



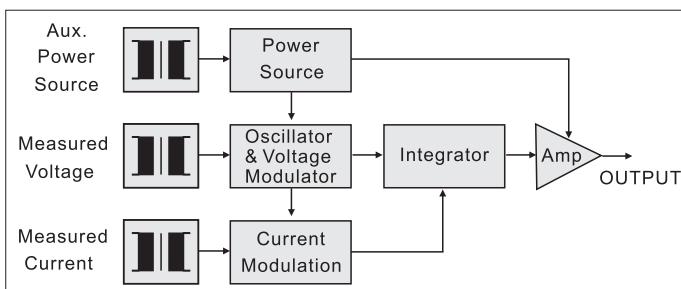
FEATURES

- 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
- High impulse & surge protection (5kV)
- The case can be mounted on a 35mm rail which complies with DIN 46277

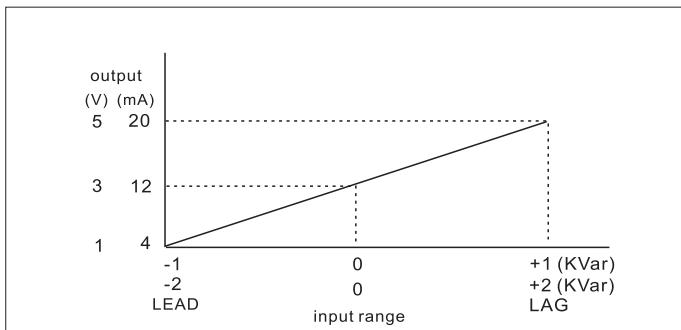
DESCRIPTION

Model: S3-RD-1 1Φ2W, active power (VAR)
 S3-RD-3 3Φ3W, active power (VAR)
 S3-RD-3A 3Φ4W, active power (VAR)

A wide range of transducers to measure all forms of reactive 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 - Vars.



• INPUT - OUTPUT CURVE



• OUTPUT

DC Output Range	Load Resistance	Output Resistance	Output Ripple	Response Time					
-1 ~ 0 ~ 1V	$\geq 1 \text{ k}\Omega$	$\leq 0.05\Omega$	$\leq 0.5\% \text{ R.O. (peak)}$	$\leq 400\text{mS.}$ $0 \sim 99\%$					
-5 ~ 0 ~ 5V									
1 ~ 3 ~ 5V									
0 ~ 5 ~ 10V									
-1 ~ 0 ~ 1mA	$\leq 10\text{k}\Omega$	$\geq 20\text{M}\Omega$							
-10 ~ 0 ~ 10mA	$\leq 1 \text{ k}\Omega$	$\geq 5\text{M}\Omega$							
0 ~ 10 ~ 20mA	$\leq 500\Omega$								
4 ~ 12 ~ 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 110V $\pm 15\%$, 50/60Hz AC 220V $\pm 15\%$, 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	$\leq 0.5\%$ 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	$\geq 1\%$ R.O.
Operating temperature range	-0 ~ 60°C
Storage temperature range	-10 ~ 70°C
Temperature coefficient	100PPM from 0 ~ 60°C 60PPM, 25°C $\pm 10\%$ C
Max. relative humidity	95%
Isolation	Input/output/power/case $\geq 100\text{M}\Omega$, DC 500V
Isolation resistance	Between input/output/power/case
Dielectric withstand voltage	AC 2.6 KV, 60 Hz, 1 minute
IEC 60688	5KV, 1.2 \times 50 μs
Impulse withstand test	Common mode & differential mode
IEC 61000-4-5	Designed to comply with IEC 60688
Performance	

