

DESCRIPTION

The DVT7 is a dc voltage transducer with user-selectable input ranges. DIP switch-selectable ranges extend from 50mV to 600V. Transducer output is proportional to a Zero-to-Full Scale (F.S.) input for the selected range. Packaging is a compact, easy-to-install, DIN rail-mount enclosure.

FEATURES

- UL and CUL Listed, DC voltage measurement
- Variety of output types
- Input, output and instrument power are electrically isolated.
- Wide ac/dc instrument power range.
- DIN rail-mount enclosure

USER-SELECTABLE INPUT RANGES



APPLICATIONS

- Shunt isolation transducer
- Solar (PV) string monitoring
- Battery ground monitoring
- DC motor drive overvoltage or undervoltage condition monitoring
- Electric Vehicle (EV)

5 YEAR WARRANTY



SPECIFICATIONS

INPUT

DIP Switch-Selectable Ranges (F.S.)

Millivolt Input 50, 100, 150, 250, 500mVdc
 Low-Voltage Input..... 5, 10, 15, 25, 50Vdc
 High-Voltage Input..... 50, 100, 150, 250, 500, 600Vdc
1000V option is available when used with DVT7-EXT extension module. (NOT AVAILABLE AS UL LISTED)

Over-range (without damage)
 500V and 600V Ranges 850Vdc
 All Other Ranges 2 X F.S. Rating

Impedance
 Millivolt Input..... ≥1kΩ
 Low-Voltage Input..... ≥100kΩ
 High-Voltage Input..... ≥1MΩ
 Frequency (all ranges)..... dc

OUTPUT

Scaling 0-F.S. Input = 0-F.S. Output
 Loading 0-±5V, 0-±10V ≥2KΩ
 4-20mA 0-500Ω
 Response (10% to 90%)..... 200µs, Typical

INSTRUMENT POWER 24V ±20%, dc/50-400Hz, ≤2W

ACCURACY (setpoint, linearity, offset)..... ±0.5% F.S.

DIELECTRIC TEST

Input to Output/Instrument Power 2500Vdc
 Instrument Power to Output..... 500Vdc

TEMPERATURE & ENVIRONMENTAL

Temperature
 Operating Range -30°C to +60°C
 Effect ±0.5% F.S.
 Relative Humidity 0-95%, non-condensing

PHYSICAL

Mounts on standard 35mm “Top Hat” rail, per EN50052/EN60715
 Termination Wire Size 30-12AWG
 IP Rating IP20
 Weight..... 0.25lbs.

MODEL SELECTION

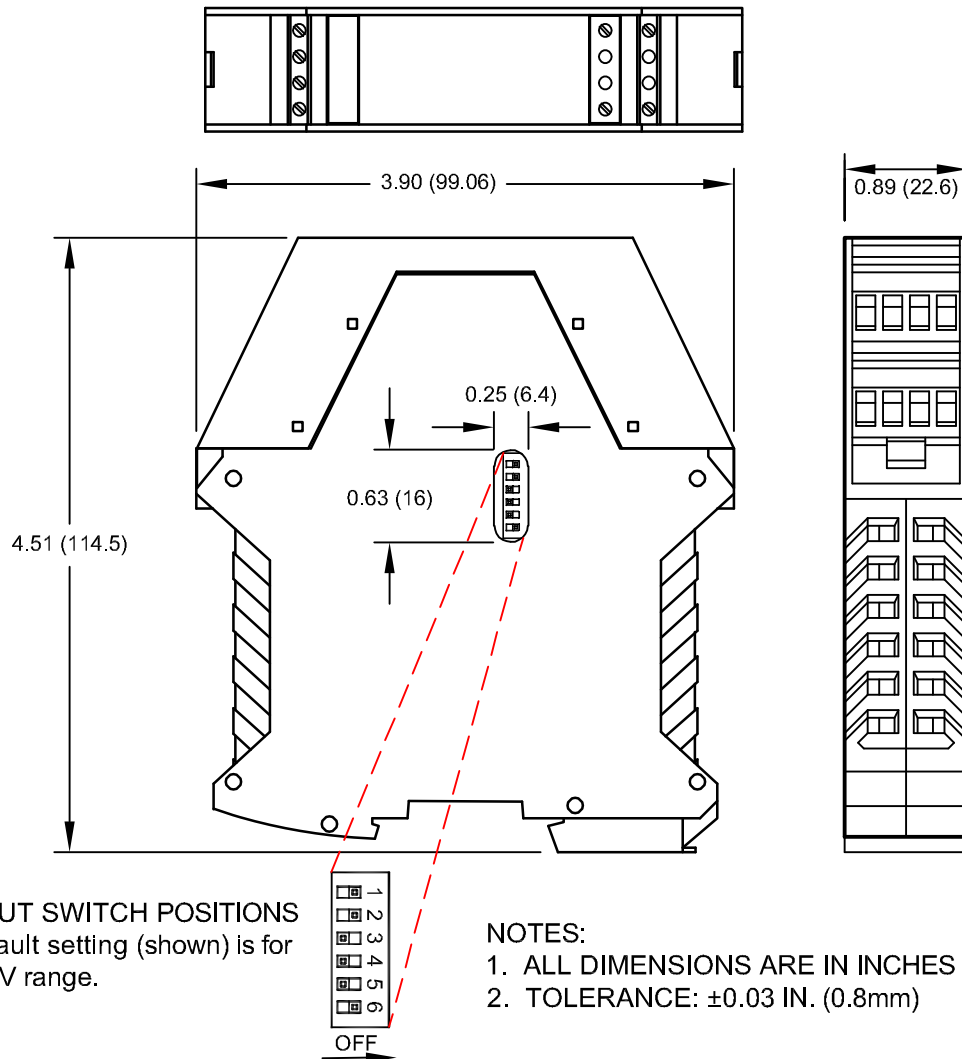
MODEL SELECTION	OUTPUT	POLARITY
DVT7D	0-±10V	bidirectional
DVT7E	4-20mA	unidirectional
DVT7X5	0-±5V	bidirectional

