

3301·3302·3303·3304·3305
POWER HI TESTER



3300
SERIES

A Completely New Concept In Industrial Power Testers



All of these instruments in a multi-range tester

Wide scale

Use of a wide angle taut band meter (deflection angle 250°) in the indicating meter has made reading very easy and accurate.

3301 DC-AMMETERS AND VOLT METERS



Type	Range	Sensitivity
3301-04	50mV/1/2/5/10A	100mV drop
3301-05	50mV/10/20/50/100A	
3301-07	30/75/150/300/750V	1.000Ω/V

- When measurements exceeds 100A, use external shunt (HS-1•HS-2) on the 50mV terminal.
- When measurements exceeds 750V, use external multiplier (HB-5•HB-6) on the 30V terminal.

Operating principle: Moving coil type
Accuracy: ±1.5%
Scale length: Approx. 165mm

Deflection angle: 250°
Dimensions: 180H × 125W × 110Dmm
Weight: Approx. 1.4kg

3302 AC-AMMETERS AND VOLT METERS



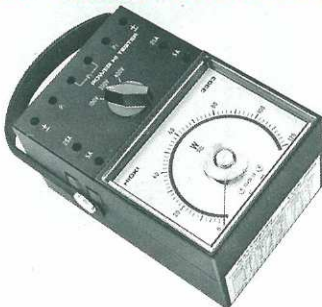
Type	Range	Approx. VA
3302-04	5/10/20/50/100A	1 ~ 9 VA
3302-06	30/75/150/300/750V	0.3 VA

- When measurements exceeds 100A, use external C.T on the 5A terminal.
- When measurements exceeds 750V, use external P.T on the 150V terminal.

Operating principle: RMS rectifier type
Accuracy: ±1.5%
Scale length: 165mm
Deflection angle: 250°

Frequency range: 45 ~ 65Hz
Dimensions: 180H × 125W × 110Dmm
Weight: 1.6kg

3303 WATT METERS



Type	Voltage Range	Current Range	Rating (cosφ = 1.0)
3303-02	100/200/400V	1/5A	0.24 ~ 4.8kw
3303-03		5/25A	1.2 ~ 24kw

- When the current exceeds 25A, use external C.T on the 5A terminal.
- When the voltage exceeds 400V, use external P.T on the 100V range.

Operating principle: Time-split multiplication.

Accuracy: ±1.5%
Scale length: Approx. 165mm
Deflection angle: 250°
Frequency range: 45 ~ 65Hz

Operating voltage range: -15 ~ +20% (rated voltage)
Power consumption: V side 0.5VA
A side 0.5 ~ 1.1VA
Dimensions: 180H × 125W × 125Dmm
Weight: 2.3kg

3304 POWER-FACTOR METERS



Type	Current Range	Voltage Range	Effective Measuring Range
3304-02	1/5A	100/200/400V	Lead Lag
3304-03	5/25A		0.5 ~ 1.0 ~ 0.5

- When the current exceeds 25A, use external C.T on the 5A terminal.
- When the voltage exceeds 400V, use external P.T on the 100V range.

Operation principle: Phase discrimination
Accuracy: ±5% (phase angle ±4.5°)
Scale length: Approx. 165mm
Deflection angle: 250°
Frequency range: 45 ~ 65Hz

(rated voltage)
Operating voltage range: -15 ~ +20%
Power consumption: V side 0.6 ~ 2.4VA
A side 0.5 ~ 1.5VA
Dimensions: 180H × 125W × 125Dmm
Weight: 1.6kg

3305 FREQUENCY METERS



Type	Voltage Range	Measuring Range	Resolution
3305-01	50/100/200/400V	45 ~ 55/55 ~ 65Hz	0.2Hz
3305-02		300 ~ 500Hz	5Hz

- When the voltage exceeds 400V, use external P.T on the 100V range.

Operation principle: Condenser charge and discharge system

Accuracy: ±0.5%
Scale length: Approx. 165mm
Deflection angle: 250°

Operating voltage range: -15 ~ +20% (rated voltage)
Power consumption: Approx. 0.9VA
Dimensions: 180H × 125W × 125Dmm
Weight: 1.6kg

*Instrument is not provided with any lead wire.

