

## FEATURES

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



## SPECIFICATION

### INPUT

Model	Input Range	Input Burden	Input Frequency	Max. Input Over Capability
AI-1 (AVG.) AV-1T (TRMS)	0~1A	$\leq 0.1VA$	50HZ $\pm 3$ HZ	3 X rated continuous
	0~5A			10 X rated 10 sec. 50 X rated 1 sec.
AI-1 (AVG.) AV-1T (TRMS)	0~150V	$\leq 0.2VA$	60HZ $\pm 3$ HZ	1.5 X rated continuous
	0~300V			2X rated 10 sec. 4X rated 2 sec.

### 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)	$\leq 400ms.$ 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 $\Omega$			
0~20mA	0~750 $\Omega$	$\geq 5M \Omega$		
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 $\Omega$ )

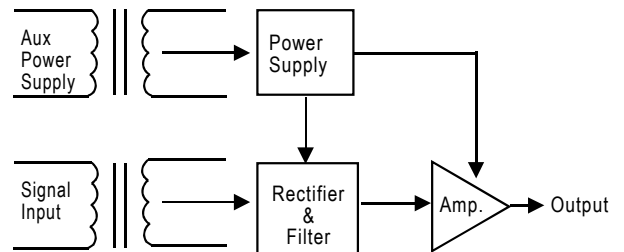
Accuracy:  $\pm 0.2\%$  Rated of Output  
 Aux. power supply: AC 110V  $\pm 5\%$ , 50/60HZ  
 AC 220v  $\pm 5\%$ , 50/60HZ  
 DC 24V, 48V, 110V,  $+15\%$ ,  $-10\%$   
 Power effect:  $\leq 0.1\%$  RO.  
 Power consumption:  $\leq 2.5VA$ ,  $\leq DC 3W$   
 Waveform effect:  $\leq 0.2\%$  RO. at distortion factor 30% (DA-1T, DV-1T)  
 Output load effect: current output  $\leq 0.1\%$  RO.  
 voltage output  $\leq 0.05\%$  RO.  
 Magnetic field strength: 400A/M.  $\leq 0.2\%$  RO.  
 Span adjustment range:  $\geq 5\%$  RO.  
 Zero adjustment range:  $\geq 1\%$  RO.  
 Operating temperature range: 0~60 $^{\circ}C$   
 Storage temperature range: -10~70 $^{\circ}C$   
 Temperature coefficient:  $\leq 100PPM$  from 0 to 60 $^{\circ}C$   
 Max. relative humidity: 95%  
 Isolation: Input/output/power/case  
 Insulation resistance:  $\geq 100M\Omega$ , DC 500V  
 Dielectric withstand voltage: Between input/output/power/case  
 (IEC 414, 688, ANSI, C37)  
 Impulse withstand test: AC 3KV, 60HZ, 1 min.  
 (IEC 255-4, ANSI C37 90a)  
 Performance: 5KV, 1.2 X 50  $\mu s$   
 Safety requirements: Common mode & differential mode  
 Designed to comply with IEC688  
 IEC 414, BS5458

## DESCRIPTION

Model: AI-1 for CURRENT input (AVG.)  
 AV-1 for VOLTAGE input (AVG.)  
 AI-1T for CURRENT input (TRMS)  
 AV-1T for VOLTAGE input (TRMS)

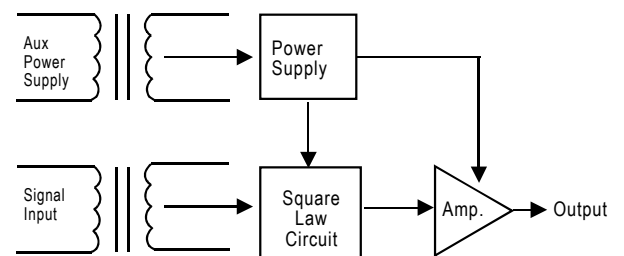
### Sinusoidal Waveforms - AVG.

