

Expand your capabilities

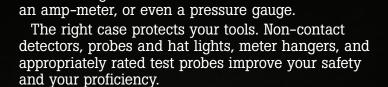
### FLUKE®

Accessories catalog









tool. Your digital multimeter can become a thermometer,

Accessories increase the functionality of your test



### Get more from your tools

You've already invested in a Fluke tool. Now expand its capabilities with Fluke accessories.









### **Expand your capabilities**



### Do you need to measure

### Where are you measuring the voltage?

Electrical and industrial environments such as electrical panels, lugs, branch circuits and motors

























Electronic environments on the bench or in the











**Automotive** 





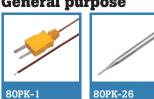




Do you need to measure

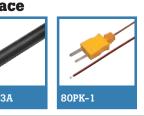
### What type of measurement is needed?

**General purpose** 









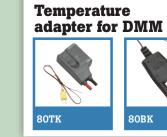
















Do you need to measure

### Are you measuring ac or ac/dc?

AC





























AC/DC













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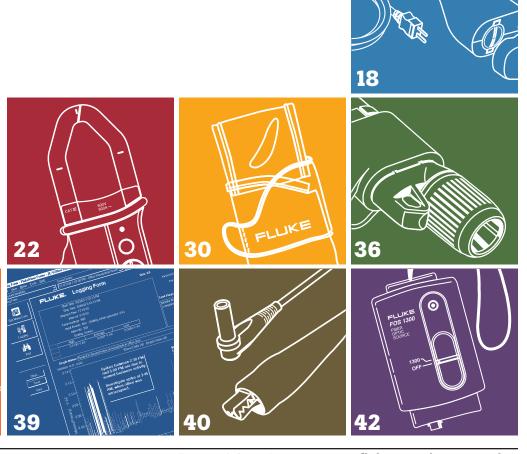
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### Test leads

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### Test lead compatibility chart

Model number	TL26A	TL40	TL71	TL75	TL76	TL221	TL222	TL224	TL910
10/11/12/12B	•	•	•	•	•	•	•	•	•
110/111/112	•	•	•	•	•	•	•	•	•
114/115/116/117	•	•	•	•	•	•	•	•	•
20/70 Series	•	•	•	•	•	•	•	•	•
27	•	•	•	•	•	•	•	•	•
70/73 III	•	•	•	•	•	•	•	•	•
175/177/179	•	•	•	•	•	•	•	•	•
80 Series III/83V	•	•	•	•	•	•	•	•	•
87/89 IV	•	•	•	•	•	•	•	•	•
87V	•	•	•	•	•	•	•	•	•
187/189	•	•	•	•	•	•	•	•	•
287/289	•	•	•	•	•	•	•	•	•
45/8845/8846	•	•	•	•		•	•	•	•
39/41B	•	•	•	•	•	•	•	•	•
43B	•	•	•	•	•	•	•	•	•
90 Series	•	•	•	•	•	•	•	•	•
120 Series	•	•	•	•	•	•	•	•	•
190 Series	•	•	•	•	•	•	•	•	•
321/322	•	•	•	•	•	•	•	•	•
330 Series	•	•	•	•	•	•	•	•	•
705/707	•	•	•	•	•	•	•	•	•
712/713	•	•	•	•	•	•	•	•	•
715	•	•	•	•	•	•	•	•	•
716/717	•	•	•	•	•	•	•	•	•
718	•	•	•	•	•	•	•	•	•
725/726	•	•	•	•	•	•	•	•	•
741/743	•	•	•	•	•	•	•	•	•
744	•	•	•	•	•	•	•	•	•
787/789	•	•	•	•	•	•	•	•	•
1577/1587		•							



### Clips and probes compatibility chart

Model number	TL71	TL75	TL76	TL221	TL222	TL224	TL910	
AC72	•	•	•					
AC87				•	•	•		
AC89				•	•	•		
AC220				•	•	•		
AC280				•	•	•		
AC283				•	•	•		
AC285				•	•	•		
TLK290				•	•	•		
TLK291				•	•	•		
TP1				•	•	•		
TP2				•	•	•		
TP4				•	•	•		
TP38				•	•	•		
TP74				•	•	•		
TP80				•	•	•		
TP220				•	•	•		
TP912							•	
TP920	•	•						
T5 Starter Kit	(compatible with T5/T+/T+Pro/330 Series Clamp Meters)							
TP165X		(com	patible wi	th 1503/1	507/1577/	1587)		

### Did you know?

Because they are an integral part of the complete measurement system, worn or under-rated test leads can cause inaccurate readings and pose a serious shock or electrocution hazard if live wires are read as being de-energized. To avoid these risks, use these precautions:

- Use the correct test probe for the application. Confirm that your meter and test accessory safety ratings meet or exceed the voltage level you plan to test. See the "Electrical measurement category ratings for test tools" chart on page 13 of this brochure for more information.
- Inspect your test leads before use to ensure the insulation is not nicked or cracked from age. Typically, you should plan on replacing your test leads every 18 months.
- Ensure there are no gaps or cracks at the junction between the insulated wire and banana plugs or probes at each end of the lead.
- Conduct a simple ohms measurement to confirm that your tools are electrically reliable and carry a signal within allowable loss parameters.

For more information about test lead use and safety, see the application note "Testing your test leads for electrical safety" at www.fluke.com/safe-leads.







### Test lead/probe in one

Test lead and probe-in-one accessories offer the convenience of a test lead and probe-in-one unit with a variety of connections.

### TL75 Hard Point™ Test Lead Set

One pair (red, black) comfort grip probes with PVC-insulated, right-angle shrouded 4 mm (0.16 in) banana plugs.

 Safety rating: CAT IV 600 V, CAT III 1000 V, 10 A

### **TL71 Premium Test** Lead Set

One pair (red, black) comfort grip probes with flexible silicone-insulated, right-angle test leads.

- Heat and cold resistant
- Safety rating: CAT IV 600 V, CAT III 1000 V, 10 A









### TL76 2mm/4mm Test Lead Set

One pair (red, black) silicone test leads with right angle shrouded 4 mm (0.16 in) banana plugs.

- Removable lantern tip for use with European wall sockets, 4 mm (0.16 in) diameter
- Removable lantern tip for easy access to terminal blocks,
   2 mm (0.08 in) diameter
- Insulated IC caps (removable) allow probing on closelyspaced leads and compliance with GS38
- Safety rating: CAT IV 600 V, CAT III 1000 V, 10 A

### TL40 Retractable Tip Test Lead Set

One pair (red, black) flexible silicone insulated test leads with sharp needle point tips adjustable to desired length from 0 mm to 76 mm.

- Extra hard probe tips to provide long service life
- Safety rating: CAT III 300 V, 3 A rating, UL listed





### TL26A 60 in 5-Way Test Lead Set

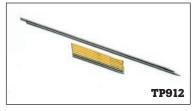
One pair (red, black) siliconeinsulated leads with five different ways to connect.

- U-shaped nose for bladeshaped terminals
- Notched jaw for gripping screw heads, bare wire or terminals
- Serrated teeth for gripping threaded or wire-wrapped terminals
- Sharp needle cluster for piercing small gauge (#22-#28 AWG) wires
- Large piercing needle for penetrating larger gauge wires
- Safety rating: CAT I 30 V, 10 A

### **TL910 Electronic Test Probes**

One pair (red, black) leads with very small tips to access hard-to-reach electronic test points.

- Includes three sets of springloaded gold tips and two sets of stainless steel tips
- Tip length up to 100 mm (4 in)
- Tip diameter: 1 mm (0.04 in)
- Safety rating: CAT IV 600 V, CAT III 1000 V, 3 A







### TP912 Replacement Tips for TL910

Five sets of spring-loaded, tips to refurbish TL910 Electronic Test Probes.

- Very small 1 mm (0.04 in) tips to access hard-to-reach electronic test points
- Probe tip length up to 100 mm (4 in)
- Three sets of gold-plated and two sets of stainless steel tips
- Safety rating: CAT IV 600 V, CAT III 1000 V, 3 A

### TP165X Remote Control Probe

Slim probe with integrated test button simplifies measurement when accessing hard-to-reach points.

- Probe designed for 1500
   Series insulation and 1650
   Series installation testers
- Tip length up to .735 in
- Tip diameter: 1 mm (0.04 in)
- Safety rating: CAT III 1000 V 10 A

### Probe-in-one clips

Probe-in-one clips and adapters expand the application of probe-in-one test leads.



### **AC72 Alligator Clip Set**

One pair (red, black) slide-on alligator clips.

- 8 mm (0.32 in) clip opening
- Safety rating: CAT IV 600 V, CAT III 1000 V, 10 A



### TP920 Test Probe Adapter Set

Three pairs (red, black) push-on adapters.

- Includes IC test adapters, extended probe tips, and medium alligator clips
- Maximum opening 7.6 mm (0.3 in)
- Safety rating: CAT III 300 V, 3 A

### Patch cords

Patch cords connect two test points or two test instruments or accessories together.



### TL932 Patch Cords (90 cm)

One pair (red, black) multistacking banana plug patch cords, 90 cm (35.4 in) long.

- Nickel-plated, 4 mm (0.16 in) banana plugs
- 90 cm long PVC insulated leads
- 30 V rms or 60 V dc, 15 A

### TL930 Patch Cords (60 cm)

One pair (red, black) multistacking banana plug patch cords, 61 cm (24 in) long.

- Nickel-plated, 4 mm (0.16 in) banana plugs
- 61 cm long PVC insulated leads
- 30 V rms or 60 V dc. 15 A

### TL935 Patch Cords (60 cm, 90 cm, 120 cm)

Three sets (red and black pairs) of multi-stacking banana plug patch cords in different lengths.

- Nickel-plated, 4 mm (0.16 in) banana plugs
- 60 cm, 90 cm, and 120 cm (23.6 in, 35.4 in, and 47.2 in) long PVC insulated leads
- 30 V rms or 60 V dc, 15 A



### Modular test leads

Modular test leads provide the convenience of attaching clips, hooks and grabbers, as needed. All of these leads are 1.5 m (59 in) long, offer reinforced strain relief, and include banana jack terminations that allow a great variety of test lead configurations.









### TL221 SureGrip™ Test **Lead Extensions Set**

One pair (red, black) siliconeinsulated leads.

- Straight female connectors on both ends
- Safety rating: CAT IV 600 V, CAT III 1000 V. 10 A

### **TL222 SureGrip™ Silicone Insulated Test Leads**

One pair (red, black) siliconeinsulated test leads (red, black) with safety-shrouded, 4 mm (0.16 in) banana plugs.

 Right angle connectors on both ends

### TL224 SureGrip™ Insulated Test Leads

One pair (red, black) siliconeinsulated test leads with safety-shrouded 4 mm (0.16 in) banana plugs.

- Right angle connector on one end and straight connector on the other
- Safety rating: CAT IV 600 V, CAT III 1000 V, 10 A

### **TL27 Heavy-duty Test Lead Set**

One pair (red, black) rugged, EPDM-insulated test leads with safety-shrouded 4 mm (0.16 in) banana plugs.

- Straight male connectors on both ends
- Safety rating: CAT III 1000 V, 10 A

### Test lead holder



### **H900 Test Lead Holder**

Heavy-duty holder for conveniently storing test lead wires.

- Mounting holes for securing to wall or other surfaces
- For test lead wires up to 8 mm (0.31 in) in diameter
- Overall dimensions (LxWxH): 27.9 cm x 8.9 cm x 3.2 cm  $(11 \text{ in } \times 3.5 \text{ in } \times 1.25 \text{ in})$



Improved ergonomics SureGrip accessories were designed to provide a reliable grip in slippery hands. Rubber-overmolded surfaces and finger-hugging curves give the user a comfortable, steady hold on the accessory so they can focus on making an accurate measurement.

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**Fest leads** 



### **Modular clips** (for use with modular test leads)

Using modular test leads, this wide variety of clips allows the configuration of leads to individual needs.

### AC285 SureGrip™ **Alligator Clips**

One pair (red, black) large alligator clips with insulated, nickel-plated steel jaws.

- Multi-purpose tooth pattern grips anything from fine gauge wire to a 20 mm (0.8 in) bolt
- Safety rating: CAT IV 600 V, CAT III 1000 V, 10 A

### AC220 SureGrip™ **Alligator Clips**

One pair (red, black) of small, insulated, nickel-plated jaws.

- Blunt tip grabs round screw heads up to 9.5 mm (0.37 in)
- Safety rating: CAT IV 600 V, CAT III 1000 V, 10 A

### AC280 SureGrip™ **Hook Clips**

One pair (red, black) nickelplated hook-style clips.

- Profile narrows to 5.6 mm (0.22 in) at tip
- Hook opening 6.4 mm (0.25 in) at front
- Base opening of 0.2 mm (0.08 in)
- Safety rating: CAT IV 600 V, CAT III 1000 V, 3 A

### AC283 SureGrip™ Pincer Clips

One pair (red, black) nickelplated pincers open to 5 mm (0.2 in). Perfect for continuity testing on circuit board components such as diodes.

- 11.4 cm (4.49 in) flexible insulated shaft
- Safety rating: CAT IV 600 V, CAT III 1000 V, 1 A

### **AC89 Heavy Duty Insula**tion Piercing Test Clip

Ideal probe for establishing accurate contact through insulation.

- Pierces 0.25 mm to 1.5 mm (0.01 in to 0.06 in) insulated
- Small pin allows self-healing of the insulation
- Safety rating: CAT IV 600 V, CAT III 1000 V, 5 A

### **AC87 Heavy Duty Bus Bar** Clip Set

One pair (red, black) flat, right angle clips designed for connecting to bus bars.

- Adjustable collar provides two ranges of jaw openings up to 30 mm (1.18 in)
- Safety rating: CAT III 600 V, 5 A















### est leads

### Modular test probes (for use with modular test leads)

Using modular test leads, this wide variety of test probes allows the configuration of leads for a wide variety of needs, whether industrial, electrical, or electronic.



### TP220 SureGrip™ Industrial Test Probes

One pair (red, black) industrial test probes with stainless steel tip.

- Sharp, 12 mm (0.47 in) tips
- Safety rating: CAT IV 600 V, CAT III 1000 V, 10 A









### TP1 Slim Reach™ Test Probes

One pair (red, black) slender probes with flat stainless steel blade to hold securely in bladetype electrical wall sockets.

