

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
ELECTRICAL						
Nominal Range	1000A _{AC}		250, 500, 1000A _{AC}		1000A _{AC}	10, 100, 1000A _{AC}
Measurement Range	0.1 to 1200A _{AC}					
Transformation Ratio	1000: 1		250:5, 500:5, 1000:5		Voltage Output	Voltage output
Output Signal	1mA/A (1A _{AC} @ 1000A)		20mA; 10mA; 5mA/A (5A _{AC} @ 250; 500; 1000A)		1mV/A (1V _{AC} @ 1000A)	100mV; 10mV; 1mV/A (1V _{AC} @ 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
MECHANICAL						
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					
ENVIRONMENTAL						
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)					
SAFETY						
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_{AC}
- 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	-	1mA to 10A 1 to 100A		-	1mV/A 1mV/A					1031.02		
	MN106	1000:1	2 to 150A	1mA/A	-	<10°	0.47" (12mm)	-	-	1031.17			
	MN114	-	1mA to 10A	-	100mV/A	<8°				2110.71			
	MN185	-	50mA to 120A	1mA/A	-	<3.5°				Jacks	100.185		
	MN213	1000:1	0.5 to 240A	1mA/A*	-	<2.5°				0.78" (19.8mm)	-	-	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	-		-		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)	-	Leads	1201.45	
		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		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)
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.