

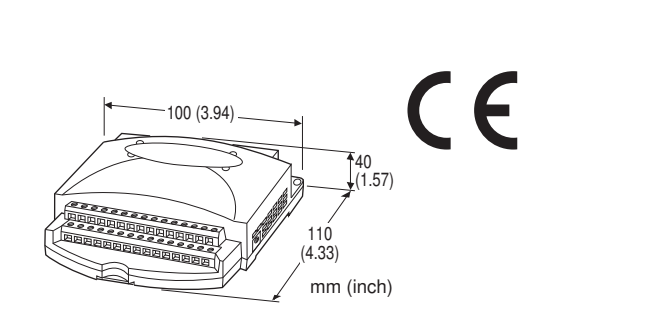
PC Recorders Series

PC RECORDER

(DC input, 8 points; RS-232-C)

Functions & Features

- Industrial recorder on PC
- 8-point input
- One trigger input and one alarm output
- Recorded data exportable to spreadsheet applications



MODEL: R2M-2G3-[1]/MSR

ORDERING INFORMATION

Code number: R2M-2G3-R/MSR

Consult Factory for AC power input.

[1] POWER INPUT

DC Power

R: 24 V DC

(Operational voltage range 24 V \pm 10 %, ripple 10 %p-p max.)

OPTIONS

PC Recorder Software Package

/MSR: With

PACKAGE INCLUDES...

- PC Recorder Software CD
- 9-pin D-sub connector, straight type (1 m or 3.3 ft)

GENERAL SPECIFICATIONS

Connection

DC power, input, alarm output: Euro-type terminal block; 0.14 - 1.5 mm² or AWG26 - 16; stranded and solid

AC adaptor: Miniature jack (side)

RS-232-C: 9-pin D-sub connector (male)
(Lock screw No. 4-40 UNC)

Configurator: Miniature jack (rear); RS-232-C level

Isolation: Input or configurator jack to alarm output to RS-232-C or power

Node address setting: Rotary switch; 1 - F (15 nodes)

RUN indicator LED: Green light blinks in normal conditions.

COMMUNICATION

Baud rate: 38.4 kbps

Communication: Half-duplex, asynchronous, no procedure

Protocol: Modbus RTU

■ RS-232-C

Standard: Conforms to RS-232-C, EIA

Transmission distance: 10 meters max.

INPUT SPECIFICATIONS

Input: DC input within \pm 10 V, 8 points; single ended (not differential but measuring potential to the single common to all channels)

Input resistance: 300 k Ω min.

Sampling rate: 50 msec./8 points

- **Trigger input:** Dry contact; ON detected at \leq 1.5 V

Sensing: Approx. 5 V DC @ 1 mA

OUTPUT SPECIFICATIONS

- **Alarm Output:** Photo MOSFET relay (no polarity);

\leq 50 Ω at ON, \geq 1 M Ω at OFF; OFF when not powered

Peak load voltage: 50 V max.

Continuous load current: 50 mA max.

Peak load current: 300 mA max. (\leq 0.1 sec.)

INSTALLATION

Power consumption

- DC: Approx. 0.9 W

Operating temperature: -5 to +60°C (23 to 140°F)

Operating humidity: 30 to 90 %RH (non-condensing)

Mounting: Surface or DIN rail

Weight: 300 g (0.66 lb)

PERFORMANCE (% of measuring range)

Temp. coefficient: \pm 0.01 %/°C (\pm 0.006 %/°F)

Accuracy: \pm 0.1 % (\pm 20 mV)

Response time: Approx. 0.6 second (0 - 90 %)

Insulation resistance: \geq 100 M Ω with 500 V DC

(RS-232-C or DC power terminal or AC adaptor jack to ground terminal to alarm output to AC plug (NOT for DC power))

Dielectric strength: 500 V AC @ 1minute

(ground terminal to input or configurator jack to RS-232-C or DC power terminal or AC adaptor jack)

2000 V AC @ 1 minute (input or configurator jack or DC power terminal or AC adaptor jack or ground terminal to alarm output)

2000 V AC @ 1 minute (AC plug (NOT for DC power) to RS-232-C or DC power terminal)



STANDARDS & APPROVALS

EU conformity:

EMC Directive

EMI EN 61000-6-4

EMS EN 61000-6-2

RoHS Directive

EN 50581

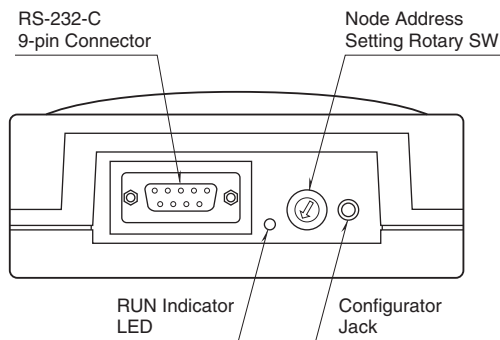
PC RECORDER SOFTWARE

PC Recorder Software Package (model: MSRPAC-2010) is included with purchases of this model.

