

M40-A AC Voltmeter and Ammeter

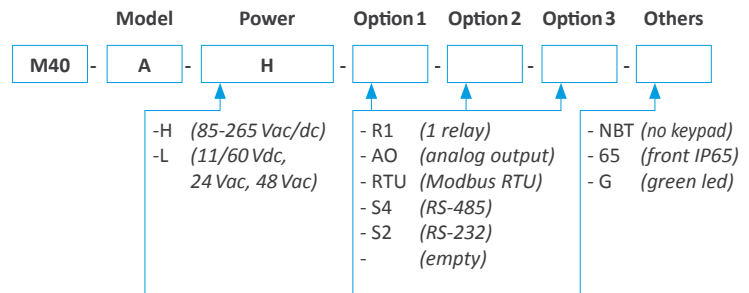
Panel mount AC Voltmeter and AC Ammeter with multiple input scales up to 600 Vac and up to 5 Aac. Reading with 4 digits and 14 mm digit height. Standard 96 x 48 mm (1/8 DIN) size, for panel mount. True RMS measure. Universal high and low AC and DC power options. Optional retransmission and control modules with relays, analog outputs and serial outputs.



Technical specifications

Digits	4
Reading	9999 / -9999
Decimal point	configurable
Led color	red or green
Digit height	14 mm
Signal ranges	600 Vac, 100 Vac, 10 Vac, 1 Vac, 0.1 Vac 5 Aac, 1 Aac
Type of measure	True RMS
Coupling	'AC' or 'AC+DC' (by internal jumper selection)
Accepted connections	phase - neutral and phase - phase
Oversignal	up to +20% of the scale
Bandwidth	1.3 KHz for measures in Vac 2.0 KHz for measures in Aac
Crest factor	3 for nominal accuracy 5 for accuracy 2.5% F.S.
Accuracy	0.15% to 0.25% F.S. depends on the range
Offset drift	75 ppm/°C to 150 ppm/°C depends on the range
Span drift*	100 ppm/°C to 200 ppm/°C depends on the range *span drift value includes offset drift
Readings	15 readings / second
Response time to the step	<300 mSec. (0% to 99% signal)
Input impedance	depends on range (see User's Manual)
Power 'H'	85 to 265 Vac/dc (isolated 2500 Veff)
Power 'L'	11 to 60 Vdc y 24/48 Vac (isolated 1500 Veff)
Retransmission and control options	relays, analog output, Modbus RTU, ...
Consumption	<1.5 W (meter only) <4.0 W (meter with options)
Protection	IP54 standard (optional IP65)
Connections	plug-in screw terminal
Weight	<150 grams
Mounting	panel
Front size	96 x 48 mm
Panel cut-out	92 x 44 mm
Deep	91 mm (including terminals)
Operating temperature	0 to 50 °C

Order reference

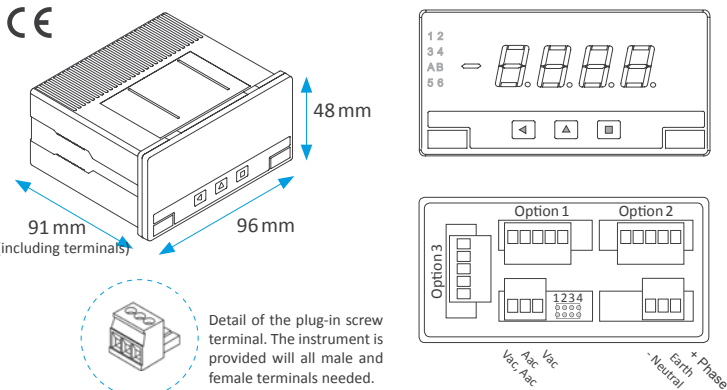


* Relays R1 with contacts (NC / NO / Common), max. 250 Vac 8 A
 * Special options with 4 and 6 relays.
 * Analog outputs and serial outputs, isolated.

