

CAPACITIVE DRIVER

CPL190/CPL290

Elite Series

- » High resolution five-element range indication
- » Coarse/Fine zero adjust with disable
- » Front-panel BNC analog output
- » Differential output to National Instruments 68-pin connector

Specifications

Resolution ¹ :	0.0005% @ 100 Hz
	0.003% @ 15 kHz
Selectable Bandwidth:	100 Hz, 1, 10, 15 kHz
Linearity ² :	<0.2% F.S. typical
Max Drift:	0.04% F.S./°C
Operating Temp:	15°C - 40°C
Front-Panel BNC:	±10V, 0Ω 10mA max
Rear-Panel National Inst:	±10V, 0Ω Differential

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.

Different probe body styles/sizes are available for each Sensing area.



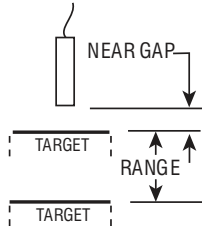
Export License

May require an export license to some countries due to the high resolution

CPL190/CPL290

Probes and Ranges

Sensing Area



CPL190/290 Probe Measurement Ranges and Resolutions

C5S

Shape
C = Cylindrical
R = Rectangular

Size in mm
C: Diameter
R: Longest Side

Body Style
Blank = Long
S = Short
R = Right Angle

Sensing Area Diameter mm	Measurement Range			Resolution ¹ @ Bandwidth				Linearity % F.S.	Available Body Sizes	
	Range Type	Range μm mils	Near Gap μm mils	100 Hz nm μin	1 kHz nm μin	10 kHz nm μin	15 kHz nm μin		Models	Body Sizes
0.5	Fine	10 0.40	20 0.8	0.06 0.003	0.14 0.006	0.40 0.016	0.50 0.020	0.25	C3S C3R C5S C5R C5	
	Standard	50 2.0	50 2.0	0.30 0.012	0.50 0.020	3.0 0.12	4.0 0.16	0.25		
	Extended	80 3.0	60 2.4	0.50 0.02	1.0 0.040	5.0 0.20	-	0.25		
0.8	Fine	25 1.0	75 3.0	0.20 0.008	0.50 0.020	1.2 0.050	1.5 0.060	0.15	C3S C3R	C5S C5R C5
	Standard	100 4.0	100 4.0	0.50 0.020	1.0 0.040	3.5 0.14	5.0 0.20	0.15		
2.0	Ultrafine	10 0.40	20 0.8	0.050 0.002	0.080 0.003	0.15 0.006	0.25 0.010	0.15	C5S C5R C5 C8S C8R C8	
	Fine	50 2.0	75 3.0	0.20 0.008	0.30 0.012	0.60 0.024	1.0 0.040	0.15		
	Standard	250 10	125 5.0	0.80 0.032	1.0 0.040	4.0 0.16	5.0 0.20	0.10		
	Extended	500 20	125 5.0	1.5 0.060	3.0 0.12	8.0 0.32	10 0.40	0.15		
3.2	Fine	50 2.0	125 5.0	0.25 0.010	0.40 0.016	1.0 0.042	1.6 0.048	0.20	C8S C8R C8	
	Standard	500 20	250 10	2.0 0.080	3.0 0.12	6.0 0.24	10 0.40	0.15		
	Extended	1250 50	250 10	10 0.40	15 0.60	20 0.80	30 1.2	0.20		
5.6	Fine	50 2.0	225 9.0	0.30 0.012	0.40 0.016	0.80 0.032	1.3 0.052	0.20	C9.5S C9.5R C9.5 R20	
	Standard	500 20	500 20	2.5 0.10	3.0 0.12	7.0 0.28	10 0.40	0.15		
	Extended	2000 80	250 10	7.0 0.28	10 0.40	20 0.80	30 1.2	0.20		
13	Fine	2000 80	2000 80	20 0.80	30 1.2	35 1.4	40 1.6	0.50	C18	
	Standard	3200 125	2000 80	30 1.2	40 1.6	50 2.0	60 2.4	0.50		
	Extended	5000 200	3000 120	75 3.0	100 4.0	130 5.2	150 6.0	0.50		
19	Standard	2500 100	5000 200	50 2.0	70 2.8	90 3.6	100 4.0	0.30	R45	
	Extended	6000 250	3000 120	90 3.6	120 4.8	160 6.4	180 7.2	1.0		
21	Standard	8000 300	5000 200	75 3.0	100 4.0	130 5.2	150 6.0	0.50	C25	
	Extended	12500 500	5000 200	130 5.2	180 7.2	230 9.2	250 10	0.50		

¹Resolution values are RMS. Peak-to-peak values are typically 8-10 times greater than the RMS values.
In high EMI conditions (10 V/m) output DC level may shift and noise may rise to 0.2 VRMS (1% resolution).