FLUKE®

Fluke Clamp Meters

Solutions for every need

381

355

773

More solutions inside

Clamp Meter selection chart

General Purpose

Job functions	Applications	Recommended clamp
Plant Maintenance Process Technician/ Electrician Automation Specialist 	**Multiple placement potential for large facilities allows units to be left in place**	**365 True-rms AC Clamp Meter** **Key features** ▪ 200 A ac and A dc measurement with fixed jaw ▪ Detachable jaw makes accessing wires and viewing the display easier ▪ 6000 Ω resistance measurement with continuity ▪ Built in flashlight/torch allows for easy illumination and identification of wires ▪ True-rms to more accurately measure the actual current, even with distorted wave-forms caused by noisy loads ▪ CAT III 600 V
Residential Electrician Electrical Contractor Commercial Electrician 	**Conduct front line troubleshooting of general ac current systems** **Verify circuit integrity and operation** ▪ Measure load current, ac voltage and continuity of switches, fuses and contacts **Feeder cables** ▪ Check balance and loading of feeder cables	**373 True-rms AC Clamp Meter** **Key features** ▪ Measure up to 600 A ac ▪ Measure ac and dc voltage to 600 V ▪ True-rms to more accurately measure the actual current, even with distorted wave forms caused by noisy loads ▪ Includes large backlit display, ac and dc voltage, resistance, continuity, and capacitance ▪ CAT IV 300 V, CAT III 600 V
Electrical Contractor Commercial Electrician Electric Utility Technician Facility Maintenance Utility Technician 	**Basic troubleshooting of ac and dc systems** ▪ Measure dc current in battery powered devices, security systems, etc. ▪ Measure motor start-up and run current ▪ Capacitance for motor start and run capacitors ▪ Check balance and loading in service panels	**374 True-rms AC/DC Clamp Meter** **Key features** ▪ Measure up to 600 A ac and A dc ▪ True-rms to more accurately measure the actual current, even with distorted wave-forms caused by noisy loads ▪ Compatible with the new i2500-18 and i2500-10 iFlex flexible current probes (sold separately), which expands the measurement range to 2500 A ac and provides increased display flexibility ▪ Inrush current mode for repeatable measurement of motor or equipment start-up current ▪ Includes large backlit display, ac and dc voltage, resistance, continuity, MIN/MAX and capacitance ▪ CAT IV 600 V, CAT III 1000 V
Industrial Electrical Contractor Plant Maintenance HVAC/R Specialist 	**Advanced troubleshooting of ac and dc systems** ▪ Large motors and drives, and noisy electrical environments ▪ Motor inrush to troubleshoot current protection devices ▪ Output of variable speed motors and drives	**375 True-rms AC/DC Clamp Meter** **Key features** ▪ 500 mV measurement range to interface with other accessories ▪ Integrated low pass filter and state of the art signal processing allows for use in noisy electrical environments while providing stable readings ▪ Frequency measurement to 500 Hz with both jaw and iFlex ▪ Compatible with the new i2500-18 and i2500-10 iFlex flexible current probes (sold separately), which expands the measurement range to 2500 A ac and provides increased display flexibility ▪ Measure true-rms voltage, capacitance, resistance and continuity ▪ CAT IV 600 V, CAT III 1000 V

