



### FEATURES

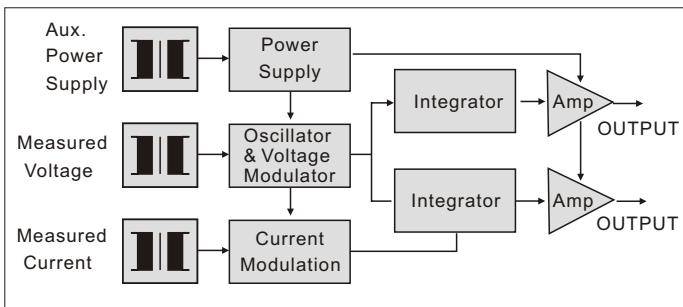
- Accuracy:  $\pm 0.2\%$  RO.
- Watt, Var packaged in one case
- Precision measurement for unbalance system
- Precision measurement even for distorted wave
- High impulse & surge protection (5KV)
- The case can be mounted on a 35mm rail which complies with DIN 46277



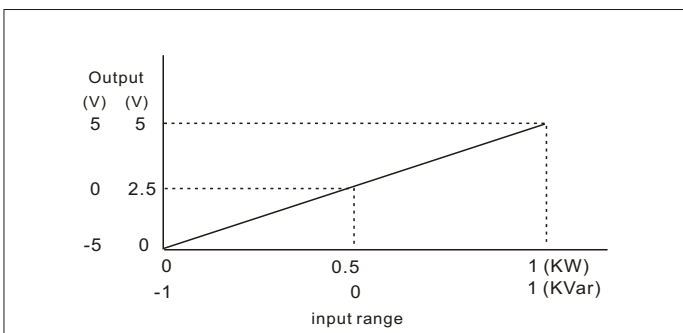
### DESCRIPTION

- Model:** S3-WRD-1 1  $\phi$  2W, WATT/VAR  
 S3-WRD-3 3  $\phi$  3W, WATT/VAR  
 S3-WRD-3A 3  $\phi$  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 ~ 0.5KW	AS S3-WD S3-RD
		220V (240V)	0 ~ 1KW	
3-Phase 3-Wire	5 A	110V (120V)	0 ~ 1KW	
		220V (240V)	0 ~ 2KW	
3-Phase 4-Wire	5 A	190V/110V (208/120V)	0 ~ 1.5KW	
		380V/220V (416/240V)	0 ~ 3KW	

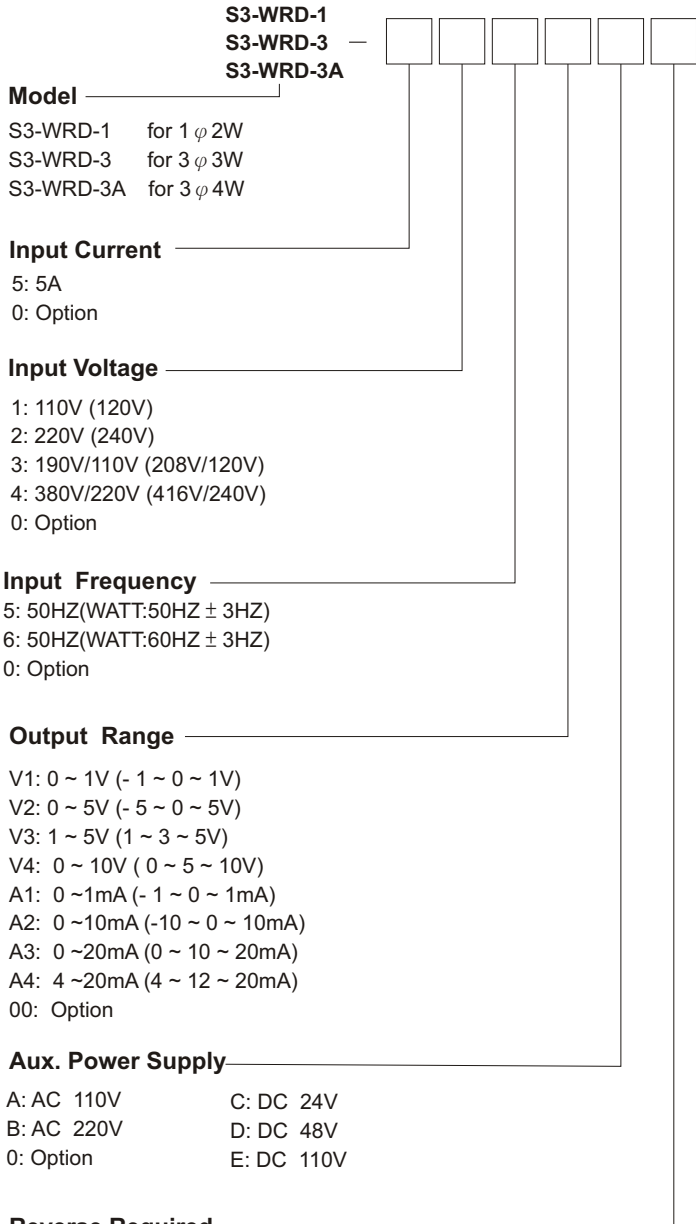
#### OUTPUT

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 $\Omega$	$\geq 20M\Omega$	$\geq 5M\Omega$	
0 ~ 10mA	0 ~ 1K $\Omega$			
0 ~ 20mA	0 ~ 500 $\Omega$			
4 ~ 20mA				

