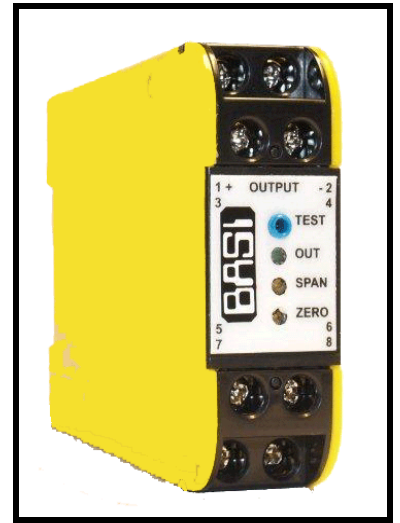




# AC VOLTAGE TRANSDUCER (v4) BAVT245

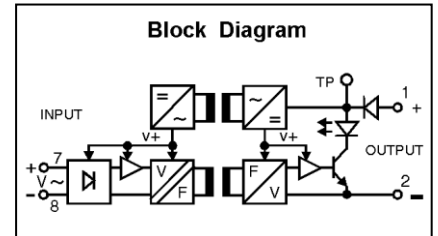
## DESCRIPTION

The AC VOLTAGE TRANSDUCER BAVT245 is a loop powered, isolating transmitters that accepts voltage up to 500Vac. The BAVT245 is ideal for field enclosures or as a space saver in larger control cabinets. Standard output is 4 - 20mA with a minimum supply voltage of 8V. This enables the BAVT245 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 the negative supply. Higher voltages are permissible with the use of suitable series resistors. 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 input circuit features an averaging precision rectifier to accurately measure sinusoidal waveforms having frequencies in the range 10 to 1000Hz. The input output isolation is greater than 2kV rms Zero suppression (OFFS) is adjusted internally via an optional 15-turn potentiometer. Final non-interacting ZERO and SPAN adjustments are accessible from the front of the module. 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 (mm)
Mounting:	Clip for 35mm DIN-Rail.
Housing material:	ABS.
Connection:	Screw terminals.
Weight:	106 g.
Protection class:	IP40.
Accuracy error:	<0.2% from 10% up to 100% of range.
Linearity:	<0.2% from 10% up to 100% of range.
Accuracy class as per AS-1384-1973:	Class 0.2.
Frequency dependence:	0.2% for 30 to 500Hz swing. 0.5% for 20Hz to 1kHz swing.
Ambient operating temperature range:	-10...+65°C.
Temperature drift error:	<0.2% within operating range.
Supply voltage:	8 - 40V continuous (50V 30 seconds).
Load for 4 - 20mA output:	$R_{Lmax} = \frac{\text{SupplyVoltage} - 8V}{0.02A} [\Omega]$ .
Load change effect:	0.1% up to RL max.
Response time:	0.5 sec to T90 (typically) additional filtering optional.
Internal offset adjustment: (Zero suppression)	-25%.
Front Zero adjust:	+20% / -10%.
Front Span adjust:	±25%.
Input range:	0.1 up to 500Vac. (10 - 1000Hz Sine) For other wave forms refer to BSI230/r.m.s. input.
Input impedance:	>10k Ω up to 1M Ω (refer overleaf).
Overload continuous:	500% of rated input (up to 100V); 200% of rated input (above 100V).
Input/output isolation:	> 2kV r.m.s.
Electromagnetic compatibility:	Complies with EN 50081-1, EN 50082-2, EN 61010-1



### TYPE NO. DESIGNATION

#### Output:

1 = 4 - 20mA.	2-wire.	}	*) 6 = 0 - 1V.	}	3-wire.
2 = 10 - 50mA.					
*) 3 = 0 - 1mA.	3-wire.	}	*) 7 = 0 - 5V, min supply 10.5Vdc	}	0V Ref
*) 4 = 0 - 10mA.					
*) 5 = 0 - 20mA.					

#### Input:

1 = 0 - 100mV. (10k $\Omega$ ).	5 = 0 - 75V. (>500k $\Omega$ ).
2 = 0 - 1V. (10k $\Omega$ ).	6 = 0 - 150V. (>500k $\Omega$ ).
3 = 0 - 10V. (100k $\Omega$ ).	7 = 0 - 300V. (>1M $\Omega$ ).
4 = 0 - 30V. (300k $\Omega$ ).	8 = 0 - 500V. (>1M $\Omega$ ).
	*) 9 = Other (Specify).

#### Action:

1 = Direct.	2 = Reverse.
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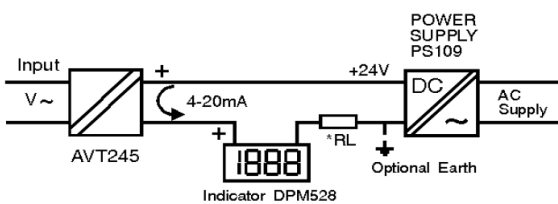
#### Options:

- 0 = None.
- \*) 1 = Customised response time (Specify).
- \*) 2 = Output ramp (external capacitor).
- \*) 3 = < 100mV input.
- \*) 4 = Dual Range (specify).
- Options 2 and 4 are mutually exclusive.
- \*) 9 = Other (Specify).

### Front Control Explanation

1. Test socket - output signal access with reference to terminal (1) loop integrity is maintained when digital multimeter Rin < 30  $\Omega$  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.

### Wiring Example



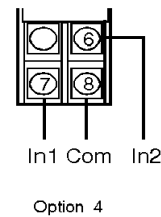
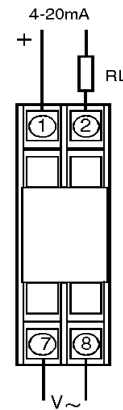
\*Note: RL is input load of PLC or other process instrument.

\*) Price Extra..

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### Connection Diagrams

**2-wire**  
(Loop Powered)



**3-wire**

