

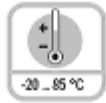
Serie ESA 24



Locked Bearing



High rotational speed



Temperature
-20 ... +85 °C



Shock/vibration resistant



Short-circuit proof



Reverse polarity protection

Rugged

- Ensures long service life and reliability of the application, no wear
Non-contact measuring system
- Can be used for a wide temperature range without additional expense.
Wide temperature range (-20 ... +85 °C)
- Robust cable outlet
High strain-relief thanks to multiple clamping



Compact

- Can be used where space is tight
Overall diameter of only 36 mm
Shaft diameter min. 4 mm

Versatile

- High resolution 12 Bit
4096 different positions at 360 °
- Wide power supply range
5 V DC or 8 ... 30 V DC
- Flexible connection of power supply
Radial or axial cable connection

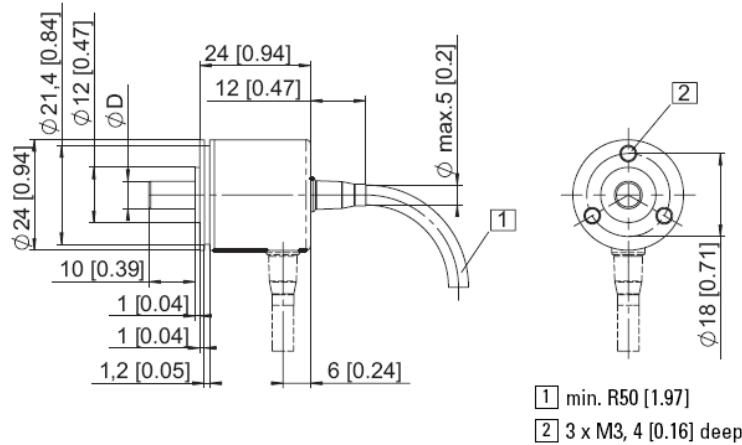
Mechanical characteristics:

Speed:	max. 12 000min ⁻¹
Rotor moment of inertia:	approx. 0.1 x 10 ⁻⁶ kgm ²
Starting torque:	<0.001 Nm
Radial load capacity of shaft:	10 N
Axial load capacity of shaft:	20 N
Weight:	approx. 0.06 kg
Protection acc. to EN 60529:	IP 64 housing side
Working temperature:	-20° C ... +85 °C ²⁾
Operating temperature:	-20° C ... +90 °C ²⁾
Shaft	stainless steel
Shock resistance acc. to DIN-IEC 68-2-27	1000 m/s ² , 6 ms
Vibration resistance acc. to DIN-IEC 68-2-6:	100 m/s ² , 55 ... 2000 Hz

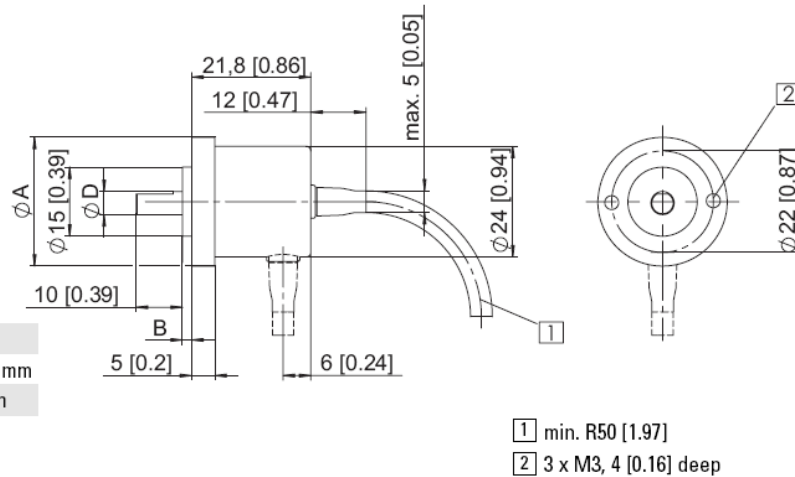
²⁾ Non-condensing

Serie ESA 24

Dimensions:
Bracket type 1 (Ø 24 mm)



Bracket type 2 (Ø 30 mm)
Bracket type 3 (Ø 28 mm)



Bracket type	2	3
A	ø 30 mm	ø 28 mm
B	3 mm	2 mm

Mounting advice:

The brackets and shafts of the encoder and drive should not both be rigidly coupled together at the same time! We recommend the use of suitable couplings (see Accessories section).

Electrical characteristics SSI Interface:

Sensor:	
Supply voltage:	5 (±0,4) V DC or 8 ... 30 V DC ¹⁾
Current consumption (w/o output load):	< 40 mA
Reverse polarity protection at power supply (U _b):	Yes
Measuring range:	360°
Resolution/Code:	12 Bit/Grey
Data refresh rate:	typ 100 µs

SSI interface	
Clock speed:	100 kHz ... 750 kHz
Output driver:	RS 485
Monoflop time typ./max.:	16 µs/20 µs
Short circuit proof outputs:	Yes ²⁾
Permissible load/channel	typ. 120 Ohm (corresponding RS 485)

¹⁾ The supply voltage at the encoder input must not be less than 4.75 V (5 V - 5%)
²⁾ Short circuit to 0V or to output, only one channel at a time, supply voltage correctly applied

Terminal assignment:

Sig.:	0V	+U _b	0 V Sens	+U _b Sens	+T	-T	+D	-D
Col.:	WH	BN	BU	RD	GN	YE	GY	PK

General characteristics:

Conforms to CE requirements acc. to EN 61000-6-1, EN 61000-6-4, EN 61000-6-3 and EN 61000-4-8 (behaviour under magnetic influence).

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Order code:

ESA 24.XXXX.G121^{*)}

Range

Bracket

1 = ø 24 mm

2 = ø 30 mm

3 = ø 28 mm

further on request

Shaft

1 = ø 4 mm x 10 mm

2 = ø 6 mm x 10 mm

3 = ø 5 mm x 10 mm with flattening

Gray Code 12 Bit resolution

Type of connection

1 = cable axial (2 m PVC cable ø 4.5 mm)

2 = cable radial (2 m PVC cable ø 4.5 mm)

Output circuit / Power supply

1 = SSI/5 V DC

2 = SSI/8 ... 30 V DC

^{*)} The product will be available as of the
1st quarter 2008