AI-1, AV-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.

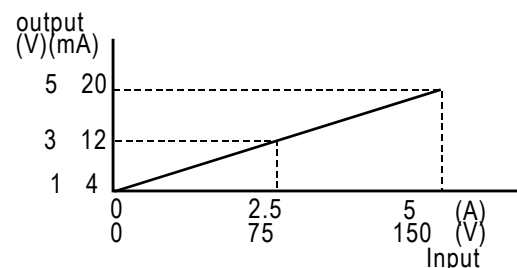


### Non-Sinusoidal Waveforms - TRMS

AI-1T, AV-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



# AC CURRENT, VOLTAGE TRANSDUCER(1Ø)

## ORDERING MODEL MAKE UP

### ● CURRENT TRANSDUCER

AI-1  
AI-1T

**Model**  
AI-1 for Sinusoidal Waveform  
AI-1T for Non-Sinusoidal Waveform

### Input Range

1 : 0 ~ 1A  
5 : 0 ~ 5A  
O : Option

### Input Frequency

5 : 50HZ ± 3HZ  
6 : 60HZ ± 3HZ  
O : Option

### Output Range

V1 : 0~1V                    A1 : 0~1mA  
V2 : 0~5V                    A2 : 0~10mA  
V3 : 1~5V                    A3 : 0~20mA  
V4 : 0~10V                  A4 : 4~20mA  
O : Option

### Aux. Power Supply

A : AC 110V                  C : DC 24V  
B : AC 220V                  D : DC 48V  
O : Option                    E : DC 110V

### ● VOLTAGE TRANSDUCER

AV-1  
AV-1T

**Model**  
AV-1 for Sinusoidal Waveform  
AV-1T for Non-Sinusoidal Waveform

### Input Range

1 : 0 ~ 150V  
5 : 0 ~ 300V  
O : Option

### Input Frequency

As AI-1, AI-1T

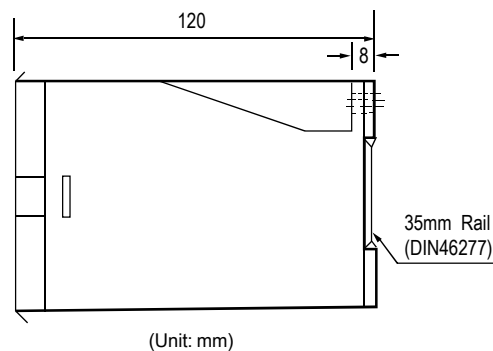
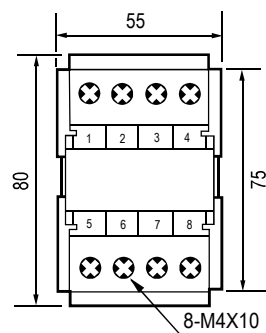
### Output Range

As AI-1, AI-1T

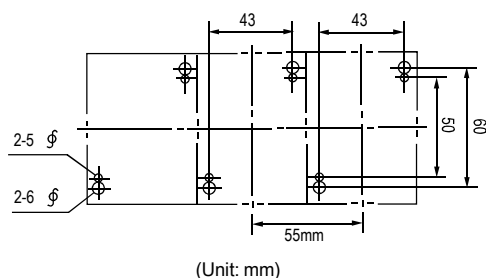
### Aux. Power Supply

As AI-1, AI-1T

## THE OUTSIDE DIMENSION

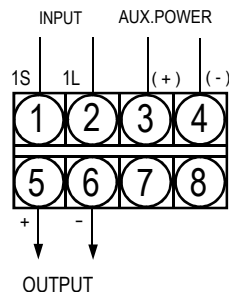


## PANEL MOUNTING HOLES



## CONNECTION DIAGRAM

### ● AI-1, AI-1T



### ● AV-1, AV-1T

