

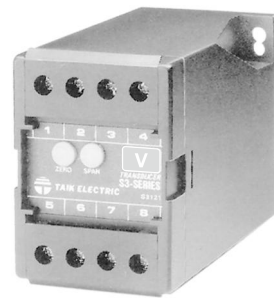


AC VOLTAGE TRANSDUCER

S3-VD
SERIES

FEATURES

- Accuracy $\pm 0.2\%$ R.O.
- Excellent long term stability (4 ~ 20mA, 500 Ω)
- Precision measurement even for distorted wave (S3-VD-1T)
- High impulse & surge protection (5KV)
- The case can be mounted on a 35mm rail which complies with DIN 46277

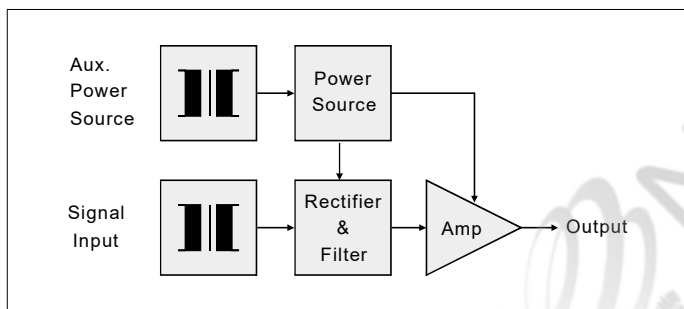


DESCRIPTION

- Model:** S3-VD-1 1 Φ input (AVG.)
 S3-VD-3 3 Φ input (AVG.)
 S3-VD-1T 1 Φ input (TRMS)

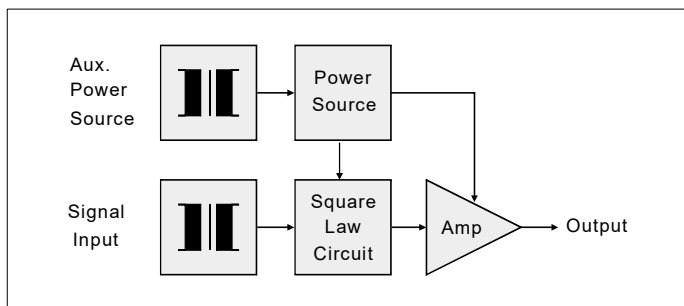
Sinusoidal Waveforms - AVG.

S3-VD Series Transducer converting a sinusoidal alternating 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.

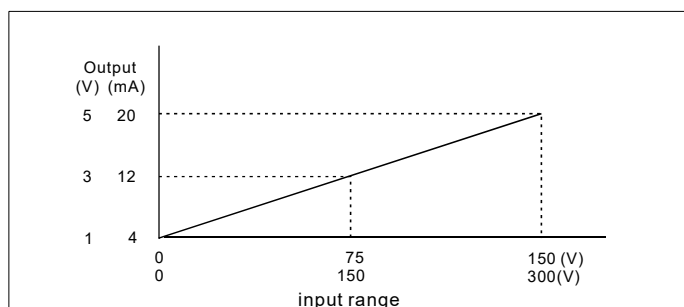


Non-Sinusoidal Waveforms - TRMS

S3-VD-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

Input Range	Input Burden	Input Frequency	Max. Input Over capability
0 ~ 150V	$\cong 0.2VA$	50Hz \pm 3Hz	2 x rated continuous
0 ~ 300V		or 60Hz \pm 3Hz	

OUTPUT

DC Output Range	Load Resistance	Output Resistance	Output Ripple	Response Time
0 ~ 1V	$\cong 1 K\Omega$	$\cong 0.05\Omega$	$\cong 0.5\%$ R.O. peak	$\cong 400mS$ 0 ~ 99%
0 ~ 5V				
1 ~ 5V				
0 ~ 10V	$\cong 10K\Omega$	$\cong 20M\Omega$		
0 ~ 1mA				
0 ~ 10mA	$\cong 1K\Omega$	$\cong 5M\Omega$		
0 ~ 20mA	$\cong 500\Omega$			
4 ~ 20mA				

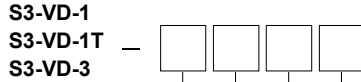
- Accuracy..... $\pm 0.2\%$ Rated of Output
 Aux. power source..... AC 110V $\pm 15\%$, 50/60HZ
 AC 220V $\pm 15\%$, 50/60HZ
 DC24V, 48V, 110V, $\pm 10\%$
 Power consumption AC $\cong 2.5VA$, DC $\cong 3W$
 Power effect $\cong 0.1\%$ R.O.
 Waveform effect $\cong 0.2\%$ R.O. at distortion factor 30%
 (S3-VD-1T)
 Output load effect $\cong 0.05\%$ R.O.
 Magnetic field strength $\cong 0.2\%$ R.O., 400A/M
 Span adjustment range $\cong 5\%$ R.O.
 Zero adjustment range $\cong 1\%$ R.O.
 Operating temperature range 0 ~ 60 $^{\circ}C$
 Storage temperature range -10 ~ 70 $^{\circ}C$
 Temperature coefficient $\cong 100PPM$ from 0 to 60 $^{\circ}C$
 $\cong 60PPM$ 25 $^{\circ}C$ ± 10 $^{\circ}C$
 Max. relative humidity 95%
 Isolation Input/output/power/case
 Insulation resistance $\cong 100M\Omega$, DC 500V
 Dielectric withstand voltage Between input/output/power/case
 IEC 60688
 AC 2.6KV, 60HZ, 1 minute
 Impulse withstand test 5KV, 1.2 X 50 μS
 IEC 61000-4-5
 Common mode & differential mode
 Performance Designed to comply with IEC 60688



