

# CURRENT MEASUREMENT PROBES

## SR SERIES CURRENT PROBES

### SR600 SERIES

Current probes well-suited for power applications where high accuracy and low phase shift is important

### SPECIFICATIONS

MODELS	SR601	SR604	SR651	SR661
<b>ELECTRICAL</b>				
Nominal Range	1000 AAC		1000 AAC	10, 100, 1000 AAC
Measurement Range	0.1 to 1200 AAC			
Transformation Ratio	1000: 1		Voltage output	
Output Signal	1 mA/A (1 AAC @ 1000 A)		1mV/A (1 VAC @ 1000 A)	100 mV; 10 mV; 1 mV/A (1 VAC @ 10, 100; 1000 A)
Phase Shift		10 A: 3° 50 A: 1.5° 200 A: 0.75° 1000 A: 0.5° 1200 A: 0.5°		(10 A Range) 10 A: ≤ 15° (100 A Range) 20 A: ≤ 15° 100 A: ≤ 10° 120 A: ≤ 5° (1000 A Range) 200 A: ≤ 3° 1000 A: ≤ 2° 1200 A: ≤ 1°
Overload	1200 A for 40 min ON, 20 min OFF			
Frequency Range	30 Hz to 5 kHz*			10 Hz to 100 kHz*
Load Impedance	5 Ω max		100 kΩ min	1 MΩ min
Working/Common Mode Voltage	600 V CAT III			
Output Surge Protection	30 V peak		N/A	
Output Termination	(2) 4 mm safety banana jacks	Lead with plugs	(2) 4 mm safety banana jacks	6.5 ft (2 m) coaxial cable with BNC terminal
<b>MECHANICAL</b>				
Jaw Opening	2.25 in (57 mm) max			
Maximum Conductor Size	2.05 in (52 mm)			
Maximum Bus Bar Size	(1) (1.95 x 0.19) in (50 x 5) mm			
Dimensions	(4.37 x 8.50 x 1.77) in (111 x 216 x 45) mm			
Weight	1.21 lb (550 g)			
Material	Polycarbonate UL 94			
<b>ENVIRONMENTAL</b>				
Operating Temperature	(14 to 122) °F (-10 to 50) °C			
Storage Temperature	(-4 to 158)°F (-20 to 70) °C			
Operating Relative Humidity	(0 to 85) % RH decreasing linearly above 95 °F (35 °C)			
<b>SAFETY</b>				
Electrical	EN 61010-2-32, 600 V CAT III			
UL Approval	Yes - United States and Canada			

Consult factory for NIST Calibration prices



SR601



### FEATURES

- Measurement range of 100 mA to 1200 AAC
- Large jaw opening accommodates up to two 500 kcmil conductors
- Ergonomic design and easy operation
- Low phase shift for power measurements
- Available with mA or mV output signals
- Designed for DMMs, recorders, loggers, oscilloscopes, power and harmonic meters
- UL approved

### ACCESSORIES

#### Catalog #1017.45

4 mm Banana plug adaptor  
(Safety Leads to non-recessed plug)

#### Catalog #2118.46

Banana (Female)  
BNC (Male) Adaptor

\*Current derating above 1 kHz using the formula:  
1000 A x 1/F (in kHz)






CATALOG NO.	DESCRIPTION
2113.43	AC Current Probe Model SR601 (1000 A, 1 mA/A, Jack) L**
2113.44	AC Current Probe Model SR604 (1000 A, 1 mA/A, Lead) L**
2113.45	AC Current Probe Model SR651 (1000 A, 1 mV/A, Jack)
2113.49	AC Current Probe Model SR661 (10 A, 100 mV/A; 100 A, 10 mV/A & 1000 A, 1 mV/A, BNC)

\*\*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 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	–		–	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/Aac	N/A	0.39 in (10 mm)	N/A	Leads	2129.21
	MN103	–	1 mA to 10 A (1 to 100) A	–	–	1 mV/mA 1 mV/A	N/A	0.47 in (12 mm)	N/A	Leads	1031.02
	MN114	–	1 mA to 10 A	–	–	100 mV/A	< 8 °	0.47 in (12 mm)	N/A	Leads	2110.71
	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/Aac	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	–		–	–		< 2.5 °	0.78 in (20 mm)	N/A	Leads	2116.27
	MN373	–	(0.1 to 24) 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	
	SL206	–	10 mA to 1.5 A 50 mA to 60 A	10 mA to 2 A 50 mA to 80 A	–	1 mV/mAac/dc 10 mV/Aac/dc	< 1 °	0.46 in (12 mm)	N/A	Leads	1201.45
	MD301	1000:1	(2 to 500) A	–	–	1 mVdc/Aac	N/A	1.18 in (30 mm) (2 x 500) kcmil	(2.48 x 0.20) in (63 x 5) mm	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 400) A	(0.5 to 600) A	–	1 mV/A	≤ 1.5 °	1.18 in (30 mm)	2 bus bar (1.24 x 0.39) in (31 x 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 x 0.19) in (50 x 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 x 0.19) in (50 x 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 x 0.19) in (50 x 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 x 0.19) in (50 x 5) mm	Leads	2113.44
	SR651	–	(0.1 to 1200) A	–	–	1 mV/A	< 0.5 °	2.05 in (52 mm)	(1.95 x 0.19) in (50 x 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 x 0.19) in (50 x 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 x 0.19) in (50 x 5) mm	Leads	2116.30
	SR752	–	(0.1 to 1000) A	–	–	1 mV/A	< 0.7 °	2.05 in (52 mm)	(1.95 x 0.19) in (50 x 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 x 0.19) in (50 x 5) mm	Leads	2116.33
	K100	–	0.1 mA to 3 A	0.05 mA to ± 4.5 A	–	1 mV/mA	N/A	0.18 in (4.5 mm)	N/A	Plugs	1200.67
	K110	–	(0.1 to 300) mA	(0.05 to ± 450) mA	–	10 mV/mA	N/A		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 °		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


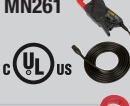
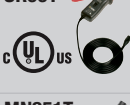






# AMPFLEX® AND MINIFLEX® PROBES - SELECTION CHARTS

SERIES	MODEL	RATIO	MEASUREMENT RANGE	OUTPUT SIGNAL	MAXIMUM CONDUCTOR SIZE	CATALOG NO.
	MF 300-10-2-10-HF	–	30 A / 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 A / 30 A / 300 A / 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 A / 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 A / 1000 A	10 mV/A, 1 mV/A	7.48 in (190 mm)	2112.98
	1000-36-2-1	–	100 A / 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 A / 3000 A	10 mV/A, 1 mV/A	7.48 in (190 mm)	2113.05
	3000-48-2-1	–	300 A / 3000 A	1 mV/A	15 in (381 mm)	2112.01
	6000-36-2-0.1	–	600 A / 6000 A	1 mV/A, 0.1 mV/A	11 in (280 mm)	2113.21
	30000-24-2-0.1	–	3000 A / 30,000 A	1 mV/A, 0.1 mV/A	7.48 in (190 mm)	2113.33
	24-3001	–	300 A / 3000 Aac	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	
 SL261	100 mA to 10 A (1 to 100) A		100 mV/A 10 mV/A	< 1.5 °	0.46 in (12 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 in (20 mm)	10 ft (3 m) Lead w/BNC
	(0.005 to 6) A	–	200 mV/A	< 4 °			
	(0.1 to 120) A	–	10 mV/A	< 2.2 °			
 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

\*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. Consult factory for NIST Calibration price.