



## FEATURES

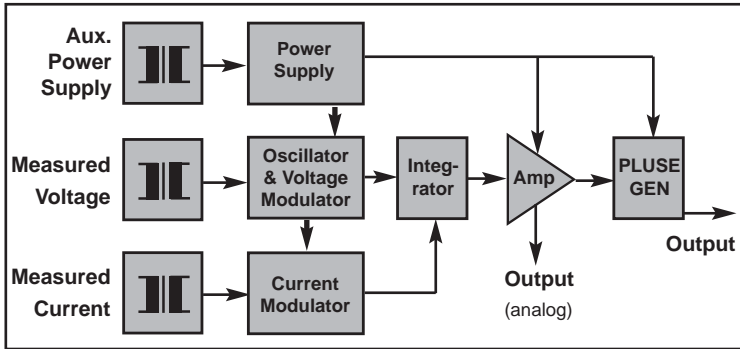
- Accuracy :  $\pm 0.2\%$  RO.
- Watthour, Watt packaged in one case
- Precision measurement for unbalance system
- Precision measurement even for distorted wave
- High impulse & surge protection (5KV)
- The case can be mounted on a 35mm rail which complies with DIN 46277



## DESCRIPTION

**Model :** S3-WHW-1 1  $\Phi$ 2W, WATTHOUR / WATT  
 S3-WHW-3 3  $\Phi$ 3W, WATTHOUR / WATT  
 S3-WHW-3A 3  $\Phi$ 4W, WATTHOUR / WATT

For kilowatt-hour-measurement, we build in another Linear integrator Circuit. This circuit accepts signal from Watts portion and integrates with respect to time, to produce a pulse output via volt free contacts, result in pulse proportional to kilowatt-hours.



## SPECIFICATION

### Input

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

### Output

Output Range		Output Mode		
per 1KWH	100 counts	Pulse	Open Collect	SPST Relay Contacts
	1000 counts			
	10000 counts	DC 15V, 10mA	DC 30V, 100mA	AC 110V, 0.5A DC 24V, 1A
	100000 counts			

