



FEATURES

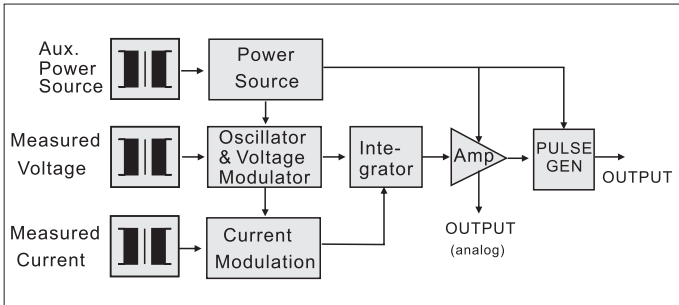
- Accuracy $\pm 0.2\%$ R.O.
- Watthour, Watt packaged in one case
- Precision measurement even for unbalance system
- Precision measurement even for distorted wave
- High impulse & surge protection (5KV)
- The case can be mounted on a 35mm rail which complies with DIN 46277



DESCRIPTION

Model: S3-WHW-1 1 Φ 2W, WATTHOUR/WATT
 S3-WHW-3 3 Φ 3W, WATTHOUR/WATT
 S3-WHW-3A 3 Φ 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.



OUTPUT

DC Output Range	Load Resistance	Output Resistance	Output Ripple	Response Time
0 ~ 1V	$\cong 1 \text{ K}\Omega$	$\cong 0.05\Omega$	$\cong 0.5\%$ R.O. (peak)	$\cong 400\text{mS}$ 0 ~ 99%
0 ~ 5V				
1 ~ 5V				
0 ~ 10V				
0 ~ 1mA	$\cong 10\text{K}\Omega$	$\cong 20\text{M}\Omega$		
0 ~ 10mA	$\cong 1 \text{ k}\Omega$	$\cong 5\text{M}\Omega$		
0 ~ 20mA	$\cong 500\Omega$			
4 ~ 20mA				

SPECIFICATION

INPUT

Input Range				
Circuit	Amp.	Voltage	Basic KWh	Basic Watt
Single Phase	5 A	110V (120V)	0.5 KWH	0.5 KW
		220V (240V)	1 KWH	1 KW
3-Phase 3-Wire	5 A	110V (120V)	1 KWH	1 KW
		220V (240V)	2 KWH	2 KW
3-Phase 4-Wire	5 A	190V/110V (208/120V)	1.5 KWH	1.5 KW
		380V/220V (416/240V)	3 KWH	3 KW

Max. Input Over Capability same as S3-WD, S3-RD.

OUTPUT FOR WATTHOUR

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

Accuracy WATT $\pm 0.2\%$ Rated of Output
 WATTHOUR $\pm 0.2\%$ Rated of Output
 Input frequency 50HZ $\pm 3\text{HZ}$ or 60HZ $\pm 3\text{HZ}$
 Input burden $\cong 0.1\text{VA}$ (ampere input)
 $\cong 0.2\text{VA}$ (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 $\cong 0.1\%$ R.O.
 Power consumption AC $\cong 9\text{VA}$, DC $\cong 7\text{W}$
 Waveform effect $\cong 0.2\%$ R.O. at distortion factor 15%
 Electromagnetic balance effect $\cong 0.1\%$ R.O.
 Mutual interference effect $\cong 0.1\%$ R.O. between element
 Magnetic field strength $\cong 0.2\%$ R.O. 400A/M
 Span adjustment range $\cong 5\%$ R.O.
 Zero adjustment range $\cong 1\%$ R.O.
 Operating temperature range 0 ~ 60°C
 Storage temperature range -10 ~ 70°C
 Temperature coefficient $\cong 100\text{PPM}$, 25°C $\pm 10^\circ\text{C}$
 Max. relative humidity 95%
 Isolation Input/output/power/case
 Isolation resistance $\cong 100\text{M}\Omega$, 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 μs
 IEC 61000-4-5 Common mode & differential mode
 Performance Designed to comply with IEC 60688



ORDER INFORMATION

Model _____

S3-WHW-1
S3-WHW-3
S3-WHW-3A

S3-WHW-1 for 1Φ2W
S3-WHW-3 for 3Φ3W
S3-WHW-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 (Watt) _____

