

## USER-SELECTABLE INPUT RANGES

### DESCRIPTION

One device can measure 50mV to 600V full-scale, RMS voltage from DC through 1kHz, enabling accurate measurement of dc, ac sinewave and complex, non-sinusoidal, waveforms in multiple locations and applications.

Exceptional flexibility from DIP-switch selectable input ranges with output proportional to the selected range Zero-to-Full Scale input.

Delivers stated accuracy from 10% to 100% of selected range.

### FEATURES

- True RMS voltage measurement from DC to 1kHz
- 50mV to 600V user-selectable input ranges
- Exceptional flexibility for multiple applications
- Galvanically isolated input, output and instrument power
- DIN rail-mount enclosure

### APPLICATIONS

- Accurate measurement of dc, ac or complex non-sinusoidal waveforms



## SPECIFICATIONS

### INPUT

DIP Switch-Selectable Ranges (F.S.)

Millivolt Input.....50, 100, 150, 250, 500mVRMS

Low-Voltage Input.....5, 10, 15, 25, 50VRMS

High-Voltage Input.....50, 100, 150, 250, 500, 600VRMS

Over-range (without damage)

500V and 600V Ranges .....750VRMS

All Other Ranges .....2 X F.S. Rating

Impedance

Millivolt Input.....≥1kΩ

Low-Voltage Input.....≥100kΩ

High-Voltage Input.....≥1MΩ

Frequency (all ranges)..... dc-1.0kHz

### OUTPUT

Scaling .....0-F.S. Input = 0-F.S. Output

Loading ..... 0-5V, 0-10V .....≥2KΩ

4-20mA .....0-500Ω

Response (to 90%) .....Typical 200ms

Ripple ..... (input dc, ≥40Hz) .....±0.5% F.S.

**INSTRUMENT POWER** ..... 24V ±20%, dc/50-400Hz, 2.5W

**ACCURACY** (setpoint, linearity, offset, 10-100% rng., 25°C)

50/60Hz .....±0.25% F.S.

dc, >60-400Hz .....±0.5% F.S.

>400Hz-1.0kHz .....±1.0% F.S.

### DIELECTRIC TEST

Input to Output/Instrument Power ..... 2200Vac, 60Hz

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

## MODEL SELECTION

MODEL SELECTION	OUTPUT
DVT8D	0-10V
DVT8E	4-20mA
DVT8X5	0-5V

## 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 (VRMS)	600	off	off	ON	ON	ON	off
	500	off	ON	ON	ON	ON	off
	250	ON	off	off	ON	ON	off
	150	ON	ON	off	ON	ON	off
	100	ON	ON	ON	off	ON	off
Low-Voltage Input (VRMS)	50	ON	ON	ON	ON	ON	off
	25	ON	off	off	ON	off	ON
	15	ON	ON	off	ON	off	ON
	10	ON	ON	ON	off	off	ON
	5	ON	ON	ON	ON	off	ON
Millivolt Input (mVRMS)	500	off	ON	ON	ON	off	off
	250	ON	off	off	ON	off	off
	150	ON	ON	off	ON	off	off
	100	ON	ON	ON	off	off	off
	50	ON	ON	ON	ON	off	off