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	Job functions	Applications	Recommended clamp
Industrial Electrical	Industrial Electrician Plant Maintenance Facility Maintenance 	**Fully featured model for electrical and industrial professionals who need to conduct advanced troubleshooting of ac and dc systems in any environment** ▪ Measure 1000 A ac or dc with fixed jaw to measure current in motors, vaults and bus bars ▪ 2500 A ac capability with iFlex flexible current probe; fits around tight and awkward conductors ▪ Clamp around bus bars or conductors in service panels to measure loads and line frequency in circuits	**376 True-rms AC/DC Clamp Meter with iFlex™** **Key features** ▪ Measure up to 1000 A ac and A dc ▪ Inputs for 1000 V ac and V dc, 60 kΩ resistance and continuity ▪ Includes the new i2500-18 and i2500-10 iFlex flexible current probes, which expands the measurement range to 2500 A ac and provides increased display flexibility ▪ Narrow, elongated jaw with large opening easily singles out the conductor of interest ▪ True-rms to more accurately measure the actual current, even with distorted wave-forms caused by noisy loads ▪ CAT IV 600 V, CAT III 1000 V
Industrial Electrical	Industrial Electrician Industrial Service Electrician Plant Maintenance Facility Maintenance 	**Fully featured model for electrical and industrial professionals who need to conduct advanced troubleshooting of ac and dc systems in any environment** ▪ Measure 1000 A ac or dc with fixed jaw to measure current in motors, vaults and bus bars ▪ 2500 A ac capability with iFlex flexible current probe; fits around tight and awkward conductors ▪ Clamp around bus bars or conductors in service panels to measure loads and line frequency in circuits	**381 Remote Display True-rms AC/DC Clamp Meter with iFlex™** **Key features** ▪ Wireless technology allows remote display to be carried up to 30 ft away from point of measurement ▪ Removable magnetic display can be conveniently mounted where it is easily seen ▪ Includes the new i2500-18 and i2500-10 iFlex flexible current probes, which expands the measurement range to 2500 A ac and provides increased display flexibility ▪ AC and dc current, ac and dc voltage, resistance, frequency, continuity, capacitance, min/max and inrush low pass filter ▪ Large, easy to read backlight display automatically sets the correct measurement range ▪ CAT IV 600 V, CAT III 1000 V
Accessory	Commercial/Industrial Electrician Facility/Plant Maintenance HVAC/R Specialist 	▪ Industrial troubleshooting in low current ac and dc applications where access is difficult ▪ Access to tight wiring in locations such as PLC cabinets	**iFlex™ i2500 Flexible Current Probes** **Key features** ▪ Measure up to 2500 A ac current with select Fluke clamp meters ▪ Provides increased display flexibility and ability to measure awkward sized conductors ▪ Works with frequency, inrush and min/max functions ▪ 7.5 mm coil diameter allows measurement in tight spaces ▪ Available in 10-inch and 18-inch lengths ▪ CAT IV 600 V, CAT III 1000 V
Resi/Comm Electrical	Commercial Electrical Contractor Industrial Electrical Contractor Plant Maintenance 	**Verify circuit integrity and operation** ▪ Measure load current, ac voltage and continuity of switches, fuses and contacts **Feeder Cables** ▪ Check balance and loading of feeder cables	**322 Clamp Meter** **Key features** ▪ Measure up to 400 A ac ▪ 0.01 A resolution in the 40 A range for more precise measurements ▪ Compact form factor to make measurements easily in tight cable compartments ▪ Measure ac and dc voltage to 600 V ▪ Resistance, continuity and display hold functions ▪ CAT III 600 V

Clamp Meter selection chart cont.

	Job functions	Applications	Recommended clamp
Comm/Ind Electrical	Electrical Contractor Facility Maintenance Commercial Electrician 	**Working on panels and branch circuits** ▪ Measure loads on a branch circuit at a panel (including feeder cables, branch circuits and neutrals) and the continuity of switches, fuses and contacts ▪ Measure load side voltage of a breaker or fuse ▪ Check if a circuit is live before beginning work	**T5-1000 Electrical Tester** **Key features** ▪ Open jaw ac current measurement to 100 A ▪ AC and dc voltage ▪ T5-600: CAT III 600 V ▪ T5-1000: CAT IV 600 V, CAT III 1000 V ▪ Continuity, resistance ▪ Rugged and easy to use
Leakage	Facility Maintenance Electrician Hospital Electrician Electrical Contractor 	**Measuring leakage current** ▪ Check insulation condition and leakage of circuits and systems ▪ Check for leakage in circuits and systems utilizing filters **Testing insulation on live circuits** ▪ Evaluate insulation condition on live circuits via leakage current measurements where disconnection is highly inconvenient	**360 AC Leakage Current Clamp Meter** **Key features** ▪ Measurement of leakage current with 3 mA range and 1 µA of resolution for accurate monitoring of insulation erosion ▪ Broad range of measurement from 1 µA up to 60 A, for all installation needs ▪ Advanced shielding to ensure accurate results when measuring near other conductors ▪ Easy-to-carry, pocket-sized leakage current tester with wide 40 mm (1.5 in) jaw size ▪ CAT III 300 V
Earth Ground	Industrial/Commercial Maintenance Electrician Utility Technician Electrical Contractor/ Consultant 	**Grounding and bonding resistance testing** ▪ Perform ground loop tests in areas where other ground resistance test techniques are not available ▪ Test parts of a multi-grounded system ▪ Periodically perform quick tests on system grounds as part of a regular preventative maintenance program	**1630 Earth Ground Clamp Meter** **Key features** ▪ Measure from 0.025 Ω to 1500 Ω ground loop resistance ▪ Large jaw for clamping around the widest range of ground conductors or grounding bars ▪ Measure ground leakage and ac load currents from 0.2 mA all the way up to 30 A ▪ User defined alarm limits for rapid pass/fail type measurements ▪ CAT III 300 V
Process	Process Technician/ Electrician Automation Specialist/ Commercial Electrician 	**Measuring process control signals** ▪ Measures 4-20 mA signals without breaking the loop ▪ Check correct operation of PLCs and control systems analog I/O ▪ Source process control signals allow for testing of 4-20 mA signals and 1 to 5 V and 0 to 10 V to test automation I/O ▪ Advanced troubleshooting features simplify loop testing	**773 Milliamp Process Clamp Meter** **Key features** ▪ Saves time and money by easily measuring 4-20 mA signals ▪ Detatchable miniature clamp for tight locations ▪ Also measure older 10 to 50 mA signal systems with the 100 mA range ▪ Backlit display, spotlight, display hold and zero-reading buttons ▪ Eliminates the need for extra 4-20 mA source or voltage equipment when troubleshooting ▪ CAT II 300 V

