



FEATURES

- Accuracy : $\pm 0.5\%$ RO. (PD), $\pm 1^\circ$ (UD)
- Excellent long term stability (4~20mA, 500 Ω)
- Precision measurement even for distorted wave
- High impulse & surge protection(5KV)
- The case can be mounted on a 35mm rail which complies with DIN46277

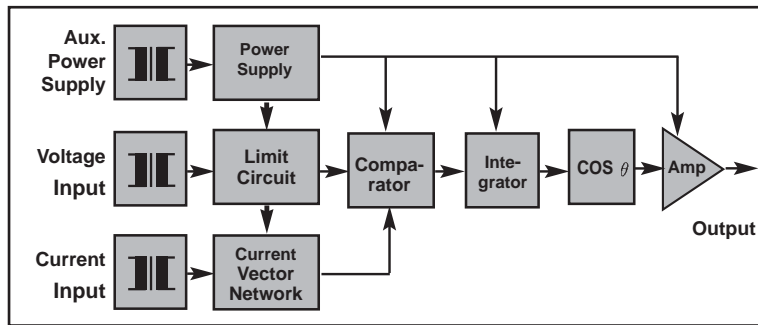


DESCRIPTION

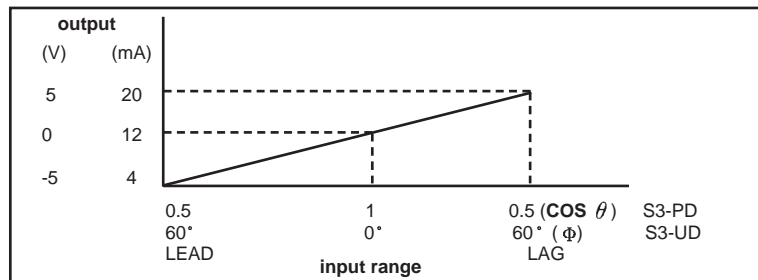
- Model :** S3-PD-1 1 Φ 2W, POWER FACTOR (COS θ)
 S3-PD-3 3 Φ 3W, POWER FACTOR (COS θ)
 S3-PD-3A 3 Φ 4W, POWER FACTOR (COS θ)
 S3-UD-1 1 Φ 2W, PHASE ANGLE (Φ)
 S3-UD-3 3 Φ 3W, PHASE ANGLE (Φ)
 S3-UD-3A 3 Φ 4W, PHASE ANGLE (Φ)

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 COS θ circuit.

Output 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	5 A	110V(120V)	(Load) (Lag)	Ampere : 3 x rated continuous 10 x rated 10 secs. 50 x rated 1 sec.
		220V(240V)		
3-Phase 3-Wire	5 A	110V(120V)	0.5~1~0.5 or (Load) (Lag)	
		220V(240V)		
3-Phase 4-Wire	5 A	190V(110V) (208/120V)	60° ~0~60°	
		380V(220V) (416/240V)		
Voltage :				2 x rated continuous

● **Output**

DC Output Range	Load Resistance	Output Resistance	Output Ripple	Response Time
-1~0~1V	$\geq 1K \Omega$	$\leq 0.05 \Omega$	$\leq 0.5\%$ RO. (peak)	$\leq 400mS$. 0~99%
-5~0~5V				
1~3~5V				
0~5~10V				
-1~0~1mA	0~10K Ω	$\geq 20M \Omega$		
-10~0~10mA	0~1K Ω	$\geq 5M \Omega$		
0~10~20mA	0~500 Ω			
4~12~20mA				

- Accuracy $\pm 0.5\%$ RO. $\pm 0.3^\circ$ (S3-PD)
 $\pm 1^\circ$ (S3-UD)
- Input frequency50HZ ± 3 HZ or 60HZ ± 3 HZ
- Input burden $\leq 0.1VA$ (ampere input)
 $\leq 0.2 VA$ (Voltage input)
- Aux. power supply AC110V $\pm 15\%$, 50/60HZ
AC220V $\pm 15\%$, 50/60HZ
DC 24V, 48V, 110V $\pm 15\%$
- Power effect $\leq 0.01PF$ (PD), $\leq 1^\circ$ (UD)
- Power consumption $\leq 4VA$, $\leq DC 3W$
- Waveform effect $\leq 0.02.PF$ (PD), $\leq 1^\circ$ (UD)
at distortion factor, 15%
- Output load effect $\leq 0.05\%$ RO.
- Magnetic field strength $\leq 0.02PF$ (PD) , $\leq 1^\circ$ (UD), 400A/M
- Span adjustment range $\geq 5\%$ RO.
- Zero adjustment range $\geq 1\%$ RO.
- Operating temperature range 0~60°C
- Storage temperature range -10~70°C
- Temperature coefficient $\leq 0.02PF$ (PD) , $\leq 1^\circ$ (UD)
- Max. relative humidity95%
- Isolation Input/output/power/case
- Insulation resistance $\geq 100M \Omega$, DC 500V
- Dielectric withstand voltage Input/output/power/case
(IEC 414,688,ANSI C37) AC 2.6KV,60HZ,1min
- Impulse withstand test5KV,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