Transducer system

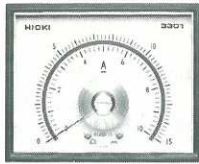
The measured value is converted into direct current, it is highly reliable and almost entirely free from change due to lapse of time.

Easy range selection

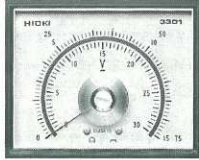
Range selection is fast and easily done by simply inserting test leads into each particular range jack.

This system insures mistake-proof operation and the specially designed jack terminals provide firm lead connections.

**3301-04
-05**
Scale plate

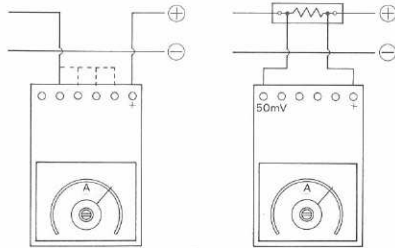


3301-07
Scale plate



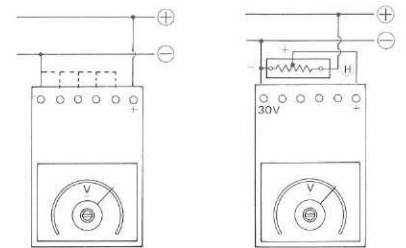
Wiring 3301-04-05

Use External Shunt

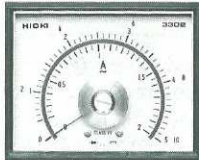


3301-07

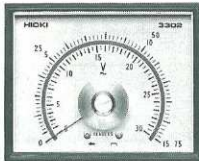
Use External Multiplier



3302-04
Scale plate

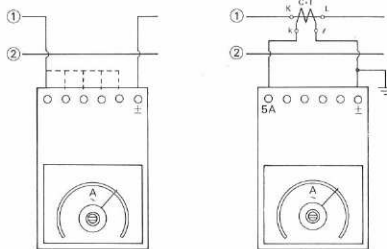


3302-06
Scale plate



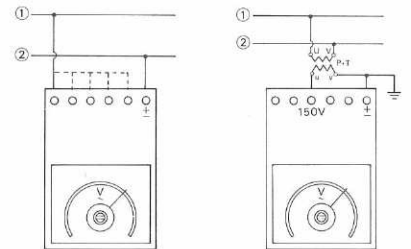
Wiring 3302-04

Use External C.T



3302-06

Use External P.T

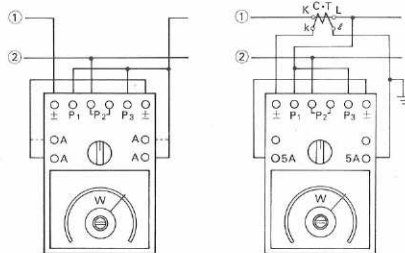


**3303-02
-03**
Scale plate



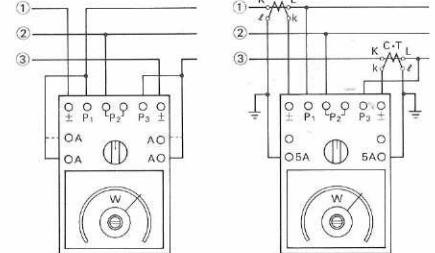
Wiring Single-phase

Use External C.T

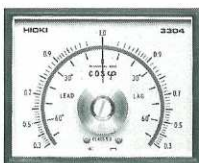


3-phase

Use External C.T

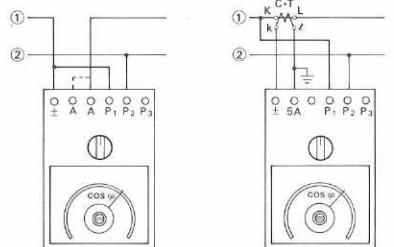


**3304-02
-03**
Scale plate



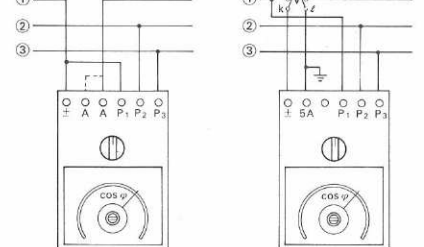
Wiring Single-phase

Use External C.T



3-phase

Use External C.T



3305-01
Scale plate

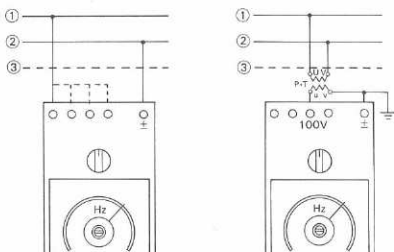


3305-02
Scale plate



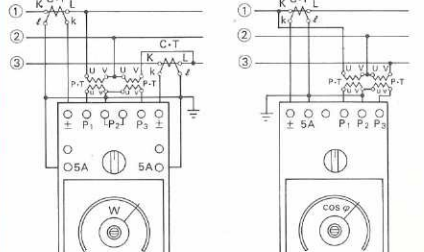
Wiring Single(3)-phase

Use External P.T



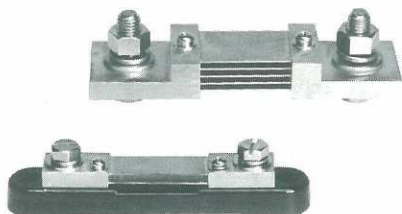
3303 3-phase 3304

