

When Precision Matters...

Eddy-Current Displacement Sensors



Precision

Noncontact

Measurement

A Trusted Name

LION
PRECISION

PROBES



A
Core Unit

B
Threaded Body

C
Smooth Body

D
Flanged Body

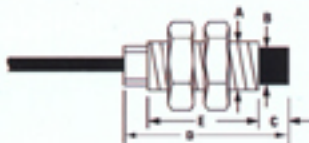
A



mm/inch	A	B
U5A	3.4 / 0.13	13.0 / 0.51
U8A	6.2 / 0.24	14.0 / 0.55
U12A	10.0 / 0.39	15.0 / 0.59
U18A	15.8 / 0.62	16.0 / 0.63

Core unit for smallest physical size. Gentle clamp mounting required.

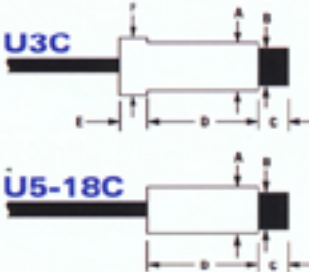
B



mm/inch	A	B	C	D	E	Wrench
U3B	M3x.5	2.0 / 0.08	3.0 / 0.12	21.1 / 0.83	13.0 / 0.51	5.5 / 0.22
U5B	M5x.8	3.4 / 0.13	3.0 / 0.12	25.0 / 0.99	18.0 / 0.71	8.0 / 0.31
U8B	M8x1	6.2 / 0.24	5.0 / 0.20	27.0 / 1.07	18.0 / 0.71	13.0 / 0.51
U12B	M12x1	10.0 / 0.39	7.0 / 0.28	29.0 / 1.15	18.0 / 0.71	17.0 / 0.67
U18B	M18x1	15.8 / 0.62	9.0 / 0.36	31.0 / 1.22	18.0 / 0.71	24.0 / 0.94
U25B	M18x1	25.0 / 0.99	15.0 / 0.59	43.0 / 1.69	24.0 / 0.95	24.0 / 0.94
U38B	M18x1	38.0 / 1.50	20.0 / 0.79	48.0 / 1.89	24.0 / 0.95	24.0 / 0.94
U50B	M18x1	50.0 / 1.97	25.0 / 0.99	53.0 / 2.09	24.0 / 0.95	24.0 / 0.94

Threaded, stainless steel body for threaded or thru-hole mounting.

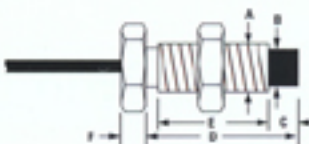
C



mm/inch	A	B	C	D	E	F
U3C	2.92 / 0.115	2.0 / 0.08	3.0 / 0.12	13.0 / 0.51	5.0 / 0.20	3.6 / 0.14
U5C	4.90 / 0.193	3.4 / 0.13	3.0 / 0.12	18.0 / 0.71		
U8C	7.90 / 0.311	6.2 / 0.24	5.0 / 0.20	18.0 / 0.71		
U12C	11.89 / 0.468	10.0 / 0.39	7.0 / 0.28	18.0 / 0.71		
U18C	17.91 / 0.705	15.8 / 0.62	9.0 / 0.36	18.0 / 0.71		

Smooth, stainless steel body for clamp or set-screw mounting.

D



mm/inch	A	B	C	D	E	F	Wrench
U5D	M5x.8	3.4 / 0.13	3.0 / 0.12	23.0 / 0.91	18.0 / 0.71	3.0 / 0.12	8.0 / 0.31
U8D	M8x1	6.2 / 0.24	5.0 / 0.20	25.0 / 0.99	18.0 / 0.71	4.0 / 0.16	13.0 / 0.51
U12D	M12x1	10.0 / 0.39	7.0 / 0.28	27.0 / 1.07	18.0 / 0.71	5.0 / 0.20	17.0 / 0.67
U18D	M18x1	15.8 / 0.62	9.0 / 0.36	31.0 / 1.22	18.0 / 0.71	5.0 / 0.20	24.0 / 0.94

Threaded, flanged, stainless steel body for threaded or thru-hole mounting.

