



### FEATURES

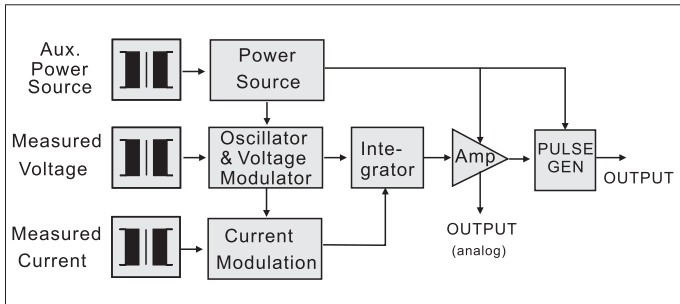
- Accuracy  $\pm 0.2\%$  R.O.
- Precision measurement even for unbalance system
- Precision measurement even for distorted wave
- Measuring reverse watt is available
- High impulse & surge protection (5KV)
- The case can be mounted on a 35mm rail which complies with DIN 46277



### DESCRIPTION

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

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 pulses proportional to kilowatt-hours.

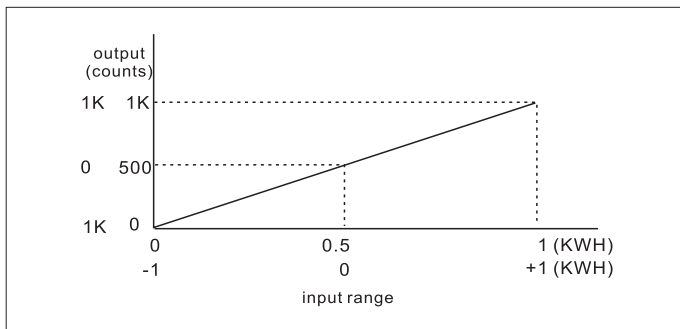


### • OUTPUT

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

- Accuracy .....  $\pm 0.2\%$  Rated of Output
- Input frequency ..... 50HZ  $\pm 3\%$  or 60HZ  $\pm 3\%$
- Input burden .....  $\leq 0.1\text{VA}$  (ampere input)  
 $\leq 0.2\text{VA}$  (voltage input)
- Aux. power source ..... AC 110 V  $\pm 15\%$  , 50/60HZ  
AC 220 V  $\pm 15\%$  , 50/60HZ  
DC 24V, 48V, 110V  $\pm 10\%$
- Power effect .....  $\leq 0.1\%$  R.O.
- Power consumption ..... AC  $\leq 8\text{VA}$ , DC  $\leq 6\text{W}$
- Waveform effect .....  $\leq 0.2\%$  R.O. at distortion factor 15%
- Electromagnetic balance effect .....  $\leq 0.1\%$  R.O.
- Mutual interference effect .....  $\leq 0.1\%$  R.O. between element
- Magnetic field strength .....  $\leq 0.2\%$  R.O. 400A/M
- Span adjustment range .....  $\leq 5\%$  R.O.
- Zero adjustment range .....  $\leq 1\%$  R.O.
- Operating temperature range ..... 0 ~ 60 °C
- Storage temperature range ..... -10 ~ 70 °C
- Temperature coefficient .....  $\leq 100\text{PPM}$ , 25 °C  $\pm 10$  °C
- Max. relative humidity ..... 95%
- Isolation ..... Input/output/power/case
- Isolation resistance .....  $\geq 100\text{M}\Omega$ , 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  $\mu\text{s}$   
IEC 61000-4-5 Common mode & differential mode
- Performance ..... Designed to comply with IEC 60688

