

Portable Wattmeters

2041 and 2042

Model 2041 single-phase wattmeters and single-phase low-power-factor wattmeters and Model 2042 three-phase wattmeters are electro-dynamometer type wattmeters with indicators based on taut-band suspension. They can handle DC and frequencies from 25 Hz to 1000 Hz, and provide excellent power factor characteristics. These instruments are shielded with dual permalloy sheets as protection against external magnetic fields.

Features

- Frequency range: DC, 25 Hz to 1000 Hz (2041 01~03, 2042 01~03)
- Effective for measurement of low-power-factor load power and small power (2041 11~13, 21, 22)
- Low self-consuming power
- Taut-band suspension system eliminates friction and provides strong resistance to shock impact.



2041 02



2042 02

Specifications

Operating principle : Electro-dynamometer type
 Operating position : Horizontal
 Scale length : Approximately 135 mm (deflection angle: 85°)
 Scale divisions : 120
 Operating temperature and humidity ranges : 0 to 40°C, 25 to 80%RH
 Storage temperature and humidity ranges : -10 to 50°C, 25 to 80%RH
 Insulation test : Between electrical circuit and the case DC 500V/More than 10MΩ
 Between current circuit and voltage circuit DC 500V/More than 5MΩ

Voltage test : Between electrical circuit and the case AC 2000 V for 5 seconds
 Between current circuit and voltage circuit AC 1500 V for 5 seconds

External dimensions and weight :

2041 Approximately 260 × 180 × 136 mm, Approximately 2.8 kg

2042 Approximately 260 × 180 × 136 mm, Approximately 3.2 kg

Standard accessory : Instruction Manual (1)

Optional accessories (sold separately) : 2292 01 Carrying case (page 10)

Notes

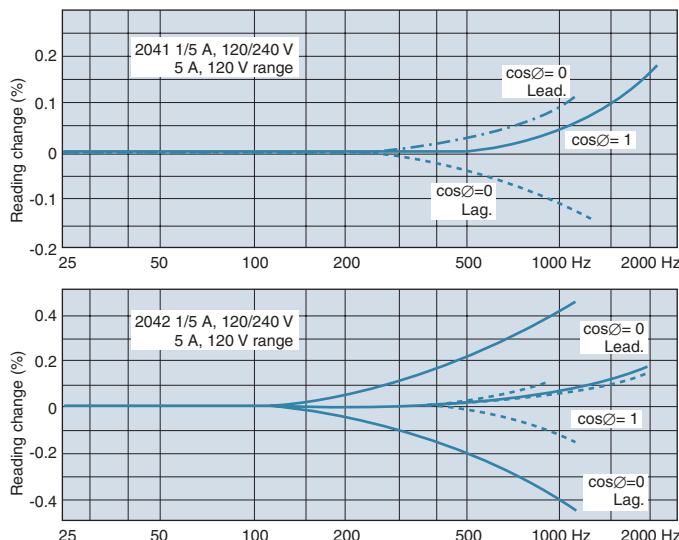
1. For measurements exceeding the rated current (25 A), externally connect a current transformer 2241-2243 (page 9) to the 5 A terminal (two required for three-phase).
2. If the rated voltage (240 V) is exceeded, externally connect an instrument voltage transformer 2261 or 2262 (page 9) (two required for three-phase).
3. The low-power-factor wattmeter is used with Epstein test sets, as well as for measurement of low-power-factor power and small power.
4. Three-phase wattmeter total consumed power = (voltage range + current range) × 2
5. Single-phase low-power factor wattmeters are not JIS-approved.
 And "cosφ = 0.2" is printed on the top right corner of scales.

Parameter	Single-phase wattmeter		
	2041		
	01	02	03
	Three-phase wattmeter		
	2042		
	01	02	03
Class	JIS C 1102, equivalent to Class 0.5		
Rated voltage (approximate consumed power)	120/240 V (1.2/2.4 VA)		
Rated current (approximate consumed power)	0.2/1 A (0.66/0.56 VA)	1/5 A (0.93/0.84 VA)	5/25 A (1.72/1.69 VA)
Rated power factor	1.0		
Operating frequency	DC, 25~1000 Hz		
Rated Frequency	50/60 Hz		

Parameter	Single-phase low-power-factor wattmeter (Note 5)				
	2041				
	11	12	13	21	22
Class	JIS C 1102, equivalent to Class 0.5				
Rated voltage (approximate consumed power)	120/240 V (2.4/4.8 VA)		30/60 V (0.6/1.2 VA)		
Rated current (approximate consumed power)	0.2/1 A (1.25/1.09 VA)	1/5 A (1.7/1.5 VA)	5/25 A (2.62/2.5 VA)	0.2/1 A (1.25/1.09 VA)	1/5 A (1.7/1.5 VA)
Rated power factor	0.2				
Operating frequency	25~1000 Hz				
Rated Frequency	50/60 Hz				

Characteristics

Frequency characteristic (examples)



Connection diagrams

