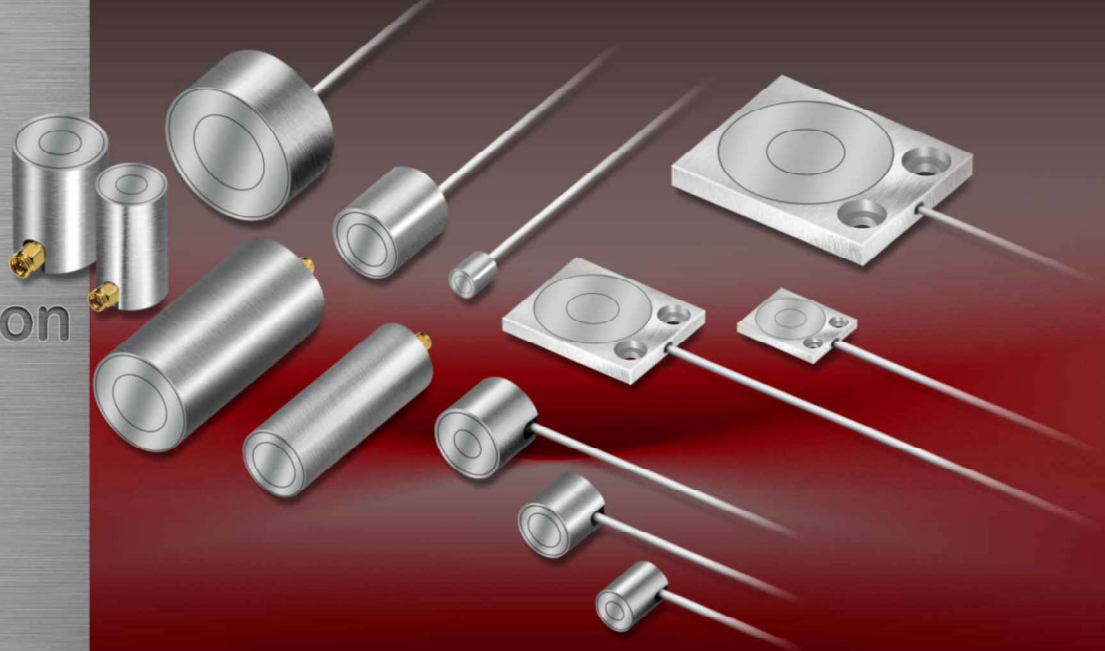


ACCUMEASURE™ Capacitance Probes

for ACCUMEASURE™ Dseries

up to 10x
range extension



Standard and Custom Capacitance Probes Available

Probe Specifications

Cable and Probe Temperature Rating:	-130°C (-202°F) to 200°C (392°F). Cryogenic and higher temperature probes are available up to 1200°C - consult MTI Factory. A BNC to SMA adapter is required
Connector Temperature Rating:	-65°C (-85°F) to 85°C(185°F)
Accuracy¹:	±0.01% FSR or better, of range when probe and amplifier are calibrated to a known standard at x1 range extension.
Probe and Cable Interchangeability:	Accurate to within ± 0.2% at X1 range extension without recalibration
Pressure Rating Standard:	1400kPa (200 psig)
Material:	Stainless steel construction, no active internal electronics
Cable Length² for ILA, ILR and PSR type Probes:	1m (3.28') length - <i>see below for extension cables</i> . Connector type probes require selection of cable assembly upon ordering

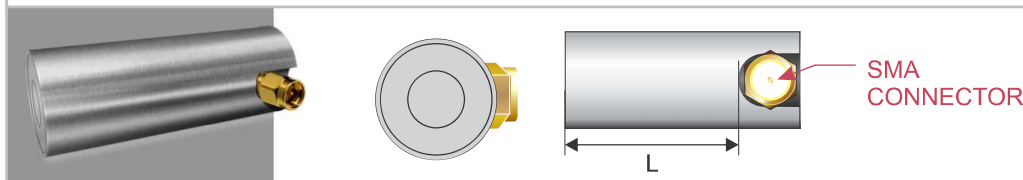
¹As range extension increases linearity decreases. Probe resolution is approximately 0.0000085 VHz FSR. Noise increases proportionally to range extension selected. x2 range extension will decrease resolution by 2X. Increasing the averaging function will decrease noise but also decrease the amplifier's bandwidth (consult users manual) . Increasing the probe's cable length will also increase system noise and decrease resolution proportionally.