### PHYSICAL

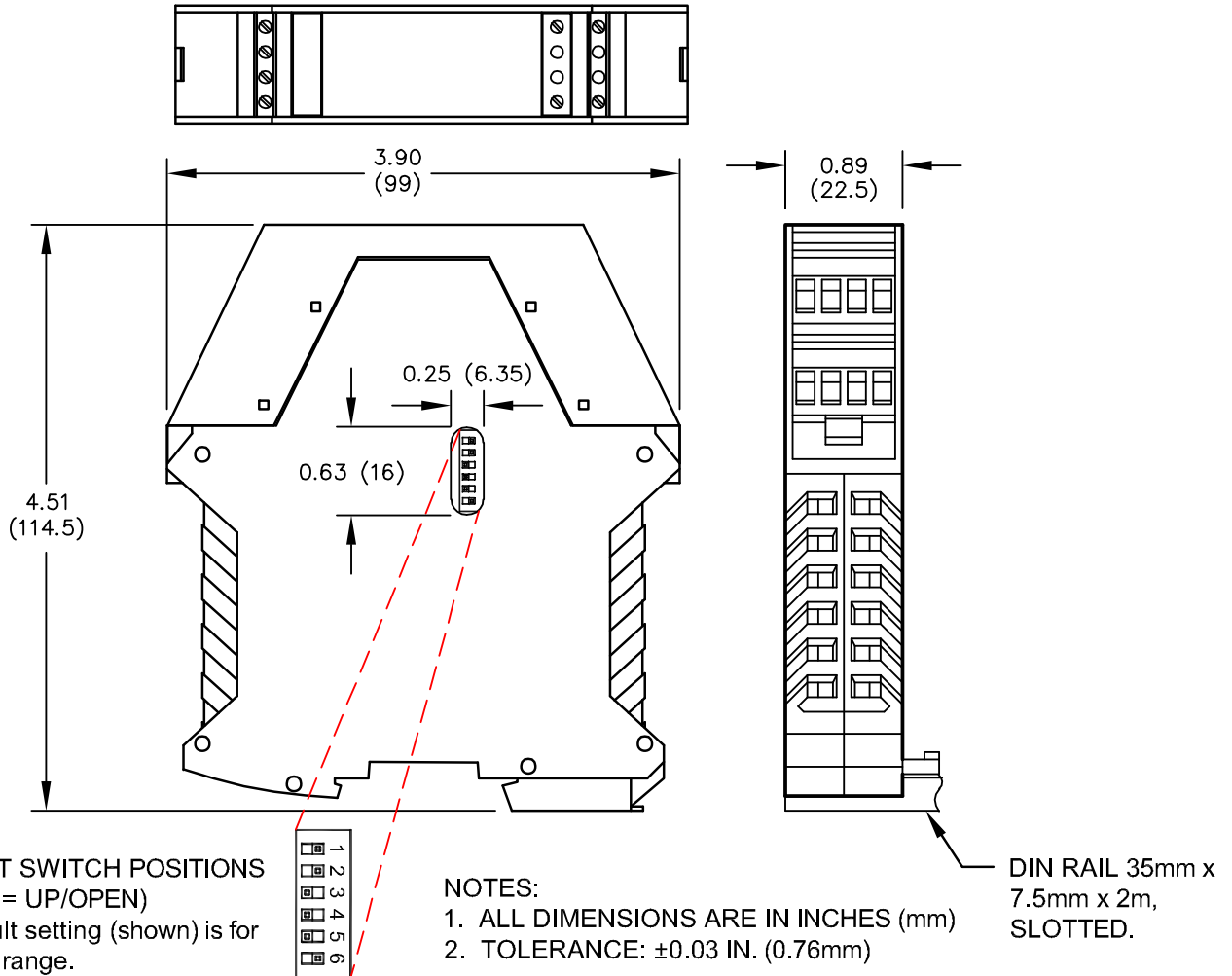
Mounts on standard 35mm "Top Hat" rail, per EN50052/EN60715

Termination Wire Size ..... 12-30AWG

IP Rating ..... IP20

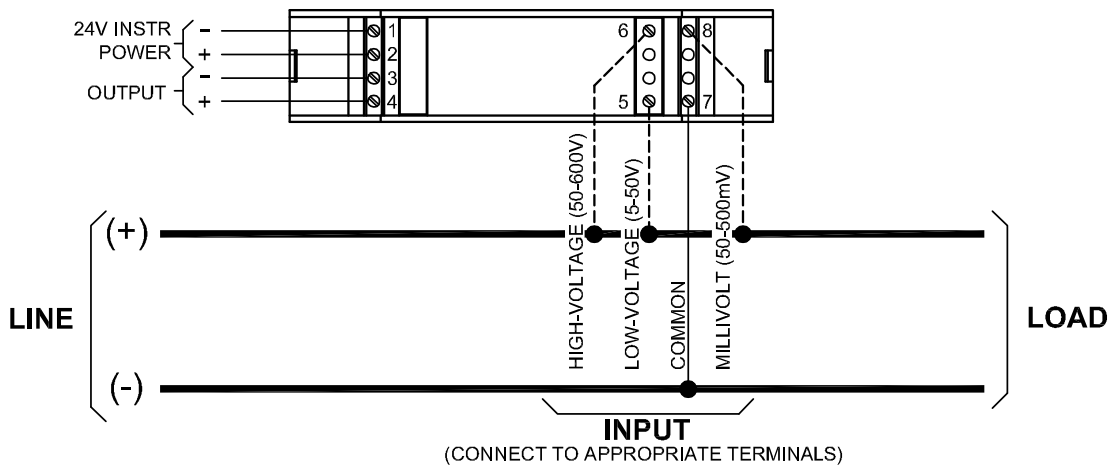
Weight ..... 0.25lbs.

**DIMENSIONS**



Dwg# 0902-01011-B Rev --

**CONNECTIONS**



Dwg# 0902-01011-B Rev --

## INSTALLATION INSTRUCTIONS

1. Installation should be performed by qualified electricians only!
2. Make sure electrical service is 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.

## OPERATING INSTRUCTIONS

1. This unit is intended for indoor use at altitudes up to 2000 meters.
2. Transient overvoltages according to Installation Category II (overvoltage category), pollution Degree 2.
3. 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.
4. 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.
5. Maximum operating temperature range is -30°C to 60°C.

## 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.