HC900 Remote Termination Panel (RTP)
For Analog Inputs

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Summary

The Remote Termination Panel (RTP) provides an easy way to connect the HC900 controller to the field wiring. The RTP integrates some of the typical externally connected components, reducing wiring and setup time. It also minimizes the need for multiple wires under a single screw connection by expanding the connectivity of the shared terminals of the I/O modules. ***RTP is not useable for thermocouples.***

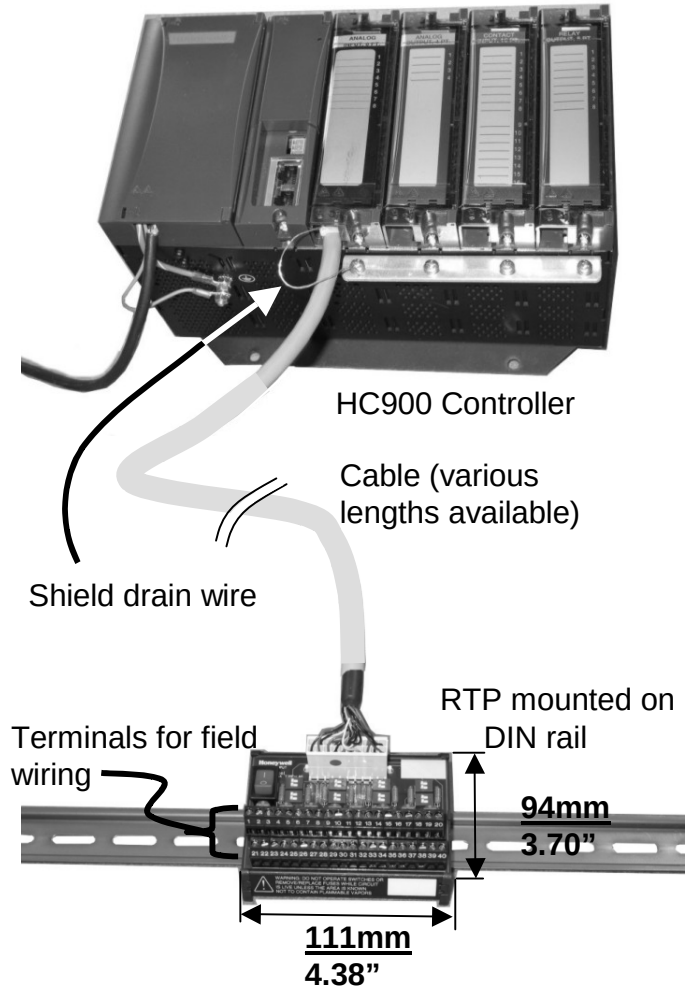
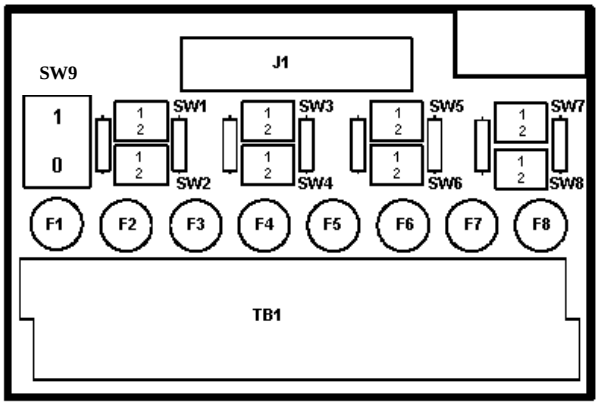
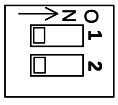
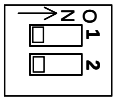
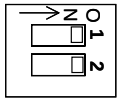
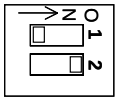
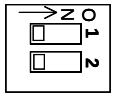


