AC VOLTAGE TRANSDUCER

S3-VD SERIES

FEATURES

- Accuracy ± 0.2% R.O.
- Excellent long term stability (4 ~ 20mA, 500Ω)
- 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
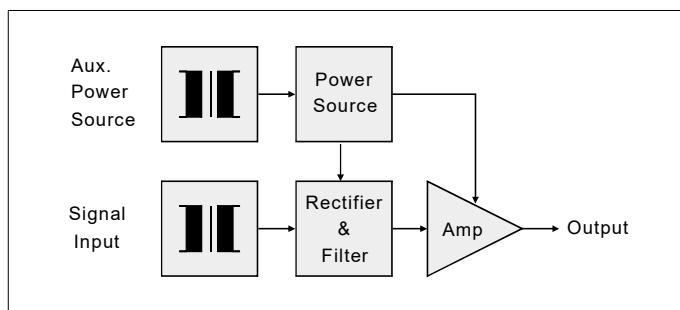
DESCRIPTION

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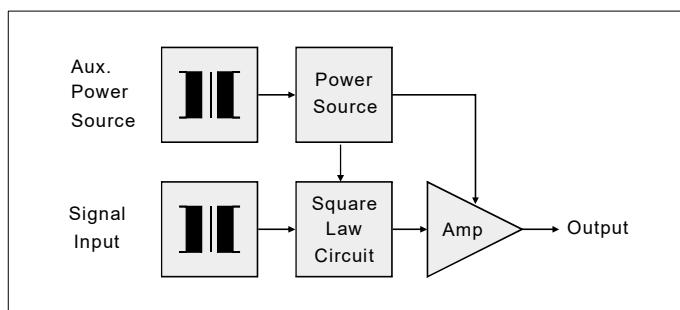
Sinusoidal Waveforms - AVG.

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.
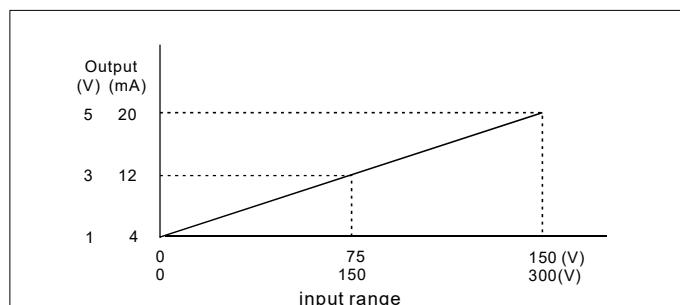
Non-Sinusoidal Waveforms - TRMS

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 amlification circuit.

INPUT-OUTPUT CURVE

SPECIFICATION

● INPUT

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

● OUTPUT

DC Output Range	Load Resistance	Output Resistance	Output Ripple	Response Time
0 ~ 1V	≧ 1 KΩ	≦ 0.05Ω	≦ 0.5% R.O. peak	≦ 400mS 0 ~ 99%
0 ~ 5V				
1 ~ 5V				
0 ~ 10V				
0 ~ 1mA	≦ 10KΩ	≧ 20MΩ		
0 ~ 10mA	≦ 1KΩ			
0 ~ 20mA	≦ 500Ω	≧ 5MΩ		
4 ~ 20mA				

Accuracy .... ± 0.2% Rated of Output
Aux. power source .... AC 110V ±15%, 50/60HZ
AC 220V ±15%, 50/60HZ
DC24V, 48V, 110V, ±10%
Power consumption .... AC ≦ 2.5VA, DC≦ 3W
Power effect .... ≦ 0.1% R.O.
Waveform effect .... ≦ 0.2% R.O. at distortion factor 30% (S3-VD-1T)
Output load effect .... ≦ 0.05% R.O.
Magnetic field strength .... ≦ 0.2% R.O., 400A/M
Span adjustment range .... ≧ 5%R.O.
Zero adjustment range .... ≧ 1%R.O.
Operating temperature range .... 0 ~ 60 °C
Storage temperature range .... -10 ~ 70 °C
Temperature coefficient .... ≦ 100PPM from 0 to 60 °C
≦ 60PPM 25 °C ±10 °C
Max. relative humidity 95%
Isolation .... Input/output/power/case
Insulation resistance .... ≧ 100MΩ, 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 50μS
IEC 61000-4-5 Common mode & differential mode
Performance .... Designed to comply with IEC 60688

ORDERING INFORMATION
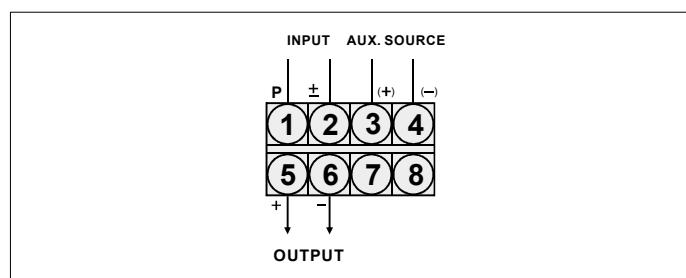
S3-VD-1
S3-VD-1T ___ ☐ ☐ ☐ ☐
S3-VD-3