- Tip length up to 14.7 mm (0.58 in)
- Safety rating: CAT IV 600 V, CAT III 1000 V, 10 A

### TP2 Slim Reach™ Test Probes

One pair (red, black) slender stainless steel probes for accessing closely-spaced or recessed terminals such as in electronic environments.

- 2 mm (0.08 in) diameter tip
- Safety rating: CAT IV 600 V, CAT III 1000 V, 10 A

### TP4 Slim Reach™ Test Probes

One pair (red, black) slender stainless steel probes for accessing closely-spaced or recessed electrical terminals.

- 4 mm (0.16 in) diameter probe tip designed to fit securely into IEC (C13 and C14) electrical wall outlets
- Safety rating: CAT IV 600 V, CAT III 1000 V, 10 A





### TP80 Electronic Test Probes

One pair (red, black) electronics test probes.

- IC-insulated cap prevents shortening of IC legs for probing high density components or boards
- Tip length up to 3.9 mm (0.157 in)
- Tip diameter: 1 mm (0.04 in)
- Safety rating: CAT III 1000 V, 10 A

### TP74 Lantern Tip Test Probes

One pair (red, black) featuring nickel-plated brass ends.

- Banana-style 4 mm (0.16 in) spring contacts
- Safety rating: CAT III 1000 V, 10 A

### TP38 Slim Reach™ Test Probes

One pair (red, black) slender stainless steel probes for accessing closely-spaced or recessed terminals.

- Tip length: 24 mm (0.95 in) which includes the insulated part of the tip
- Probe tip insulated to 4 mm (0.16 in) from the end
- Meets GS38 specs for the United Kingdom
- Safety rating: CAT IV 600 V, CAT III 1000 V, 10 A





sheathed tips for additional safety. Available August, 2008.

### Did you know?

Test probes with less exposed metal help reduce the risk of inadvertent shorts that could result in an arc flash explosion. The TL238 SureGrip™ Test Lead Set for High Energy **Environments contains** a probe that has only 4 mm (0.16 in) of exposed metal at the tip to reduce this risk. Using probe extenders between modular test leads and test probes is another way to increase the distance from live circuits by 20.5 cm (8 in).

### How to choose the best test probe for your job?

### **IEC 61010 Electrical measurement category ratings for test tools**

Make sure that your accessory ratings meet or exceed the rating of your measurement environment.

Measurement category	Applicable environment	Examples
CAT I	Electronic	Protected electronic equipment  Equipment connected to (source) circuits in which measures are taken to limit transient overvoltages to an appropriately low level  Any high-voltage, low-energy source derived from a high-winding resistance transformer, such as the high-voltage section of a copier
CAT II	Single-phase receptacle connected loads	Appliance, portable tools, and other household and similar loads     Outlet and long branch circuits     Outlets at more than 10 m (30 ft) from CAT III source     Outlets at more that 20 m (60 ft) from CAT IV source
CAT III	Three-phase distribution, including single-phase commercial lighting	Equipment in fixed installations, such as switchgear and polyphase motors     Bus and feeder in industrial plants     Feeders and short branch circuits, distribution panel devices     Lighting systems in larger buildings     Heavy appliance outlets with short connections to service entrance
CAT IV	Three-phase at utility connection, any outdoor conductors	Refers to the "origin of installation," i.e., where low-voltage connection is made to utility power     Electricity meters, primary overcurrent protection equipment     Outside and service entrance, service drop from pole to building, run between meter and panel     Overhead line to detached building, underground line to well pump

### Test lead sets and kits

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### Test lead sets and kits compatibility chart

Model number	TL27	TL80A	TL81A	TL220	TL223	TL225	TL238	TLK-220	TLK-225	TLK287	TLK289	TLS430
10/11/12/12B	•	•	•	•	•	•	•	•	•	•	•	
110/111/112	•	•	•	•	•	•	•	•	•	•	•	
114/115/116/117	•	•	•	•	•	•	•	•	•	•	•	
20/70 Series	•	•	•	•	•	•	•	•	•	•	•	
27	•	•	•	•	•	•	•	•	•	•	•	
70/73 III	•	•	•	•	•	•	•	•	•	•	•	
175/177	•	•	•	•	•	•	•	•	•	•	•	
179	•	•	•	•	•	•	•	•	•	•	•	
80 Series III/83V	•	•	•	•	•	•	•	•	•	•	•	(0
87/89 IV	•	•	•	•	•	•	•	•	•	•	•	(compatible with 430 Series Power Quality Analyzer)
87V	•	•	•	•	•	•	•	•	•	•	•	atib
187/189	•	•	•	•	•	•	•	•	•	•	•	le w
287/289	•	•	•	•	•	•	•	•	•	•	•	7ith
45/8845/8846	•	•	•	•	•	•	•	•	•	•	•	430
39/41B	•	•	•	•	•	•	•	•	•	•	•	) Ser
43B	•	•	•	•	•	•	•	•	•	•	•	ies
90 Series	•	•	•	•	•	•	•	•	•	•	•	Pow
120 Series	•	•	•	•	•	•	•	•	•	•	•	ver (
190 Series	•	•	•	•	•	•	•	•	•	•	•	)ual
321/322	•	•	•	•	•	•	•	•	•	•	•	ity /
330 Series	•	•	•	•	•	•	•	•	•	•	•	lnal
705/707	•	•	•	•	•	•	•	•	•	•	•	yzeı
712/713	•	•	•	•	•	•	•	•	•	•	•	
715	•	•	•	•	•	•	•	•	•	•	•	
716/717	•	•	•	•	•	•	•	•	•	•	•	
718	•	•	•	•	•	•	•	•	•	•	•	
725/726	•	•	•	•	•	•	•	•	•	•	•	
741/743	•	•	•	•	•	•	•	•	•	•	•	
744	•	•	•	•	•	•	•	•	•	•	•	
787/789	•	•	•	•	•	•	•	•	•	•	•	
1577/1587	•	•	•	•	•	•	•	•	•	•	•	



### Clips and probes compatibility chart

Model number	TL27	TL80A	TL81A	TL220	TL223	TL225	TL238	TLK-220	TLK-225	TLK287	TLK289
AC72		•	•								
AC87	•		•	•	•	•	•	•	•	•	•
AC89	•		•	•	•	•	•	•	•	•	•
AC220	•		•	•	•	•	•	•	•	•	•
AC280	•		•	•	•	•	•	•	•	•	•
AC283	•		•	•	•	•	•	•	•	•	•
AC285	•		•	•	•	•	•	•	•	•	•
TLK290			•	•	•	•	•	•	•	•	•
TLK291			•	•	•	•	•	•	•	•	•
TP1	•		•	•		•	•	•	•	•	•
TP2	•		•	•	•	•	•	•	•	•	•
TP4	•		•	•	•	•	•	•	•	•	•
TP38	•		•	•	•	•	•	•	•	•	•
TP74	•		•	•	•	•	•	•	•	•	•
TP80	•		•	•	•	•	•	•	•	•	•
TP220	•		•	•	•	•	•	•	•	•	•
TP912											
TP920		•	•								
T5 Starter Kit		(compatible with T5/T+/T+Pro/330 Series Clamp Meters)									
TP165X				(compat	ible with 15	03/1507/157	7/1587/1650	O Series)			





### NEW! TLK289 Industrial Master Test Lead Set

Designed for electrical and electronics testing in today's industrial environment including clips and probes for dependable contact with a variety of test points. Includes eight items:

- One pair each (red, black)
  - -AC285 SureGrip™ Alligator Clips
  - -AC220 SureGrip™ Alligator Clips
  - -AC280 SureGrip™ Hook Clips
  - -TP220 SureGrip™ Industrial Test Probes
- TPAK ToolPak™
- 80BK-A Integrated DMM Temperature Probe
- C116 Soft Carrying Case

### **NEW! TLK287 Electronics Master Test Lead Set**

The perfect test lead set for today's electronics test and design. Includes 11 items:

- Precision electronic probes with multiple spring-loaded sharp tips to maximize contact with SMD test points
- Micro-grabbers and leads to enable fine SMD testing
- Mini-alligator clips, grabbers, and probes for virtually every electronics need
- Modular test leads and lead-probe combinations
- Couplers for long lead applications

## est lead sets and kits









### TL81A Deluxe Electronic Test Lead Kit

This 11-item kit includes pouch and two each (red, black) of:

- Test leads with a safetyshrouded, right angle banana connector on one end and a stainless steel test probe on the other. Rated up to 10 A.
- Insulated alligator clips. Rated up to 5 A
- Insulated probe tip extenders. Rated up to 3 A
- Modular test probes with banana connector. Rated up to 10 A
- Modular hook-style clip test leads. Rated up to 5 A
- Modular pinch-style clip test leads. Rated up to 5 A
- Modular alligator clips. Rated up to 5 A
- Slide-on IC probe tip adapters (rated up to 3 A) and test lead couplers
- Bare spade lug. Rated to 10 A

### TL220 SureGrip™ Industrial Test Lead Set

Handy all-in-one set that includes essential test items for industrial environments. Three-item set includes:

- AC220 SureGrip™ Alligator Clips
- TP220 SureGrip™ Industrial Test Probes
- TL222 SureGrip™ Silicone Insulated Test Leads
- Safety rating: all CAT IV 600 V, CAT III 1000 V

### TL80A Basic Electronic Test Lead Kit

The fundamental accessories for testing are included in this fouritem kit.

- TL71 Premium Test Lead Set
- C75 Accessory Case
- Safety rating: CAT II 300 V

### TLK-225 SureGrip™ Master Accessory Set

Set includes all the SureGrip™ leads, clips, and probes in a handy roll-up pouch. This 13-item set includes:

- AC220 SureGrip™ Alligator Clips
- AC280 SureGrip™ Hook Clips
- AC283 SureGrip™ Pincer Clips
- AC285 SureGrip™ Alligator
- TP220 SureGrip™ Industrial Test Probes
- TL224 SureGrip™ Insulated Test Leads
- Six-pocket storage pouch
- Safety rating: all CAT IV 600 V, CAT III 1000 V

### TL223 SureGrip™ Electrical Test Lead Set

All-in-one set includes three test lead accessories:

- AC220 SureGrip™ Alligator Clips
- TP1 Slim Reach Test Probes (flat-bladed)
- TL224 SureGrip™ Insulated Test Leads
- Safety rating: all CAT IV 600 V, CAT III 1000 V





### TLK-220 US SureGrip™ Industrial Test Lead Kit

Special-value SureGrip™ five-piece kit for industrial applications, in a roomy carrying case. Kit includes:

- AC220 SureGrip™ Alligator Clips
- AC285 SureGrip™ Alligator Clips
- TP220 SureGrip™ Industrial Test Probes
- TL224 SureGrip™ Insulated Test Leads
- C116 zippered vinyl case with moveable divider
- Safety rating: all CAT IV 600 V, CAT III 1000 V

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### **T5 Starter Kit**

Special-value three-piece kit for the electrical professional with a Fluke T5 Voltage, Continuity and Current Tester. Kit includes:

- TP220 SureGrip<sup>™</sup> Industrial Test Probes
- AC285 SureGrip<sup>™</sup> Alligator Clips
- C33 Soft Carrying Case
- Safety rating: all CAT IV 600 V, CAT III 1000 V

### TLK291 Fused Test Probe Set

One pair (red, black) fused test probes offer added measurement protection by providing firm and secure contact. Probes fit on modular leads or on fixed-lead test tools.

- Each probe contains a 500 mA/1000 V/50 kA fuse
- Safety rating: CAT IV 600 V, CAT III 1000 V

### TL238 SureGrip™ Test Lead Set for High Energy Environments

This kit is specially designed for high energy environments. Three-piece kit includes:

- TP238 SureGrip™ Insulated Test Probe Set
- TP280 SureGrip™ Test Probe Extender
- TL224 SureGrip™ Insulated Test Leads
- Safety rating:
  - -TP238 and TL224: CAT IV 600 V, CAT III 1000 V, 10 A
  - -TP280: CAT III 1000 V, 10 A

### TL225 SureGrip™ Stray Voltage Adapter Test Lead Kit

The Fluke TL225 adds low input impedance to a multimeter, desensitizing it to low energy and eliminating ghost or stray voltages. Four-piece kit includes:

- SV225 Stray Voltage Adapter
- TL224 SureGrip™ Insulated Test Leads
- TP220 SureGrip™ Industrial Test Probes
- C75 Accessory Case
- Safety rating: All CAT IV 600 V, CAT III 1000 V, 10 A

For more information on the adapter, see page 43.









### TLK290 Flexible Socket Probe Set

Set includes three flexible socket probes and a large alligator clip for use with 4 mm (0.16 in) shrouded test leads.

- Test probes are for use on motor and three-phase sockets
- Probes have flexible test points that fit securely between 4 mm and 8 mm (0.16 in and 0.32 in) sockets
- Alligator clip opening: 20 mm (0.8 in)
- Safe contact such as in CEE 16 A and CEE 32 A plugs
- Safety rating: CAT IV 600 V, CAT III 1000 V, 8 A

### TLS430 Test Leads and Alligator Clips

Test lead replacement set for the Fluke 430 Series Three-Phase Power Quality Analyzers.

