

DIN Rail Mount Indicators

RM4-SSI Synchronous Serial Interface (SSI) data input

Description

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

SSI communication is typically used in high accuracy non contact measurement applications. Long transmission distances (up to 1.2km) are possible when connecting to SSI devices. Devices available with SSI output include position encoders and laser distance measuring equipment. The data transmitted is in the form of a binary or Gray code (up to 24 bits). The serial communications is externally activated via clock pulses generated from the RM4-SSI. Shielded twisted pair wire should be used for the clock and data lines.

The RM4-SSI meter can be programmed to scale the input signal to give a display in engineering units e.g. Metres. All function settings and scaling is accomplished via the instrument's pushbuttons.

When used with AIC model RM-BC or RM4-BC converters the RM4-SSI may be used as a Binary/BCD/Gray Code display/converter.

Two alarm relays are provided as standard. Combinations of optional outputs including extra relays, analog retransmission or serial communications (ASCII or Modbus RTU protocol) can also be provided.

The RM4-SSI 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.

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



Features

- SSI input in binary or Gray Code form
- Scalable to display in engineering units
- Pushbutton scaling and setup
- 240V, 110V, 48V, 42V, 32V, 24VAC, or 12 to 48VDC (factory configured)
- Digital filter, improves stability
- Two alarm/control relay outputs (5A)
- Can be used via models RM-BC or RM4-BC to display from Binary/BCD/Grey Code sources
- 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
- 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



RM4SSI-3.2-0

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Specifications

Technical Specifications

Input types: Synchronous Serial Interface (SSI) Binary or Gray Code - up to 24 bits

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

Relay action: Rated 5A resistive 240VAC Programmable N.O. or N.C.

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

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-SSI Order Codes

RM4-SSI - [] - [] - []

Power Supplies

RM4-SSI - [XXX] - [] - []

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

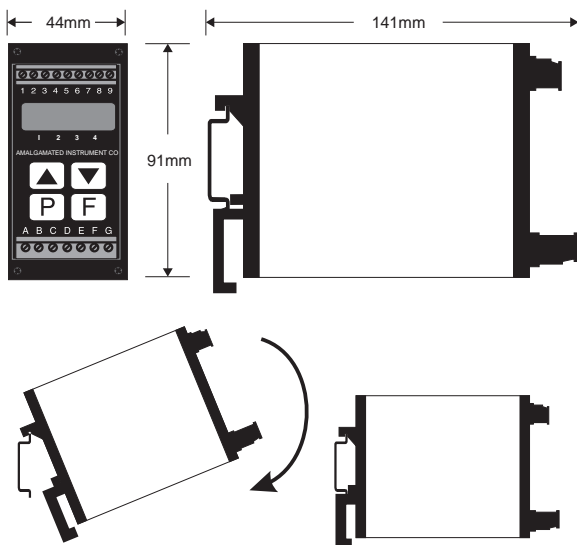
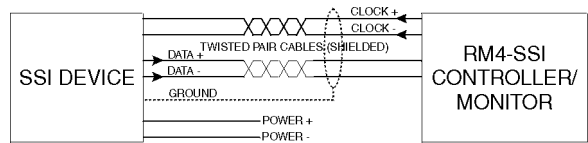
Display Type

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

Options

RM4-SSI - [] - [] - [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



Common optional output connections

Third relay + analog retransmission
1 Relay 3
2 Relay 3
3 Analog retransmission +
4 Analog retransmission -
Transmitter supply + analog retransmission
1 Transmitter supply 12/24VDC +
2 Transmitter supply GND
3 Analog retransmission +
4 Analog retransmission -
Third relay only (Form C)
1 Not used
2 Relay 3 N/C
3 Relay 3 N/O
4 Relay 3 COM
Third and fourth relays
1 Relay 4
2 Relay 4
3 Relay 3
4 Relay 3
Serial communications
1 RS232 Rx or RS485/RS422 A
2 RS232 Tx or RS485/RS422 B
3 RS232/RS485 GND or RS422A
4 RS422 B

