

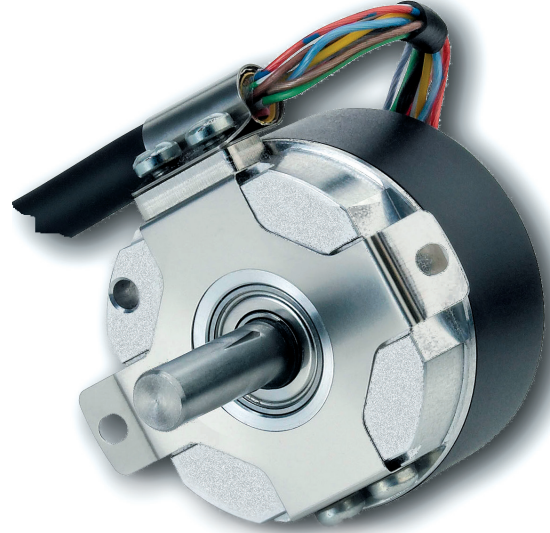
# SERIES AD34

# HENGSTLER

## Single Turn Absolute Encoder

### Key Features

- **Special Notched Shaft Installs Easily in One Step and Eliminates Coupling Issues**
- **Up to 22 bits of Singleturn Absolute Positioning**
- **Wide -15° to +120°C Operating Temperature Covers Majority of Servomotor Applications**



EN61326-1



## 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 5V -5 %/+10 % or DC 7 - 30V

**Current w/o Load typ.:** 5V: 100 mA (ST), 150 mA (MT);  
7-30V: 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, radial; PCB connector, 12 pole

### MECHANICAL:

**Housing Diameter:** 38.1 mm

**Shaft Diameter:** 6mm (Notched Shaft)

**Shaft Material:** Stainless Steel

**Axial Endplay of Mounting Shaft:** (Hub shaft)

± 0.5 mm

**Radial Runout of Mating Shaft:** (Hub shaft)

± 0.05 mm

**Maximum Speed:** max. 10,000 rpm (continuous),  
max. 12 000 rpm (short term)

**Starting torque typ.:** ≤ 1 Nm

**Moment of inertia:** ca. 2.5 x 10<sup>-6</sup> kgm<sup>2</sup>

**Mounting:** Spring Tether

**Housing Material:** Plastic

**Disc Material:** Glass

**Weight:** approx. 80g (2.8 oz), (ST)

### ENVIRONMENTAL:

**Standard Operating Temperature:**  
-15 °C ...+120 °C

**Storage Temperature:** -15 °C ...+85 °C

**Shock:** (DIN EN 60068-2-27)  
1000 m/s<sup>2</sup> (6 ms)

**Vibration:** (DIN EN 60068-2-6)  
100 m/s<sup>2</sup> (10 ... 2000 Hz)

**Humidity:** 75% rel. Humidity (no condensation allowed)

**Enclosure Rating:** (EN 60529/A1:2000-02)  
IP40 Housing & Shaft

## CONNECTIONS

PIN	1b	2b	3b	4b	5b	6b
Function	DC 5V / 7-30V (U <sub>p</sub> )	Clock	B -	0 V (U <sub>n</sub> )	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<sub>p</sub> = power Supply

Sensor is connected to Power Supply and 0 V (U<sub>n</sub>)

