

전력량 변환기 (Watt-hour Transducer)

■ 주요사항 (Specification)

- Accuracy Class : 0.2% at rated voltage and current
0.4% at rated voltage and 1/20 of rated current
- Pulse Time : App. 100ms

Type	Circuit	Rated Input(AC)		Output (Pulse)	Accuracy	Load	Burden	Auxiliary Power (AC)	Weight (g)	Case Model
		Voltage	Current							
TP – 1WC	1P 2W	110V	5 A or 1 A	1P / 1kWh 10P / 1kWh 100P / 1kWh 1P / 10kWh 1P / 100kWh	0.2% at rated current	Contact Capacity AC110V, 1A PF 1.0	Current : 0.5VA / phase Voltage : 0.5VA / phase	110 / 220V	≒700	TL
TP – 2WC	1P 3W								≒860	
TP – 3WC	3P 3W								≒1040	
TP – 4WC	3P 4W	190/√3V				Open Collector Vceo : 30V Ic : 20mA			≒700	
TP – 1WP	1P 2W	110V							≒860	
TP – 2WP	1P 3W								≒1040	
TP – 3WP	3P 3W									
TP – 4WP	3P 4W								190/√3V	

※ 주문사항에 따라 입력, 출력, 제어전원 및 주파수를 변경하여 제작이 가능합니다.

Order made is available except for standard products. (Input, Output, Auxiliary power, Frequency)

※ 주문 시 VT, CT 및 펄스출력의 비율을 말씀해 주시기 바랍니다.

When the ordering, you must be announced the VT ratio, CT ratio and the ratio of output pulse.

Circuit	ex 1) 3P 3W	ex 2) 3P 4W
Type	TP - 3WC	TP - 4WC
VT ratio	3300 / 110 V	$22900/\sqrt{3}$ / $190/\sqrt{3}$ V
CT ratio	100 / 5A	50 / 5 A
Output	1 pulse / 1kWh	1pulse / 1kWh
Ratio of output pulse	600 pulse / 600kWh	2000 pulse / 2000 kWh

※ 주문 시 3600펄스를 초과할 수 없습니다. When the ordering, Please not exceed the 3600 pulse.

■ Operating Area of Input

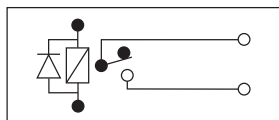
	Voltage		Current		Frequency		Auxiliary Power (AC)	
Rating	110V	220V	1A	5A	50Hz	60Hz	110V	220V
Range	0~120V	0~240V	0~1.5A	0~7.5A	47~53Hz	57~63Hz	90~130V	180~260V

※ 전압, 전류 및 제어전원의 동작범위는 연속 정격이 아니므로 단시간 동안의 입력값 대비 출력값의 동작 범위입니다.

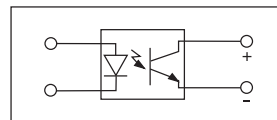
Operation range of voltage, current and auxiliary power is not continuous rating. Therefore it is operation range of output value compared to input value during a short time.

■ Output Mode

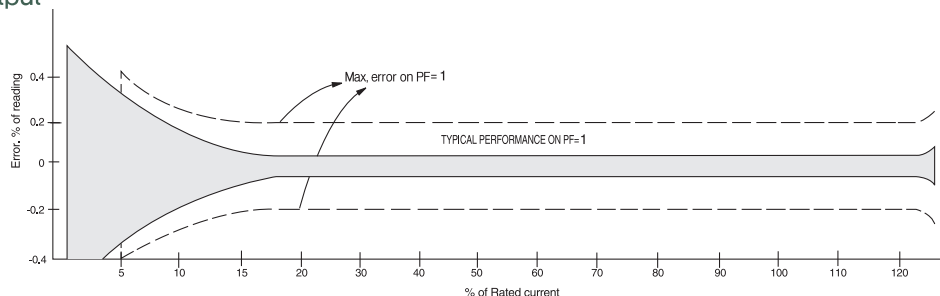
• TP - □ □ C



• TP - □ □ P



■ Error of Output



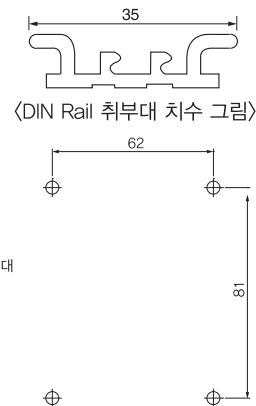
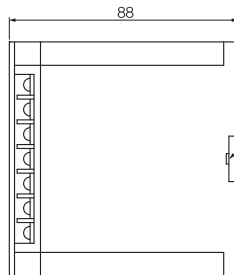
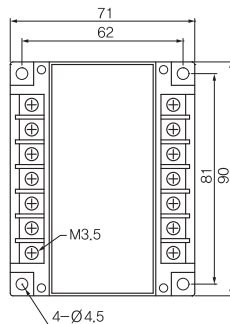
■ 주요성능 (Performance)

- Standard Test Temperature : $23^{\circ}\text{C} \pm 2^{\circ}\text{C}$
- Operating Temperature Range : $0^{\circ}\text{C} \sim 40^{\circ}\text{C}$
- Storage Temperature Range : $-10^{\circ}\text{C} \sim 60^{\circ}\text{C}$
- Operating Humidity : 30~85%, non-condensing
- Color of case : Black (Munsell No N1.5)
- Material of Case : ABS Resin / DIN rail type
- Terminal Screws : M3.5
- Auxiliary Power : AC 110 / 220 V
- Zero Adjustment : $\pm 10\%$ minimum
- Span Adjustment : $\pm 10\%$ minimum
- Influences Affecting Accuracy
 - Temperature : Less than 0.2% from 0 to 50°C
 - Long-term Stability : Less than 0.2% / year non-cumulative
 - Frequency : Less than 0.1% 50Hz or 60Hz
 - External magnetic field : Less than 0.2% 400 A / m
- Overload Current : 1.2 I_n continuous
10 I_n 3 sec.
- Voltage : 1.2 V_n continuous
1.5 V_n 10sec.
- Dielectric Strength : Input terminal to Case AC 2000V 1 minute
Input to Output terminal AC 2000V 1 minute
- Impulse / Surge : $1.2 \times 50\mu\text{s}$, 5kV / 2.5kV 1MHz

■ 외형 치수 (Dimension)

Unit : mm

■ TS Type



〈DIN Rail 취부대 치수 그림〉

■ TL Type

