





DIN Rail Mount Indicators

RM4-TR Totaliser/Ratemeter - pulse input

Description

Model RM4-TR is a DIN rail mounted process unit which can function as an indicator/ alarm/ controller/ transmitter/ computer interface.

The RM4-TR can function as a ratemeter or totaliser with the option of toggling the display between rate and total via the  or  buttons or a remote switch input. In totaliser operation a total and "grand total" (accumulated total) display is available and the display may be toggled via the  or . The RM4-TR accepts its input from pulse sources such as proximity sensors, encoders, switches etc. All setup and scaling and is carried out via the front panel pushbuttons.

Applications include flow rate and total in litres/sec or litres/hr (+ total litres), RPM (+ total revs), bottles/min (+ total bottles), wind speed etc. Versatile scaling functions allow display combinations such as flow rate in litres/sec. total in kilolitres and grand total in megalitres.

Two alarm relays are provided as standard which can be independently programmed to operate on the rate or the total. In addition to normal total alarm operation a special "pass" mode allows the relays to be configured to activate for a programmable time on multiples of a total e.g the a relay can be programmed to close for 0.5 seconds every time the total reaches a multiple of 1000.

Combinations of optional outputs including extra relays, analog retransmission or serial communications (ASCII or Modbus protocol) can also be provided.

The RM4 has a programmable display brightness function and an autodim function to conserve power. The display returns to normal brightness if a pushbutton is pressed or an alarm occurs. 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, grand total reset, rate/total display toggle, security lockout, and reset (zero).

Electrical isolation between power supply, input voltage/current and retransmission eliminates grounding and common mode voltage problems.



Features

- Rate/Total/Grand Total display via pushbuttons
- Totaliser memory retained for at least forty days with power removed
- Pushbutton calibration and setup
- Accepts a wide range of input sensor types
- 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, selectable 5V or 24VDC
- Remote inputs for reset and to perform special functions including display hold, peak hold, high memory, low memory, brightness level switching, reset (zero), grand total reset or rate/total display toggle
- 5 digit LED display and relay/alarm status LEDs
- Isolation between input signal, output and supply
- Programmable display brightness
- Auto dim feature conserves power
- Rugged aluminium DIN rail mount housing
- 2 year guarantee

Options

- Analog output single or dual 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., ASCII or Modbus RTU protocol
- Combined analog 4-20mA and RS485 serial outputs



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AMALGAMATED INSTRUMENT CO PTY LTD

ACN: 001 589 439

Unit 5, 28 Leighton Place Hornsby
NSW 2077 Australia

Telephone: +61 2 9476 2244
Facsimile: +61 2 9476 2902

e-mail: sales@aicpl.com.au
Internet: www.aicpl.com.au

Specifications

Technical Specifications

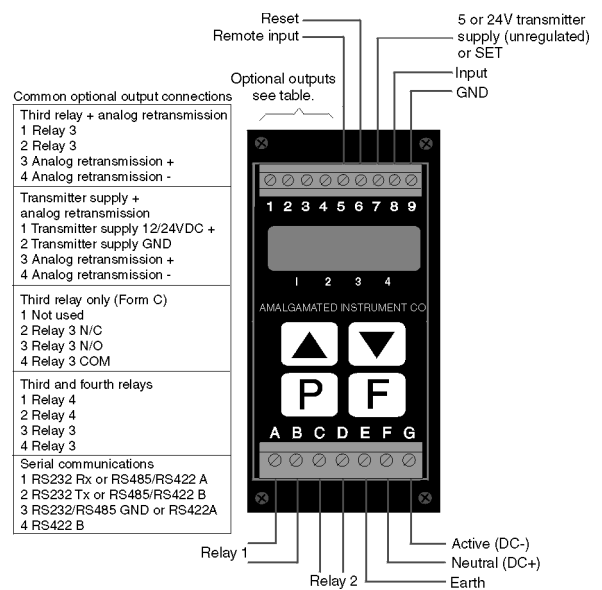
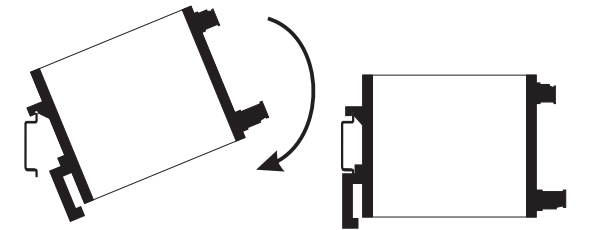
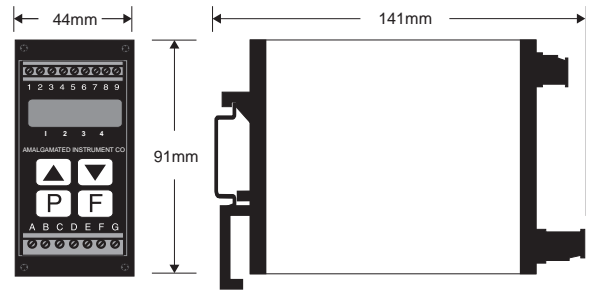
- Input types: Selectable types inc: NPN, PNP, switch contact, magnetic pickup output from TTL or CMOS etc
- Impedance: 10kΩ
- Maximum count rate: 100kHz
- Memory Retention: Total memory for at least 40 days with power removed
- Display reset: Remote reset via "Reset" terminal, front panel **P** button 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 LEDs
- Power supply: 240V, 110V, 48V, 42V, 32V, 24VAC 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**
- Relay action: Programmable N.O. or N.C.

Output Options - see below for full list

- 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-TR Order codes

The last section is for optional outputs, if required. (Note: only one of the optional outputs below can be fitted).