ORDERING INFORMATION

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



Model

S3-PD-1 for 1 Φ 2W, power factor
 S3-PD-3 for 3 Φ 3W, power factor
 S3-PD-3A for 3 Φ 4W, power factor
 S3-UD-1 for 1 Φ 2W, phase angle
 S3-UD-3 for 3 Φ 3W, phase angle
 S3-UD-3A for 3 Φ 4W, phase angle

Input Current

5 : 5A
 O : Option

Input Voltage

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

Input Frequency

5 : 50HZ 6 : 60HZ 0 : Option

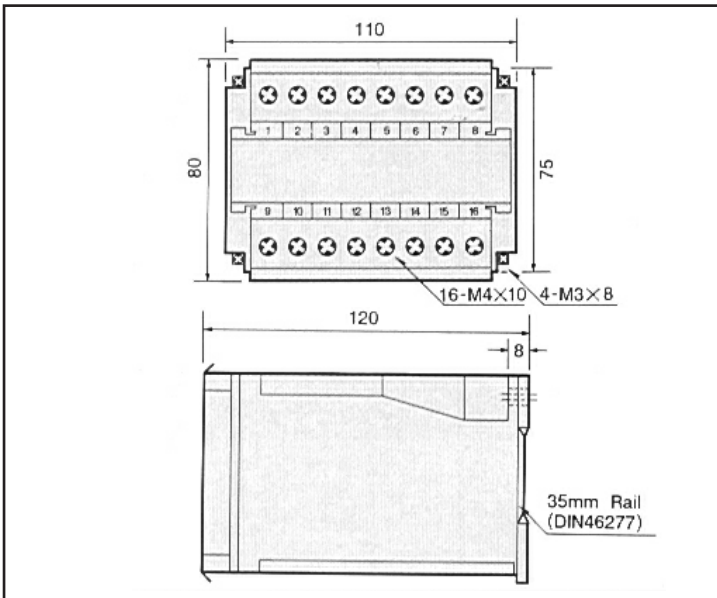
Output Range

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

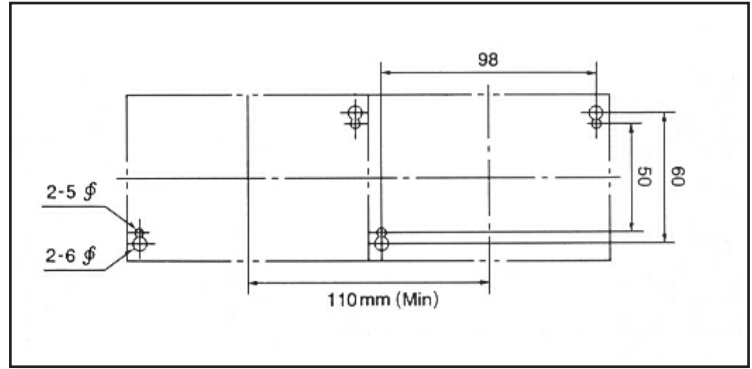
Aux. Power Supply

A : AC 110V B : AC220V C : DC 24V
 D : DC 48V E : DC 110V O : Option

THE OUTSIDE DIMENSION (UNIT:mm)

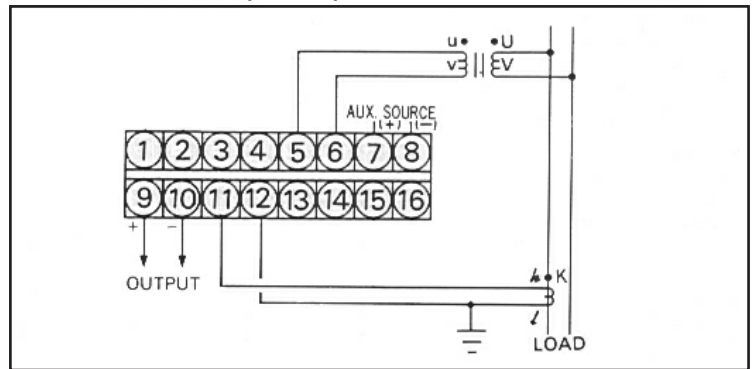


★ PANEL MOUNTING HOLES (UNIT:mm)

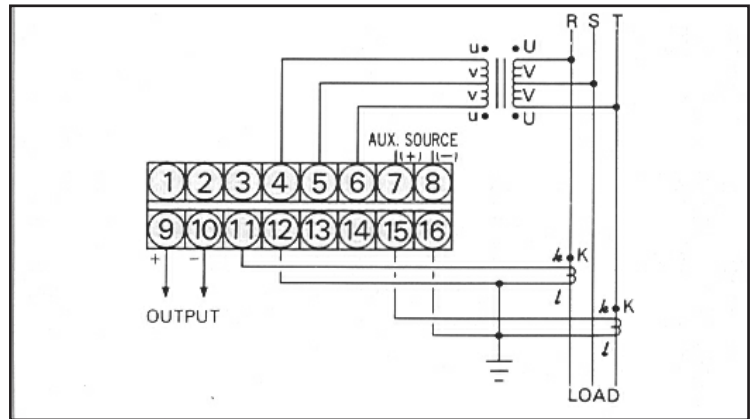


CONNECTION DIAGRAM

S3-PD-1, S3-UD-1 (1 Φ 2W)



S3-PD-3, S3-UD-3 (3 Φ 3W)



S3-PD-3A, S3-UD-3A (3 Φ 4W)

