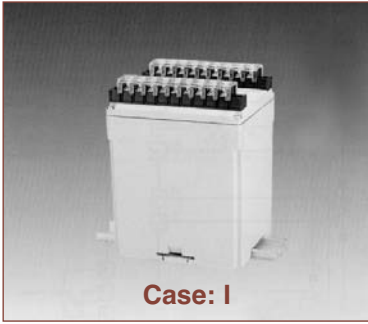


WATTHOUR AND VARHOUR TRANSDUCERS

RWH / RQH / RWWH / RQQH Series



FEATURES

- High accuracy $\pm 0.2\%$ RD (WH) $\pm 0.25\%$ RD (VARH)
- Precision measurement even for distorted waves
- Uses time division multiplier for watt and var
- High immunity to external noise
- Wide selection of input and output range
- Quick and easy mounting

RWH	system Watthour
RWWH	system Watthour + Watt
RQH	system Varhour
RQQH	system Varhour + Var

These transducers convert the active power or reactive power of a single-phase of three-phase system with balanced or unbalanced load.

The output signals are a digital and DC analog signal.

Specifications

Accuracy	$\pm 0.2\%$ RD (WH) $\pm 0.25\%$ RD (VARH)
Temp. coefficient	≤ 100 ppm/ $^{\circ}$ C ≤ 60 ppm/ $^{\circ}$ C, 25° C $\pm 10^{\circ}$ C
Temp. range	-20° C to 60° C, Operating $0 \sim 50^{\circ}$ C
Humidity range	Up to 95% RH
Isolation	Input / output / power / case
Dielectric test	DIN-IEC 688 2K Vrms/1min, Between terminal to terminal 2.8K Vrms/1min, Between terminal to case
Surge test	DIN/IEC 255-4, ANSI C37 90a/1974 5KV (1.2 X 50us)
Insulation resistance	100M Ω or more, DC 500V
Housing material	ABS Resin (94V-0)
Mounting	Rail 35mm
Aux. power	AC 115/230V $\pm 15\%$, 50/60Hz, 3VA DC 24V, 48V, 110V $\pm 20\%$ (option)

Input

Frequency	50Hz or 60Hz ± 3 Hz
Burden	≤ 0.1 VA per voltage circuit ≤ 0.2 VA per current circuit
Sensitivity	$\leq 0.5\%$ of range end value
Overload capacity	Voltage 600Vrms continuous 1.25 X rated continuous 2 X rated 10 sec. 4 X rated 5 sec. Current 3 X rated continuous 10 X rated for 10 sec 50 X rated for 1 sec 80 X rated 0.5 sec.

Code Number

Model-Connection-Input / Input-Freq / Freq. Output Freq Output Mode / Power Supply-Two-Freq. Output / DC Output	
Example A	RWH-34-32111-N
Connection	3 phase 4 wires
Input	AC 208/120V, 5A(0 ~ 1500W)
Input freq	60Hz ± 3 Hz
Freq.output	1 Pulse/WH
Freq.output mode	Open collector
Aux. Power	AC 115/230V
Example B	RQQH-33-21211-YE
Connection	3 phase 3 wires
Input	AC 240V, 5A (0 ~ ± 2000 Var)
Input freq	50Hz ± 3 Hz
Freq.output	10 Pulse/VARH
Freq.output mode	Open collector
Aux. Power	AC 115/230V
Two-freq. output	Forward + Reverse
DC output	-10 ~ 0 ~ + 10V

Output

Output variables	Pulse and DC signal
Ripple	<0.5% p-p max.
Response time	<0.4 sec. or less
Zero adjustment	$\pm 5\%$ minimum
Span adjustment	$\pm 10\%$ minimum

Ordering Informations

RWH, RQH	□ □ □ □ □ □ □ □
RWWH, RQQH	□ □ □ □ □ □ □ □
MODEL	_____
RWH: Watt-Hour	
RQH: Var-Hour	
RWWH: Watt-Hour + Watt	
RQQH: Var-Hour + Var	
CONNECTION	_____
12: 1 phase 2 wires	
13: 1 phase 3 wires	
33: 3 phase 3 wires	
34: 3 phase 4 wires	
IINPUT	_____
1: AC 120 ~ 5A	3: 208/120V, 5A
2: AC 240 ~ 5A	4: 416/240V, 5A
Y: Option (600V, 10A max.)	
INPUT FREQUENCY	_____
1: 50Hz ± 3 Hz	2: 60Hz ± 3 Hz
FREQUENC OUTPUT	_____
(per WH or VarH)	
1: 1 Pulse	Y: Option
2: 10 Pulse	
FREQUENCY OUTPUT MODE	_____
1: Open collector	2: Reed relay
AUX. POWER	_____
1: AC 115/230V	C: DC 110V
A: DC 24V	Y: Option
B: DC 48V	
TWO FREQUENCY OUTPUT	_____
Y: Forward + Reverse	
N: No (only forward)	
DC OUTPUT	_____
1: 4 ~ 20mA	A: 0 ~ 10V
2: 0 ~ 20mA	B: 0 ~ 5V
3: 0 ~ 10mA	C: 1 ~ 5V
4: 0 ~ 1mA	D: 0 ~ 1V
5: -10 ~ 0 ~ + 10mA	E: -10 ~ 0 ~ + 10V
6: -1 ~ 0 ~ + 1mA	F: -1 ~ 0 ~ + 1V
Y: Option (± 20 mA, ± 10 V max.)	