

# General Accessories

## Power Supply & Oscilloscope Probes



### TLPWR1 High Current Premium Test Lead Accessory

High quality red and black cable with externally braided wrap with large fork-type spade connectors for connecting to high current power supplies or DC loads.

- Length: 2 m
- Rated current: 60 A
- Gauge: 8 AWG
- Connector inner diameter: 8 mm (approximate)
- Connector outer width: 15 mm (approximate)
- Wire material: flexible silicon jacket



### CC545 General Purpose Power Supply Accessory Kit

This kit provides everything needed to put a bench power supply to work. The kit includes 3 high capacity test leads with retractile sleeve plugs. Rated at 600 V CAT II and 36 A, the leads provide safe connection to either standard or sheathed jacks while its silicone jacket wire stays flexible under all conditions.

- High capacity retractable sheath silicone jacketed leads
- Extra-large insulated alligator clips
- Black, red and green components
- Storage case

Description	Qty.	IEC rating	Max current
Retractable lead, 100 cm	*3	600 V CAT II	36 A
6/4mm spade lug adapter	*3	33 Vdc/ 70 Vac	36 A
BNC cable assembly, 100 cm	1	500 Vrms	3 A
BNC female to double banana plugs	1	500 Vrms	3 A
Banana plug adapter	*3	33 Vdc/ 70 Vac	36 A
BNC male to double binding posts	1	500 Vrms	3 A
Insulated alligator clip	*3	600 V CAT IV	36 A

\*Colors: Black, red & green



### TLPS Power Supply Accessory Kit

This accessory kit combines safety and functionality. A must have for anyone who uses a power supply, this kit is ideal for use with power supplies in educational, service and maintenance, and manufacturing applications.

- Medium and large insulated alligator clips
- Black and red components
- Sense lead included

Description	Qty.	IEC Rating	Max current
Retractable leads, 120cm	*2	600 V CAT II	25 A
6/4mm Spade lug adapters	*2	33 VDC/ 70 VAC	36 A
Standard alligator clips	*2	300 V CAT I	3 A
4mm Banana plug adapters	*2	33 VDC/ 70 VAC	36 A
Insulated alligator clips	*3	600 V CAT IV	36 A
Sense lead pair, 1 m	*1	33 VDC/ 70 VAC	3 A

\*Colors: Black & Red

### TL 5A & TL 30 Power Supply Leads



TL 5A



TL 30

Description	Qty.	IEC rating	Max current	Model
Leads, 4 mm banana plug leads, 100 cm	*2	33 VDC/ 70 VAC	5 A	TL 5A
Cables, #10 lug to battery clip, 75 cm	*2	33 VDC/ 70 VAC	30 A	TL 30

\*Colors: Black & Red

### CP62 300 kHz AC/DC Oscilloscope Current Clamp Probe

The CP62 current probe allows a general purpose oscilloscope to display AC and DC current signals up to 100 A Peak (70 A RMS). The CP62 current probe can also make AC and DC measurements with a multimeter by using the recommended accessory TL62 (BNC-to-banana) plug adapter.

- 50 mA to 100 Apk
- DC to 300 kHz



# General Accessories

## Oscilloscope Probes



### PR-60 Active Differential Probe

Allows for safe and accurate floating measurements with your standard analog or digital oscilloscope.

#### Applications

- Switching power supply designs
- Motor drive design
- Electronic ballast design

Specifications	PR-60
Bandwidth	25 MHz (-3 dB)
Attenuation ratio	x10/x100
Accuracy	±2%
Rise time	14 ns
Input impedance	4 MΩ/10 pF each side to ground
Input voltage	
Max. differential	±700 V (DC+Peak AC)
Max. common mode	±700 V (DC+Peak AC)
Output voltage	
Max. amplitude	±7 V (into 2 kΩ load)
Offset (Typical)	≤±5 mV, -10° to 40° C
Noise (Typical)	1.5 to 2 mV
Source impedance	1 Ω @ 1 kHz 8 Ω @ 1 MHz
CMRR	
50Hz	86 dB
20kHz	66 dB
200kHz	56 dB
Probes	Sprung hooks (B/R)
Length of input lines	45 cm
Operating temperature	14° to 104°F (-10° to 40°C)
Power requirements	4 x AA batteries
Certification	IEC61010-1 CATIII

### Passive Oscilloscope Probes

High bandwidth, high impedance 10x passive voltage probe with 10 MΩ input impedance. All probes are RoHS (2002/95/EC) compliant.