²Contact factory to increase ILA/ILR/PSR cable to non-standard cable lengths, or purchase the optional special low-noise probe extension cable (information on brochure). Extension cables do not require an adapter as they are male to female SMA connectors

Probe Style

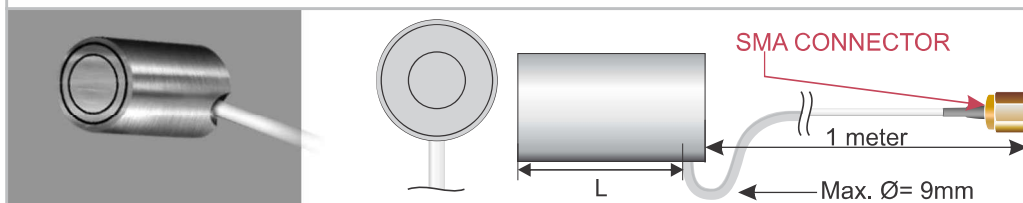
CONNECTOR TYPE RADIAL

An SMA connector is built in to the probe. The cable is connected to the capacitive sensor with a connector and it exits the probe radially.



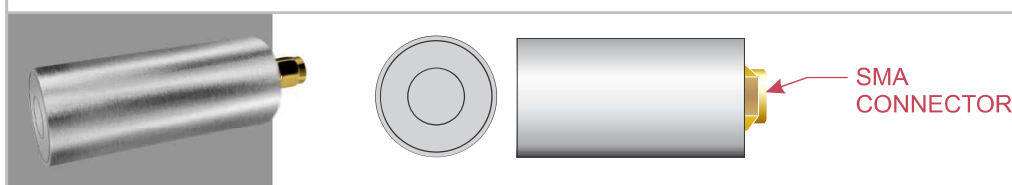
INTEGRAL LEAD RADIAL

The cable is low-noise highly flexible silicone integral to the ILR probe and exits the probe radially.



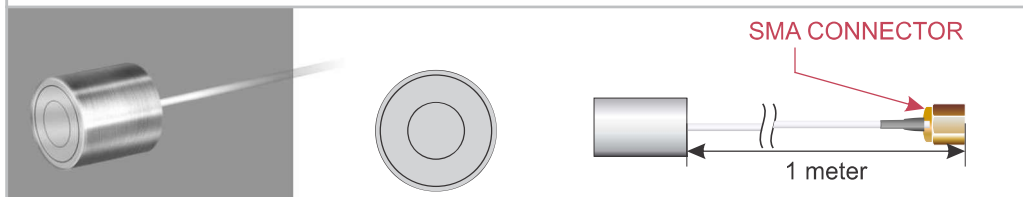
CONNECTOR TYPE AXIAL

The cable is connected to the CTA capacitive sensor with a connector and it exits the probe axially.



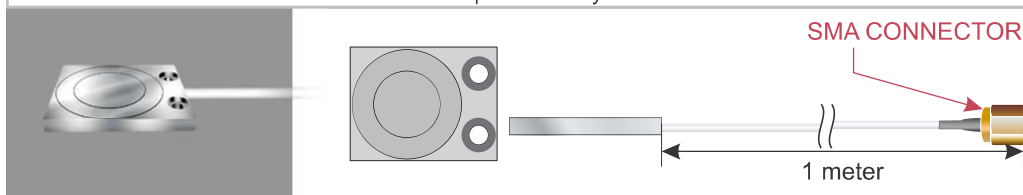
INTEGRAL LEAD AXIAL

The cable is low-noise highly flexible silicone integral to the ILA probe and exits the probe axially.

