

CAPACITIVE DRIVER

CPL490

Elite Series

- Highest resolution
- Widest bandwidth (50 kHz)
- Five-element range indicator
- Zero adjust
- Front-panel BNC analog output
- Differential output to National Instruments 68-pin connector
- Uses 2nd Generation Probes

Specifications

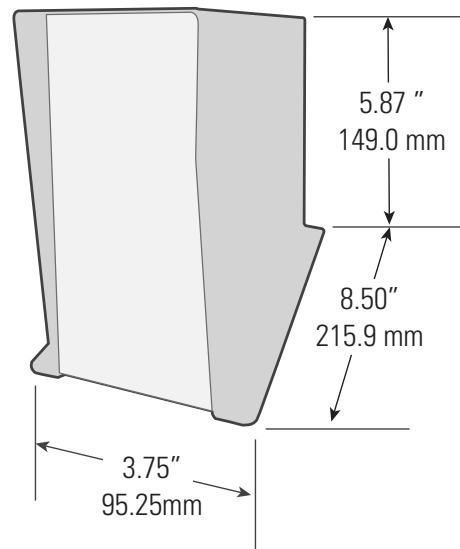
Resolution ¹ :	0.0004% @ 1 kHz
	0.0007% @ 15 kHz
	0.002% @ 50 kHz
Selectable Bandwidth:	1, 10, 15, 50 kHz
Linearity ² :	<0.2% F.S. typical
Max Drift:	0.02-0.04% F.S./°C
Operating Temp:	15-40°C
Front-Panel BNC:	±10V, 0Ω 10mA max
Rear-Panel National Inst:	±10V, 0Ω Differential
Multiple Channels:	Up to 3 per enclosure (Contact Lion Precision for more than 3)

1. Dependent on probe, range, and bandwidth. See next page for details.

2. Dependent on probe and range. See next page for details.

Listed [specifications](#) assume a two meter probe cable: Flat measurement area diameter at least 1.3 times larger than the Sensing Area with no customizations.

The CPL490 uses 2nd Generation probes.



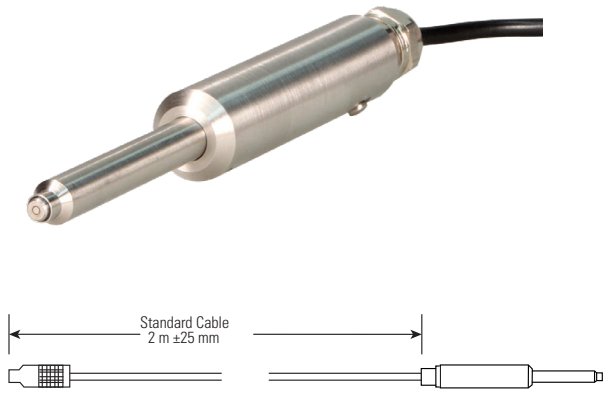
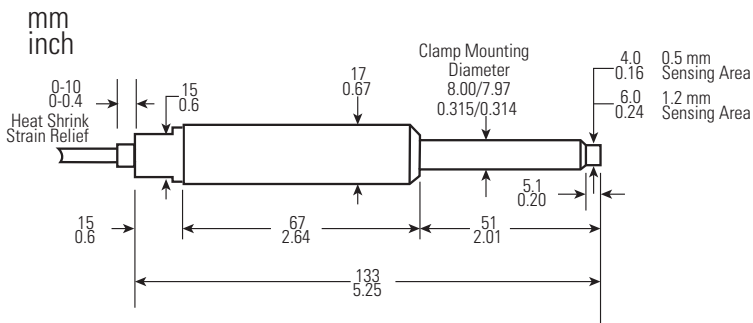
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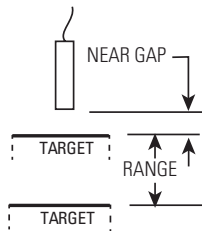
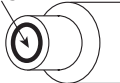
Second Generation Probes

- The CPL490 uses 2nd Generation Capacitive Probes which include electronics in the probe housing.
- The probes are mounted by the 8mm diameter probe body extending from the larger housing.
- Two models are available differing only in the sensing area diameter and associated measurement ranges.

2G-C8-0.5: 0.5 mm sensing area
 2G-C8-1.2: 1.2 mm sensing area



Sensing Area



CPL490 Probe Measuremen Ranges and Resolutions

Sensing Area Diameter mm (Probe Model)	Range Type	Range	Near Gap	1 kHz	10 kHz	15 kHz	50 kHz	Probe Max. Drift % FS/°C
		µm mils	µm mils	nm µin	nm µin	nm µin	nm µin	
0.5 (2G-C8-0.5)	Fine	10 0.4	20 0.8	0.05 0.002	0.07 0.003	0.09 0.004	0.26 0.010	0.04
	Standard	50 2.0	25 1.0	0.17 0.007	0.27 0.011	0.35 0.014	1.0 0.040	0.02
	Extended	100 4.0	50 2.0	0.38 0.015	0.80 0.31	1.0 0.039	3.3 0.14	0.03
1.2 (2g-C8-1.2)	Fine	50 2.0	25 1.0	0.15 0.006	0.20 0.008	0.22 0.009	0.63 0.25	0.02
	Standard	100 4.0	50 2.0	0.33 0.013	0.40 0.016	0.52 0.021	1.7 0.065	0.02
	Ultrafine	200 8.0	100 4.0	0.68 0.027	1.0 0.040	1.3 0.050	3.8 0.15	0.02

Range is determined by the sensing area diameter. The larger the diameter, the larger the range. Flat target surface must be 1.3 times larger than the sensing area diameter.