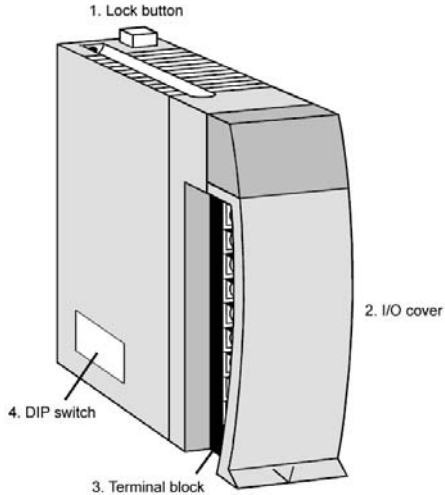
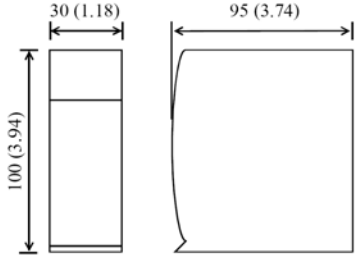


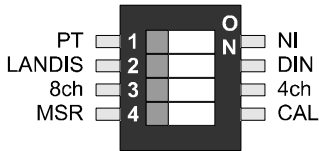


EH-RT80 - 8-channel Resistance Temperature Input Module

Name and function of each part		Type	EH-RT80
		Weight	approx. 0.2kg (0.4 lb)
		Dimensions mm (inch)	
No.	Name	Function	Remarks
1.	Lock button	Used to remove the module from the base unit. After installed to the base unit, the fixation can be reinforced using screws. In this case, use M4 x 10mm (0.39 in.) screw.	manual rev. 1.0
2.	I/O cover	Cover attached to the terminal block area.	
3.	Terminal block	Terminal block for connecting input signals. The terminal block is removable.	
4.	DIP switch	Used to select input type (Pt, Ni Landis, Ni DIN), number of channels (8/4), and to start calibration.	

No.	Item	Detailed explanation	Remarks																
	Operation	Set DIP switches according to required operation mode, and connect sensors. The CPU module recognizes status of the module. When I/O assignment in user program is correct, input information is received.																	
	Terminal block	<p>The screws for the terminal block are M3 screws. Use a crimp terminal that fits the screw diameter. The maximum thickness of the cable should be up to 0.75 mm² (0.5 mm² when two crimp terminals are attached to the same terminal). The recommended crimp terminal is indicated below.</p>  <p style="text-align: center;">Recommended</p>  <p style="text-align: center;">Caution, may fall off if the screw is loose</p>																	
	DIP switch setting		<table border="0"> <tr><td>PT</td><td>Pt100/1000</td></tr> <tr><td>NI</td><td>Ni100/1000 (Landis or DIN)</td></tr> <tr><td>LANDIS</td><td>Ni Landis & Gyr</td></tr> <tr><td>DIN</td><td>Ni DIN43760</td></tr> <tr><td>8ch</td><td>8 channels, two wire</td></tr> <tr><td>4ch</td><td>4 channels, three wire</td></tr> <tr><td>MSR</td><td>normal operation</td></tr> <tr><td>CAL</td><td>calibration mode*</td></tr> </table>	PT	Pt100/1000	NI	Ni100/1000 (Landis or DIN)	LANDIS	Ni Landis & Gyr	DIN	Ni DIN43760	8ch	8 channels, two wire	4ch	4 channels, three wire	MSR	normal operation	CAL	calibration mode*
PT	Pt100/1000																		
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4ch	4 channels, three wire																		
MSR	normal operation																		
CAL	calibration mode*																		

* Please do not enter calibration mode without the proper equipment and calibration manual.



Specification table

Item		Specifications
Type		EH-RT80
Temperature sensor		Platinum temperature-measuring resistor Pt100/1000 (DIN751) Nickel temperature-measuring resistor Ni100/1000 (DIN43760) Nickel temperature-measuring resistor Ni100/1000 (Landis & Gyr)
Measuring range *	Pt100/1000 Ni100/1000	-120..380°C -60..200°C
Accuracy **	Pt100/1000 Ni100/1000	+/-0.5°C @ 25°C +/-0.25°C @ 25°C
Number of channels		8 channels (two-wire) 4 channels (three-wire)
Temperature readout		0.1°C (123.4°C is shown as 1234)
Temperature drift		+/-0.01%/°C
Conversion time		1440ms
Conversion method		voltage to frequency
Conversion resolution		14 bits equivalent
Thermal recalibration		automatic, each measuring cycle
Mains suppression		50/60Hz (100ms integration time), better than 60dB
Sensor current		150uA per input
Insulation	between input and internal circuit	opto-coupler insulation
	between inputs	no insulation (B inputs are common)
Externally supplied power		24VDC, galvanically insulated from inputs
External wiring		shielded cable
Additional function		linearisation
Error detection		if temperature is out of measurement range, readout value is H7FFF
I/O assignment		X8W (in 4-channel mode, inputs 4..7 are zero)

* Selection between 100ohm and 1000ohm range is automatic

** In 8-channel mode, additional measurement error may be induced by resistance of connecting wires.

Terminal configuration	No.	Signal name		Diagram of internal circuit
		8-channel	4-channel	
		8-channel	4-channel	
	1	A0	A0	
	2	A1	b0	
	3	A2	A1	
	4	A3	b1	
	5	A4	A2	
	6	A5	b2	
	7	A6	A3	
	8	A7	b3	
	9	+24VDC	+24VDC	
	10	B0	B0	
	11	B1	-	
	12	B2	B1	
	13	B3	-	
	14	B4	B2	
	15	B5	-	
	16	B6	B3	
	17	B7	-	
18	0V	0V		

