

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



EN61326-1



SPECIFICATIONS

STANDARD OPERATING CHARACTERISTICS:

Code: Absolute
Resolution Single-turn: 12-22 Bit
Resolution Multi-turn: 12 Bit
Absolute Accuracy: $\pm 35^\circ$
Repeatability: $\pm 7^\circ$

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 ± 0.5 mm; Radial ± 0.05 mm
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 500 Hz) (IEC 68-2-6)
Humidity: 75%, non-condensing
Enclosure Rating: (EN 60529/A1:2000-02):
 IP40 Housing & Shaft

CONNECTIONS

PIN	1b	2b	3b	4b	5b	6b
Function	DC 5V / 7-30V (U_p)	Clock	B -	0 V (U_n)	A -	Data
Color	White	Yellow	Gray/Pink	Brown	Brown/Green	Pink
PIN	1a	2a	3a	4a	5a	6a
Function	Data	A +	0 V -Sen	B +	Clock	5V Sensor
Color	Gray	White/Green	Black	Red/Blue	Green	Violet

U_p = power Supply
 Sensor is connected to Power Supply and 0 V (U_n)
 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

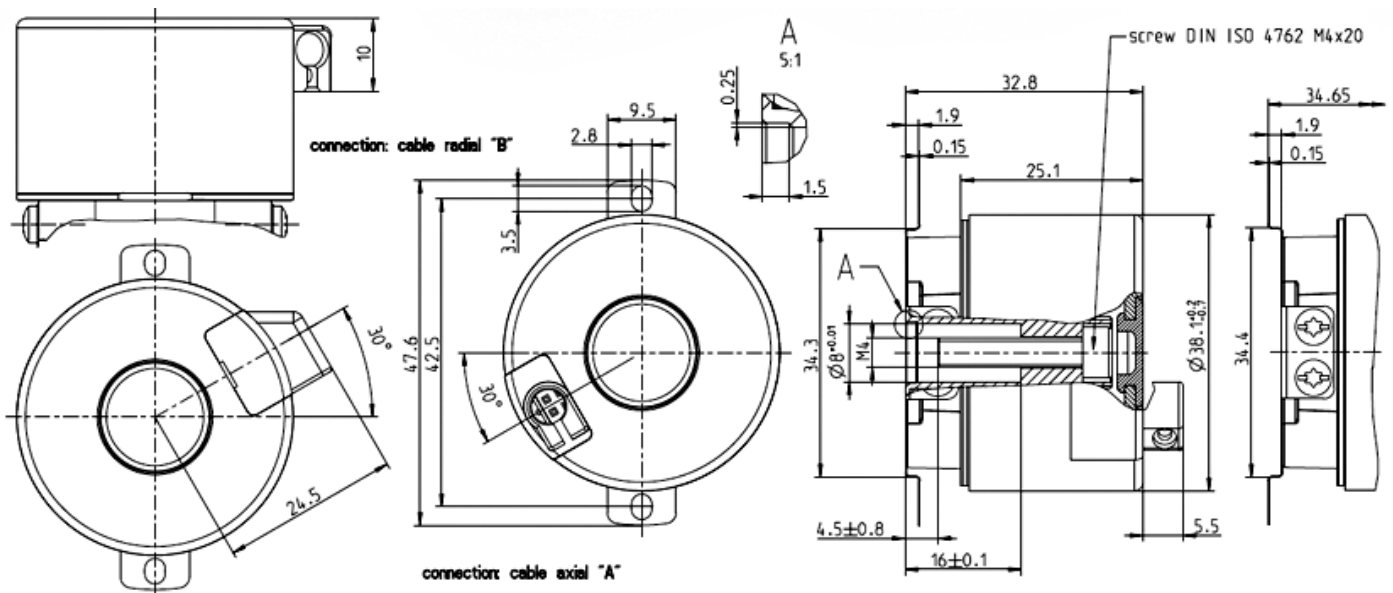
To order, complete the model number with code numbers from the table below:

Code 1: Model	Code 2: Resolution	Code 3: Voltage	Code 4: Flange/Protection/Shaft	Code 5: Output	Code 6: Termination
AD36	<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"/> <input type="checkbox"/>	<input type="checkbox"/>
AD36 Absolute Encoder	0012 12 Bit ST 0013 13 Bit ST 0014 14 Bit ST 0017 17 Bit ST 0019 19 Bit ST 0022 22 Bit ST 1212 12 Bit MT +12 Bit ST 1213 12 Bit MT +13 Bit ST 1214 12 Bit MT +14 Bit ST 1217 12 Bit MT +17 Bit ST 1219 12 Bit MT +19 Bit ST 1222 12 Bit MT +22 Bit ST	A 5 VDC* E 7-30 VDC	F.0C Spring Tether F, IP40, 8mm Through Hollow Shaft F.0R Spring Tether F, IP40, 8mm Hub Shaft U.0R Spring Tether U, IP40, 8 mm Hub Shaft U.0C Spring Tether U, IP40, 8 mm Through Hollow Shaft	BC BiSS-B (+SinCos 1Vpp) SC SSI Gray (+SinCos 1Vpp) BV BiSS- C (+SinCos 1Vpp) SD SSI-Binary (+SinCos 1Vpp) BI, SG, BE, SB available ONLY when Code 6: is A or B BI BiSS-B BE BiSS- C SB SSI-Binary SG SSI-Gray	0 PCB Connector, Axial, 12 pole 2 PCB Connector, Radial, 12 pole A PCB Connector, Axial, 12 pole with Mating Connector and 0.5 m Cable B PCB Connector, Radial, 12 pole with Mating Connector and 0.5 m Cable

*No inverse-polarity protection for 5V power supply.