- Accuracy .....  $\pm 0.2\%$  Rated of Output
- Input frequency ..... Watt 50HZ  $\pm 3HZ$  or 60HZ  $\pm 3HZ$   
Var 50HZ  $\pm 0.02HZ$  or 60HZ  $\pm 0.02HZ$
- Input burden .....  $\leq 0.1VA$  (ampere input)  
 $\leq 0.2VA$  (voltage input)
- Aux. power supply ..... AC 110V  $\pm 15\%$ , 50/60HZ  
AC 220V  $\pm 15\%$ , 50/60HZ  
DC 24V, 48V, 110V,  $\pm 15\%$ ,
- Power effect .....  $\leq 0.1\%$  RO.
- Power consumption .....  $\leq 4.5VA$ ,  $\leq DC 3W$
- 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 .....  $\leq 100PPM$  from 0 to 60 °C  
 $\leq 60PPM$ , 25 °C  $\pm 10$  °C
- Max. relative humidity ..... 95%
- 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, 1 min.
- Impulse withstand test ..... 5KV, 1.2 X 50  $\mu S$   
(IEC 255-4, ANSI C37 90a) Common mode & differential mode
- Performance ..... Designed to comply with IEC 688
- Safety requirements ..... IEC 414, BS5458

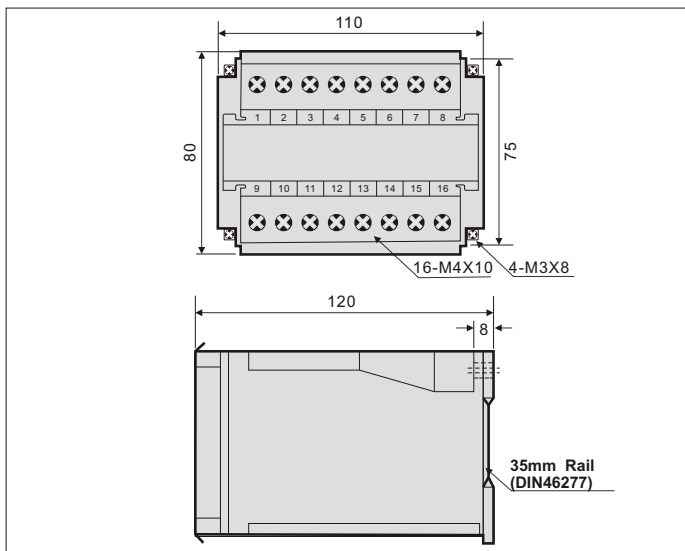


## ORDERING INFORMATION

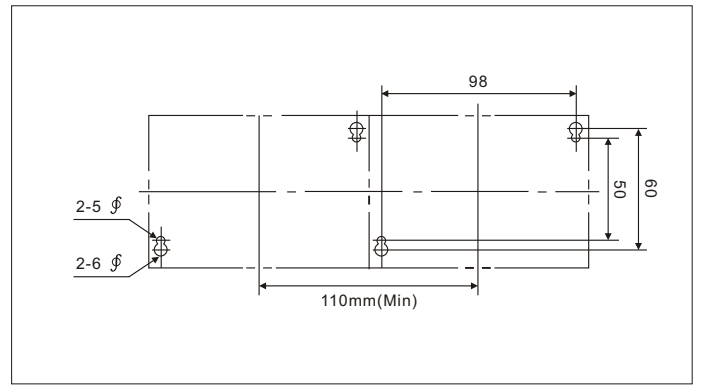


\*Remark: The value in parentheses is VAR output or Reverse Watt output.

## THE OUTSIDE DIMENSION (UNIT:mm)

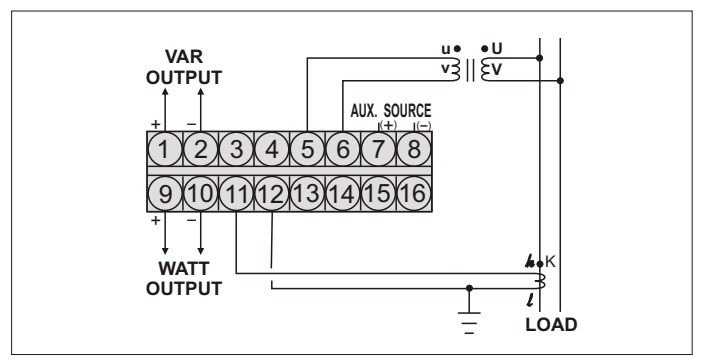


## PANEL MOUNTING HOLES (UNIT:mm)

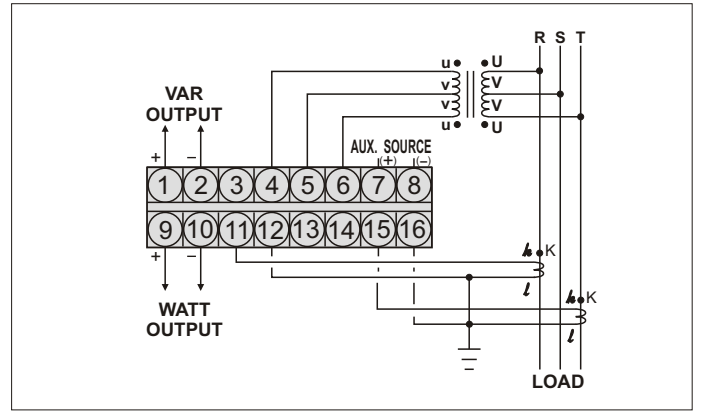


## CONNECTION DIAGRAM

### S3-WRD-1 (1 $\phi$ 2W)



### S3-WRD-3 (3 $\phi$ 3W)



### S3-WRD-3A (3 $\phi$ 4W)