Functions included

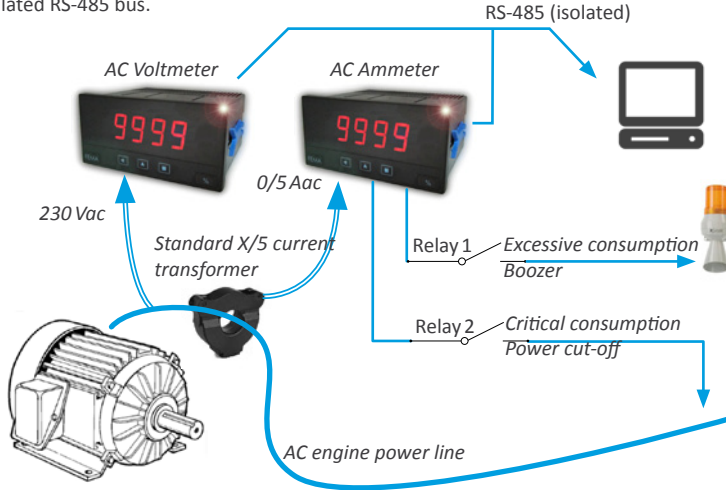
- 'Fast access' menu a single press on the front keypad gives access to alarm setpoint modification, special functions, memory of maximum and minimum reading, ...
- 'Field correction' function ... for fast and easy offset corrections when installing on the field.
- DC component filter configurable filter to block the DC component of the signal.
- 'On power-up' function protects remote systems by delaying the output and control signals at cold start-up.
- Alarms with one or two setpoints, independent activation and deactivation delays, hysteresis, optional manual deactivation of the relay.
- Inverted relay for security applications, relay can be configured with inverted function.
- 'Peak & hold' function for test-break applications.
- Display filters recursive filters for noisy signals, optional reading in predefined steps, configurable fixed digits, ...
- Brightness 5 levels of brightness intensity.
- Password blocks access to configuration menu.

Dimensions and connections



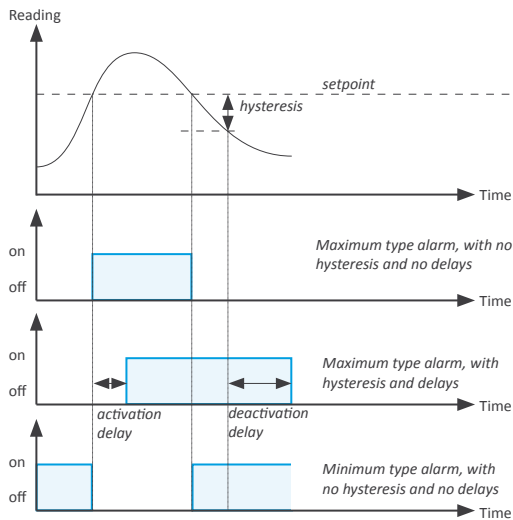
Application example

Measure of current consumption on an AC engine measured through a standard X/5 current transformer, and measure of the 230Vac voltage level of the power line. A first relay output signal the excessive consumption for operator intervention. A second relay output controls the power cut-off in case of critical consumption. Retransmission of the reading value to a remote SCADA of PLC unit through an isolated RS-485 bus.



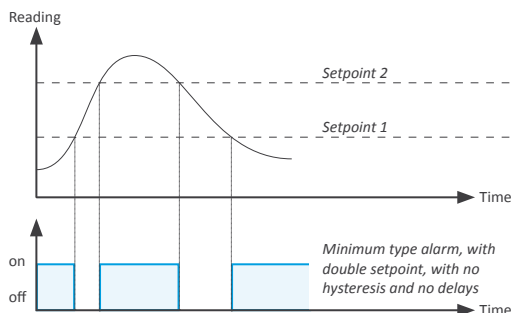
Alarms example

Alarms with one setpoint, configurable deactivation hysteresis, independent activation and deactivation delays.



Double setpoint alarms

Alarms with double setpoint, configurable as maximum or minimum, allow to create activation or deactivation windows..



Other options and accessories

Options for M Series of instruments and mounting accessories for 96x48 mm housings of M Series.



Without front keypad



DIN rail mount adapter



Green leds



96 x96 mm adapter



IP65 front sealing



Benchtop housing

Web documentation

M40-A user's manual
 M40-A datasheet

www.fema.es/docs/2144_M40-A_manual_i.pdf
www.fema.es/docs/3178_M40-A_datasheet_i.pdf

Reading distances

Reading distances and series of product for panel meters with digit height starting at 10 mm and up to 100 mm.

Digit height (mm)	10	14	20	60	100
Reading distance	4 m	5 m	8 m	20 m	40 m
Series	L35	Series M	Series K	BDF-24	BDF-44
		Series S			