

Rotary Measuring Technology

Incremental hollow shaft encoder

Sine wave output Type ENI 58S



- Only 42 mm clearance needed
- Very easy mounting. The encoder is mounted directly on the drive shaft without couplings. This saves up to 30 % cost and 60 % clearance compared to shaft versions
- Many variations
- Temperature and ageing compensation
- Short-circuit proof outputs
- Reverse connection protection for voltage supply
- Sine wave output 1 Vpp
- Resolution up to 5000 ppr
- IP 66
- available as explosion proof zone 2 and 22

Mechanical characteristics:

Speed without sealing:	max. 12000 min ⁻¹
Speed with sealing: ¹⁾	max. 6000 min ⁻¹
Rotor moment of inertia:	approx. 6 x 10 ⁻⁶ kgm ²
Starting torque without sealing:	< 0.01 Nm
Starting torque with sealing:	< 0.05 Nm
Weight:	approx. 0.4 kg
Protection acc. to EN 60 529 without sealing:	IP 40
Protection acc. to EN 60 529 with sealing:	IP 66
Working temperature without sealing:	-20 °C ... +85 °C ²⁾³⁾
Working temperature with sealing:	-20 °C ... +80 °C ²⁾³⁾
Operating temperature without sealing:	-20 °C ... +90 °C ²⁾⁴⁾
Operating temperature with sealing:	-20 °C ... +85 °C ²⁾⁴⁾
Shaft:	stainless steel, H7
Shock resistance acc. to DIN-IEC 68-2-27	2000 m/s ² , 6 ms
Vibration resistance acc. to DIN-IEC 68-2-6:	100 m/s ² , 10...2000Hz

¹⁾ For continuous operation max. 3000 min⁻¹ ventilated

²⁾ Non-condensing

³⁾ 70 °C with Cable

⁴⁾ 80 °C with Cable

Electrical characteristics:

Output circuit:	Sine wave	Sine wave
	U = 1 Vpp	U = 1 Vpp
Supply voltage:	5 V (±5%)	10 ... 30 V DC
Current consumption (no load) with inverted signals:	type. 65 mA / max. 110 mA	type. 65 mA / max. 110 mA
-3 dB frequency:	≥ 180 kHz	≥ 180 kHz
Signal level channels A/B:	1 Vpp (±20 %)	1 Vpp (±20 %)
Signal level channel 0:	0.1 ... 1.2 V	0.1 ... 1.2 V
Short circuit proof outputs: ¹⁾	yes	yes
Reverse connection protection at U _B :	no	yes
Conforms to CE requirements acc. to EN 61000-6-1, EN 61000-6-4 and EN 61000-6-3		

¹⁾ If supply voltage correctly applied

Pulse rates available at short notice:

in voltage sine wave version
500, 512, 600, 625, 720, 745, 750, 762, 800, 900, 927, 1000, **1024**, 1250, 1270, 1400, 1500, 1800, 2000, **2048**, 2250, 2400, 2500, 3000, 3600, 4000, **4096**, 5000

Other pulse rates on request

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Terminal assignment voltage sine wave output:

Signal:	0 V	0 V Sensor ²⁾	+U _B	+U _B Sensor ²⁾	A	\bar{A}	B	\bar{B}	0	$\bar{0}$	Shield
12 pin plug; Pin:	10	11	12	2	5	6	8	1	3	4	PH ¹⁾
Colour:	WH 0.5 mm ²	WH	BN 0.5 mm ²	BN	GN	YE	GY	PK	BU	RD	

1) PH = Shield is attached to connector housing

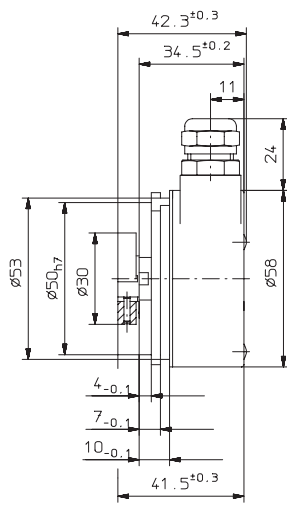
2) Sensor cables are connected to the supply voltage internally if long feeder cables are involved they can be used to adjust or control the voltage at the encoder

- If sensor cables are not in use, they have to be insulated or 0 V_{Sensor} has to be connected to 0 V and U_BSensor has to be connected to U_B

Insulate unused outputs before initial startup.

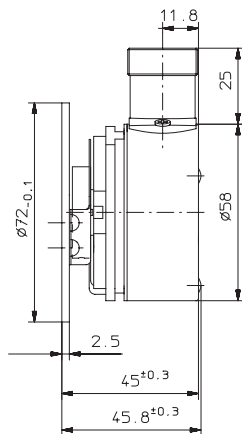
Dimensions

Bracket Type 1

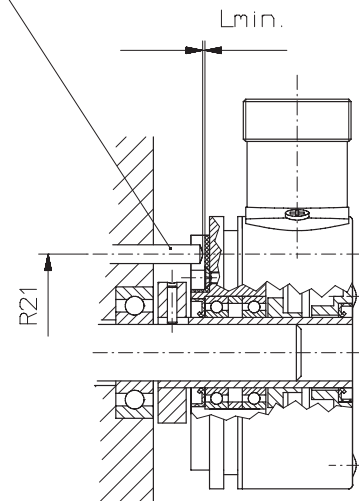


torque stop slot
Recommendation:
Cyl.-pin according to DIN 7 $\phi 4$

Bracket Type 3 with stator coupling



Cyl. pin acc. to DIN 7 $\phi 4$



Mounting advice:

1) The brackets and shafts of the encoder and drive should not both be rigidly coupled together at the same time.

2) When mounting a hollow shaft encoder, we recommend using a torque stop pin or a stator coupling.

3) When mounting the encoder ensure that the dimension Lmin. is larger than the axial play of the drive. Otherwise there is a danger that the device could mechanically seize up.

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Order code:

ENI 58S.XXXX.XXXX