Specifications	PR150B	PR250B	PR500B	PR2000B
Type	5 mm Passive Voltage			
Bandwidth	17/150 MHz	250 MHz	500 MHz	200 MHz
Attenuation	1x/10x	10x	10x	100x
Input impedance	1/10 MΩ	10 MΩ	10 MΩ	100 MΩ
Input capacitance	≈45/12 pF	≈12 pF	≈10 pF	≈5 pF
Rise time	20/2.3 ns	1.4 ns	0.7 ns	1.8 ns
IEC rating	300 V CAT II	300 V CAT II	300 V CAT II	2,000 V CAT I
Compensation	10-30 pF	10-30 pF	6-22 pF	10-30 pF
Cable length	1.2 m			
Attenuation accuracy	-	-	-	6%
Voltage coefficient (VCR)	-	-	-	≤30 ppm/V
Operating temperature	0° to +50° C			
Humidity	85% RH or less (at 35° C)			

### PR 32A RF Detector Probe



Specifications	PR 32 A
Bandwidth	100 kHz - 950 MHz
Accuracy	±3 dB
Voltage	200 V
HF voltage	50 Veff
Actuating Voltage	250 mV
Input capacitance	5 pF
Cable length	1.2 m
Body color	Black

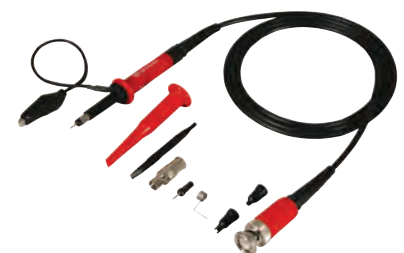
### General Purpose Passive Probes

This full line of probes increases the versatility of your oscilloscope with both fixed and switchable attenuation. Each probe includes a full accessory kit with a sprung hook, replacement tip and BNC adapter. All models are compliant to IEC61010-031.

Specifications	Passive probes			High voltage (passive)	
	PR 33A	PR 37 AG	PR 37AR	PR 100A	PR-55
Bandwidth (MHz)	15/90	6/150	6/150	250	50
Attenuation	x1/x10	x1/x10/REF	x1/x10/REF	x100	x1000
Input impedance R(MΩ)	1/10	1/10	1/10	100	100
Capacitance (pF)	46/16	100/15	100/15	6.5	1
Voltage (VDC+AC max)	600	600	600	1,200	10,000
Compensation (pF)	10-35	10-35	10-35	10-35	10-30
Cable length	1.2 m	1.2 m	1.2 m	1.2 m	2.0 m



Model PR-55



Model PR 37AR

# General Accessories

## Signal Interconnect Kits



### CC 510 General Purpose Function Generator Kit

This kit provides a range of BNC and N Type coaxial interconnection for basic function / arbitrary waveform generators use. All components feature standard BNC or N Type interfaces with 50 Ω impedance and gold plated center contacts to ensure accurate repeatable measurements. The kit is provided in a convenient foam lined storage case for easy selection and use.

Description	Qty.	Frequency range	Max. VSWR
BNC cable assembly, 100 cm	2	DC - 1 GHz	1.20:1 @ 1 GHz
BNC feed-thru terminator, 2 W	1	DC - 1 GHz	1.20:1 @ 1 GHz
BNC tee, female-male-female	1	DC - 4 GHz	N/A
BNC female to double banana plugs	2	N/A	N/A
BNC female to N type male	1	DC - 4 GHz	1.30:1 @ 4 GHz
BNC female to N type female	1	DC - 4 GHz	1.30:1 @ 4 GHz
BNC attenuator, 20 dB (10x) 2 W	1	DC - 4 GHz	1.25:1 @ 4 GHz



### TLFG Function Generator Accessory Kit

The kit provides convenience and functionality to get a user up and running quickly. The kit eliminates the time consuming start-up task of collecting cables and adapters.