Use External C.T-P.T



OPTIONAL ACCESSORIES

EXTERNAL SHUNTS



Type	Rated Value	
HS-1	30A	50mV
	50A	
	75A	
	100A	
	150A	
	200A	
	300A	

Type	Rated Value	
HS-2	500A	50mV
	750A	
	1000A	

Accuracy: $\pm 0.5\%$
Use any lead wire of which resistance is less than 0.1Ω in total.

EXTERNAL MULTIPLIERS



Type	Rated value	
HB-5	1.5kV	1mA
	3kV	
HB-6	7.5kV	

Accuracy: $\pm 0.5\%$
Measuring method: 3 terminals

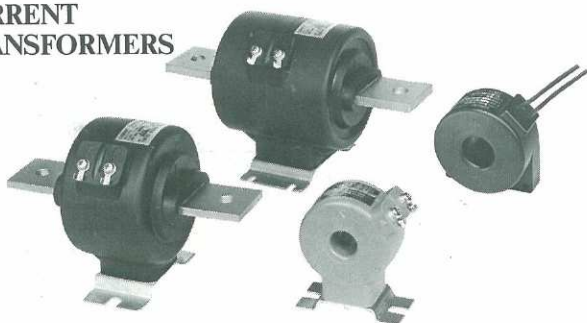
POTENTIAL TRANSFORMERS



PT-15M ₃	PT-50M ₆	Secondary	Full scale
Primary	Primary		
1.100V	1.100V	110V	1.500V
2.200V	2.200V		3.000V
3.300V	3.300V		4.500V
-	6.600V		9.000V

Accuracy: $\pm 1.0\%$
Rated Frequency: 50 to 60Hz
Construction: Epoxy molded type
Rated Load: PT-15M - 15VA
PT-50M - 50VA

CURRENT TRANSFORMERS



CT-2MR	CT-5MR	CT-15M ₃	CT-40M ₆	Secondary
Primary	Primary	Primary	Primary	
10A = 100A/10T		10A	10A	5A
15A = 150A/10T		15A	15A	
20A = 100A/5T		20A	20A	
30A = 120A/4T		30A	30A	
50A = 100A/2T		50A	50A	
75A = 150A/2T		75A	75A	
100A	100A	100A	100A	
120A	120A	-	-	
150A	150A	150A	150A	
200A	200A	200A	200A	
250A	250A	250A	250A	
300A	300A	300A	300A	
-	500A	500A	500A	
-	600A	600A	600A	
-	-	750A	750A	
-	-	-	1.000A	
-	-	-	1.500A	
-	-	-	2.000A	

T = Number of turns

Accuracy: $\pm 1.0\%$
Rated Frequency: 50 to 60Hz

Type	Rated Load	Max. Circuit Voltage	Construction
CT-2MR	2VA	1.150V	Polyester resin molded type
CT-5MR	5VA		
CT-15M ₃	15VA	3.450V	Epoxy molded type
CT-40M ₆	40VA	6.900V	

	Model	Sets	N.W. kg	G.W. kg	cft
Standard Packing	3301-3302	12	15	18	4.5
Double carton box	3303	10	23	26	4.5
	3304-3305	12	19	22	4.5

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