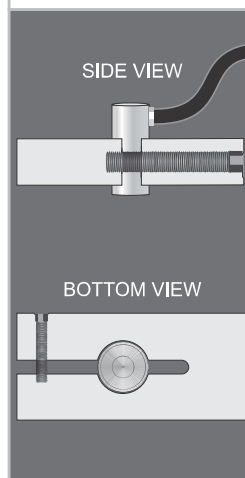


PANCAKE SQUARE RADIAL

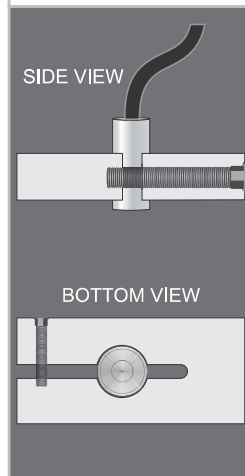
The PSR probe is thin, the cable is low-noise highly flexible silicone integral to the PSR probe and exits the probe radially.



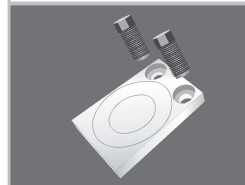
RADIAL PROBE MOUNTING

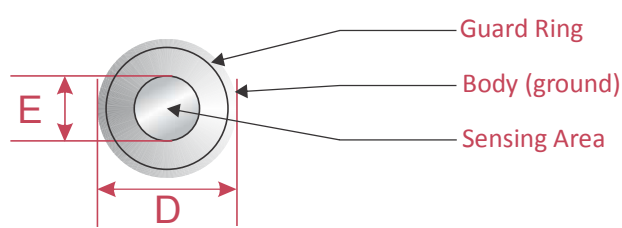
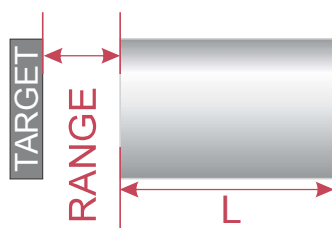


AXIAL PROBE MOUNTING



PSR PROBE MOUNTING





Measuring Range 25 μm 1 mil Resolution at 50Hz RMS 0.2 nm 0.008 μi Resolution at 5kHz RMS 1.5 nm 0.059 μi	PRODUCT CODE	PRODUCT #	Min. Range		Max Range Extension ¹	E		D		L	
			μm	mils		mm	Inch	mm	Inch	mm	Inch
	ASP-25M-CTR	8100-1001-000	1.27	0.05	10x	1.09	0.043	9.49	0.374	25.50	1.004
	ASP-25M-ILR	8100-3001-4XX*	1.27	0.05	9x	1.09	0.043	2.39	0.094	9.50	0.374
	ASP-25M-CTA	8100-0001-000	1.27	0.05	10x	1.09	0.043	6.39	0.251	63.50	2.500
	ASP-25M-ILA	8100-2001-4XX*	1.27	0.05	9x	1.09	0.043	2.39	0.094	9.50	0.374

Measuring Range 50 μm 2 mils Resolution at 50Hz RMS 0.3 nm 0.012 μi Resolution at 5kHz RMS 3 nm 0.118 μi	PRODUCT CODE	PRODUCT #	Min. Range		Max Range Extension ¹	E		D		L	
			μm	mils		mm	Inch	mm	Inch	mm	Inch
	ASP-50M-CTR	8100-1002-000	2.54	0.1	9x	1.55	0.061	9.49	0.374	25.50	1.004
	ASP-50M-ILR	8100-3002-4XX*	2.54	0.1	4x	1.55	0.061	2.89	0.114	9.50	0.374
	ASP-50M-CTA	8100-0002-000	2.54	0.1	9x	1.55	0.061	6.39	0.251	63.50	2.500
	ASP-50M-ILA	8100-2002-4XX*	2.54	0.1	4x	1.55	0.061	2.89	0.114	9.50	0.374

Measuring Range 125 μm 5 mils Resolution at 50Hz RMS 0.8 nm 0.031 μi Resolution at 5kHz RMS 7.5 nm 0.295 μi	PRODUCT CODE	PRODUCT #	Min. Range		Max Range Extension ¹	E		D		L	
			μm	mils		mm	Inch	mm	Inch	mm	Inch
	ASP-125M-CTR	8100-1003-000	6.35	0.25	10x	2.49	0.098	9.49	0.374	25.50	1.004
	ASP-125M-ILR	8100-3003-4XX*	6.35	0.25	2x	2.49	0.098	3.99	0.157	9.50	0.374
	ASP-125M-CTA	8100-0003-000	6.35	0.25	10x	2.49	0.098	6.39	0.251	63.50	2.500
	ASP-125M-ILA	8100-2003-4XX*	6.35	0.25	2x	2.49	0.098	3.99	0.157	9.50	0.374

