

AC CURRENT, VOLTAGE TRANSDUCER(3 ϕ)

AI/AV

FEATURES

- Accuracy $\pm 0.2\%$ RO.
- 3 element are packaged in one case
- Excellent long term stability(4~20mA, 750 Ω)
- Precision measurement even for distorted wave (AI-3T, AV-3T)
- 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-3 (AVG.) AI-3T (TRMS)	0~1A 0~5A	$\leq 0.1\text{VA}$ (phase)	50HZ $\pm$ 3HZ or 60HZ $\pm$ 3HZ	3 X rated continuous 10 X rated 10 sec. 50 X rated 1 sec.
AV-3 (AVG.) AV-3T (TRMS)	0~150V 0~300V	$\leq 0.2\text{VA}$ (phase)		1.5 X rated continuous 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)	$\leq 400\text{mS.}$ 0~99%
0~5V	$\geq 500 \Omega$			
1~5V	$\geq 500 \Omega$			
0~10V	$\geq 500 \Omega$			
0~1mA	0~15K Ω	$\geq 20\text{M} \Omega$	$\leq 0.5\%$ RO. (peak)	$\leq 400\text{mS.}$ 0~99%
0~10mA	0~1500 Ω	$\geq 5\text{M} \Omega$		
0~20mA	0~750 Ω			
4~20mA	0~750 Ω			

Accuracy:
Aux.power supply:

Power effect:
Mutual interference effect:
Power consumption:
Waveform effect:

Magnetic field strength:
Output load effect:

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:

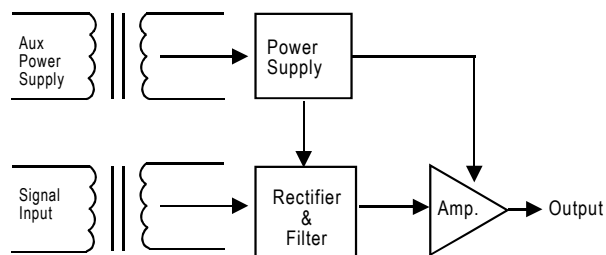
$\pm 0.2\%$ Rated of Output
AC 110V $\pm 15\%$, 50/60HZ
AC 220V $\pm 15\%$, 50/60HZ
DC 24V, 48V, 110V, $+15\%$, -10%
 $\leq 0.1\%$ RO.
 $\leq 0.1\%$ RO. between element.
 $\leq 6.5\text{VA}$, $\leq \text{DC } 9\text{W}$
 $\leq 0.2\%$ RO. at distortion factor 30%
(AI-3T, AV-3T)
400A/M. $\leq 0.2\%$ RO.
current output $\leq 0.1\%$ RO.
voltage output $\leq 0.05\%$ RO..
 $\geq 5\%$ RO.
 $\geq 1\%$ RO.
0~60°C
-10~70°C
 $\leq 100\text{PPM}$ from 0 to 60°C
95%
Input/output/power/case
 $\geq 100\text{M} \Omega$, DC 500V
Between input/output/power/case
AC 3KV, 60HZ, 1 min.
5KV, 1.2 X 50us
Common mode & differential mode
Designed to comply with IEC688
IEC 414, BS5458

DESCRIPTION

Model: AI-3 for 3 ϕ CURRENT input (AVG.)
AV-3 for 3 ϕ VOLTAGE input (AVG.)
AI-3T for 3 ϕ CURRENT input (TRMS)
AV-3T for 3 ϕ VOLTAGE input (TRMS)

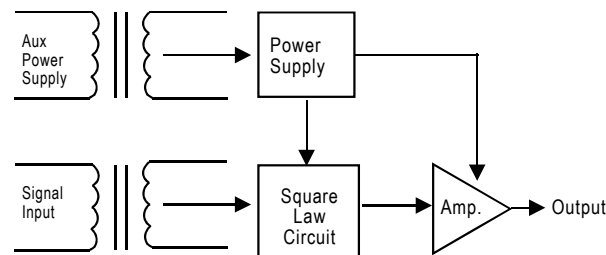
Sinusoidal Waveforms - AVG.

