# AC CURRENT TRANSDUCER

**S3-AD SERIES**

## FEATURES

- Accuracy ± 0.2% R.O.
- 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

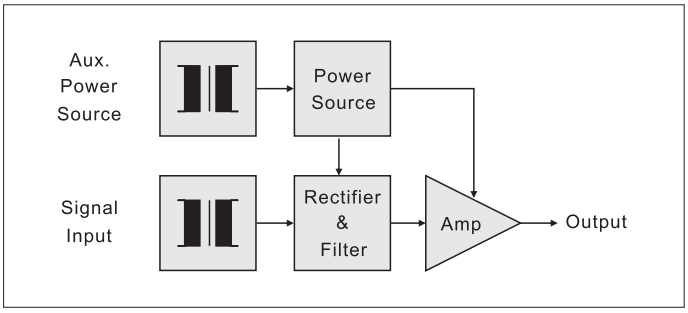
CE

## DESCRIPTION

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

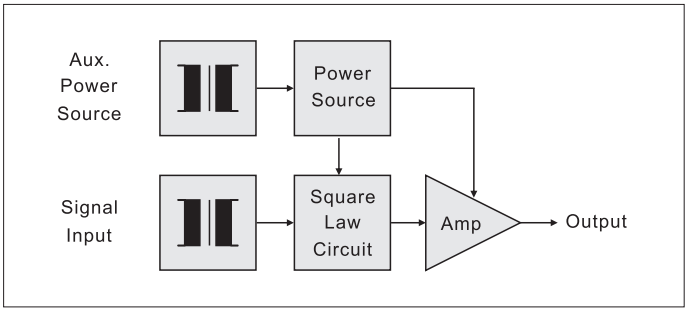
**Sinusoidal Waveforms - AVG.**

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.

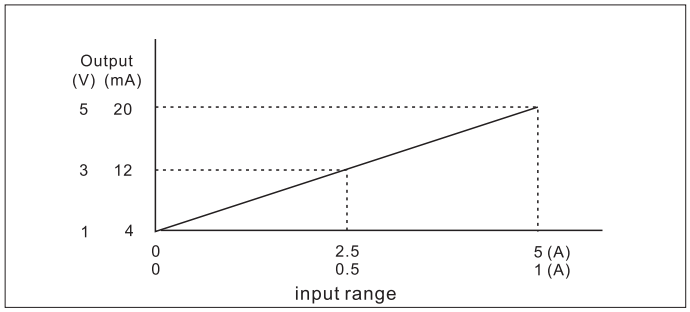



**Non-Sinusoidal Waveforms - TRMS**

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 X rated continuous<br>10 X rated 10 sec.<br>50 X rated 1 sec. |
| 0 ~ 5A | | | |

### • OUTPUT

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



代理商：泰州杰仪自动化科技有限公司 电话：15896047866 网址：www.taizhoujy.com

## ORDERING INFORMATION

S3-AD-1
S3-AD-1T
S3-AD-3 _ □ □ □ □

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

**Input Range**
1: 0 ~ 1A
5: 0 ~ 5A
0: Option

**Input Frequency**
5: 50HZ ±3HZ
6: 60HZ ±3HZ
0: Option

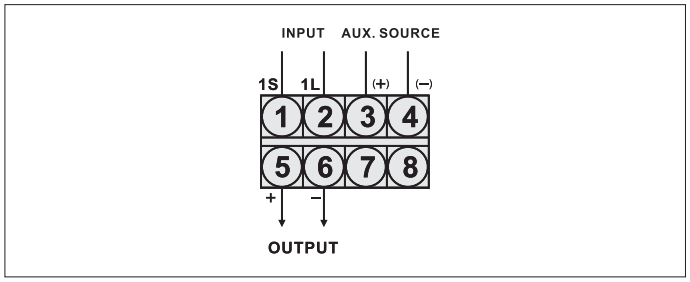
**Output Range**
V1: 0 ~ 1V A1: 0 ~ 1mA
V2: 0 ~ 5V A2: 0 ~ 10mA
V3: 1 ~ 5V A3: 0 ~ 20mA
V4: 0 ~ 10V A4: 4 ~ 20mA
00: Option

**Aux. Power Source**
A: AC 110V C: DC 24V
B: AC 220V D: DC 48V
0: Option E: DC 110V

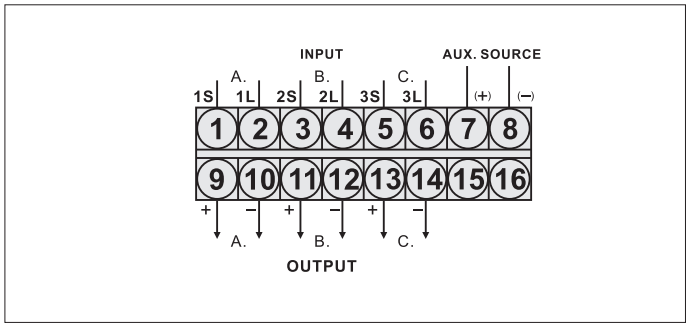
- **EXAMPLE**
  Input: 1Φ , AC 0 ~ 5A, 60HZ, Output: DC 4-20mA
  Aux. power source: AC 110V
  Ordering model: S3-AD-1-56A4A