Measuring Range 250 μm 10 mils Resolution at 50Hz RMS 1.5 nm 0.059 μi Resolution at 5kHz RMS 15 nm 0.591 μi	PRODUCT CODE	PRODUCT #	Min. Range		Max Range Extension ¹	E		D		L	
			μm	mils		mm	Inch	mm	Inch	mm	Inch
	ASP-250M-CTR	8100-1004-000	12.7	0.5	9x	3.53	0.139	9.49	0.374	25.50	1.004
	ASP-250M-ILR	8100-3004-4XX*	12.7	0.5	2x	3.53	0.139	5.59	0.220	9.50	0.374
	ASP-250M-CTA	8100-0004-000	12.7	0.5	3x	3.53	0.139	6.39	0.251	63.50	2.500
	ASP-250M-ILA	8100-2004-4XX*	12.7	0.5	2x	3.53	0.139	5.59	0.220	9.50	0.374

*XX indicates the length of the cable, which can be customized. Example: a product number ending with a 415 would result in a cable that is 1.5 meters in length.

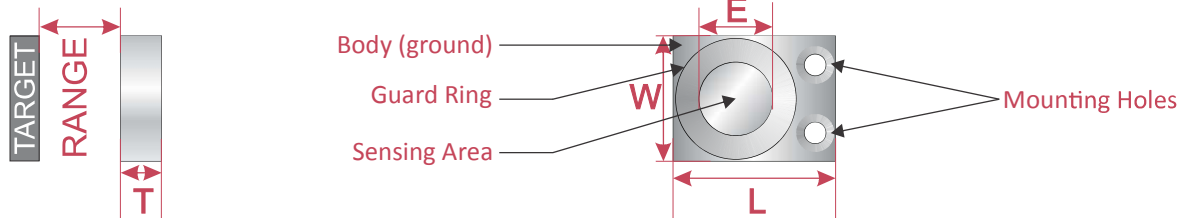
Measuring Range 500 μm 20 mils	PRODUCT CODE	PRODUCT #	Min. Range		Max Range	E		D		L	
			μm	mils	Extension ¹	mm	Inch	mm	Inch	mm	Inch
Resolution at 50Hz RMS 3 nm 0.118 μi	ASP-500M-CTR	8100-1005-000	25.4	1	3x	5.00	0.197	11.00	0.433	25.50	1.004
	ASP-500M-ILR	8100-3005-4XX*	25.4	1	2x	5.00	0.197	7.99	0.315	9.50	0.374
Resolution at 5kHz RMS 30.1 nm 1.185 μi	ASP-500M-CTA	8100-0005-000	25.4	1	4x	5.00	0.197	11.00	0.433	63.50	2.500
	ASP-500M-ILA	8100-2005-4XX*	25.4	1	2x	5.00	0.197	7.99	0.315	9.50	0.374

Measuring Range 1250 μm 50 mils	PRODUCT CODE	PRODUCT #	Min. Range		Max Range	E		D		L	
			μm	mils	Extension ¹	mm	Inch	mm	Inch	mm	Inch
Resolution at 50Hz RMS 7.5 nm 0.295 μi	ASP-1250M-CTR	8100-1006-000	63.5	2.5	2x	7.98	0.314	15.50	0.610	25.50	1.004
	ASP-1250M-ILR	8100-3006-4XX*	63.5	2.5	2x	7.98	0.314	14.00	0.551	9.50	0.374
Resolution at 5kHz RMS 75.1 nm 2.957 μi	ASP-1250M-CTA	8100-0006-000	63.5	2.5	2x	7.98	0.314	15.50	0.610	63.50	2.500
	ASP-1250M-ILA	8100-2006-4XX*	63.5	2.5	2x	7.98	0.314	14.00	0.551	9.50	0.374

