ACTIVE/REACTIVE POWER (WATT/VAR) TRANSDUCER AWR

FEATURES

- Accuracy ±0.2% RO.
- Watt, Var packaged in one case
- Precision measurement even for unbalance ststem
- 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

• OUTPUT

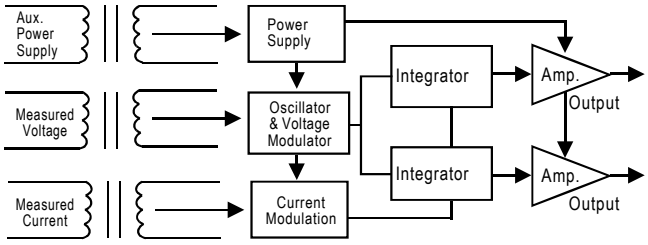
DC Output Range	Load Resistance	Output Resistance	Output Ripple	Response Time
0~1V	≥1K Ω	≤0.05 Ω	≤0.5% RO. (peak)	≤400mS. 0~99%
0~5V	≥1K Ω			
1~5V	≥1K Ω			
0~10V	≥1K Ω			
0~1mA	0~10K Ω	≥ 20M Ω		
0~10mA	0~1K Ω	≥ 5M Ω		
0~20mA	0~500 Ω			
4~20mA	0~500 Ω			

Accuracy:	±0.2% Rated of Output
Input frequency:	Watt 50HZ±3HZ or 60HZ±3HZ Var 50HZ or 60HZ
Input frequency effect:	≤ 0.015%, per 0.01HZ (Only for VAR)
Input burden:	≤ 0.2VA (ampere input) ≤ 0.1VA (voltage input)
Aux. power supply:	AC 110V±15%, 50/60HZ AC 220V±15%, 50/60HZ DC24V, 48V, 110V, +15%, -10%
Power effect:	≤ 0.1% RO.
Power consumption:	≤ 4.5VA, ≤ DC 3W
Waveform effect:	≤ 0.2% RO. at distortion factor 15%
Output load effect:	Current output≤ 0.1% RO. Voltage output≤0.05% RO.
Electromagnetic balance effect:	≤ 0.1% RO.
Mutual interference effect:	≤ 0.1% RO. between element
Magnetic field strength:	400A/M.≤ 0.2% RO.
Span adjustment range:	≥ 5% RO.
Zero adjustment range:	≥ 1% RO.
Operating temperature range:	0~60°C
Storage temperature range:	-10~70°C
Temperature coefficient:	≤100PPM from 0 to 60°C
Max. relative humidity:	95%
Isolation:	Input/output/power/case
Insulation resistance:	≥ 100M Ω, DC 500V
Dielectric withstand voltage: (IEC 414, 688, ANSI, C37)	Between input/output/power/case AC 3KV, 60HZ, 1 min.
Impulse withstand test: (IEC 255-4, ANSI C37 90a)	5KV, 1.2 X 50us Common mode & differential mode
Performance:	Designed to comply with IEC688
Safety requirements:	IEC 414, BS5458

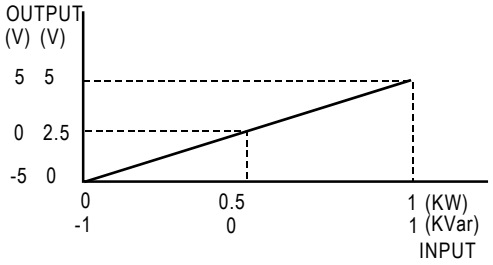
DESCRIPTION

Model: AWR-1 for 1φ2W, watt/var
AWR-3 for 3φ3W, watt/var
AWR-3A for 3φ4W, watt/var

A wide range of transducers to measure all forms of WATT, VAR, 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-Watt & Vars.