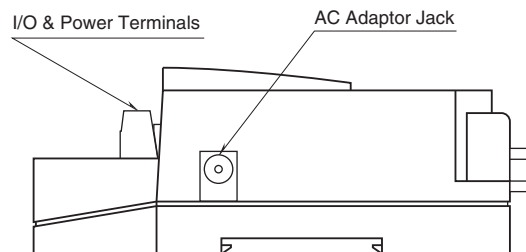
Refer to the MSRPAC-2010 data sheet for the contents of the package and the requirements for the PC to be prepared by the user.

EXTERNAL VIEW

REAR VIEW



SIDE VIEW



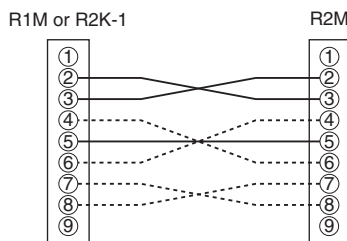
RS-232-C CABLE

- When connecting a R2M directly to a PC, use a 'straight' cable. A short 'straight' cable is included in the product package.
- When connecting a R2M to a R1M or R2K-1, use a RS-232-C Interlink/Reverse cable.

This cable should meet the following conditions:

- Must include wires indicated in solid lines in the figure below.
- Must not connect between Pins No. 8 of the both connectors. (May cause failure)

Pin Assignments



The above example with solid and broken lines shows an 'interlink' type cable.

RS-232-C INTERFACE



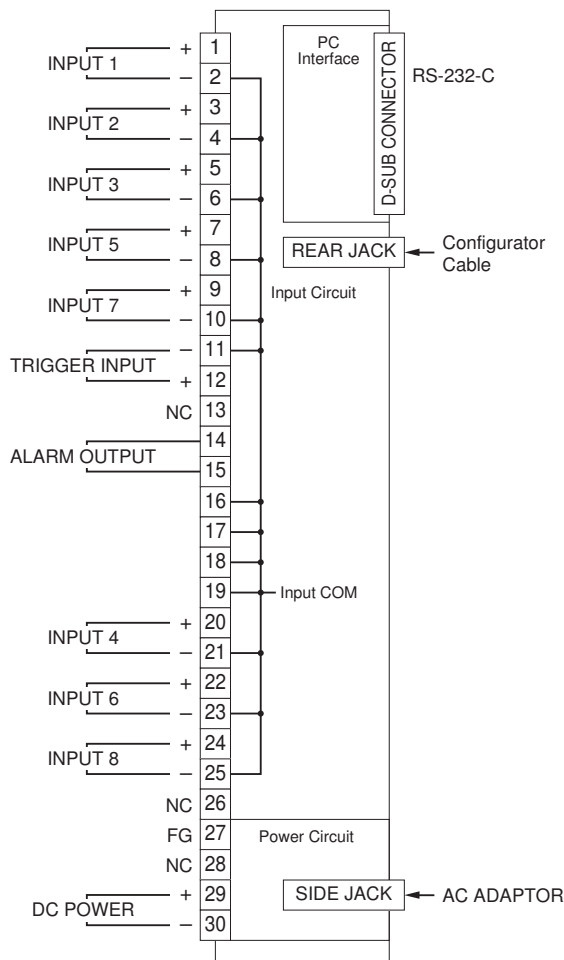
ABBR.	PIN NO.	EXPLANATION OF FUNCTION
BA (SD)	2	Transmitted Data
BB (RD)	3	Received Data
AB (SG)	5	Signal Common
CB (CS)	7	Clear to Send
CA (RS)	8	Request to Send
	1	Not Used.
	4	DO NOT connect. Connecting may cause malfunctions.
	6	
	9	



CONNECTION DIAGRAM

Note: In order to improve EMC performance, bond the FG terminal to ground.

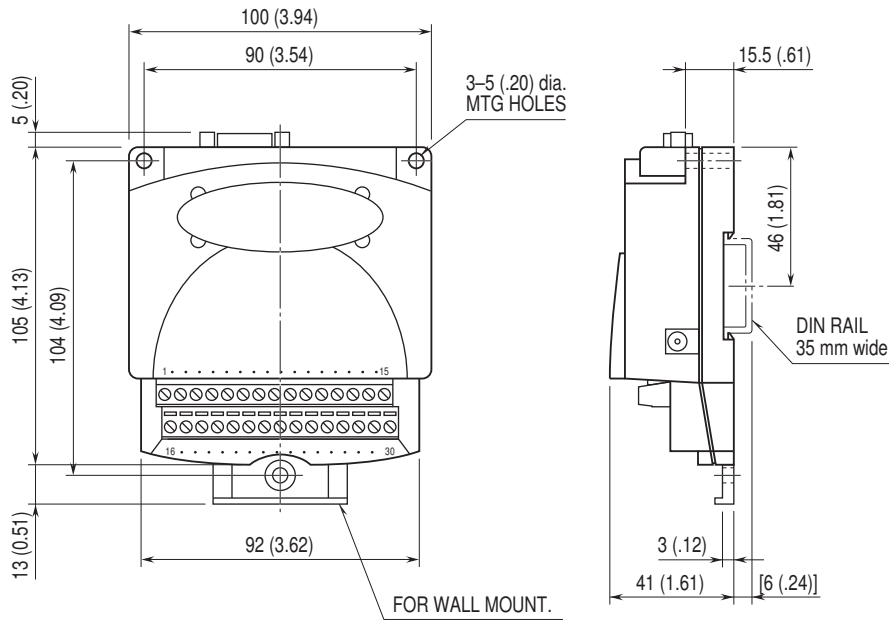
Caution: FG terminal is NOT a protective conductor terminal.



