

DC Voltage Transformer Type DCVT8HV



The DCVT8HV is a linear isolating transformer for power level DC voltages. It derives its power economically from the signal to be monitored and needs no external power supply.

For accurate measurement of DC voltage in control applications, these voltage isolating transformers give excellent and rugged performance under adverse conditions. The method of operation gives complete galvanic isolation between the primary power circuit and the secondary monitoring circuit.

Increased creepage and clearance distances are provided to allow high voltage isolation in adverse conditions. This device is for unipolar applications only.

Features

- 10 kV Proof Stress
- Solid potted construction
- 25V to 10V transformation ratio
- Increased creepage and clearance

Benefits

- Galvanic Isolation
- High Accuracy
- No power supply needed
- Rugged Design

Applications

- Railway traction
- DC transmission systems
- Process Equipment
- Safety systems
- Ground Loop Prevention
- Remote signal Isolators

As part of our policy of continuous product improvement we reserve the right to make modifications to this product without prior notice.

TECHNICAL DATA

Nominal Voltage Transformation Ratio	25V : 10V
Standard Load Resistance	1k Ω
Input Current ($V_{out} = 10V$ $R_L = 1k?$)	13.9mA
Operating Temperature Range	-10 to +65°C
Storage Temperature Range	-15°C to +90°C

SPECIFICATION

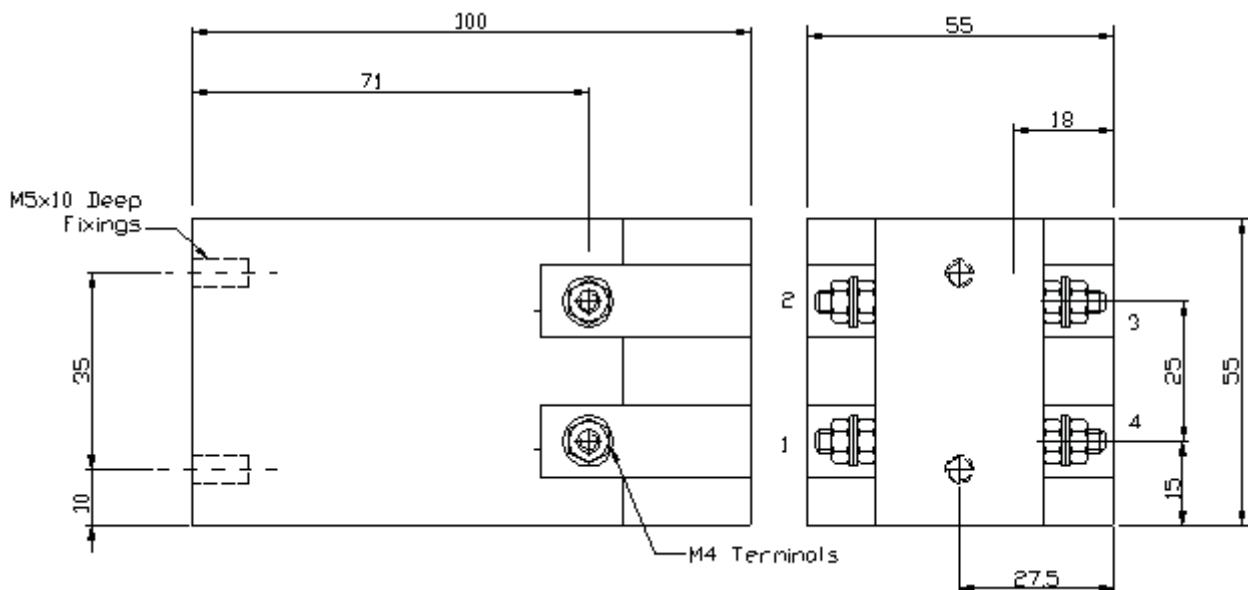
Transformation Ratio Error	$\pm 1\%$ max.
Interchangeability (unit to unit)	$\pm 2\%$ max.
Independent linearity ($V_{out} = 0.5 - 10V$)	0.2% max.
Frequency response (-3dB)	DC to 5kHz min.
Response Time for Step Input	100 μ s max.
Output Rise Time (10% - 90% V_{out})	50 μ s typ.
Output Ripple Amplitude (pk-pk)	0.5% of V_{out}
Output Ripple Frequency	80kHz typ..
Internal Dissipation	300mW max.
Peak Input Voltage Across Terminals 1 to 2	-0.3V to 26V max.
Proof Stress Voltage (i/p to o/p & fixings)	10kV a.c., rms, 50Hz for 1 minute
Insulation Resistance (i/p to o/p & fixings)	1G Ω min.

GENERAL DATA

Weight	530g typ.
Housing Material	Resin cast
Signal Sense	i/p:- 1 -ve, 2 +ve, o/p:- 4 -ve, 3 +ve.
Mounting	Two M5 threaded bushes imbedded in base

Note the specification above is for a maximum input of 25V and a load resistance of 1k Ω . For use with other inputs voltages and load resistances see the DCVT Series Application Note

DIMENSIONS



060518