S3-WD ACTIVE POWER(WATT)TRANSDUCER

S3 SERIES

FEATURES

- Accuracy : ±0.2% RO.
- 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

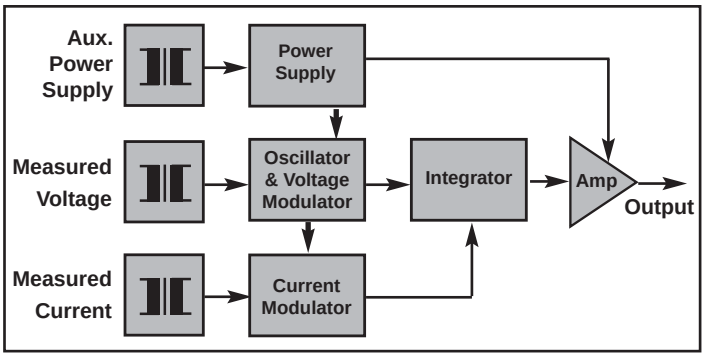
DESCRIPTION

Model : S3-WD-1 1 Φ2W, active power (WATT)

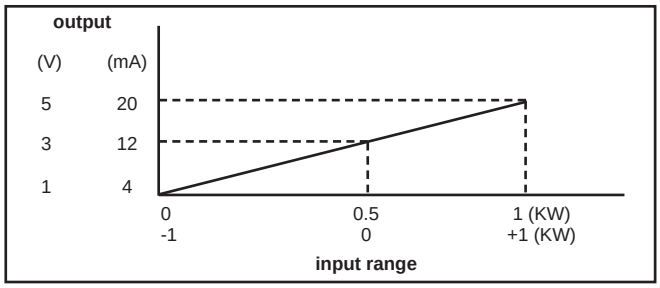
S3-WD-3 3 Φ3W, active power (WATT)

S3-WD-3A 3 Φ4W, 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	5 A	110V(120V)	0～0.5 KW	Ampere ： 3 ×rated continuous 10 ×rated 10 secs. 50 ×rated 1 sec. Voltage ： 2 ×rated continuous
		220V(240V)	0～1 KW	
3-Phase 3-Wire	5 A	110V(120V)	0～1 KW	
		220V(240V)	0～2 KW	
3-Phase 4-Wire	5 A	190V(110V) (208/120V)	0～1.5 KW	
		380V(220V) (416/240V)	0～3 KW	

● Output

DC Output Range	Load Resistance	Output Resistance	Output Ripple	Response Time
0 ～1V	≧1K Ω	≦0.05 Ω	≦0.5%RO. (peak)	≦400mS. 0～99%
0 ～5V				
1 ～5V				
0 ～10V				
0 ～1mA	0～10K Ω	≧20M Ω		
0 ～10mA	0～1K Ω	≧5M Ω		
0 ～20mA	0～500 Ω			
4 ～20mA				

Accuracy . . . . . ±0.2% Rated to Output
Input frequency . . . . . .50HZ ±3HZ or 60HZ ±3HZ
Input burden . . . . . ≦0.1VA (ampere input)
≦0.2 VA (voltage input)
Aux. power supply . . . . . .AC110V ±15%, 50/60HZ
AC220V ±15%, 50/60HZ
DC 24V, 48V, 110V ±15%
Power effect . . . . . ≦ 0.1%RO.
Power consumption . . . . . ≦4VA, ≦DC3W
Waveform effect . . . . . .≦0.2%RO.at distortion factor 15%
Output load effect . . . . . ≦0.05% RO.
Electromagnetic balance effect . . . . . ≦0.1%RO.
Mutual interference effect . . . . . ≦0.1%RO.between element
Magnetic field strength . . . . . ≦0.2% RO., 400A/M
Span adjustment range . . . . . ≧5%RO.
Zero adjustment range . . . . . ≧1%RO.
Operating temperature range . . . . . .0~60℃
Storage temperature range . . . . . .-10~70℃
Temperature coefficient . . . . . ≦100PPM from 0 to 60℃
≦60PPM, 25℃ ±10℃
Max. relative humidity 95%
Isolation . . . . . .Input/output/power/case
Insulation resistance . . . . . ≧100M Ω, 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 μs
(IEC 255-4,ANSI C37 90a) Common mode & differential mode
Performance . . . . . .Designed to comply with IEC688
Safety requirements IEC414, BS5458

S3-WD ACTIVE POWER(WATT)TRANSDUCER S3 SERIES

ORDERING INFORMATION

S3-WD-1
S3-WD-3
S3-WD-3A — [ ][ ][ ][ ][ ][ ]