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: Output	Code 4: Flange/Protection/Shaft	Code 5: Interface	Code 6: Connection
<b>AD34</b>	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/>	<input type="text"/> . <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/>	<input type="text"/>
Series AD34 Absolute Encoder	<b>0012</b> 12 Bit ST <b>0013</b> 13 Bit ST <b>0014</b> 14 Bit ST <b>0017</b> 17 Bit ST <b>0019</b> 19 Bit ST <b>0022</b> 22 Bit ST <b>1212</b> 12 Bit MT, 12 Bit ST <b>1213</b> 12 Bit MT, 13 Bit ST <b>1214</b> 12 Bit MT, 14 Bit ST <b>1217</b> 12 Bit MT, 17 Bit ST <b>1219</b> 12 Bit MT, 19 Bit ST <b>1222</b> 12 Bit MT, 22 Bit ST	<b>A</b> 5 VDC* <b>E</b> 7-30VDC	<b>F.ON</b> Spring tether F, IP40, 6 mm notched shaft  <b>U.ON</b> Spring tether U, IP40, 6 mm notched shaft	<b>BC</b> BiSS-B (+SinCos 1Vpp) <b>SC</b> SSI Gray (+SinCos 1Vpp) <b>BV</b> BiSS- C (+SinCos 1Vpp) <b>SD</b> SSI-Binary (+SinCos 1Vpp)  BI, SG, BE, SB available ONLY when Code 6: is A or B  <b>BI</b> BiSS-B <b>BE</b> BiSS- C <b>SB</b> SSI-Binary <b>SG</b> SSI-Gray	<b>0</b> PCB Connector, axial, 12 pole <b>2</b> PCB Connector, radial, 12 pole <b>A</b> PCB Connector, axial, 12 pole, with mating connector and 0.5 m cable <b>B</b> PCB Connector, radial, 12 pole, with mating connector and 0.5 m cable

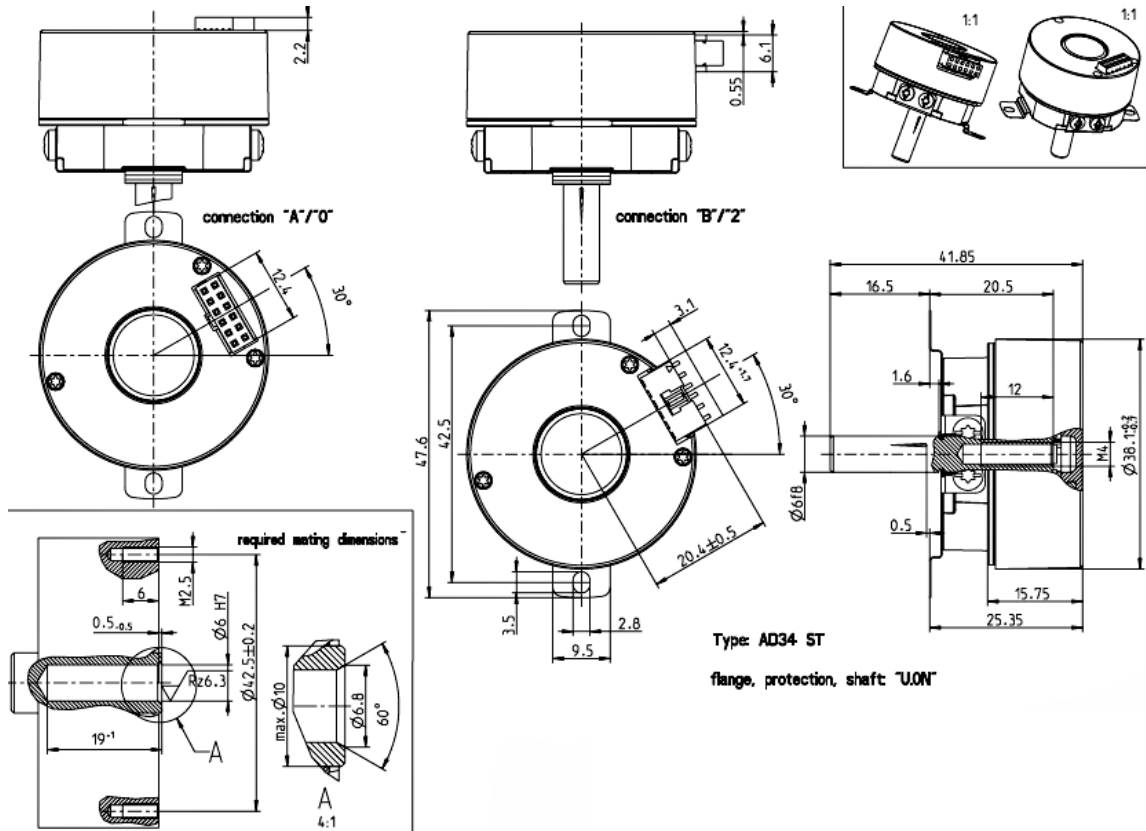
\*No inverse-polarity protection for 5V power supply.

