, Tare, top value, Hold, Lock, Math. operations
External control:	INP 1, INP 2 - adjustable fce: Hold, Lock, Tare, resetting
Real time:	15 ppm/°C
Calibration:	time-date-display value (max. 65000 data), transmission of stored data RS 232 at 25°C and 40 % r.h.

COMPARATOR

Type:	digital, adjustable in programming mode, contact switch-on < 30 ms
Limit 1... 4	±49999
Hysteresis:	0...9999
Delay:	0...99,9 s
Outputs:	4 relays with switching contact (250 VAC/50 VDC, 3 A) upon request SSR (250 VAC, 1 A) or open collector may be fitted

DATA OUTPUTS

Data format:	rate 600...38 400 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 (up to 31 instruments)

ANALOGUE OUTPUTS

Type:	isolated, programmable with resolution max. 10 000 points, analogue 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 %, 7,5 VA
10...30 VDC/max. 1,2 A, (24 VDC/350 mA), isolated
- power supply is protected by a fuse inside the instruments

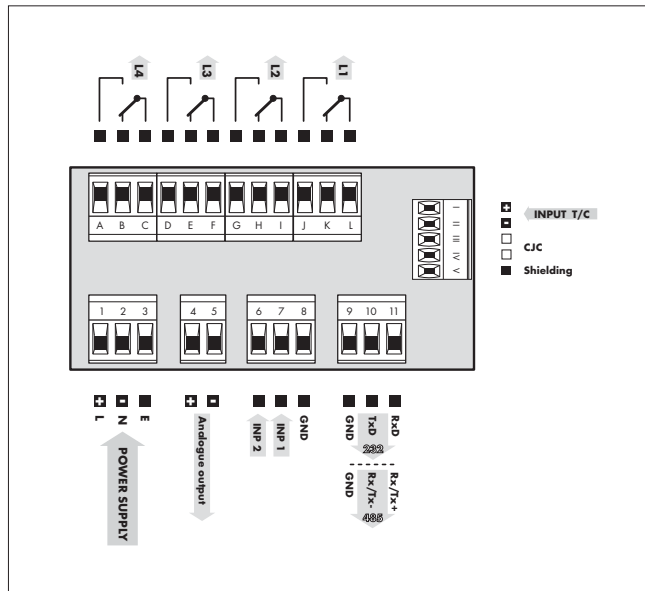
MECHANIC PROPERTIES

Material:	Noryl GFN2 SE1, incombustible UL 94 V-1
Dimensions:	96 x 48 x 154 mm
Panel cut:	90,5 x 45 mm

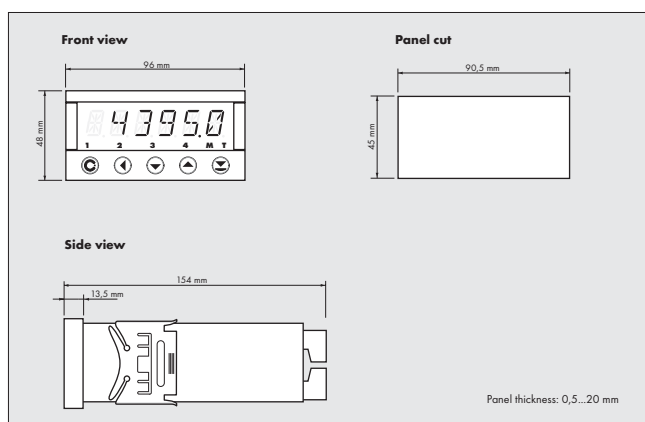
OPERATING CONDITIONS

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 II
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 550222, A1, A2

Connection



Dimensions



Order code

