



# T-VS SELF POWERED VOLTAGE TRANSDUCER



The Carrel Electrade T-VS voltage transducer converts a sinusoidal ac voltage into a load independent dc current or voltage signal capable of driving a number of independent instruments. Power for this unit is derived from the input signal. The output signal is calibrated to rms, based on an arithmetic mean measurement of the rectified input signal, and hence the transducer should be used with undistorted sine waveforms (<1% distortion).

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.

## Specifications

### Input

Sinusoidal alternating voltage  
Standard nominal range  $0 - V_{nom}$  : 0 - 150V, 0 - 300V, 0 - 500V  
(others on request)  
Accurate range : 20 - 120%  $V_{nom}$  for current outputs  
: 25 - 120%  $V_{nom}$  for voltage outputs  
Frequency range : 45 - 50 - 55 - 60 - 65Hz  
Burden of input at  $V_{nom}$  : <2.5VA  
Overload capacity : 1.2 x  $V_{nom}$  continuous  
: 1.5 x  $V_{nom}$  for 10 seconds

### Output

Linear voltage or current proportional to input  
Standard nominal outputs : 0-10mA dc <1500Ω load  
(others on request) : 0-20mA dc <750Ω load  
: 0-5V dc >2kΩ load  
: 0-10V dc >2kΩ load  
Ripple : <1% pk to pk of full span  
Response time : <250ms 0-90%  
: <500ms 0-99%

### Accuracy

: Class 0.5 to IEC 60688  
: ±0.5% of nominal output for specified range

### Isolation

Galvanic isolation between input and output circuits  
Test voltage : 4kV rms 50Hz for 1 minute  
Impulse : 5kV 1.2/50μsec 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

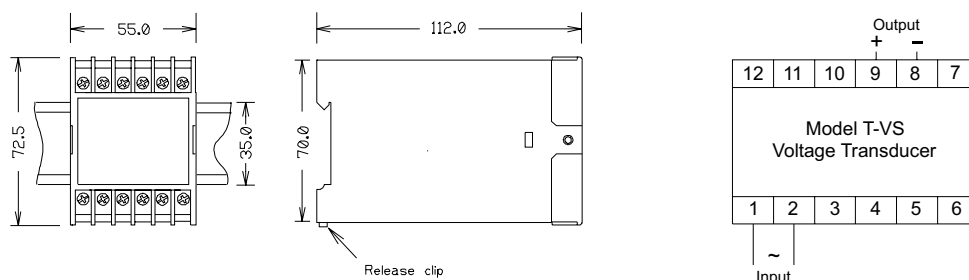
### Housing

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<sup>2</sup> conductors (max).  
Optional terminal covers raise rating from IP10 to IP20

## Housing & Connection Diagrams



## CARREL ELECTRADE LTD

MANUFACTURERS, IMPORTERS AND DISTRIBUTORS OF ELECTRICAL ENGINEERING PRODUCTS  
POSTAL ADDRESS: P O BOX 11078, ELLERSLIE 1542, AUCKLAND NEW ZEALAND  
FACTORY AND OFFICE: 661 GREAT SOUTH ROAD, PENROSE 1061  
TELEPHONE: +64-9-525 1753 FACSIMILE: +64-9-525 1756  
CHRISTCHURCH BRANCH: 73B BRISBANE STREET, SYDENHAM  
TELEPHONE: 03-366 1242 FACSIMILE: 03-379 1991  
EMAIL: sales@carrel-electrade.co.nz WEB: www.carrel-electrade.co.nz