# WATMETERS

# **OM 501PWR**



• Network analyser - V/A/W(P,Q,S)/Hz/cos o

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- 4 digit programmable projection
- 0...450 V/0...5 A
- Mathematic functions, Digital filters
- Size of DIN 96 x 48 mm
- Power supply 80...250 V AC/DC

# Options

Comparators • Data output • Universal analog output • Real time

## Description

The OM 501PWR model is a 4 digit universal panel programmable network analyser.

The instrument is based on an 8-bit controller with a converter, that secures high accuracy, stability and easy operation of the instrument.

## **Standard functions**

### Programmable display projection

Programmable display projection		
Measuring modes	voltage (V <sub>RMS</sub> ) current (A <sub>RMS</sub> )	
	real power (W)	
	frequency (Hz)	
and with calculation	reactive power (Q)	
	apparent power (S)	
	power factor (cos φ)	
Setting	manual, optional projection on the display may be set for maximum value of the input signal in "CM",	
	e.g.: 0250 V/05 and ⇒ 01.500 MW	
Projection	±9999	
Digital filters		
Floating average	from 210 measurements	
Exponen. average	from 2255 measurements	
n-th value	from 2255 measurements	
Radius of insensitiv.	band of suppressed change of measured value	
Mathematic functions		
Min/max. value	registration of min./max. value reached during measurements	
Top value	the display shows only max. (min.) value for a selec- ted time period	
Round up/down	setting the projection step for display	
Math. operations	polynome, 1/x, logarithm, exponential, power, root, sin x	
External control		
Hold	display/instrument blocking	

Holddisplay/instrument blockingLockcontrol keys blockingResetting MMresetting min/max value to zero



The instrument is set and controlled by five control keys located on the front panel. All programmable settings of the instrument are realised in two adjusting modes.

Configuration menu	(hereinafter referred to as CM) is protected by an
	optional number code and contains complete
	instrument setting
User menu	may contain arbitrary programming settings defined
	in "CM" with another selective restriction
	(see, change)

All programmable parameters are stored in the EEPROM memory (they hold even after the instrument is switched off). The measured units may be projected on the display.

## Options

**Comparators** are assigned to monitor one, two, three or four limit values with relay output. The user may select limits regime: LIMIT/DOSING/ FROM-TO. 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 RS232 and RS485 with the DIN MessBus/ASCII protocol.

**Analog outputs** will find their place in applications where further evaluating or processing of measured data is required in external devices. We offer universal analog output with the option of selection of the type of output - voltage/current. The value of analog output corresponds with the displayed data and its type and range are selectable in CM.

**Real time** is an internal time control of data collection. It is suitable everywhere where it is necessary to register measured data in a given time segment. Up to 65 000 values may be stored in the instrument's memory. Data transmission into PC via serial interface RS232/485.



# Technical data

#### **MEASURING RANGE**

 Active power output:
 ±9999 W

 Voltage input:
 0...450 V

 Current input:
 0...5 A

 Frequency range:
 40...400 Hz

With converter transformer or shunt, optional power output may be measured up to max.projection 9999.

#### PROJECTION

Display:	±99999, red or green 14-segment LED, digit height 14 mm
Decimal point:	adjustable - in Configuration menu
Rrightness.	adjustable - in Configuration /Ilser menu

#### **INSTRUMENT ACCURACY**

Tempco:	60 ppm/°C
Accuracy:	±0,2% of range + 1 digit
Rate:	0,6 - 1,2 - 2,5 - 5 measurements/s
Overload capacity:	10x (t < 30 ms) - does not apply for 450 V and 5 A, 2x (long-term)
Watch-dog:	reset after 1,2 s
Input filters:	floating (2-10) and exp. average, radius of insensitiveness, n-th value (2-255)
Measuring modes:	voltage (V <sub>euc</sub> ), current (A <sub>euc</sub> ), power output (W), frequency (Hz) and w/ calculation
	of Q, S, cos p
Function:	offset, min./max. value, tare
	Hold - stop measuring (upon contact)
Real time:	15 ppm/°C
	time-date-display value (max. 65000 data)
Calibration <sup>.</sup>	at 25°C and 40 % r h

### COMPARATOR

Type:	digital, adjustable in programming mode, contact switch-on < 30 ms
Limit 1 4	±99999
Hysteresis:	09999
Delay:	099,9 s

Delay:	099,9 s
Outputs:	2 relays with switching & 2 relays with switch-on contact (250 VAC/50 VDC, 3 A)

# DATA OUTPUTS

Data format:	rate 60038 400 Baud
	7 bit + even parity + 1 stop bit (DIN MessBus),
	8 bit + no parity + 1 stop bit (ASCII)
RS 232	isolated
RS 485	isolated, addressing (up to 31 instruments)

#### ANALOG OUTPUTS

Туре:	isolated, programmable with resolution max. 10 000 points, analog output corre-
	sponds with the displayed data, output type and range are selectable in CM
Non-linearity:	0,2 % of range
Tempco:	100 ppm/°C
Rate:	response to change of value < 40 ms
Voltage:	02 V/5 V/10 V
Current:	05 mA/20 mA/420 mA (compensation of conduct up to 600 Ohm)

#### **POWER SUPPLY**

80 ... 250 V (AC/DC), 13,5 VA 9 ... 50 V (AC/DC), 13,5 VA - power supply is protected by a fuse inside the instrument

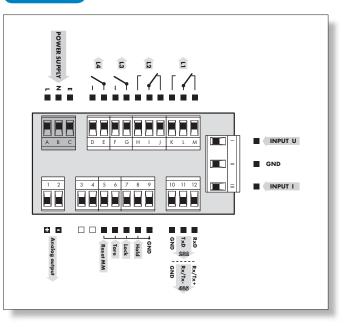
#### **MECHANIC PROPERTIES**

Material:	Noryl GFN2 SE1, incombustible UL 94 V-I
Dimensions:	96 x 48 x 154 mm
Panel cut:	90,5 x 45 mm

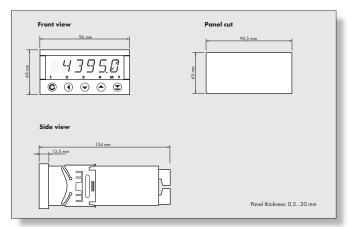
#### **OPERATING CONDITIONS**

Connection: Stabilization period:	connector terminal board, conductor section up to 1,5/2,5 mm <sup>2</sup> within 15 minutes after switch-on
Working temperature:	
Storage temperature:	
Covering:	IP65 (front panel only)
	safety class II
Electrical safety:	EN 61010-1, A2
Overvoltage category:	for pollution degree II
	III instrument power supply, relay outputs (300 V)
	II input, output (300 V)
EMC:	EN 61000-3-2+A12; EN 61000-4-2, 3, 4, 5, 8, 11; EN 550222, A1, A2

## Connection



# Dimensions



# Order code

