



FEATURES

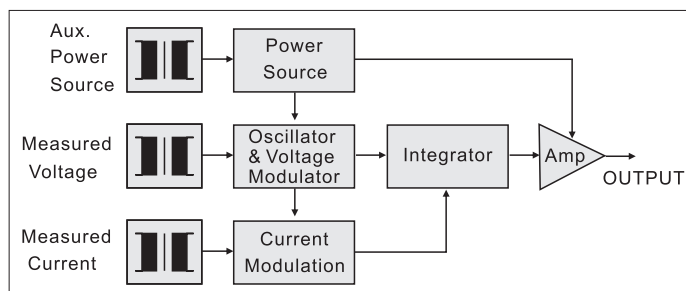
- Accuracy $\pm 0.2\%$ R.O.
- Excellent long term stability (4 ~ 20mA, 500 Ω)
- Precision measurement even for unbalance system
- Precision measurement even for distorted wave
- Measuring reverse watt is available
- High impulse & surge protection (5KV)
- The case can be mounted on a 35mm rail which complies with DIN 46277



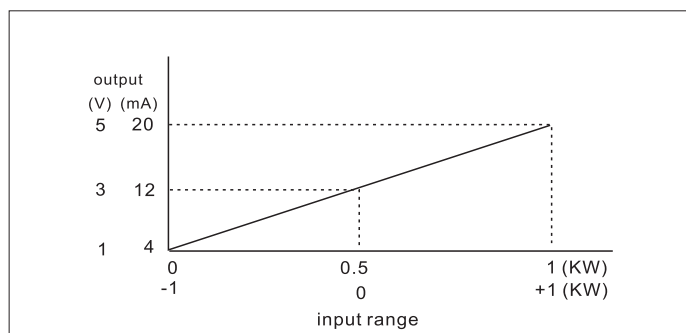
DESCRIPTION

Model: S3-WD-1 1 Φ 2W, active power (WATT)
S3-WD-3 3 Φ 3W, active power (WATT)
S3-WD-3A 3 Φ 4W, active power (WATT)

A wide range of transducers to measure all forms of active power, 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 amplitude by the measured current, are fed to an integrator an output amplification circuit. The dc signal produced is then directly proportional to power input - Watts.



INPUT - OUTPUT CURVE



SPECIFICATION

INPUT

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

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				

Accuracy $\pm 0.2\%$ Rated of Output
Input frequency 50HZ $\pm 3\text{HZ}$ or 60HZ $\pm 3\text{HZ}$
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%
Output load effect $\leq 0.05\%$ R.O.
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 $\geq 5\%$ R.O.
Zero adjustment range $\leq 1\%$ R.O.
Operating temperature range 0 ~ 60 $^{\circ}\text{C}$
Storage temperature range -10 ~ 70 $^{\circ}\text{C}$
Temperature coefficient $\leq 100\text{PPM}$ from 0 ~ 60 $^{\circ}\text{C}$
..... 60PPM, 25 $^{\circ}\text{C}$ $\pm 10^{\circ}\text{C}$
Max. relative humidity 95%
Isolation Input/output/power/case
Isolation resistance $\geq 100M\Omega$, 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 $\times 50 \mu\text{s}$
IEC 61000-4-5 Common mode & differential mode
Performance Designed to comply with IEC 60688



ORDER INFORMATION

Model _____

S3-WD-1 for 1Φ2W
S3-WD-3 for 3Φ3W
S3-WD-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 _____

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 ~ 1mA)
A2: 0 ~ 10mA (-10 ~ 0 ~ 10mA)
A3: 0 ~ 20mA (0 ~ 10 ~ 20mA)
A4: 4 ~ 20mA (4 ~ 12 ~ 20mA)
00: Option

