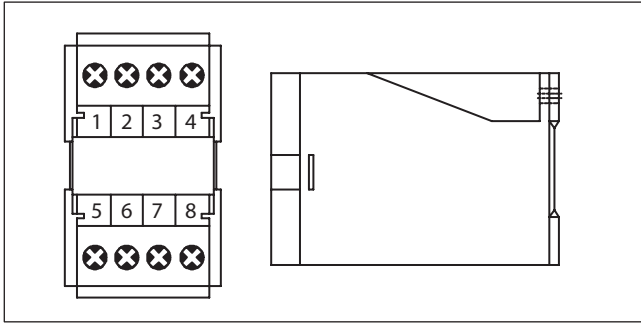


# AC VOLTAGE TRANSDUCER

MODEL : DV - 1 / DV - 1T



## FEATURES

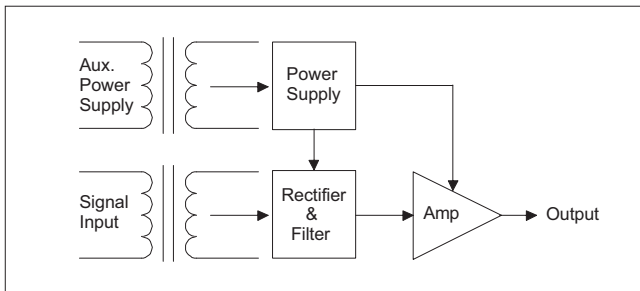
- Accuracy  $\pm 0.2\%$  RO.
- Excellent long term stability (4~20mA, 750 $\Omega$ )
- Precision measurement even for distorted wave (DV-1T)
- High impulse & surge protection (5KV)
- The case can be mounted on a 35mm rail which complies with DIM 46277

## DESCRIPTION

Model DV-1 for voltage input (AVG.)  
DV-1T for voltage input (TRMS)

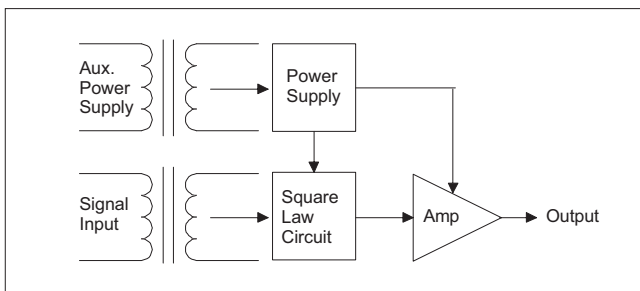
### Sinusoidal Waveforms - AVG

**DV-1** Transducer converting a sinusoidal alternating current or voltage into a dc output, proportional to the RMS value of input. These units are average sensing, but RMS calibrated for a sine wave with less than 1% distortion. The input signal is converted to a dc voltage which then feeds to a single stage amplifier and a dc output produced.

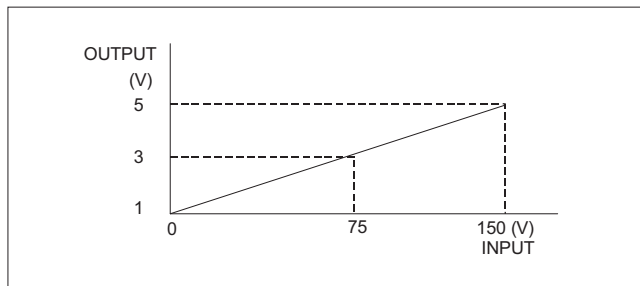


### Non-Sinusoidal Waveforms TRMS

**DV-1T** Transducer are designed for use on waveforms with up to 30% of 3rd harmonic content. The input signal is fed to an RMS detection circuit and the resultant dc volts produced are a linear function of the RMS value of input waveform. This dc voltage is converted to a milliamp output via an output amplification circuit