Description	Qty.	Frequency range	Max. VSWR
BNC cable assembly, 120 cm	2	DC - 1 GHz	1.20:1 @ 1 GHz
BNC (f) breakout w/miniature alligator clips	1	DC - 1 GHz	N/A
BNC (f) breakout w/Ø.031 sockets	1	DC - 1 GHz	N/A
MiniFlex IC clips, black & red pair	*2	N/A	N/A
MicroFlex IC Clips, black & red pair	*2	N/A	N/A
BNC tee, female-male-female	1	DC - 4 GHz	N/A
BNC female to N type male	1	DC - 4 GHz	1.30:1 @ 4 GHz

\*black & red pair

### CT 2701 General Purpose Universal Coaxial Adapter Kit

This kit provides a convenient solution for most interconnection needs. The included 6 universal adapters allows assembly of hundreds of different configurations: male-to-male, female-to-female, male-to-female, in-series and between-series for BNC, TNC, N-Type, F, RCA, SMA, UHF and Mini-UHF.



- Convenient interconnection kit
- BNC, TNC, N, SMA, RCA, F, SMA & Mini-UHF connectors
- Tarnish resistant nickel finish
- Gold plated center contacts
- Zippered storage case

Description	Qty.
Universal adapters	6
BNC male adapters	2
BNC female adapters	2
F male adapter	1
F female adapter	1
N Type male adapters	2
N Type female adapters	2
RCA male adapter	1
RCA female adapter	1
SMA male adapter	1
SMA female adapter	1
TNC male adapters	2
TNC female adapters	2
UHF male adapters	2
UHF female adapters	2
Mini-UHF male adapter	1
Mini-UHF female adapter	1

### CC500 General Purpose BNC & N Type Adapter Kit

This general purpose BNC & N type adapter kit provides a comprehensive range of in-series and between-series BNC and N type coaxial adapters for basic RF testing and troubleshooting needs.



- 12-piece kit
- BNC & N type 50 Ω connectors
- Gold plated center contacts
- Storage case

Description	Qty.	Frequency range	Max. VSWR
BNC tee female-male-female	1	DC - 4 GHz	N/A
N type female-female	1	DC - 8 GHz	1.30:1 @ 8 GHz
N type male-male	1	DC - 8 GHz	1.30:1 @ 8 GHz
N type tee female-male-female	1	DC - 8 GHz	N/A
BNC female to N type male	1	DC - 4 GHz	1.30:1 @ 4 GHz
BNC male to N type female	1	DC - 4 GHz	1.30:1 @ 4 GHz
BNC female-female	1	DC - 4 GHz	1.30:1 @ 4 GHz
BNC male-male	1	DC - 4 GHz	1.30:1 @ 4 GHz
BNC female to N type female	1	DC - 4 GHz	1.30:1 @ 4 GHz
BNC Tee female-female-female	1	DC - 4 GHz	N/A
N type tee female-female-female	1	DC - 8 GHz	N/A
N type right-angle male-female	1	DC - 8 GHz	1.35:1 @ 8 GHz



# General Accessories

Multimeters



## PR 28A 40 kV High Voltage DMM Probe

For voltage measurements above the specifications of general purpose probes.

Specifications	PR 28A
Attenuation	x1000
Voltage (AC)	20 kV
Voltage (DC)	40 kV
Bandwidth	60 Hz
Input impedance	1000 MΩ
Accuracy (AC & DC)	±3%
Cable length	1.2 m



## TL-50B Maxi-Pro DMM Kit

Complete accessory kit for all your testing needs. Includes soft, flexible silicone lead wire for easy movement.

