DIN Rail Mount Indicators

RM4 Serial data input - RS232, RS485, RS422 or serial current loop

Description

The serial input RM4 model accepts a factory configured input of either RS232, RS485, RS422 or serial current loop in either ASCII or Modbus RTU protocol.

The serial input RM4 model can function as an indicator/alarm/serial to analog converter/serial to serial converter/PLC or computer interface. Serial baud rate, parity, data bits and other parameters are easily set up by the user using "on display" easy to follow messages. An RS485 or RS422 arithmetic operation mode allows the RM4 to poll up to eight external AIC instruments and perform arithmetic operations on the result using a versatile formula.

The instrument can poll up to eight external AIC instruments with automatic or manual display scrolling showing 3 digits plus channel number.

An alpha character feature allows certain alpha characters to be displayed. This feature is ideal for displaying special messages (e.g. OPEN, CLOSE etc.)

The RM4-RS is also capable of transmitting a polling command of up to eight characters in length to request data from other instruments.

Two alarm relays are provided as standard. Optional output combinations including extra relays, isolated analog retransmission (4-20mA, 0-1V or 0-10VDC) or isolated serial comms. can also be provided.

The RM4 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. The display can be programmed to automatically dim or blank after a set time. The display brightness is restored if a relay is activated or any of the front buttons is pushed.

An external input (not available with RS422) is configurable to perform one of various functions e.g. Two level brightness switching, peak hold, display hold, max/min memory, setpoint only access, security lockout or zero.

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

Features

- RS232, RS485, RS422 or serial current loop input (ASCII or Modbus RTU protocol)
- Pushbutton calibration and setup
- 240V, 110V, 48V, 42V, 32V, 24VAC, or 12 to 48VDC (factory configured)
- Arithmetic capability from up to eight sources
- Polling from up to eight external sources
- Programmable baud rate, parity, decimal point & data bits (7 or 8)
- Programmable terminating & skip characters and alpha enable
- Digital filter, improves stability
- Two alarm/control relay outputs (5A)
- Remote inputs for reset and to perform special functions including display hold, peak hold, high memory, low memory, brightness level switching, etc
- 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

- Isolated analog output single or two independent outputs 4-20mA, 0-1V or 0-10V
- 16 bit analog retransmission + 3rd setpoint relay
- 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

RM4RS-3.3-0

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Specifications

Technical Specifications

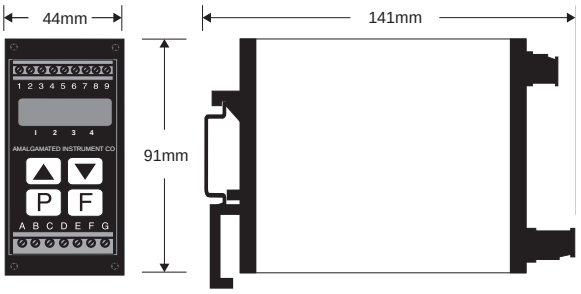
Input types:	Models available for RS232, RS485, RS422 or serial current loop
Baud rate:	300, 600, 1200, 2400, 4800, 9600, 19200 or 38400 baud
Microprocessor:	MC68HC11 CMOS
Ambient temp:	-10°C to 60°C
Humidity:	5% to 95% non condensing
Display:	LED 5 digit 7.6mm and alarm annunciator LEDs
Power supply:	240V, 110V, 48V, 42V, 32V, 24VAC 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.

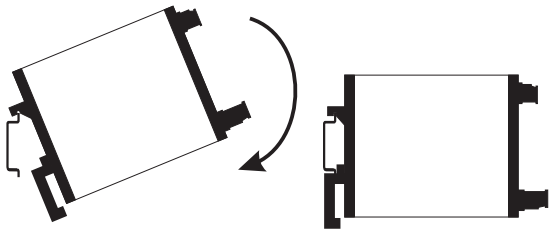
Output Options - see below for full list

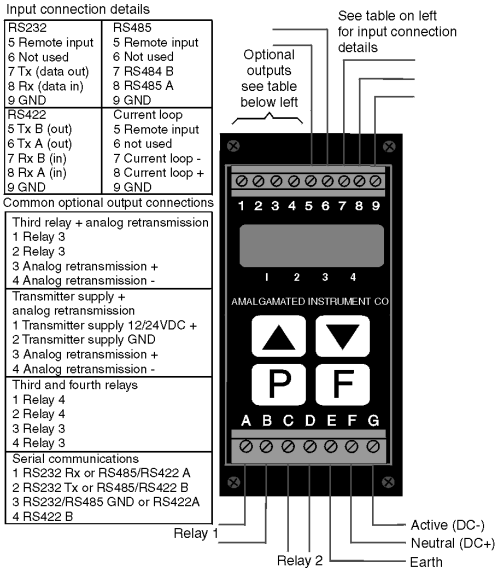
Third relay :	Rated 0.5A resistive at 30VAC or DC, form C if no other options fitted (otherwise form A)
Fourth relay:	Rated 0.5A resistive at 30VAC or DC, form A
Retransmission:	Analog 4 to 20mA, 0 to 1V or 0 to 10V link selectable (single or dual channel versions) 16 bit single channel available Serial RS232, RS485 or RS422 choice of ASCII or Modbus RTU protocols
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 2.5mm^2 wire)
Weight:	500g basic model, 550g with option card







RM4 Serial Input Order codes

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

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

Input type

232	RS232
485	RS483
422	RS422
CL	Serial Current Loop

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