SERVO DUTY

SERIES AD36

HENGSTLER

Single- / Multi- Turn Absolute Encoder

Key Features

- Compact Dimensions Compatible with Size 15 Resolvers
- Up to 22 Bit Singleturn and 12 Bit True Multiturn Absolute Positioning
- Optional Sinewave 1Vpp Output for Easy Integration Into Older Controls

SPECIFICATIONS

STANDARD OPERATING CHARACTERISTICS:

- Code: Absolute
- Resolution Single-turn: 12-22 Bit
- Resolution Multi-turn: 12 Bit
- Absolute Accuracy: ±35"
- Repeatability: ±7"

ELECTRICAL:

- Interface: BiSS & SSI
- Input Power: DC 5 V -5 %/+10 % or DC 7 - 30 V
- Current w/o load typ.: 5V: 100 mA (ST), 150 mA (MT), 10-30V: 100 mA (ST), 150 mA (MT)
- Permissible load: Max. 30 mA
- Output Code: Gray
- Drives: Clock and Data / RS422
- Incremental Signals: Sine-Cosine 1 Vpp
- Number of Pulses: 2048
- 3dB Limiting Frequency: 500 kHz
- Alarm Output: Alarm bit (SSI Option), Warning bit and alarm bit (BiSS)

ELECTRICAL (Cont.):

- Frequency Response (Baud Rate):
  - SSI: 100kHz ... 1.5MHz
  - BiSS-B/BiSS-C: 100kHz ... 10 MHz
- Noise Immunity: Tested to EN61326-1
- Electrical Immunity: Reverse Polarity and Short Circuit Protected for the 7-30 VDC Only
- Termination: Cable, PCB connector, 12 pole

MECHANICAL:

- Housing Diameter: 38.1 mm
- Shaft Diameter: 8mm (Hollow Shaft)
- Shaft Material: Stainless Steel
- Shaft Load (solid-shaft): Axial ≤5 N; Radial ≤10 N
- Shaft Load (hub shaft): Spring Tether Tolerance: Axial ±0.5mm; Radial ±0.05mm
- Maximum Speed: max. 10 000 rpm (continuous), max. 12 000 rpm (short term)
- Starting torque typ.: 1 Ncm
- Moment of Inertia: Approx. 2.5 gcm²
- Mounting: Spring Tether (Hollow Shaft)
- Housing Material: Plastic
- Disc Material: Glass
- Weight: 80g (2.8 oz.) (ST) / 130g (4.6 oz.) (MT)

ENVIRONMENTAL:

- Standard Operating Temperature: -40 °C ...+120 °C
- Storage Temperature: -15 °C ...+85 °C
- Shock (DIN EN 60068-2-27): 1,000 m/s² for 6 msec duration (IEC 68-2-27)
- Vibration (DIN EN 60068-2-6): 100 m/s² (10 to 2000 Hz) (IEC 68-2-6)
- Humidity: 75%, non-condensing

CONNECTIONS

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<tr>
<th>PIN</th>
<th>1b</th>
<th>2b</th>
<th>3b</th>
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<tbody>
<tr>
<td>Function</td>
<td>DC 5V / 7-30V (U), Clock</td>
<td>B -</td>
<td>0 V (U), A -</td>
<td>Data</td>
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<td>Color</td>
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<td>Yellow</td>
<td>Gray/Pink</td>
<td>Brown</td>
<td>Brown/Green</td>
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<tr>
<td>PIN</td>
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<td>4a</td>
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<td>6a</td>
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<tr>
<td>Function</td>
<td>Data</td>
<td>A +</td>
<td>0 V -Sen</td>
<td>B +</td>
<td>Clock</td>
<td>5V Sensor</td>
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<tr>
<td>Color</td>
<td>Gray</td>
<td>White/Green</td>
<td>Black</td>
<td>Red/Blue</td>
<td>Green</td>
<td>Violet</td>
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</table>

**U = power Supply**

Sensor is connected to Power Supply and 0 V (U)

Shield connected to case

Analog signals (1Vpp) only available with interface

SC (SSI Gray +1Vpp), BC (BiSS-B +1Vpp) and BV (BiSS-C +1Vpp)
Ordering Information

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

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<td>12 Bit MT +22 Bit ST</td>
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*No inverse-polarity protection for 5V power supply.

**DIMENSIONS mm**

**HUB SHAFT WITH SPRING TETHER “F”**

[Diagram showing dimensions and features of the AD36 Absolute Encoder model with spring tether “F” and “U” options, including required mating dimensions and connection views.]
DIMENSIONS \text{mm}

HOLLOW SHAFT WITH SPRING TETHER “F”

connection cable model “A”

connection cable model “B”

flange, protection, shaft “F0C”

flange, protection, shaft “W0C”

Typ AD36