## CONNECTION DIAGRAM

- **S3-AD-1, S3-AD-1T**

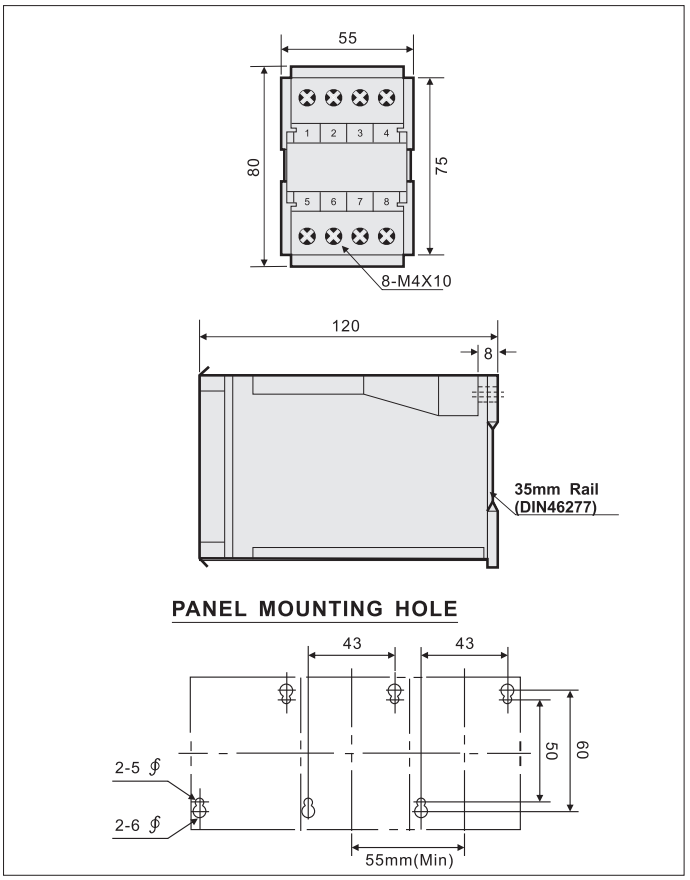



- **S3-AD-3**

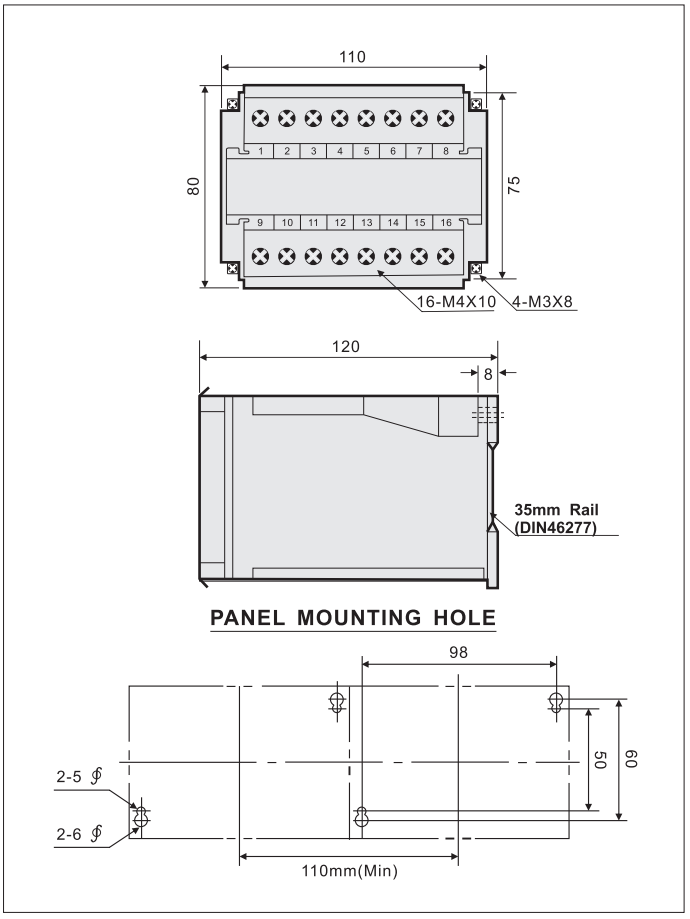



## THE OUTSIDE DIMENSION (UNIT: mm)

- **S3-AD-1, S3-AD-1T**




- **S3-AD-3**



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