- Set includes five each (4 black, 1 green) of test leads and alligator clips
- Safety rating: CAT IV 600 V, CAT III 1000 V





### Temperature accessories

### **Temperature specifications**

								General	Industrial	Pipe
	E	Bead	HVAC	Immersion	Surface	Air	Piercing	purpose	surface	clamp
	80BK-A	80PK-1 80PJ-1	80PK-11	80PK-22	80PK-3A	80PK-24	80PK-25 80PT-25	80PK-26	80PK-27	80PK-8
Lowest temp	-40 °(	C (-40 °F)	-30 °C (-22 °F)	-40 °C (-40 °F)	0 °C (32 °F)	-40 °C (-40 °F)	Type K: -40 °C (-40 °F) Type T: -196 °C (-321 °F)	-40 °C (-40 °F)	-127 °C (-196 °F)	-29 °C (-20 °F)
Highest temp	260 °C (500 °F)	105 °C (221 °F)	1090 °C (1994 °F)	260 °C (500 °F)	816 °C (1500 °F)	350 °C (662 °F)	816 °C (1500 °F)	600 °C (1112 °F)	149 °C (300 °F)	
Probe material		wire with insulation	Velcro	Inconel 600	Type K sensor with teflon body	Inconel	316 Stainless Steel	304 Stainless Steel	304 Stainless Steel	Type K sensor with pvc body
Probe length	1 m lead wire	1 m lead wire	19 m Velcro cuff	21.27 cm (8.375 in)	9.525 cm (3.75 in)	21.59 cm (8.5 in)	10.16 cm (4 in)	21.57 cm (8.5 in)	20.32 cm (8 in)	for pipes from 6.4 mm (.25 in) to 34.9 mm (1.375 in)
Cable length	1 m (39 in)	1 m (39 in)	1 m (39 in)	1 m (39 in)	1.3 m (4 ft)	1 m (39 in)	1 m (39 in)	1 m (39 in)	1 m (39 in)	1 m (39 in)
Connection	Standard banana jack	Molded thermocouple plug	Molded thermocouple plug	Molded thermocouple plug	Molded thermocouple plug	Molded thermocouple plug	Molded thermocouple plug	Molded thermocouple plug	Molded thermocouple plug	Molded thermocouple plug
SureGrip handle	No	No	No	Yes	No	Yes	Yes	Yes	Yes	No
Key feature	shooting. C	nitial trouble- Can be secured rith a magnet.	Velcro probe allows hands free temperature measurement.	For use in liquids or in gels.	Exposed junction for direct contact with flat or slightly convex surfaces.	Perforated baffle for air and non-caustic gas measure- ments.	Probe material safe for use in foods. Sharp tip pierces solid surfaces.	Use for general purpose air or surface measurements.	Low conductivity stainless steel minimizes thermal shunting. Extra rugged.	Clamps securely to pipe. Measurements are repeatable to 0.56 °C (1 °F).
Thermocouple types	K	К, Ј	K	K	K	K	K, T	K	K	K
Typical use										
General purpose	•	•	•	•	•	•	•	•	•	•
HVAC		•	•	•	•	•		•	•	•
Food service				•			•			
Industrial	•	•	•						•	•
Residential	•	•			•	•	•			•
Commercial	•	•	•	•	•	•	•	•	•	•

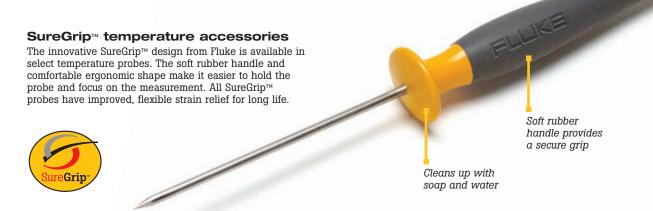
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Temperature compatibility													
			All 80PK	80PJ-1/			80T-						
Model number	80AK-A	80BK-A	Probes	80PJ-9	80PT-25	80TK	150UA	80PJ-EXT	80PK-EXT	80PT-EXT	80CK-M	80CJ-M	80PR-60
10/11/12/12B			*			•	•		*		*		
110/111/112			*			•	•		*		*		
114/115/116/117	116	116	•						<b>A</b>		<b>A</b>		
20/70 Series			*			•	•		*		*		
27						•	•		*		*		
70/73 III			*			•	•		*		*		
175/177			*			•	•		*		*		
179	•	•	<b>A</b>						<b>A</b>		<b>A</b>		
80 Series III/83V			*			•			*		*		
87/89 IV	•	•	<b>A</b>						<b>A</b>		<b>A</b>		
87V	•	•	<b>A</b>						<b>A</b>		<b>A</b>		
187/189	•	•	<b>A</b>				•		<b>A</b>		<b>A</b>		
287/289	•	•	<b>A</b>				•		<b>A</b>		<b>A</b>		
45/8845/8846			*			•	•		*		*		
43B			*			•	•		*		*		
90 Series			*			•	•		*		*		
120 Series			*			•	•		*		*		
190 Series			*			•	•		*		*		
50S/50D			•	•				•	•		•	•	
51/52/53/54 II			•	•	•			•	•	•	•	•	
63/66/68													66/68
714			•	•	•			•	•	•	•	•	
715			*			•	•		*		*		
725/726			•	•	•			•	•	•	•	•	
741/743/744			•	•	•			•	•	•	•	•	
787/789			*			•	•		*		*		
902	•	•	•						•				
1587	•	•	<b>A</b>						<b>A</b>		<b>A</b>		
1577	•		<b>A</b>										
561			•										
574/576			•										

Compatible; ★ Requires 80TK; ▲ Requires 80AK-A; ♦116 only: requires 80AK-A

## Temperature accessories



### **Temperature probes**

These temperature probes expand the functionality of Fluke thermometers, while offering the same rugged reliability of Fluke test tools.

















### 80PK-26 SureGrip™ Tapered Temperature Probe

Type K thermocouple probe with tapered tip for speedy air, surface, non-caustic gas, and liquid measurements.

- 1 m (39 in) lead
- 203 mm (8 in) stainless steel probe
- Measurement range: -40 °C to 816 °C (-40 °F to 1500 °F)

### General purpose measurements

### 80PJ-1 or 80PK-1 Bead Probe

Type J or K thermocouple probe for general-purpose applications. Ideal for troubleshooting.

- 1 m (39 in) lead
- 1 mm (0.04 in) probe with Teflon\* insulation
- Measurement range: -40 °C to 260 °C (-40 °F to 500 °F)

### 80PJ-9 or 80PK-9 General Purpose Probe

Type J or K thermocouple probe for air and non-caustic gases. The sharp tip pierces pipe insulation and the flat surface makes good contact.

- 1 m (39 in) lead
- 15.25 cm (6 in) stainless steel probe
- Measurement range: -40 °C to 260 °C (-40 °F to 500 °F)

### **Surface measurements**

### **80PK-3A Surface Probe**

Type K thermocouple with exposed junction for flat or slightly convex surfaces such as plates and rollers.

- 1.3 m (4 ft) lead
- 9.525 cm (3.75 in) probe with Teflon\* insulation
- Measurement range: 0 °C to 260 °C (32 °F to 500 °F)

### 80PK-27 SureGrip™ Industrial Surface Temperature Probe

Type K thermocouple probe for surfaces in rugged environments.

- 1 m (39 in) lead
- 20.32 cm (8 in) stainless steel probe
- Measurement range: -127 °C to 600 °C (-197 °F to 1112 °F)

### **Piercing measurements**

### 80PK-25 or 80PT-25 SureGrip™ Piercing Temperature Probe

Type K or T thermocouple suitable for food industry, liquids, and gels. Sharp tip pierces solid surfaces.

- 1 m (39 in) lead
- 10.16 cm (4 in) stainless steel probe
- Measurement range:
  - -Type K: -40 °C to 350 °C (-40 °F to 662 °F)
  - -Type T: -196 °C to 350 °C (-321 °F to 662 °F)

### **Air measurements**

### 80PK-24 SureGrip™ Air Temperature Probe

Type K thermocouple probe for air and non-caustic gas measurements.

- 1 m (39 in) lead
- 21.59 cm (8.5 in) Inconel\* probe
- Bead protected by perforated baffle
- Measurement range: -40 °C to 816 °C (-40 °F to 1500 °F)

### Immersion measurements

### 80PK-22 SureGrip™ Immersion Temperature Probe

Type K thermocouple probe for use in liquids and gels.

- 1 m (39 in) lead
- 21.27 cm (8.375 in) Inconel\* probe
- Measurement range: -40 °C to 1090 °C (-40 °F to 1994 °F)

FLUKE®







### **Pipe measurements**

### **80PK-8 Pipe Clamp Temperature Probe**

Type K thermocouple clamps securely to pipes for fast temperature and superheat measurements.

- Durable ribbon sensor
- 1 m (39 in) lead
- For pipe diameters: 6.4 mm to 34.9 mm (0.25 in to 1.375 in)
- Measurements are repeatable to 0.56 °C (1 °F)
- Measurement range: -29 °C to 149 °C (-20 °F to 300 °F)

### 80PK-11 Type-K Velcro® **Thermocouple Temperature Probe**

Type K Velcro cuff for use with any temperature-measuring instrument that accepts type K thermocouples.

- Use multiples and leave in place for route-based routine maintenance
- 1 m (39 in) lead
- 48 cm (19 in) Velcro\* cuff
- Measurement range: -30 °C to 105 °C (-22 °F to 221 °F)



### **Contact measurements**

(for use with non-contact infrared thermometers)

### **80PR-60 RTD Temperature Probe**

This probe expands the utility of an RTD non-contact infrared thermometer by simultaneously taking contact and non-contact temperature readings.

- For use with the Fluke 66 and 68 Infrared Thermometers
- 1 m (39 in) lead
- 90 mm (3.5 in) platinum 1 KW probe
- 3.5 mm (0.14 in) phono type jack
- Measurement range: -40 °C to 260 °C (-40 °F to 500 °F)

### **Temperature adapters** for DMMs

### **80AK-A Thermocouple Adapter**

Adapts type K thermocouple mini-connector to dual shrouded 4 mm (0.16 in) banana plug inputs.

- Measurement range and accuracy: probe dependent
- Suitable for low voltage applications (below 30 V ac, 60 V dc)

### **80BK-A Integrated DMM Temperature Probe**

Convenient, integrated type K thermocouple probe with standard shrouded 4 mm (0.16 in) banana jack.

- Compatible with Fluke DMM with temperature measurement functions
- 1 m (39 in) lead
- Measurement range: -40 °C to 260 °C (-40 °F to 500 °F)

### **80TK Thermocouple Module**

This module converts a DMM to a thermometer and is designed for use with type K thermocouples in low voltage applications.

- Voltage range: below 24 V ac, 60 V dc
- 1 m (39 in) lead
- Measurement range: -50 °C to 1000 °C (-58 °F to 1832 °F) (probe dependent)







### 80T-150UA Universal **Temperature Probe**

Adapts any DMM using shrouded 4 mm (0.16 in) banana plugs. This fast, accurate integrated probe is designed for low-voltage applications.

- · For air, surface, and noncorrosive applications
- Voltage range: below 24 V ac, 60 V dc
- 1.1 m (42 in) lead
- 15.7 cm (6.2 in) probe tip
- Measurement range: -50 °C to 150 °C (-58 °F to 302 °F)
- Output: switchable, from 1 mV/°C to 1 mV/°F

### Other temperature accessories

### 80CJ-M or 80CK-M Male Mini-**Connectors**



Type J or K thermocouple, suitable for up to 20-gauge thermocouple wire.

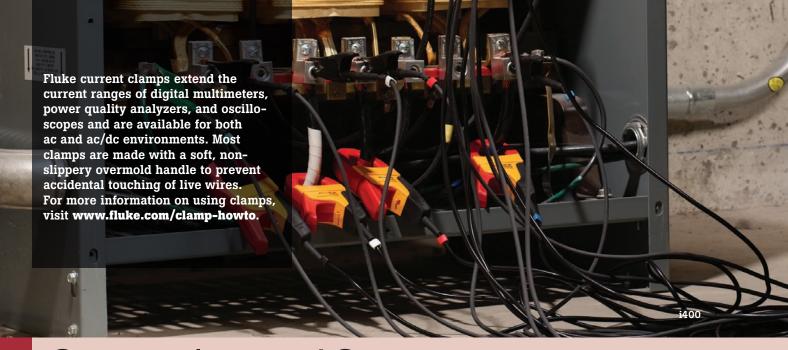
- · Isothermal screw terminal for J wire
- Two per package

### 80PJ-EXT, 80PK-EXT, or 80PT-EXT Extension **Wire Kit**



This kit extends and repairs type J, K, or T thermocouple wires for thermometers.

- Includes 3 m (118 in) of thermocouple wire and one pair of male/female mini-connectors
- Maximum continuous exposure temperature: 260 °C (500 °F)



### Current clamps: AC

### AC current clamp specifications

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	i5s	i200	i200s	i400	i400s	i800	i1000s	i3000s
AC range	10 mA to 6 A	1 A to 200 A	1 A to 200 A	1 A to 400 A	0.5 A to 400 A	0.1 A to 600 A	0.2 A to 1000 A	1 A to 3000 A
Accuracy	10 mA to 1 A 1% + 5 mA 1 A to 5 A 1 %, 48 Hz to 65 Hz	≤ 3 % +0.5 A 48 Hz to 65 Hz	≤ 1 % +0.5 A 48 Hz to 65 Hz	2 % + 0.06 A 45 Hz to 400 Hz	.5 A to 40 A, 2 % + .015 A, 5 A to 400 A, 2 % + .04 A, 45 Hz to 400 Hz	± 2 % of rdg., 50 Hz to 1 kHz ± 3 % of rdg., (typical) 30 Hz to 50 Hz and 1 kHz to 10 kHz	0.2 to 10 A: 3 % + 0.1 A 10 A to 100 A: 2 % + 0.5 A 100 A to 1000 A: 1 % + 1 A 48 Hz to 65 Hz	1 A to 30 A: 2 % + 0.1 A 1 A to 300 A: 2 % + 0.5 A 1 A to 3000 A: 2 % + 2 A 48 Hz to 65 Hz
Bandwidth (-3 dB)	40 Hz to 5 kHz	40 Hz to 40 kHz	40 Hz to 40 kHz	5 kHz to 20 kHz	5 Hz to 10 kHz	30 Hz to 10 kHz	5 Hz to 100 kHz	10 Hz to 100 kHz
Maximum conductor dia.	15 mm (0.59 in)	20 mm (0.8 in)	20 mm (0.8 in)	32 mm (1.25 in)	32 mm (1.25 in)	54 mm (2.13 in)	54 mm (2.13 in)	64 x 100 mm (2.52 in x 3.94 in)
Maximum conductor size	2 AWG	300 MCM	300 MCM	750 MCM	750 MCM	2-500 MCM or 1-1000 MCM	2-500 MCM or 1-1000 MCM	64 mm (2.52 in)
Output levels	400 mV/A	1 mA/A	10 mV/A 100 mV/A	1 mA/A	10 mV/A 1 mV/A	1 mA/A	1 mV/A 10 mV/A 100 mV/A	10 mV/A 1 mV/A 0.1 mV/A
Output cable	2.5 m to BNC termination	1.5 m shrouded banana plugs	2 m to BNC termination	1.5 m shrouded banana plugs	2.5 m to BNC termination	1.6 m shrouded banana plugs	1.6 m to BNC termination	2.1 m to BNC termination
Warranty	One-year	One-year	One-year	One-year	One-year	One-year	One-year	One-year
Safety rating	NA	CAT III 600 V	CAT III 600 V	CAT III 1000 V CAT IV 600 V	CAT III 1000 V CAT IV 600 V	CAT III 600 V	CAT III 600 V	CAT III 600 V

