



### FEATURES

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

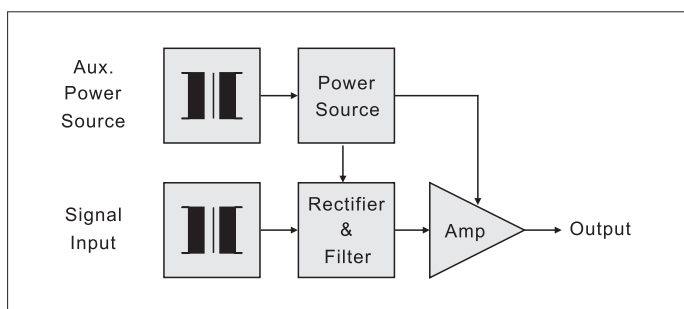


### DESCRIPTION

- Model:** S3-AD-1 1 $\Phi$  input (AVG.)  
 S3-AD-3 3 $\Phi$  input (AVG.)  
 S3-AD-1T 1 $\Phi$  input (TRMS)

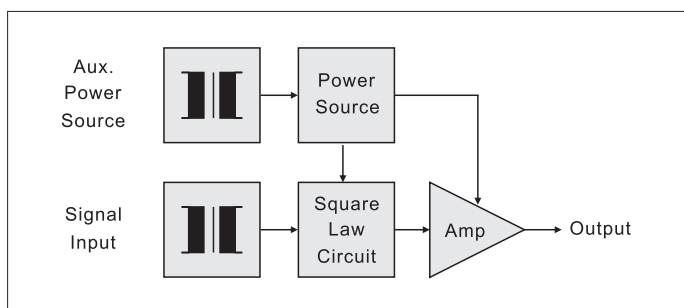
#### Sinusoidal Waveforms - AVG.

S3-AD Series Transducer converting a sinusoidal alternating current 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.

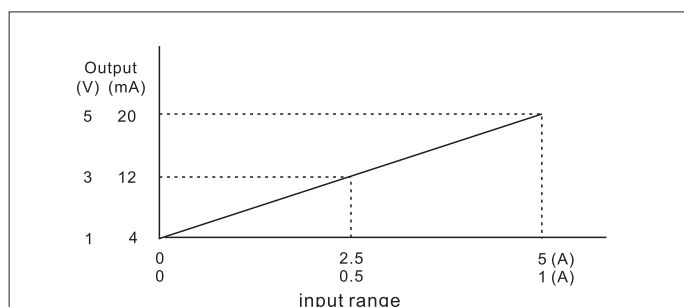


#### Non-Sinusoidal Waveforms - TRMS

S3-AD-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 ~ 1A	$\leq 0.1VA$	50Hz $\pm$ 3Hz	3 X rated continuous
0 ~ 5A		or 60Hz $\pm$ 3Hz	10 X rated 10 sec. 50 X rated 1 sec.