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	Job functions	Applications	Recommended clamp
Power Quality	Electrical and Field Service Technician HVAC/R Technician Electrical Engineer Commercial Electrician Facility Maintenance Electrician Electric Utility Engineer 	**Measuring non-linear loads** • Setup and troubleshoot variable frequency drives and UPS systems—Verify correct operation by measuring key power quality parameters **Harmonic measurements** • Uncover harmonic issues that can damage or disrupt critical equipment **Troubleshooting start-up current issues** • Check start-up current where spurious resets or nuisance circuit breaker tripping occurs **Load studies** • Verify electrical system capacity before adding loads	**345 Power Quality Clamp Meter** **Key features** • AC/DC current: Clamp-on measurement of current up to 1400 A ac rms and 2000 A dc • CAT IV 600 V rated for use at the service entrance • Accurate in noisy environments: Using low-pass filter, the clamp meter performs even with distorted waveforms • Data logging: Identify intermittent faults by logging any power quality parameter for minutes, or over a month • Troubleshoot harmonics: Analyze and log harmonics digitally or graphically • Inrush current: Capture and analyze nuisance tripping, from 3 seconds to 300 seconds • CAT IV 600 V, CAT III 1000 V
High-End Industrial Utility	Industrial Service Electrician Electrical Contractor Electric Utility Technician Marine or Welding Electrician Facility Maintenance Electrician 	**Service panel, service entrance and low voltage vaults** • In the service panel, clamp around each individual phase. Good for large single or parallel conductors • In the service entrance, clamp around busbars, up to 2.5 in, to verify expected current usage • Measure current in conductors of low-voltage vaults (1000 V or less) **Working with large loads** • Verify operation of large load service panels, switchgears, large current DC systems and motors	**355 True-rms 2000 A Clamp Meter** **Key features** • Up to 2000 A dc, 1400 A ac current measurement • Large jaw suitable for single or multiple large conductors • CAT IV 600 V rated for maximum application versatility • Inputs for 600 V ac, 1000 V dc, 400 KΩ resistance and continuity • Low pass filter, min/max/avg and inrush current • Accurately measure frequency of current and voltage up to 1 kHz • CAT IV 600 V, CAT III 1000 V
HVAC/R	HVAC/R Service Technician 	**Checking boilers and furnaces** • Capture flue gas temperatures and perform flame rod testing **HVAC motors and drives** • Measure start and run motor capacitors • Troubleshoot compressor electrical motor faults • Measure performance of variable frequency drives **Testing electrical performance** • Measure load-side and supply-side current and voltage • Measure current and voltage phase balance on 3 phase systems	**902 True-rms HVAC Clamp Meter** **Key features** • Measure current up to 600 A ac and up to 200 µA dc • Measure true-rms voltage, capacitance, resistance and continuity • Measure contact temperature with included Type-K temperature probe. (Or measure the outside temperature of a pipe with the 80PK-8 Pipe Clamp Temperature Probe, sold separately) • CAT III 600 V

Clamp meter specifications

	Commercial/industrial electrical		Residential/commercial electrical		General purpose	
	T5-600	T5-1000	321	322	365	373
						