	i430-flex	i2000 flex	i3000s flex-24/i3000s flex-36	i6000s flex-24/i6000s flex-36
AC range	30 A to 3000 A	2 A to 2000 A	3 A to 3000 A	6 A to 6000 A
Accuracy	$\pm$ 1 % of reading at 25 °C, 50 Hz	± 1 % of range 45 Hz to 65 Hz Ranges: 20 A, 200 A, 2000 A	± 1 % of range, 45 Hz to 65 Hz, Ranges: 30 A, 300 A, 3000 A	± 1 % of range, 45 Hz to 65 Hz, Ranges: 60 A, 600 A, 6000 A
Bandwidth (-3 dB)	10 Hz to 7 kHz	10 Hz to 20 kHz	10 Hz to 50 kHz	10 Hz to 50 kHz
Maximum conductor dia.	177 mm (7 in)	177 mm (7 in)	177 mm (7 in) or 265 mm (10.4 in)	177 mm (7 in) or 265 mm (10.4 in)
Maximum conductor size	610 mm (24 in) circumference	610 mm (24 in) circumference	610 mm (24 in) circumference	610 mm (24 in) circumference
Output levels	85 mV at 1000 A rms, 50 Hz	100 mV/A, 10 mV/A, 1 mV/A	100 mV/A, 10 mV/A, 1 mV/A	50 mV/A, 5 mV/A, 0.5 mV/A
Output cable	2.5 m to BNC termination	2 m with double shrouded banana plugs	2.1 m to BNC termination	2 m to BNC termination
Battery life	No battery	NA	400 hours	400 hours
Warranty	One-year	One-year	One-year	One-year
Safety rating	CAT II 1000 V, CAT III 600 V, CAT IV 300 V	CAT III 600 V	CAT III 600 V	CAT III 600 V



### AC clamp-on current probe compatibility

		:000	:000	:400	:460	:000	11000	.0000	:400 =	i2000	i3000s	i6000s
Model number 10/11/12/	i5s	i200	<b>i200s</b> 1 A to	i400	<b>i400s</b> 1 A to	i800	<b>i1000s</b> 0.2 A to	<b>i3000s</b> 1 A to	i430-flex	FLEX <sup>1</sup> 2 A to	FLEX 3 A to	FLEX <sup>3</sup> 6 A to
12B/16/18 110/111/112			200 A 3 A to		400 A* 30 A to		1000 A* 3 A to	3000 A 30 A to		2000 A 3 A to	3000 A 3 A to	6000 A 6 A to
			200 A		400 A*		1000 A*	3000 A		2000 A	3000 A	6000 A
114/116			1 A to 200 A		0.6 A to 400 A*		0.2 A to 1000 A*	1 A to 3000 A		2 A to 2000 A	3 A to 3000 A	6 A to 6000 A
115/117		60 A to 200 A	1 A to 200 A	60 A to 400 A	0.6 A to 400 A*	60 A to 800 A	0.2 A to 1000 A*	1 Å to 3000 Å		2 A to 2000 A	3 A to 3000 A	6 A to 6000 A
21/23/73/75/77 Series III		1 Å to 200 Å	1 A to 200 A	1 A to 400 A	1 A to 400 A*	0.1 A to 800 A	0.2 A to 1000 A*	1 A to 3000 A		2 Å to 2000 Å	3 A to 3000 A	6 A to 6000 A
26/79 Series III		1 A to 40 A	1 A to 200 A	1 A to 40 A/ 200 A to 400 A	2 A to 400 A*	0.4 A to 40 A, 200 A to 800 A	0.2 A to 1000 A*	2 A to 3000 A		2 A to 2000 A	3 A to 3000 A	6 A to 6000 A
27		1 A to 200 A	1 A to 200 A	1 A to 400 A	1 A to 400 A*	0.1 A to 800 A	0.2 Å to 1000 Å*	1 A to 3000 A		2 A to 2000 A	3 A to 3000 A	6 A to 6000 A
70 Series III			1 A to 200 A		1 A to 400 A*		0.2 A to 1000 A*	1 A to 3000 A		2 A to 2000 A	3 A to 3000 A	6 A to 6000 A
77-IV						0.1 A to 800 A						6 A to 6000 A
175/177/179		3 A to 200 A	1 A to 200 A	3 A to 400 A	1 A to 400 A*	3 A to 800 A	0.3 A to 1000 A*	3 A to 3000 A		2 A to 2000 A	3 A to 3000 A	6 A to 6000 A
1577/1587		3 A to 200 A	1 A to 200 A	3 A to 400 A	3 Å to 400 Å*	3 A to 800 A	0.3 A to 1000 A*	3 A to 3000 A		2 A to 2000 A	3 A to 3000 A	6 A to 6000 A
83III/83V/88V		2 A to 200 A	1 A to 200 A	2 A to 400 A	1 A to 400 A*	0.25 A to 800 A	0.2 A to 1000 A*	1 A to 3000 A		2 A to 2000 A	3 A to 3000 A	6 A to 6000 A
85/87 Series III 87 Series V		2 A to 200 A	1 A to 200 A	2 A to 400 A	2 A to 400 A*	2 A to 800 A	0.2 A to 1000 A*	2 A to 3000 A		2 A to 2000 A	3 A to 3000 A	6 A to 6000 A
87/89 Series IV 187/189		2.5 A to 200 A	1 A to 200 A	2.5 Å to 400 Å	0.5 A to 400 A*	2.5 A to 800 A	0.2 A to 1000 A*	1 A to 3000 A		2 A to 2000 A	3 A to 3000 A	6 A to 6000 A
287/289		1 A to 200 A	1 A to 200 A	1 A to 400 A	0.5 A to 400 A*	1 A to 800 A	0.2 A to 1000 A*	1 A to 3000 A		2 A to 2000 A	3 A to 3000 A	
8060A/8062A		2 A to 200 A	1 A to 200 A	2 A to 400A	2 A to 400 A*	2 A to 800 A	0.2 A to 1000 A*	2 A to 3000 A		2 A to 2000 A	3 A to 3000 A	6 A to 6000 A
860 Series		1 A to 200 A	1 A to 200 A	1 A to 400 A	3 A to 400 A*	1.5 A to 800 A	0.3 A to 1000 A*	3 A to 3000 A		2 A to 2000 A	3 A to 3000 A	6 A to 6000 A
39/41B			1 A to 200 A <sup>2</sup>		1 A to 400 A <sup>2</sup>		0.2 A to 1000 A <sup>2</sup>	1 Å to 3000 Å <sup>2</sup>		2 A to 2000 A <sup>2</sup>	3 A to 3000 A <sup>2</sup>	6 A to 6000 A
43B			1 A to 200 A		0.5 A to 400 A		0.2 A to 1000 A	1 A to 3000 A		2 A to 2000 A	3 A to 3000 A	6 A to 6000 A
434/435	10 mA to 6 A		1 A to 200 A		1.2 A to 400 A		0.3 A to 1000 A	1.2 A to 3000 A	30 A to 3000 A	Best to use i430Flex	Best to use i430Flex	
9X Series			1 A to 200 A		1 A to 400 A		0.2 A to 1000 A	1 A to 3000 A		2 A to 2000 A	3 A to 3000 A	6 A to 6000 A
120 Series			1 A to 200 A		2.5 A to 400 A		0.25 A to 1000 A	2.5 A to 3000 A		2 A to 2000 A	3 A to 3000 A	6 A to 6000 A
190 Series			1 A to 200 A		1 A to 400 A		0.2 A to 1000 A	1 A to 3000 A		2 A to 2000 A	3 A to 3000 A	6 A to 6000 A
45 DMM		1.5 A to 100 A	1 A to 200 A	1.5 A to 100 A	1.5 A to 400 A*	1.5 A to 100 A, 500 A to 800 A	0.15 A to 1000 A*	1.5 A to 3000 A		2 A to 2000 A	3 A to 3000 A	6 A to 6000 A
8808A		1 Å to 200 Å	1 Å to 200 Å	1 A to 400 A	0.5 Å to 400 Å*	1 A to 800 A	0.2 A to 1000 A*	1 A to 3000 A		2 A to 2000 A	3 A to 3000 A	6 A to 6000 A
8845A/8846A		1 A to 200 A	1 A to 200 A	1 A to 400 A	1 Å to 400 Å*	0.5 A to 800 A	0.2 Å to 1000 Å*	1 Å to 3000 Å		2 A to 2000 A	3 A to 3000 A	6 A to 6000 A
74X Series			1.1 Å to 200 Å		11 A to 400 A*		1.1 Å to 1000 A*	11 A to 3000 A		2 Å to 2000 Å	3 A to 3000 A	6 A to 6000 A
787/789		50 A to 200 A	1 A to 200 A	50 A to 400 A	2 A to 400 A*	50 A to 440 A	0.2 A to 1000 A*	2 A to 3000 A		2 A to 2000 A	3 A to 3000 A	6 A to 6000 A

<sup>\*</sup>Requires PM9081/001 Adapters. ¹Three range version. ²Current and watt readings will be multiples of 10 higher or lower than actual on some ranges. ³Current readings will read half of the expected cardinal value on all meters.

### **Current clamps: AC**

### **AC-only clamps**

Fluke current clamps provide accurate current measurements without breaking electric circuits.

### NEW! i800 AC Current Clamp

This ac current clamp is designed to extend the current measuring capability of a digital multimeter to 800 A ac. It is compatible with a digital multimeter that accepts shrouded 4 mm (0.16 in) banana plugs and has an ac milliamp range.

- Current range: 100 mA to 800 A rms ac
- Frequency range: 30 Hz to 10 kHz (-3 dB)
- Safety rating: CAT III 600 V rms

### **i400 AC Current Clamp**

This high-safety current clamp for digital multimeters is a single range 400 Å ac clamp that is designed to offer maximum utility in a very compact shape. It is compatible with most digital multimeters or any other current measurement device that accepts 4 mm (0.16 in) shrouded banana plugs and has an ac milliamp range. The division ratio is 1000:1.

- Current range: 1 A to 400 A ac
- Frequency range: 5 kHz to 20 kHz (-3 dB)
- Safety rating: CAT IV 600 V, CAT III 1000 V

### **i400s AC Current Clamp**

This high-safety compact current clamp with BNC output is a companion to a ScopeMeter or power quality meter to measure up to 400 A ac.

- Current range: 0.5 A to 400 A ac
- Frequency range: 5 Hz to 10 kHz (-3 dB)
- Optional PM9081/001 Dual Banana Plug (male) to Female BNC Adapter is available for digital multimeters
- Safety rating: CAT IV 600 V, CAT III 1000 V

### i200 AC Current Clamp

This small-sized single-range current clamp features safety-shrouded 4 mm (0.16 in) banana plugs. It is compatible with most digital multimeters or other current measurement device that accepts shrouded 4 mm (0.16 in) banana plugs and has an ac milliamp range.

- Current range: 1 A to 200 A ac
- Frequency range: 40 Hz to 40 kHz
- Safety rating: CAT III 600 V

### i200s AC Current Clamp

This small-sized dual-range current clamp offers voltage output using a safety-insulated BNC connector. A dual banana-to-BNC adapter allows the clamp to be connected to meters with banana inputs. It is an ideal companion to a ScopeMeter, power quality meter, or digital multimeter.

- Current ranges: 20 A and 200 A ac switchable
- Frequency range: 40 Hz to 40 kHz
- Safety rating: CAT III 600 V

### i2000 Flex AC Current Clamp

This current probe utilizes the Rogowski (air-cored coil) principle. It can be used to measure currents up to 2000 A when used in conjunction with multimeters, recorders, or data loggers. The flexible and lightweight measuring head allows quick and easy installation on thick and hard-to-reach areas.

- Current range: 20 A, 200 A, and 2000 A ac switchable
- Frequency range: 10 Hz to 20 kHz
- Safety rating: CAT III 600 V



### i 1000s AC Current Clamp

This large ac current clamp expands applications in industrial and power environments by connecting directly to an oscilloscope using a reinforced coaxial cable and an insulated BNC connector. It is ideal for measuring distorted current waveform rms and harmonics.

- Current range: 0.2 A to 1000 A ac
- Frequency range: 5 Hz to 100 kHz
- Accurate displays due to a passive filter that eliminates noise and ring on rapidlyrising di/dt waveforms
- Optional PM9081/001 Dual Banana Plug (male) to Female BNC Adapter is available for digital multimeters
- Safety rating: CAT III 600 V









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Surrent clamps: A

### **i430 Flex Current Clamp**

This flex clamp uses the Rogowski (air-cored coil) principle and is perfect for use with Fluke 430 Series Three-Phase Power Quality Analyzers. The flexible and lightweight measuring head allows quick and easy installation in hard-to-reach areas without batteries or an external power source. This clamp fits around bus bars and large conductors. This clamp is powered by the 430 series Analyzer; no batteries required.

- Current range: 30 A to 3000 A ac
- Frequency range: 10 Hz to 7 kHz (-3 dB)
- Safety rating: CAT IV 300 V, CAT III 600 V, CAT II 1000 V

Also available in a convenient four-pack (i430 Flex 4 Pack)

### i3000s AC Current Clamp

This ac current clamp is designed as a clamp-on unit for use with oscilloscopes. It also includes a dual banana to BNC adapter for use with multimeters with 4 mm (0.16 in) banana input plugs. This clamp is optimized for measurement on power distribution systems.

- Current range: 1 A to 3000 A
- Frequency range: 10 Hz to 100 kHz
- Safety rating: CAT III 600 V

### i3000s Flex-24 or -36 AC Current Clamp

The flex clamp uses the Rogowski (air-cored coil) principle and can be used to measure three ranges of currents up to 3000 A when used in conjunction with oscilloscopes, recorders or data loggers. The flexible and lightweight measuring head allows quick and easy installation in hard-to-reach areas without batteries or an external power source. This clamp fits around large conductors and is available in 610 mm and 914 mm (24 in and 36 in) lengths.