Figure 1 Example installation

8 Point Analog Input	
Step	**Action**
1	**ATTENTION: RTP is not for use with thermocouples.** **ATTENTION: RTP and cables are intended for permanent installation within their own enclosure.** **Mount RTP cable assembly to HC900 Controller** (Figure 1). • Remove appropriate key tabs from terminal block to allow mating with the module. See HC900 Hybrid Controller Installation and User guide 51-52-25-107 for details. • Connect desired cable to AI module at controller. Choose from: 900RTC-L010 Remote Terminal Low Voltage Cable Assembly, 1.0 meters long 900RTC-L025 Remote Terminal Low Voltage Cable Assembly, 2.5 meters long. 900RTC-L050 Remote Terminal Low Voltage Cable Assembly, 5.0 meters long • Install AI module label onto the module connector cover. • Connect shield drain wire to the grounding bars at the base of the HC900 rack. All field-wiring shields must be grounded as described in the shield grounding section of the HC900 Hybrid Controller Installation and User guide 51-52-25-107.
2	**Mount RTP to DIN rail.** • Latch to rail. See page 8. • Connect cable to RTP.
3	**Set DIP switch positions SW1 through SW8.** Set each input's DIP switch positions according to the input type. For Input n use Switch n. For example, for Input 1 use Switch 1, for Input 2 use Switch 2, etc. If an input is not used, set its DIP switch positions to OFF.  Fuses: 80mA Time lag Wickmann part #3740080041 UL/CSA approved **Volt, millivolt:**  **Ohms:**  **Transmitter: Loop powered**  **Milliamp: Externally powered**  **RTD:**  SW9 is the red power switch for 24 volt supply. Module RIUP is not affected by using the RTP. See page 7 for RTP internal schematic.

8 Point Analog Input	
Step	**Action**
4	**Connect field wiring.** Refer to Figure 2 through Figure 8 for field wiring. Any input type can be wired to any of the 8 inputs. After wiring, double-check DIP switches settings for each input type (Step 3).

