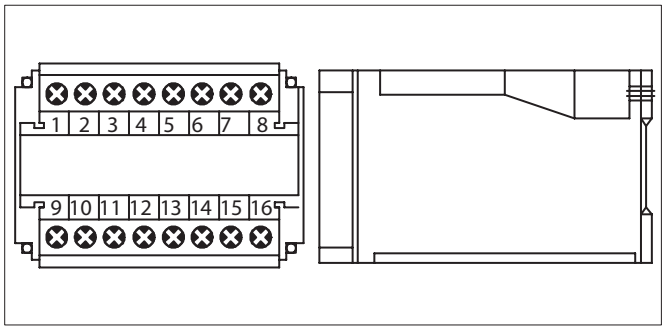
WATT WATT HOUR TRANSDUCER

MODEL : DWHW SERIES



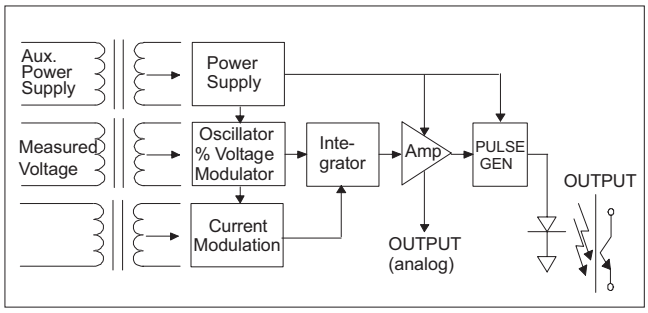
■ FEATURES

- Accuracy ± 0.25% RO.
- Wattout, Watt packaged in one case.
- 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 : DWHW-1 for 1Φ 2W, watthour/watt
DWHW-3 for 3Φ 3W, watthour/watt
DWHW-3A for 3Φ 4W, watthour/watt

For kilowatt-hour measurement, we build in another Linear integrator Circuit, This circuit accepts signal from Watts portion and integrates with respect to time, to produce a pulsed output via volt free contacts. result in pulses proportional to kilowatt-hours.



■ SPECIFICATION

· INPUT

Input Range				
Circuit	Amp.	Voltage	Basic KWH	Basic Watt
Single Phase	5A	110V(120V)	0 ~ 0.5KWH	0 ~ 0.5KW
		220V(240V)	0 ~ 1KWH	0 ~ 1KW
3-Phase 3-wire	5A	110V(120V)	0 ~ 1KWH	0 ~ 1KW
		220V(240V)	0 ~ 2KWH	0 ~ 2KW
3-Phase 4-wire	5A	190/110V (208/120V)	0 ~ 1.5KWH	0 ~ 1.5KW
		380/220V (416/240V)	0 ~ 3KWH	0 ~ 3KW

Max. Input Over Capability : Ampere : 3 rated continuous
10 rated 10sec
50 rated 1sec
Voltage : 1.5 rated continuous
2 rated 10sec
4 rated 1sec

· OUTPUT FOR WATTHOUR

Output Range		Output Mode		
per 1KWH	100 counts	Pulse DC 15V, 10mA	Open Collect DC 30V, 100mA	Relay Contacts SPDT AC 110V, 0.5A DC 24V, 1A
	1000 counts			
	10000 counts			
	100000 counts			

· OUTPUT FOR WATT

DC output range	Load Resistance	Output Resistance	Output Ripple	Response Time
0 ~ 1V	≥ 500Ω	≤ 0.05Ω	0.5% RO. (peak)	≤ 400mS 0~99%
0 ~ 5V	≥ 500Ω			
1 ~ 5V	≥ 500Ω			
0 ~ 10V	≥ 500Ω			
0 ~ 1mA	0 ~ 15KΩ	≥ 20MΩ		
0 ~ 10mA	0 ~ 1500Ω	≥ 5MΩ		
0 ~ 20mA	0 ~ 750Ω			
4 ~ 20mA	0 ~ 750Ω			

Accuracy :	± 0.25% Rated of Output
Input frequency :	50Hz ± 3Hz or 60Hz ± 3Hz
Input burden :	≥ 0.1VA (voltage 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 :	≤ 4.5VA, ≤ DC 3W
Waveform effect :	≤ 0.01% RO, at distortion factor 15%
Output load effect (watt) :	current output ≤ 0.1% RO.
	voltage output ≤ 0.05% RO.
Mutual interference effect :	≤ 0.1% RO.
Electromagnetic balance effect :	≤ 0,1% RO. between element
Magnetic field strength :	400A/M. ≤ 0.2% RO..
Span adjustment range :	≥ 5% RO
Zero adjustment range :	≥ 2% RO
Operating temperature range :	0 ~ 60℃
Storage temperature range :	-10~70℃
Temperature coefficient :	≤ 100PPM 23℃±10℃
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 902)	Common mode & differential mode
Performance :	Designed to comply with IEC688
Safety requirements :	IEC 414, BS5458