ECL100 and ECL130 Calibrations:

Nonferrous materials:

Aluminum, Beryllium, Brass, Bronze, Copper, Gold, Iridium, Magnesium, Molybdenum, Phosphor Bronze, Rhodium, Silver

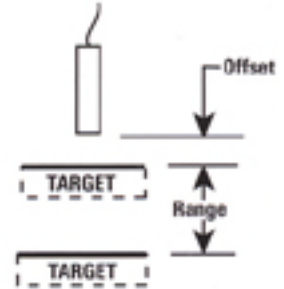
Maximum linearity error when measuring nonferrous materials: $< \pm 0.25\%$ of full scale.

Ferrous materials:

Stainless Steels: 301, 302, 303, 304, 304L, 310, 316, 316L, 321

AISI: 4130, 4140, 4150

Maximum linearity error when measuring ferrous materials: $< \pm 0.5\%$ of full scale.



Metric					
Probe Model	Range mm	Offset mm	RMS Resolution μm		
			1kHz	10kHz	80kHz
U3	0.50	0.05	0.02	0.04	0.30
U5	1.25	0.25	0.05	0.10	0.75
U8	2.00	0.35	0.08	0.16	1.20
U12	3.50	0.60	0.14	0.28	2.10
U18	5.00	0.75	0.20	0.41	3.05
U25	8.00	1.25	0.28	0.57	4.88
U38	12.5	1.50	0.48	0.96	7.16
U50	15.0	2.00	0.66	1.32	9.91

Inch					
Probe Model	Range inch	Offset inch	RMS Resolution μinch		
			1kHz	10kHz	80kHz
U3	0.020	0.002	0.8	1.6	13
U5	0.050	0.010	2	4	30
U8	0.080	0.015	3	6	48
U12	0.140	0.025	6	11	84
U18	0.200	0.030	8	16	120
U25	0.320	0.050	11	22	192
U38	0.500	0.060	19	38	282
U50	0.600	0.080	26	52	390

Probe Environmental Ratings:

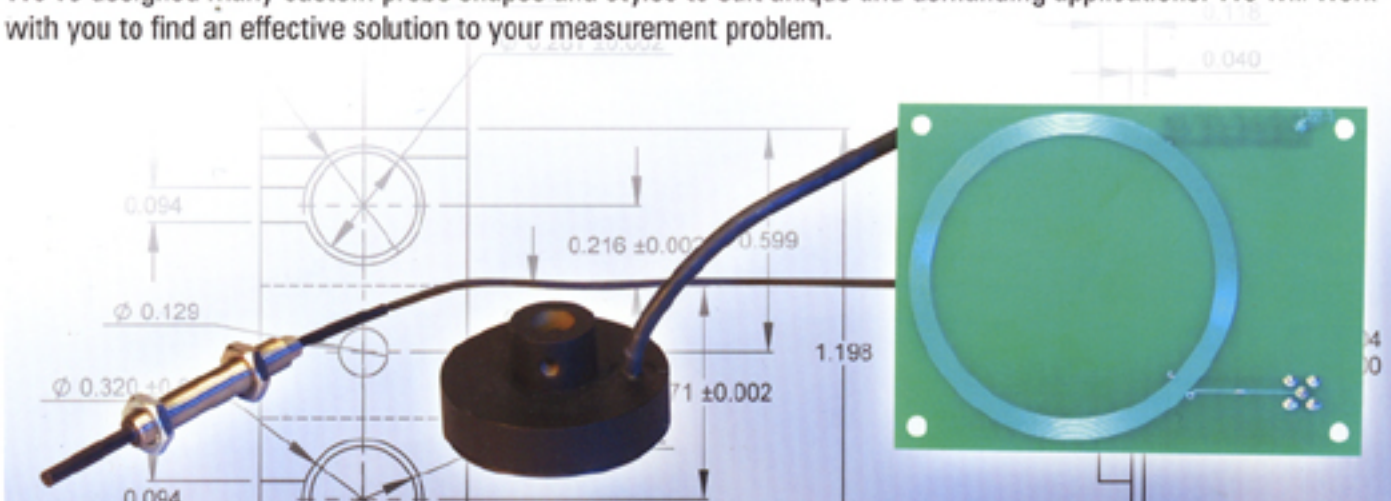
Standard Probes: -25°C to $+125^{\circ}\text{C}$ (-10°F to $+250^{\circ}\text{F}$), IP67

High-Temperature Probes: -25°C to $+200^{\circ}\text{C}$ (-10°F to $+400^{\circ}\text{F}$), IP63

Temperature Coefficient for both probe types: $< 0.04\%$ F.S./ $^{\circ}\text{C}$ (0.02% F.S./ $^{\circ}\text{F}$)

Custom Probe Designs:

We've designed many custom probe shapes and styles to suit unique and demanding applications. We will work with you to find an effective solution to your measurement problem.

