

Portable AC Ammeters and Voltmeters

2013, 2014

Models 2013 and 2014 are moving iron type instruments using a taut-band suspension system. The suspension system provides excellent reproducibility without friction, and good resistance to shock impact. A cap shield mechanism serving to reduce external magnetic fields, a superior temperature compensation circuit, and other components ensure stable performance.

Features

- Taut-band suspension system eliminates friction and provides good resistance to shock impact.
- Stable performance ensures that changes over time are negligible.
- Magnetic circuit reduces the effects of external magnetic fields.
- Superior temperature compensation circuit reduces external temperature effects.



2013 14



2014 00

Specifications

Operating principle : Moving iron type
 Class : JIS C 1102, equivalent to Class 0.5
 Operating position : Horizontal
 Scale length : Approximately 135 mm (deflection angle: 85°)
 Rated Frequency : 50/60 Hz
 Scale divisions : Check the symbols below against the instrument list.
 A: 100 divisions B: 150 divisions C: 100/150 divisions
 D: 100/125 divisions E: 120/150 divisions

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 500 V/More than 10 MΩ
 Voltage test : Between electrical circuit and the case AC 3000 V for 5 seconds
 External dimensions and weight :
 2013 Approximately 197 × 181 × 92 mm, approximately 1.7 kg
 2014 Approximately 260 × 180 × 120 mm, approximately 4.2 kg
 Standard accessories : Instruction Manual (1)
 Current transformer 2244 (2013 22)
 Optional accessories (sold separately) : 2291 01 Carrying case for 2013 (page 10)
 2292 01 Carrying case for 2014 (page 10)

Model	Maximum scale value	Approximate internal resistance and consumed power
	(scale divisions)	
2013	01 20/100 mA A	0.3/0.2 VA
	02 50/250 mA D	0.5/0.5 VA
	03 100/500 mA A	0.5/0.5 VA
	04 0.2/1 A A	0.4/0.4 VA
	05 0.5/2.5 A D	0.5/0.5 VA
	06 1/5 A A	0.6/0.6 VA
	07 2/10 A A	0.7/0.7 VA
	08 5/25 A D	1/1 VA
	09 10/50 A A	1.2/1.8 VA
	10 20/50/100/200 mA A	0.4/0.3/0.2/0.3 VA
	11 0.1/0.2/0.5/1 A A	0.2/0.3/0.4/0.5 VA
	12 0.5/1/2/5 A A	0.7/0.6/0.5/0.3 VA
	13 2/5/10/20 A A	0.5/0.3/0.6/0.9 VA
	14 10/20/50/100 A A	0.6/0.9/1.7/2.4 VA
	15 15/30 V B	3.8 VA
	16 30/75 V B	
	17 75/150 V B	
	18 150/300 V B	
	19 300/750 V B	
	20 (5 A) C	0.2 VA
	21 (150 V) C	3.8 VA
	22 500 A (500 A) D	Used in combination with current transformer 2244 (accessory)
2013 (for 400 Hz)	23 0.5/1/2/5 A A	1.2 VA
	24 2/5/10/20 A A	3.5 VA
	25 10/20/50/100 V B	3.8 VA
	26 75/150 V B	
	27 150/300 V B	
2014 00	30/75/150/300/750 V 0.15/0.3/0.75/1.5/3/ 7.5/15/30 A (13 different measurement ranges)	Each voltage measurement range 4.5 VA Current measurement range 7.5 A or less 0.7 VA 15 A 0.9 VA 30 A 2 VA

Notes

- For ranges higher than 100 A, externally connect current transformer 2241 or 2242 (page 9) to the 5 A terminal on 2013 20 (5 A instrument) or 2013, or the 7.5 A terminal on 2014.
- For ranges higher than 750 V, use to 2013 21 (150 V instrument), or externally connect voltage transformer 2261 or 2262 (page 9) to the 150 V terminal on 2013 or 2014.
- The scales on 2013 20 (5 A instrument) and 2013 21 (150 V instrument) are dual scale (100 and 150) with both scales printed. These standard scales are easy to use through a simple conversion process with CTs and VTs of any rating. DC scales (single scale or dual scale) are also available by special order.