## INPUT-OUTPUT CURVE



## SPECIFICATION

### INPUT

| Model        | Input Range | Input Burden | Input Frequency                        | Max. Input Over Capability                            |
|--------------|-------------|--------------|--|---|
| DV-1 (AVG.)  | 0~150V      | $\geq 0.2VA$ | 50Hz $\pm$ 3Hz<br>or<br>60Hz $\pm$ 3Hz | 1.5 rated continuous<br>2 rated 10sec<br>4 rated 1sec |
| DV-1T (TRMS) | 0~300V      |              |  |   |

### OUTPUT

| DC output Range | Load Resistance   | Output Resistance | Output Ripple           | Response Time         |
|-----------------|-------------------|-------------------|-------------------------|-----------------------|
| 0 ~ 1V          | $\geq 500\Omega$  | $\leq 0.05\Omega$ | $\leq 0.5\%$ RO. (peak) | $\leq 400mS$<br>0~99% |
| 0 ~ 5V          | $\geq 500\Omega$  |                   |                         |                       |
| 1 ~ 5V          | $\geq 500\Omega$  |                   |                         |                       |
| 0 ~ 10V         | $\geq 500\Omega$  |                   |                         |                       |
| 0 ~ 1mA         | 0 ~ 15K $\Omega$  | $\geq 20M\Omega$  |                         |                       |
| 0 ~ 10mA        | 0 ~ 1500 $\Omega$ | $\geq 5M\Omega$   |                         |                       |
| 0 ~ 20mA        | 0 ~ 750 $\Omega$  |                   |                         |                       |
| 4 ~ 20mA        | 0 ~ 750 $\Omega$  |                   |                         |                       |

Remark : If DC SOURCE, the output : 0 ~ 1mA (0~10K $\Omega$ )  
0 ~ 10mA (0~1K $\Omega$ )  
0 ~ 20mA (0~500 $\Omega$ )  
4 ~ 20mA (0~500 $\Omega$ )

### Accuracy :

Aux. Power supply :

### Power effect :

Power consumption :

Waveform effect :

### Output load effect :

Magnetic field strength :

Span adjustment range :

Zero adjustment range :

Operating temperature range :

Storage temperature range :

Temperature coefficient :

Max. relative humidity :

Isolation :

Insulation resistance :

Dielectric withstand voltage ; (IEC 414, 688, ANSI, C37)

Impulse withstand test :

(IEC 255-4, ANSI C37 90a)

Performance :

Safety requirements :

$\pm 0.2\%$  Rated of Output

AC 110V  $\pm 15\%$ , 50/60Hz

AC 220V  $\pm 15\%$ , 50/60Hz

DC24V, 48V, 110V, +15%, -10%

$\leq 0.1\%$  RO

$\leq 2.5VA$ ,  $\leq DC 3W$

$\leq 0.2\%$  RO, at distortion factor 30% (DV-1T)

current output  $\leq 0.1\%$  RO.

voltage output  $\leq 0.05\%$  RO.

400A/M.  $\leq 0.2\%$  RO.

