

# SERIES AI25 CANLayer 2 HENGSTLER

## Absolute Encoder

### Key Features

- Up to 14 Bit of Singleturn and 12 Bits of True Multiturn Absolute Positioning
- Onboard Diagnostics
- CANbus CAN Layer 2 Interface
- Available with multiple shaft configurations
- Enclosure ratings of IP64 or IP67



## SPECIFICATIONS

### STANDARD OPERATING CHARACTERISTICS:

**Code:** Absolute, Optical  
**Resolution Single-turn:** 10-14 Bit  
**Resolution Multi-turn:** 12 Bit  
**Linearity:** ± 1/2 LSB  
**Absolute Accuracy:** ± 0.01° mechanical (36 arc-sec.)  
**Repeatability:** ± 0.002° mechanical (7.2 arc-sec.)

### ELECTRICAL:

**Interface:** CAN High-Speed according to ISO/ DIS 11898  
**Protocol:** CAN 2.0A  
**Output Code:** Binary  
**Input Power:** 10-30 VDC  
**Intrinsic Current Consumption:** 220 mA (ST), 250 mA (MT)  
**Frequency Response (Baud Rate):** Range of 10 through 1000 Kbits/s  
**Noise Immunity:** Tested to EN 61326-1  
**Electrical Immunity:** Tested to EN 61326-1  
**Termination:** Bus Cover with spring terminal clamps; 12 pin Conin CW; Cable with Pigtail

### MECHANICAL:

**Shaft Diameter:** 6 mm (Servo Mount), 10 mm (Clamping Mount), 3/8" (Square Flange Mount),  
**Hubshaft:** 10mm, 12 mm, 3/8", 1/2"  
**Shaft Load (axial/radial):** 40N (9lb.) / 60N (13lb.)  
**Shaft Tolerance (hubshaft only):** +/- 1.5 mm axial, +/- 0.2 mm radial  
**Maximum Shaft Speed:** 10,000 RPM (continuous), 12,000 RPM (peak)  
**Starting Torque:** < 1.4 in-oz  
**Housing Material:** Aluminum  
**Shaft Material:** Stainless Steel  
**Disc Material:** Glass  
**Weight:**  
 Single-Turn: approx. 12.3 oz (350 g)  
 Multi-Turn: approx. 14.1 oz. (400 g)

### ENVIRONMENTAL:

**Operating Temperature:** -40 °C ...+85 °C  
**Storage Temperature:** -40 °C ...+100 °C  
**Shock:** 1,000 m/s<sup>2</sup> for 6 msec  
**Vibration:** 100 m/s<sup>2</sup> (10 to 2,000 Hz)  
**Humidity:** Up to 75%, (no condensation allowed)  
**Enclosure Rating:** IP64 or IP67



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[WWW.DYNAPAR.COM](http://WWW.DYNAPAR.COM)

Headquarters: 1675 Delany Road • Gurnee, IL 60031-1282 • USA

### Customer Service:

Tel.: +1.800.873.8731  
 Fax: +1.847.662.4150  
[custserv@dynamapar.com](mailto:custserv@dynamapar.com)

### Technical Support

Tel.: +1.800.234.8731  
 Fax: +1.847.662.4150  
[dynamapar.techsupport@dynamapar.com](mailto:dynamapar.techsupport@dynamapar.com)

### European Sales Representative

Hengstler GmbH  
 Umlandstrasse 49, 78554 Aldingen  
 Germany  
[www.hengstler.com](http://www.hengstler.com)