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

Output Range (per KWH) _____

1: 100 COUNTS 3: 10000 COUNTS
2: 1000 COUNTS 0: Option

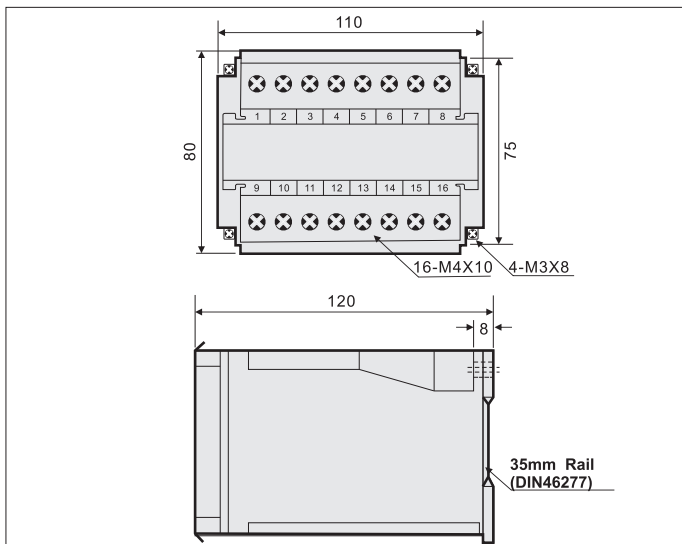
Output Mode (KWH) _____

P: Pulse
C: Open collect
R: Relay contact

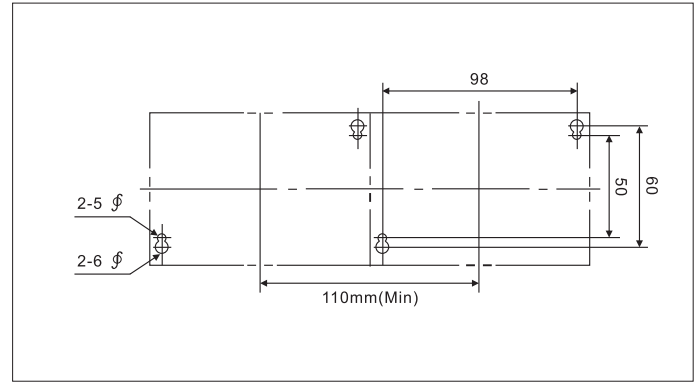
Aux. Power Source _____

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

THE OUTSIDE DIMENSION (UNIT:mm)

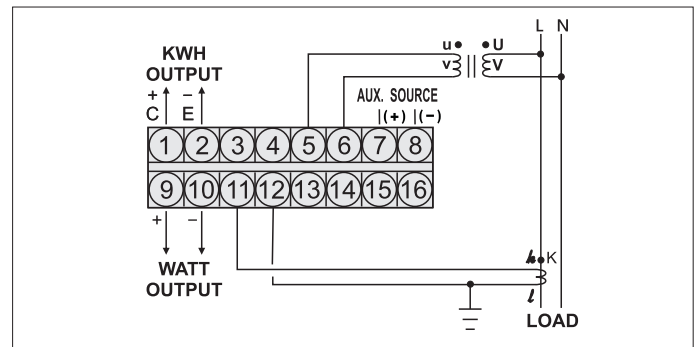


• PANEL MOUNTING HOLES (UNIT:mm)

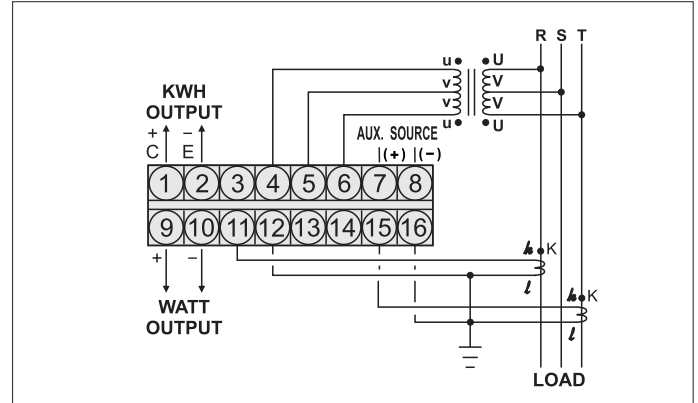


CONNECTION DIAGRAM

S3-WHW-1 (1Φ2W)



S3-WHW-3 (3Φ3W)



S3-WHW-3A (3Φ4W)