Measurements						
AC current	▪	▪	▪	▪	▪	▪
AC voltage	▪	▪	▪	▪	▪	▪
Resistance	▪	▪	▪	▪	▪	▪
Continuity	▪	▪	▪	▪	▪	▪
DC volts	▪	▪		▪	▪	▪
DC current					▪	
True-rms					▪	▪
Frequency						
AC + DC voltage						
AC + DC current						
Min/Max/Avg						
4–20 mA (0.01 mA resolution)						
Temperature						
Capacitance						▪
Earth ground loop resistance						
Special features						
Inrush current mode						
Low Pass filter						
Harmonics, power, data logging						
18-inch iFlex Flexible Current Probe						
10-inch iFlex Flexible Current Probe						
Remote display						
Flashlight/torch					▪	
Display						
Display hold	▪	▪	▪	▪	▪	▪
Backlight					▪	▪
Graphing display						
Specifications						
Jaw opening	12.9 mm (0.5 in)	12.9 mm (0.5 in)	25.4 mm (1.0 in)	25.4 mm (1.0 in)	18 mm (0.7 in)	32 mm (1.26 in)
Max wire size	1/0 THHN Cable	1/0 THHN Cable	500 MCM	500 MCM	17 mm (0.67 in)	750 MCM
Current range ac rms	0 to 100.0 A	0 to 100.0 A	0 to 400.0 A	0 to 400.0 A	0 to 200.0 A	0 to 600.0 A
Accuracy ac current (50/60 Hz)	3 % ± 3 counts	3 % ± 3 counts	1.8 % ± 5 counts	1.8 % ± 5 counts	2 % ± 5 counts	2 % ± 5 counts
AC Response	Averaging	Averaging	Averaging	Averaging	True-rms	True-rms
Current range dc					0 to 200 A	
Accuracy dc current					2 % ± 5 counts	
Voltage range ac	0 to 600.0 V	0 to 1000 V	0 to 600.0 V	0 to 600.0 V	0 to 600.0 V	0 to 600.0 V
Accuracy ac voltage	1.5 % ± 2 counts	1.5 % ± 2 counts	1.2 % ± 5 counts	1.2 % ± 5 counts	2 % ± 5 counts	1 % ± 5 counts
Voltage range dc	0 to 600.0 V	0 to 1000 V		0 to 600.0 V	0 to 600.0 V	0 to 600.0 V
Accuracy dc voltage	1 % ± 1 count	1 % ± 1 count		1 % ± 5 counts	2 % ± 5 counts	1 % ± 5 counts
Resistance range	0 to 1000 Ω	0 to 1000 Ω	0 to 400 Ω	0 to 400 Ω	0 to 6000 Ω	0 to 6000 Ω
Frequency measurement range						
Unit power						
Auto off	▪	▪	▪	▪		▪
Warranty and safety						
Warranty (years)	2	2	2	2	3	3
Category ratings (EN61010-1)	CAT III 600 V	CAT IV 600 V, CAT III 1000 V	CAT III 600 V	CAT III 600 V	CAT III 600 V	CAT III 600 V, CAT IV 300 V

