M40-P Process panel meter

Panel meter for process signals in mA y Vdc. Reading at 4 digits with 14 mm digit height. Standard 96 x 48 mm (1/8 DIN) size, for panel mount. Provides excitation voltage to power the transducer. Universal high and low AC and DC power options. Optional output modules with relay, transistor, SSR control, analog outputs and MODBUS RTU communication.

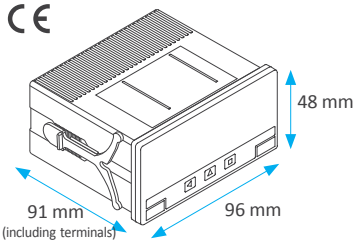
Process

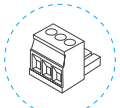


Technical specifications

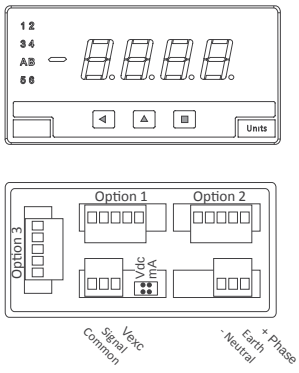
Digits	4
Reading	9999 / -9999
Decimal point	configurable
Led color	red or green
Digit height	14 mm
Signal ranges	4/20 mA, 0/10 Vdc, ±20 mA, ±10 Vdc, ...
Excitation voltage	+20 Vdc, +15 Vdc, +10 Vdc, +5 Vdc (max. 35 mA)
Accuracy	0.05% F.S. ±1 digit
Offset drift	10 ppm/ºC
Span drift*	25 ppm/ºC
	**span drift value includes offset drift*
Readings	15 readings / second
Refresh	15 refresh / second
Response time	<120 mSec. (0 % to 99 % signal)
Input impedance	11 Ohm in mA, 932 KOhm in Vdc
Power 'H'	85 to 265 Vac/dc (isolated 2500 Veff)
Power 'L'	11 to 60 Vdc and 24/48 Vac (isolated 1500 Veff)
Retransmission and control options	relays, analog output, serial communications, ...
Consumption	<1.5 W (meter only)
	<4.0 W (meter with options)
Front protection	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 ºC

Dimensions and connections





Detail of the plug-in screw terminal. The instrument is provided will all male and female terminals needed.



Order reference

Model	Power	Option 1	Option 2	Option 3	Others
M40 - P -	H -				

- -H *(85-265 Vac/dc)*
- -L *(11/60 Vdc, 24 Vac, 48 Vac)*

- - R1 *(1 relay)*
- - AO *(analog output)*
- - RTU *(Modbus RTU)*
- - S4 *(RS-485)*
- - S2 *(RS-232)*
- - T1 *(1 transistor)*
- - SSR *(1 SSR control)*
- - *(empty)*

- - NBT *(no keypad)*
- - G *(green led)*

** 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

Segment linearization. . . . . up to 20 segments for linearization of signals from irregular shaped volumes, tanker ships, ...

'**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.

'**On power-up**' function . . . . . protects remote systems by delaying the output and control signals at cold start-up.

'**Measure**' function. . . . . for troubleshooting purposes, it displays the actual signal at input terminals, directly in mA or Vdc, without scaling.

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.

'**Tare**' function. . . . . for weight applications.

'**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.

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Output and control options

Model	Power	Option 1	Option 2	Option 3	Others
M40	P				

	Function	Installable options	Isolated
R1	1 relay output	3	yes
T1	1 transistor output	3	yes
SSR	1 control for SSR relay	3	yes
AO	1 analog output	3	yes
RTU	1 Modbus RTU port	3	yes
S4	1 RS-485 port	3	yes
S2	1 RS-232 port	3	yes
R2, R4, R6	*special modules up to 6 relay outputs. Check for information.*		

Other options

Option NBT



Without front keypad

Option G



Green leds

Accessories

WME



Wall mount

DRA



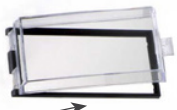
DIN rail mount

THM



Benchtop housing

KIP



Protection cover

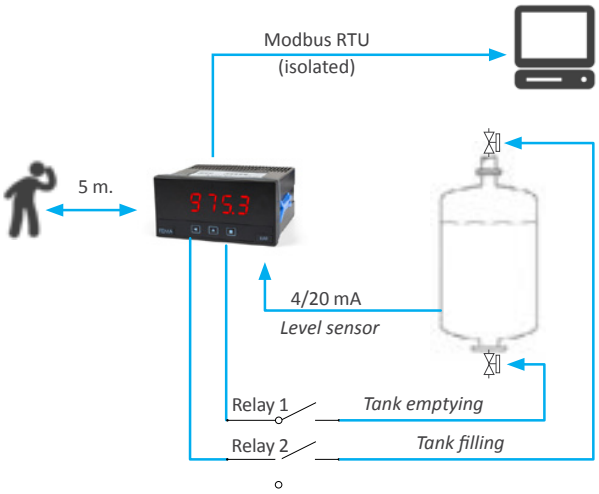
KA96



Adapter 96 x 96 mm

Application example

Measure of level from an irregular tank, with relay outputs to the solenoid valves that control the filling and emptying of the tank. Retransmission of the reading value to a remote SCADA of PLC unit through an isolated Modbus RTU bus.



Reading distances

Digit height (mm)	10	14	20	60	100
Reading distance	4 m	5 m	8 m	20 m	40 m
Series	L	M,S	K	B2x	B4x

Other Process meters

Series M
4, 5 and 6 digits
digit height . . . . . 14 mm
color . . . . . red, green
vision . . . . . 5 meters
size . . . . . 96 x 48 mm



Series K
Further view
digit height . . . . . 20 mm
color . . . . . red
vision . . . . . 8 meters
size . . . . . 96 x 48 mm



Series S
Compact size
digit height . . . . . 14 mm
color . . . . . red, green
vision . . . . . 5 meters
size . . . . . 72 x 36 mm



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