

Clamp-on Testers

CL Series and 30031 of Clamp-on Testers

Our CL Series offers wide range of current measurement

- AC Current Measurement CL120/130/135/150/155
- AC/DC Current Measurement CL220/235/250/255
- Leakage Current Measurement CL320/340/345/360



Selection Guide

■ For AC Current

Model		CL120	CL130	CL135	CL150	CL155	Notes
Diameter of measurable conductor		∅24mm	∅30mm	∅30mm	∅54mm	∅54mm	
Display		1999	1999	1999	3999	3999	
DC current	Range	—	—	—	—	—	
	Resolution	—	—	—	—	—	
AC current	Range	20/200A	200/600A	200/600A	400/2000A	400/2000A	
	Resolution	0.01A	0.1A	0.1A	0.1A	0.1A	
	Frequency characteristics	40~1kHz	40~1kHz	40~1kHz	40~1kHz	40~1kHz	
	Method of detection	Mean value	Mean value	True RMS	Mean value	True RMS	
Other measurement	AC voltage	—	○	○	○	○	
	DC voltage	—	—	—	○	○	
	Continuity check	—	○	○	○	○	
	Frequency	—	—	—	—	—	
	Temperature	—	—	—	—	—	
Other functions	Recorder output	—	—	—	○	○	
	Waveform monitor output	—	—	—	—	—	
	Data hold	○	○	○	○	○	
	Auto hold	—	—	—	—	—	
	Peak hold	—	—	—	○	○	
	maximum value memory	—	—	—	—	—	
	Mean value display	—	—	—	—	—	
	Filter	—	—	—	—	—	
	Range hold (current range)	○	○	○	○(current range)	○(current range)	
	Auto ZERO adjust	—	—	—	—	—	
	Auto power-off	○	—	—	—	—	.Sleep function (power-down)
	Page		1	1	2	2	3

■ For AC/DC Currents

Model		CL220	CL235	CL250	CL255	Notes
Diameter of measurable conductor		∅24mm	∅33mm	∅55mm	∅55mm	
Display		3999	3999	3999	3999	
DC current	Range	40/300A	400/1000A	400/2000A	400/2000A	
	Resolution	0.01A	0.1A	0.1A	0.1A	
AC current	Range	40/300A	400/600A	400/2000A	400/2000A	
	Resolution	0.01A	0.1A	0.1A	0.1A	
	Frequency characteristics	20~1kHz	40~1kHz	40~1kHz	30~1kHz	
	Method of detection	Mean value	True RMS	Mean value	True RMS	
Other measurement	AC voltage	—	○	○	○	
	DC voltage	—	○	○	○	
	Continuity check	—	○	○	○	
	Frequency	—	○	—	○	
	Temperature	—	—	—	—	
Other functions	Recorder output	—	—	○	○	
	Waveform monitor output	—	—	—	—	
	Data hold	○	○	○	○	
	Auto hold	—	—	—	—	
	Peak hold	—	○	—	○	
	maximum value memory	—	—	○	—	
	Mean value display	—	○	—	○	
	Filter	—	—	—	—	
	Range hold (current range)	—	—	○(current range)	—	
	Auto ZERO adjust	○	○	○	○	
	Auto power-off	—	—	—	—	.Sleep function (power-down)
	Page		4	4	5	5

■ For Leakage Current

Model		CL320	CL340	CL345	CL360	30031	Notes
Diameter of measurable conductor		∅24mm	∅40mm	∅40mm	∅68mm	∅40mm	
Display		1999	3999	4200	1999	3200	
DC current	Range	—	—	—	—	—	
	Resolution	—	—	—	—	—	
AC current	Range	20/200mA,200A	40/400mA,400A	40/400mA,400A	200mA/2/20/200/1000A	3/30mA 30/60A	
	Resolution	0.01mA	0.01mA	0.01mA	0.1mA	0.001mA	
	Frequency characteristics	40~400Hz	20~1kHz	20~1kHz	40~1kHz	50/60Hz	
	Method of detection	Mean value	Mean value	True RMS	Mean value	Mean value	
Other measurement	AC voltage	—	—	—	—	—	
	DC voltage	—	—	—	—	—	
	Continuity check	—	—	—	—	—	
	Frequency	—	—	—	—	—	
	Temperature	—	—	—	—	—	
Other functions	Recorder output	—	—	—	○	—	
	Waveform monitor output	—	—	—	○	—	
	Data hold	○	○	○	○	○	
	Auto hold	—	—	—	—	—	
	Peak hold	—	○	○	○	—	
	maximum value memory	—	—	—	—	—	
	Mean value display	—	—	—	—	—	
	Filter	○	○	○	○	—	
	Range hold (current range)	○	○	○	○	—	
	Auto ZERO adjust	—	—	—	—	—	
	Auto power-off	○	○	○	—	○	
	Page		6	6	7	7	8

