FEATURES

- Accuracy ± 0.5% R.O.(PD) , ± 1° (UD)
- Excellent long term stability (4 ~ 20mA, 500Ω)
- Precision measurement even for distorted wave
- High impulse & surge protection (5KV)
- The case can be mounted on a 35mm rail which complies with DIN 46277

CE

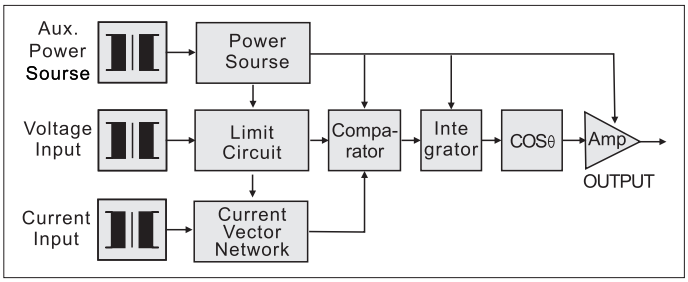
DESCRIPTION

Model:

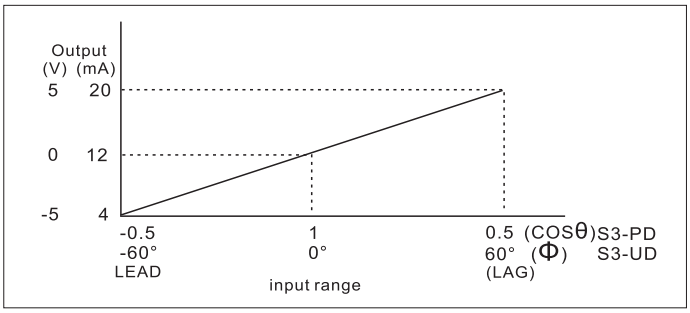
S3-PD-1	1Φ2W, POWER FACTOR (COSθ)
S3-PD-3	3Φ3W, POWER FACTOR (COSθ)
S3-PD-3A	3Φ4W, POWER FACTOR (COSθ)
S3-UD-1	1Φ2W, PHASE ANGLE (Φ)
S3-UD-3	3Φ3W, PHASE ANGLE (Φ)
S3-UD-3A	3Φ4W, PHASE ANGLE (Φ)

These transducers require an auxiliary power supply and offer a highly accurate method of measuring the phase angle of the input. They have a full four quadrant capability. The output is a linear function of the phase angle between the two inputs (which can be current or voltage), the circuit can also be used as power factor transducer only added a COSθ circuit.

The oPutput amplifier provides constant voltage or current output. Output is unaffected by load resistance provided it is within the specified range.



• INPUT - OUTPUT CURVE



SPECIFICATION

• INPUT

Input Range				Max. Input Over Capability
Circuit	Amp.	Voltage	Range	
Single Phase	5A	110V (120V)	(Lead) (Lag) -0.5 ~ 1 ~ 0.5 or (Lead) (Lag) -60° ~ 0 ~ 60°	Ampere: 3 x rated continuous 10 x rated 10 sec. 50 x rated 1 sec. Voltage: 2 x rated continuous
		220V (240V)		
3-Phase 3-Wire	5A	110V (120V)		
		220V (240V)		
3-Phase 4-Wire	5A	190V/110V (208/120V)		
		380V/220V (416/240V)		

• OUTPUT

DC Output Range	Load Resistance	Output Resistance	Output Ripple	Response Time
-1 ~ 0 ~ 1V	≧ 1 KΩ	≦ 0.05Ω	≦ 0.5% R.O. (peak)	≦ 400mS. 0 ~ 99%
-5 ~ 0 ~ 5V				
1 ~ 3 ~ 5V				
0 ~ 5 ~ 10V				
-1 ~ 0 ~ 1mA	≦ 10KΩ	≧ 20MΩ		
-10 ~ 0 ~ 10mA	≦ 1 kΩ	≧ 5MΩ		
0 ~ 10 ~ 20mA	≦ 500Ω			
4 ~ 12 ~ 20mA				

Accuracy	±0.5% Rated of Output±0.3°(S3-PD) ≦ ±1°(S3-UD)
Input frequency	50HZ ± 3HZ or 60HZ ± 3HZ
Input burden	≦ 0.1VA (ampere input) ≦ 0.2VA (voltage input)
Aux. power source	AC 110 V ± 15% , 50/60HZ AC 220 V ± 15% , 50/60HZ DC 24V,48V,110V ± 10%
Power effect	≦ 0.01PF(PD), ≦ 1°(UD)
Power consumption	AC≦ 8VA,DC≦ 6W
Waveform effect	≦ 0.02PF (PD),≦ 1°(UD) at distortion factor 15%
Output load effect	≦ 0.05% R.O.
Magnetic field strength	≦ 0.02PF (PD),≦ 1°(UD) , 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	≦ 0.02PF (PD), ≦ 1°(UD),25 °C ±10 °C
Max. relative humidity	95%
Isolation	Input/output/power/case
Isolation resistance	≧ 100MΩ, DC 500 V
Dielectric withstand voltage	Between input/output/power/case
IEC 60688	AC 2.6 KV,60 HZ,1 minute
Impulse withstand test	5KV, 1.2 x 50 μs
IEC 61000-4-5	Common mode & differential mode
Performance	Designed to comply with IEC 60688

