

CURRENT MEASUREMENT PROBES

AC/DC MICROPROBES

300 V
CAT II



MODELS K100 & K110

Ultra-compact AC/DC microprobes for high-accuracy low-current measurement — designed for circuits and components where even a small clamp is too large.



MODEL K100

MODEL K110



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FEATURES

- Measures both AC and DC currents simultaneously with no mode switching required — output signal is proportional to total current (AC + DC)
- Measures from 0 up to 3 A_{AC} / ± 4 A_{DC} (Model K100) or 300 mA_{AC} / ± 400 mA_{DC} (Model K110), with typical resolution down to 100 μ A (Model K100) and 50 μ A (Model K110) — ideal for detecting leakage, standby, and control currents
- High output signal of 1 mV/mA (Model K100) or 10 mV/mA (Model K110) with low output noise for clean, accurate display of low-amplitude waveforms on oscilloscopes and DMMs
- Jaw opening of just 0.18 in (4.5 mm) allows measurement on fine wires and component leads not accessible by any other clamp-type probe
- Red LED overload indicator and green LED battery/power status; 9 V battery with 20-hour life; simple plug-in operation with no range or mode switching

PRODUCT INCLUDES

CAT. #1200.67 AC/DC MICROPROBE MODEL K100

CAT. #2111.73 AC/DC MICROPROBE MODEL K110

Electronic plug-in module with an attached current probe, 9 V battery, and user manual.

ACCESSORIES

CAT. #1017.45

Adapter — 4 mm Non-Insulated For Safety Leads

CAT. #2118.46

Adapter — Banana (Female) - BNC (Male)



See aemc.com for Accessories/Replacements

MODELS	K100	K110
ELECTRICAL		
AC Range	(0 to 3) ARMS	(0 to 300) mARMS
DC Range	0 to ± 4 A	0 to ± 400 mA
Output Signal	1 mV/mA	10 mV/mA
Resolution	Mfg. Before 04/01/24 DC: 50 µA typical AC: 100 µA typical	
	Mfg. After 04/01/24 DC: 100 µA typical AC: 200 µA typical	Mfg. After 04/01/24 DC: 50 µA typical AC: 150 µA typical
Typical Accuracy	Mfg. Before 04/01/24 DC: 1 % Reading ± 200 µA AC: 2 % Reading ± 200 µA	Mfg. Before 04/01/24 DC: (1 to 450) mA: 0.5 % Reading ± 150 µA AC: 0.8 % Reading ± 200 µA
	Mfg. After 04/01/24 DC: 1 mA to 2 A: 1 % Reading ± 300 µA (2 to 4) A: 2 % Reading ± 500 µA AC: 2 % Reading ± 500 µA	Mfg. After 04/01/24 DC: (1 to 200) mA: 0.5 % Reading ± 150 µA (200 to 400) mA: 1.5 % Reading ± 200 µA AC: 1 % Reading ± 300 µA
Frequency Range / Bandwidth	DC to 2 kHz	DC to 1.2 kHz
MECHANICAL		
Max Conductor Size	Ø 0.18 in (4.5 mm)	
Output Termination	4 mm safety banana plugs	
POWER		
Power Supply	9 V alkaline battery	
Battery Life	20 h	
SAFETY		
Safety Rating	300 V CAT II	
Ingress Protection	IP40	
COMPATIBILITY		
Compatible Instruments	DMMs, Oscilloscopes	

Consult factory for NIST Calibration prices.