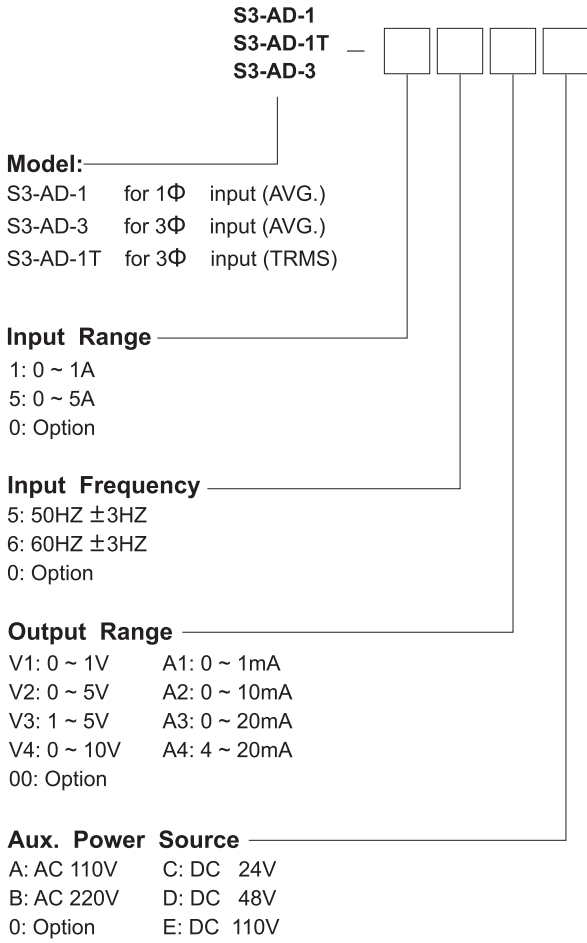
#### OUTPUT

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				
0 ~ 1mA	$\cong 10K\Omega$	$\cong 20M\Omega$		
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  $\leq 2.5VA$ , DC  $\leq 3W$
- Power effect .....  $\leq 0.1\%$  R.O.
- Waveform effect .....  $\leq 0.2\%$  R.O. at distortion factor 30% (S3-AD-1T)
- Output load effect .....  $\leq 0.05\%$  R.O.
- Magnetic field strength .....  $\leq 0.2\%$  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 .....  $\leq 100PPM$  from 0 to 60  $^{\circ}C$   
 $\leq 60PPM$  25  $^{\circ}C \pm 10^{\circ}C$
- 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 $\mu S$
- IEC 61000-4-5 ..... Common mode & differential mode
- Performance ..... Designed to comply with IEC 60688



### ORDERING INFORMATION

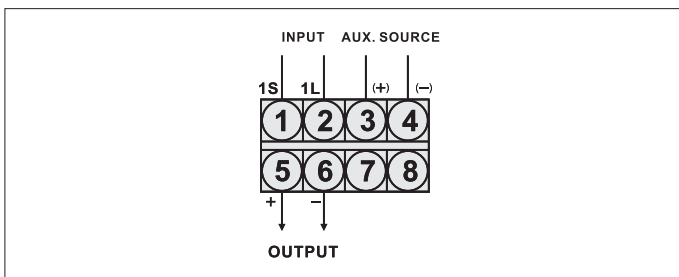


### EXAMPLE

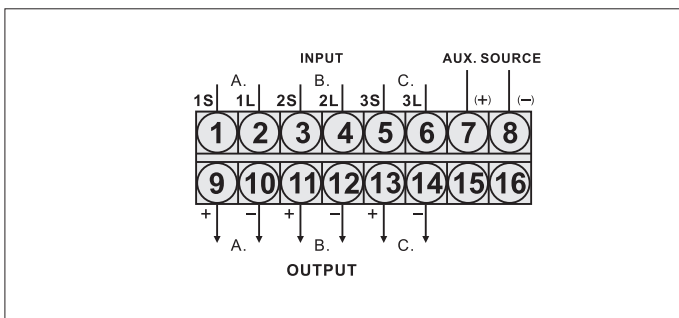
Input: 1Φ, AC 0 ~ 5A, 60HZ, Output: DC 4-20mA  
 Aux. power source: AC 110V  
 Ordering model: S3-AD-1-56A4A

### CONNECTION DIAGRAM

#### • S3-AD-1, S3-AD-1T

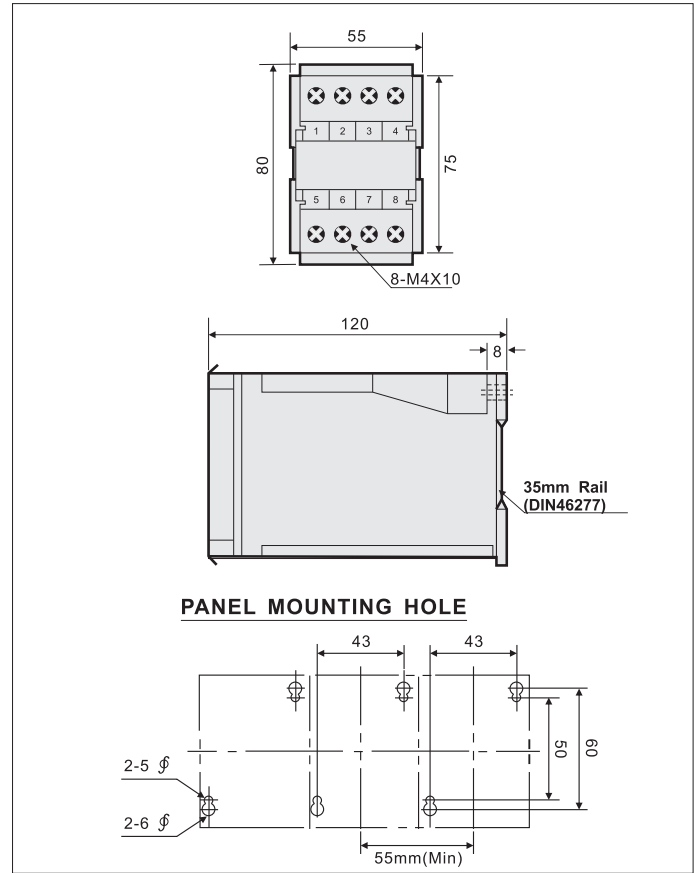


#### • S3-AD-3



### THE OUTSIDE DIMENSION (UNIT: mm)

#### • S3-AD-1, S3-AD-1T



#### • S3-AD-3