- Current range: 30 A, 300 A, and 3000 A switchable
- Frequency range: 10 Hz to 100 kHz
- Safety rating: CAT III 600 V i3000s Flex-24 is available in a convenient four-pack (i3000s Flex 4 Pack)

### **i5s AC Current Clamp**

This compact 5 A ac clamp, specially configured to provide low-current accuracy while taking measurements on secondary current transformers, expands the use of the Fluke 430 Series Three-Phase Power Quality Analyzer.

- Current range: 10 mA to 6 A
- Frequency range: 40 Hz to 5 kHz
- Safety rating: CAT III 600 V (for insulated conductors only)

Also available in a convenient three-pack (i5sPQ3)

### i6000s Flex-24 or -36 AC Current Clamp

This ac current clamp utilizes the Rogowski (air-cored coil) principle and measures three ranges of currents up to 6000 A when used in conjunction with oscilloscopes, recorders, or data loggers. The flexible and light-weight measuring head allows quick and easy installation in hard-to-reach areas without batteries or an external power source. This clamp fits around large conductors and is available in both 610 mm and 914 mm (24 in and 36 in) lengths.

- Current range: 60 A, 600 A, and 6000 A switchable
- Frequency range: 10 Hz to 50 kHz (-3 dB)
- Safety rating: CAT III 600 V









i1000s







### Current clamps: AC/DC

### AC/DC current clamp specifications

AC/DC C	urrent Cia	mp speci	lications				
	i30	i30s	i50s	80i-110s	i310s	i410	i1010
DC range	30 mA to 30 A	30 mA to 30 A	30 mA to 30 A	0.1 A to 100 A	0.1 A to 450 A	1 A to 400 A	1 A to 1000 A
AC range	30 mA to 20 A rms	30 mA to 20 A rms	30 mA to 30 A rms	0.1 A to 70 A	0.1 A to 300 A	1 A to 400 A	1 A to 600 A
Accuracy	± 1 % of reading, ± 2 mA	± 1 % of reading, ± 2 mA	± 0.5 % at In typical, ± 1.5 % at I max	0.1 A to 10 A; dc to 1 kHz: ± 3 % + 50 mA; up to 100 A add 15 %; up to 20 kHz add 12 %	30 A range: 1 % + 50 mA 300 A range: 1 % + 300 mA	3.5 % + 0.5 A for dc or ac (45 Hz to 400 Hz)	2 % + 0.5 A for dc or ac (45 Hz to 400 Hz)
Bandwidth (-3 dB)	dc to 20 kHz (-0.5 dB)	dc to 100 kHz (-0.5 dB)	dc to 50 MHz (-3 dB)	100 kHZ	dc to 20 kHz	3 kHz	10 kHz
Zero error adjustment	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Maximum conductor diameter	19 mm (0.75 in)	19 mm (0.75 in)	5 mm x 5 mm (0.20 in x 0.20 in)	11.8 mm (0.46 in)	19 mm (0.75 in)	30 mm (1.18 in)	30 mm (1.18 in)
Maximum conductor size	250 MCM	250 MCM	NA	1 AWG	250 MCM	750 MCM or 2-500 MCM	750 MCM or 2-500 MCM
Output levels	100 mV/A	100 mV/A	1 V/A, 100 mV/A	10 mV/A, 100 mV/A	10 mV/A, 100 mV/A	1 mV/A	1 mV/A
Output cable	1.5 meter with shrouded dual banana plug	2 meter with BNC termination	2 meter with BNC termination	1.6 meter with BNC termination	2 meters with BNC termination and a BNC to safety shrouded banana adapter	1.2 meter with shrouded banana plugs	1.2 meter with shrouded banana plugs
Battery life (hours)	30	30	± 12 V @ 550 mA (Power supply)	40	30	60	60
Warranty	One-year	One-year	One-year	One-year	One-year	One-year	One-year
Safety	CAT III 300 V	CAT III 300 V	CAT I 300 V, CAT II 150 V	CAT II 600 V; CAT III 300 V	CAT III 300 V	CAT III 600 V	CAT III 600 V

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### AC/DC clamp-on current probe compatibility

Model number	80i-110s	i410	i1010	i30	i30s	i310s	i50s
10/11/12/ 12B/16/18	0.1 A to 100 A dc/ 0.1 A to 70 A ac*	5 A to 400 A dc/ 7 A to 400 A ac	5 A to 1000 A dc/ 7 A to 600 A ac	40 mA to 30 A dc/ 60 mA to 20 A ac	40 mA to 30 A dc/ 60 mA to 20 A ac	0.4 A to 450 A dc/ 0.6 A to 300 A ac	30 mA to 30 A dc and 30 mA to 30 A ac*
110/111/112	0.14 A to 100 A dc/ 3 A to 70 A ac*	5 A to 400 A dc/ 300 A to 400 A ac	5 A to 1000 A dc/ 300 A to 600 A ac	40 mA to 30 A dc/ 3 A to 20 A ac	40 mA to 30 A dc/ 3 A to 20 A ac	0.4 A to 450 A dc/ 30 A to 300 A ac	30 mA to 30 A dc and 300 mA to 30 A ac*
114/115/116/117	0.1 A to 100 A dc/ 0.1 A to 70 A ac*	1.4 A to 400 A dc/ 6 A to 400 A ac	1.4 A to 1000 A dc/ 6 A to 600 A ac	30 mA to 30 A dc/ 60 mA to 20 A ac	30 mA to 30 A dc/ 60 mA to 20 A ac	0.1 A to 450 A dc/ 0.6 A to 300 A ac	30 mA to 30 A dc and 30 mA to 30 A ac*
21/23/70/73/ 75/77 Series III	0.1 A to 100 A dc/ 0.1 A to 70 A ac*	1 A to 400 A dc/ 5 A to 400 A ac	1 A to 1000 A dc/ 5 A to 600 A ac	30 mA to 30 A dc/ 40 mA to 20 A ac	30 mA to 30 A dc/ 40 mA to 20 A ac	0.1 A to 450 A dc/ 0.4 A to 300 A ac	30 mA to 30 A dc and 30 mA to 30 A ac*
26/79 Series III	0.1 A to 100 A dc/ 0.2 A to 70 A ac*	1 A to 400 A dc/ 20 A to 400 A ac	1 A to 1000 A dc/ 20 A to 600 A ac	30 mA to 30 A dc/ 200 mA to 20 A ac	30 mA to 30 A dc/ 200 mA to 20 A ac	0.1 A to 450 A dc/ 2 A to 300 A ac	30 mA to 30 A dc and 30 mA to 30 A ac*
27	0.1 A to 100 A dc/ 0.1 A to 70 A ac*	1 A to 400 A dc/ 1 A to 400 A ac	1 A to 1000 A dc/ 1 A to 600 A ac	30 mA to 30 A dc/ 30 mA to 20 A ac	30 mA to 30 A dc/ 30 mA to 20 A ac	0.1 A to 450 A dc/ 0.1 A to 300 A ac	30 mA to 30 A dc and 30 mA to 30 A ac*
77-IV	0.1 A to 100 A dc/ 0.1 A to 70 A ac*	1 A to 400 A dc/ 5 A to 400 A ac	1 A to 1000 A dc/ 5 A to 600 A ac	30 mA to 30 A dc/ 40 mA to 20 A ac	30 mA to 30 A dc/ 40 mA to 20 A ac	0.1 A to 450 A dc/ 0.4 A to 300 A ac	30 mA to 30 A dc and 30 mA to 30 A ac*
175/177/179	0.11 A to 100 A dc/ 0.3 A to 70 A ac*	1.6 A to 400 A dc/ 30 A to 400 A ac	1.6 A to 1000 A dc/ 30 A to 600 A ac	30 mA to 30 A dc/ 300 mA to 20 A ac	30 mA to 30 A dc/ 300 mA to 20 A ac	0.1 Å to 450 Å dc/ 3 Å to 300 Å ac	30 mA to 30 A dc and 30 mA to 30 A ac*
1577/1587	0.1 A to 100 A dc/ 0.3 A to 70 A ac*	1.2 A to 400 A dc/ 30 A to 400 A ac	1.2 A to 1000 A dc/ 30 A to 600 A ac	30 mA to 30 A dc/ 300 mA to 20 A ac	30 mA to 30 A dc/ 300 mA to 20 A ac	0.1 A to 450 A dc/ 3 A to 300 A ac	30 mA to 30 A dc and 30 mA to 30 A ac*
83-III/83-V/88-V	0.1 A to 100 A dc/ 0.1 A to 70 A ac*	1 A to 400 A dc/ 1 A to 400 A ac	1 A to 1000 A dc/ 1 A to 600 A ac	30 mA to 30 A dc/ 30 mA to 20 A ac	30 mA to 30 A dc/ 30 mA to 20 A ac	0.1 A to 450 A dc/ 0.1 A to 300 A ac	30 mA to 30 A dc and 30 mA to 30 A ac*
85-III/87-III/87-V	0.1 A to 100 A dc/ 0.2 A to 70 A ac*	1 A to 400 A dc/ 20 A to 400 A ac	1 A to 1000 A dc/ 20 A to 600 A ac	30 mA to 30 A dc/ 200 mA to 20 A ac	30 mA to 30 A dc/ 200 mA to 20 A ac	0.1 A to 450 A dc/ 2 A to 300 A ac	30 mA to 30 A dc and 30 mA to 30 A ac*
87-IV/89-IV/ 187/189	0.1 A to 100 A dc/ 0.1 A to 70 A ac*	1 A to 400 A dc/ 2.5 A to 400 A ac	1 A to 1000 A dc/ 2.5 A to 600 A ac	30 mA to 30 A dc/ 30 mA to 20 A ac	30 mA to 30 A dc/ 30 mA to 20 A ac	0.1 A to 450 A dc/ 0.25 A to 300 A ac	30 mA to 30 A dc and 30 mA to 30 A ac*
287/289	0.1 A to 100 A dc/ 0.1 A to 70 A ac*	1 A to 400 A dc/ 1 A to 400 A ac	1 A to 1000 A dc/ 1 A to 600 A ac	30 mA to 30 A dc/ 30 mA to 20 A ac	30 mA to 30 A dc/ 30 mA to 20 A ac	0.1 A to 450 A dc/ 0.1 A to 300 A ac	30 mA to 30 A dc and 30 mA to 30 A ac*
8060A/8062A	0.1 A to 100 A dc/ 0.2 A to 70 A ac*	1 A to 400 A dc/ 20 A to 400 A ac	1 A to 1000 A dc/ 20 A to 600 A ac	30 mA to 30 A dc/ 200 mA to 20 A ac	30 mA to 30 A dc/ 200 mA to 20 A ac	0.1 Å to 450 Å dc/ 2 Å to 300 Å ac	30 mA to 30 A dc and 30 mA to 30 A ac*
860 Series	0.1 A to 100 A dc/ 0.3 A to 70 A ac*	1 A to 400 A dc/ 30 A to 400 A ac	1 A to 1000 A dc/ 30 A to 600 A ac	30 mA to 30 A dc/ 300 mA to 20 A ac	30 mA to 30 A dc/ 300 mA to 20 A ac	0.1 A to 450 A dc/ 3 A to 300 A ac	30 mA to 30 A dc and 30 mA to 30 A ac*
39/41B	Usable but will read 10 or 100 times higher	1 A to 400 A ac** Not spec'd for dc	1 A to 600 A ac** Not spec'd for dc	Usable but will read 100 times higher**	Usable but will read 100 times higher	Not spec'd for dc 0.6 A to 300 A ac	Usable but will read 100 or 1000 times higher, ac only
9X Series	0.1 A to 100 A dc/ 0.1 A to 70 A ac	1 A to 400 A dc/ 5 A to 400 A ac**	1 A to 1000 A dc/ 5 A to 600 A ac**	30 mA to 30 A dc/ 50 mA to 20 A ac**	30 mA to 30 A dc/ 50 mA to 20 A ac	0.1 A to 450 A dc/ 0.5 A to 300 A ac	30 mA to 30 A dc and 30 mA to 30 A ac
120 Series	0.1 A to 100 A dc/ 0.25 A to 70 A ac	1 A to 400 A dc/ 25 A to 400 A ac**	1 A to 1000 A dc/ 25 A to 600 A ac**	30 mA to 30 A dc/ 250 mA to 20 A ac**	30 mA to 30 A dc/ 250 mA to 20 A ac	0.1 A to 450 A dc/ 2.5 A to 300 A ac	30 mA to 30 A dc and 30 mA to 30 A ac
190 Series	0.1 A to 100 A dc/ 0.1 A to 70 A ac	1 A to 400 A dc/ 5 A to 400 A ac**	1 A to 1000 A dc/ 5 A to 600 A ac**	30 mA to 30 A dc/ 50 mA to 20 A ac**	30 mA to 30 A dc/ 50 mA to 20 A ac	0.1 A to 450 A dc/ 0.5 A to 300 A ac	30 mA to 30A dc and 30 mA to 30A ac
45 DMM	0.1 A to 100 A dc/ 0.15 A to 70 A ac*	1 A to 400 A dc/ 15 A to 400 A ac	1 A to 1000 A dc/ 15 A to 600 A ac	30 mA to 30 A dc 150 mA to 20 A ac	30 mA to 30 A dc 150 mA to 20 A ac	0.1 A to 450 A dc/ 1.5 A to 300 A ac	30 mA to 30 A dc and 30 mA to 30 A ac *
8808A	0.1 A to 100 A dc/ 0.1 A to 70 A ac*	1 A to 400 A dc/ 2 A to 400 A ac	1 A to 1000 A dc/ 2 A to 600 A ac	30 mA to 30 A dc/ 30 mA to 20 A ac	30 mA to 30 A dc/ 30 mA to 20 A ac	0.1 Å to 450 Å dc/ 0.2 Å to 300 Å ac	30 mA to 30 A dc and 30 mA to 30 A ac*
8845A/8846A	0.1 A to 100 A dc/ 0.1 A to 70 A ac*	1 A to 400 A dc/ 1 A to 400 A ac	1 A to 1000 A dc/ 1 A to 600 A ac	30 mA to 30 A dc/ 30 mA to 20 A ac	30 mA to 30 A dc/ 30 mA to 20 A ac	0.1 A to 450 A dc/ 0.1 A to 300 A ac	30 mA to 30 A dc and 30 mA to 30 A ac*
705/707	0.1 A to 100 A dc, no ac*	4 A to 400 A dc, no ac	4 A to 1000 A dc, no ac	40 mA to 30 A dc, no ac	40 mA to 30 A dc, no ac	0.4 A to 450 A dc, no ac	30 mA to 30 A dc, no ac*
715	0.1 A to 100 A dc, no ac*	4 A to 400 A dc, no ac	4 A to 1000 A dc, no ac	40 mA to 30 A dc, no ac	40 mA to 30 A dc, no ac	0.1 A to 450 A dc, no ac	30 mA to 30 A dc, no ac*
74X Series	0.1 A to 100 A dc/ 1.1 A to 70 A ac*	1 A to 400 A dc/ 110 A to 400 A ac	1 A to 1000 A dc/ 110 A to 600 A ac	30 mA to 30 A dc/ 1.1 A to 20 A ac	30 mA to 30 A dc/ 1.1 A to 20 A ac	0.1 A to 450 A dc/ 11 A to 300 A ac	30 mA to 30 A dc and 110 mA to 30 A ac*
787/789	0.1 A to 100 A dc/ 0.2 A to 70 A ac*	1 A to 400 A dc/ 20 A to 400 A ac	1 A to 1000 A dc/ 20 A to 600 A ac	30 mA to 30 A dc/ 200 mA to 20 A ac	3 mA to 30 A dc/ 200 mA to 20 A ac	0.1 A to 450 A dc/ 2 A to 300 A ac	30 mA to 30 A dc and 30 mA to 30 A ac*

<sup>\*</sup>Requires PM9081/001 Adapters. \*\*Requires PM9082/001 Adapter

**Surrent clamps: AC** 

### AC/DC clamps

AC/DC current clamps are available for a range of applications and professions.