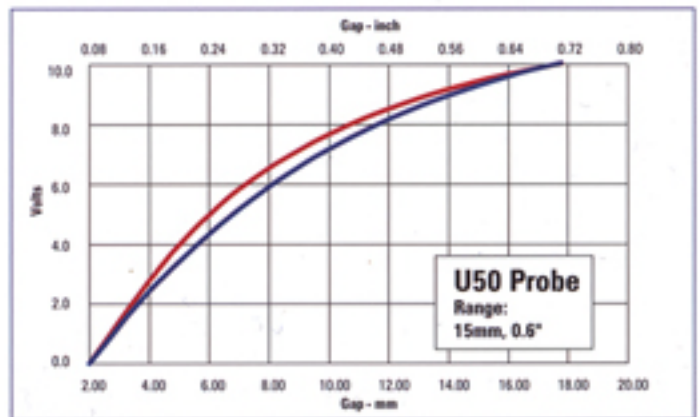
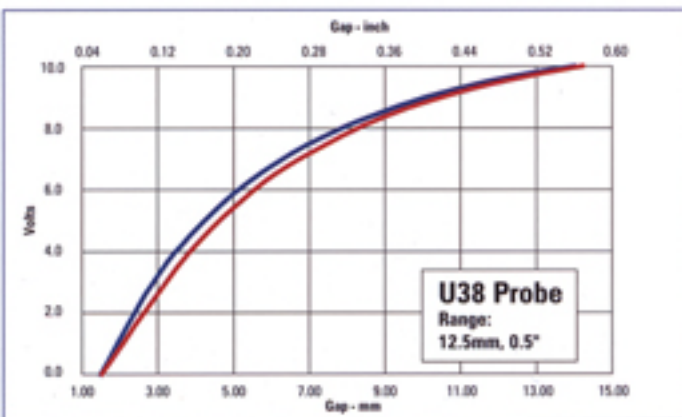
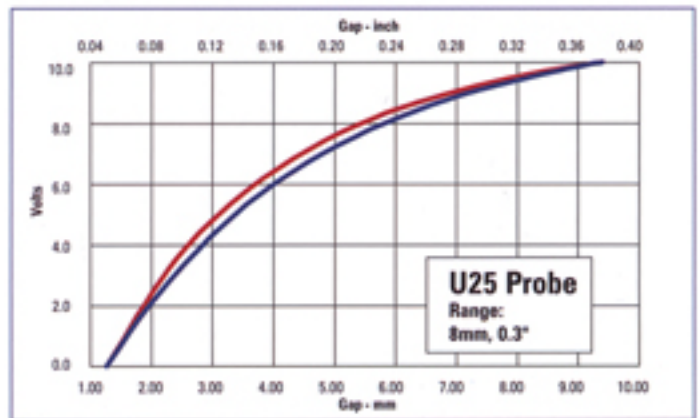
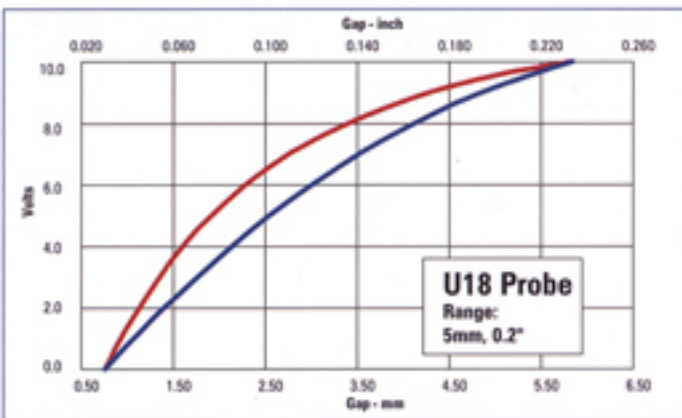