CURRENT MEASUREMENT PROBES

GENERAL PURPOSE PROBES SELECTION CHART

Series	Model	Ratio	Measurement Range		Output Signal		Phase Shift**	Maximum Conductor Size		Output Connection	CAT. #
			AC	DC	Current	Voltage		Ø Cable	Bus Bar		
	MN01	1000:1	(2 to 150) A	—	1 mA/A*	—	N / A	0.39 in (10 mm)	N / A	Leads	2129.17
	MN02	1000:1	50 mA to 100 A 50 mA to 90 A	—	1 mA/A*	—	N / A	0.39 in (10 mm)	N / A	Leads	2129.20
	MN05	—	5 mA to 10 A (1 to 100) A	—	—	1 mV/mA 1 mV/A	N / A	0.39 in (10 mm)	N / A	Leads	2129.19
	MN09	—	(1 to 150) A	—	—	100 mVDC / A _{AC}	N / A	0.39 in (10 mm)	N / A	Leads	2129.21
	MN134	—	1 mA to 10 A	—	—	100 mV/A	< 10°	0.39 in (10 mm)	N / A	Leads	2129.22
	MN185	1000:1	50 mA to 120 A	—	1 mA/A	—	< 3.5°	0.47 in (12 mm)	N / A	Jacks	100.185
	MN255	—	(0.1 to 24) A (0.1 to 240) A	—	—	100 mV/A 10 mV/A	< 2.5°	0.78 in (20 mm)	N / A	Leads	2115.81
	MN261	—	(0.1 to 24) A (0.5 to 240) A	—	—	100 mV/A 10 mV/A	< 6°	0.78 in (20 mm)	N / A	BNC	2115.82
	MN291	—	(0.5 to 240) A	—	—	100 mVDC / A _{AC}	N / A	0.78 in (20 mm)	N / A	Leads	2115.84
	MN307	—	10 mA to 12 A	—	—	100 mV/A	< 2.5°	0.78 in (20 mm)	N / A	Leads	2116.23
	MN312	1000:1	(0.1 to 200) A	—	1 mA/A*	—	< 2.5°	0.78 in (20 mm)	N / A	Jacks	2116.24
	MN352	—	(0.1 to 150) A	—	—	10 mV/A	< 2.5°	0.78 in (20 mm)	N / A	Jacks	2116.26
	MN353	—	(0.1 to 150) A	—	—	10 mV/A	< 2.5°	0.78 in (20 mm)	N / A	Leads	2116.27
	MN373	—	(0.01 to 2.4) A (0.1 to 200) A	—	—	1000 mV/A 10 mV/A	< 3°	0.78 in (20 mm)	N / A	Leads	2116.28
	MN375	—	(0.1 to 10) A	—	—	100 mV/A	< 1.5°	0.78 in (20 mm)	N / A	Leads	2115.41
	MN379	—	5 mA to 6 A (0.1 to 120) A	—	—	200 mV/A 10 mV/A	< 4°	0.78 in (20 mm)	N / A	Leads	2153.01
	MN379T	—	5 mA to 6 A (0.1 to 120) A	—	—	200 mV/A 10 mV/A	< 4°	0.78 in (20 mm)	N / A	Lead w/ BNC	2153.02
	SL306	—	5 mA to 1.5 A 50 mA to 60 A	5 mA to 2 A 50 mA to 80 A	—	1 mV/mA 10 mV/A	< 1°	0.46 in (11.8 mm)	N / A	Leads	2153.08
	SL361	—	100 mA a 10 A peak 500 mA a 100 A peak	—	—	100 mV/A 10 mV/A	< 1°	0.46 in (11.8 mm)	N / A	Lead w/ BNC	2153.09
	MD301	1000:1	(2 to 500) A	—	—	1 mVDC / A _{AC}	N / A	1.18 in (30 mm) (2 × 500) kcmil	(2.48 × 0.20 in (63 × 5) mm)	Leads	1201.07
	MD305	1000:1	(1 to 600) A	—	1 mA/A	—	< 1°	1.18 in (30 mm) (2 × 500) kcmil	(2.48 × 0.20 in (63 × 5) mm)	Leads	1201.36
	MD361	1000:1	(1 to 500) A	—	—	1 mV/A	< 3°	1.18 in (30 mm) (2 × 500) kcmil	(2.48 × 0.20 in (63 × 5) mm)	Lead w/ BNC	2153.10

*Output protection for open secondary.

**Phase shift indicated at maximum rating.

Note: Model MN185 are not CE compliant. MN200 & MN300 series are UL approved except MN379.

Consult factory for NIST Calibration price.

