

DIN Rail Mount Indicators

RM4-FX Ratemeter - pulse input

Description

Model RM4-FX is a DIN rail mounted process unit which can function as an indicator/ alarm/ controller/ transmitter/ computer interface and functions as a frequency meter/ ratemeter/ tacho.

The RM4-FX accepts its input from a wide variety of pulse sources such as proximity sensors, encoders, flowmeters etc. All function settings and scaling is carried out via the instruments pushbuttons. Applications include flow rate e.g. litres/hr, RPM, bottles/min, wind speed, etc.

Two alarm relays and a transmitter supply (link selectable 5V or 24VDC unregulated) are provided as standard. Combinations of optional outputs including extra relays, analog retransmission or serial communications can also be provided.

The RM4-FX has a programmable display brightness function, this allows the unit to be operated with low display brightness to reduce the instrument power consumption and to improve readability in darker areas. To reduce power consumption in normal use the display can be programmed to automatically dim or blank after a set time. The display brightness will be restored if an alarm relay is activated or any of the front buttons is pushed.

The programmable digital filter improves stability by smoothing out short term interference.

An external input is configurable to perform one of various functions e.g. Two level brightness switching, peak hold, display hold, max/min memory, setpoint only access or security lockout.

Electrical isolation between power supply, input signals and retransmission eliminates grounding and common mode voltage problems. This isolation feature makes the RM4-FX ideal for interfacing to PLCs, computers and other data acquisition equipment.

A combined ratemeter/totaliser version of this instrument is also available, model RM4-TR. See separate brochure for details.



Features

- Pushbutton calibration and setup
- Accepts a wide range of input sensor types
- Easy scaling - no test gear needed
- 240V, 110V, 48V, 42V, 32V, 24VAC, or 12 to 48VDC (factory configured)
- Digital filter, improves stability
- Two alarm/control relay outputs (5A)
- Inbuilt transmitter supply 5V or 24VDC (unregulated, common ground)
- Remote inputs for reset and to perform special functions e.g. display hold, peak hold, high memory, low memory, brightness level switching, setpoint only access or full security lockout of functions
- 5 digit LED display and relay/alarm status LEDs
- Isolation between input signal, output and supply
- Programmable display brightness reduces power consumption and controls glare in low brightness areas. Auto dim feature conserves power
- Rugged aluminium DIN rail mount housing
- 2 year guarantee

Options

- Isolated analog output single or two independent outputs 4-20mA, 0-1V or 0-10V
- 16 bit analog retransmission + 3rd setpoint relay
- Additional relays in combination with analog or transmitter supply outputs
- Isolated & regulated 12VDC @ 50mA or 24VDC @ 25mA (link selectable)
- Isolated RS232, RS422 or RS485 serial comms. with choice of ASCII or Modbus RTU protocol
- Combined analog 4-20mA and RS485 serial outputs



RM4FX-3.2-0

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Specifications

Technical Specifications

Input types: Selectable types inc: NPN, PNP, switch contact, magnetic pickup output from TTL or CMOS etc

Impedance: 10kΩ

Maximum count rate: 100kHz

Display reset: Remote reset via "Reset" terminal, front panel **P** button or "remote input" if programmed

Microprocessor: MC68HC11 CMOS

Ambient temp: -10°C to 60°C

Humidity: 5% to 95% non condensing

Display: LED 5 digit 7.6mm and alarm annunciator LEDs

Power supply: 240V, 110V, 48V, 42V, 32V, 24VAC 50/60Hz, or 12 to 48VDC (factory configured)

Power usage: AC supply 6 VA max, DC supply, <6W (depends on load & options)

Output (standard): 2 x relays, form A Rated 5A resistive 240VAC 24VDC unregulated transmitter supply (common ground) **25mA max** Programmable N.O. or N.C.

Relay action:

Output Options

Third relay : Rated 0.5A resistive at 30VAC or DC, form C if no other options fitted (otherwise form A)

Fourth relay: Rated 0.5A resistive at 30VAC or DC, form A

Retransmission: Analog 4 to 20mA, 0 to 1V or 0 to 10V link selectable (single or dual channel versions) 16 bit single channel available Serial RS232, RS485 or RS422 choice of ASCII or Modbus RTU protocols (factory configured)

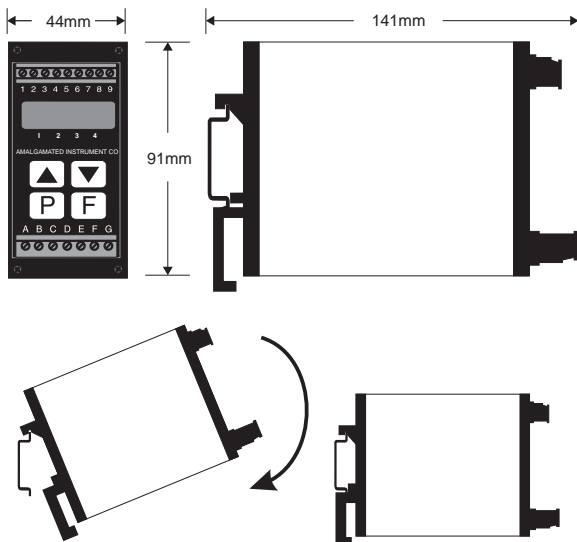
DC voltage out: Isolated 24V at 25mA or 12VDC at 50mA (link selectable)

Physical Characteristics

Case size: 44mm x 91mm x 141mm

Connections: Plug in screw terminals 2.5mm² wire

Weight: 500g basic model, 550g with option card



RM4-FX Order Codes

RM4-FX - [] - [] - []

Power Supplies

RM4-FX - [XXX] - [] - []

240VAC	240
110VAC	110
48VAC	48
42VAC	42
32VAC	32
24VAC	24
12 to 48VDC	DC

Display Type

RM4-FX - [] - 5E - []

Options

RM4-FX - [] - [] - [XXX]

ANALOG (4-20mA, 0-1V or 0-10V selectable)	A
DUAL ANALOG (4-20mA, 0-1V or 0-10V selectable)	AA
RS232	232
RS485	485
RS422	422
DC VOLTAGE OUTPUT 24V (±12V)	E
THIRD RELAY	R
THIRD & FOURTH RELAYS	RR
ANALOG (16 BIT) PLUS 3RD RELAY	AHR
3RD RELAY PLUS 24V (±12VDC) OUTPUT	RE
3RD RELAY PLUS ANALOG (12 BIT)	AR
ANALOG (12 BIT) PLUS 24V (±12VDC) OUTPUT	AE
ANALOG (12 BIT) PLUS RS485	A485