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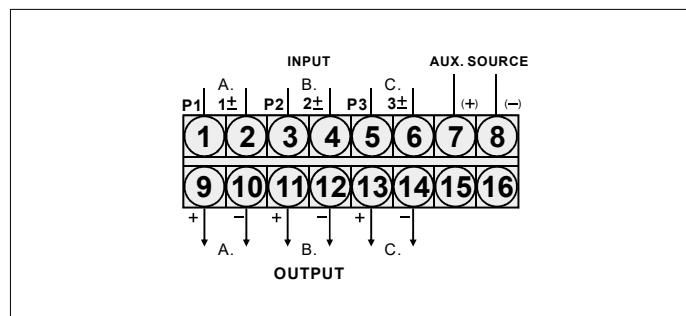
  Input: 1ΦAC 0 ~ 150V, 60HZ, Output: DC 4-20mA
  Aux. Power source: AC 110V
  Ordering model: S3-VD-1-16A4A

CONNECTION DIAGRAM

- **S3-VD-1, S3-VD-1T**
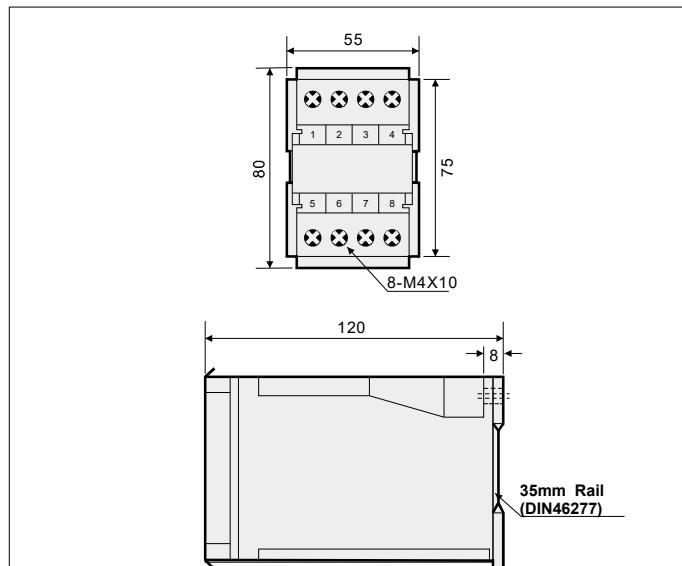
- **S3-VD-3**
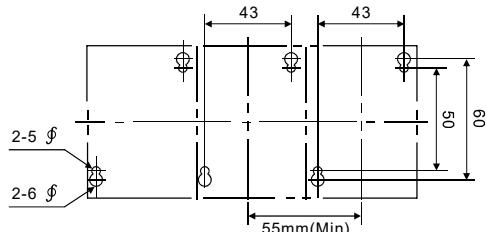
THE OUTSIDE DIMENSION (UNIT: mm)
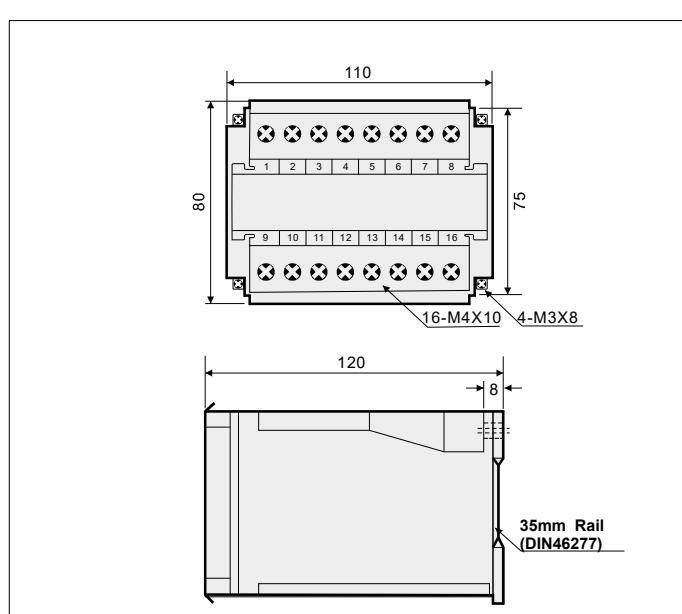
- **S3-VD-1, S3-VD-1T**

PANEL MOUNTING HOLE

- **S3-VD-3**

PANEL MOUNTING HOLE