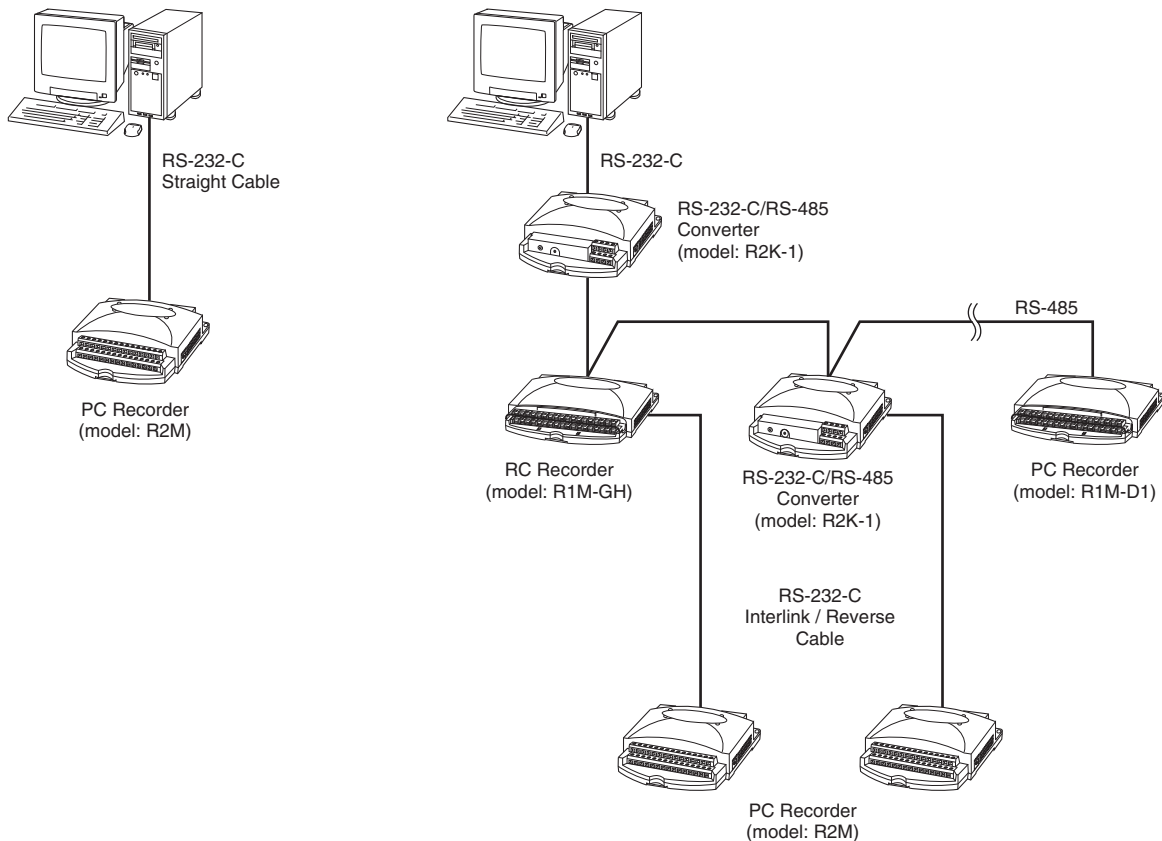
Remarks

- 1) Terminals 2, 4, 6, 8, 10, 11, 16, 17, 18, 19, 21, 23 and 25 are common negative. No. 11 is used only for a trigger input. Be aware the interconnected terminals when wiring as a large current, if it flows across these terminals, may destroy the module.
- 2) Use shielded twisted cables for the input or take other necessary measures so that there is no noise interference.
- 3) Ground the terminal 27 (FG) for safety.
- 4) The terminal 30 (DC Power -) and the signal ground (SG) of the D-sub connector are internally connected. The terminal 27 (FG) is used to lead noise from R2M's I/O terminals to the ground. For protecting your PC and the R2M, we recommend both terminals, 27 and 30, to be connected to the PC's ground before connecting an RS-232-C cable between the PC and the R2M.
- 5) The AC adaptor jack and the DC power input terminals 29 and 30 are directly connected. Supplying at the both sides may damage the power sources connected to the terminals/jack.
- 6) DO NOT connect the terminals 13, 26 and 28 (NC: No Connection). Wrong connection may cause failures of the module.

EXTERNAL DIMENSIONS & TERMINAL ASSIGNMENTS unit: mm (inch)



SYSTEM CONFIGURATION EXAMPLES



Specifications are subject to change without notice.

