



Data Sheet  
**OM 402PWR**

*Distributed by*



[www.bristolinstruments.com](http://www.bristolinstruments.com)

Bristol Instruments  
90 Canal Street, 4th Floor  
Boston, MA 02114

Toll free  
877-866-8500



## OM 402PWR

The OM 402 model series are 4-digit panel programmable instruments designed for maximum efficiency and user comfort while maintaining their favourable price.

Type OM 402PWR is a universal alternating current V-A meter with the extension of functions for further network analysis. The instrument measures voltage, current, active power, frequency, and with calculation also reactive power, apparent power and cos φ.

The instrument is based on a single-chip microcontroller with a true RMS converter, which ensures good accuracy, stability and easy operation of the instrument.



### AC V-A METER/NETWORK ANALYSER

- 4-digit programmable projection
- Range: 0...1/2,5/5 A; 0...60/150/300 mV;  
0...10/120/250/450 V
- Digital filters, Tare, Linearization
- Size of DIN 96 x 48 mm
- Power supply 10...30 V AC/DC; 80...250 V AC/DC
- Option  
Comparators · Data output · Analog output  
Data record · Three-color display · 20 mm

**OM 402PWR**  
AC VOLTMETER AND AMMETER  
AC NETWORK ANALYSER

#### OPERATION

The instrument is set and controlled by five buttons located on the front panel. All programmable settings of the instrument may be performed in three adjusting modes:

**LIGHT MENU** is protected by optional number code and contains solely items necessary for instrument setting.

**PROFI MENU** is protected by optional number code and contains complete instrument setting.

**USER MENU** may contain arbitrary items from the programming menu (LIGHT/PROFI), which determine the right (see, change). Access w/o password.

Standard equipment is the OM Link interface, which together with operation program enables modification and filing of all instrument settings as well as performing firmware updates (with OML cable). The program is also designed for visualization and filing of measured values from more instruments.

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

#### OPTION

**COMPARATORS** are assigned to monitor one, two, three or four limit values with relay output. As a user you can select the mode limit: LIMIT/BATCH/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 ASCII/PROFIBUS protocols.

**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. Its type and range are selectable in menu.

**MEASURED DATA RECORD** is an internal time control of data collection. It is suitable where it is necessary to register measured values. Two modes may be used. FAST is designed for fast storage (40 records/s) of all measured values up to 8 000 records. Second mode is RTC, where Data record is governed by Real Time with data storage in a selected time segment and cycle. Up to 266 000 values may be stored in the instrument memory. Data transmission into PC via serial interface RS232/485 and OM Link.

#### STANDARD FUNCTIONS

##### PROGRAMMABLE PROJECTION

Measuring range: adjustable in menu

Measuring modes: voltage ( $V_{RMS}$ ), current ( $A_{RMS}$ ), 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 in menu for both limit values of the input signal, e.g. input 0...60 mV > 0...500.0

Projection: -999..9999

##### FUNCTIONS

Linearization: non-linear signals can be linearized by the means of a linearization table (up to 50 points)

Min./max. value: registration of min./max. value reached during measurement

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

Peak value: the display shows only max. or min. value

Mathemat. operations: polynom, 1/x, logarithm, exponential, power, root, sin x

##### DIGITAL FILTERS

Floating/Exp./Arithm. average: from 2...30/100/100 measurements

Rounding: setting the projection step for display

##### EXTERNAL CONTROL

Lock: control keys blocking

Hold: display/instrument blocking

Tare: activation and tare resetting

Resetting MM: resetting min/max value