• INTPUT-OUTPUT CURVE



SPECIFICATION

• INPUT

Input Range					Max. Input Over Capabiiity
Circuit	Amp	Voltage	Basic Watt	Basic Var	
Single Phase	5A	110V(120V)	0~0.5KW	±0.5KVar	AS AW, AR
		220V(240V)	0~1KW	±1KVar	
3-Phase 3-Wire	5A	110V(120V)	0~1KW	±1KVar	
		220V(240V)	0~2KW	±2KVar	
3-Phase 4-Wire	5A	190V/120V (208/120V)	0~1.5KW	±1.5KVar	
		380V/220V (416/240V)	0~3KW	±3KVar	

ACTIVE/REACTIVE POWER (WATT/VAR) TRANSDUCER

ORDERING MODEL MAKE UP

AWR-1
AWR-3
AWR-3A — [ ][ ][ ][ ][ ][ ][ ]

Model
AWR-1 for 1Φ2W
AWR-3 for 3Φ3W
AWR-3A for 3Φ4W

Input Current
5 : 5A
O : Option

Input voltage
1 : 110V (120V)
2 : 220V (240V)
3 : 190V/110V (208V/120V)
4 : 380V/220V (416V/240V)
O : Option

Input Frequency
5 : 50HZ (Watt:50HZ 3HZ)
6 : 50HZ (Watt:60HZ 3HZ)
O : Option

Output Range

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

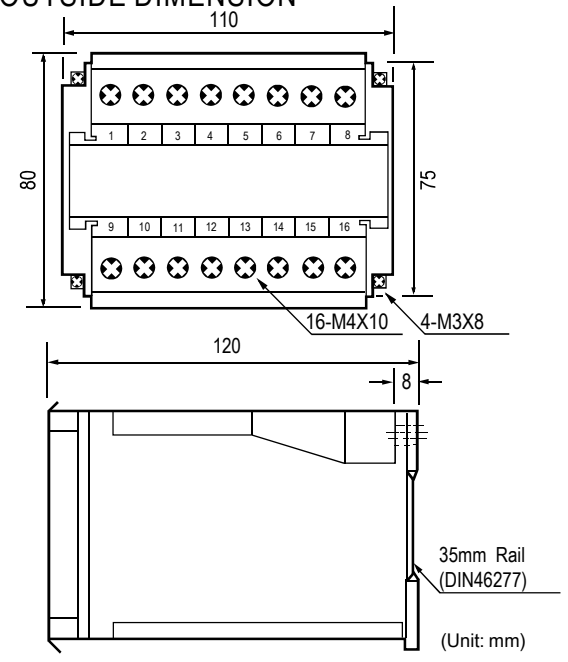
Aux. Power Supply

A : AC110V	C : DC24V
B : AC220V	D : DC48V
O : Option	E : DC110V

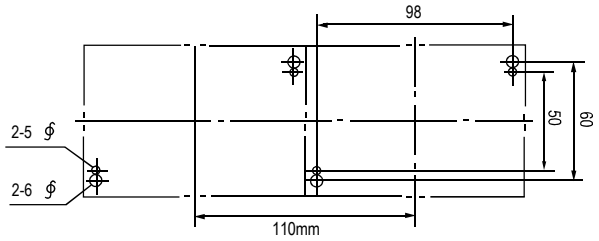
Reverse Required
Y: Yes
N : No

* Remark: The value in parentheses is VAR output or Renerse watt output

THE OUTSIDE DIMENSION



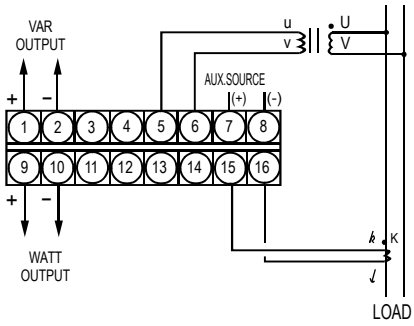
PANEL MOUNTING HOLES



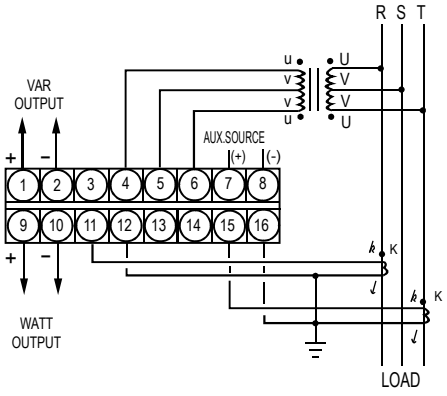
(Unit: mm)

CONNECTION DIAGRAM

AWR-1 (1Φ2W)



AWR-3 (3Φ3W)



AWR-3A (3Φ4W)