

Resistance Transmitter v1 RT283

DESCRIPTION

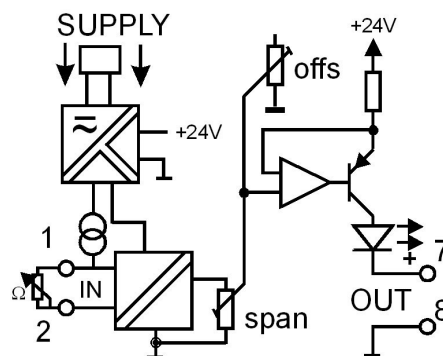
The RT283 is a isolating transmitter that measures the resistance of a probe or sensor. A constant current is applied to the input device and a change of resistance value causes the voltage to change. The precision current source is adjustable by a 15-turn potentiometer located on the input card. The measured input is then scaled by a isolating transmitter with a link selectable output providing true 3-way galvanic isolation up to 2000V rms. A wide range ac/dc power supply powers the input and the output circuit with three way power/input/output isolation. Final calibration is trimmed using the front accessible ZERO and SPAN 15-turn trim adjustments. The output signal level is indicated by a green LED on front giving a clear indication of module function. Reverse or direct action are factory configured. Special requirements for input/output response time variation can be accommodated by optional the "output ramp" option or the three standard link selectable response times.



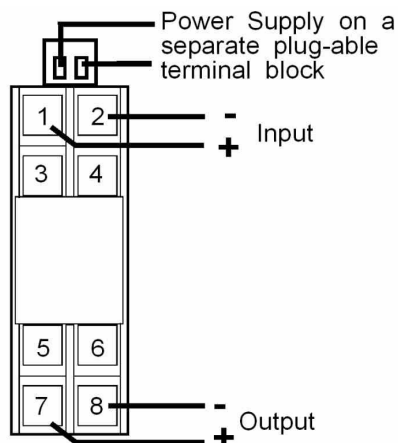
General Specifications

Size:	23.5W x 71.5H x 109D (mm).
Mounting:	Clip for 35mm DIN-Rail.
Housing material:	ABS
Termination:	Screw terminals.
Protection class:	IP40.
Weight:	0.106 kg.
Protection class:	IP40.
Front SPAN adjust:	±25% typical.
Front ZERO adjust:	+20/-10% typical.
Operating temperature:	-10...+60°C.
Output drive:	10mA into 0 - 2kΩ, 20mA into 0 - 950Ω.
Calibration accuracy:	<0.5%.
Linearity:	<0.5%.
Temperature drift error:	<0.5% within operating range (not taking account of input lead resistance).
Response time:	0.5 sec to T ₉₀ .
Optional internal offset adjust:	±50% typical.
Input range:	50Ω up to 10kΩ.
Excitation current:	0.6mA max.
Supply/Input/Output Isolation:	2kV rms.
Electromagnetic compatibility:	Complies with AS/NZS 4251.1 (EN 50081.1)

Block Diagram



Connections



For input / output combinations refer to TYPE NO. DESIGNATION overleaf.

TYPE NO. DESIGNATION

Power Supply:

1 = 85-265Vac 50/60Hz (90–280Vdc)

2 = 16-42Vac 50/60Hz (10-60Vdc) .

Input Span:

1 = 0 - 200Ω (100 - 300 #).

2 = 0 - 500Ω (250 - 750 #).

3 = 0 - 1kΩ (500 - 1k5 #).

4 = 0 - 1.5kΩ (1k - 2k5 #).

5 = 0 - 2.5kΩ (1k8 - 3k4 #).

6 = 0 - 3.5kΩ (2k8 - 4k3 #).

7 = 0 - 5kΩ (4k2 - 5k7 #).

8 = 0 - 10kΩ (5k - 12k9 #).

*) Z = Other (Specify).

Output:

0 = Link Selectable.

*) Z = Other (Specify).

Action:

1 = Direct.

2 = Reverse.

Options:

0 = None.

*) 1 = Output ramp.

*) 2 = Offset inputs up to 100% of span.

*) Z = Other (Specify).

= Indicates span range that can be achieved for the specified input using an internal adjustment.

*) = Price Extra.

Response time Table 0

	LK1/6	LK1/7
5ms		
50ms	X	
500ms		X

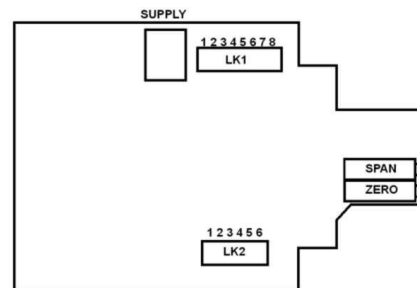
Output Table 5

	LK2					
Output	1	2	3	4	5	6
4-20mA	X		X			
0-20mA		X				
0-10mA				X		
0-5V		X				X
1-5V	X		X			X
0-10V		X			X	

To change ranges

1. Unplug supply plug.
2. Remove terminal covers.
3. Slightly depress lid to base clips and withdraw from housing.
4. Set coding plugs as required.
5. Reassemble unit and connect power.
6. Adjust SPAN and ZERO pots to recalibrate.
7. Change the label information to the new input/output values.

Coding Plug Location Diagram



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