

Incremental Encoders

Miniature series, magnetic 2430 / 2440 (Shaft / Hollow shaft)



Thanks to their non-contact magnetic scanning technology the miniature-format encoders 2430 and 2440 guarantee exceptional ruggedness.

As a result of their compact outer diameter, they are ideal for use where installation space is restricted.



Safety-Lock™



High rotational speed



Temperature

-20° +85°



Shock/vibration resistant



Short-circuit proof



Reverse polarity protection

Magnetically robust

- The non-contact magnetic technology prevents wear and guarantees a long service life
- Multiple clamping affords high strain relief to the cable outlet, ensuring longer life.
- Wide temperature range from -20°C up to +85°C

Compact Power

- Flexible connection options: can be supplied with radial or axial cable outlet

Order code Shaft version

8.2430 . XXXX . XXXX
Type 1 2 3 4 5



1 Flange

- 1 = \varnothing 24 mm
- 2 = \varnothing 30 mm
- 3 = \varnothing 28 mm

2 Shaft (D)

- 1 = \varnothing 4 mm
- 2 = \varnothing 6 mm
- 3 = \varnothing 5 mm x 10 mm with flat

3 Interface / Power supply

- 6 = RS422 (with inverted signal) supply voltage 5 V

4 Type of connection

- 1 = cable axial (2 m PVC cable \varnothing 4,5 mm)
- 2 = cable radial (2 m PVC cable \varnothing 4,5 mm)

5 Pulse rate

- 1 ... 128 (factory programmable) 256
- (e.g. 128 pulses => 0128)
- Other pulse rates on request

Preferred types are underlined

Order code Hollow shaft

8.2440 . XXXX . XXXX
Type 1 2 3 4 5



1 Flange

- 1 = \varnothing 24 mm

2 Blind hollow shaft

- (insertion depth max. 14 mm)
- 1 = \varnothing 4 mm
- 2 = \varnothing 6 mm

3 Interface / Power supply

- 6 = RS422 (with inverted signal) supply voltage 5 V

4 Type of connection

- 1 = cable axial (2 m PVC cable \varnothing 4,5 mm)
- 2 = cable radial (2 m PVC cable \varnothing 4,5 mm)

5 Pulse rate

- 1 ... 128 (factory programmable) 256
- (e.g. 128 pulses => 0128)
- Other pulse rates on request

Preferred types are underlined

Suitable accessories:

- further cables and connectors, also pre-assembled, can be found in the Connection Technology section.
- further mounting attachments and stator couplings can be found in the Accessories section.

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Mechanical characteristics

Speed	max. 12.000 min ⁻¹	
Rotor moment of inertia	approx. 0,1 x 10 ⁻⁶ kgm ²	
Starting torque	< 0,001 Nm	
Shaft load capacity	radial	10 N
	axial	20 N
Weight	ca. 0,06 kg	
Protection acc. to EN 60529	housing side	IP 64 (IP 67 on request)
	flange side	IP 50 (IP 67 on request)
Working temperature range	-20°C ... +85°C ¹⁾	
Materials	Shaft/Hollow shaft	stainless steel
	Clamping flange	MS58
Shock resistance acc. to DIN-IEC 68-2-27	1000 m/s ² , 6 ms	
Vibration resistance acc. to DIN-IEC 68-2-27	100 m/s ² , 55 ... 2000 Hz	

Electrical characteristics

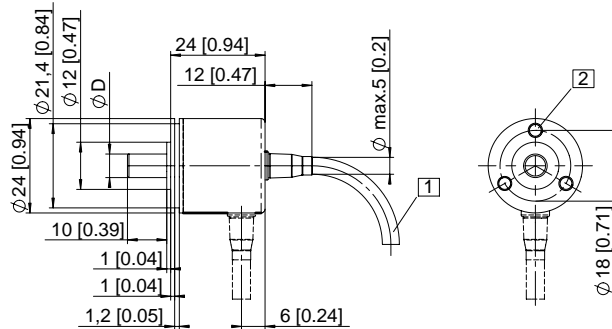
Output circuit	RS 422 (TTL-compatible)	
Supply voltage	5 V ±5%	
Current consumption	no load	typ. 40 mA
	with inversion	max. 90 mA
Permissible load/channel	max. ±20 mA	
Pulse frequency	max. 300 kHz	
Signal level	high	min. 2,5 V
	low	max. 0,5 V
Rise time t_r	max. 200 ns	
Fall time t_f	max. 200 ns	
Min. flange distance	0,5 μs ²⁾	
Short circuit proof outputs ³⁾	yes ⁴⁾	
Reverse connection of the supply voltage	no	
CE compliant acc. to	EN 61000-6-2, EN 61000-6-4 and EN 61000-6-3	
RoHS compliant acc. to	EG-guideline 2002/95/EG	

Terminal assignment

Signal:	0 V	+U _B	\bar{A}	A	\bar{B}	B	$\bar{0}$	0
Cable colour:	WH	BN	GN	YE	GY	PK	BU	RD

Dimensions shaft version:

Flange Type 1 (ø 24 mm)



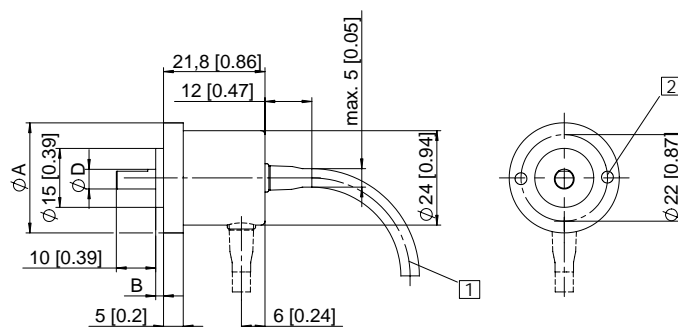
1) min. R50 [1,97]

2) 3 x M3, 4 [0,16] deep

Flange Type 2 (ø 30 mm)

Flange Type 3 (ø 28 mm)

Flange Type	2	3
A	ø 30 mm	ø 28 mm
B	3 mm	2 mm



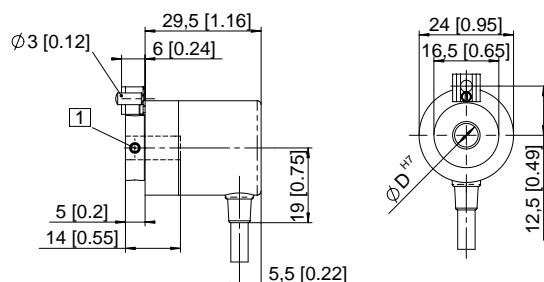
1) min. R50 [1,97]

2) 3 x M3, 4 [0,16] deep

Mounting advice

The flanges 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).

Dimensions hollow shaft version



1) 4 x M3 DIN 915 - SW15

Mounting advice

The flanges and shafts of the encoder and drive should not both be rigidly coupled together at the same time! Cylindrical pin (ISO 2338-A-3m6 x 10) for torque stop incl. in scope of delivery.

1) Non-condensing

2) For max. speed use a counter with input frequency of min. 500 kHz.

3) If supply voltage correctly applied

4) Only one channel allowed to be shorted-out:

at U_B = 5 V short circuit to channel, 0 V, or +U_B is permitted.
at U_B = 5 ... 30 V short circuit to channel or 0 V is permitted.