Resistance Transmitter v4 BSWT240

DESCRIPTION

The BSWT240 is designed for SLIDEWIRE or potentiometer inputs ranging from 100Ω up to 20kΩ with zero suppression up to 50% of range. Standard output is 4 - 20mA with a minimum supply voltage of 7V and a maximum up to 40V. This enables the BSWT240 to be used in 12V battery supply systems or in automotive applications. Other factory set output configurations are 10 - 50mA loop powered and 0 - 10mA, 0 -
20mA or voltage output in 3-wire connection. Reference for 3-wire connection is 0V. Double surge protection is standard with all Series 200 loop powered transmitters to prevent failure due to spikes induced by DC switched inductive loads.

Example: SLIDEWIRE 1kΩ.
calibration 500-1000Ω = 4-20mA output.

Final calibration is trimmed using the front accessible zero and span 15-turn trimadjustments. A front mounted L.E.D. and a test socket verify module function and assist in calibration checks without disconnection of output wires.

General Specifications

Size:	23.5W x 71.5H x 109D.
Mounting:	Clip for 35mm DIN-Rail.
Housing material:	ABS.
Connection:	Screw terminals.
Weight:	88 g.
Protection class:	IP40 (IP65 refer to BSWT540).
Accuracy error:	<0.1% of range.
Linearity error:	<0.1% of range.
Ambient operating range:	-20...+70°C.
Temperature drift error:	<0.5% within operating range.
Supply voltage:	7 - 40V continuous (50V 30 seconds).
Load for 4-20mA output:	$RL_{max} = \frac{SupplyVoltage - 7V}{0.02A}$ [Ω].
Load change effect:	0.1% up to RL max.
Response time:	0.2 sec for T_{90}.
Front zero adjust:	0 - 65% of range.
Front span adjust:	35 - 100% of potientiometer travel (Gain 2.8...1).
Input range:	100 Ω up to 20k Ω.
Slidewire excitation:	4.6V @ 0.5mA max.
Input/output isolation:	None - refer to Resistance Transmitter BRT243 for isolation.
Electromagnetic compatibility:	Complies with EN 50081-1, EN 50082-2, EN 61010-1

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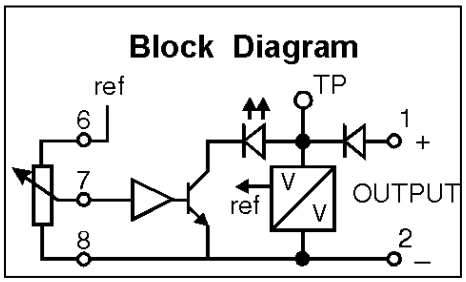


For input / output combinations refer to TYPE NO. DESIGNATION overleaf.

BSWT240 - X X 0 X

TYPE NO. DESIGNATION

Power Supply:

1 = 4 - 20mA.	2-Wire	*) 6 = 0 - 1V.	3-Wire 0V Ref.
2 = 10 - 50mA.		*) 7 = 0 - 5 V. min. supply 10.5Vdc	
*) 3 = 0 - 1mA.		*) 8 = 0 - 10V. min. supply 15.5Vdc	
*) 4 = 0 - 10mA.	3-Wire 0V Ref	*) 9 = Other (Specify).	
*) 5 = 0 - 20mA.			

Input:

1 = 0 - 100Ω.	6 = 0 - 5kΩ.
2 = 0 - 200Ω.	7 = 0 - 10kΩ.
3 = 0 - 400Ω.	8 = 0 - 20kΩ.
4 = 0 - 1kΩ.	*) 9 = Other (Specify).
5 = 0 - 2kΩ.	

Options:

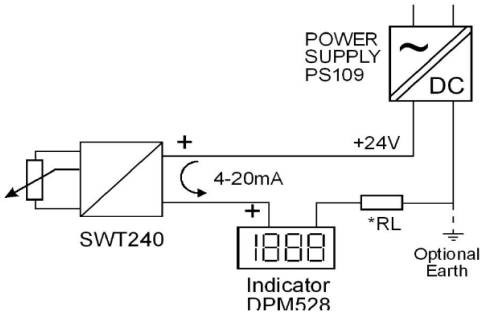
0 = None.
*) 1 = SPAN, remote adjustment including 1.5 cable tail, (Potentiometer extra).
*) 2 = SPAN AND INPUT ZERO remote adjustment including 2 x 1.5m cable tail (Potentiometer extra).
*) 9 = Other (Specify).

*) = Price Extra.

Front Control Explanation

1. Test socket - output signal access with reference to terminal (1) loop integrity is maintained when digital multimeter Rin <30Ω is used.
2. Loop indicator - dim at 4mA, bright at 20mA.
3. SPAN (full scale) adjust 15 turn.
4. ZERO (start scale) adjust 15 turn.

Connection Example



RL is input load of PLC, VSD, or other process instrument.

Connection Diagrams