



# MILLIVOLT TRANSMITTER (v4) BMVT223

## DESCRIPTION

The BMVT223 is a loop powered, isolating transmitter that offers an economical solution combining compactness with accuracy and flexibility. The BMVT223 is ideal in field enclosures or in larger control cabinets. Standard output is 4 - 20mA loop powered with a minimum supply voltage of 8V. Factory set output configurations include 10-50mA loop powered and a range of 3-wire connection versions. Double surge protection is standard with all Series 200 loop powered transmitters to prevent failure due to spikes induced by DC switched inductive loads. The BMVT223 accepts low level DC millivolt input signals. It features coding plugs to easily change ranges in the field without special tools or soldering. The BMVT223 can be factory configured for applications requiring "reverse acting" operation. Final calibration is trimmed using the front accessible zero and span 15-turn trim adjustments. A front mounted L.E.D. and a test socket verify module function and assist in calibration checks without disconnection of output wires.

### Features

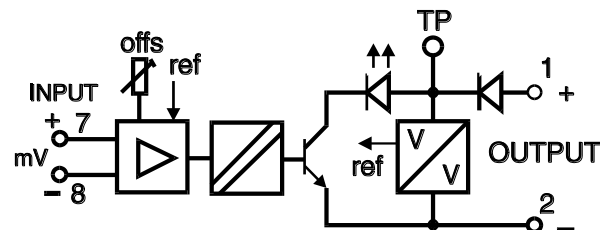
- Suitable for 12V battery supply systems or in automotive applications.
- Link selectable ranges of 20 to 1000mV cover external DC shunt applications.
- Reference for 3-wire connection is the negative supply.



## GENERAL SPECIFICATIONS

Size:	23.5W x 71.5H x 109D (mm)
Mounting:	Clip for 35mm DIN-Rail.
Housing material:	ABS.
Connection:	Screw terminals.
Weight:	110 g.
Protection class:	IP40 (IP65 refer to (BMVT523)
Accuracy error:	<0.1% of range.
Linearity:	<0.1% of range.
Ambient operating temperature range:	-10...+65°C.
Temperature drift error:	<0.5% within operating range.
Supply voltage:	8 - 40V continuous (50V 30 seconds).
Load for 4 - 20mA output:	$RL_{max} = \frac{SupplyVoltage-8V}{0.02A} [\Omega]$ .
Load change effect:	0.1% up to RL max.
Response time:	0.2 sec for T <sub>90</sub> .
Front Zero adjust:	+20% / -10%.
Front Span adjust:	±25%.
Internal offset adjust:	±50%.
Input range:	20mV up to 1000mV
Input impedance:	30kΩ for 20-200 mV 140kΩ for 250-1000mV
Input/output isolation:	> 2kV r.m.s.
Factory input default range:	75mV for input 1 and 500mV for input 2.

### BLOCK DIAGRAM



Electromagnetic compatibility: Complies with EN 50081-1, EN 50082-2, EN 61010-1

For inputs of 1 volt dc and above, refer to BSI231.

For input/output combinations refer to TYPE NO. DESIGNATION



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