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General purpose		Industrial electrical		HVAC/R	High end industrial, utility		iFlex accessory
374 	375 	376 	381 	902 	353 	355 	i2500-10/ i2500-18 
▪	▪	▪	▪	▪	▪	▪	▪
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▪	▪	▪	▪	▪			
▪	▪	▪	▪		▪	▪	▪
	▪	▪	▪		▪	▪	
Optional	Optional	Included	Included				
Optional	Optional	Optional	Optional				
			▪				
▪	▪	▪	▪	▪	▪	▪	
▪	▪	▪	▪	▪	▪	▪	
34 mm (1.33 in)	34 mm (1.33 in)	34 mm (1.33 in)	34 mm (1.33 in)	30.5 mm (1.2 in)	58 mm (2.3 in)	58 mm (2.3 in)	7.5 mm coil
750 MCM	750 MCM	750 MCM	750 MCM	750 MCM	750 MCM or three 500 MCM	750 MCM or three 500 MCM	
0 to 600.0 A	0 to 600.0 A	0 to 999.9 A	0 to 999.9 A	0 to 600.0 A	0 to 1400 A	0 to 1400 A	0 to 2500 A
2 % ± 5 counts	2 % ± 5 counts	2 % ± 5 counts	2 % ± 5 counts	2 % ± 5 counts	1.5 % ± 5 counts	1.5 % ± 5 counts	3 % ± 5 counts
True-rms	True-rms	True-rms	True-rms	True-rms	True-rms	True-rms	True-rms
0 to 600.0 A	0 to 600.0 A	0 to 999.9 A	0 to 999.9 A	0 to 200 µA	0 to 2000 A	0 to 2000 A	
2 % ± 5 counts	2 % ± 5 counts	2 % ± 5 counts	2 % ± 5 counts	1 % ± 5 counts	1.5 % ± 5 counts	1.5 % ± 5 counts	
0 to 600.0 V	0 to 600.0 V	0 to 1000 V	0 to 1000 V	600.0 V		0 to 600.0 V	
1.5 % ± 5 counts	1.5 % ± 5 counts	1.5 % ± 5 counts	1.5 % ± 5 counts	1 % ± 5 counts		1 % ± 5 counts	
0 to 600.0 V	0 to 600.0 V	0 to 1000 V	0 to 1000 V	0 to 600.0 V		0 to 1000 V	
1 % ± 5 counts	1 % ± 5 counts	1 % ± 5 counts	1 % ± 5 counts	1 % ± 5 counts		1 % ± 5 counts	
0 to 6000 Ω	0 to 6000 Ω	0 to 60 kΩ	0 to 60 kΩ	0 to 9999 Ω		0 to 400 KΩ	
	500 Hz	500 Hz	500 Hz		5 to 1000 Hz	5 to 1000 Hz	500 Hz
▪	▪	▪	▪	▪	▪	▪	
3	3	3	3	3	3	3	3
CAT III 1000 V, CAT IV 600 V	CAT III 1000 V, CAT IV 600 V	CAT III 1000 V, CAT IV 600 V	CAT III 1000 V, CAT IV 600 V	CAT III 600 V	CAT III 1000 V, CAT IV 600 V	CAT III 1000 V, CAT IV 600 V	CAT III 1000 V, CAT IV 600 V

Clamp meter specifications cont.

	Leakage	Process	Earth ground	Power quality
	360* 	773 	1630 	345 
Measurements				
AC current	▪		▪	▪
AC volts				▪
Resistance				
Continuity			▪	
DC Volts				▪
DC current		▪		▪
True-rms			▪	▪
Frequency				▪
Min/Max/Avg				▪
4-20 mA (0.01 mA resolution)		▪		
Temperature				
Capacitance				
Earth ground loop resistance			▪	
Special features				
Inrush current mode				▪
Low Pass filter				▪
Harmonics, power, data logging				▪
18-inch iFlex Flexible Current Probe				
10-inch iFlex Flexible Current Probe				
Remote display				
Flashlight/torch				
Display				
Display hold	▪	▪	▪	▪
Backlight	▪	▪		▪
Graphing display				▪
Specifications				
Jaw opening	40 mm (1.5 in)	4.5mm (0.177 in)	35 mm (1.38 in)	58 mm (2.3 in)
Max wire size	1250 MCM	6 AWG	1000 MCM	750 MCM or three 500 MCM
Current range ac rms	0 to 60 A		0 to 35 A	0 to 1400 A
Accuracy ac current (50/60 Hz)	1 % ± 5 counts		2 % ± 3 counts	± 3 % ± 5 counts
AC Response	Averaging		True-rms	True-rms
Current range dc		0 to 99.9 mA		0 to 2000 A
Accuracy dc current		4-20 mA is 0.2 % ± 5 counts		± 1.5 % ± 5 counts
Voltage range ac				0 to 825 V
Accuracy ac voltage				± 1 % ± 5 counts
Voltage range dc				0 to 825 V
Accuracy dc voltage				± 1 % ± 5 counts
Resistance range			0 to 1500 Ω	
Frequency measurement range				15 to 1000 Hz
Unit power				
Auto off	▪	▪	▪	▪
Warranty and safety				
Warranty (years)	1	3	1	2
Category ratings (EN61010-1)	CAT III 300 V	Cat II 300 V	CAT III 300 V	CAT IV 600 V, CAT III 1000 V

*Not available for sale in Canada

Education/Support

ABCs of Clamp Meters
What is a clamp meter and what can it do? What measurements can be made with a clamp meter? How do you get the most out of a clamp meter? Which clamp meter is best suited to the environment the meter will be used in? Find the answers to these questions and more in our Clamp Meter ABCs application note. **www.fluke.com/clampABCs**

mA Loop Webinar
Learn how to test and troubleshoot 4 mA to 20 mA control loops with this Fluke webinar. Visit the link below to register and participate. **www.fluke.com/mALoopWebinar**

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