SWITCH POSITIONS

To select the desired input range, set the switches “ON” as indicated in the chart below.

INPUT RANGE	SWITCH POSITIONS					
	SW1	SW2	SW3	SW4	SW5	SW6
High-Voltage Input (Vdc)	600	off	off	ON	ON	off
	500	off	ON	ON	ON	off
	250	ON	off	off	ON	off
	150	ON	ON	off	ON	off
	100	ON	ON	ON	off	off
Low-Voltage Input (Vdc)	50	ON	ON	ON	ON	off
	25	ON	off	off	ON	off
	15	ON	ON	off	ON	off
	10	ON	ON	ON	off	off
	5	ON	ON	ON	ON	off
Millivolt Input (mVdc)	500	off	ON	ON	ON	off
	250	ON	off	off	ON	off
	150	ON	ON	off	ON	off
	100	ON	ON	ON	off	off
	50	ON	ON	ON	ON	off

DIMENSIONS



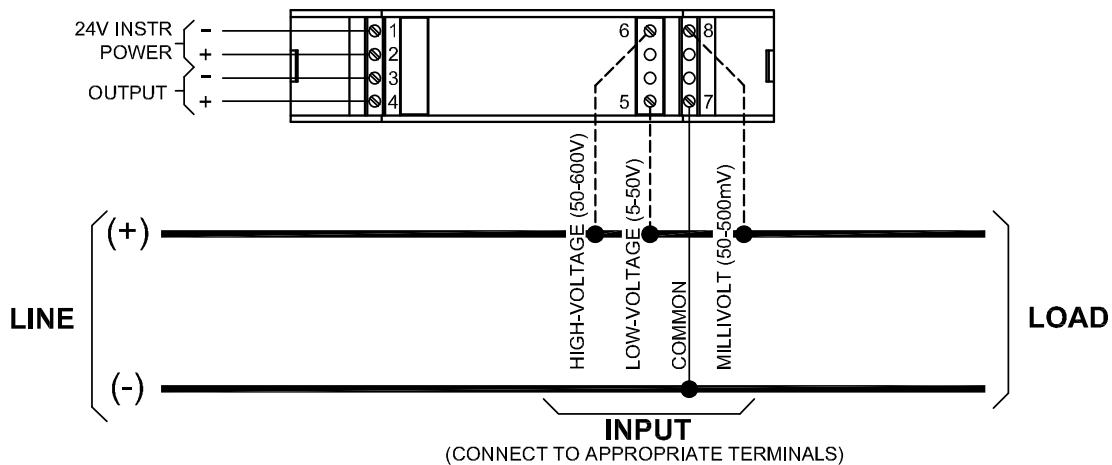
INPUT SWITCH POSITIONS
Default setting (shown) is for 600V range.

- NOTES:**
1. ALL DIMENSIONS ARE IN INCHES (mm)
 2. TOLERANCE: ± 0.03 IN. (0.8mm)

DIN RAIL
35mm x 7.5mm,
SLOTTED.

Dwg# 0902-01011-B Rev-A

CONNECTION DIAGRAM



Dwg# 0902-01011-B Rev-A

INSTALLATION INSTRUCTIONS

1. Installation should be performed by qualified electricians only!
2. Electrical service must be disconnected before making any electrical connections.
3. Branch circuit protection is required to be provided in accordance with the National and Local codes of the inspection authority.
4. Route wires as required and secure to terminals per connection diagram on this sheet and on the unit.
5. Use copper wires per 60°C sizing.

OPERATING INSTRUCTIONS

1. This unit is intended for indoor use (Open Type) at altitudes up to 2000 meters.
2. Transient overvoltages according to Installation Category II (Overvoltage Category).
3. For use in Pollution Degree 2 Environment.
4. The output signal is intended to be "Not accessible to the user." To prevent contact with live circuits, the transducer is required to be mounted in an enclosure that requires the use of a tool for access.
5. If cleaning of the exterior surface is necessary, de-energize all services of supply (both measuring and instrument power circuits) and brush with a soft brush or blow off with low-pressure air. Use appropriate eye protection. Not suitable for hose-down cleaning.
6. Maximum operating temperature range is -30°C to +60°C.

SYMBOLS



Caution! General hazard point. Read the product documentation.



Instrument Power Symbol



Output Symbol



Input Symbol



UL approved for USA and Canada



Both Direct (dc) and Alternating (ac) current



Direct Current

WARRANTY STATEMENT

Ohio Semitronics Inc. warrants this unit to be free of defects in material and workmanship for a period of five years from date of shipment. This unit must not be used in any manner other than as specified in this document.