ORDER INFORMATION

S3-PD-1
S3-PD-3
S3-PD-3A
S3-UD-1
S3-UD-3
S3-UD-3A

Model

PD-1 for 1Φ2W, power factor
PD-3 for 3Φ3W, power factor
PD-3A for 3Φ4W, power factor
UD-1 for 1Φ2W, phase angle
UD-3 for 3Φ3W, phase angle
UD-3A for 3Φ4W, phase angle

Input Current

1: 1A
5: 5A
0: Option

Input Voltage

1: 110V (120V)
2: 220V (240V)
3: 190V/110V (208V/120V)
4: 380V/220V (416V/240V)
0: Option

Input Frequency

5: 50HZ ± 3HZ
6: 60HZ ± 3HZ
0: Option

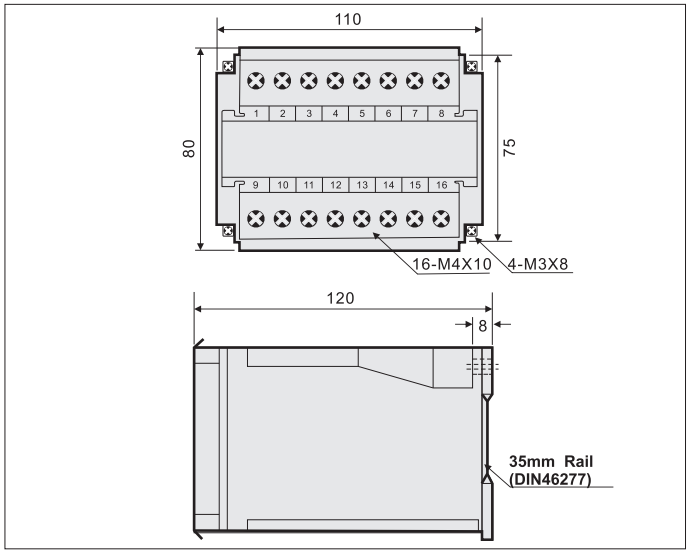
Output Range

V1: -1 ~ 0 ~ 1V
V2: -5 ~ 0 ~ 5V
V3: 1 ~ 3 ~ 5V
V4: 0 ~ 5 ~ 10V
A1: -1 ~ 0 ~ 1mA
A2: -10 ~ 0 ~ 10mA
A3: 0 ~ 10 ~ 20mA
A4: 4 ~ 12 ~ 20mA
00: Option

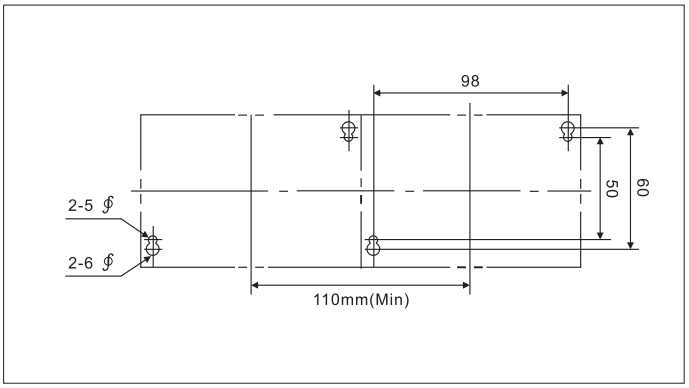
Aux. Power Source

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

THE OUTSIDE DIMENSION (UNIT:mm)

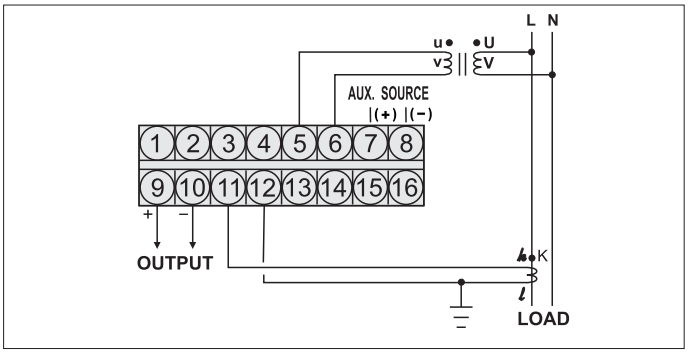


- **PANEL MOUNTING HOLES (UNIT:mm)**

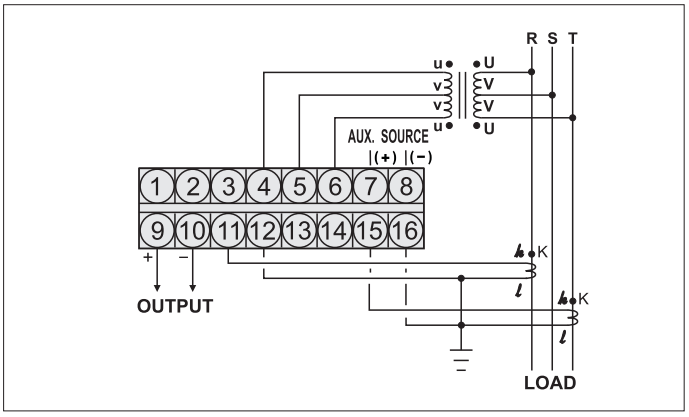


CONNECTION DIAGRAM

S3-PD-1,S3-UD-1 (1Φ2W)



S3-PD-3,S3-UD-3 (3Φ3W)



S3-PD-3A,S3-UD-3A (3Φ4W)