Model
S3-WD-1 for 1 Φ2W
S3-WD-3 for 3 Φ3W
S3-WD-3A for 3 Φ4W

Input Current
5 : 5A
O : 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

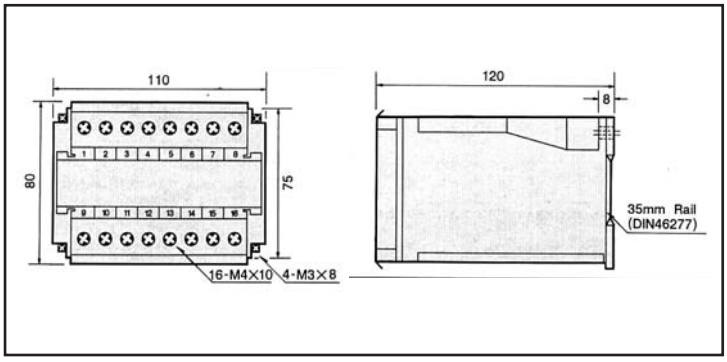
Output Range
V1 : 0~1V(-1~0~1V)
V2 : 0~5V(-5~0~5V)
V3 : 1~5V(1~3~5V)
V4 : 0~10V(0~5~10V)
A1 : 0~1mA (-1~0~1 mA)
A2 : 0~10mA (-10~0~10 mA)
A3 : 0~20mA (0~10~20 mA)
A4 : 4~20mA (4~12~20 mA)
00 : Option

Aux. Power Supply
A : AC 110V C : DC24V
B : AC 220V D : DC48V
O : Option E : DC 110V

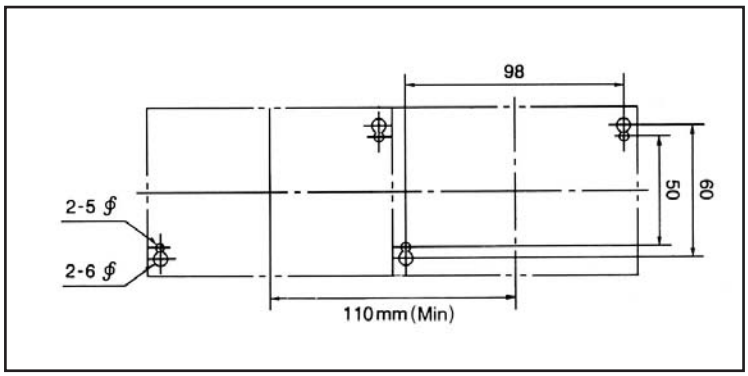
Reverse Required
Y : Yes
N : No

★ Remark : The value in parentheses is the output or reverse watt be required

THE OUTSIDE DIMENSION (UNIT:mm)

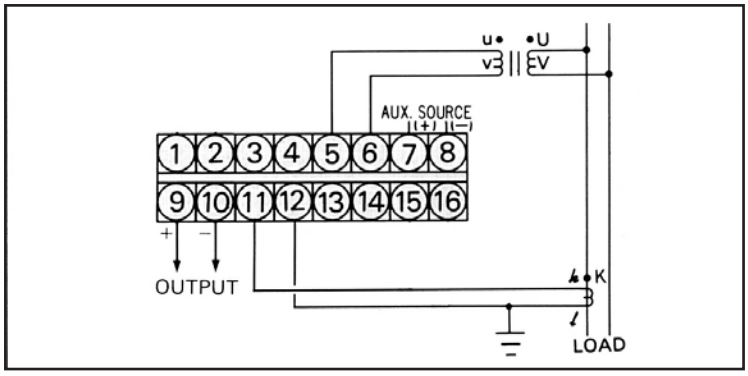


★ PANEL MOUNTING HOLES (UNIT:mm)

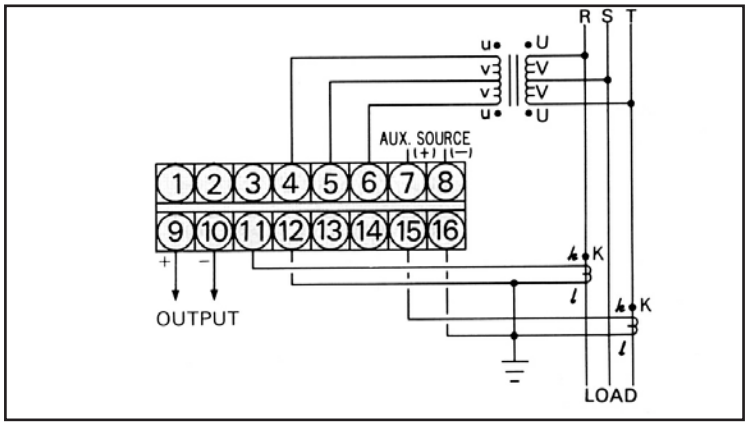


CONNECTION DIAGRAM

S3-WD-1 (1 Φ2W)



S3-WD-3A (3 Φ3W)



S3-WD-3A (3 Φ4W)