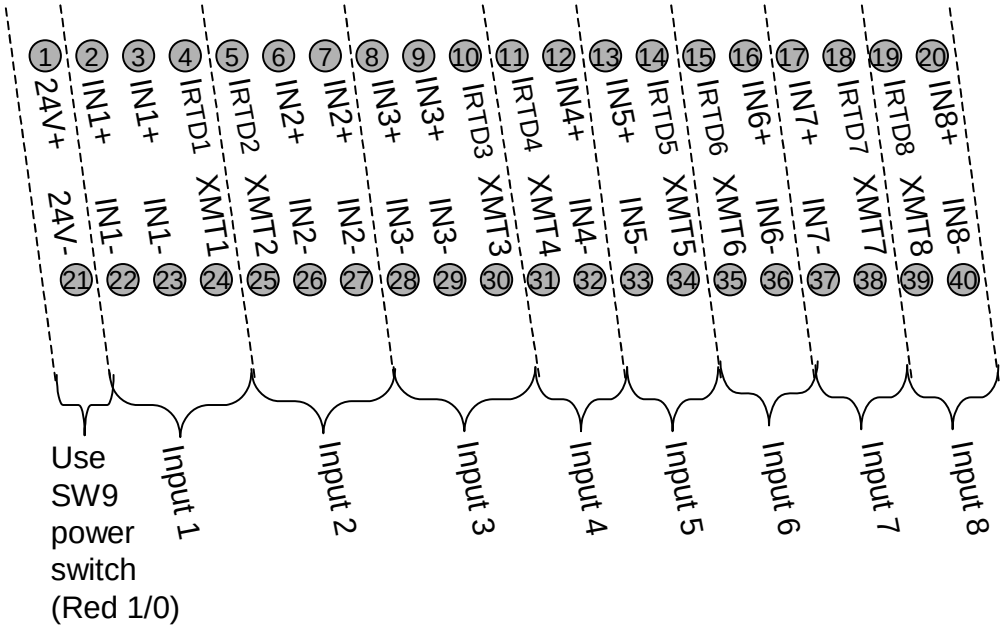


Figure 2 Analog input terminals

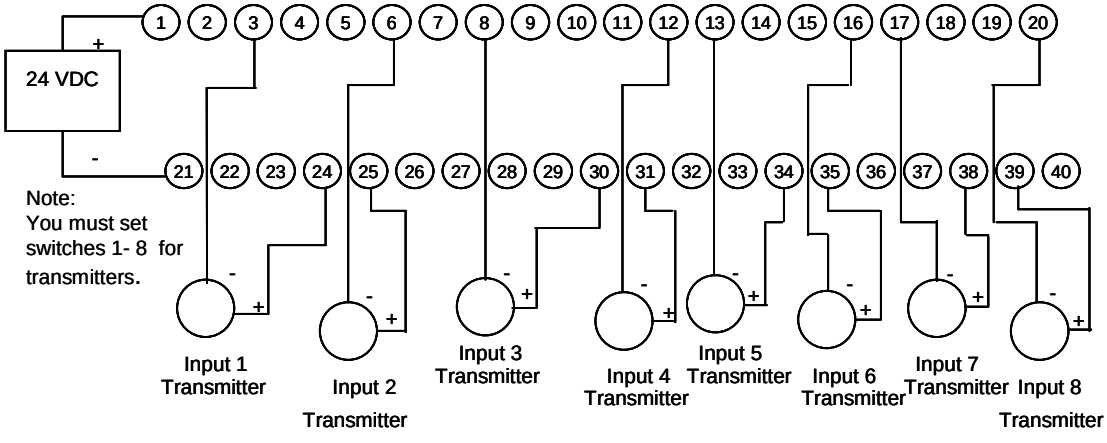


Figure 3 Two–wire transmitter connections with common 24 VDC supply