Clamp-on Testers

CL120



AC A

∅ 24

AC/20~200A

CL130



AC A

∅ 30

AC/200~600A

AC V/Ω

CL120

Light weight & compact design
 Mean value display
 Data hold function
 Approved for conformity to safety standards EN61010-1,
 EN61010-2-032 (CAT. III 300 V)

Specifications

At 23 ±5 75%RH or less
 Accuracy: ± (% rdg + dgt) = ± (% readout + value of least significant digit)

Parameter	Reference	Accuracy
AC current	20A	2.0+7 (50 ~ 1kHz)
	200A	2.0+5 (50/60Hz) 3.0+10 (40 ~ 1kHz)

General Specifications

Parameter	Specification
Method of detection	Mean value
Display	LCD(Digital display:1999 counts)
Response time	Approx. 2 seconds
Range switching	Manual-range
Data hold	On all range
Ambient temperature and humidity	0-40 , 85% RH or less (no condensation)
Temperature coefficient	-
Influence of external magnetic field	0.8A or less at 400A/m
Influence of conductor position	±2% or less
Safety standard	Conforms EN 61010-1, EN61010-2-032
Circuit voltage	300Vrms or less
Withstanding voltage	3.7kV AC for one minute
Power supply	LR-44 ×2(3V) or SR-44 ×2
Battery life	Approx. 100 hours (continuous)
Consumed current	Approx. 1mA
Auto power-off	Approx. 10 minutes
Diameter of measurable conductor	24mm at maximum
Dimensions	Approx. 59(W)×148(H)×26(D)mm
Weight	Approx. 100g
Accessories	User's manual(IM CL120), batteries, carrying case(93033)

CL130

Mean value display
 Data hold function
 Approved for conformity to safety standards EN61010-1,
 EN61010-2-031, EN61010-2-032 (CAT. III 600 V)

Specifications

At 23 ±5 75%RH or less
 Accuracy: ± (% rdg + dgt) = ± (% readout + value of least significant digit)

Parameter	Reference	Accuracy
AC current	200A	1.5+6 (50/60Hz)
		2.0+5 (40 ~ 1kHz)
	600A	1.0+3 (50/60Hz) 2.0+5 (40 ~ 1kHz)
AC voltage	200V/600V	1.0+2 (50/60Hz)
		1.5+4 (40 ~ 1kHz)
Resistance	200	1.2+4 , Beeps at below 30 (continuity check)

General Specifications

Parameter	Specification
Method of detection	Mean value
Display	LCD(Digital display:1999 counts)
Response time	Approx. 1 second (approx. 2 seconds on resistance range)
Range switching	Manual-range
Data hold	On all range
Ambient temperature and humidity	-10-50 , (no condensation) up to 30 , 90% RH up to 40 , 75% RH up to 50 , 45% RH
Temperature coefficient	-
Influence of external magnetic field	2A or less at 400A/m
Influence of conductor position	±2% or less
Safety standard	Conforms EN 61010-1, EN61010-2-031, EN61010-2-032
Circuit voltage	600Vrms or less
Withstanding voltage	5.55kV AC for one minute
Power supply	6F22(006P)9V ×1 or 6LR61 ×2
Battery life	Approx. 200 hours (continuous)
Consumed current	Approx. 2mA
Auto power-off	Approx. 10 minutes
Diameter of measurable conductor	30mm at maximum
Dimensions	Approx. 93(W)×210(H)×40(D)mm
Weight	Approx. 400g
Accessories	User's manual(IM CL130), batteries, carrying case(93032)

Clamp-on Testers



- AC A
- ∅30
- AC/200~600A
- RMS
- AC V/Ω



- AC A
- ∅54
- AC/400~2000A
- AC V/DC V/Ω

CL135

True RMS Display
Data hold function
Approved for conformity to safety standard EN61010-1, EN61010-2-031, EN61010-2-032 (CAT. III 600 V)