AI-3, AV-3 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.

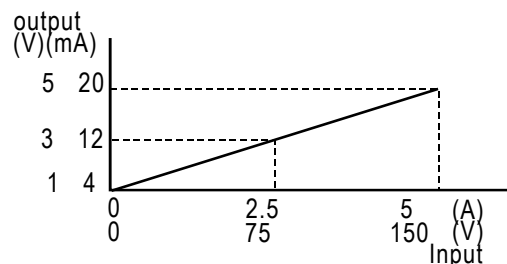


Non-Sinusoidal Waveforms - TRMS

AI-3T, AV-3T 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



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ORDERING MODEL MAKE UP

CURRENT TRANSDUCER

Model AI-3
AI-3 for Sinusoidal Waveform
AI-3T for Non-Sinusoidal Waveform

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

Input Frequency 5
5: 50HZ $\pm$ 3HZ
6: 60HZ $\pm$ 3HZ
O: Option

Output Range V1
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
A: AC 110V C: DC 24V
B: AC 220V D: DC 48V
O: Option E: DC 110V

VOLTAGE TRANSDUCER

Model AV-3
AV-3 for Sinusoidal Waveform
AV-3T for Non-Sinusoidal Waveform

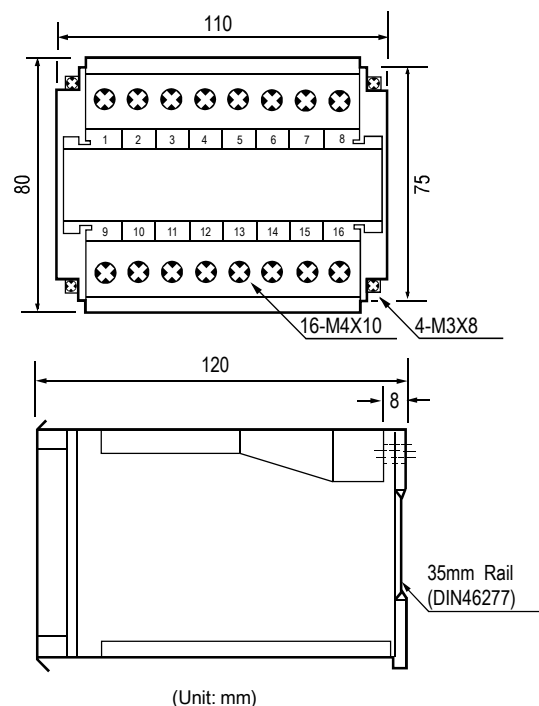
Input Range 1
1: 0 ~ 150V
5: 0 ~ 300V
O: Option

Input Frequency As AI-3, AI-3T

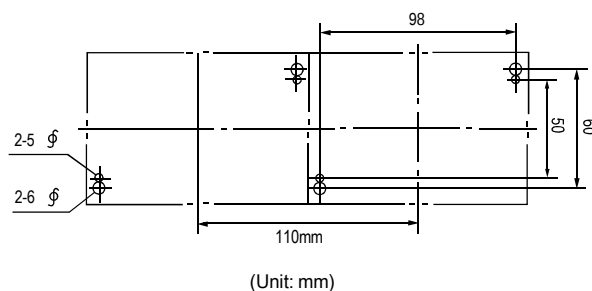
Output Range As AI-3, AI-3T

Aux. Power Supply As AI-3, AI-3T

THE OUTSIDE DIMENSION

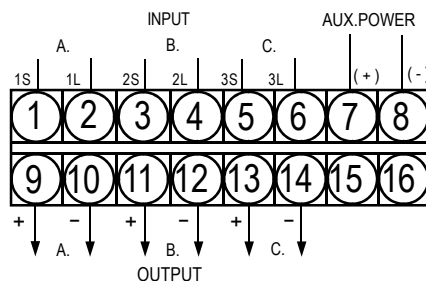


PANEL MOUNTING HOLES



CONNECTION DIAGRAM

AI-3, AI-3T



AV-3, AV-3T