Aux. Power Source _____

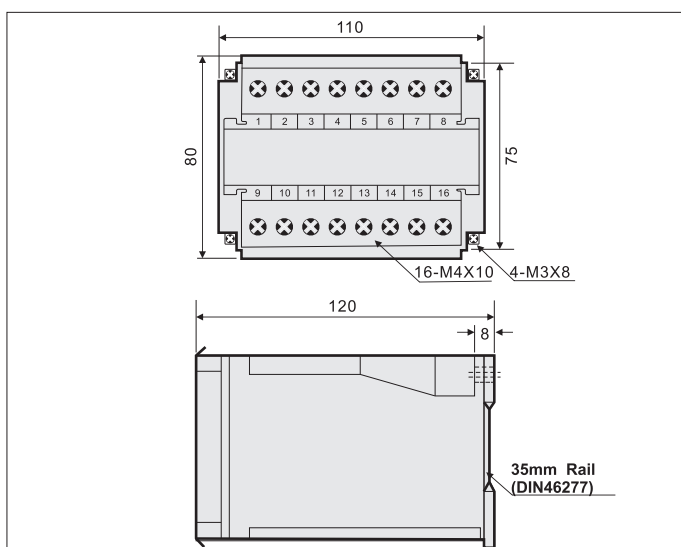
A: AC 110V C: DC 24V
B: AC 220V D: DC 48V
0: Option E: DC 110V

Reverse Required _____

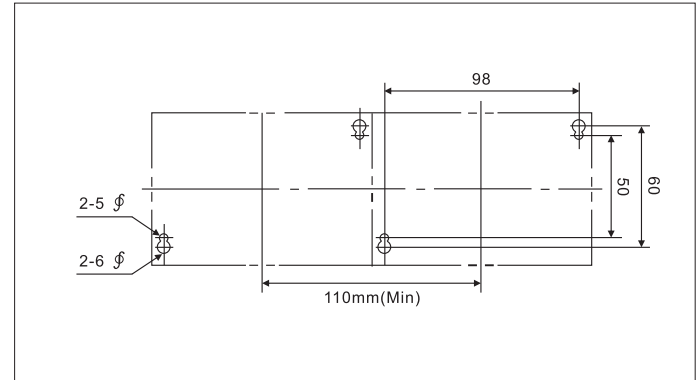
Y: Yes
N: No

*Remark: The value in parentheses is the output or reverse Watt be required

THE OUTSIDE DIMENSION (UNIT:mm)

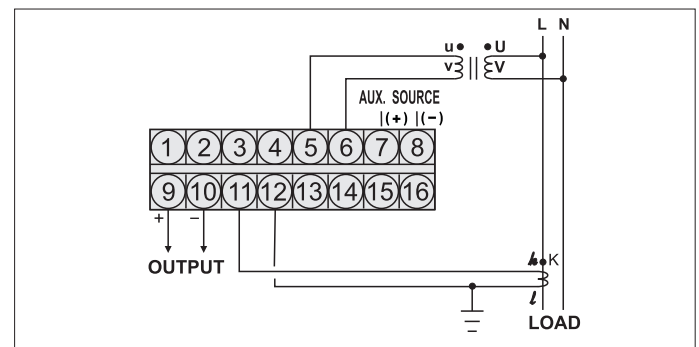


• PANEL MOUNTING HOLES (UNIT:mm)

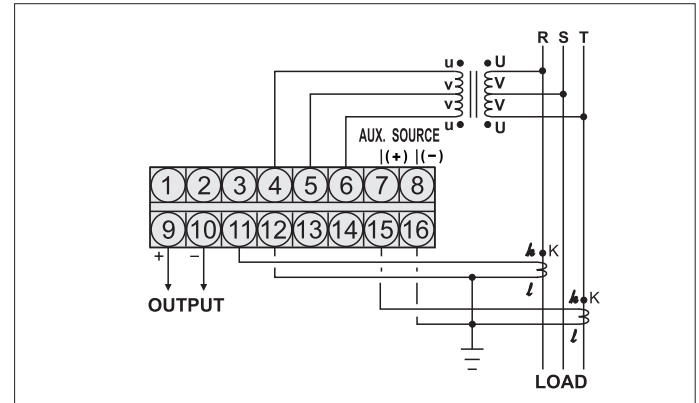


CONNECTION DIAGRAM

S3-WD-1 (1Φ2W)



S3-WD-3 (3Φ3W)



S3-WD-3A (3Φ4W)

