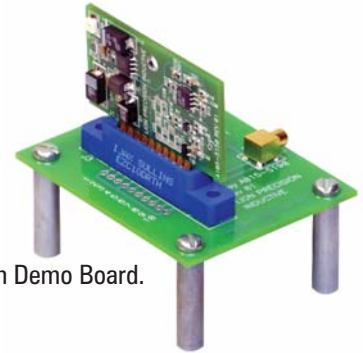


ECA110 Analog Output Eddy Current Driver PCB

***Precision displacement measurement;
OEM, embedded design.***

This versatile sensor is ideal for applications requiring high resolution and high repeatability without the higher price of linear sensors. These embeddable units are shipped from the factory fully calibrated with no user adjustments – ready to install.



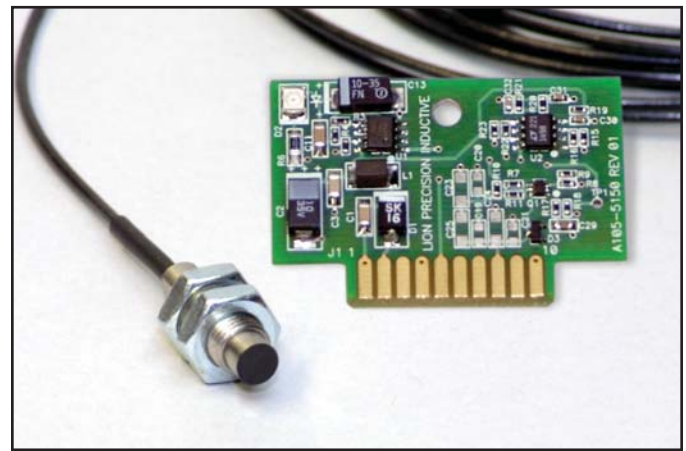
ECA110 with Demo Board.

Performance

- Resolution: 0.002%FS
- Bandwidth to 10kHz
- DC Voltage Output

Features

- 12-24VDC Input
- Factory Calibration
- Small PCB with Edge Connector
- Power LED



Probes

Choose from our four standard body styles:

Core unit features the smallest physical size for limited access applications,

Smooth body has the strength of a stainless steel housing for clamp or set screw mounting and easy adjustment of axial position,

Threaded body provides precise adjustment of axial position in a threaded mounting hole or a through hole using the two lock nuts provided,

Bulkhead body gives you easy axial position repeatability in a threaded or through hole.

Custom Probes

All body styles are built upon the same core unit. Custom body styles are turned around quickly to get you up and running with exactly what you need in your application.

Core Unit



Smooth



Threaded



Bulkhead



563 Shoreview Park Rd.
St. Paul, MN 55126
651-484-6544
www.lionprecision.com

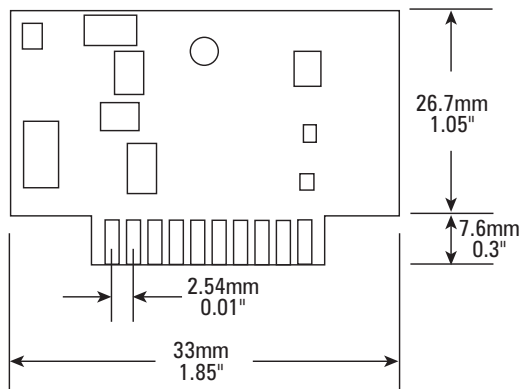
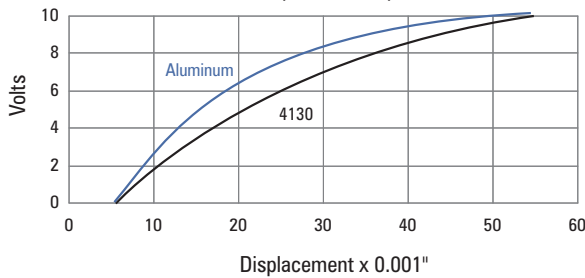
ECA110 Driver Specifications:*

| | | |
|--------------------------------|-------------------|--|
| Resolution: RMS @ mid-scale | DC-10kHz | 0.002%FS** |
| Probe Temperature Coefficient | | 0.2%FS/°C |
| Driver Input Power | | +12 to +24VDC 30mA @ 15V |
| Driver Outputs | Voltage | 0-10VDC Standard |
| Operating Temperature: | Std. Probes | -25°C to +125°C |
| | Ext. Temp. Probes | -25°C to +200°C |
| | Driver | 0°C to +65°C |
| Probe Cables | Length | 3 meters |
| | Jacket Material | Std. Temp. PUR Ext. Temp. TEFLON |
| Ratings | Driver | IP40 (CE Pending) |
| | Probes | Std. Temp. - IP67 Ext. Temp. - IP63 |
| Driver Dimensions | Height | 33mm / 1.3" |
| | Width | 48.3mm / 1.9" |
| | Connector Pitch | 2.54mm / 0.1" C-C |

