



T-VP SEPARATELY POWERED VOLTAGE TRANSDUCER



The T-VP voltage transducer converts a sinusoidal ac voltage input into a load independent dc current or voltage output. Power for the unit is derived from an auxiliary supply. The output is proportional to the rms calibrated rectified arithmetic mean of the input. Accurate measurement assumes a sinusoidal input waveform. The auxiliary power supply allows low input burdens, high sensitivity and live zero outputs, eg 4-20mA.

To enhance the resolution, the transducer can be set up to operate with a window or a dual slope function. The window option, T-VPW suppresses the lower end of the range so that the transducer reads over a band of voltage centred on the nominal working voltage of the system being measured. The dual slope option, T-VP-DSW has a lower resolution at the low end of the range with a higher resolution centred on the nominal working voltage of the system being measured.

The unit conforms to IEC 60688. In addition it meets the insulation requirements of IEC 60255-5, clauses 5, 6 and 8 as well as the high frequency disturbance test of IEC 60255-22-1 for Class III test voltage.

Ordering information: T-VP, input, output, power supply.

Examples: T-VP, input 0-150Vac, output 4-20mA, supply 110Vdc.

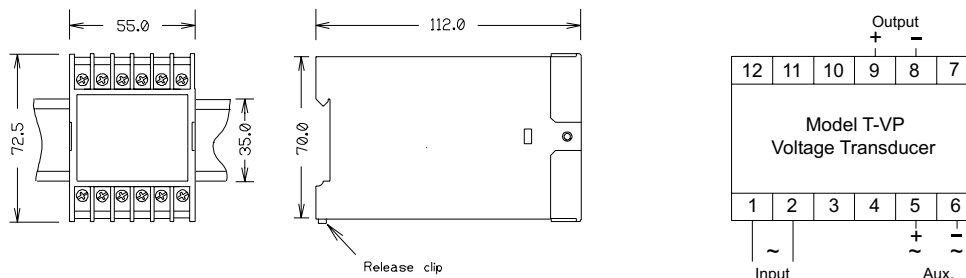
T-VP-DSW, input 0-80-140Vac, output 0-1.2-10V, supply 230Vac.

T-VPW, input 90-130Vac, output 4-20mA, supply 110Vac

Specifications

Input	Sinusoidal alternating voltage	
	Standard nominal range 0 - V_{nom}	: 0 - 150V, 0 - 300V, 0 - 500V (others on request, e.g. 90-130V window)
	Accurate range	: 0 - 120% V_{nom}
	Frequency range	: 45 - <u>50</u> - 55 - <u>60</u> - 65Hz
	Burden of input at V_{nom}	: 1mA
	Overload capacity	: 2 x V_{nom} continuous : 3 x V_{nom} for 10 seconds
Output	Linear voltage or current proportional to input	
	Standard nominal outputs	: 0-10mA dc <1500 Ω load
	(others on request)	: 0-20mA dc <750 Ω load : 4-20mA dc <750 Ω load : 0-5V dc >2k Ω load : 0-10V dc >2k Ω load
	Ripple	: <1% pk to pk of full span
	Response time	: <250ms 0-90%, <500ms 0-99%
Power Supply		: 24V, 110V, 230/240V, 400/415V ac \pm 20% 2VA
		: 24V dc \pm 20% or 110V/125V dc (88V-138V) 2W
Accuracy		: Class 0.5 to IEC 60688
		: \pm 0.5% of nominal output for specified range
Isolation	Galvanic isolation between input, output and the power supply circuits	
	Test voltage	: 4kV rms 50Hz for 1 minute
	Impulse	: 5kV 1.2/50 μ sec waveform
Temperature	Operating	: -10°C to +20°C to +50°C
	Storage	: -20°C to +70°C
EMC Approvals		: AS/NZS 61000.6.3:2012
Housing	Self extinguishing grey polycarbonate to IP40 snap mounting on top hat rail DIN EN 50022-35	
Terminals	Tinned steel pozi-drive M3 screws with captive square washers suitable for 2 x 2.5mm ² conductors (max).	
	Optional terminal covers raise rating from IP10 to IP20	

Housing & Connection Diagrams



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