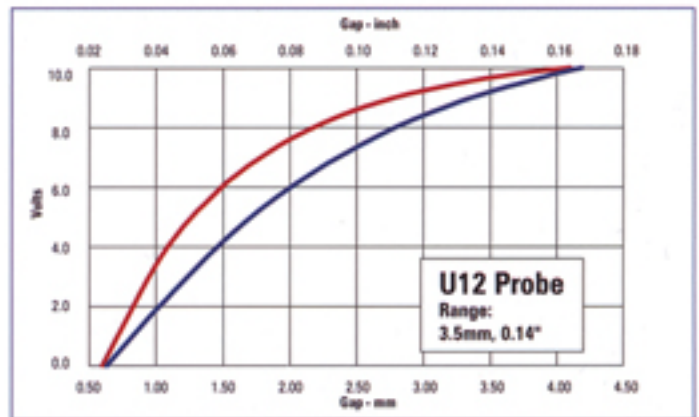
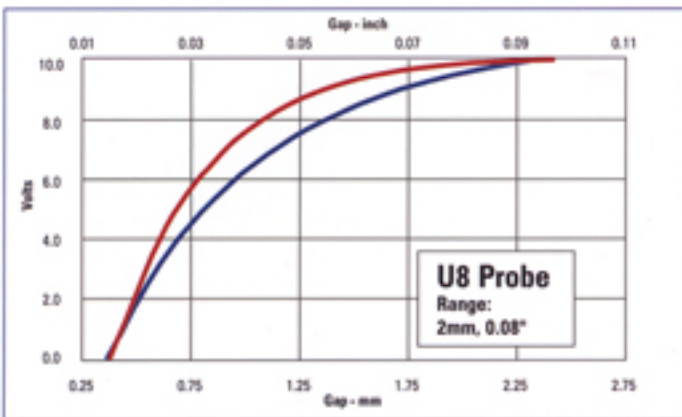
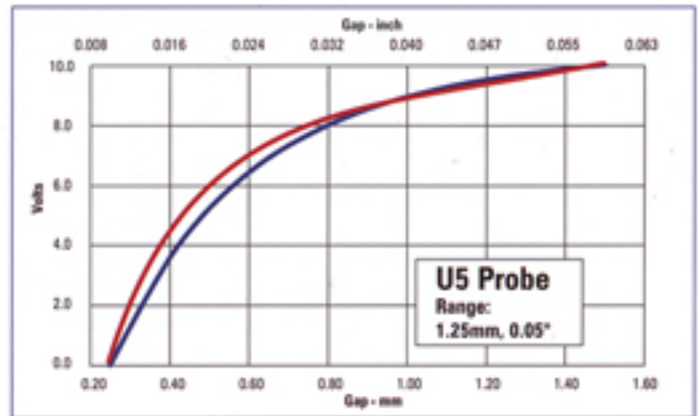
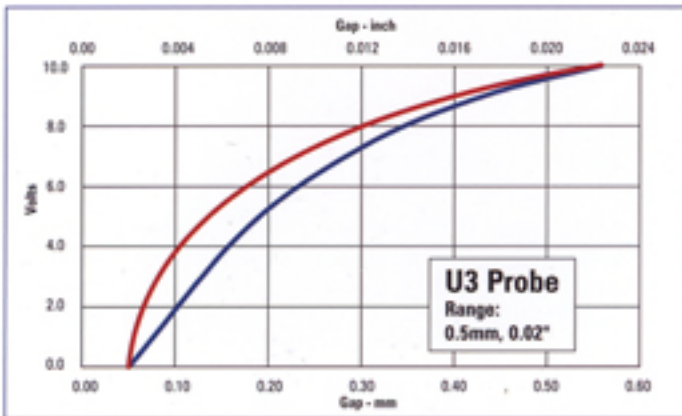


