

# S40-C1 Impulse counter, Ratemeter

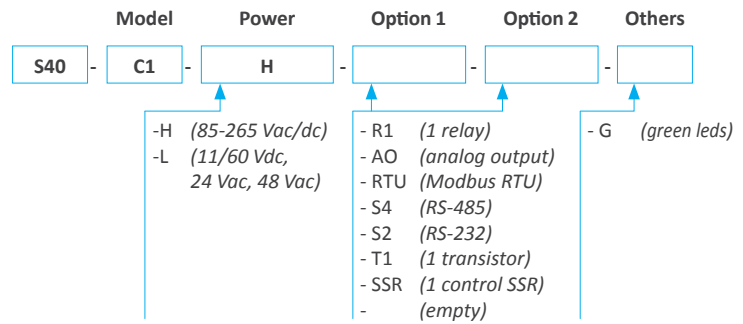
Panel meter with compact 72 x 36 mm size, and 14 mm digit height, for panel mount. Impulse counter, ratemeter and periodmeter. Accepts all type of impulse signals and encoders. Provides excitation voltage for the sensor. Universal high and low AC and DC power options. Optional output modules with relay, transistor, SSR control, analog outputs and MODBUS RTU communication.



## Technical specifications

Digits	4
Reading	9999 / -1999
Decimal point	configurable
Led color	red or green
Digit height	14 mm
Signals accepted	NPN, PNP, Namur, pick-up, TTL, inductive, mechanical, quadrature, ...
Excitation voltage	+5 Vdc, +9 Vdc, +15 Vdc, +18 Vdc (max. 70 mA)
Maximum Vdc at input terminals	±30 Vdc
Quartz accuracy	±0.01 %
Thermal stability	20 ppm/°C
Display refresh	15 refresh / second
Maximum frequencies	counter up to 250 KHz ratemeter and periodmeter up to 500 KHz
Minimum frequencies	ratemeter and periodmeter down to 1 mHz (0.001 Hz)
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)
Protection front	IP54
Connections	plug-in screw terminal
Weight	<150 grams
Mounting	panel
Front size	72 x 36 mm
Panel cut-out	69 x 32.5 mm
Deep	98 mm (including terminals)
Operating temperature	0 to 50 °C

## Order reference

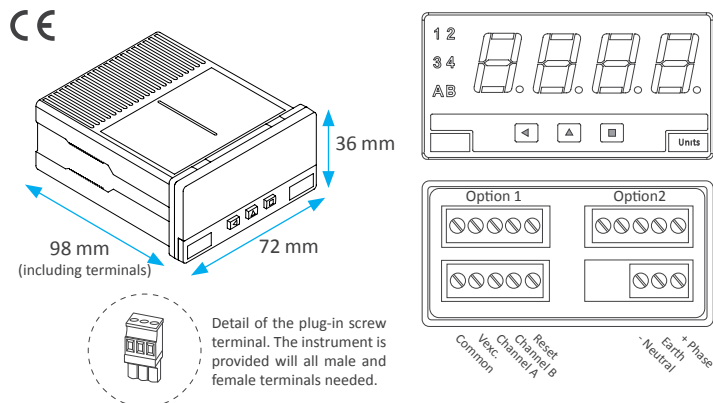


\* Relays R1 with contacts (NC / NO / Common), max. 250 Vac 8 A  
 \* Special options with 4 relays.  
 \* Analog outputs and serial outputs, isolated.

## Functions included

- 'Fast access' menu ..... a single press on the front keypad gives access to alarm setpoint modification, preset, memories, ...
- Function 'SLOW' ..... special mode for low frequency ratemeter applications
- Function 'FAST' ..... special mode for high frequency counter applications
- Scaling factor ..... multiplier and divider from 1 to 9999
- Configurable reset ..... front and rear reset, and reset linked to alarm activation
- Preset ..... configurable
- Trigger level ..... configurable
- Function 'Trigger Sense' ..... help on setting the correct trigger level
- Sensor selection ..... by menu
- Cycle counter ..... count of cycles defined by the 'on alarm reset' function
- Retention memory ..... recovers the counting value in case of power loss
- '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
- Display filters ..... recursive filters for unstable signals
- Brightness ..... 5 levels of brightness intensity.
- Password ..... blocks access to configuration menu.

## Dimensions and connections



## Output and control options

Model	Power	Option 1	Option 2	Others
S40	C1			
Function	Installable options	Isolated		
R1	1 relay output	2	yes	
T1	1 transistor output	2	yes	
SSR	1 control for SSR relay	2	yes	
AO	1 analog output	2	yes	
RTU	1 Modbus RTU port	2	yes	
S4	1 RS-485 port	2	yes	
S2	1 RS-232 port	2	yes	
R2, R4	special modules up to 4 relay outputs. Check for information.			

## Other options

### Option G



Green leds

## Accessories

### KA72



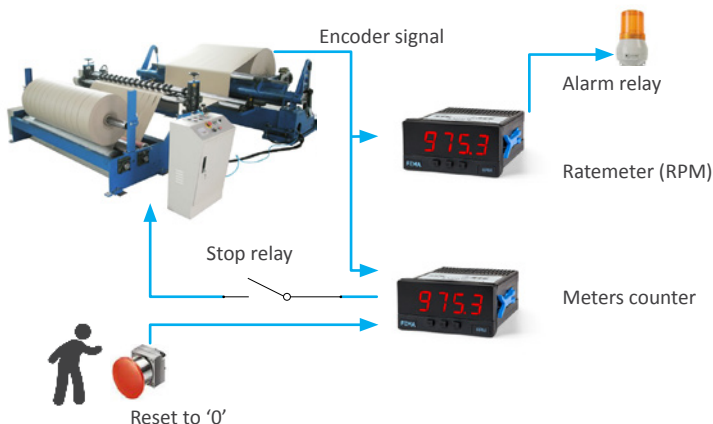
Adapter 72 x 72 mm

## Additional documentation

S40-C1 user's manual	<a href="http://www.fema.es/docs/2983_S40-C1_manual_en.pdf">www.fema.es/docs/2983_S40-C1_manual_en.pdf</a>
S40-C1 datasheet	<a href="http://www.fema.es/docs/3226_S40-C1_datasheet_en.pdf">www.fema.es/docs/3226_S40-C1_datasheet_en.pdf</a>
Options user's manual	<a href="http://www.fema.es/docs/4254_SERIES_M-K-S_OPTIONS_manual_en.pdf">www.fema.es/docs/4254_SERIES_M-K-S_OPTIONS_manual_en.pdf</a>

## Application example

Reading of total processed meters on a paper mill. Signal received from a built-in bidirectional encoder at the roller. Operator has a manual reset control to set the counter to '0' at start. A relay output stops the mill when the total desired meters has been reached. A second meter, configured as ratemeter, reads the actual RPM speed of the roller. A relay output controls an alarm signal in case of excessive speed.



## 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 Counters and Ratemeters

### Series M

#### 4, 5 y 6 digits

digit height ..... 14 mm  
color ..... red, green  
vision ..... 5 meters  
size ..... 96 x 48 mm

DIGITAL PANEL METER  
**SERIES M**  
Full Signal Ranges Available



### Series K

#### Further view

digit height ..... 20 mm  
color ..... red  
vision ..... 8 meters  
size ..... 96 x 48 mm

DIGITAL PANEL METERS  
**SERIES K**  
20 mm Digit Size



### Series S

#### Compact size

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

DIGITAL PANEL METERS  
**SERIES S**  
Compact Size 72x36 mm

