

OMX 100T/C

OMLINK



2003-3-en

- **B; R/S/T; E/J/K/N**
- **Aut. compensation of cold junctions**
- **Output: 0/4...20 mA/0...5 mA/
0...2/5/10 V/0...2 kHz**
- **To DIN rail 35 mm**
- **Power supply 230 VAC**

Options

Dual comparator • Data output • Real time • Power supply: 24 VAC, 110 VAC, 10...30 VDC

Description

The OMX 100T/C model is a programmable transmitter of signal from thermocouples J, K, T, E, B, S, R and N to isolated analog output.

The instrument is based on an 8-bit controller with precise A/D converter, that secures high accuracy, stability of the instrument. For projection of measured data and easier setting it is, as a standard, equipped with illuminated LCD display.

The transmitter is in a plastic DIN box with a terminal board for mounting to rail of 35 mm width.

Transmitter power supply (230 VAC), Input and output signal have galvanic separation with isolation voltage of 500 V.

Operation

The transmitter is set by control keys on the front panel or via data line RS 232/485.

A standard equipment is the OM link interface, by means of which it is possible to adjust and file all settings of the equipment as well as perform firmware update. The OM link program is freely accessible on the web.

All programmable parameters are stored in the EEPROM memory (they hold even after the instrument is switched off).

Options

Dual comparator serves to monitor two limit values with relay output. The limits have adjustable hysteresis as well as selectable delay of the switch-on. 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.

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.

Standard functions

Digital filter

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

External control

Hold display/instrument blocking
Lock control keys blocking or blocking access into menu

Output

Analog programmable
0...5/0/4...20 mA
0...2/5/10 V
0,2... 2 200 Hz

Technical data

MEASURING RANGE

Range 1:	B (PtRh30-PtRh6)	300°...1 820°C
Range 2:	R (Pt13Rh-Pt)	-50°...1 740°C
	S (PtRh10-Pt)	-50°...1 760°C
	T (Cu-CuNi)	-200°...400°C
Range 3:	E (NiCr-CuNi)	-200°...690°C
	J (Fe-CuNi)	-200°...900°C
	K (NiCr-Ni)	-200°...1 300°C
	N (Omegalloy)	-200°... 1300°C

PROJECTION

Display: LCD with illumination, 2x 3 signs + 2x description (3 signs)
 Decimal point: adjustable - menu

INSTRUMENT ACCURACY

Tempco: 100 ppm/°C
 Accuracy: ±0,3% of range (applies for 10 measurements/s)
 Rate: 0,5 - 1,2 - 2,5 - 5 - 10 - 20 - 40 - 80 measurements/s
 Comp.of cold junct.: adjustable 0°...99°C or automatic
 Overload capacity: 2x (long-term)
 Watch-dog: reset after 20 ms
 Calibration: at 25°C and 40 % r.h.

OUTPUTS

Analog: isolated, programmable with resolution max. 12 bit
 Non-linearity: 0,1 % of range
 Tempco: 100 ppm/°C
 Rate: response to change of value < 100 ms
 Voltage: 0...2 V/5 V/10 V, upon request ±5 V/±10 V
 Current: 0...5 mA/0/4...20 mA (compensation of conduct up to 600 Ohm)
 upon request ±20 mA
 Corrugation: 5 mV residual corrugation at output voltage 10 V
 Frequency: isolated, programmable, open collector
 0,2...2 200 Hz

COMPARATOR

Type: digital, adjustable in programming mode, contact switch-on < 30 ms
 Limit 1 and 2: -99...999
 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

DATA OUTPUTS

Data format: rate 1 200...38 400 Baud, 8 bit + no parity + 1 stop bit (ASCII)
 RS 232: isolated
 RS 485: isolated, addressing (max. 99 instruments)

POWER SUPPLY

24; 110; 230 VAC, 50/60 Hz, ±10 %, 5 VA
 10...30 VDC/max. 150 mA, (24 VDC/80 mA), isolated
 - power supply is protected by a fuse inside the instrument

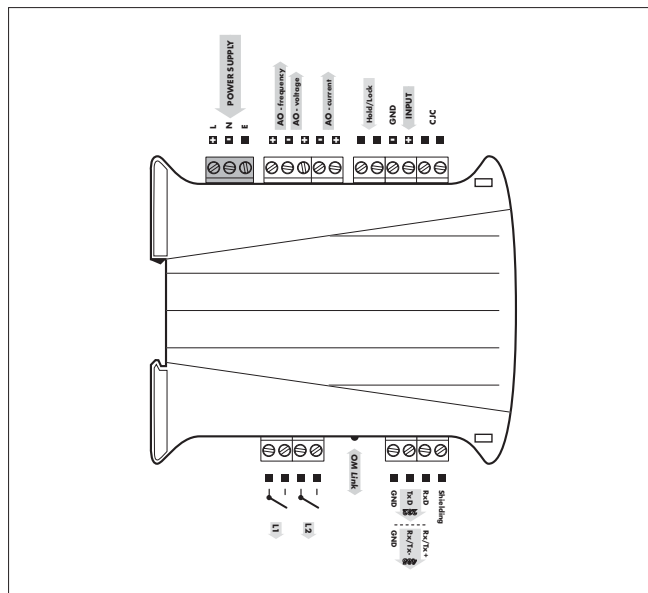
MECHANIC PROPERTIES

Material: ABS (UL 94-V0), green
 Dimensions: 120 x 101 x 35 mm
 Installation: to DIN rail, width of 35 mm

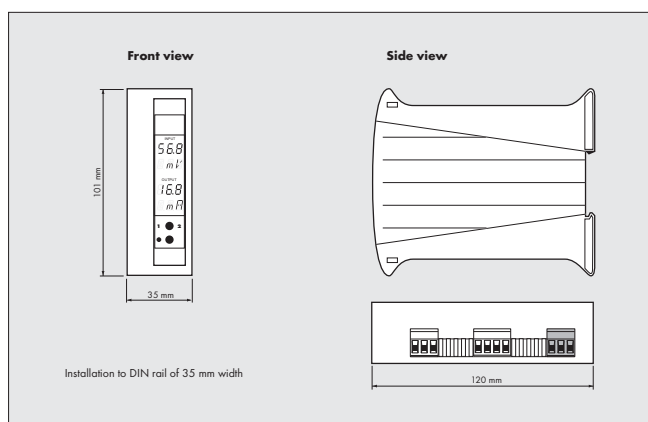
OPERATING CONDITIONS

Connection: connector terminal board, conductor section up to 2,5 mm²
 Stabilization period: within 15 minutes after switch-on
 Working temperature: 0°...60°C
 Storage temperature: -10°...85°C
 Covering: IP20
 Construction: safety class I
 Elektrická bezpečnost: EN 61010-1, A2
 Overvoltage category: for pollution degree II
 II. - instrument power supply, relay outputs (500 V)
 II. - input, output (500 V)
 EMC: EN 61000-3-2+A12; EN 61000-4-2, 3, 4, 5, 8, 11; EN 550222, A1, A2

Connection



Dimensions



Order code