ECA100 and ECA110 Calibrations:

Typical resolution at midpoint: <0.02% of Full Scale

— Ferrous curves (AISI 4140)

— Nonferrous curves (AL 6061)



DRIVERS



ECL100



- Nonlinearity <math>< \pm 0.25\%</math>
- Bandwidths to 80kHz
- Local and Remote Zeroing
- Calibrated Range Indicators
- DIN Rail Mountable
- TEDS

Input Power		+12 to +24 VDC 130mA @ 15V
Outputs	Voltage	0-10VDC
	Current	0-20mA
Operating Temperature		0°C to +65°C
Ratings		IP40
Dimensions	Height	75mm / 2.95"
	Width	22.5mm / 0.89"
	Depth	107.5mm / 4.23"

ECL130



- Nonlinearity <math>< \pm 0.25\%</math>
- Bandwidths to 80kHz
- Single-Ended and Differential Output
- Up to Six Synchronized Channels
- Dense Multi-Channel Package

Input Power		± 12 to ± 15 VDC 300mA Max.
Outputs 2 per chan.	Positive	± 10 VDC
	Negative	± 10 VDC
Operating Temperature		0°C to +65°C
Ratings		IP40
Dimensions	Height	56mm / 2.2"
	Width	173mm / 6.8"
	Depth	79mm / 3.1"

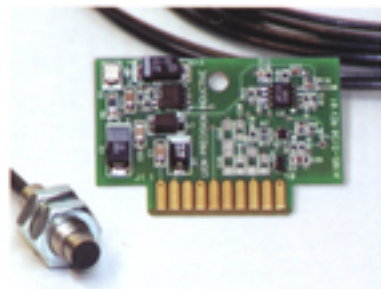
ECA100



- Adjustable Zero and Gain
- Bandwidth: 10kHz
- Calibrated Range Indicators
- Switched Output with Adjustable Threshold
- DIN Rail Mountable
- TEDS

Input Power		+12 to +24 VDC 130mA @ 15V
Outputs	Voltage	0-10VDC
	Switch	N.O. Contact 400V, 100mA
Operating Temperature		0°C to +65°C
Ratings		IP40
Dimensions	Height	75mm / 2.95"
	Width	22.5mm / 0.89"
	Depth	107.5mm / 4.23"

ECA110

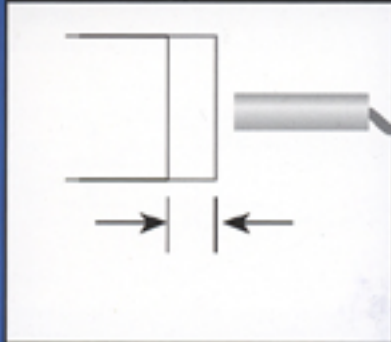


- Bandwidth: 10kHz
- OEM Applications
- Embedded Applications
- Factory Calibrated

Input Power		+12 to +24 VDC 30mA @ 15V
Output		0-10VDC
Operating Temperature		0°C to +65°C
Ratings		IP40
Dimensions	Height	33mm / 1.3"
	Width	48mm / 1.9"
	Contact Pitch	2.54mm / 0.10"
		C-C

Typical Applications:

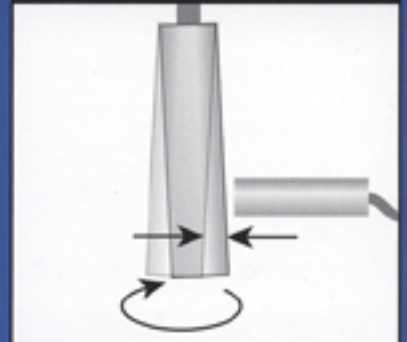
Position, Displacement



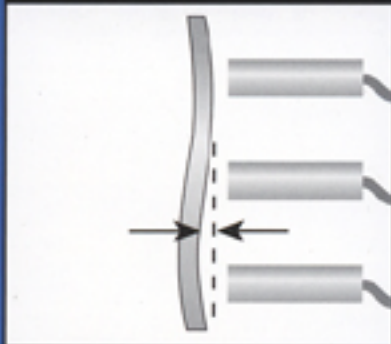
Thickness



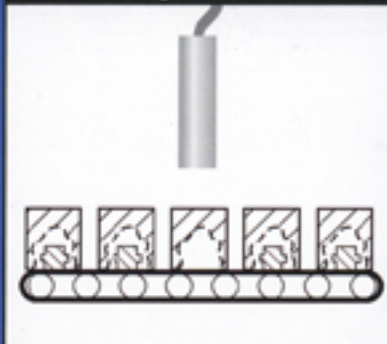
Runout, Eccentricity



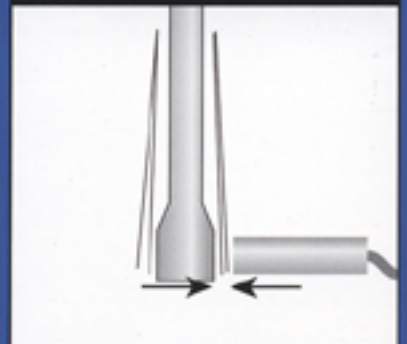
Deformation



Part Sorting



Vibration



Lion Precision's commitment to service

is unsurpassed in the industry. We partner with our customers to ensure their success by providing optimized sensing solutions.

Contact us today and let us solve your
difficult measurement problems.

LION
PRECISION

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