

ac Voltage Transducer v4 AVT245

DESCRIPTION

The AC VOLTAGE TRANSDUCER AVT245 is a loop powered, isolating transmitters that accepts voltage up to 500Vac. The AVT245 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 AVT245 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)	<p>Block Diagram</p>
Mounting:	Clip for 35mm DIN-Rail.	
Housing material:	ABS	
Connection:	Screw terminals.	
Weight:	0.106 kg.	
Protection class:	IP40.	
Calibration accuracy:	<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:	$RL_{max} = \frac{SupplyVoltage - 8V}{0.02A} \Omega$	
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 SI230/rms 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 rms	
Electromagnetic compatibility:	Complies with AS/NZS 4251.1 (EN 50081.1)	

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

