



OMX 333PWR

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

Type OMX 333PWR is a universal alternating current V-A meter with the extension of functions for further network analysis. The instrument measures voltage, current, active power and with calculation also apparent power and $\cos \phi$.

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



PROGRAMMABLE ISOLATED TRANSMITTER

- Range: 0...1 / 2,5 / 5 A; 0...60 / 150 / 300 mV
0...10 / 120 / 250 / 450 V
- Digital filters, Tare
- 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

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.

OMX 333PWR

AC VOLTMETER AND AMMETER, WATTMETER

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

Measuring modes (PWR): voltage (V_{RMS}), current (A_{RMS}), power (W) and with calculation apparent power (S) and power factor ($\cos \phi$)

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)

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		
PWR Range	optional in configuration menu		
	0...60 mV	21 kOhm	Vstup 5
	0...150 mV	21 kOhm	Vstup 5
	0...300 mV	1,2 kOhm	Vstup 5
	0...1 A	< 150 mV	Vstup 5
	0...2,5 A	< 150 mV	Vstup 5
	0...5 A	< 150 mV	Vstup 5
	0...10 V	152 kOhm	Vstup 3
	0...120 V	930 kOhm	Vstup 1
	0...250 V	730 kOhm	Vstup 3
	0...450 V	930 kOhm	Vstup 1
Input frequency	0...400 Hz for amplitude from 8 V		
Measured quantities	Voltage (VRMS) Current (ARMS) Active power (P)		
	<i>with calculation</i> apparent power (S) power factor (cos φ)		
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: ±0,3% of range
 Rate: 0,5...5 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

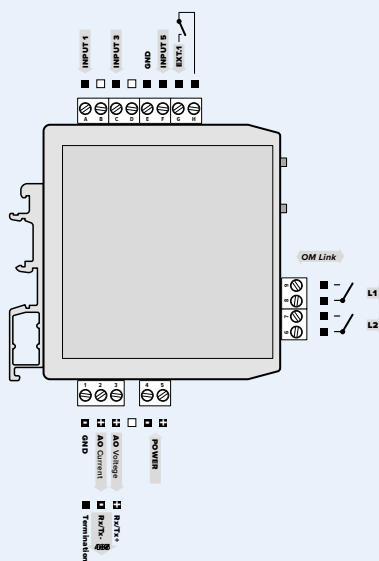
Material: PA 66, incombustible UL 94 V0, blue
 Dimensions: 25 x 79 x 90,5 (w x h x d)
 Installation: on DIN rail, width 35 mm

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
 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 333PWR

- [] [] [] [] - []

Volatge range	0...10 V/120 V 0...250 V/450 V	S			
Current range	0...60 mV/300 mV 0...1 A/2,5 A/5 A	U			
Comparators	no 1x relay (Form A) 2x relay (Form A) 1x open collector 2x open collector		K		
			P		
Output	none analog RS 485			0	
				1	
				2	
Specification	customized version, do not fill in				00

Basic configuration of the instrument is indicated in bold.