

SERIES AI25 Profibus

HENGSTLER

Absolute Encoder

Key Features

- Up to 14 Bit of Singleturn and 12 Bits of True Multiturn Absolute Positioning
- Onboard Diagnostics
- Profibus Interface
- Available with Multiple Shaft Configurations
- Enclosure ratings of IP64 or IP67



E321846



SPECIFICATIONS

STANDARD OPERATING CHARACTERISTICS:

Code: Absolute, Optical
Resolution Single-turn: 10-14 Bit
Resolution Multi-turn: 12 Bit
Absolute Accuracy: $\pm 0.01^\circ$ mechanical (36 arc-sec.)
Repeatability: $\pm 0.002^\circ$ mechanical (7.2 arc-sec.)

ELECTRICAL:

Interface: Profibus-DP, Encoder Profile
Output Code: Binary
Input Power: 10-30 VDC
Intrinsic current Consumption: 220 mA (ST), 250 mA (MT)
Programmable: Resolution, Preset, Direction
Special Functions: Speed, Acceleration, Operating time
Frequency Response (Baud Rate): is automatically set within a range of 9.6 Kbaud through 12 Mbaud
Noise Immunity: Tested to EN 61326-1
Electrical Immunity: Tested to EN 61326-1
Termination: Bus Cover with spring terminal clamps

MECHANICAL:

Shaft Diameter: 6 mm (Servo Mount), 10 mm (Clamping Mount), 3/8" (Square Flange Mount),
Hubshaft: 10mm, 12 mm, 3/8", 1/2"
Maximum Shaft Load:
 6 mm shaft: 13 lb axial, 24 lb radial
 10 mm shaft: 9 lb axial, 13 lb radial
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
Weight (approx.): 350 g ST, 400 g MT
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: $-40^\circ\text{C} \dots +85^\circ\text{C}$
Storage Temperature: $-40^\circ\text{C} \dots +100^\circ\text{C}$
Shock: 1,000 m/s² for 6 msec
Vibration: 100 m/s² (10 to 2,000 Hz)
Humidity: Up to 75%, (no condensation allowed)
Enclosure Rating: IP64 or IP67

SERIES AI25

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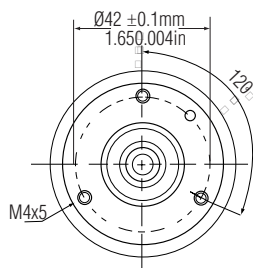
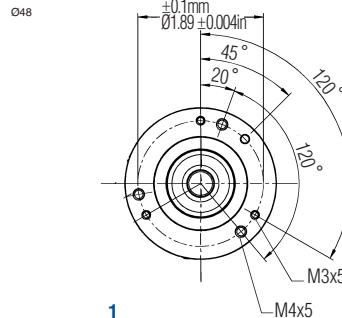
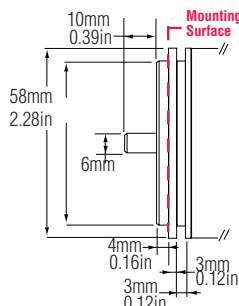
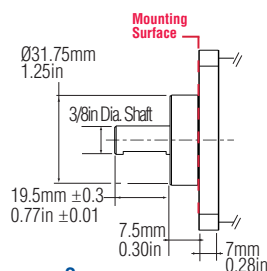
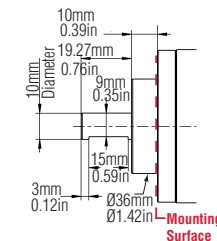
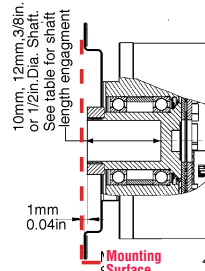
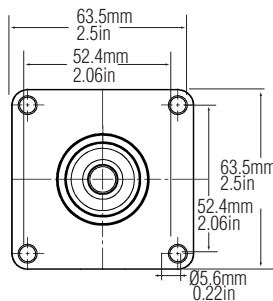
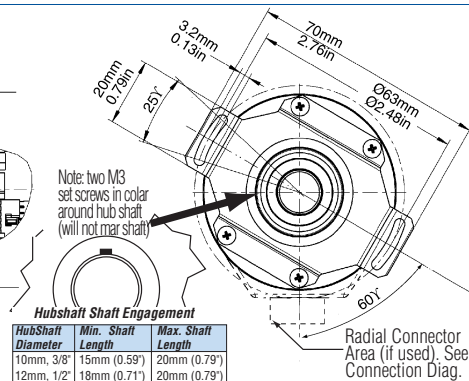
Ordering Information

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

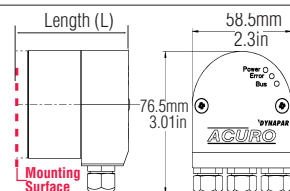
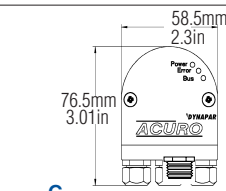
Code 1: Model	Code 2: Resolution	Code 3: Mounting	Code 4: Shaft Size	Code 5: Interface	Code 6: Output	Code 7: Termination
AI25	☐ ☐ ☐ ☐	☐	☐	☐	☐	☐
AI25 Size25 Absolute Encoder	Single-Turn 0010 10 Bit 0012 12 Bit 0013 13 Bit 0014 14 Bit Multi-Turn 1212 12 Bit Multi-Turn, 12 Bit Single-Turn 1213 12 Bit Multi-Turn, 13 Bit Single-Turn 1214 12 Bit Multi-Turn, 14 Bit Single-Turn	Available when Code 4 is 0 or A 0 Servo* Available when Code 4 is 1, 2 or B, C 1 Clamping* 2 Square Flange** Available when Code 4 is 3, 4, 5 or 6 3 Hubshaft w/ Tether† * 58mm Dia. ** 2.5" Square † 63mm BC	w/o shaft seal (IP64) 0 6 mm 1 3/8" 2 10 mm 3 3/8" Hubshaft 4 12 mm Hubshaft 5 1/2" Hubshaft 6 10mm Hubshaft w/ shaft seal (IP67) A 6 mm B 3/8" C 10 mm	6 Profibus	2 10-30 VDC	E Bus Cover 3 Strain Relief Exits. Internal T-coupler included G Bus Cover 2 Strain Relief Exits and 1 M12, 5-Pole Connector (for Tico display). Internal T-coupler included H Bus Cover Double Conin. Internal T-coupler included R Bus Cover with 3x M12

DIMENSIONS

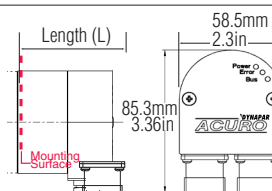
Code 3: Mounting


0
Servo

1
Clamping

2
Square Flange

3
Hubshaft w/Tether

 Radial Connector
 Area (if used). See
 Connection Diag.

Code 7: Connector


E
3 Strain Relief Exits

G
2 Strain Relief Exits
 1 M12, 5-pole Connector*

*M12, 5-Pole Connector used
to interface Hengstler Tico 731
LCD display


H
Double Conin

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

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