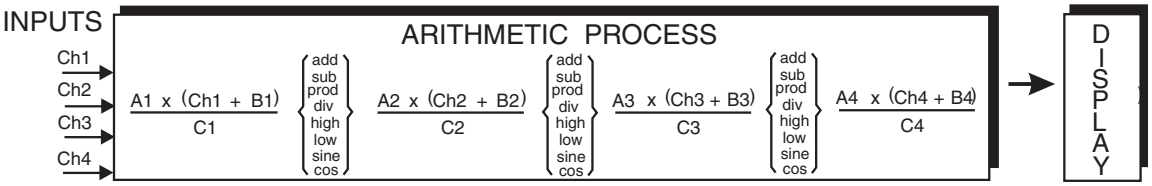
DIN Rail Mount Indicators
RM4-V4 4 input Arithmetic/Scanning

Accepts up to 4 channels of ±1VDC or ±10VDC

Features

- Pushbutton calibration and setup
- 5 digit LED display and relay/alarm status indication
- Up to 4 inputs
- Powered by 240V, 110V, 48V, 42V, 32V, 24VAC, or 12 to 48V DC(factory configured)
- Digital filter for improved stability
- Two alarm/control relay outputs (5A) standard with choices of operation from rate, total or pass
- Display auto-dimming feature. Switches display to a programmed level to conserve power
- Programmable display brightness reduces power consumption and controls glare in low brightness areas
- Rugged aluminium DIN rail mount housing
- Remote input to perform special functions e.g. totaliser rest, zero, tare/gross/net, peak hold, display hold, max/min, scale switching or security lock out
- 2 year guarantee



Description

Model RM4-V4 is a DIN rail mounted process unit which can function as an indicator/alarm/controller/transmitter/computer interface. The RM4-V4 accepts its input from ±100mV, ±1V or ±10VDC.

Two operation modes allow the RM4-V4 to be used either in arithmetic or scanning mode. The arithmetic mode allows input combining and manipulation via an arithmetic formula. Up to four inputs (Ch1, Ch2, Ch3 & Ch4) can be combined arithmetically using the versatile formula above. The instrument is ideal for situations requiring multi-input source calculations such as:- density correction, temperature compensation, combining from more than one source, ratios etc. In scanning mode up to four inputs to be scanned automatically (with selection of scanning period) or manually via the ▲ and ▼ pushbuttons.

Two alarm relays are provided as standard. The relays can be set to operate from any input channel, in arithmetic mode they can be set to operate from any input channel or the result. Combinations of optional outputs including extra relays, analog retransmission or serial comms. (ASCII or Modbus RTU protocol) can also be optionally provided.

The RM4 has an automatic display dimming function available. This will switch the display brightness after a configured time. The display will return to the "bright level" if an alarm condition is met or if one of the front buttons is touched.

The RM4 also 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. This function is switched using a remote input connection.

The programmable digital filter improves stability by smoothing out short term interference. Electrical isolation between power supply, input signals and retransmission eliminates grounding and common mode voltage problems.

RM4V4-3.6-0

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Specifications

Technical Specifications

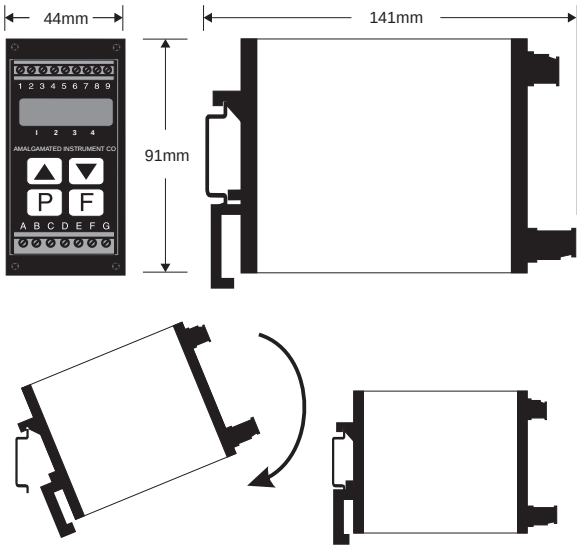
Input types:	±100mV, ±1V or ±10V (link selectable)
Input resistance:	1MΩ (Voltage)
ADC resolution:	1 in 20,000
Accuracy:	0.1% when calibrated
Sample Rate:	1 sample per second per channel
Conversion:	Dual Slope ADC
Microprocessor:	MC68HC11 CMOS
Ambient temp:	-10°C to 60°C
Humidity:	5% to 95% non condensing
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
Relay action:	Programmable N.O. or N.C.

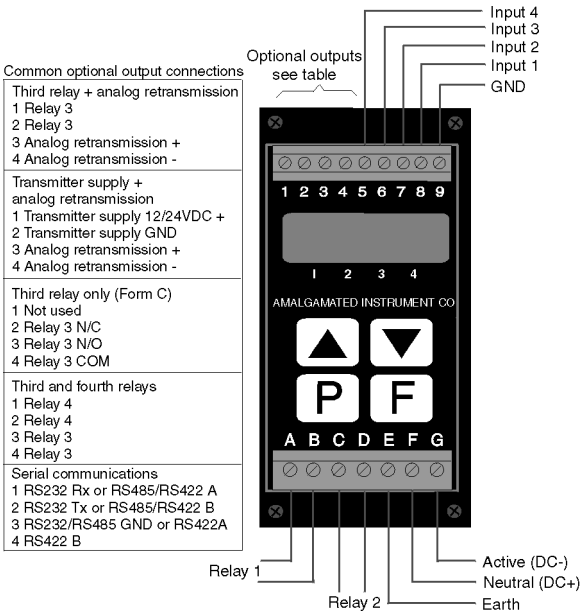
Output Options - see below for full list

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 or RS485, 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
Weight:	500g basic model, 550g with option card





RM4-V4 Order codes

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

RM4-V4- [ ] - 5E - [ ]

Power supply

240	240VAC
110	110VAC
48	48VAC
42	42VAC
32	32VAC
24	24VAC
DC	12-48VDC isolated

Display type

5E	5 digit 7.6mm red led with front pushbuttons & annunciators

Optional outputs

R	3rd setpoint relay (form C) - rated 0.5A/32VAC or DC
RR	3rd & 4th setpoint relays (form A) - rated 0.5A/32VAC or DC
RE	3rd setpoint relay (form C) - rated 0.5A/32VAC or DC and 12 or 24V isolated regulated transmitter supply
E	12 or 24V isolated regulated transmitter supply
SS	3rd and 4th setpoints, transistor 24VDC output or open collector NPN
A	Analog retransmission (12 bit 4-20mA, 0-1V or 0-10V) isolated
AA	Dual analog retransmission (12 bit 4-20mA, 0-1V or 0-10V individually isolated)
AE	Analog retransmission (12 bit 4-20mA, 0-1 or 0-10V) plus 12 or 24V regulated transmitter supply
AR	Analog retransmission (12 bit 4-20mA, 0-1 or 0-10V) plus 3rd setpoint relay (form A)
AHR	Analog retransmission (16 bit 4-20mA, 0-1 or 0-10V) plus 3rd setpoint relay (form A)
232	RS232 serial communications output - isolated
422	RS422 serial communications output - isolated full duplex (4 wire)
485	RS485 serial communications output - isolated half duplex (2 wire)
A485	Analog retransmission (12 bit 4-20mA, 0-1 or 0-10V) plus RS485 serial communications