

CURRENT MEASUREMENT PROBES

LM SERIES

MODEL LM102 & LM103

Equipped with high performance magnetic material offering excellent linearity and improved performance

Ideal current measurement tool for use with multimeters, data loggers and power analyzers

SPECIFICATIONS

Patent #1385787 - Mini-Clamp Design

MODELS	LM102	LM103
ELECTRICAL		
Nominal Range	200Aac	
Measurement Range	50mA to 200Aac (1Ω or 10Ω load)	100mA to 200A
Transformation Ratio	1000:1	Voltage Output
Output Signal	1mA/A (200mAac @ 200A)	1mV/A (200mVac @ 200A)
Phase Shift	≤3° ((1 Ω load) ≤6° (10Ω load)	≤3°
Overload	350A continuous @ ≤1kHz 200A continuous @ ≤8kHz	
Frequency Range	48 Hz to 10kHz	
Load Impedance	≤10Ω	≥10kΩ
Open Secondary Voltage	≤30V	—
Output Termination	Double-insulated 5 ft (1.5m) lead with two 4mm safety banana plugs	
MECHANICAL		
Maximum Conductor Size	Ø 0.63" (16mm)	
Dimensions	5.13 x 1.81 x 1.34" (130.4 x 46 x 34mm)	
Weight	Approximately 8.8oz (250g)	
Material	Polycarbonate UL 94	
ENVIRONMENTAL		
Operating Temperature	14° to 122°F (-10° to 50°C)	
Storage Temperature	-40° to 176°F (-40° to 80°C)	
Operating Relative Humidity	0 to 85% RH decreasing linearly above 95°F (35°C)	
SAFETY		
Safety Rating	EN 61010-1, EN 61010-2-031, EN 61010-2-032 600V CAT III, 300V CAT IV Pollution Degree 2	
Ingress Protection	IP20 (EN 60529)	
Double Insulation	Yes	
CE Mark	Yes	



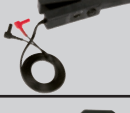
FEATURES

- Clamping diameter 0.63" (16mm)
- Measurement range from 0.05 to 200 Amps
- Over range up to 350 Amps continuous
- 1mA/A output (Model LM102)
- 1mV/A output (Model LM103)
- Clothes pin design allows access to tight places
- Frequency response from 48Hz to 10kHz
- Arrow marker clearly assists in proper orientation for power measurement applications

CATALOG NO.	DESCRIPTION
2153.04	AC Current Probe Model LM102 (200A/1mA/A)
2153.05	AC Current Probe Model LM103 (200A/1mV/A)

CURRENT MEASUREMENT PROBES

GENERAL PURPOSE PROBES SELECTION CHART

Series	Model	Ratio	Measurement Range		Output Signal		Phase Shift**	Maximum Conductor Size		Output Connection	Catalog No.		
			AC	DC	Current	Voltage		Ø Cable	Bus Bar				
	MN01	1000:1	2 to 150A	-	1mA/A*	-	N/A	0.39" (10mm)		Leads	2129.17		
	MN02		50mA to 100A 50mA to 90A			-					2129.20		
	MN03	2 to 100A	-		1mV/A	2129.18							
	MN05	5mA to 10A 1 to 100A	-		1mV/A 1mV/A	2129.19							
	MN103	-	1mA to 10A 1 to 100A		-	1mV/A 1mV/A	<10° <8° <3.5°	0.47" (12mm)			Jacks	1031.02	
	MN106		1000:1		2 to 150A	1mA/A						-	1031.17
	MN114	-	1mA to 10A		-	100mV/A						2110.71	
	MN185	1000:1	50mA to 120A		1mA/A	-						100.185	
	MN213	1000:1	0.5 to 240A	-	1mA/A*	-	<2.5°	0.78" (19.8mm)	N/A	Leads		2115.75	
	MN251	-			-	1mV/A						2115.77	
	MN253				-	10mV/A						2115.79	
	MN255				0.1 to 24A 0.1 to 240A	-						100mV/A 10mV/A	2115.81
	MN291	-			0.5 to 240A	-					100mVdc/Aac	N/A	2115.84
	MN307				10mA to 12A	-					100mV/A	2116.23	
	MN312	1000:1	0.1 to 200A		1mA/A*	-	<2.5°			Jacks	2116.24		
	MN313					-				Leads	2116.25		
	MN352	-	0.1 to 150A		-	10mV/A	Jacks			2116.26			
	MN353				-		Leads			2116.27			
	MN373	-	0.01 to 2.4A 0.1 to 200A		-	1000mV/A 10mV/A				<3°	2116.28		
	MN375		0.1 to 10A		-	100mV/A				<1.5°	2115.41		
	MN379		5mA to 6A 0.1 to 120A		-	200mV/A 10mV/A					2153.01		
		SL206			10mA to 1.5A 50mA to 60A	10mA to 2A 50mA to 80A	-			1mV/mAac/dc 10mV/Aac/dc	<1°	0.46" (11.8mm)	
	MD301	1000:1	2 to 500A	-	-	1mVdc/Aac	N/A	1.18" (30mm) 2 x 500kcmil	2.48 x 0.20" (63 x 5mm)		1201.07		
	MD305		1 to 600A		1mA/A*	-	<1°			1201.36			