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MODEL : DWHW SERIES

■ ORDERING MODEL MAKE UP

DWHW-1
DWHW-3
DWHW-3A

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

Input Current
5 : 5A
0 : Option

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

Input Frequency
5 : 50Hz ± 3Hz
6 : 60Hz ± 3Hz
0 : Option

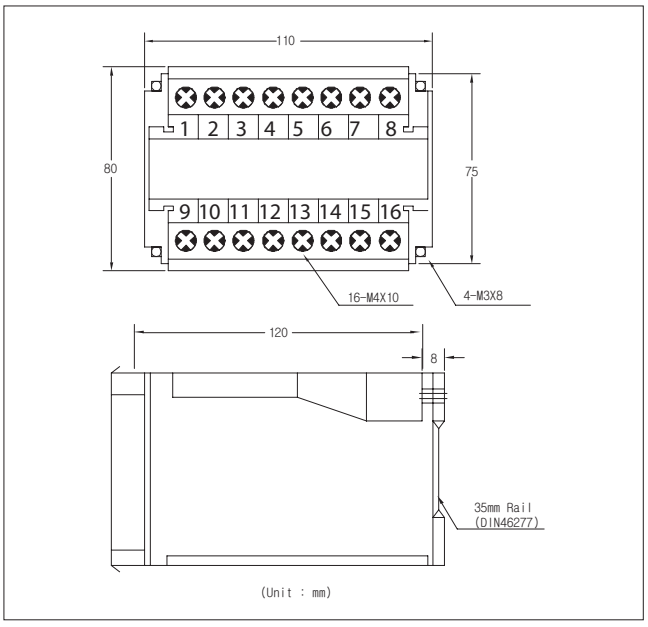
Output Frequency
V1 : 0 ~ 1V
V2 : 0 ~ 5V
V3 : 1 ~ 5V
V4 : 0 ~ 10V
A1 : 0 ~ 1mA
A2 : 0 ~ 10mA
A3 : 0 ~ 20mA
A4 : 4 ~ 20mA
00 : Option

Output Range (per KWH)
1 : 100 counts
2 : 1000 counts
3 : 10000 counts
4 : 100000 counts
5 : Option

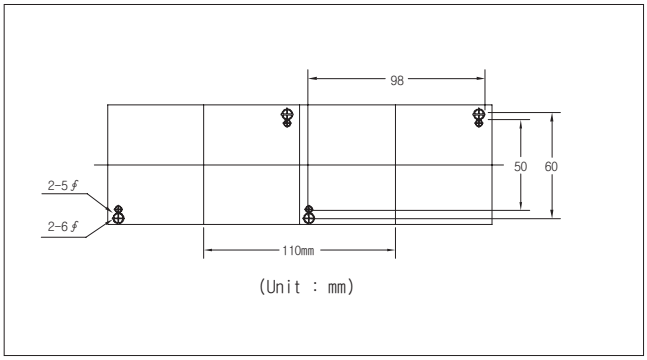
Output Mode
P : Pulse
R : Relay contact
C : Open collect

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

■ THE OUTSIDE DIMENSION

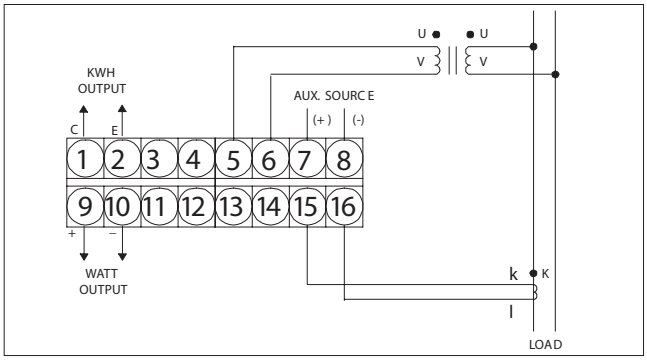


■ PANEL MOUNTING HOLES

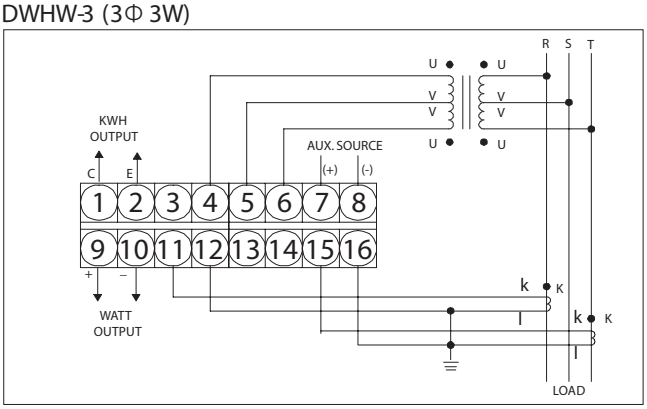


■ CONNECTION DIAGRAM

DWHW-1 (1Φ 2W)



DWHW-3 (3Φ 3W)



DWHW-3A (3Φ 4W)