

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



MN213



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 (20A Range) (200A Range) 0.5 to 10A 10 to 40A 40 to 100A 100 to 240A	— Not Specified ≤5° ≤3° ≤2.5°			Not Specified Not Specified ≤5° ≤3° ≤2.5°	N/A
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

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

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



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)	N/A	Leads	2129.17
	MN02	1000:1	50mA to 100A 50mA to 90A	—		—	N/A	0.39" (10mm)	N/A	Leads	2129.20
	MN03	—	2 to 100A	—	—	1mV/A	N/A	0.39" (10mm)	N/A	Leads	2129.18
	MN05	—	5mA to 10A 1 to 100A	—	—	1mV/A 1mV/A	N/A	0.39" (10mm)	N/A	Leads	2129.19
	MN09	—	1 to 150A	—	—	100mVdc/Aac	N/A	0.39" (10mm)	N/A	Leads	2129.21
	MN103	—	1mA to 10A 1 to 100A	—	—	1mV/A 1mV/A	N/A	0.47" (12mm)	N/A	Leads	1031.02
	MN114	—	1mA to 10A	—	—	100mV/A	<8°	0.47" (12mm)	N/A	Leads	2110.71
	MN185	1000:1	50mA to 120A	—	1mA/A	—	<3.5°	0.47" (12mm)	N/A	Jacks	100.185
	MN255	—	0.1 to 24A 0.1 to 240A	—	—	100mV/A 10mV/A	<2.5°	0.78" (19.8mm)	N/A	Leads	2115.81
	MN291	—	0.5 to 240A	—	—	100mVdc/Aac	N/A	0.78" (19.8mm)	N/A	Leads	2115.84
	MN307	—	10mA to 12A	—	—	100mV/A	<2.5°	0.78" (19.8mm)	N/A	Leads	2116.23
	MN312	1000:1	0.1 to 200A	—	1mA/A*	—	<2.5°	0.78" (19.8mm)	N/A	Jacks	2116.24
	MN352	—	0.1 to 150A	—	—	10mV/A	<2.5°	0.78" (19.8mm)	N/A	Jacks	2116.26
	MN353	—		—	—	10mV/A	<2.5°	0.78" (19.8mm)	N/A	Leads	2116.27
	MN375	—	0.1 to 10A	—	—	100mV/A	<1.5°	0.78" (19.8mm)	N/A	Leads	2115.41
	MN379	—	5mA to 6A 0.1 to 120A	—	—	200mV/A 10mV/A		0.78" (19.8mm)	N/A	Leads	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)	N/A	Leads	1201.45
	MD301	1000:1	2 to 500A	—	—	1mVdc/Aac	N/A	1.18" (30mm) 2 x 500kc-mil	2.48 x 0.20" (63 x 5mm)	Leads	1201.07

*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°	1.53" (39mm)	2 bus bar 1.95 x 0.19" (50 x 5mm)	5 ft (1.5m) Lead	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°	1.53" (39mm)	2 bus bar 1.95 x 0.19" (50 x 5mm)	5 ft (1.5m) Lead	1200.83
	SR601	1000:1	0.1 to 1200A	—	1mA/A*	—	<0.5°	2.05" (52mm)	1.95 x 0.19" (50 x 5mm)	Jacks	2113.43
	SR604	1000:1	0.1 to 1200A	—	1mA/A*	—	<0.5°	2.05" (52mm)	1.95 x 0.19" (50 x 5mm)	Leads	2113.44
	SR651	—	0.1 to 1200A	—	—	1mV/A	<0.5°	2.05" (52mm)	1.95 x 0.19" (50 x 5mm)	Jacks	2113.45
	SR701	1000:1	1mA to 1000A	—	1mA/A*	—	<0.7°	2.05" (52mm)	1.95 x 0.19" (50 x 5mm)	Jacks	2116.29
	SR704	1000:1	1mA to 1000A	—	1mA/A*	—	<0.7°	2.05" (52mm)	1.95 x 0.19" (50 x 5mm)	Leads	2116.30
	SR752	—	0.1 to 1000A	—	—	1mV/A	<0.7°	2.05" (52mm)	1.95 x 0.19" (50 x 5mm)	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	<1°	2.05" (52mm)	1.95 x 0.19" (50 x 5mm)	Leads	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	N/A		N/A	Plugs	2111.73
	LM102	1000:1	50mA to 200A	—	1mA/A*	—	<3°	0.63" (16 mm)	N/A	Leads	2153.04
	LM103	—	0.1 to 200A	—	—	1mV/A	<3°		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 (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

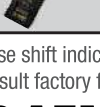


AMPFLEX® AND MINIFLEX® PROBES - SELECTION CHARTS

SERIES	MODEL	RATIO	MEASUREMENT RANGE	OUTPUT SIGNAL	MAXIMUM CONDUCTOR SIZE	CATALOG NO.
	MF 300-10-2-10-HF	—	30A / 300A	100mV/A, 10mV/A	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	7.48" (190mm)	2112.39
	1000-24-2-1	—	100A / 1000A	10mV/A, 1mV/A	7.48" (190mm)	2112.98
	1000-36-2-1	—	100A / 1000A	10mV/A, 1mV/A	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
	6000-36-2-0.1	—	600A / 6000A	1mV/A, 0.1mV/A	11" (290mm)	2113.21
	30000-24-2-0.1	—	3000A / 30,000A		7.48" (190mm)	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 VOLTAGE	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	6.5 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	0.5 to 240A	—	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.
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