SPECIFICATION

• INPUT

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



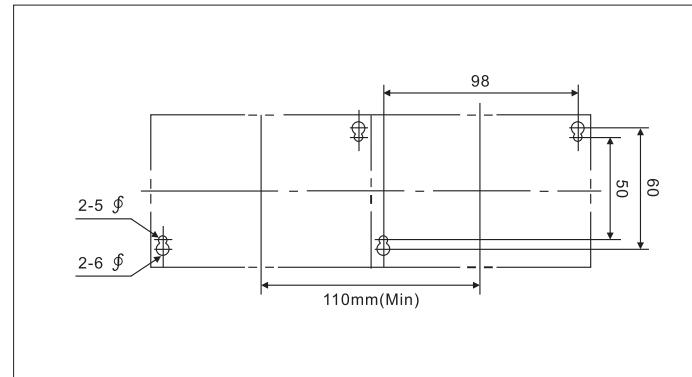
REACTIVE POWER VAR TRANSDUCER

S3-RD
SERIES

ORDER INFORMATION

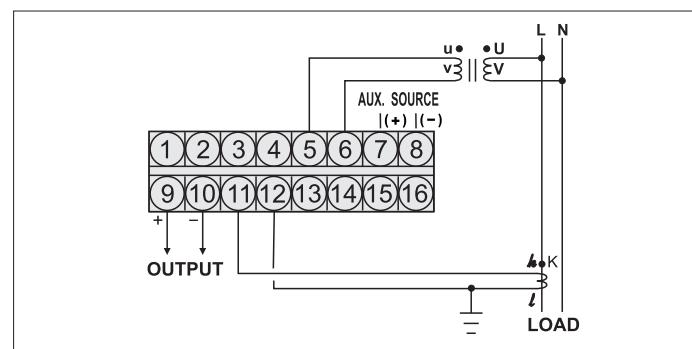
Model	S3-RD-1 S3-RD-3 S3-RD-3A
S3-RD-1	for 1Φ2W
S3-RD-3	for 3Φ3W
S3-RD-3A	for 3Φ4W
Input Current	
1: 1A	
5: 5A	
0: Option	
Input Voltage	
1: 110V (120V)	
2: 220V (240V)	
3: 190V/110V (208V/120V)	
4: 380V/220V (416V/240V)	
0: Option	
Input Frequency	
5: 50HZ ± 3HZ	
6: 60HZ ± 3HZ	
0: Option	
Output Range	
V1: -1 ~ 0 ~ 1V	
V2: -5 ~ 0 ~ 5V	
V3: 1 ~ 3 ~ 5V	
V4: 0 ~ 5 ~ 10V	
A1: -1 ~ 0 ~ 1mA	
A2: -10 ~ 0 ~ 10mA	
A3: 0 ~ 10 ~ 20mA	
A4: 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

• PANEL MOUNTING HOLES (UNIT:mm)

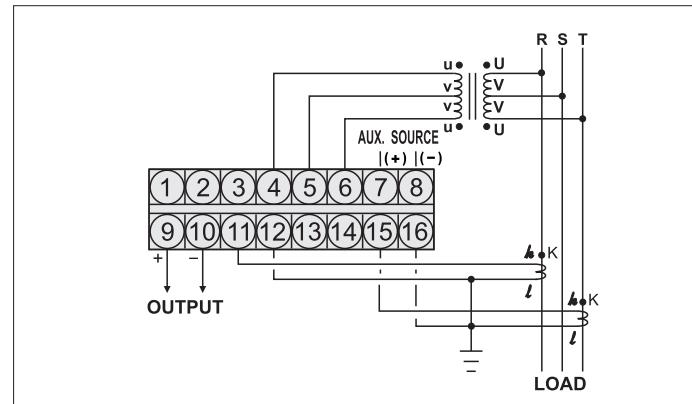


CONNECTION DIAGRAM

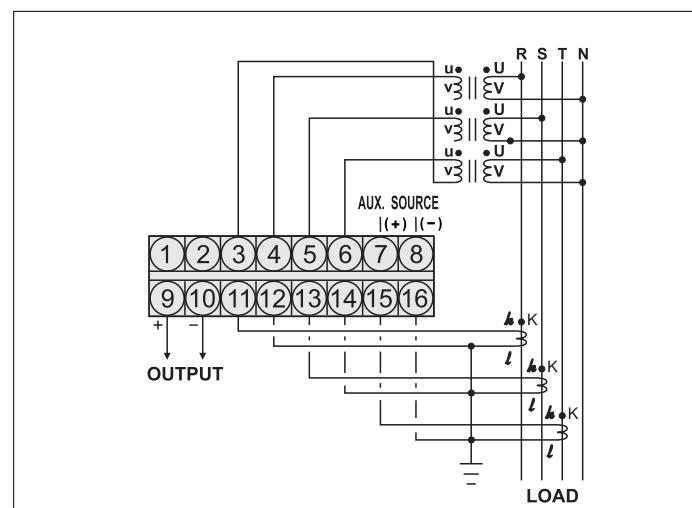
S3-RD-1 (1Φ2W)



S3-RD-3 (3Φ3W)



S3-RD-3A (3Φ4W)



THE OUTSIDE DIMENSION (UNIT:mm)