# HENGSTLER SERIES AI25 CANLayer 2

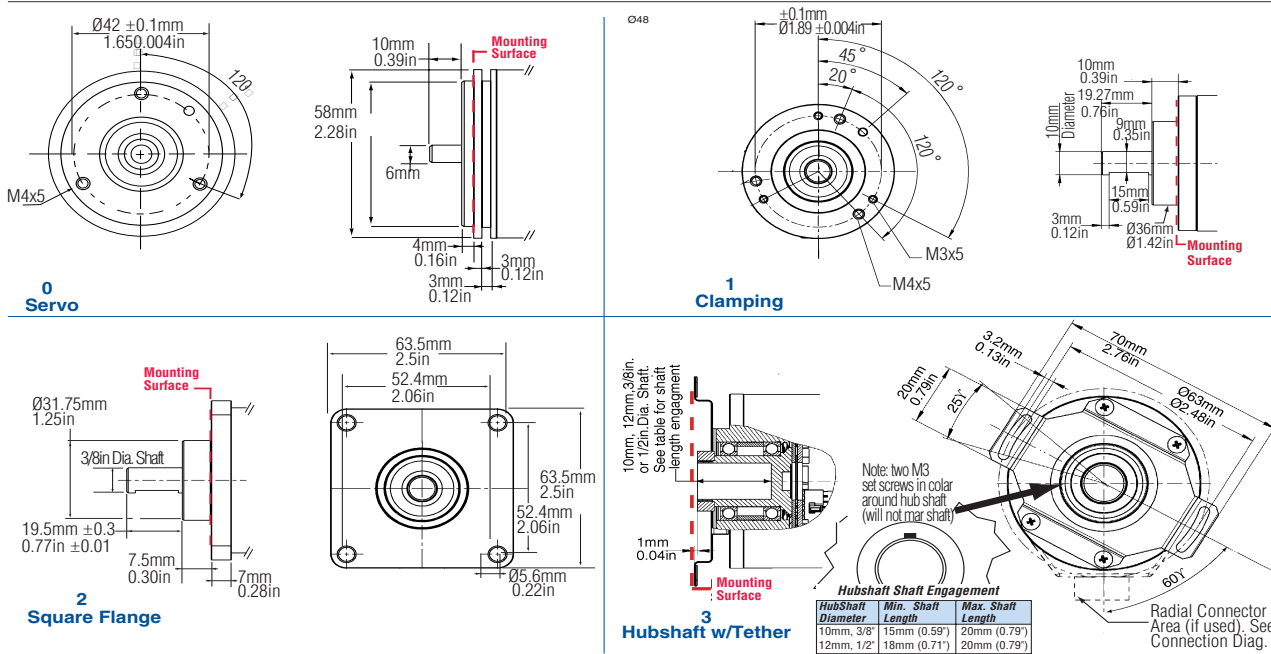
## Ordering Information

To order, complete the model number with code numbers from the table below:

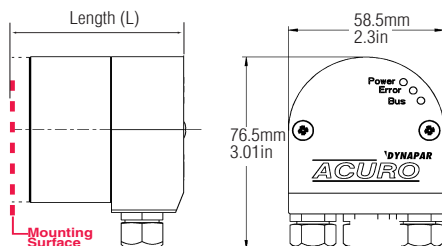
| Code 1: Model                                | Code 2: Bits   | Code 3: Mounting  | Code 4: Shaft Size  | Code 5: Protocol         | Code 6: Electrical       | Code 7: Connector  |
|--|--|---|---|--------------------------|--------------------------|--|
| Ordering Information                         |  |   |   |                          |                          |  |
| <b>AI25</b>                                  | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>  | <input type="checkbox"/>  | <input type="checkbox"/>  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   |
| <b>AI25</b><br>Size25<br>Absolute<br>Encoder | <b>Single-Turn</b><br><b>0010</b> 10 Bit<br><b>0012</b> 12 Bit<br><b>0013</b> 13 Bit<br><b>0014</b> 14 Bit<br><br><b>Multi-Turn</b><br><b>1212</b><br>12 Bit MT<br>12 Bit ST<br><b>1213</b><br>12 Bit MT,<br>13 Bit ST<br><b>1214</b><br>12 Bit MT,<br>14 Bit ST | Available when<br>Code 4 is 0<br>or A<br><br><b>0</b> Servo*<br><br>Available when<br>Code 4 is 1, 2<br>or B, C<br><br><b>1</b> Clamping*<br><b>2</b> Square<br>Flange**<br><br>Available when<br>Code 4 is 3, 4,<br>5 or 6<br><br><b>3</b> Hubshaft<br>w/Tether†<br><br>* 58mm Dia.<br>** 2.5" Square<br>† 63mm BC | <b>w/o shaft<br/>seal (IP64)</b><br><b>0</b> 6 mm<br><b>1</b> 3/8"<br><b>2</b> 10 mm<br><b>3</b> 3/8"<br>Hubshaft<br><b>4</b> 12 mm<br>Hubshaft<br><b>5</b> 1/2"<br>Hubshaft<br><b>6</b> 10 mm<br>Hubshaft<br><br><b>w/ shaft seal<br/>(IP67)</b><br><b>A</b> 6 mm<br><b>B</b> 3/8"<br><b>C</b> 10 mm | 7 CAN Layer2             | <b>2</b> 10-30 VDC       | <b>0</b> Cable, axial<br><b>1</b> Cable, radial<br><b>2</b> M23 Conin 12 pin axial, CW<br><b>3</b> M23 Conin 12 pin radial, CW<br><b>4</b> M23 connector (Conin), 12 pole, axial, CCW<br><b>5</b> M23 connector (Conin), 12 pole, radial, CCW<br><b>F</b> Bus Cover 1 M12, 5-Pole Connector<br><b>H</b> Bus Cover with 2x M23 connector (Conin), 9 pole, radial, CW<br><b>L</b> Bus Cover 2 Strain Relief Exits. Internal T-coupler included |

## DIMENSIONS

Code 3: Mounting



Code 7: Connector



Length (L) Mounting Surface to Rear For connector types L, and F

| Mount (Code 3)    | Single-Turn | Multi-Turn |
|-------------------|-------------|------------|
| (0) Servo         | 63.3/2.49   | 72.3/2.85  |
| (1) Clamping      | 62.3/2.45   | 71.3/2.81  |
| (2) Square Flange | 64.8/2.55   | 73.8/2.91  |
| (3) Hubshaft      | 72.2/2.84   | 81.2/3.2   |