DIMENSIONS mm

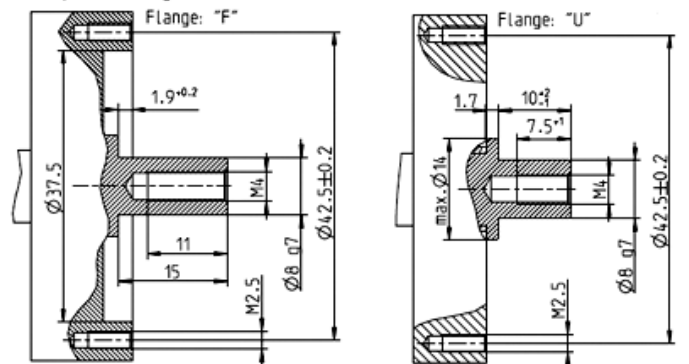
HUB SHAFT WITH SPRING TETHER "F"



flange, protection, shaft: "F.0R"

flange, protection, shaft: "U.0R"

required mating dimensions



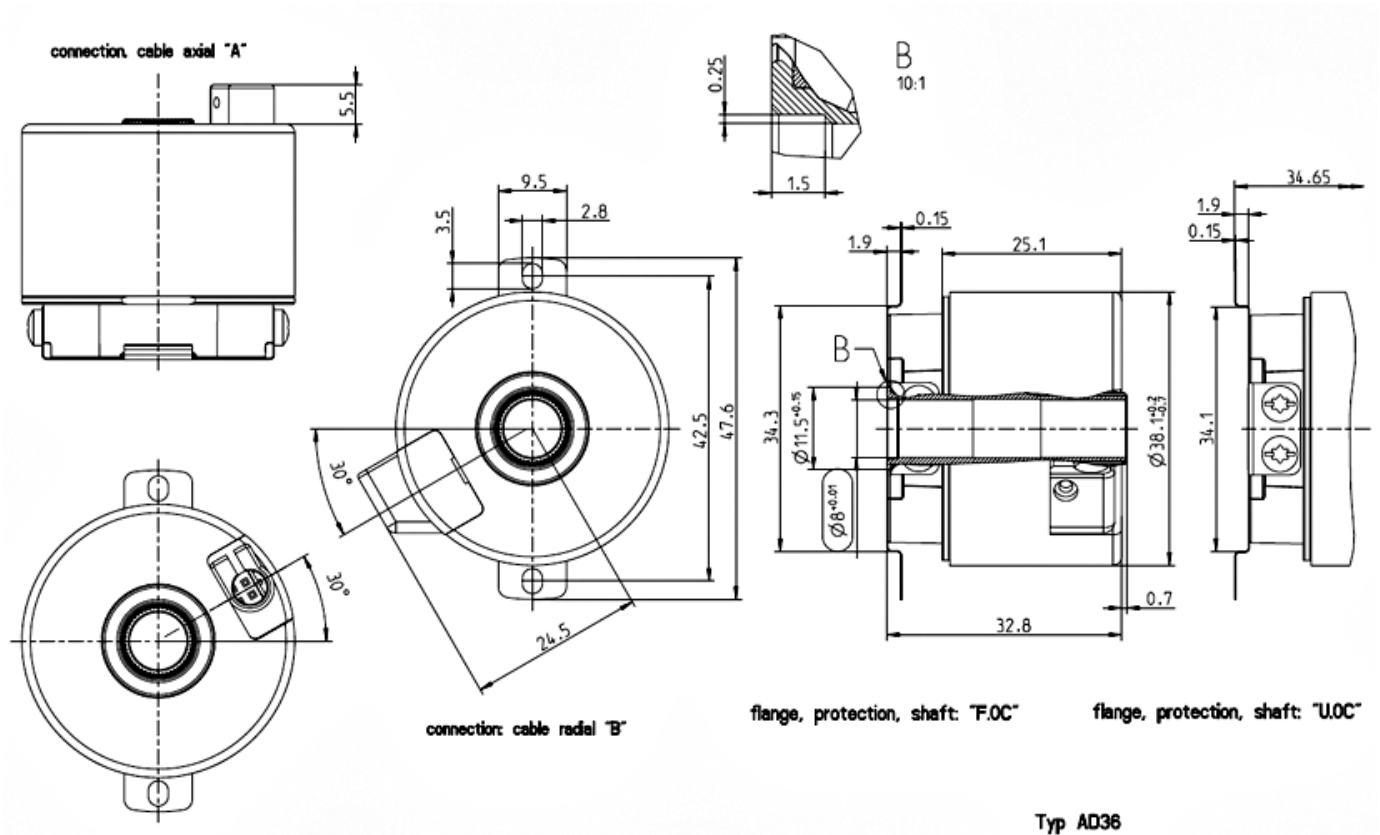
Typ AD36

SERIES AD36



DIMENSIONS mm

HOLLOW SHAFT WITH SPRING TETHER "F"



SERVO DUTY

HENGSTLER

by  **DYNAPAR™**



WWW.DYNAPAR.COM

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

Worldwide Brands: NorthStar™ • Dynapar™ • Hengstler™ • Harowe™

Customer Service:

Tel.: +1.800.873.8731

Fax: +1.847.662.4150

custserv@dynapar.com

Technical Support

Tel.: +1.800.234.8731

Fax: +1.847.662.4150

dynapar.techsupport@dynapar.com

European Sales Representative

Hengstler GmbH

Umlandstrasse 49, 78554 Aldingen

Germany

www.hengstler.com