S3-AD AC CURRENT TRANSDUCER

S3 SERIES

FEATURES

- Accuracy : ±0.2% RO.
- Excellent long term stability (4～20mA,500Ω)
- 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

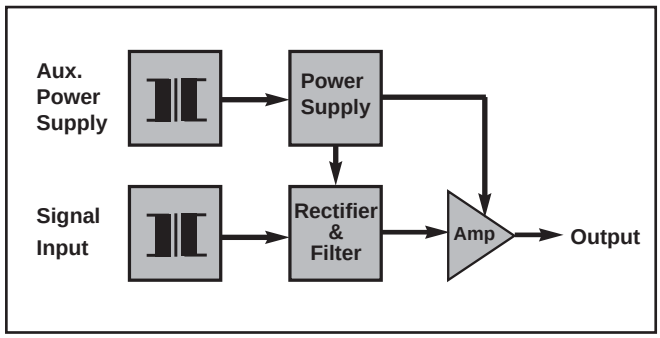
Model : S3-AD-1 1 Φinput (AVG.)

S3-AD-3 3 Φ input (AVG.)

S3-AD-1T 1 Φ input (TRMS)

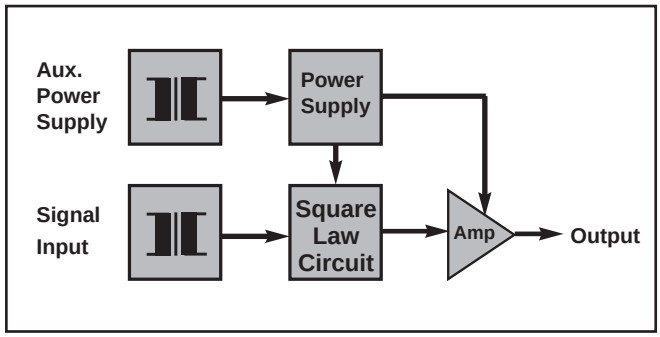
Sinusoidal Waveforms - AVG

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.

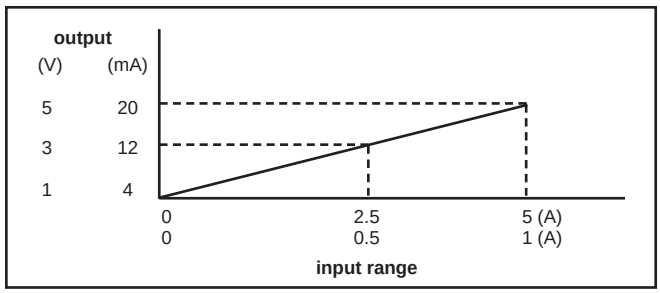


Non-Sinusoidal Waveforms - TRMS

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 amlification circuit



INPUT - OUTPUT CURVE



SPECIFICATION

● Input

Input Range	Input Burden	Input Frequency	Max. Input Over Capability
0 ～1A	≦0.1VA	50HZ ±3HZ or 60HZ ±3HZ	3 ×rated continuous 10 ×rated 10 secs. 50 ×rated 1 sec.
0 ～5A			

● Output

DC Output Range	Load Resistance	Output Resistance	Output Ripple	Response Time
0 ～1V	≧1KΩ	≦0.05KΩ	≦0.5%RO. (peak)	≦400mS. 0～99%
0 ～5V				
1 ～5V				
0 ～10V				
0 ～1mA	0～10KΩ	≧20MΩ		
0 ～10mA	0～1KΩ	≧5MΩ		
0 ～20mA	0～500Ω			
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, ≦DC3W

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 . . . . . ≧100MΩ, 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-AD AC CURRENT TRANSDUCER

S3 SERIES

ORDERING INFORMATION

S3-AD-1
S3-AD-1T
S3-AD-3 — [ ] [ ] [ ] [ ]

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

Input Range
1 ：0~1A
5 ：0~5A
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	

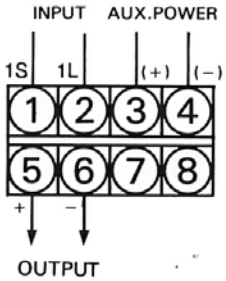
Aux, Power Supply

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

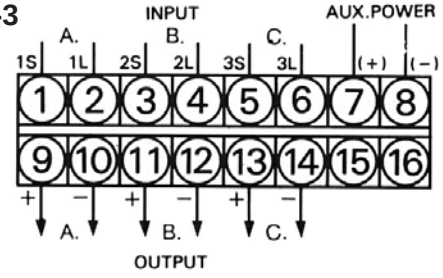
★EXAMPLE
Input ：1 Φ, AC 0~5A,60HZ, Output ：DC 4-20mA
Aux. power source ：AC 110V
Ordering model ：S3-AD-1-56A4A

CONNECTION DIAGRAM

S3-AD-1
S3-AD-1T

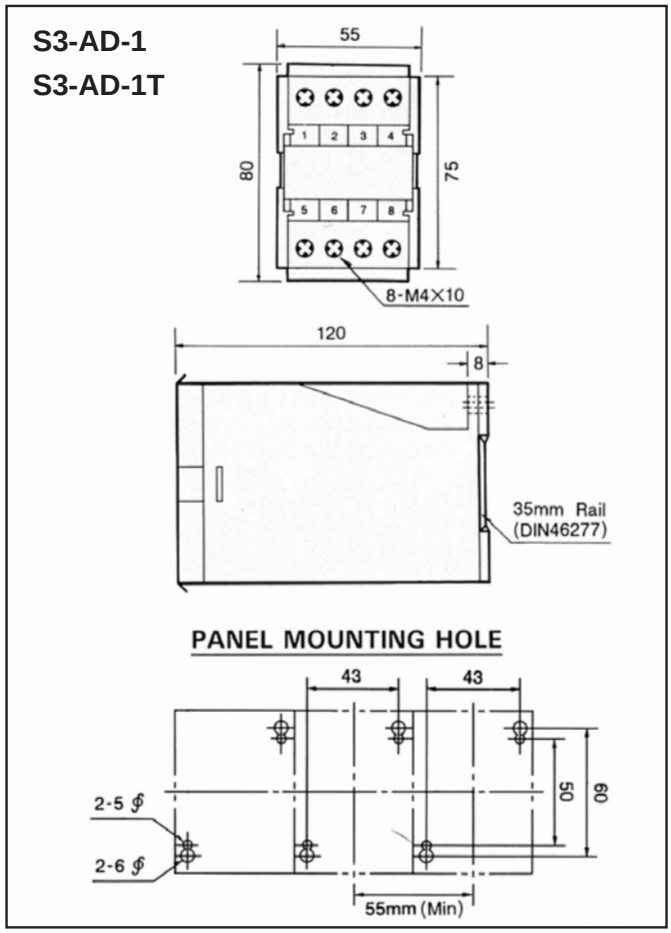


S3-AD-3



THE OUTSIDE DIMENSION (UNIT:mm)

S3-AD-1
S3-AD-1T



S3-AD-3