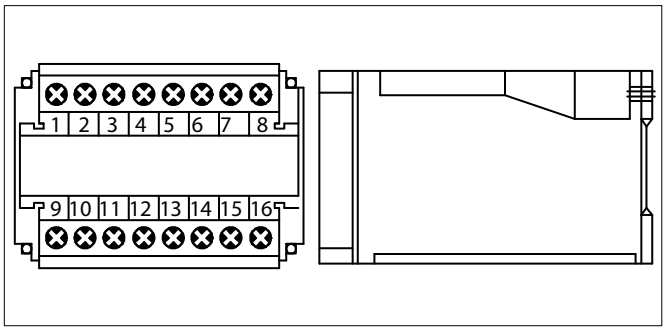
REACTIVE POWER TRANSDUCER (VAR)

MODEL : DR SERIES



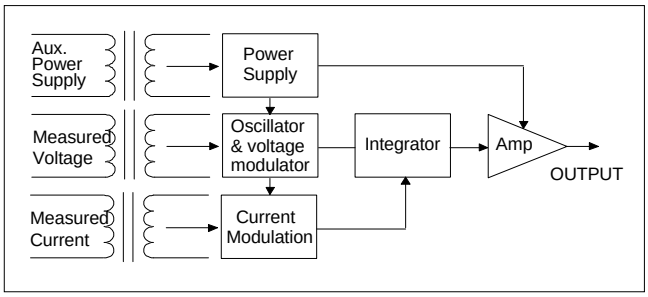
■ FEATURES

- Accuracy ± 0.2% RO.
- Excellent long term stability (4~20mA, 750Ω)
- 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 DIM 46277

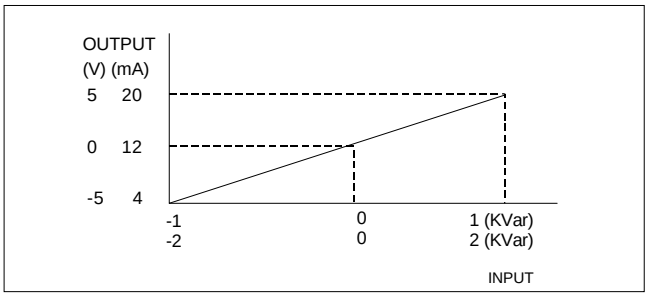
■ DESCRIPTION

Model : DR-1 for 1Φ 2W, reactive power(var)
DR-3 for 3Φ 3W, reactive power(var)
DR-3A for 3Φ 4W, reactive power(var)

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 amplitued by the measured current, are fed to an integrator an output amplification circuit. The dc signal produced is then directly proportional to power input-var.



· INPUT-OUTPUT CURVE



■ SPECIFICATION

· INPUT

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

· OUTPUT

DC output Range	Load Resistance	Output Resistance	Output Ripple	Response Time
-1 ~0 ~ 1V	≥ 500Ω	≤ 0.05Ω	≤ 0.5% RO. (peak)	≤ 400mS 0~99%
-5 ~0 ~ 5V	≥ 500Ω			
1 ~ 3 ~ 5V	≥ 500Ω			
0 ~ 5 ~ 10V	≥ 500Ω			
-1 ~0 ~ 1mA	0 ~ 10KΩ	≥ 20MΩ		
-10 ~ 0 ~ 10mA	0 ~ 1KΩ	≥ 5MΩ		
0 ~ 10 ~ 20mA	0 ~ 750Ω			
4 ~ 12 ~ 20mA	0 ~ 750Ω			

Accuracy :	± 0.2% Rated of Output
Input frequency :	50Hz or 60Hz
Input frequency effect :	≤ 0.015%, per 0.01Hz
Input burden :	≥ 0.1VA (ampere input)
	≤ 0.2VA (ampere 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 :	≤ 4VA, ≤ 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℃
Storage temperature range :	-10~70℃
Temperature coefficient :	≤ 100PPM from 0 to 60℃
Max. relative humidity :	95%
Isolation :	Input/output/power/case
Insulation resistance :	≤ 100MΩ , DC 500V
Dielectric withstand voltage ;	Between input/output/power/case
(IEC 414, 688, ANSI, C37)	AC 3KV, 60Hz, 1min
Impulse withstand test :	5KV, 1.2x50㎲
(IEC 255-4, ANSI C37 90a)	Common mode & differential mode
Performance :	Designed to comply with IEC688
Safety requirements :	IEC 414, BS5458

REACTIVE POWER TRANSDUCER (VAR)

MODEL : DR SERIES

■ ORDERING MODEL MAKE UP

DR-1
DR-3
DR-3A — [ ][ ][ ][ ][ ][ ]