- IEC61010-031 compliant
- Silicone lead wire length (1.5 m)
- Tri-fold velcro pouch

Description	TL-50B		
4 mm straight to right-angle silicone leads, 1.5 m	1000 V	CAT III	12 A
Probe bodies w/Ø2 mm tip	1000 V	CAT III	36 A
Pincer style clips	1000 V	CAT III	6 A
Alligator clips	300 V	CAT I	3 A
Spade lug adapters	42 V (1000 V)	-	36 A
Banana plug adapters	42 V (1000 V)	-	36 A
Fully insulated alligator clips	1000 V	CAT III	20 A

## TL 8 Surface Mount Tweezers

- Two conductor leads
- 400 Vrms, 1 A



## TL500B High Performance Bench DMM Accessory Kit

This kit of accessories was assembled to facilitate requirements by high-performance bench digital multimeters (DMMs) users. All the most popular accessories in one kit. The kit offers MiniProbe test probe, with spring-loaded tips for fine probing; MiniPRO and MiniFlex test clips for small and micro connections; and for those larger test points, both spade lug and banana plug adapters, two pairs of test leads for 4-wire measurements or calibration hookups, an insulated BNC male to sheathed banana jack adapter, and an insulated SMD tweezer set for surface-mount component testing.

- Silicone jacketed test lead wire
- MiniProbe w/spring loaded stainless steel tips
- Packaged in plastic case
- RoHS (2002/95/EC)

Qty.	Description	Color
(4)	Test lead 4 mm sheathed P-RaP silicon 0.75, 100 cm	(2) black, (2) red
(2)	Spring tip MiniPRO - 4 mm jack	(1) black, (1) red
(1)	Insulated BNC male adapter - 4 mm safety jacks	-
(2)	Adapter - 4 mm banana plug to jack	(1) black, (1) red
(2)	MiniFlex clip - 4 mm jack-silicon 0.40, 10 cm	(1) black, (1) red
(2)	Adapter 6 mm spade 4 mm jack	(1) black, (1) red
(2)	Lead MiniPRO-J-PVC 0.40, 10 cm	(1) black, (1) red
(1)	Tweezer test lead set- 4 mm P, w/PVC pouch	-



## TL37 Red and Black CAT III 1000 V (CAT IV 600 V) Test Leads

Right angled sheathed banana replacement 10A test leads for digital multimeters. With tip cap on, they are rated to CAT III 1000V, CAT IV 600V, with tip cap off, they are CAT II 1000V.

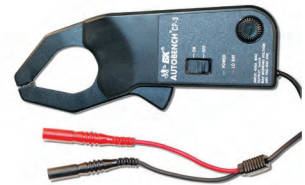


## TL 130B General Purpose DMM Kit

If you need only one basic accessory kit for your meter, this is the one. Attach probes or clips to the sheath plug to complete your test. Soft, flexible silicone leads make movement easy. Kit is voltage and current rated for electronic or electrical applications.

- IEC61010-2-031 compliant
- Silicone lead wire length (1.5 m)
- Tri-fold velcro pouch

Description	TL 130B		
4 mm straight to right-angle silicone leads, 1.5 m	1000 V	CAT III	12 A
Probe bodies w/Ø2mm tip	1000 V	CAT III	36 A
Alligator style clips	1000 V	CAT III	20 A
Alligator clips	300 V	CAT I	3 A



## CP3 DC/AC Current Clamp

- Converts any DMM to a current clamp
- Measures current without disconnecting circuit under test
- Measures to 400 A DC or AC
- Outputs 1 mV per Amp, operates on 2 V range of any DMM

Specifications	CP 3
(Accuracy specified at 18° to 28°C)	
Current range	2 A to 400 A, DC or AC
Frequency Response (AC)	50 Hz - 400 Hz
Accuracy	±(2% reading + 2 A)
Input resistance	10 kΩ min.
Maximum conductor size	30 mm
Power requirement	9 V battery, NEDA 1604
Battery life	100 hr typical
Operating temperature	0° to 40°C, <70% RH
Storage temperature	-20° to + 70°C, <80% RH