



FEATURES

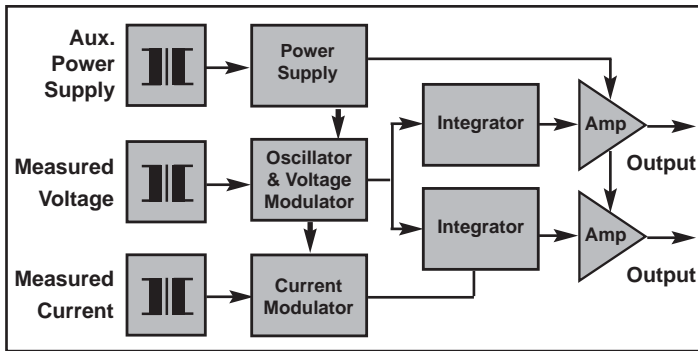
- Accuracy : $\pm 0.2\%$ RO.
- Watt, Var packaged in one case
- Precision measurement for unbalance system
- Precision measurement even for distorted wave
- High impulse & surge protection (5KV)
- The case can be mounted on a 35mm rail which complies with DIN 46277



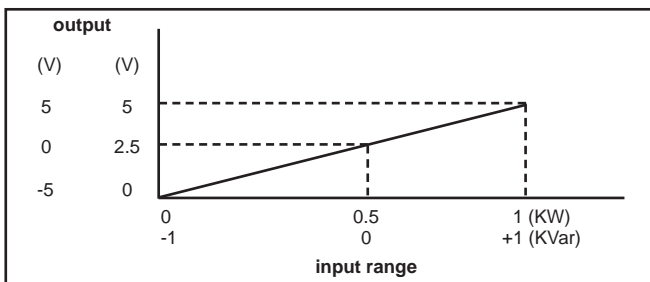
DESCRIPTION

Model : S3-WRD-1 1 Φ 2W, WATT / VAR
 S3-WRD-3 3 Φ 3W, WATT / VAR
 S3-WRD-3A 3 Φ 4W, WATT / VAR

A wide range of transducers to measure all forms of WATT, VAR, in both balanced and unbalanced, single or 3 phase system. They utilize the well prove "time division multiplication" method of measuring instantaneous power over a wide range of input waveforms. The circuit diagram shown measured voltage is modulated by circuit of an oscillator. Square wave pulses from a multi-vibrator circuit, with a mark-space ratio varied by the measured voltage and amplified by the measured current, are fed to an integrator an output amplification circuit. The dc signal produced is then directly proportional to power input-Watt & Vars.



INPUT - OUTPUT CURVE



SPECIFICATION

● **Input**

Input Range					Max. Input Over Capability	
Circuit	Amp.	Voltage	Basic Watt	Basic Var		
Single Phase	5 A	110V(120V)	0~0.5 KW	± 0.5 KVar	Ampere : 3 x rated continuous 10 x rated 10 secs. 50 x rated 1 sec.	
		220V(240V)	0~1 KW	± 1 KVar		
3-Phase 3-Wire	5 A	110V(120V)	0~1 KW	± 1 KVar		
		220V(240V)	0~2 KW	± 2 KVar		
3-Phase 4-Wire	5 A	190V(110V) (208/120V)	0~1.5 KW	± 1.5 KVar		Voltage : 2 x rated continuous
		380V(220V) (416/240V)	0~3 KW	± 3 KVar		

● **Output**

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

- Accuracy $\pm 0.2\%$ Rated to Output
- Input frequency Watt 50HZ ± 3 HZ or 60HZ ± 3 HZ
Var 50HZ ± 0.02 HZ or 60HZ ± 0.02 HZ
- Input burden ≤ 0.1 VA (ampere input)
 ≤ 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 $\leq 0.1\%RO.$
- Power consumption ≤ 4.5 VA, $\leq DC$ 3W
- Waveform effect $\leq 0.2\%RO.$ at distortion factor 15%
- Output load effect $\leq 0.05\% RO.$
- Electromagnetic balance effect $\leq 0.1\%RO.$
- Mutual interference effect $\leq 0.1\%RO.$
- Magnetic field strength $\leq 0.2\% RO.,$ 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 ≤ 100 PPM from 0 to 60°C
 ≤ 60 PPM, 25°C ± 10 °C
- Max. relative humidity95%
- Isolation Input/output/power/case
- Insulation resistance $\geq 100M \Omega,$ DC 500V
- Dielectric withstand voltage Between input/output/power/case
(IEC 414,688,ANSI C37) AC 2.6KV,60HZ,1min
- Impulse withstand test5KV,1.2 x 50 μ S
(IEC 255-4,ANSI C37 90a) Common mode & differential mode
- Performance Designed to comply with IEC688
- Safety requirements IEC414,BS5458