Model
DW-1 for 1Φ 2W
DW-3 for 3Φ 3W
DW-3A for 3Φ 4W

Input Current
5 : 5A
0 : Option

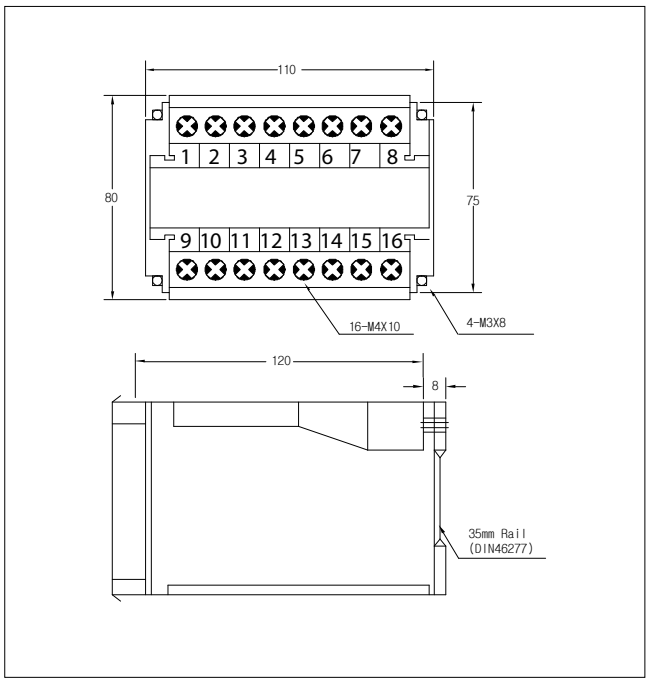
Input Voltage
1 : 110V (120V)
2 : 220V (240V)
3 : 190V/110V (208V/120V)
4 : 380V/220V (416V/240V)
0 : Option

Input Frequency
5 : 50Hz
6 : 60Hz
0 : Option

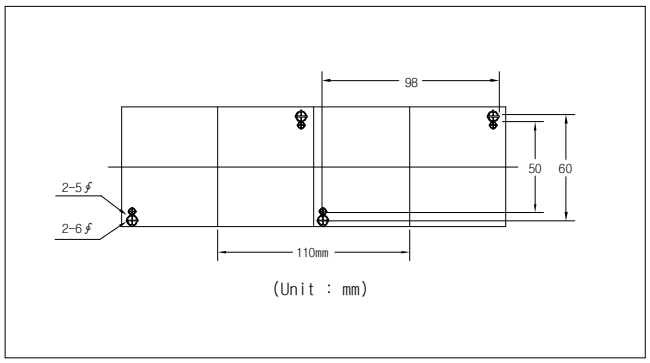
Output Range
V1 : -1 ~ 10 ~ 1V
V2 : -5 ~ 0 ~ 5V
V3 : 1 ~ 3 ~ 5V
V4 :0 ~ 5 ~ 10V
00 : Option
A1 : -1 ~ 0 ~ 1mV
A2 : -10 ~ 0 ~ 10mV
A3 : 0 ~ 10 ~ 20mV
A4 : 4 ~ 12 ~ 20mV

Aux. Power Supply
A : AC 110V
B : AC 220V
O : Option
C : DC 24V
D : DC 48V
E : DC 110V

■ THE OUTSIDE DIMENSION

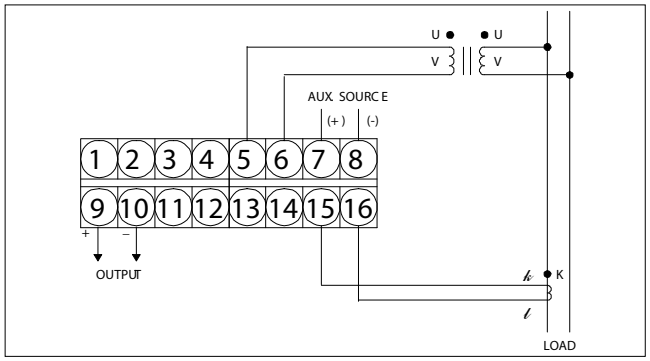


■ PANEL MOUNTING HOLES

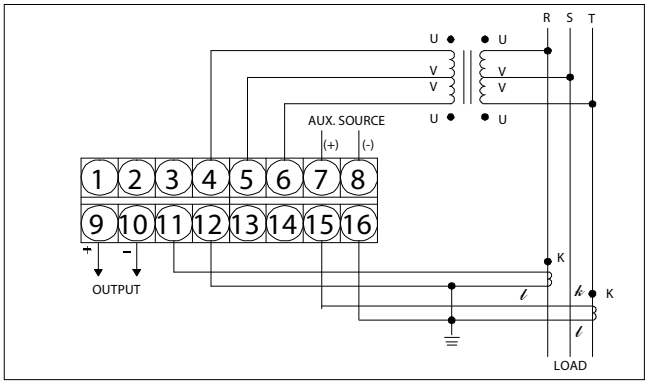


■ CONNECTION DIAGRAM

DR-1 (1Φ 2W)



DR- 3 (3Φ 3W)



DR-3 A (3Φ 4W)