CURRENT MEASUREMENT PROBES

GENERAL PURPOSE PROBES SELECTION CHART

SERIES	MODEL	RATIO	MEASUREMENT RANGE		OUTPUT SIGNAL		PHASE SHIFT**	MAXIMUM CONDUCTOR SIZE		OUTPUT CONNECTION	CAT. #
			AC	DC	CURRENT	VOLTAGE		Ø CABLE	BUS BAR		
	MR415	—	(0.5 to 400) A	(0.5 to 600) A	—	1 mV/A	≤ 1.5 °	1.18 in (30 mm)	2 bus bar (1.24 × 0.39) in (31 × 10) mm	5 ft (1.5 m) Lead	1200.80
	MR416	—	(0.5 to 40) A (0.5 to 400) A	(0.5 to 60) A (0.5 to 600) A	—	10 mV/A 1 mV/A	≤ 2.2 ° ≤ 1.5 °	1.53 in (39 mm)	2 bus bar (1.95 × 0.19) in (50 × 5) mm	5 ft (1.5 m) Lead	1200.82
	MR526	—	(0.5 to 100) A (0.5 to 1000) A	(0.5 to 150) A (0.5 to 1400) A	—	10 mV/A 1 mV/A	≤ 2 ° ≤ 1.5 °	1.53 in (39 mm)	2 bus bar (1.95 × 0.19) in (50 × 5) mm	5 ft (1.5 m) Lead	1200.83
	SR601	1000:1	(0.1 to 1200) A	—	1 mA/A*	—	< 0.5 °	2.05 in (52 mm)	(1.95 × 0.19) in (50 × 5) mm	Jacks	2113.43
	SR604	1000:1	(0.1 to 1200) A	—	1 mA/A*	—	< 0.5 °	2.05 in (52 mm)	(1.95 × 0.19) in (50 × 5) mm	Leads	2113.44
	SR651	—	(0.1 to 1200) A	—	—	1 mV/A	< 0.5 °	2.05 in (52 mm)	(1.95 × 0.19) in (50 × 5) mm	Jacks	2113.45
	SR701	1000:1	1 mA to 1000 A	—	1 mA/A*	—	< 0.7 °	2.05 in (52 mm)	(1.95 × 0.19) in (50 × 5) mm	Jacks	2116.29
	SR704	1000:1	1 mA to 1000 A	—	1 mA/A*	—	< 0.7 °	2.05 in (52 mm)	(1.95 × 0.19) in (50 × 5) mm	Leads	2116.30
	SR752	—	(0.1 to 1000) A	—	—	1 mV/A	< 0.7 °	2.05 in (52 mm)	(1.95 × 0.19) in (50 × 5) mm	Leads	2116.32
	SR759	—	1 mA to 1 A 10 mA to 10 A (0.1 to 100) A (1 to 1000) A	—	—	1000 mV/A 100 mV/A 10 mV/A 1 mV/A	< 1 °	2.05 in (52 mm)	(1.95 × 0.19) in (50 × 5) mm	Leads	2116.33
	K100	—	(0 to 3) Arms	0 to ± 4 A	—	1 mV/mA	N / A	0.18 in (4.5 mm)	N / A	Plugs	1200.67
	K110	—	(0 to 300) mArms	0 to ± 400 mA	—	10 mV/mA	N / A	0.18 in (4.5 mm)	N / A	Plugs	2111.73
	LM102	1000:1	50 mA to 200 A	—	1 mA/A*	—	< 3 °	0.63 in (16 mm)	N / A	Leads	2153.04
	LM103	—	(0.1 to 200) A	—	—	1 mV/A	< 3 °	0.63 in (16 mm)	N / A	Leads	2153.05

*Output Protection for open secondary.

**Phase shift indicated at maximum rating.

Note: All SR probes listed on this chart are UL approved, however not all SR series probes are UL approved; please consult factory.

Consult factory for NIST Calibration price.

OUTPUT TERMINATIONS

Lead with BNC

Insulated 6.5 ft (2 m) coaxial cable with insulated BNC connector rated 600 Vrms



Jacks

Two standard safety banana jacks (4 mm)



