

M60-CR Chronometer

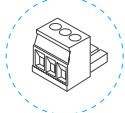
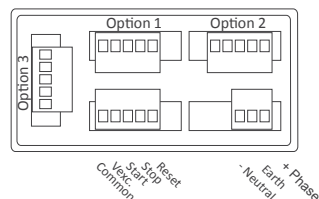
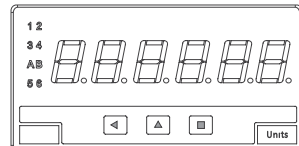
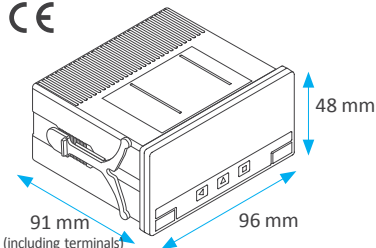
Time counter with external control for start, stop and reset. Reading at 6 digits with 14 mm digit height. Standard 96 x 48 mm (1/8 DIN) size, for panel mount. Configurable for decimal format and sexagesimal (clock) format. Provides excitation voltage for sensors. Universal high and low AC and DC power options. Optional output modules with relay, transistor, SSR control, analog outputs and MODBUS RTU communication.



Technical specifications

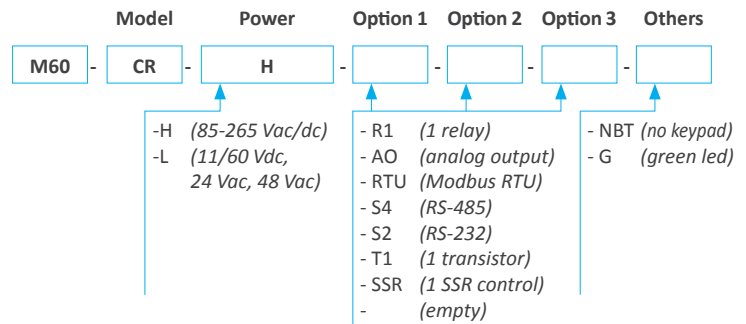
Digits	6
Sexagesimal reading	mm.ss.cc / hh.mm.ss / dd.hh.mm mmmm.ss / hhhh.mm / dddd.hh
Decimal reading	sssss/sss.s / ssss.ss / mmmmmm / mmmmm.m / mmmm.mm / hhhhhh / hhhhh.h / hhhh.hh
Led color	red or green
Digit height	14 mm
Function	time counter (up and down counting)
Controls	start, stop, reset
Default controls*	free potential contact
* configurable for	push-pull, NPN, PNP, inductive, ...
Excitation voltage	+5 Vdc, +9 Vdc, +15 Vdc, +18 Vdc (max. 70 mA)
Maximum Vdc at input terminals	±30 Vdc
Accuracy	100 ppm
Display refresh	12 refresh / second
Reset	front, rear and 'on alarm' activation
Counting memory	maintains in case of power loss
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 °C

Dimensions and connections



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

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, preset, memories, ...
- Special modes external control for 'up' or 'down' counting, external control for 'hold' counting, second counter for cycles, second counter for total counting time, second counter for exceeded time counting, memory of longest and shortest cycles.
- 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
- 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
- Brightness 5 levels of brightness intensity.
- Password blocks access to configuration menu.

45 YEARS

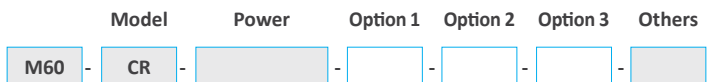
Q ISO 9001
Certified Quality

CE EN-61010-1
Security

CE EN-61326-1
Electromagnetic C.

5 YEARS
Extended Warranty

Output and control options



	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



Protector IP65

KA96



Adapter 96 x 96 mm

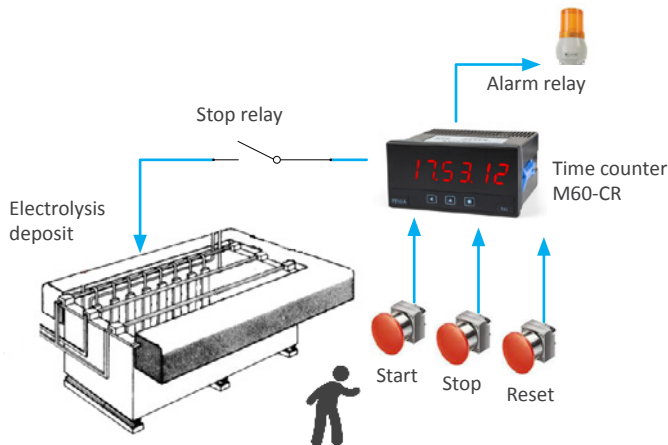
Additional documentation

M60-CR user's manual
M60-CR datasheet
Options user's manual

www.fema.es/docs/3215_M60-CR_manual_en.pdf
www.fema.es/docs/3193_M60-CR_datasheet_en.pdf
www.fema.es/docs/4254_SERIES_M-K-S_OPTIONS_manual_en.pdf

Application example

Electrolysis application times, controlled by a M60-CR instrument. The operator assigns the time to apply the chemical treatment and the instrument will activate the 'Stop relay' when the configured time is reached. Additionally, a second time counter can be defined to count the 'exceeded' time since the alarm was activated, or the total accumulated time with treatment activated, for maintenance control of the deposit.



Reading distances



Other Chronometers

Series M

4, 5 and 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