$\geq 5\%$  RO

$\geq 1\%$  RO

0 ~ 60 $^{\circ}C$

-10~70 $^{\circ}C$

$\leq 100PPM$  from 0 to 60 $^{\circ}C$

95%

Input/output/power/case

$\leq 100M\Omega$ , DC 500V

Between input/output/power/case

AC 3KV, 60Hz, 1min

5KV, 1.2x50 $\mu S$

Common mode & differential mode

Designed to comply with IEC688

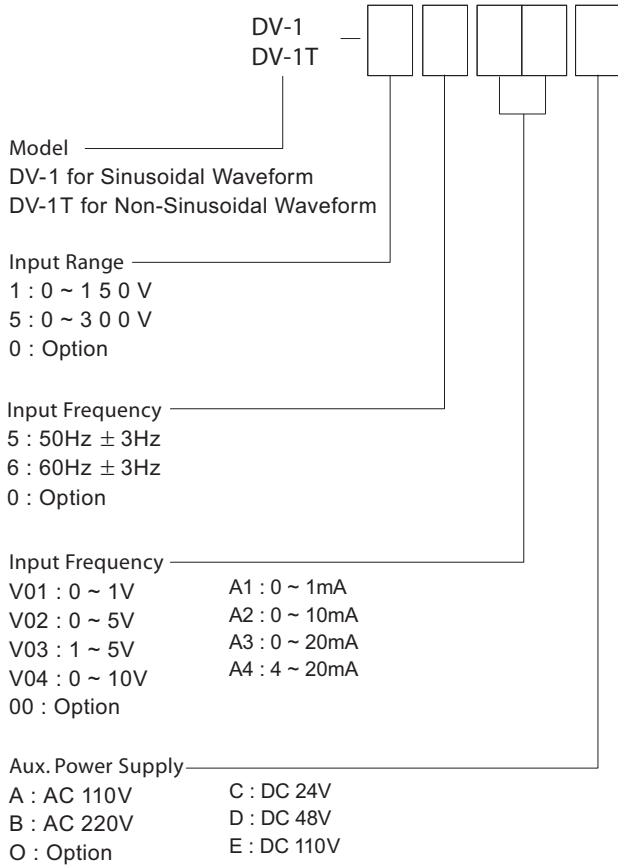
IEC 414, BS5458

# AC VOLTAGE TRANSDUCER

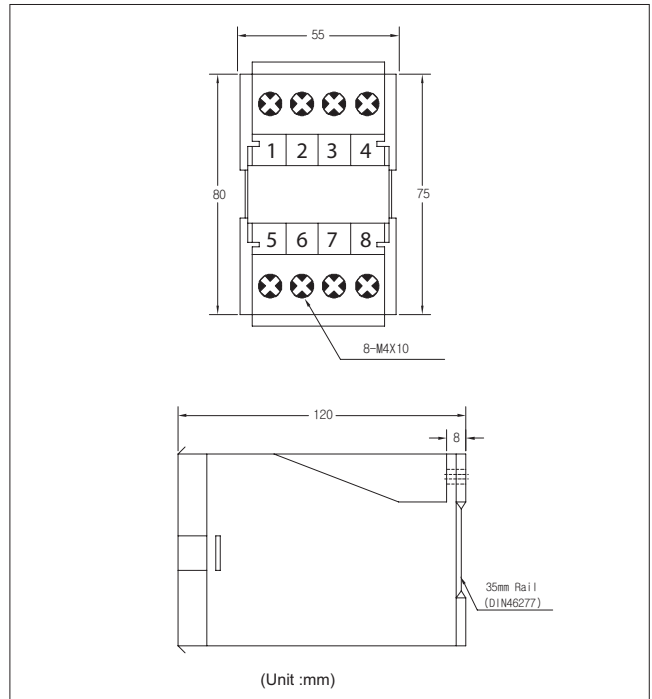
## MODEL : DV- 1 / DV - 1T

### ORDERING MODEL MAKE UP

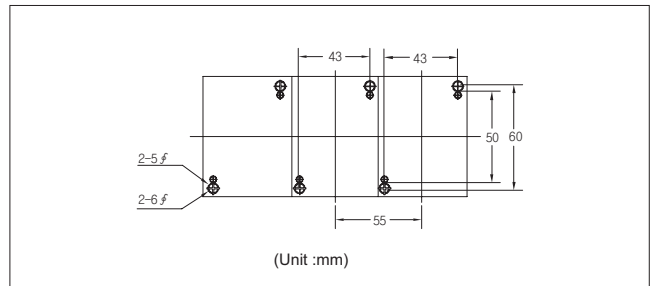
· CURRENT TRANSDUCER



### THE OUTSIDE DIMENSION



### PANEL MOUNTING HOLES



### CONNECTION DIAGRAM

DV-1, DV-1T