Leads

Double/reinforced 5 ft (1.5 m) leads with 4 mm safety banana plug



Shrouded Banana Plugs

Two 4 mm safety banana plugs; standard ¾ in (19 mm) spacing



CURRENT MEASUREMENT PROBES

AMPFLEX® AND MINIFLEX® PROBES - SELECTION CHARTS

SERIES	MODEL	RATIO	MEASUREMENT RANGE	OUTPUT SIGNAL	MAXIMUM CONDUCTOR SIZE	CAT. #
	MF 300-10-2-10-HF	—	(30 / 300) A	100 mV/A, 10 mV/A	2.95 in (75 mm)	2126.84
	MF 3000-14-1-1-HF	—	3000 A	1 mV/A	3.93 in (100 mm)	2126.86
	MA114	—	(3 / 30 / 300 / 3000) A	1 mV/mA, 100 mV/A 10 mV/A, 1 mV/A	4 in (101 mm)	2153.41
	300-24-2-10	—	(30 / 300) A	100 mV/A, 10 mV/A	7.48 in (190 mm)	2112.88
	1000-24-1-1	—	1000 A	1 mV/A	7.48 in (190 mm)	2112.39
	1000-24-2-1	—	(100 / 1000) A	10 mV/A, 1 mV/A	7.48 in (190 mm)	2112.98
	1000-36-2-1	—	(100 / 1000) A	10 mV/A, 1 mV/A	11 in (280 mm)	2113.00
	3000-24-1-1	—	3000 A	1 mV/A	7.48 in (190 mm)	2112.46
	3000-36-1-1	—	3000 A	1 mV/A	11 in (280 mm)	2112.48
	3000-24-2-1	—	(300 / 3000) A	10 mV/A, 1 mV/A	7.48 in (190 mm)	2113.05
	3000-48-2-1	—	(300 / 3000) A	10 mV/A, 1 mV/A	15 in (381 mm)	2112.01
	6000-36-2-0.1	—	(600 / 6000) A	1 mV/A, 0.1 mV/A	11 in (280 mm)	2113.21
	30000-24-2-0.1	—	(3000 / 30,000) A	1 mV/A, 0.1 mV/A	7.48 in (190 mm)	2113.33
	24-3001	—	300 A / 3000 A _{AC}	10 mV/A, 1 mV/A	7.48 in (190 mm)	2120.81

Consult factory for NIST Calibration price.

OSCILLOSCOPE & BNC TERMINATED PROBES

MODEL	MEASUREMENT RANGE		OUTPUT SIGNAL VOLTAGE	PHASE SHIFT*	MAXIMUM CONDUCTOR SIZE		OUTPUT CONNECTION
	AC	DC			Ø CABLE	BUS BAR	
 SL361	(0.1 to 100) A		100 mV/A 10 mV/A	< 1.5 °	0.46 in (11.8 mm)	N / A	6.5 ft (2 m) Lead w/BNC
 MN261	(0.1 to 24) A (0.5 to 240) A	—	100 mV/A 10 mV/A	< 2.5 °	0.78 in (20 mm)	N / A	6.5 ft (2 m) Lead w/BNC
 SR661	(0.1 to 12) A (0.1 to 120) A (1 to 1200) A	—	100 mV/A 10 mV/A 1 mV/A	< 1 °	2.05 in (52 mm)	(1.96 x 0.19) in (50 x 5) mm	6.5 ft (2 m) Lead w/BNC
 MN251T MN379T	(0.5 to 240) A	—	1 mV/A	≤ 2.5 °	0.78 in (20 mm)	(0.78 x 0.19) in (20 x 5) mm	10 ft (3 m) Lead w/BNC
	(0.005 to 6) A (0.1 to 120) A	—	200 mV/A 10 mV/A	≤ 4 ° ≤ 2.2 °	0.78 in (20 mm)	(0.78 x 0.19) in (20 x 5) mm	10 ft (3 m) Lead w/BNC
 MH60	(0.5 to 100) A	(0.5 to 100) A	10 mV/A	< 1 °	1.02 in (26 mm)	N / A	6.6 ft (2 m) Lead w/BNC
 MR417	(0.5 to 40) A (0.5 to 400) A	(0.5 to 60) A (0.5 to 600) A	10 mV/A 1 mV/A	≤ 2.2 ° ≤ 1.5 °	1.18 in (30 mm)	2 bus bar (1.24 x 0.39) in (32 x 10) mm	6.6 ft (2 m) Lead w/BNC
 MR527	(0.5 to 100) A (0.5 to 1000) A	(0.5 to 150) A (0.5 to 1400) A	10 mV/A 1 mV/A	≤ 2.2 ° ≤ 1.5 °	1.53 in (39 mm)	2 bus bar (1.96 x 0.19) in (50 x 5) mm	6.6 ft (2 m) Lead w/BNC
 MD361	1 (1 to 500) A	—	1 mV/A	< 3 °	1.18 in (30 mm)	(2.48 x 0.20) in (63 x 5) mm	6.6 ft (2 m) Lead w/ BNC

*Phase shift indicated at maximum rating. Note: All probes are rated 600 V CAT III and CE compliant. Not all models are UL approved; please consult factory.
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