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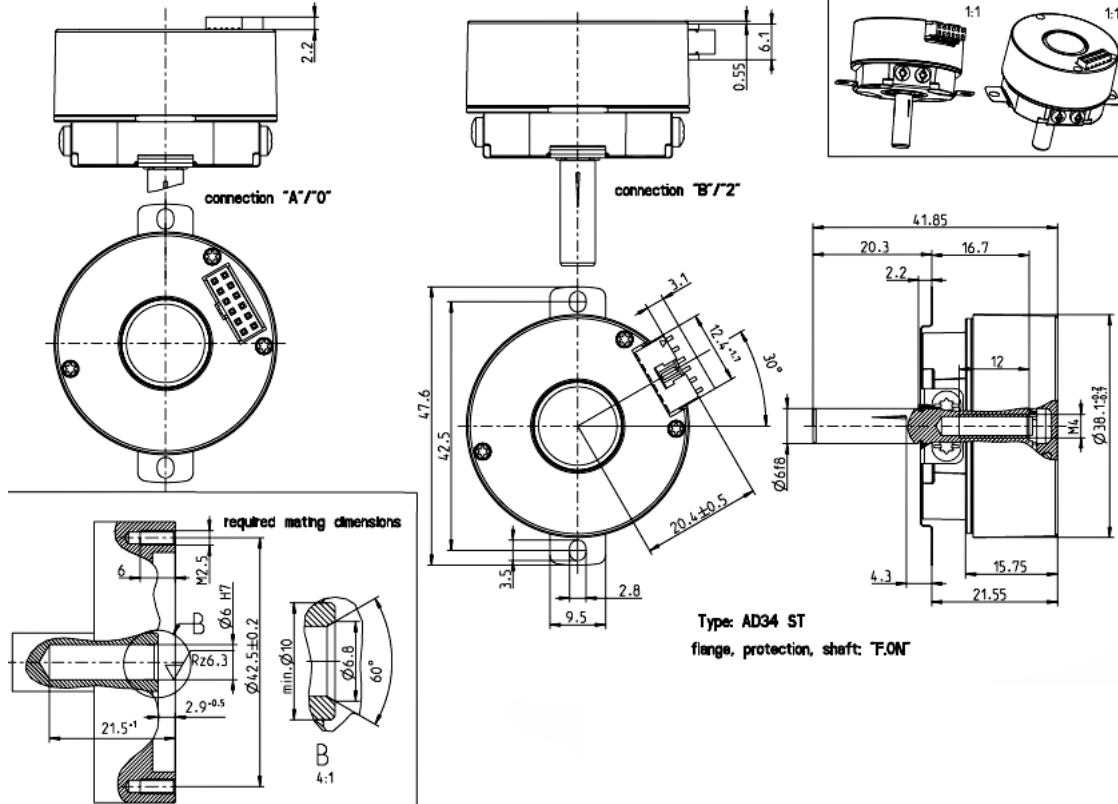