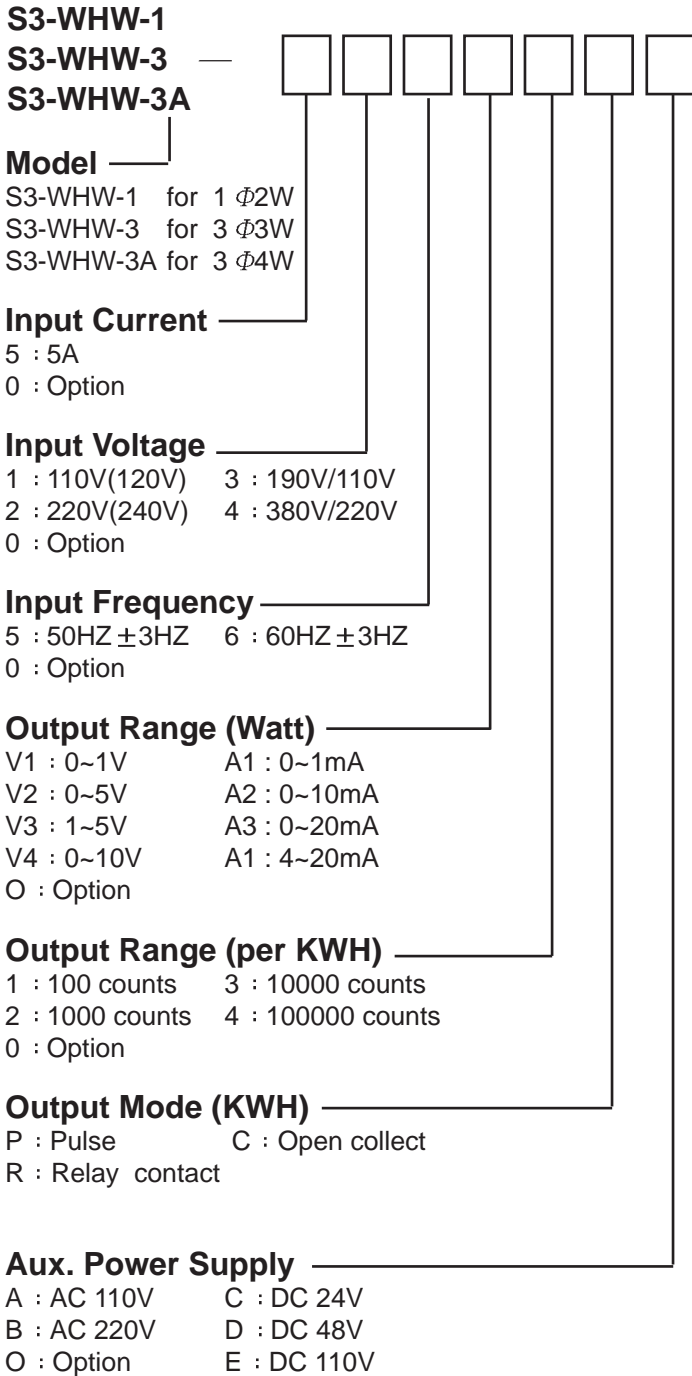
### Output FOR WATT

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

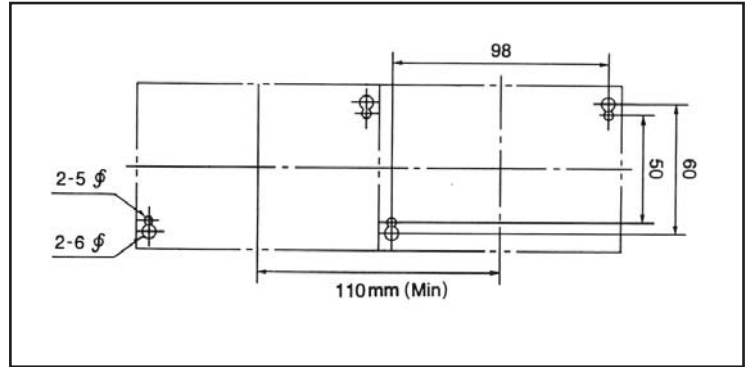
Accuracy . . . . . WATT,  $\pm 0.2\%$  Rated of Output  
 WATTHOUR  $\pm 0.2\%$  RD.  
 Input frequency . . . . . 50HZ  $\pm 3HZ$  or 60HZ  $\pm 3HZ$   
 Input burden . . . . .  $\leq 0.1VA$  (ampere input)  
 $\leq 0.2 VA$  (Voltage input)  
 Aux. power supply . . . . . AC110V  $\pm 15\%$ , 50HZ/60HZ  
 AC220V  $\pm 15\%$ , 50HZ/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%  
 Electromagnetic balance effect . . . . .  $\leq 0.1\%RO.$   
 Mutual interference effect . . . . .  $\leq 0.1\%RO.$  between element.  
 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 . . . . .  $\leq 100PPM$ , 25°C  $\pm 10^\circ C$   
 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, 1Min  
 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 IEC688  
 Safety requirements . . . . . IEC414, BS5458



## ORDERING INFORMATION

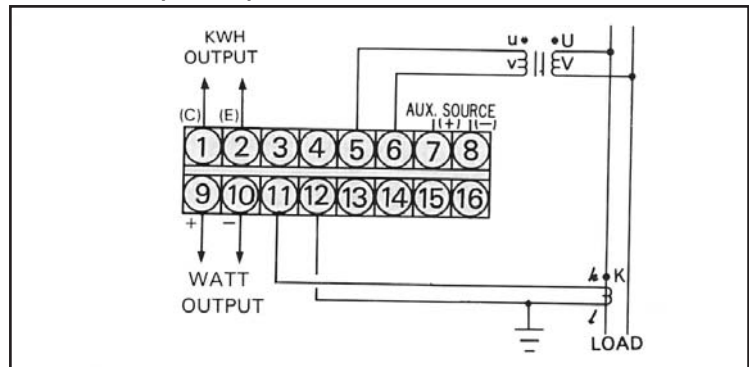


## ★ PANEL MOUNTING HOLES (UNIT:mm)

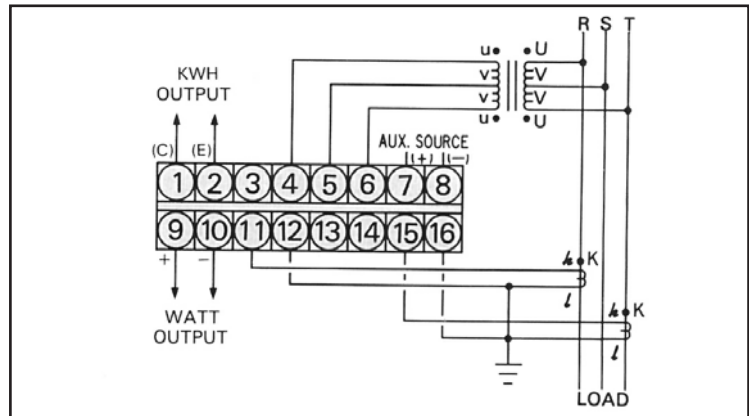


## CONNECTION DIAGRAM

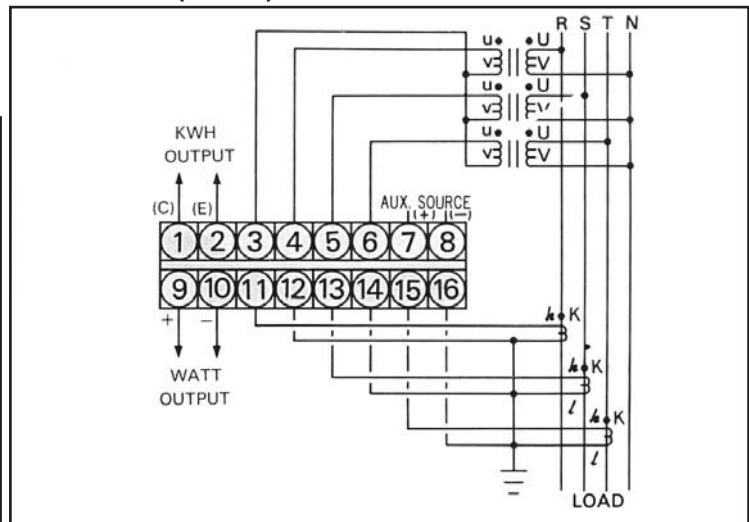
### S3-WHW-1 (1 $\Phi$ 2W)



### S3-WHW-3A (3 $\Phi$ 3W)



### S3-WHW-3A (3 $\Phi$ 4W)



## THE OUTSIDE DIMENSION (UNIT:mm)