8 Point Analog Input	
Step	**Action**

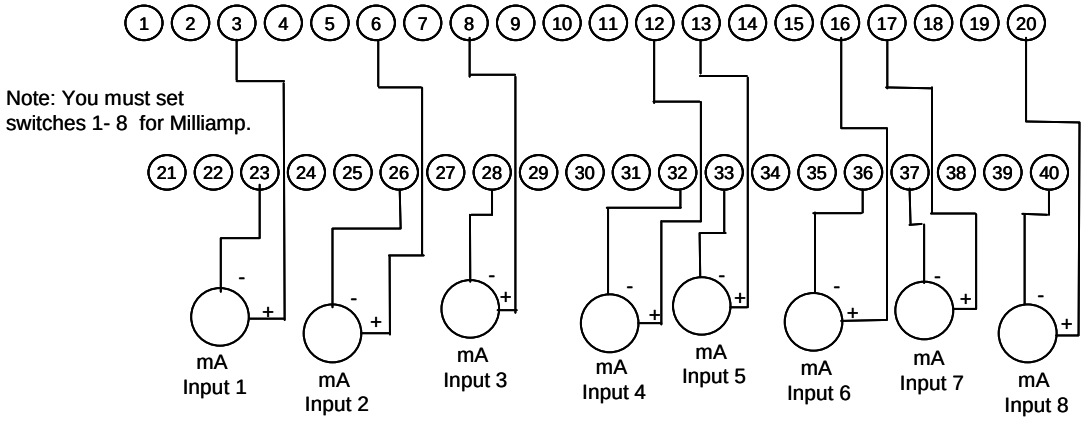


Figure 4 Milliamp input connections with 250 ohm shunt resistance

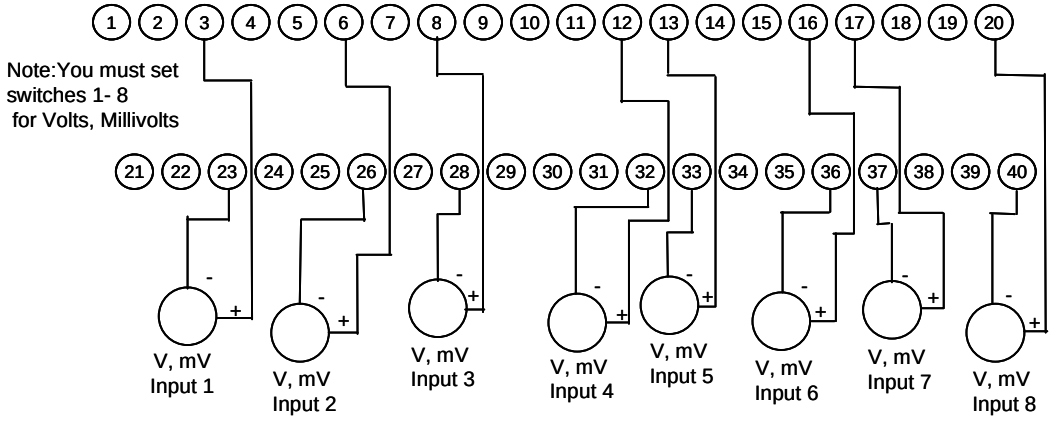