## DIMENSIONS mm

### SINGLE TURN WITH SPRING TETHER "U"



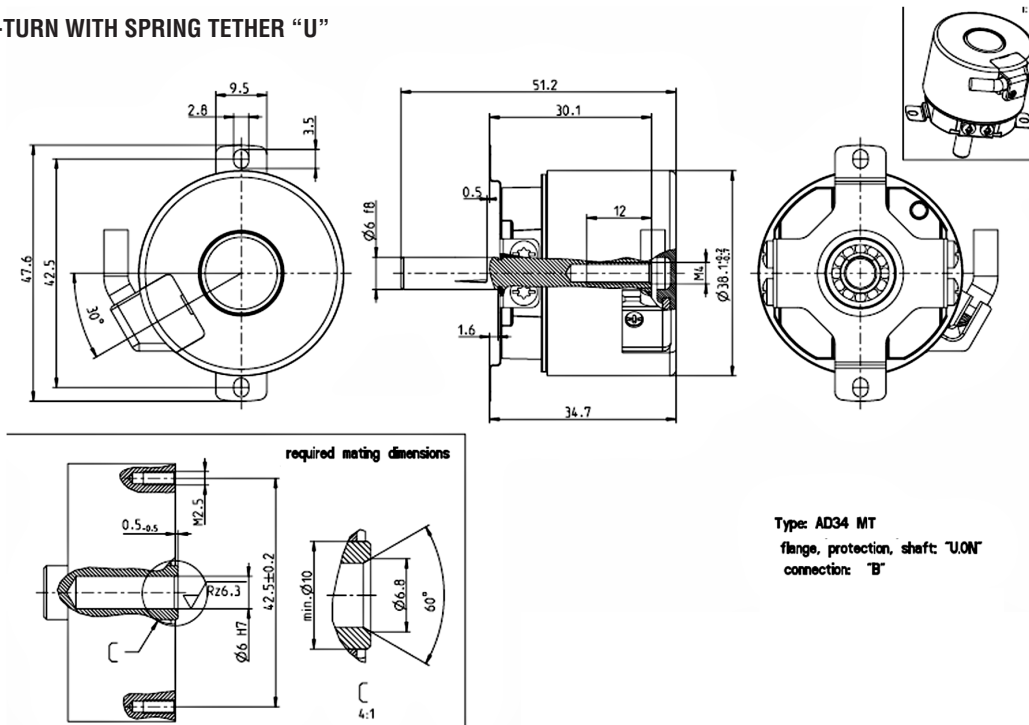
### SINGLE TURN WITH SPRING TETHER "F"



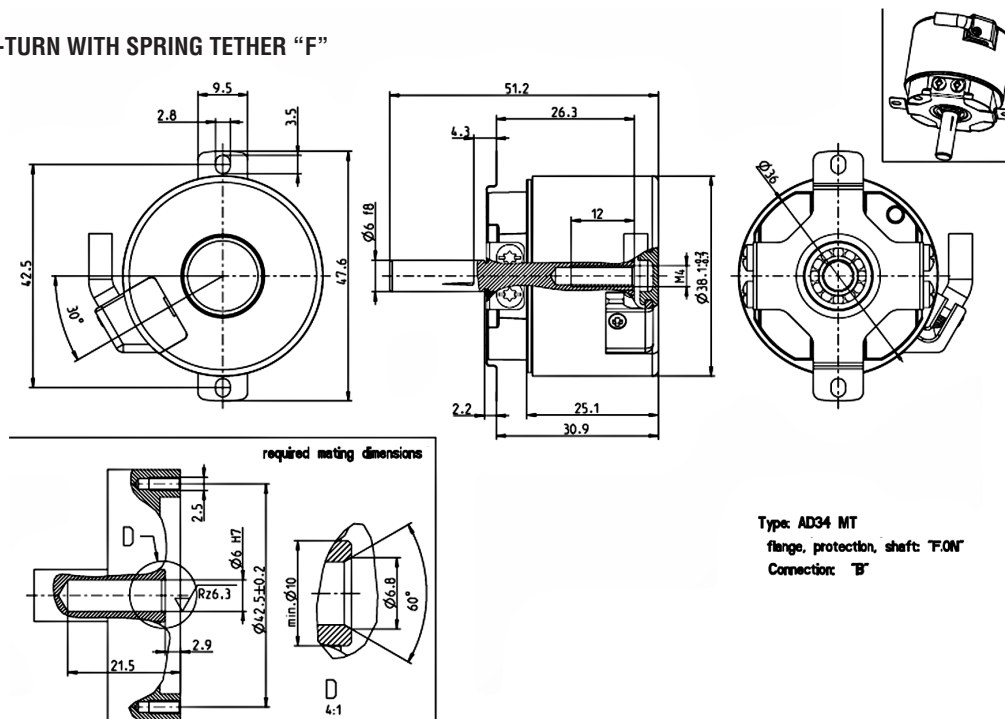
# HENGSTLER

## DIMENSIONS mm

### MULTI-TURN WITH SPRING TETHER "U"



### MULTI-TURN WITH SPRING TETHER "F"



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