S3-VD AC VOLTAGE TRANSDUCER

S3 SERIES

FEATURES

- Accuracy : ±0.2% RO.
- 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

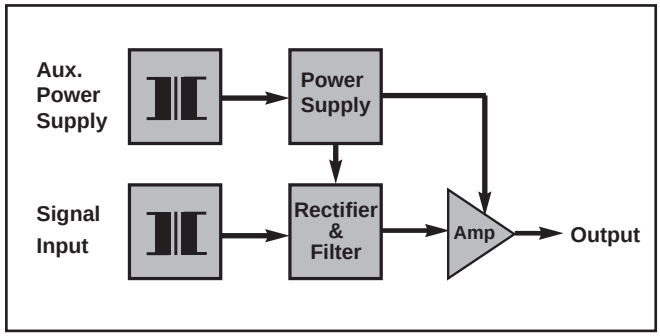
Model : S3-VD-1 1 Φinput (AVG.)

S3-VD-3 3 Φ input (AVG.)

S3-VD-1T 1 Φ input (TRMS)

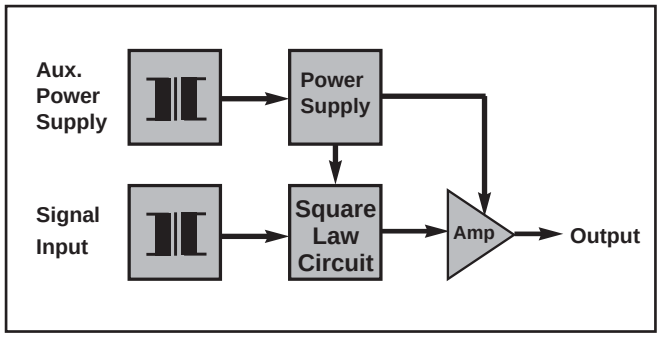
Sinusoidal Waveforms - AVG

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.

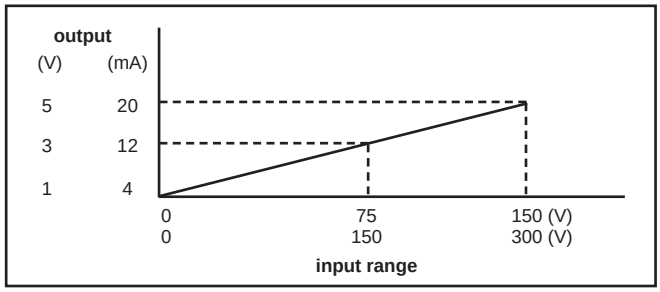


Non-Sinusoidal Waveforms - TRMS

S3-VD-1T Transdu cer 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	≦0.2VA	50HZ ±3HZ or 60HZ ±3HZ	2 ×rated continuous
0 ~300V			

● Output

DC Output Range	Load Resistance	Output Resistance	Output Ripple	Response Time
0 ~1V	≧1K Ω	≦0.05K Ω	≦0.5%RO. (peak)	≦400mS. 0~99%
0 ~5V				
1 ~5V				
0 ~10V				
0 ~1mA	0~10K Ω	≧20M Ω		
0 ~10mA	0~1K Ω	≧5M Ω		
0 ~20mA	0~500 Ω			
4 ~20mA				

Accuracy . . . . . ±0.2% Rated of Output

Aux. power supply . . . . . .AC 110V ±15%, 50/60HZ
AC 220V ±15%, 50/60HZ
DC24V, 48V, 110V, ±15%

Power consumption . . . . . ≦2.5VA, ≦DC 3W

Power effect . . . . . ≦0.1% RO.

Waveform effect . . . . . ≦0.2% RO. at distortion factor 30% (S3-AD-1T)

Output load effect . . . . . ≦0.05% RO.

Magnetic field strength . . . . . ≦0.2% RO., 400A/M

Span adjustment range . . . . . ≧5% RO.

Zero adjustment range . . . . . ≧1% RO.

Operating temperature range . . . . . .0~60℃

Storage temperature range . . . . . .-10~70℃

Temperature coefficient . . . . . ≦100PPM from 0 to 60℃
≦60PPM, 25℃ ±10℃

Max. relative humidity 95%

Isolation . . . . . .Input/output/power/case

Insulation resistance . . . . . ≧100M Ω, DC 500V

Dielectric withstand voltage . . . . . Between input/output/power/case
(IEC 414,688,ANSI C37) AC 2.6KV, 60HZ, 1min

Impulse withstand test . . . . . .5KV, 1.2 x 50 μs
(IEC 255-4, ANSI C37 90a) Common mode & differential mode

Performance . . . . . .Designed to comply with IEC688

Safety requirement IEC414, BS5458

S3-VD AC VOLTAGE TRANSDUCER

S3 SERIES

ORDERING INFORMATION

S3-VD-1
S3-VD-1T
S3-VD-3 — □ □ □ □

Model
S3-VD-1 for 1 Φ input (AVG.)
S3-VD-3 for 3 Φ input (AVG.)
S3-VD-1T for 1 Φ 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
OO ：Option	

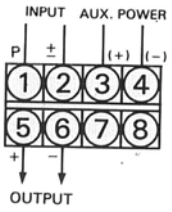
Aux. Power Supply

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

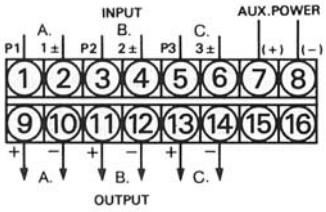
EXAMPLE
Input ：1 Φ, AC 0～150V,60HZ, Output ：DC 4-20mA
Aux. power source ：AC 110V
Ordering model ：S3-VD-1-16A4A

CONNECTION DIAGRAM

S3-VD-1
S3-VD-1T

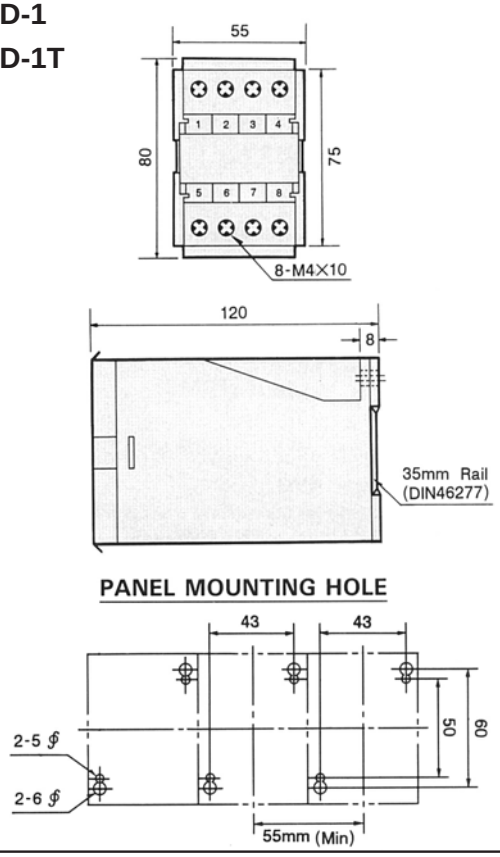


S3-VD-3



THE OUTSIDE DIMENSION (UNIT:mm)

S3-VD-1
S3-VD-1T



S3-VD-3