Figure 5 Volt, millivolt input connections

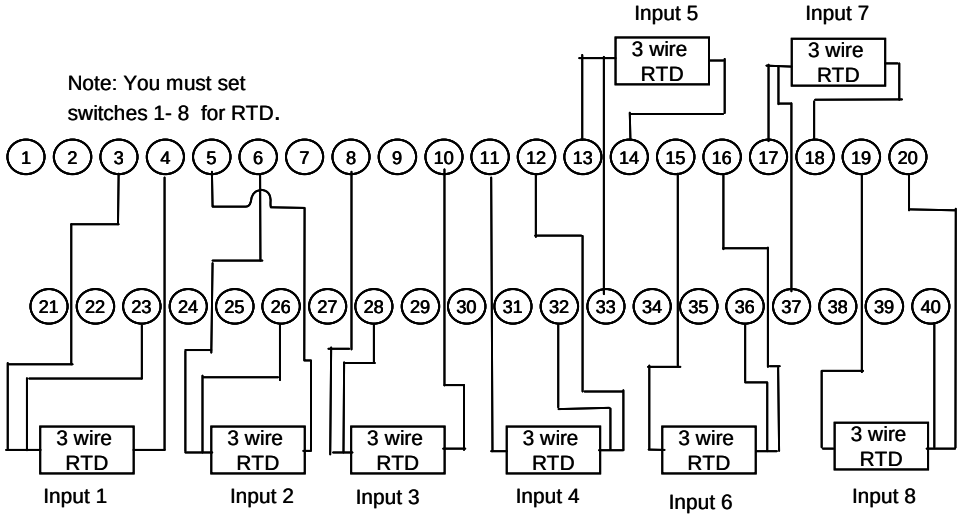
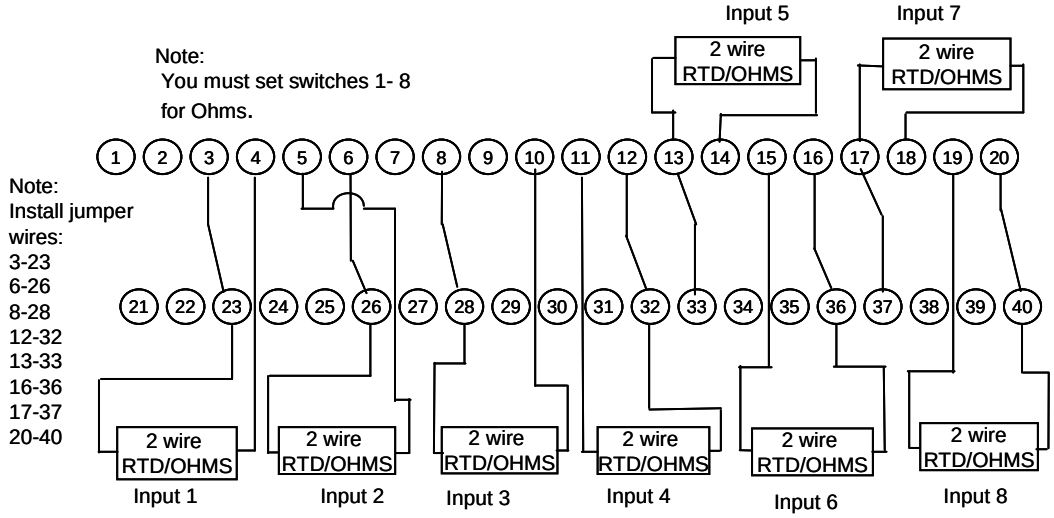
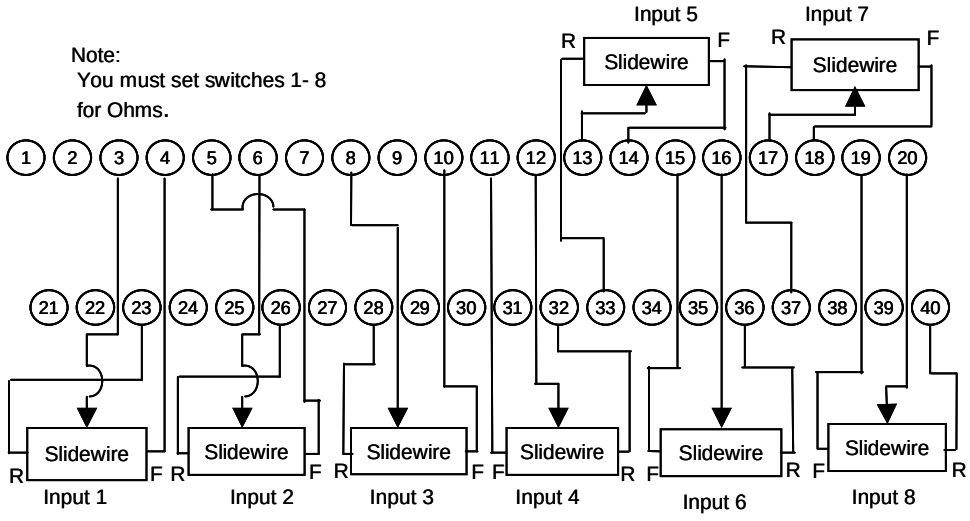