ORDERING INFORMATION

S3-WRD-1

S3-WRD-3

S3-WRD-3A

Model

S3-WRD-1 for 1 Φ 2W
 S3-WRD-3 for 3 Φ 3W
 S3-WRD-3A for 3 Φ 4W

Input Current

5 : 5A
 O : Option

Input Voltage

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

Input Frequency

5 : 50HZ (WATT : 50HZ \pm 3HZ)
 6 : 60HZ (WATT : 60HZ \pm 3HZ)
 0 : Option

Output Range

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

Aux. Power Supply

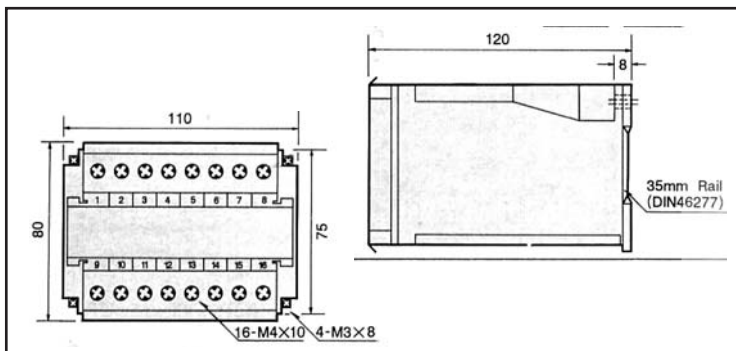
A : AC 110V C : DC 24V
 B : AC 220V D : DC 48V
 O : Option E : DC 110V

Reverse Required

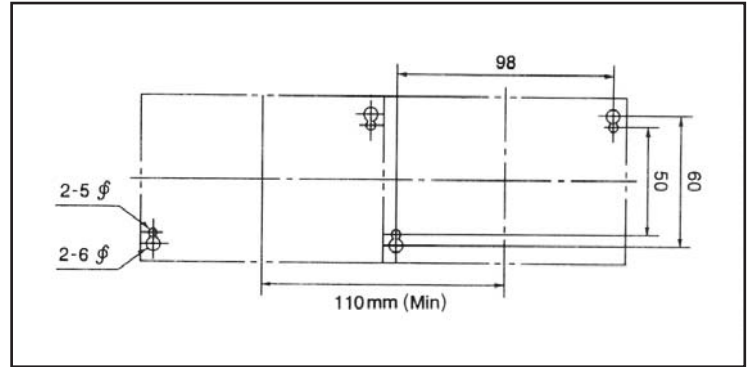
Y : Yes
 N : No

★ Remark : The value in parentheses is VAR output or Reverse watt output

THE OUTSIDE DIMENSION (UNIT:mm)

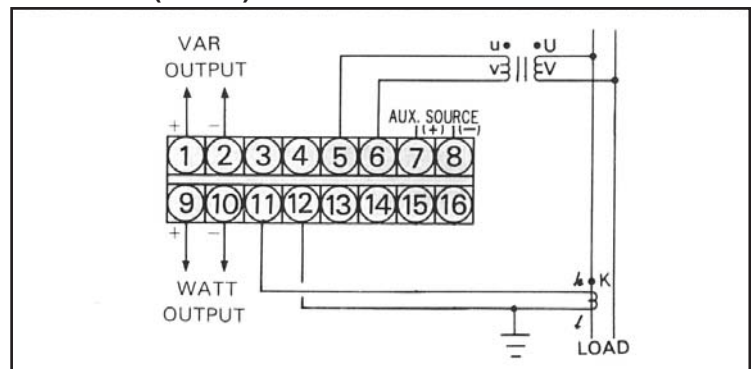


★ PANEL MOUNTING HOLES (UNIT:mm)

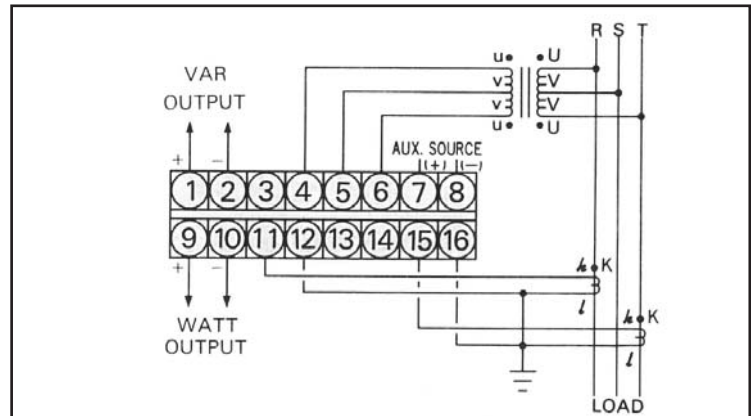


CONNECTION DIAGRAM

S3-WRD-1 (1 Φ 2W)



S3-WRD-3 (3 Φ 3W)



S3-WRD-3A(3 Φ 4W)