Measuring Range 2500 μm 100mils	PRODUCT CODE	PRODUCT #	Min. Range		Max Range	E		D		L	
			μm	mils	Extension ¹	mm	Inch	mm	Inch	mm	Inch
Resolution at 50Hz RMS 15 nm 0.591 μi	ASP-2500M-CTR	8100-1007-000	127	5	2x	11.25	0.443	25.00	0.984	25.50	1.004
	ASP-2500M-ILR	8100-3007-4XX*	127	5	2x	11.25	0.443	25.00	0.984	9.50	0.374
Resolution at 5kHz RMS 150.3 nm 5.917 μi	ASP-2500M-CTA	8100-0007-000	127	5	2x	11.25	0.443	25.00	0.984	63.50	2.500
	ASP-2500M-ILA	8100-2007-4XX*	127	5	2x	11.25	0.443	25.00	0.984	9.50	0.374

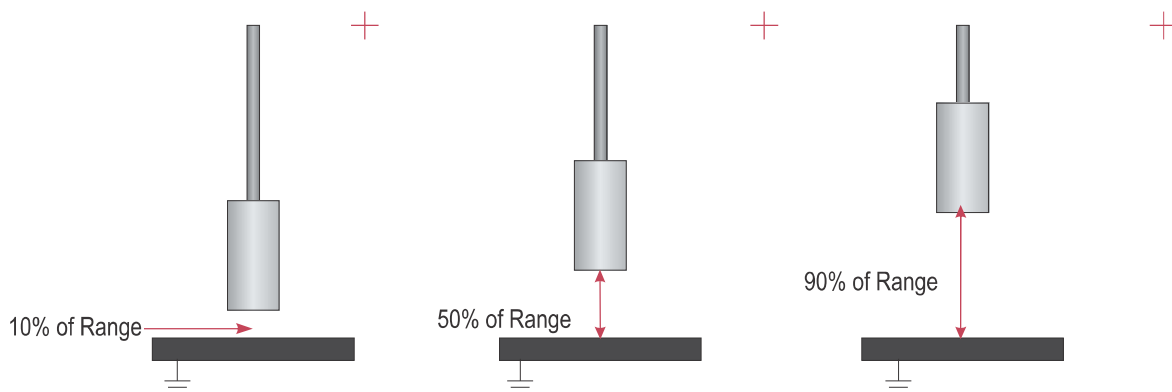
Measuring Range 5000 μm 200 mils	PRODUCT CODE	PRODUCT #	Min. Range		Max Range	E		D		L	
			μm	<i>mils</i>	Extension ¹	mm	<i>Inch</i>	mm	<i>Inch</i>	mm	<i>Inch</i>
Resolution at 50Hz RMS 30.1 nm 1.185 μi	ASP-5000M-CTR	8100-1008-000	254	10	2x	15.93	0.627	38.00	1.496	25.50	1.004
	ASP-5000M-ILR	8100-3008-4XX*	254	10	2x	15.93	0.627	38.00	1.496	9.50	0.374
Resolution at 5kHz RMS 300.5 nm 11.831 μi	ASP-5000M-CTA	8100-0008-000	254	10	2x	15.93	0.627	38.00	1.496	63.50	2.500
	ASP-5000M-ILA	8100-2008-4XX*	254	10	2x	15.93	0.627	38.00	1.496	9.50	0.374

*XX indicates the length of the cable, which can be customized. Example: a product number ending with a 415 would result in a cable that is 1.5 meters in length.