* Performance data taken with standard unshielded probes, 15VDC input, normal room ambient, 4130/4140 Steel target.

** 0.005% with Aluminum target

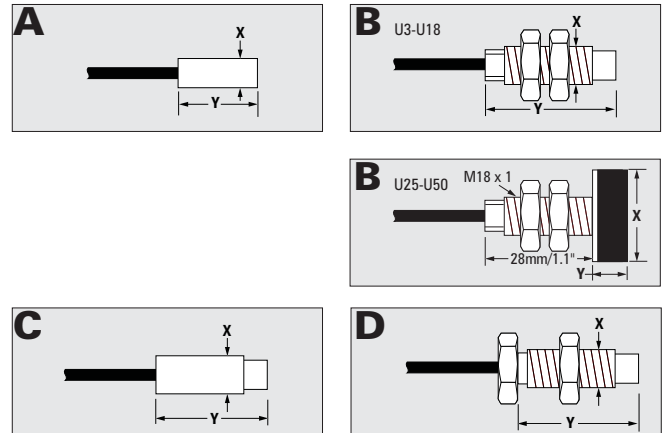
Typical Output Nonlinearity (ECA110-U5)



Typical Probe Ranges and Resolutions: (for reference only)

| Probe Model | Range mm/inch | Offset mm/inch |
|-------------|------------------|-------------------|
| U3 | 0.50/0.020 | 0.05/0.002 |
| U5 | 1.25/0.050 | 0.25/0.010 |
| U8 | 2.00/0.080 | 0.35/0.015 |
| U12 | 3.50/0.140 | 0.60/0.025 |
| U18 | 5.00/0.200 | 0.75/0.030 |
| U25 | 8.00/0.320 | 1.25/0.050 |
| U38 | 12.5/0.500 | 1.50/0.060 |
| U50 | 15.0/0.600 | 2.00/0.080 |

*Specifications for 6061 aluminum and 4140 steel. Other ferromagnetic and nonferromagnetic materials will produce similar results.



Probe Dimensions

| A | X | Y | B | X | Y |
|-----------------|------------------------|-------------------|------|-----------|-----------|
| | mm/inch | mm/inch | | thread | mm/inch |
| — | — | — | U3B | M3x.5 | 21.1/0.83 |
| U5A | 3.4/0.13 | 13.0/0.51 | U5B | M5x.8 | 25.0/0.99 |
| U8A | 6.2/0.24 | 14.0/0.55 | U8B | M8x1 | 27.0/1.07 |
| U12A | 10.0/0.39 | 15.0/0.59 | U12B | M12x1 | 29.0/1.15 |
| U18A | 15.8/0.62 | 16.0/0.63 | U18B | M18x1 | 31.0/1.22 |
| — | — | — | U25B | 25.0/0.99 | 15.0/0.59 |
| — | — | — | U38B | 38.0/1.50 | 20.0/0.79 |
| — | — | — | U50B | 50.0/1.97 | 25.0/0.99 |
| C | X | Y | D | X | Y |
| | mm/inch | mm/inch | | thread | mm/inch |
| U3C Shoulder | 2.92/0.115 3.6/0.14 | 16/0.63 5/0.20 | — | — | — |
| U5C | 4.9/0.193 | 21/0.83 | U5D | M5x.8 | 23/0.91 |
| U8C | 7.9/0.311 | 23/0.91 | U8D | M8x1 | 25/0.99 |
| U12C | 11.9/0.468 | 25/0.99 | U12D | M12x1 | 27/1.07 |
| U18C | 17.9/0.705 | 27/1.07 | U18D | M18x1 | 31/1.22 |

LION
PRECISION

563 Shoreview Park Rd.
St. Paul, MN 55126
800-250-9297, 651-484-6544
www.lionprecision.com