### i410 AC/DC Current Clamp

This battery-powered Hall-effect probe measures 1 A to 400 A with large-claw clamp that gives access to difficult-to-reach areas. It is compatible with most multimeters and other device that measures ac and dc current and accepts shrouded 4 mm (0.16 in) banana plugs.

- On/Off LED indicator
- AC and dc current range:
   1 A to 400 A
- Frequency range: 3 kHzSafety rating: CAT III 600 V

### i410-KIT AC/DC Current Clamp and Carry Case Kit

This special-value kit for electrical professionals adds ac and dc current measurement capabilities to a digital multimeter. A roomy carrying case holds a meter and the current clamp plus test leads, probes and manuals. Kit includes:

- i410 AC/DC Current Clamp
- C116 Soft Carrying Case

### i 1010 AC/DC Current Clamp

This clamp measures both ac and dc currents with a large-jaw, battery-powered Hall-effect probe that gives access to difficult-to-reach areas. It is compatible with most Fluke multimeters and any other devices that measure ac and dc current and accept shrouded 4 mm (0.16 in) banana plugs.

- On/Off LED indicator
- AC current range: 1 A to 600 A ac
- DC current range: 0.5 A to 1000 A dc
- Frequency range: dc to 10 kHz
- Safety rating: CAT III 600 V rms

### i 1010-Kit AC/DC Current Clamp and Carry Case Kit

This special-value kit for electrical professional adds ac and dc current measurement capabilities to a digital multimeter. A roomy carrying case holds a meter and the current clamp plus test leads, probes and manuals. Kit includes:

- i1010 AC/DC Current Clamp
- C116 Soft Carrying Case

### 80i-110s AC/DC Current Clamp

This clamp is compatible with ScopeMeter, power harmonics analyzer, multimeter, or other voltage measurement device that has BNC input connectors.

- AC current range: 0.1 A to 70 A
- DC current range: 0.1 A to 100 A
- Frequency range: 1 Hz to 100 kHz
- Optional PM9081/001 Dual Banana Plug (male) to Female BNC Adapter is available for digital multimeters
- Safety rating: CAT II 600 V

### i30 AC/DC Current Clamp

Based on Hall-effect technology, this battery-powered clamp measures both ac and dc current. It may be used in conjunction with multimeters, recorders and other suitable recording instruments for accurate non-intrusive current measurement.

- AC current range: 30 mA to 20 A rms
- DC current range: 30 mA to 30 A
- Frequency range: dc to 20 kHz (-0.5 dB)
- Safety rating: CAT III 300 V

### i30s AC/DC Current Clamp

Based on Hall effect technology, this battery-powered clamp measures both ac and dc current. It may be used with ScopeMeter and other suitable recording instruments for accurate non-intrusive current measurement.

- AC current range: 30 mA to 20 A rms
- DC current range: 30 mA to 30 A
- Frequency range: dc to 100 kHz (-0.5 dB)
- Safety rating: CAT III 300 V









**FLUKE**®

Current clamps: AC/

### i310s AC/DC Current Clamp

Based on Hall-effect technology, this battery-powered clamp measures both ac and dc current. It may be used with ScopeMeter and other suitable recording instruments for accurate non-intrusive current measurement. This clamp is especially useful for current measurements on inverters, switching power supplies, industrial controllers, automotive diagnostics, and other applications requiring current measurements and/ or waveform analysis.

- AC current range: 0.1 A to 300 A
- DC current range: 0.1 A to 450 A
- Frequency range: dc to 20 kHz
- Safety rating: CAT III 300 V



Designed for use with all types of oscilloscopes, this clamp is designed for accurate, non-intrusive measurement of ac, dc, and complex waveform currents. Using Hall-effect technology, and with exceptional immunity to high common mode voltages, it is ideal for use by electronic design engineers in development and diagnosis of switch mode power supplies, UPS systems, and motor control systems.

- AC and dc current range: nominal 30 A dc or A rmms, up to 50 A rms for 10s
- Frequency range: dc to 50 MHz (-3 dB)
- Requires 12 V power supply

### PSi50s Bench Power Supply Module

Bench power supply with dual output to supply two Fluke i50s AC/DC Scope Current Clamps.

 Output voltage: ± 12 V dc; ± 0.5 V dc at 550 mA













### Did you know?

Does your current probe read zero current when you clamp it around a power cord? That's because the power cord has both the hot and neutral current carrying wire in it. If both wires are in the jaws of the clamp meter, the fields cancel each other out, and the current clamp will read nothing. You need to put just one current-carrying conductor in the jaw of the current clamp. If you don't have access to the separate wires within the cord, use a line splitter tool to avoid breaking the circuit.



### Cases, holsters, and hangers

Soft cas	es c	om	npat	ibili	ty														
Model number	C12A	C23	C25	C33	C35	C43	C50	C75	C90	C115	C116	C125*	C195*	C280	C345	C550	C570	C781	C78
114/115/116/117	•	•	•		•		•			•	•			•					
175/177/179			•		•				•	•	•			•					
187/189			•		•	•				•	•	•		•				•	
287/289											•			•				•	
27			•		•					•	•			•					
77 IV		•	•	•	•				•	•	•			•					
83V/87V/88V			•		•					•	•	•		•					
T5/T+/T+Pro				•															
321/322																			
333/334/335/ 336/337/902				•															
353/355						•									Fc	For			
1503/1507/ 1577/1587			•		•			For		•	•	•		•	For multiple	or multiple		•	
9040/9062			•					For multiple							tiple	tiple			
1735/1740 Series								:iple							met	meters,			
430 Series								test							ers,				
43B/120 Series					•	•		test leads		•	•	•	•	•	meters, test leads	test leads		•	•
190 Series								ls an					•		lead	lead			
922		•	•		•			d ac	•			•			s an	s and			
971		•	•					and accessories							d ac	d ac			
51/52/53/54 II			•		•		•	orie		•	•			•	cess	cess			
561								02							and accessories	accessories			
566/568															••	0.			
570 Series																	•		
61		•																	
63/66/68																			
705/707	•				•					•	•			•					
712/714/715/717			•		•					•	•			•					
718					•	•				•	•	•		•				•	•
724/725/726			•			•				•	•	•		•				•	
741B/743B/744																		•	•
787			•	•	•					•	•	•		•					•
789																			

\*For information about these cases go to **www.fluke.co**n

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### Soft cases

### **New!** C35 Soft Carrying Case

Case top opens laterally to allow use of test tool without removing it from the case and includes a Velcro\* strap to secure the test tool.

- Made of durable polyester 600D
- Dimensions (HxWxD):
   220 mm x 140 mm x 65 mm
   (8.7 in x 5.5 in x 2.6 in)

### New! C115 Soft Carrying Case

Includes two padded pockets for protection of two test tools, such as a digital multimeter and 60 Series IR Thermometer and a pouch for test leads and other accessories.

- Made of durable polyester 600D
- Dimensions (HxWxD):
   240 mm x 205 mm x 75 mm
   (9.5 in x 8 in x 3 in)

### New! C116 Soft Carrying Case

Provides adjustable padded space with a moveable Velcro\* divider for protection of two test tools, such as a digital multimeter and a current probe.

- Made of durable polyester 600D
- Dimensions (HxWxD):
   240 mm x 230 mm x 65 mm
   (9.5 in x 9 in x 2.6 in)

### New! C345 Soft Case

The perfect case for carrying a wide range of Fluke handheld test tools and accessories, large enough for all your accessories and instrument manuals. Includes an elastic accessory strap and mesh accessory retainer as well as an outer pouch, outer zipper packet and two slash pockets for convenient accessory storage.

- Made of durable polyester 600D
- Dimensions (HxWxD): 360 mm x 200 mm x 240 mm (14 in x 8 in x 9.5 in)

### New! C280 Soft Case

Designed especially for larger format test tools such as the new Fluke 287 and 289 Digital Multimeters. Includes detachable, extendable shoulder strap and an inner front pocket with closure and dual pouch pockets for test tools and accessories.

- Made of durable polyester 600D
- Dimensions (HxWxD):
   230 mm x 185 mm x 65 mm
   (9 in x 7.3 in x 2.6 in)



# Sases, holsters, and hangers













### **New!** C570 Soft Case

Designed specifically for the larger IR thermometers like the Fluke 560 and 570 Series. Includes zippered holster and padding to protect test tools as well as convenient belt loops and clips.

- Made of vinyl
- Dimensions (HxWxD):
   240 mm x 89 mm to 170 mm
   x 56 mm (9.5 in x 3.5 in to
   6.7 in x 2.2 in)

### C25 Large Soft Case for DMMs

Zippered carrying case with padding and inside pocket for holding accessories.

- Made of vinyl
- Dimensions (HxWxD):
   218 mm x 128 mm x 64 mm
   (8.6 in x 5 in x 2.52 in)



### **C90 Soft Case for DMMs**

Zippered carrying case featuring a belt loop. Also includes padding to protect the meter and an inside pocket for holding accessories.

- Made of vinyl
- Dimensions (HxWxD):
   205 mm x 90 mm x 72 mm
   (8 in x 3.5 in x 2.8 in)

### **C50 Meter Case**

Zippered and padded case featuring an inside strap to secure a meter as well as a belt loop for convenient carrying. Also includes an inside pocket for holding accessories.

- Made of vinyl
- Dimensions (HxWxD):
   192 mm x 90 mm x 38 mm
   (7.56 in x 3.5 in x 1.5 in)

### **C33 Soft Carrying Case**

Zippered carrying case with durable vinyl exterior and belt loop. Inner pocket stores test leads and small accessories.

- Made of vinyl
- Dimensions (HxWxD): 280 mm x 115 mm x 55 mm (11 in x 4.5 in x 2.2 in)

### C550 Tool Bag

Rugged, weather-resistant tool bag with zippered top, inside pockets and carrying straps. Features a large storage compartment with 25 pockets as well as steel-reinforced frame.

- Made of ballistic cloth with heavy-duty hardware
- Dimensions (HxWxD):
   333 mm x 513 mm x 231 mm
   (13 in x 20.2 in x 9.1 in)

### C12A Meter Case

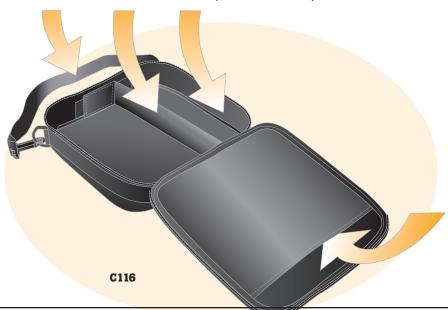
Zippered case with inside pockets and belt loop for convenient carrying.

- Made of vinyl
- Dimensions (HxWxD):
   172 mm x 128 mm x 38 mm
   (6.8 in x 5 in x 1.5 in)

### **C75 Accessory Case**

Zippered carrying case designed for carrying small accessories. Includes two inside pockets.

- Made of vinvl
- Dimensions (HxWxD):
   179 mm x 103 mm x 26 mm
   (7 in x 4 in x 1 in)





### **C781 Meter Case**

Zippered case, designed for carrying a meter as well as a detachable external pouch for holding test leads, and other accessories.

- Made of durable polyester 600D
- Dimensions (HxWxD): 269 mm x 141 mm x 90 mm  $(10.6 \text{ in } \times 5.6 \text{ in } \times 3.5 \text{ in})$

### C789 Meter and **Accessory Case**

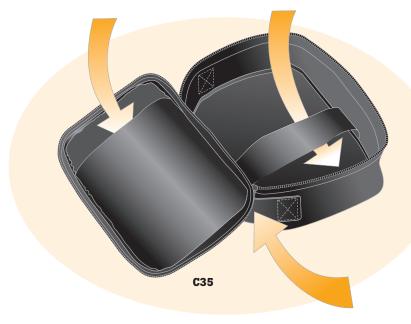
Large carrying case with three compartments, removable handle, and shoulder strap. Holds a meter and multiple accessories.

- Made of durable polyester 600D
- Dimensions (HxWxD): 308 mm x 256 mm x 77 mm (12 in x 10 in x 3 in)

### **C43 Soft Carrying Case**

Zippered carrying case includes inner front pocket with closure and two pockets to store test leads or small accessories. Includes detachable 254 mm (10 in) handle and 1066 mm (42 in) shoulder strap.

- Made of durable polyester 600D
- Dimensions (HxWxD): 318 mm x 230 mm x 90 mm  $(12.5 \text{ in } \times 9.1 \text{ in } \times 3.5 \text{ in})$



### **C23 Soft Carrying Case**

Zippered case featuring a belt loop for convenient carrying and an inner pocket to store test leads or small accessories.