PRODUCT CODE	ASP-25M-PSR	ASP-50M-PSR	ASP-125M-PSR	ASP-250M-PSR	ASP-500M-PSR	ASP-1250M-PSR	ASP-2500M-PSR	ASP-5000M-PSR
PRODUCT NUMBER	8100-4001-210	8100-4002-210	8100-4003-210	8100-4004-210	8100-4005-210	8100-4006-210	8100-4007-210	8100-4008-210
Range	μm 25	μm 50	μm 125	μm 250	μm 500	μm 1250	μm 2500	μm 5000
	mils 1	mils 2	mils 5	mils 10	mils 20	mils 50	mils 100	mils 200
Min. Range	μm 1.27	μm 2.54	μm 6.35	μm 12.70	μm 25.40	μm 63.50	μm 127.00	μm 254.00
	mils 0.05	mils 0.10	mils 0.25	mils 0.50	mils 1.00	mils 2.50	mils 5.00	mils 10.00
Resolution at 50Hz RMS	nm 0.20	nm 0.30	nm 0.80	nm 1.50	nm 3.00	nm 7.50	nm 15.00	nm 30.10
	μi 0.008	μi 0.012	μi 0.031	μi 0.059	μi 0.118	μi 0.295	μi 0.591	μi 1.185
Max Range Extension ¹	9x	4x	2x	2x	2x	2x	2x	2x
Resolution at 5kHz RMS	nm 1.50	nm 3.00	nm 7.50	nm 15.00	nm 30.10	nm 75.10	nm 150.30	nm 300.50
	μi 0.059	μi 0.118	μi 0.295	μi 0.591	μi 1.185	μi 2.957	μi 5.917	μi 11.831
E	mm 1.09	mm 1.55	mm 2.49	mm 3.53	mm 4.98	mm 7.98	mm 11.25	mm 15.93
	Inch 0.043	Inch 0.061	Inch 0.098	Inch 0.139	Inch 0.196	Inch 0.314	Inch 0.443	Inch 0.627
L	mm 7.50	mm 7.70	mm 8.20	mm 9.00	mm 10.20	mm 18.00	mm 29.75	mm 42.50
	Inch 0.295	Inch 0.303	Inch 0.323	Inch 0.354	Inch 0.402	Inch 0.709	Inch 1.171	Inch 1.673
W	mm 8.00	mm 8.00	mm 8.00	mm 8.00	mm 8.00	mm 13.90	mm 25.40	mm 38.00
	Inch 0.315	Inch 0.315	Inch 0.315	Inch 0.315	Inch 0.315	Inch 0.547	Inch 1.000	Inch 1.496
T	mm 2.50	mm 2.50	mm 2.50	mm 2.50	mm 2.50	mm 2.50	mm 2.50	mm 5.00
	Inch 0.098	Inch 0.098	Inch 0.098	Inch 0.098	Inch 0.098	Inch 0.098	Inch 0.098	Inch 0.197
Hole Information	2X M2x0.4		2X M2x0.5	2X M2x0.6	2X M2x0.7	2X M2x0.8	2X (4.2 x 1.65, 2.4 thru)	

Probe Recommended Stand-off Ranges



Specify Range Extension Required

Inform MTI the range extension upon ordering (1x, 2x, 3x and 8x) **Default = 1x and 2x**

Accessories

Description	Product Number
SMA female to BNC male Adapter (for MTI Analog Amplifiers)	8000-6890
BNC female to SMA male Cable (for legacy probes)	8000-6892-201
T Connector (for multiple Synchronization)	8000-6889
Synch Cable (1.8 meters)	8000-6888
Special Low Noise Probe Extension Cables - SMA male to SMA female	
1 meter	8000-6891-210
2 meters	8000-6891-220
4 meters	8000-6891-240



T Connector
Synchronization Adapter to daisy chain multiple systems



Synch Cable
Synchronization cable for between multiple systems (1.8m standard)

Description	Product Number
24 VDC Power Supply	8000-6925
D Series SDK (DLL, .NET and NI LabVIEW™)	8000-6831
Amplifier Calibrator (probe simulator for amplifier checking)	8000-4111-D
KD-CH-4D Calibration Fixture	8000-6952
Ethernet Cable (1.8 meters)	8000-6887
USB-A to Micro USB-B (1 meter)	8000-6929
DIN rail (to mount amplifier)	8000-6882



KD-CH-4D calibrator

A precision fixture that secures a non-contact displacement sensor and accurately varies the position of a target relative to the sensor. It provides an excellent means of obtaining calibration data at the user's facility.

Compatible with



ACCUMEASURE™ D series CAPACITANCE AMPLIFIER

True Direct Digital Capacitive Displacement Sensor
Up to 0.01% FSR Linearity

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OR USA TOLL FREE: 1-800-342-2203
FAX: +1- 518-218-2506
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www.mtiinstruments.com

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