



## OMX 333DC

**OMLINK**

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/ $\pm 10$  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 Ling 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

**Setting:** manual, in menu it is possible to set for both limit values of the input signal arbitrary AV conversion as well as type of the analog output

##### ANALOG OUTPUT

**Type:** isolated, programmable with a resolution of 16 bit, rate < 0,2 ms  
**Ranges:** 0...2/5/10 V/ $\pm 10$  V, 0...5 mA/0/4...20 mA (comp. < 600  $\Omega$ )

##### FUNCTIONS

**Linearization:** through linear interpolation in 25 points (solely via OM Link)

**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

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

TK: 50 ppm/°C  
**Accuracy:** ±0,15% of range (for 20 m/s)  
 Rate: 0,5...80 measur./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  
**DM 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 ±1/2 Hys.\* and time (0...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  
 TK: 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 Q/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<sub>sp</sub> < 40 A/1 ms, isolated  
**Consumption:** < 2 W/2 VA

### MECHANIC PROPERTIES

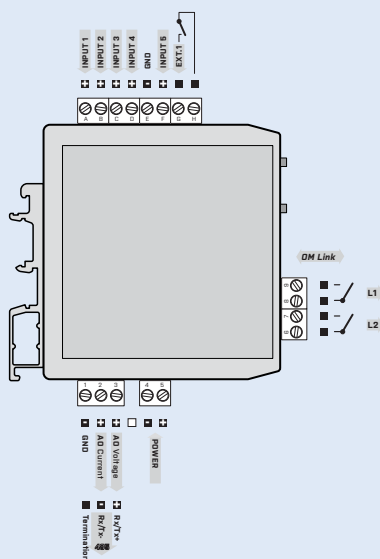
**Material:** PA 66, incombustible UL 94 V0, blue  
**Dimensions:** 25 x 79 x 90,5 (w x h x d)  
**Installation:** on DIN rail, width 35 mm

### OPERATING CONDITIONS

**Connection:** connector terminal blocks, section < 1,5 mm<sup>2</sup>  
**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:** 2,5kV 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

- [ ] - [ ]

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

Basic configuration of the instrument is indicated in bold.