



OMX 380T



The OMX 380 model series are very fast DIN rail mountable digital transmitters with a Teach-in function.

Type OMX 380T is a transmitter for strain gauges.

The instrument is based on a single-chip microcontroller and a 24-bit A/D and 16-bit D/A converter, which ensures excellent accuracy, stability and easy operation of the instrument.

PROGRAMMABLE ISOLATED TRANSMITTER

- Input for strain gauges
- Output: 4...20 mA/0...10 V/±10 V
- Rate up to 7 500 meas./s
- Digital filters, Tare, Teach-in
- Strain gauge excitation
- Galvanic separation: 2,5 kVAC
- Power supply 18...30 VDC/24 VAC
- Option
Data output

OMX 380T TRANSMITTER FOR STRAIN GAUGES

OPERATION

The instrument is set and controlled by two push buttons located on the front panel. Type of the output signal and access to the instrument setting is managed by a switch on the front panel.

Standard equipment is the OM Link interface, which together with operating program allows modification and filing of all instrument's settings as well as performing firmware updates (with OML cable).

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

OPTION

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 RS485 with ASCII protocol.

STANDARD FUNCTIONS

PROGRAMMABLE INPUT

Selection: measuring range

Tech-in: semiautomatic mode of input calibration of both limit values of the output range

ANALOG OUTPUT

Type: programmable with resolution of 16 bit, rate < 0,2 ms

Range: 0...10 V, ±10 V, 4...20 mA

EXCITATION

Fixed: 10 VDC, load ≥ 80 Ω

FUNCTIONS

Tare: designed to reset display upon non-zero input signal

Fixed tare: firmly preset tare

DIGITAL FILTERS

Floating average: from 2...30 measurements

Exponential average: from 2...100 measurements

Arithmetic average: from 2...100 measurements

EXTERNAL CONTROL

Hold: display/instrument blocking

Lock: control keys blocking

Tare: activation and tare resetting

TECHNICAL DATA

INPUT

Number of inputs	1
T Range	optional in configuration menu
	1...4 mV/V
	2...8 mV/V
	4...16 mV/V
Excitation	10 VDC, load \geq 80 Ω
Connection	6-wire
Ext. inputs	2 inputs, on contact
	The following functions can be assigned:
	OFF input off
	HLD. display stop
	TAR. tare activation
	CL.TAR. tare resetting

INSTRUMENT ACCURACY

TC: 10 ppm/ $^{\circ}$ C
 Accuracy: \pm 0,025% of value
 Rate: 1 000...7 500 measurement/s
 Overload capacity: 2x; 10x (t < 30 ms)
 Digital filters: exp./floating/arithm. average
 Functions: Teach-in, Tare
 OM Link: company communication interface for operation, setting and update of instruments
 Watch-dog: reset after 400 ms
 Calibration: at 25 $^{\circ}$ C and 40% r.h.

DATA OUTPUTS

Type: RS 485
 Protocol: ASCII, MESSBUS, MODBUS RTU
 Data format: 8 bit + no parity + 1 stop bit
 Rate: 600...230 400 Baud
 Addressing: ASCII - max. 31 instruments
 MODBUS - max. 246 instruments

ANALOG OUTPUTS

Type: programmable with a 16-bit D/A converter, output type and range are optional
 Non-linearity: 0,024% of range
 TC: 10 ppm/ $^{\circ}$ C
 Rate: response to change of value < 0,2 ms
 Ranges: 0...10 V, \pm 10 V, 4...20 mA (comp. < 600 Ω)
 Ripple: 5 mV residual ripple at output voltage of 10 V

POWER SUPPLY

Range: 10...30 VDC/24 VAC, \pm 10%, PF \geq 0,4, I_{STP} < 40 A/1 ms
 10...30 VDC/24 VAC, \pm 10%, PF \geq 0,4, I_{STP} < 40 A/1 ms, isolated
 Consumption: < 2,5 W/2,3 VA

MECHANIC PROPERTIES

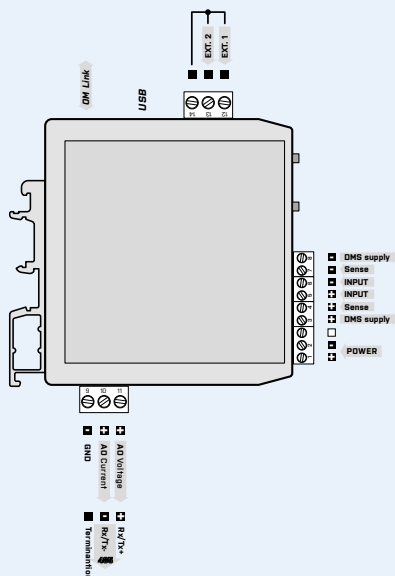
Material: PA 66, incombustible UL 94 V0, blue
 Dimensions: 25 x 79 x 90,5 (w x h x d)
 Installation: on DIN rail, width 35 mm

OPERATING CONDITIONS

Connection: connector terminal blocks, section < 1,5 mm²
 Stabilization period: within 5 minutes after switch-on
 Working temperature: -20...60 $^{\circ}$ C
 Storage temperature: -20...80 $^{\circ}$ C
 Protection: IP20
 El. safety: EN 61010-1, A2
 Dielectric strength: 2,5 kVAC per 1 min test between supply and input
 2,5 kVAC per 1 min test between supply and data/analog output
 2,5 kVAC per 1 min test between input and data/analog output
 Insulation resistance: for pollution degree II, measuring cat. III
 power supply > 550 V (PI), 255 V (DI)
 EMC: EN 61326-1

PI - Primary insulation, DI - Double insulation

CONNECTION



ORDER CODE

OMX 380T

- [] - []

Power supply	18...30 VDC	0	
	10...30 VDC, isolated	1	
Output	Analog	1	
	Data - RS 485	2	
	Data - RS 485/Modbus	3	
Specification	customized version, do not fill in		00

Basic configuration of the instrument is indicated in bold.