Figure 6 Three-wire RTD input connections

8 Point Analog Input	
Step	**Action**
	 **Figure 7 Two-wire RTD or ohm input connections**  **Figure 8 Slidewire feedback connections for actuators**

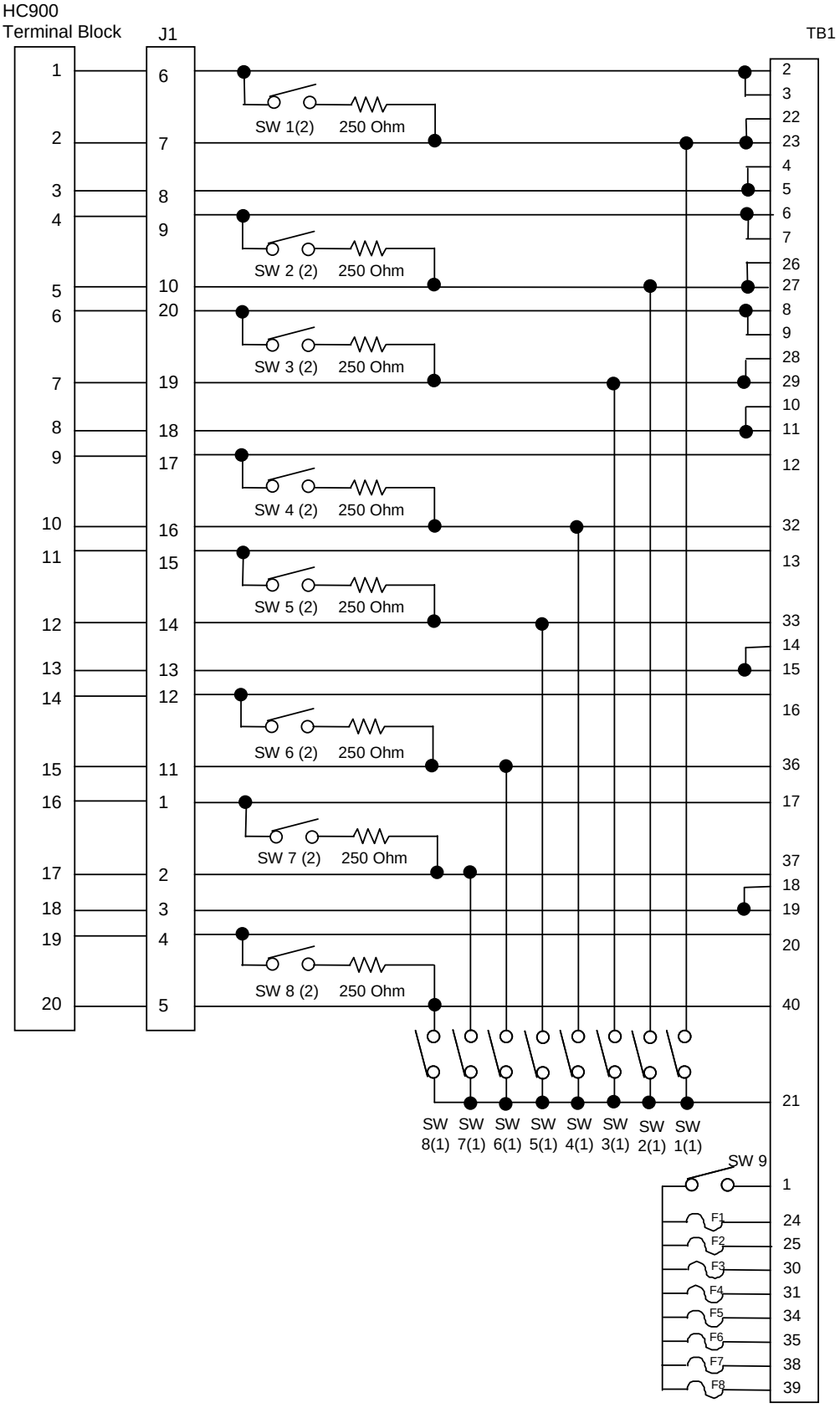
RTP Cable wire positions and colors

Twisted Pair Number	HC900 Module TB Position	RTP J1 Plug Connector	Color
1	1	6	Black
	2	7	Red
2	4	9	Black
	5	10	White
3	6	20	Black
	7	19	Green
4	9	17	Black
	10	16	Blue
5	11	15	Black
	12	14	Yellow
6	14	12	Black
	15	11	Brown
7	16	1	Black
	17	2	Orange
8	19	4	Red
	20	5	White
9	3	8	Red
	8	18	Green
10	13	13	Red
	18	3	Blue

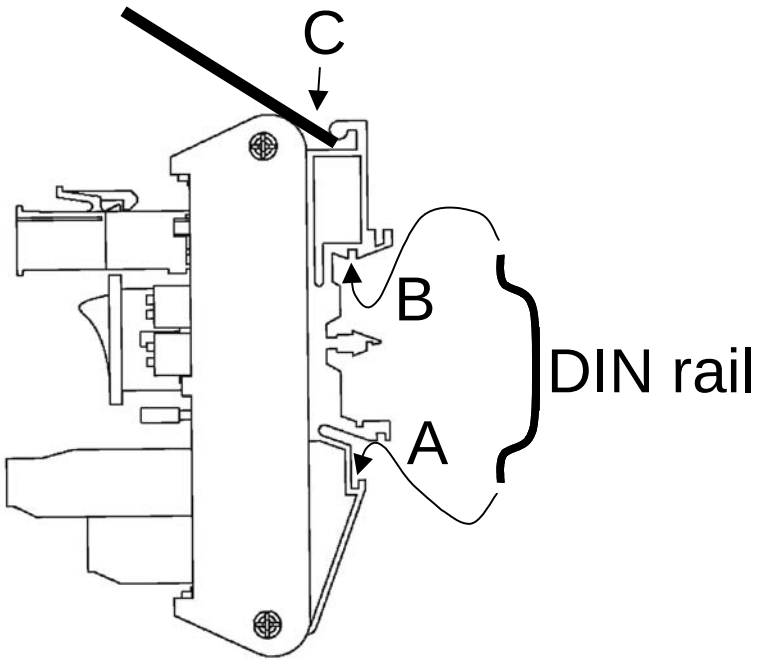
Accuracy specification

Range	AI Module Accuracy	RTP + Cable Accuracy	AI Module + RTP Accuracy
100Ω Plat. RTD	±0.1% of Range	±0.04% Range (0.357°C)	±0.14% of Range
JIS RTD	±0.1% of Range	±0.12% Range (0.824°C)	±0.22% of Range
10Ω Cu. RTD	±0.1% of Range	±0.57% Range (1.540°C)	±0.67% of Range
200Ω OHMS	±0.1% of Range	±0.07% Range (0.140Ω)	±0.17% of Range
0-10mV LINEAR	±0.1% of Range	±0.04% Range (0.004mV)	±0.14% of Range

RTP Internal schematic



Latch/Unlatch RTP to rail

Step	Action
1	**Mounting screws must be installed at each end of the mounting rail, with additional screws approx. every 8"(203mm) to prevent twisting of the rail.**
2	**Insert one side of DIN rail at A.** 
3	**Insert other side of DIN rail at B, and push B over the rail to snap into place.**
4	**To remove, using slot screwdriver to lift C up gently (plastic is fragile) to disengage at B. Lift up and over rail, then disengage at A.**

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