OMX 333PWR

PROGRAMMABLE ISOLATED TRANSMITTER

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

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 extention of functions for further network analysis. The instrument measures voltage, current, active power and with calculation also apparent power and cos fi.

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

OMX 333PWR
AC VOLTMETER AND AMMETER, WATTMETER

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 recomend the use of OM Link interface, which in conjunction with free control SW alows 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
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 fi)

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) *with calculation* apparent power (S) power factor (cos fi)		
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_{STP} < 40 A/1 ms, isolated
Consumption: < 2 W/2 VA

MECHANIC PROPERTIES

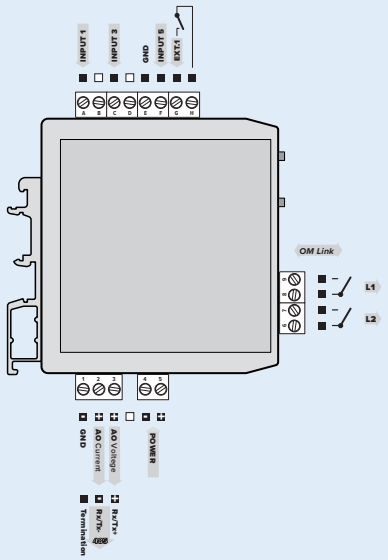
Material: PA 66, incombustible UL 94 V0, blue
Dimensions: 25 x 79 x 90,5 (w x h x d)
Installation: on DIN rail, width 35 mm

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

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Volatge range	0...10 V/120 V	**S**				
	0...250 V/450 V	**U**				
Current range	0...60 mV/300 mV		**K**			
	0...1 A/2,5 A/5 A		**P**			
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.