### • INPUT - OUTPUT CURVE



### SPECIFICATION

#### • INPUT

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



## ORDER INFORMATION

**Model** S3-WHD-1 S3-WHD-3 S3-WHD-3A

S3-WHD-1 for 1Φ2W  
 S3-WHD-3 for 3Φ3W  
 S3-WHD-3A for 3Φ4W

**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

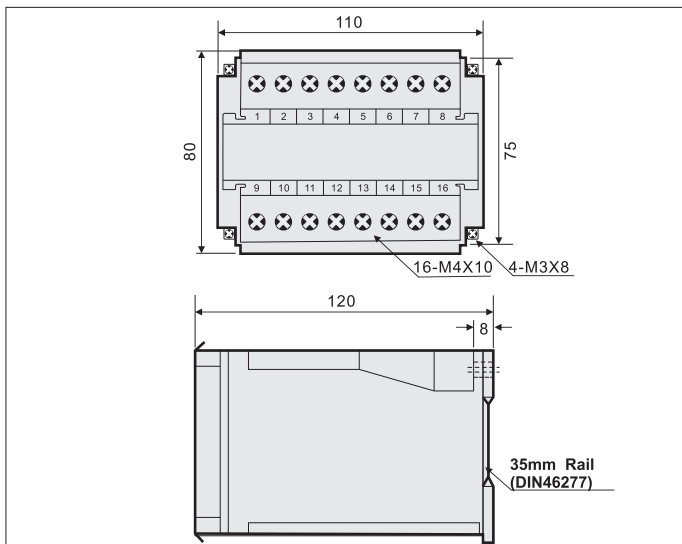
**Output Range (per KWH)**  
 1: 100 counts  
 2: 1000 counts  
 3: 10000 counts  
 0: Option

**Output Model**  
 P: Pulse  
 C: Open collect  
 R: Relay contact

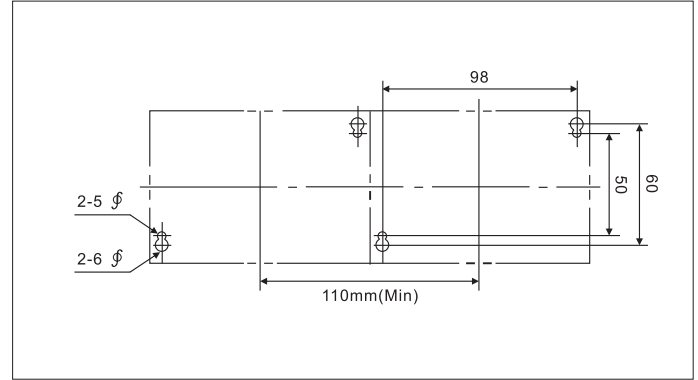
**Aux. Power Source**  
 A: AC 110V      C: DC 24V  
 B: AC 220V      D: DC 48V  
 0: Option        E: DC 110V

**Reverse Required**  
 Y: Yes  
 N: No

## THE OUTSIDE DIMENSION (UNIT:mm)

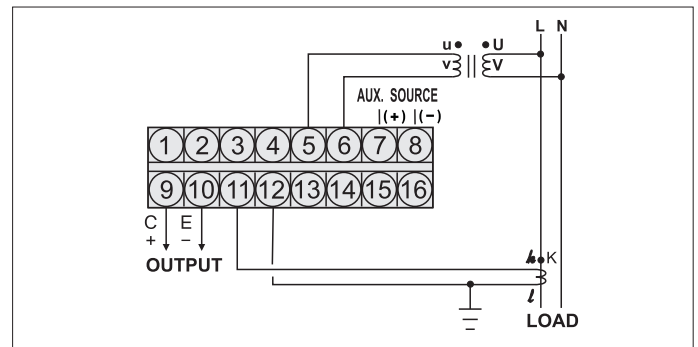


## • PANEL MOUNTING HOLES (UNIT:mm)

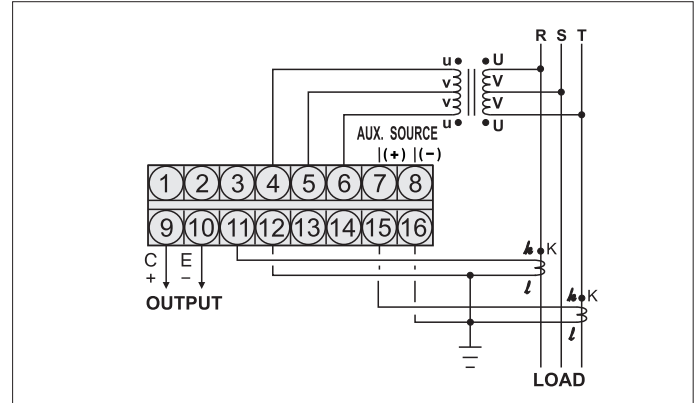


## CONNECTION DIAGRAM

### S3-WHD-1 (1Φ2W)



### S3-WHD-3 (3Φ3W)



### S3-WHD-3A (3Φ4W)

