

CURRENT MEASUREMENT PROBES

MN SERIES AC CURRENT PROBES

MN200 SERIES

General purpose AC current probe with voltage output, for use with DMMs or with measuring instruments with voltage input

Permits measurement or recording of current with instruments that do not have current ranges. Output signal proportional to current measured

SPECIFICATIONS

MODELS	MN213	MN251	MN253	MN255	MN291
ELECTRICAL					
Nominal Range	200Aac			20Aac; 200Aac	200Aac
Measurement Range	0.5 to 240Aac		0.1 to 40Aac;	0.1 to 24Aac; 0.1 to 240Aac	0.5 to 240Aac
Transformation Ratio	1000: 1	Voltage output			DC Voltage output
Output Signal	1mA/A (200mAac @ 200A)	1mV/A (200mVac @ 200A)	10mV/A (2Vac @ 200A)	20A: 100mV/A (20Vac @ 200A) 200A: 10mV/A (2Vac @ 200A)	100mVdc/Aac (20Vdc @ 200A)
Phase Shift	— Not Specified ≤5° ≤3° ≤2.5°			Not Specified	N/A
(20A Range)					
(200A Range)					
0.5 to 10A					
10 to 40A					
40 to 100A				≤5°	
100 to 240A				≤3°	
				≤2.5°	
Overload	240A for 10 min ON, 30 min OFF				
Frequency Range	40Hz to 10kHz				
Load Impedance	1Ω, 10Ω max. with derating	>1MΩ			
Working/Common Mode Voltage	600V				
Output Termination	Double-insulated 5 ft (1.5m) lead with two 4mm safety banana plugs				
MECHANICAL					
Jaw Opening	0.83" (21mm)				
Maximum Conductor Size	Ø 0.78" max (20mm)				
Maximum Bus Bar size	0.78 x 0.19" (20 x 5mm)				
Dimensions	5.47 x 2.00 x 1.18" (139 x 51 x 30mm)				
Weight	6.5 oz (180g)				
Material	Polycarbonate UL 94				
ENVIRONMENTAL					
Operating Temperature	14° to 131°F (-10° to 55°C)				
Storage Temperature	-40° to 158°F (-40° to 70°C)				
Operating Relative Humidity	10 to 90% RH				
SAFETY					
Safety Rating	EN/IEC 61010-2-32 600 V CAT III, EN/IEC 61010-032				
UL Approval	Yes - Canada and United States				
Ingress Protection	IP40				
Double Insulation	Yes				
CE Mark	Yes				

Consult factory for NIST Calibration prices



FEATURES

- Small compact size
- Measurement ranges from 100mA to 240A
- Frequency response to 10kHz
- UL approved for both US and Canada
- Designed to EN61010, 600V CAT III
- Jaw opening accommodates 250kcmil cables
- Constructed with UL94V0 flame retardant material
- Double insulated construction

CATALOG NO.	DESCRIPTION	CATALOG NO.	DESCRIPTION
2115.75	AC Current Probe Model MN213 (200A, 1mA/A, Lead) L*	2115.81	AC Current Probe Model MN255 (20A, 100mV/A & 200A, 10mV/A, Lead)
2115.77	AC Current Probe Model MN251 (200A, 1mV/A, Lead)	2115.84	AC Current Probe Model MN291 (200A, 100mVDC/A, Lead)
2115.79	AC Current Probe Model MN253 (200A, 10mV/A, Lead)		

*L - Limited open Voltage Output

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)			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	-					Jacks	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.

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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°	2113.45		
	SR701	1000:1	1mA to 1000A		1mA/A*	—	<0.7°			Jacks	2116.29		
	SR704									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 ¾" (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

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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.