- · Made of durable vinyl
- Ideal companion case to:
  - -Fluke 61 and 65 Infrared Thermometers
  - -Fluke 321 and 322 Clamp Meters
- Dimensions (HxWxD): 225 mm x 95 mm x 58 mm  $(8.9 \text{ in } \times 3.75 \text{ in } \times 2.3 \text{ in})$

















# Cases, holsters, and hangers





### Compatibility

				Hard	cases				Leathe	er cases		]	Holsters	l		Hangers
Model number	C20	C100	C101	C120*	C190*	C435*	C800	C1600	C510	C520A	C10	H80M	нз	Н5	Н6	ToolPak
114/115/116/117																•
175/177/179		•	•				•		•							•
187/189	•		•													•
27	•	•	•													
77 IV							•		•							•
83V/87V/88V		•	•				•		•			•				•
T5/T+/T+Pro			•							•				•		
321/322			•										•			
333/334/335/336/337/902			•					For multiple meters,					•			
1503/1507/1577/1587			•					aulti	•							
9040/9062			•					ple								•
1735/1740 Series						•		met								
430 Series						•		ers,								
43B/120 Series				•				acc								
190 Series					•			osse								
922								ries				•				
971			•					ano								
51/52/53/54 II			•					d oti	•							•
561								her							•	
566/568								accessories and other tools							•	
61			•					01								
63/66/68															•	
705/707			•								•					
712/714/715/717		•	•				•		•			•				715
718			•													
724/725/726			•						•							•
787		•	•				•		•			•				
789			•						•							•

<sup>\*</sup>For information about these cases go to www.fluke.com

### **Hard cases**

### C101 Hard Case

Tough polypropylene case with configurable diced foam interior to store and protect tools and accessories.

- Exterior dimensions (HxWxD): 305 mm x 360 mm x 105 mm (12 in x 14.2 in x 4.1 in)
- Interior dimensions (HxWxD): 230 mm x 290 mm x 65 mm (9 in x 11.5 in x 2.5 in)

### C100 Universal Carrying Case

Large, tough polypropylene case with carrying handle and snapon lid. This case conveniently carries tools, leads, and other accessories.

 Dimensions (HxWxD): 397 mm x 346 mm x 122 mm (15.7 in x 13.6 in x 4.8 in)

### **C20 Hard Case**

Heavy-duty construction with convenient molded carrying handle and storage compartment, this case is designed to hold a meter and accessories. It features a top cover that snaps onto the back to serve as a tilt stand.

- Made of polyprophylene
- Dimensions (HxWxD):
   256 mm x 154 mm x 106 mm
   (10 in x 6.1 in x 4.2 in)

### **C800 Meter and Accessory Case**

Tough polypropylene case with a sturdy handle, snap-on detachable lid, and convenient compartments for holding accessories and manuals.

• Dimensions (HxWxD): 230 mm x 385 mm x 115 mm (9 in x 15 in x 4.5 in)











### C1600 Gear Box for Meter and Accessories

A rugged, molded plastic case with a deep interior and lift-out tray designed to carry Fluke handheld digital multimeters and process calibrators, as well as their accessories. Features a large handle and snap-open lid compartment for easy access to small parts such as fuses, batteries, probes, and leads. Can also be locked.

- Includes five hook and loop straps to wrap cords and test leads
- Dimensions (HxWxD):
   260 mm x 390 mm x 200 mm
   (10 in x 15 in x 7.8 in)

### **Leather cases**

### **C520A Leather Tester Case**

Rugged leather case designed to hold Fluke electrical testers. It features a large belt loop and a top flap to secure the tester. Made of top-grain cowhide with heavy-duty stitching and reinforced rivets.

 Dimensions (HxWxD): 256 mm x 154 mm x 106 mm (10 in x 6 in x 4 in)

### **C510 Leather Meter Case**

Rugged leather case designed to hold most Fluke digital multimeters, thermometers, and process calibrators. It features a large belt loop and a top flap to secure the tool. Made of topgrain cowhide with heavy-duty stitching and reinforced rivets.

 Dimensions (HxWxD): 287 mm x 179 mm x 106 mm (11 in x 7 in x 4 in)



### **H5 Electrical Tester Holster**

Rugged fabric holster designed to hold Fluke T3 and T5 Electrical Testers. It features a built-in belt loop and flap for test lead storage.

Dimensions (HxWxD):
 192 mm x 90 mm x 38 mm
 (7.5 in x 3.5 in x 1.5 in)

### **H3 Clamp Meter Holster**

Rugged fabric holster designed to hold Fluke 330 Series Clamp Meters. It features a built-in belt loop and a handy pocket with snap for test lead storage.

Dimensions (HxWxD):
 231 mm x 90 mm x 64 mm
 (9 in x 3.5 in x 2.5 in)

### H80M Protective Holster with Magnetic Hanging Strap

Convenient snap-on holster with a magnetic hanging system enables hands-free work while protecting digital multimeters or calibration tools. This holster is designed to absorb shock and to hang from just about any metal surface.

- Includes a hanging magnet, general purpose hanger, and hook and loop straps
- Dimensions (HxWxD): 190 mm x 95 mm x 43 mm (7.5 in x 3.7 in x 1.7 in)

### **C10 Meter Holster**

Snap-on holster absorbs shocks and protects multimeters from rough handling. It features a built-in stand and hanger loop for convenience during testing.

- Compatible with Fluke 10 Series Multimeters
- Dimensions (HxWxD): 154 mm x 77 mm x 45 mm (6 in x 3 in x 1.8 in)

### H6 Infrared Thermometer Holster

Durable nylon construction with Velcro\* closures provides quick access and protection for infrared thermometers. It features a snap-open loop that attaches easily to a belt and an accessory pocket for storing temperature probes.

Dimensions (HxWxD):
 302 mm x 178 mm x 57 mm
 (11.9 in x 7 in x 2 in)

### **Hangers**

### TPAK ToolPak™

This meter-hanging solution uses a magnet, clip, and strap to hang a meter from metallic surfaces, freeing both hands for conducting tests. Kit includes:

- Two universal hanger clips
- Hook and loop straps
  - -Two lengths: 12.7 cm (5 in); 19 cm (7.5 in)
- Strong rare earth magnet

















FLUKE<sub>®</sub>



### Lights

### **LVD2 Volt Light**

Non-contact ac voltage detector and LED flashlight combined into an easy-to-use pen-style design with dual-sensitivity. This voltage detector glows blue when 3 cm to 12 cm (1 in to 5 in) from ac voltage and red when at the source. For use in commercial and industrial applications.

- Detects voltage from 90 V to 600 V ac
- Ultra-bright white LED light with 100,000 hour bulb life
- · AAA battery included
- Safety rating: CAT IV 600 V







### **LVD1 Volt Light**

Non-contact ac voltage detector and pocket-sized flashlight combined with exclusive dualsensitivity. This voltage detector glows blue when 2.5 cm to 12.7 cm (1 in to 5 in) from ac voltage and red when at the source.

- Detects voltages from 40 V to 300 V ac
- Ultra-bright white LED with 100,000 hour bulb life
- AAA battery included

### L206 Deluxe LED Hat Light

Attach this water-resistant light to a hard hat, a baseball hat, or even a panel door for hands-free bright light where needed. Includes a 360° rotating clip, special hard-hat attachment, and neck lanyard. (Hat not included.)

- Three LEDs with 40-hour battery life
- · Three AAA battery included

### L205 Mini Hat Light

Rugged, high-intensity Xenon work light with pre-focused optical-quality reflector attaches to a baseball cap to allow hands-free work. (Hat not included.)

- Includes waterproof ABS case that won't crack or chip
- Two AAA batteries included

### **L210 Probe Light Kit**

Test probe extender with small, bright LED that illuminates the contact area and frees hands for work. Two probe extenders 20 cm (8 in) fit modular test probes and keep hands away from live circuits. Ultra-bright white LED provides 120 hours of battery life. Kit includes:

- L200 Probe Light
- SureGrip™ test probe extenders
- Two 3 V watch batteries included
- Probe extenders safety rating: CAT III 1000 V, 10 A







### L200 Probe Light

Small, rugged light that easily attaches to any Fluke test probe, illuminates the contact area and frees hands for work.

- Bright white LED with 120 hours of battery life
- Two 3 V watch batteries included

### L207 High Intensity Light with Collector's Cap

Powerful, lightweight, mini-Xenon light illuminates work area to free hands for work. Comes with Limited Edition Fluke collector's cap that adjusts for all-day comfort. Waterproof, rugged light attaches to bill of baseball cap.

- Xenon high intensity work light
- Two AAA batteries included

### L215 SureGrip™ Kit with Probe Light and Probe Extender

A great complement of industrial test accessories with a small, rugged light that attaches to test probe or extenders to illuminate the contact area. Kit includes:

- L200 Probe Light
- SureGrip™ Test Probe Extenders, 20 cm (8 in)
- TP220 SureGrip™ Industrial Test Probes
- TL224 SureGrip™ Insulated Test Leads
- Foldable soft pouch with six pockets and hook & loop closure
- Safety rating:
  - -TP220 and TP224: CAT IV 600 V, CAT III 1000 V, 10 A
  - –Probe extenders: CAT III 1000 V, 10 A

### **L211 Probe Light Kit**

This special-value combo pairs the new L200 Probe Light with one of the most popular test leads by Fluke and a handy carrying case. Probe light attaches to any Fluke test probe to free both hands for work. Kit includes:

- L200 Probe Light
- TL71 Premium Test Lead Set
- C75 Accessory Case











### **High voltage**

### 80K-40 High Voltage Probe

Extends the voltage measuring capability of an ac/dc multimeter to 40,000 V peak ac or dc. This probe is designed for taking measurements on low-energy circuits within equipment only, such as televisions or photo copy machines.

- Voltage range: 1 kV to 40,000 kV, dc or peak ac, 28 kV rms ac
- Accuracy: 20 kV to 35 kV;
   ± 1 % at 20 °C to 30 °C
- Division ratio: 1000:1
- Meets IEC 61010-2-031:1993, Type B, 40 kV dc or peak ac, 28 kV rms ac, overvoltage CAT I (voltage derived from limited energy transformer)

### **80K-6 High Voltage Probe**

Extends the voltage measuring capability of an ac/dc digital multimeter to 6,000 V peak ac or dc. This probe is designed for taking measurements on low-energy circuits within equipment only.

- Voltage range: 0 kV to 6 kV, dc or peak ac
- Accuracy: dc to 500 Hz ± 1 %; 500 Hz to 1 kHz ± 2 %; above 1 kHz output falls, -30 % at 10 kHz
- Division ratio: 1000:1
- Meets IEC 61010-2-031:1993, Type B, 40 kV dc or peak ac, 28 kV rms ac, overvoltage CAT I (voltage derived from limited energy transformer)

### **80K-15 High Voltage Probe**

Extends the voltage measuring capability of an ac/dc digital multimeter to 15,000 V peak ac or dc. This probe is designed for taking measurements on low-energy circuits within equipment only.

- Voltage range: 1 kV to 15 kV dc or peak ac, 10 kV ac rms
- Accuracy: dc ± 2 % 60 Hz;
- Division ratio: 1000:1
- Meets IEC 61010-2-031:1993, Type B, 40 kV dc or peak ac, 28 kV rms ac, overvoltage CAT I (voltage derived from limited energy transformer)

### High frequency

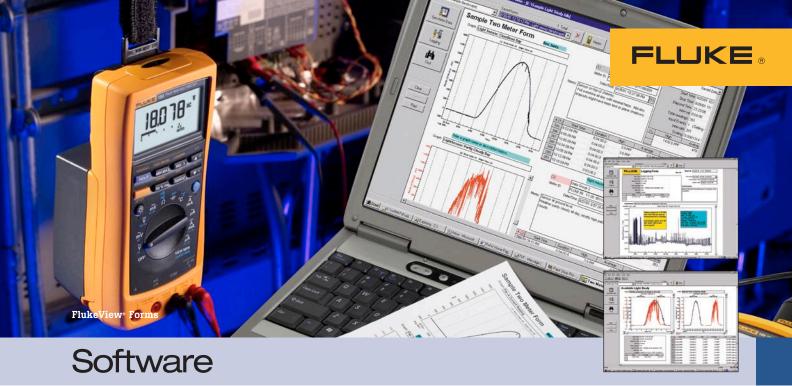
### 85RF High Frequency Probe

Converts a dc voltmeter with an input impedance of 10 megohms into a high frequency (100 kHz to 500 MHz) RF voltmeter. The probe's dc output is calibrated to be equivalent to the rms value of a sine wave input.

- Voltage range: 0.25 V to 3 V ac rms
- Maximum input: 30 V rms, 200 V dc
- AC to dc ratio: 1:1
- Ratio accuracy at 25 MHz and loaded with 10 megohms
  - -Above 0.5 V:  $\pm$  0.5 dB
  - -Below 0.5 V:  $\pm$  1.0 dB
  - -Add  $\pm$  0.2 dB in RF fields of 1 V/m to 3 V/m
- Frequency response relative to 25 MHz:
  - -100 KHz to 100 MHz  $\pm$  0.5 dB
  - -100 MHz to 200 MHz ± 2.0 dB
  - -200 MHz to 500 MHz  $\pm$  3.0 dB

### Caution!

DO NOT use these probes to measure high voltages on power distribution systems. The probes provide high accuracy when used with a multimeter having 10 megohm input impedance.



### FlukeView Forms Basic

This application transfers data from a Fluke test tool to a PC, using two standard, non-customizable forms to display measurement readings in table or graphical form. This software includes a cable appropriate for your measuring instrument.

### FlukeView<sup>®</sup> Forms Full

This application provides the FlukeView Forms Basic software functions in addition to customizable documents and custom templates using the FlukeView Forms Designer. This software includes a cable appropriate for your measuring instrument.

Visit http://us.fluke.com/usen/support/software/FlukeViewDemoSoft.htm to download a demo/reader version of the FlukeView Forms software.

### FVF-UG FlukeView\* Forms Upgrade

This upgrade is designed for users of FlukeView Forms Basic who want to include the features of FlukeView Forms Full. It can also be used by FlukeView Forms Full users who want to use the latest version of the software. No cable is provided with this option. This upgrade is compatible with all previous versions of FlukeView Forms.