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ORDERING INFORMATION



Model

- S3-VD-1 for 1Φ input (AVG.)
- S3-VD-3 for 3Φ input (AVG.)
- S3-VD-1T for 1Φ input (TRMS)

Input Range

- 1: 0 ~ 150V
- 3: 0 ~ 300V
- 0: Option

Input Frequency

- 5: 50HZ ± 3HZ
- 6: 60HZ ± 3HZ
- 0: 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
- 00: Option

Aux. Power Source

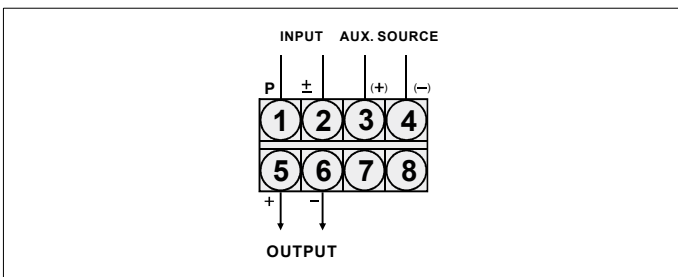
- A: AC 110V C: DC 24V
- B: AC 220V D: DC 48V
- 0: Option E: DC 110V

EXAMPLE

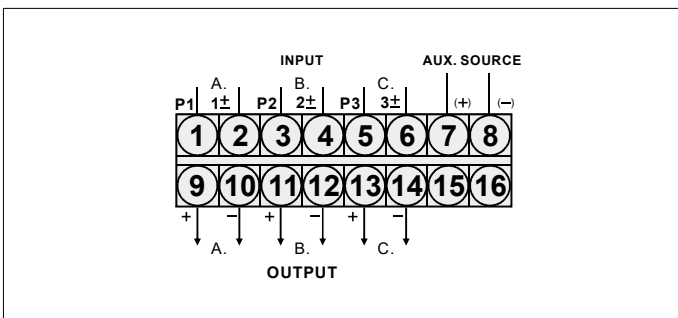
Input: 1ΦAC 0 ~ 150V, 60HZ, Output: DC 4-20mA
 Aux. Power source: AC 110V
 Ordering model: S3-VD-1-16A4A

CONNECTION DIAGRAM

• S3-VD-1, S3-VD-1T

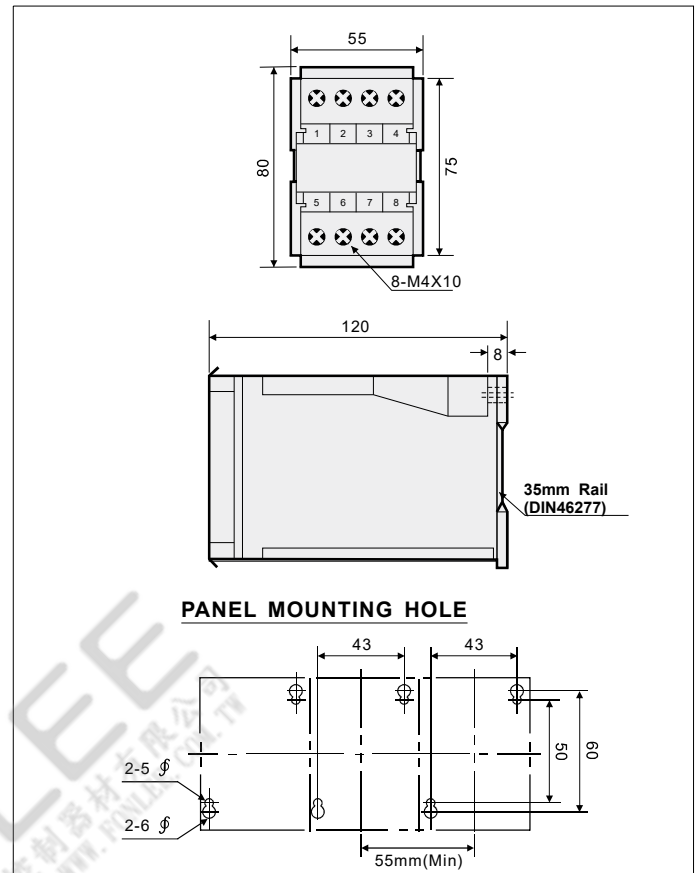


• S3-VD-3



THE OUTSIDE DIMENSION (UNIT: mm)

• S3-VD-1, S3-VD-1T



• S3-VD-3

