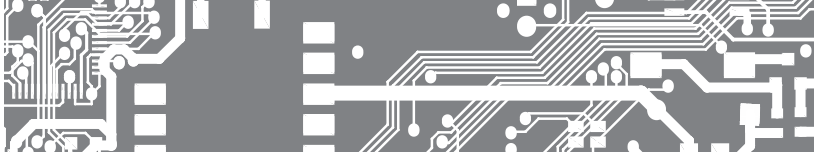


OMX 380DU

OMLINK

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

Type OMX 380DU is a transmitter for linear potentiometers.

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 LINEAR POTENTIOMETERS
- OUTPUT: 4...20 mA/0...10 V/±10 V
- RATE UP TO 7 500 m./s
- DIGITAL FILTERS, TARE, TEACH-IN
- GALVANIC SEPARATION: 2,5 kVAC
- POWER SUPPLY 18...30 VDC/24 VAC
- Option
  Data output

OMX 380DU
TRANSMITTER FOR LINEAR POTENTIOMETERS

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 allowes 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
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

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

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

DU	**Potent. power supply**	2,5 VDC/6 mA, Potentiometer resistance > 500 Ω
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

TK: 10 ppm/°C
Accuracy: ±0,01% of range
Rate: 25...7 500 measur./s
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°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
TK: 10 ppm/°C
Rate: response to change of value < 0,2 ms
Ranges: 0...10 V, ±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, ±10 %, PF≥0,4, I_{STP}< 40 A/1 ms
10...30 VDC/24 VAC, ±10 %, PF≥0,4, I_{STP}< 40 A/1 ms, isolated
Consumption: < 2 W/1,8 VA

MECHANIC PROPERTIES

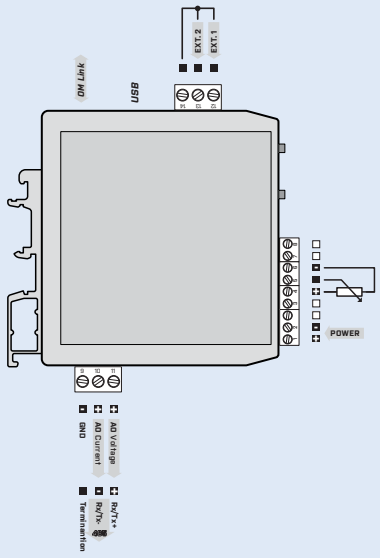
Material: PA 66, incombustible UL 94 V0, blue
Dimensions: 25 x 79 x 90,5 (w x h x d)
Installation: on DIN rail, width 35 mm

OPERATING CONDITIONS

Connection: connector terminal blocks, section < 1,5 mm²
Stabilization period: within 15 minutes after switch-on
Working temperature: -20°...60°C
Storage temperature: -20°...80°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 380DU - □□ - □

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.