### FlukeView Forms compatibility chart

FVF BASIC								
FVF option	Interface cable	Fluke instrume	nt compatibility					
FVF-Basic	USB** / IR	280 Series Waveform Generators	789 ProcessMeter™					
		1550B MegOhmMeter	1653 Installation Tester					
		180 Series* Digital Multimeter						
FVF-SC5	USB** / Serial	8808A Digital Multimeter	8845A 6.5 Digit Precision Multimeters					
		8846A 6.5 Digit Precision Multimeters	45* Dual Display Multimeter					
FVF FULL								
FVF option	Interface cable	Fluke instrument compatibility						
FVF-SC1	Serial / IrDA	53-II Single Input Digital Thermometer with data logging	87-IV* Digital Multimeter					
		54-II Dual Input Digital Thermometer	89-IV* Digital Multimeter					
FVF-SC2	USB** / IR	568 Infrared and Contact Thermometer	789 ProcessMeter™					
		280 Series Digital Multimeter	1550B MegOhmMeter					
		1653 Installation Tester	180 Series* Digital Multimeter					
FVF-SC4	USB** / Serial	8808A Digital Multimeter	8845A 6.5 Digit Precision Multimeters					
		8846A 6.5 Digit Precision Multimeters	45* Dual Display Multimeter					
		975 AirMeter™						
FVF-UPGRADE								
FVF option	Interface cable	Fluke instrume	nt compatibility					
FVF-UG	No cable included	Any instrument that supports FlukeView Forms software						
*011								

<sup>\*</sup>Obsolete

### Hardware and software requirements

Application	Hardware	Operating System Software				
FVF-Basic	Pentium class or better microprocessor	Windows 2000, Me, XP, or Windows NT 4.0				
	32 MB RAM					
	70 MB disk space (100 MB to install)					
FVF-Full	Pentium class or better microprocessor	Windows 2000, Me, XP, Vista or Windows NT 4.0				
	32 MB RAM					
	70 MB disk space (100 MB to install)					
FVF-Upgrade	Pentium class or better microprocessor	Windows 2000, Me, XP, Vista or Windows NT 4.0				
	32 MB RAM					
	70 MB disk space (100 MB to install)					

<sup>\*\*</sup>USB cables are not supported for Microsoft Windows NT 4.0



### **Automotive**





### **BP880 BNC to Female Double Stacking Banana**

Converts a BNC scope lead to a dual banana plug for connection to a digital multimeter to provide hands-free testing in controlled voltage environments. Required when adapting a shielded BNC cable, found on high-end low current clamps such as the Fluke 80i-110S AC/DC Current Clamp, to a digital multimeter.

- Voltage range: up to 500 V ac rms
- 4 mm (0.16 in) banana plug is nickel-plated, beryllium copper for low contact resistance

### **BP881 BNC to Male Double Stacking Banana**

Easily connects a digital multimeter to a BNC patch cord to provide hands-free testing in controlled voltage environments. This adapter connects accessories that have a male BNC output.

- Voltage range: up to 500 V ac rms
- 4 mm (0.16 in) banana plug is nickel-plated, beryllium copper for low contact resistance

### TL28A Automotive Test Lead Set

Silicone-insulated test leads (red, black) with large, solid copper alligator clips with 12.7 mm (0.5 in) opening and serrated teeth. Also includes a large piercing needle within the jaws for penetrating larger gauge wires.

- 1.5 m (60 in) test leads
- Safety rating: CAT I 30 V, 10 A

### TL82 Automotive Pin and Socket Adapter Set

This collection of male and female adapters provides firm connection to pin-and-socket connectors. Useful when making voltage, frequency, duty cycle, or resistance measurements and when measuring current in series in the circuit. Rated to 60 V dc. Set includes:

- Two retractable shrouded test leads (red, black) 1.2 m (48 in)
- Eight pin-and-socket adapters with flexible tips (red, black) in the following sizes:
  - -Size 22 contact 0.76 mm (0.03 in), rated 5 A
  - -Size 20 contact 1.02 mm (0.04 in), rated 7.5A
  - -Size 16 contact 1.60 mm (0.063 in), rated 13 A
  - -Size 12 contact 2.36 mm (0.093 in), rated 23 A













### TLK281 SureGrip™ Automotive Test Lead Kit

This complete set of test and measurement accessories is designed for automotive specialists. Sharp stainless steel probes can be used to contact the wire conductor or pinpoint tests on a circuit or relay while the large-jaw alligator clips ensure a good ground on the engine or connection to battery terminals. Also includes silicone-insulated test leads and a convenient case. Rated to 60 V dc. Kit includes:

- TP81 Insulation Piercing Clip Set
- TL224 SureGrip™ Insulated Test Leads
- TP220 SureGrip™ Industrial Test Probes
- AC220 SureGrip™ Alligator Clips
- AC285 SureGrip<sup>™</sup> Alligator Clips
- · Soft case

### TLK282 SureGrip™ Deluxe Automotive Test Lead Kit

This kit includes everything in the TLK281 Kit plus a few extras. The back probe pins slide past weather-pack connectors on fuel injectors, TPS, and MAP sensors. A hook probe with plunger actuation allows quick connection to pins or exposed conductors. Kit includes:

- TP81 Insulation Piercing Clip Set
- TP40 Automotive Back Probe Pins (five)
- TL224 SureGrip™ Insulated Test Leads
- TP220 SureGrip™ Industrial Test Probes
- AC220 SureGrip™ Alligator Clips
- AC285 SureGrip™ Alligator Clips
- AC280 SureGrip™ Hook Clips
- · Soft case
- Rated to 60 V dc

### **TP40 Automotive Back Probe Pins**

Flexible and formable 31.75 mm (1.25 in) pins provide an easy connection past weather-pack seals to connector conductors. These five pins are a must-have for fuel injectors, TPS, and MAP sensors, as well as for any under-hood or under-vehicle connector with weather-pack seals.

- 4 mm (0.16 in) banana jack accepts digital multimeter and banana jack leads
- Easily connects to modular leads such as the TL224
- Rated to 60 V dc

### TP81/TP82 Insulation Piercing Clip Set

Two stainless steel probes (red, black) pierce insulation on 14, 16 and 18 gauge wire. Needle depth can be controlled to minimize insulation damage. Essential for use under hood or under dash. Can be used on fuel injectors or sensors while providing complete insulation to grounding. Probe connects to a banana jack that accepts all digital multimeter and banana jack leads (such as the TL224 SureGrip™ Insulated Test Leads).

- TP1 has non-rotating 4 mm (0.16 in) banana jack to prevent leads from tangling
- Rated to 60 V dc
- TP82 is for use with test leads with 2 mm probes

### TP84 Oxygen Sensor Insulation Piercing Clip

Long, piercing probe extends the reach into a hot engine and keeps hands away from the exhaust manifold. The insulated probe protects it from burning on a hot manifold. Probe connects to a banana jack that accepts all digital multimeter and banana jack leads.

- Convenient, non-rotating 4 mm (0.16 in) banana jack prevents leads from tangling
- Probe length: 30 cm (12 in)
- · Rated to 60 V dc

### TP88 Rigid Back Probe Pins

Better than a test probe alone, these rigid back probe pins easily pass between a weather-pack seal and wire. A sharp point ensures good contact to the electrical connector, and insulation protects the pin from shorting to other wires.

- Slides onto 2 mm (0.08 in) test probes
- Probe length: 51 mm (2 in)
- Rated to 60 V dc

### RPM80 Inductive Pick-Up/External Trigger

- Provides RPM measurement capability when clipped on spark plug wire
- For use with Fluke 88 Series and 78 Series DMMs









### Specialty products

### Compatibility

Model number	PV350 (pressure)	FOM (fiber optic)	CO-210	80K-6, 80K-15, 80K-40
10/11/12/ 12B/16/18	•	•	•	dc only
110/111/112	•	•	•	dc only
114/115/116/117	•	•	•	dc only
20/70 Series	•	•	•	•
27	•	•	•	•
70/73 III	•	•	•	•
175/177/179	•	•	•	•
80 Series III/83V	•	•	•	•
87/89 IV	•	•	•	•
83 III/83V/88V	•	•	•	•
87V	•	•	•	•
187/189	•	•	•	•
287/289	•	•	•	•
45/8845/8846	•	•	•	dc only
43B	•	•	•	
90 Series	•	•	•	
120 Series	•	•	•	
190 Series	•	•	•	
705/707	•	•	•	
715	•	•	•	
74X Series	•	•	•	
787/789	•	•	•	•
1577/1587	•			

### **Fiber optics**

### **FOM Fiber Optic Meter**

This meter allows testing and maintenance of fiber optic cables without buying a new meter. It plugs directly into any digital multimeter with an mV dc function and a 10 megohm input impedance to quickly and accurately verify fiber optic cable system loss.

- Wave lengths: 1550, 1300, 850 and nm
- Light sources sold separately: see FOS

### FOS-850 and FOS-850/1300 Fiber Optic Light Source

Both of these fiber optics accessories are designed to offer a variety of light sources for testing different cable lengths.

- Wave lengths:
  - -FOS-850: 850 nm; FOS-850/ 1300 850 and 1300 nm
- Light output:
  - -FOS-850: 850 nm
  - -FOS-850/1300: 850 nm and 1300 nm

### FLUKE ®



### 87-Retrofit kit







### Miscellaneous

### PV350 Pressure Vacuum Module

Single unit allows digital multimeters to make both pressure and vacuum measurements. Ideal for HVAC and automotive environments. Compatible with digital multimeters with mV measuring capability.

- Transducer sealed in 316 stainless steel compatible with variety of liquids and gases
- Vacuum measurement: to 76 cm (29.9 in) Hg
- Pressure measurement: to 3447 kPa (500 psig)

### 87-RETROFIT Kit for Fluke 83, 85, 87 III, 787 Meters

This inclusive kit refurbishes any Fluke 80 Series digital multimeter. Kit includes:

- · Meter holster
- Meter display upgrade kit
- TL71 Premium Test Lead Set
- AC72 Alligator Clip Set
- F1 and F2 replacement fuses
- MC6 MeterCleaner™ Wipes

### MC6 and MC50, MeterCleaner™ Wipes, 6-Pack and 50-Pack

Pre-moistened, industrialstrength wipes remove dirt, oil, and grease from meters. Individually packaged, each wipe easily cleans one meter and is safe on rubber and plastic.

 Non-toxic and safe for the environment

### SV225 Stray Voltage Adapter

Stray voltage can appear in electrical installations, due to the capacity between wires. This may result in erroneous readings on high impedance meters. The SV225 solves this without compromising safety.

- On energized wires, the meter will indicate the real voltage
- On non-energized circuits the meter will read close to zero (even if there are stray voltages)
- Can be used on all meters with standard input spacing
- Safety rating: CAT III 1000 V, CAT IV 600 V

Note: This adapter should not be used on low-voltage control circuits or where the circuit under test could be adversely-affected by this low impedance load. The adapter is designed to handle continuously-applied power system voltages without damage. However, this adapter can be used intermittently to determine whether a circuit is energized.

### Did you know?

When measuring electrical installations, a voltage may appear even if the wires are non-energized. This is called stray or "ghost" voltage and is caused by the capacity between wires in close proximity. This voltage reading may be as high as 50 % of the nearby energized voltage. Although stray voltage doesn't carry energy or current flow, it does generate a "false" reading because of the very high impedance input of the meter. That's an obvious safety problem: is the circuit live, or not? Technicians working in ghost voltage environments need lower impedance across the input terminals of the meter. The solution is the TL225 SureGrip™ Stray Voltage Adapter, also available in a kit (see page 17).

For more information on ghost voltage, visit www.fluke.com/stray-voltage.

### TLS430 Test Leads and Alligator Clips (4 black, 1 green).....17 **TP1** Slim Reach™ Test Probes...... 12 also see TL223 SureGrip™ Electrical Test Lead Set......16 TP165X Remote Control Probe....... 9 TP2 Slim Reach™ Test Probes...... 12 ndex by model numbe **TP220** SureGrip™ Industrial Test Probes ...... 12 also see L215 SureGrip™ Kit with Probe Light and Probe Extender... 37 also see T5 Starter Kit.....17 also see TL220 SureGrip™ Industrial Test Lead Set ......16 also see TL225 SureGrip™ Stray Voltage Adapter Test Lead Kit.......17 also see TLK-220 SureGrip™ Industrial Test Lead Kit......16 also see TLK-225 SureGrip™ Master Accessory Set ......16 also see TLK281 SureGrip™ Automotive Test Lead Kit...... 41 also see TLK282 SureGrip™ Deluxe Automotive Test Lead Kit... 41 also see TLK289 Industrial Master Test Lead Set...... 15 TP38 Slim Reach™ Test Probes..... 12 **TP4** Slim Reach™ Test Probes...... 12 **TP40** Automotive Back Probe Pins (five) ...... 41 also see TLK282 SureGrip™ Deluxe Automotive Test Lead Kit... 41 TP74 Lantern Tip Test Probes...... 12 TP80 Electronic Test Probes.......... 12 **TP81** Insulation Piercing Clip Set ...... 41 also see TLK281 SureGrip™ Automotive Test Lead Kit...... 41 also see TLK282 SureGrip™ Deluxe Automotive Test Lead Kit... 41

Test Lead Set ...... 15

**TLK282** SureGrip™ Deluxe

TLK289 Industrial Master

TLK290 Flexible Socket

L
<b>L200</b> Probe Light
also see L210 Probe Light Kit 36
also see L211 Probe Light Kit 37
also see L215 SureGrip™ Kit with
Probe Light and Probe Extender 37
<b>L205</b> Mini Hat Light36
L206 Deluxe LED Hat Light36
L207 High Intensity Light
with Collector's Cap37
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Type K thermocouple clamps securely to pipes for fast temperature and superheat measurements.

> For more information, see page 21





### TPAK ToolPak™

This meter-hanging solution uses a magnet, clip, and strap to hang a meter from metallic surfaces, freeing both hands for conducting

For more information, see page 35



### C550 Tool Bag

Rugged, weather-resistant tool bag with zippered top, 25 inside pockets, steel-reinforced frame, and carrying straps.

For more information, see page 32





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