*Output Protection for open secondary

**Phase shift indicated at maximum rating

Note: Models MN103, MN106, MN114 & 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	Catalog No.
			AC	DC	Current	Voltage		Ø Cable	Bus Bar		
	MR415	—	0.5 to 400A	0.5 to 600A	—	1mV/A	≤1.5°	1.18" (30mm)	2 bus bar 1.24 x 0.39" (31.5 x 10mm)	5 ft (1.5m) Lead	1200.80
	MR416		0.5 to 40A 0.5 to 400A	0.5 to 60A 0.5 to 600A		10mV/A 1mV/A	≤2.2° ≤1.5°				1200.82
	MR525		0.5 to 1000A	0.5 to 1400A		1mV/A	≤1.5°	1.53" (39mm)	2 bus bar 1.96 x 0.19" (50 x 5mm)		1200.81
	MR526		0.5 to 100A 0.5 to 1000A	0.5 to 150A 0.5 to 1400A		10mV/A 1mV/A	≤2° ≤1.5°				1200.83
	SR600	1000:1	0.1 to 1000A	—	1mA/A	—	<0.5°	2.05" (52mm)	1.96 x 0.19" (50 x 5mm)	Jacks	2113.42
	SR601				1mA/A*					Jacks	2113.43
	SR604				1mA/A*					Leads	2113.44
	SR634	250:5 500:5 1000:5	1 to 250A 1 to 500A 1 to 1000A		20mA/A 10mA/A 5mA/A*	<1°	Jacks			2113.48	
	SR651	—	0.1 to 1000A		—	1mV/A	<0.5°			Jacks	2113.45
	SR701	1000:1	1mA to 1000A		1mA/A*	—	<0.7°			Jacks	2116.29
	SR704									Leads	2116.30
	SR752	—	0.1 to 1000A		—	1mV/A	<1°			Leads	2116.32
	SR759		1mA to 1A 10mA to 10A 0.1 to 100A 1 to 1000A			1000mV/A 100mV/A 10mV/A 1mV/A				2116.33	
	K100	—	0.1mA to 3A	0.05mA to ±4A	—	1mV/mA	N/A	0.18" (4.5 mm)	N/A	Plugs	1200.67
	K110		0.1mA to 300mA	0.05mA to ±450mA		10mV/mA				2111.73	
	LM102	1000:1	50mA to 200A	—	1mA/A*	—	<3°	0.63" (16 mm)		Leads	2153.04
	LM103	—	0.1 to 200A		—	1mV/A				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 (2m) coaxial cable with insulated BNC connector rated 600Vrms



Jacks

Two standard safety banana jacks (4mm)



Leads

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



Shrouded Banana Plugs

Two 4mm safety banana plugs; standard 3/4" (19mm) spacing



AMPFLEX® AND MINIFLEX® PROBES - SELECTION CHARTS

SERIES	MODEL	RATIO	MEASUREMENT RANGE	OUTPUT SIGNAL	MAXIMUM CONDUCTOR SIZE	CATALOG NO.
	MF 300-6-2-10-HF	—	30A / 300A	100mV/A, 10mV/A	1.77" (45mm)	2126.83
	MF 300-10-2-10-HF	—			2.95" (70mm)	2126.84
	MA114	—	3A / 30A / 300A / 3000A	1mV/mA, 100mV/A 10mV/A, 1mV/A	4" (101mm)	2153.41
	300-24-2-10	—	30A / 300A	100mV/A, 10mV/A	7.48" (190mm)	2112.88
	1000-24-1-1	—	1000A	1mV/A		2112.39
	1000-24-2-1	—	100A / 1000A	10mV/A, 1mV/A		2112.98
	1000-36-2-1	—			11" (290mm)	2113.00
	3000-24-1-1	—	3000A	1mV/A	7.48" (190mm)	2112.46
	3000-36-1-1	—			11" (290mm)	2112.48
	3000-24-2-1	—	300A / 3000A	10mV/A, 1mV/A	7.48" (190mm)	2113.05
	3000-36-2-1	—			11" (290mm)	2112.00
	3000-48-2-1	—			15" (390mm)	2112.01
	6000-36-2-0.1	—	600A / 6000A	1mV/A, 0.1mV/A	11" (290mm)	2113.21
	30000-24-2-0.1	—	3000A / 30,000A			2113.33
	24-3001	—	300A / 3000AAC	10mV/A, 1mV/A	7.48" (190mm)	2120.81

Consult factory for NIST Calibration price

OSCILLOSCOPE & BNC TERMINATED PROBES

MODEL	MEASUREMENT RANGE		OUTPUT SIGNAL	PHASE SHIFT*	MAXIMUM CONDUCTOR SIZE		OUTPUT CONNECTION
	AC	DC			Ø CABLE	BUS BAR	
 SL261	100mA to 10A 1 to 100A		100mV/A 10mV/A	<1.5°	0.46" (11.8mm)	N/A	6.6 ft (2m) Lead w/BNC
 MN261				<2.5°	0.78" (19.8mm)		
 SR661			100mV/A 10mV/A 1mV/A	<1°	2.05" (52mm)	1.96 x 0.19" (50 x 5mm)	
 MN251T MN379T			1mV/A	<2.5°	0.78" (20mm)	0.78" (20mm)	10 ft (3m) Lead w/BNC
	0.005 to 6A		200mV/A	<4°			
	0.1 to 120A		10mV/A	<2.2°			
 MH60	0.5 to 100A	0.5 to 100A	10mV/A	<1°	1.02" (26mm)	N/A	6.6 ft (2m) Lead w/BNC
 MR417	0.5 to 40A 0.5 to 400A	0.5 to 60A 0.5 to 600A	10mV/A 1mV/A	≤2.2° ≤1.5°	1.18" (30mm)	2 bus bar 1.24 x 0.39" (31.5 x 10mm)	
 MR527	0.5 to 100A 0.5 to 1000A	0.5 to 150A 0.5 to 1400A		≤2.2° ≤1.5°	1.53" (39mm)	2 bus bar 1.96 x 0.19" (50 x 5mm)	

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