

# 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	SR600	SR601	SR604	SR634	SR651	SR661
<b>ELECTRICAL</b>						
Nominal Range	1000A <sub>AC</sub>		250, 500, 1000A <sub>AC</sub>		1000A <sub>AC</sub>	10, 100, 1000A <sub>AC</sub>
Measurement Range	0.1 to 1200A <sub>AC</sub>					
Transformation Ratio	1000: 1		250:5, 500:5, 1000:5		Voltage Output	Voltage output
Output Signal	1mA/A (1A <sub>AC</sub> @ 1000A)		20mA; 10mA; 5mA/A (5A <sub>AC</sub> @ 250; 500; 1000A)		1mV/A (1V <sub>AC</sub> @ 1000A)	100mV; 10mV; 1mV/A (1V <sub>AC</sub> @ 10, 100; 1000A)
Phase Shift	10A: 3° 50A: 1.5° 200A: 0.75° 1000A: 0.5° 1200A: 0.5°		(250A Range) 12.5A: 10°; 50A: 10°; 250A: 10°; 300A: 10° (500A Range) 10A: 6°; 25A: 4°; 100A: 3°; 500A: 2.5°; 600A: 2.5° (1000A Range) 20A: 5°; 50A: 3°; 200A: 1.5°; 1000A: 1°; 1200A: 1°		10A: 3° 50A: 1.5° 200A: 0.75° 1000A: 0.5° 1200A: 0.5°	(10A Range) 10A: ≤15° (100A Range) 20A: ≤15° 100A: ≤10° 120A: ≤5° (1000A Range) 200A: ≤3° 1000A: ≤2° 1200A: ≤1
Overload	1200A for 40 min ON, 20 min OFF		1200A for 30 min ON, 15 min OFF		1200A for 40 min ON, 20 min OFF	
Frequency Range	30Hz to 5kHz*				10Hz to 100kHz*	
Load Impedance	5Ω max		0.4Ω max		100kΩ min	1MΩ min
Working/Common Mode Voltage	600V CAT III					
Output Surge Protection	No	30V peak				N/A
Output Termination	Two 4mm safety banana jacks	Lead with plugs	Two 4mm safety banana jacks			6.5 ft (2m) coaxial cable with BNC terminal
<b>MECHANICAL</b>						
Jaw Opening	2.25" (57mm) max					
Maximum Conductor Size	2.05" (52mm)					
Maximum Bus Bar Size	One 1.95 x 0.19" (50 x 5mm)					
Dimensions	4.37 x 8.50 x 1.77" (111 x 216 x 45mm)					
Weight	1.21 lbs (550g)					
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% decreasing linearly above 95°F (35°C)					
<b>SAFETY</b>						
Electrical	EN 61010-2-32, 600 V CAT III					
UL Approval	Yes - Canada and United States					
Double Insulation	Yes					
CE Mark	Yes					



SR601

### FEATURES

- Measurement range of 100mA to 1200A<sub>AC</sub>
- Large jaw opening accommodates up to two 500kcmil 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

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

#### Catalog #2118.46

Banana (Female) BNC (Male) Adaptor






\*Current derating above 1kHz using the formula: 1000A x 1/F (in kHz)  
Consult factory for NIST Calibration prices

CATALOG NO.	DESCRIPTION
2113.42	AC Current Probe Model SR600 (1000A, 1mA/A, Jack)
2113.43	AC Current Probe Model SR601 (1000A, 1mA/A, Lead) L**
2113.44	AC Current Probe Model SR604 (1000A, 1mA/A, Lead) L**
2113.48	AC Current Probe Model SR634 (250A, 20mA/A; 500A, 10mA/A & 1000A, 5mA/A, Jack) L**
2113.45	AC Current Probe Model SR651 (1000A, 1mV/A, Jack)
2113.49	AC Current Probe Model SR661 (10A, 100mV/A; 100A, 10mV/A & 1000A, 1mV/A, BNC)



# 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	1000:1	1mA to 10A 1 to 100A	-	-	1mV/A 1mV/A	N/A	0.47" (12mm)	-	Leads	1031.02	
	MN106		2 to 150A			1mA/A					-	<10°
	MN114	-	1mA to 10A		-	100mV/A					<8°	2110.71
	MN185	1000:1	50mA to 120A		1mA/A	-					<3.5°	Jacks
	MN213	1000:1	0.5 to 240A	-	1mA/A*	-	<2.5°	N/A	-	Leads	2115.75	
	MN251	-			0.1 to 24A 0.1 to 240A	-					1mV/A	2115.77
	MN253					-					10mV/A	2115.79
	MN255	0.5 to 240A			-	100mV/A 10mV/A					2115.81	
	MN291	10mA to 12A	-		100mV/A	N/A	2115.84					
	MN307	1000:1	0.1 to 200A		-	100mV/A	<2.5°			0.78" (19.8mm)	Jacks	2116.23
	MN312	0.1 to 150A	1mA/A*		-	2116.24						
	MN313	0.1 to 200A	-		-	2116.25						
	MN352	0.1 to 150A	-		10mV/A	2116.26						
	MN353	0.01 to 2.4A 0.1 to 200A	-		1000mV/A 10mV/A	<3°	2116.27					
	MN373	0.1 to 10A	-		100mV/A	<1.5°	2116.28					
	MN375	5mA to 6A 0.1 to 120A	-		200mV/A 10mV/A		2115.41					
	MN379	0.1 to 120A	-		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°	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 1.96 x 0.19" (50 x 5mm)		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*						2113.43
	SR604				1mA/A*						Leads
	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°			2116.29	
	SR704					2116.30					
	SR752	-	0.1 to 1000A	-	-	1mV/A	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°	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	11" (290mm)	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 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	6.6 ft (2m) Lead w/BNC
 MN261	0.1 to 24A 0.5 to 240A	—		<2.5°	0.78" (19.8mm)		
 SR661	0.1 to 12A 0.1 to 120A 1 to 1200A		<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. Consult factory for NIST Calibration price.