Sine wave output Type ESI 58S

- Sturdy model to industry standard, Ø58 mm housing
- Many variations, also customized versions
- IP 65
- Temperature and ageing compensation
- Short-circuit proof outputs
- Reverse connection protection (at U_B= 10 ... 30 V DC)
- Resolution up to 5000 ppr
- Voltage sine wave outputs (1Vpp)
- Ex available as explosion proof zone 2 and 22
- High shaft load
- Highly flexible PUR-cable (constant trailing: -20 ...+70 °C)

Mechanical characteristics:

Speed:	max. 12000 min^{-1}
Rotor moment of inertia:	approx. 1.8 x 10^{-6} kgm^2
Starting torque:	< 0.01 Nm
Radial load capacity of shaft*:	80 N
Axial load capacity of shaft:*:	40 N
Weight:	approx. 0.4 kg
Protection acc. to EN 60 529:	IP 65
Working temperature:	–20 °C ... +85 °C[1)]
Operating temperature:	–20 °C ... +90 °C[1)]
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, 10 ... 2000 Hz

* View also diagrams on page 25

1) Non-condensing

Pulse rates available at short notice:

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

Electrical characteristics:

Output circuit:	Sine wave U = 1 Vpp	Sine wave U = 1 Vpp
Supply voltage:	5 V (±5%)	10 ... 30 V DC
Current consumption (no load) with inverted signals:	typ. 65 mA / max. 110 mA	typ. 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 UB:	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

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Terminal assignment voltage sine wave output:

Signal:	0 V	0 V Sensor[2)]	$+U_B$	$+U_B$ Sensor[2)]	A	$\overline{A}$	B	$\overline{B}$	0	$\overline{0}$	Shield
12 pin plug, Pin:	10	11	12	2	5	6	8	1	3	4	PH[1)]
Cable colour:	WH 0.5 mm²	WH	BN 0.5 mm²	BN	GN	YE	GY	PK	BU	RD	

1) PH = Shield is attached to connector housing

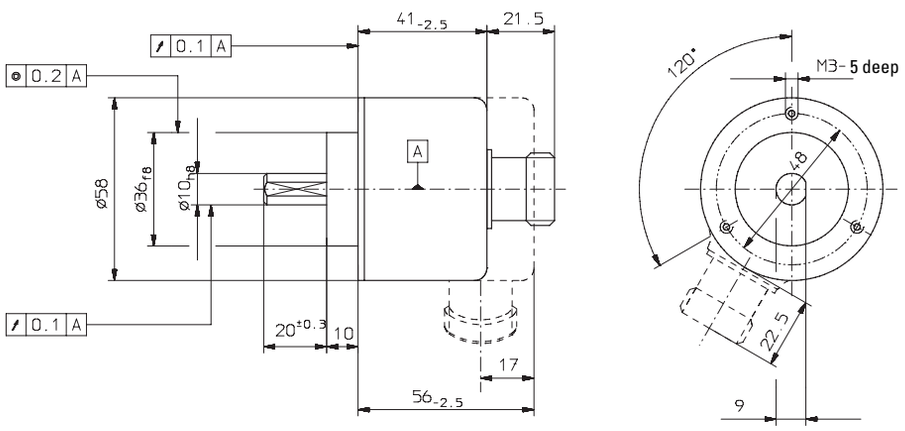
2) The sensor cables are connected to the supply voltage internally if long feeder cables are involved they can be used to adjust or control the voltage at the encoder

- If the 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

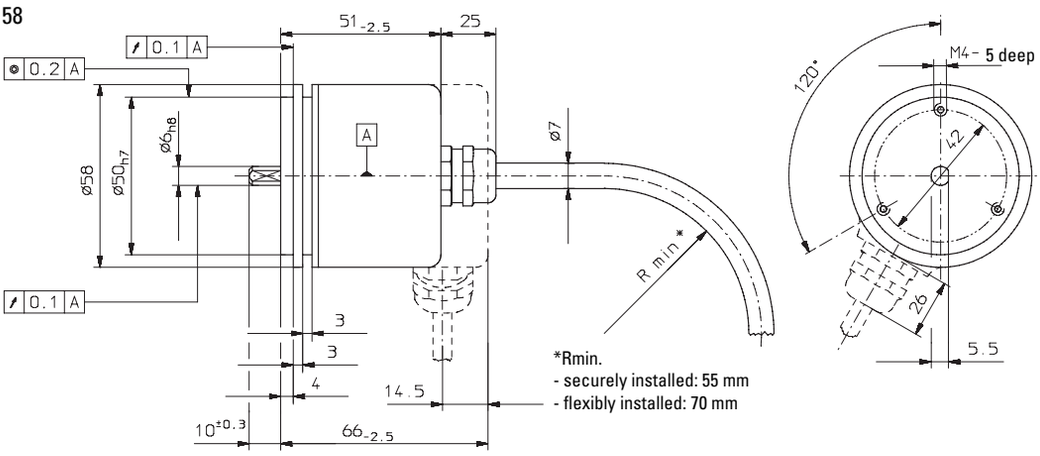
Insulate unused outputs before initial startup.

Dimensions

Clamping bracket ø 58



Synchronous bracket ø 58



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).

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Order code:

ESI 58S.XXXX.XXXX

Range

Bracket
- 1 = Clamping bracket ø 58
- **2 = Synchronous bracket ø 58**

Shaft
- **1 = ø 6 mm x 10 mm**
- 2 = ø 10 mm x 20 mm

Type of connection and supply voltage
- **1 = Sine, 1 Vpp (with inverted signal) 5 V supply voltage**
- 2 = Sine, 1 Vpp (with inverted signal) 10 ... 30 V Supply voltage

Pulse rate
(e.g. 250 pulses=> 0250)

Type of connection
- 1 = Cable axial (1 m TPE-Cable)
- 2 = Cable radial (1 m TPE-Cable)
- 3 = axial 12 pin plug without mating connector
- **5 = radial 12 pin plug without mating connector**

Preferred types are indicated in ***bold***