Specifications

At 23 ±5 75%RH or less
Accuracy: ± (% rdg + dgt) = ± (% readout + value of least significant digit)

Parameter	Reference	Accuracy
AC current	200A	1.5+4 (50/60Hz)
		2.0+5 (40 ~ 1kHz)
	600A	1.5+4 (50/60Hz)
		2.0+5 (40 ~ 1kHz)
AC voltage	200V/600V	1.0+2 (50/60Hz)
		1.5+4 (40 ~ 1kHz)
		3 (50/60Hz)
Crest factor	40A	3 (50/60Hz)
Resistance	200	1.2+4, Beeps at below 30 (continuity check)

General Specifications

Parameter	Specification
Method of detection	True RMS
Display	LCD(Digital display:1999 counts)
Response time	Approx. 1 second (approx. 2 seconds on resistance range)
Range switching	Manual-range
Data hold	On all range
Ambient temperature and humidity	-10-50 , (no condensation)
	up to 30 , 90%RH
	up to 40 , 75%RH
	up to 50 , 45%RH
Temperature coefficient	-
Influence of external magnetic field	2A or less at 400A/m
Influence of conductor position	± 3% or less
Safety standard	Conforms EN61010-1, EN61010-2-031, EN61010-2-032
Circuit voltage	600Vrms or less
Withstanding voltage	5.55kV AC for one minute
Power supply	6F22(006P)9V × 1 or 6LR61 × 2
Battery life	Approx. 200 hours (continuous)
Consumed current	Approx. 2mA
Auto power-off	Approx. 10 minutes
Diameter of measurable conductor	30mm at maximum
Dimensions	Approx. 93(W)×210(H)×40(D)mm
Weight	Approx. 400g
Accessories	User's manual(IM CL130), batteries, carrying case(93032)

CL150

Mean value display
DC output function
Data hold function
Sleep function
Approved for conformity to safety standards EN61010-1, EN61010-2-031, EN61010-2-032 (CAT. III 600 V, CAT. II 1000 V)

Specifications

At 23 ±5 75%RH or less
Accuracy: ± (% rdg + dgt) = ± (% readout + value of least significant digit)

Parameter	Reference	Accuracy
AC current	400A	1.0+3 (50/60Hz)
		2.0+3 (40 ~ 1kHz)
	2000A(0 ~ 1500A)	1.0+3 (50/60Hz)
		3.0+3 (40 ~ 1kHz)
AC voltage	2000A(1500 ~ 2000A)	3.0(50/60Hz)
		1.0+2 (50/60Hz)
		1.5+3 (40 ~ 1kHz)
DC voltage	40/400/1000V	1.0+2
Resistance	400/4k/40k/400k	1.5+2, Beeps at below 50±35 (continuity check)
DC output	400A(0 ~ 400mV)	± 1.5% rdg ± 0.5mV (50/60Hz)
		± 2.5% rdg ± 0.5mV (40 ~ 1kHz)
	2000A(0 ~ 150mV/0 ~ 1500A)	± 1.5% rdg ± 0.5mV (50/60Hz)
		± 3.5% rdg ± 0.5mV (40 ~ 1kHz)
2000A(150 ~ 200mV/1500 ~ 2000A)	± 3.5% rdg (50/60Hz)	

General Specifications

Parameter	Specification
Method of detection	Mean value
Display	LCD(Digital display:3999 counts)
Response time	Approx. 2 seconds
Range switching	Manual-range(on AC current range)/ Auto-range(on AC voltage range, resistance range)
Data hold	On all range
Peak hold	On AC current range
Ambient temperature and humidity	0-40 , 85% RH or less (no condensation)
Temperature coefficient	-
Influence of external magnetic field	1A or less at 400A/m
Influence of conductor position	± (2.0% rdg + 3dgt) or less
Safety standard	Conforms EN61010-1, EN61010-2-031, EN61010-2-032
Circuit voltage	1000Vrms or less
Withstanding voltage	5.55kV AC for one minute
Power supply	R6P(SUM-3) × 2 or LR6 × 2
Battery life	Approx. 150 hours (continuous)
Consumed current	Approx. 5mA
Sleep function	Automatically powered down in about 10 minutes after the last switch operation
Diameter of measurable conductor	54mm at maximum
Dimensions	Approx. 105(W)×247(H)×49(D)mm
Weight	Approx. 470g
Accessories	User's manual(IM CL150), batteries, carrying case(93034)