

OMX 333DC

The OMX 333 model series are simple DIN rail mountable programmable transmitters.

Type OMX 333DC is designed for measurements of higher DC and AC voltage and current, easily adjustable in the instrument's menu.

The instrument is based on a single-chip microcontroller with a 16-bit A/D and D/A converter, which provides good accuracy, stability and ease of use.



PROGRAMMABLE ISOLATED TRANSMITTER

- Range: $\pm 0,5/\pm 1/\pm 5$ A
 $\pm 25/\pm 50/\pm 100/\pm 200/\pm 400$ V
- Digital filters, Tare, Linearization
- Output: 0/4...20 mA/0...5 mA/0...2/5/10 V/ ± 10 V
- Galvanic separation: 2,5 kVAC
- Power supply 10...30 VDC/24 VAC
- Option
Comparators - Data output

OMX 333DC
DC VOLTMETER AND AMMETER

OPERATION

Instrument can be controlled by two push buttons and a DIP switch located on the front panel. When frequent changes of settings are needed, we recommend the use of OM Link interface, which in conjunction with free control SW allows for modification and storage of all instrument's settings and also for firmware upload (using OM Link cable) from a PC.

The above mentioned SW can also be used for visualisation and archiving of measured values from a number of instruments via the RS 485 line.

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

OPTION

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 RS485 with ASCII protocol.

STANDARD FUNCTIONS

PROGRAMMABLE INPUT

Measuring range: adjustable in menu

Teach-In: Min and Max values can be assigned to any two values of (unknown) input signal

ANALOG OUTPUT

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

Ranges: 0...2/5/10 V/ ± 10 V, 0...5 mA/0/4...20 mA (comp. < 600 Ω)

FUNCTIONS

Linearization: non-linear signals can be linearized by the means of a linearization table (up to 25 points)

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

DIGITAL FILTERS

Exponential average: from 2...100 measurements

Rounding: setting the projection step for display

EXTERNAL CONTROL

Hold: display/instrument blocking

Lock: control keys blocking

Tare: activation and tare resetting

TECHNICAL DATA

INPUT

Number of inputs		1		
DC	Range	optional in configuration menu		
		±0,5 A	< 15 mV	Input 5
		±1 A	< 30 mV	Input 5
		±5 A	< 150 mV	Input 5
		±25 V	10 MΩ	Input 1
		±50 V	10 MΩ	Input 1
		±100 V	10 MΩ	Input 1
		±200 V	10 MΩ	Input 1
		±400 V	10 MΩ	Input 1
	External input		1 input, on contact	
The following functions can be assigned:				
OFF	input off			
HLD.	display stop			
LOCK	control keys blocking			
TAR.	tare activation			

INSTRUMENT ACCURACY

TC: 50 ppm/°C
Accuracy: ±0,15% of range (for 20 meas./s)
Rate: 0,5...80 measurement/s
Overload capacity: 2x; 10x (t < 30 ms) - not for > 200 V and 5 A
Digital filters: exponential average, rounding
Functions: Tare
Linearization: through linear interpolation in 25 points (only via OM Link)
OM Link: company communication interface for operation, setting and update of instruments
Watch-dog: reset after 500 ms
Calibration: at 25°C and 40 % r.h.

COMPARATOR

Type: digital, menu adjustable, contact switch-on < 50 ms
Hysteresis mode: switching limit, hysteresis band (Lim and ±1/2 Hys.) and time (±99,9 s) determining the switching delay
Mode READY - output switching signals flawless status
Mode Error - output switching signals error status
Output: 1...2x Form A relays (250 VAC/30 VDC, 3 A);
 1...2x open collector (30 VDC/100 mA)

DATA OUTPUTS

Protocol: ASCII
Data format: 8 bit + no parity + 1 stop bit (ASCII)
Rate: 600...230 400 Baud
RS 485: isolated, addressing (max. 31 instruments)

ANALOG OUTPUTS

Type: isolated, programmable with a 16 bit D/A converter, type and range are selectable in menu
Non-linearity: 0,1% of range
 TC: 15 ppm/°C
Rate: response to change of value < 1 ms
Ranges: 0...2/5/10 V, ±10 V, 0...5 mA, 0/4...20 mA (comp. < 600 Ω/12 V)
Ripple: 5 mV residual ripple at output voltage of 10 V

POWER SUPPLY

Range: 10...30 VDC/24 VAC, ±10 %, PF≥0,4, I_{STB}< 40 A/1 ms, isolated
Consumption: < 2 W/2 VA

MECHANIC PROPERTIES

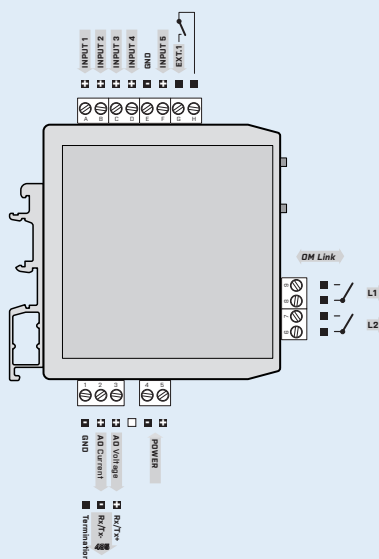
Material: PA 66, incombustible UL 94 V0, blue
Dimensions: 25 x 79 x 90,5 (w x h x d)
Installation: on DIN rail, width 35 mm

OPERATING CONDITIONS

Connection: connector terminal blocks, section < 1,5 mm²
Stabilization period: within 5 minutes after switch-on
Working temperature: -20°...60°C
Storage temperature: -20°...80°C
Protection: IP20
EI. safety: EN 61010-1, A2
Dielectric strength: 2,5kV per 1 min test between pow. supply, inputs and outputs
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 333DC

- [] - []

Comparators	no	0	
	1x relay (Form A)	1	
	2x relay (Form A)	2	
	1x open collector	3	
	2x open collector	4	
Output	none	0	
	analog	1	
	RS 485	2	
Specification	customized version, do not fill in		00

Basic configuration of the instrument is indicated in bold.