

ESI58HA SERIE



For die CNC-machine, crane's and test system



- ➔ Up to 36'000 pulses
- ➔ RS422 and push-pull signal
- ➔ With cable or plug connection
- ➔ Magnetically stable
- ➔ Short-circuit proof

Product description

The incremental encoders ESI58HA offer resolutions up to a maximum of 36000 pulses per revolution. They are therefore predestined for use in applications in which maximum accuracy is required.

Application

The encoder is used in all areas of industry. Especially in the processing industry such as metal construction. It is used in turning and milling machines, CNC machines, motors and in many other machines. Encoders with incremental measurement or absolute measurement are predestined to detect the change in angle of objects and to determine their position.

Technical specification

RS422 - Signal

Supply voltage		5 V DC (+5 %) or 10 ... 30 V DC
Power input (without load)		typ. 70 mA / max. 120 mA
Tolerable load / channel		max. +/- 20 mA
Pulse frequency		max. 800 kHz
Signal level	HIGH	min. 2,5 V
	LOW	max. 0,5 V
Flank rise time tr		max. 200 ns
Flank fall time tf		max. 200 ns
Short-circuit proof		yes
Inverse-polarity protection of power voltage		no; 10 ... 30 V DC: yes

Push-pull - signal

Supply voltage		10 ... 30 V DC
Power input (without load)		typ. 115 mA/max. 160 mA
Tolerable load / channel		max. +/- 30 mA
Pulse frequency		max. 600 kHz
Signal level	HIGH	min. +V - 2,5 V
	LOW	max. 2,0 V
Flank rise time tr		max. 1 µs
Flank fall time tf		max. 1 µs
Short-circuit proof		yes
Inverse-polarity protection of power voltage		yes

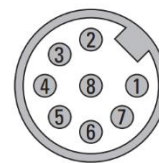
ESI58HA SERIE



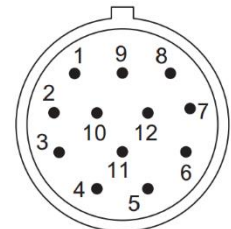
Maximum rotation speed	shaft IP65	12'000 min ⁻¹
Weight moment of inertia		ca. 1,8 x 10 ⁻⁶ kgm ²
Starting torque (by 20°C)	shaft IP65	< 0,01 Nm
Shaft capacity	radial	80 N
	axial	40N
Weight		ca. 0,4 kg
Protection as EN 60529		IP65
Working temperature range		-20°C ... +105°C
Material shaft		stainless steel H7
Shock consistency as EN 60068-2-27		1000 m/s ² , 6 ms
Vibration consistency as EN 60068-2-6		100 m/s ² , 10 ... 2000 Hz

Connection

Interface	Connection	Cable (unused conductors must be individually insulated before commissioning)											
0, 1, 2, 3	0, 1	Signal	0V	+V	0Vsens 2)	+Vsens 2)	A	A-	B	B-	0	0-	Shield
		Kabelfarbe	WH 0.5mm ²	BN 0.5mm ²	WH	BN	GY	PK	BU	RD	BK	-	Shield
Interface	Connection	M23 connector, 12 pol											
0, 1, 2, 3	2	Signal	0V	+V	0Vsens 2)	+Vsens 2)	A	A-	B	B-	0	0-	Shield
		Pin	10	12	11	2	5	6	8	1	3	4	PH 1)
Interface	Connection	M12 connector, 8 pol											
0, 1, 2, 3	3	Signal	0V	+V	0Vsens 2)	+Vsens 2)	A	A-	B	B-	0	0-	Shield
		Pin	1	2			3	4	5	6	7	8	PH 1)



M12-Stecker, 8-polig



M23-Stecker, 12-polig

- +V: Supply voltage encoder +V DC
- 0 V: Mass encoder GND (0 V)
- 0 Vsens / +Vsens: The voltage applied to the encoder can be measured via the sensor cables of the encoder and be increased accordingly if necessary.
- A, A- : Incremental-output channel A
- B, B- : Incremental-output channel B
- 0, 0- : Reference signal
- PH : Connector housing (shield)

- 1) PH = Shield is on the connector housing.
- 2) The sensor cables are internally connected to the power supply connected. Special power supplies rules about the return of the tension the voltage drop on long cables.

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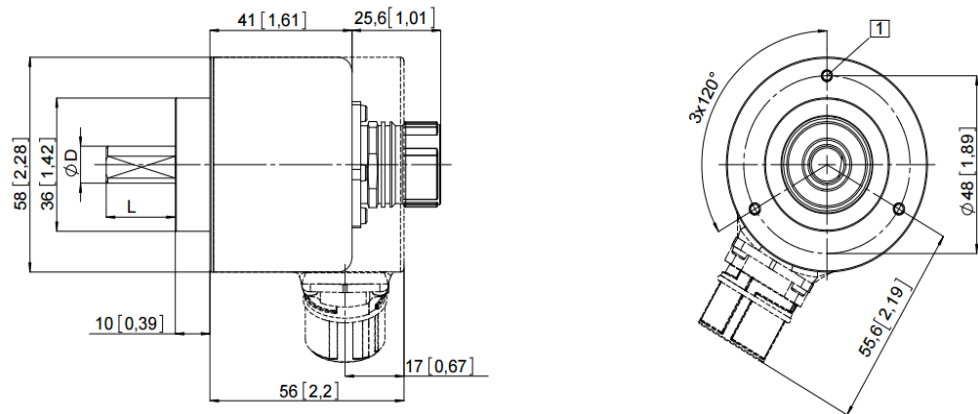


Dimension in mm

Clamp flange, ø 58

Dimension in mm [inch]

D	Passung	L
6 [0.24]	h7	10 [0.39]
10 [0.39]	f7	20 [0.79]



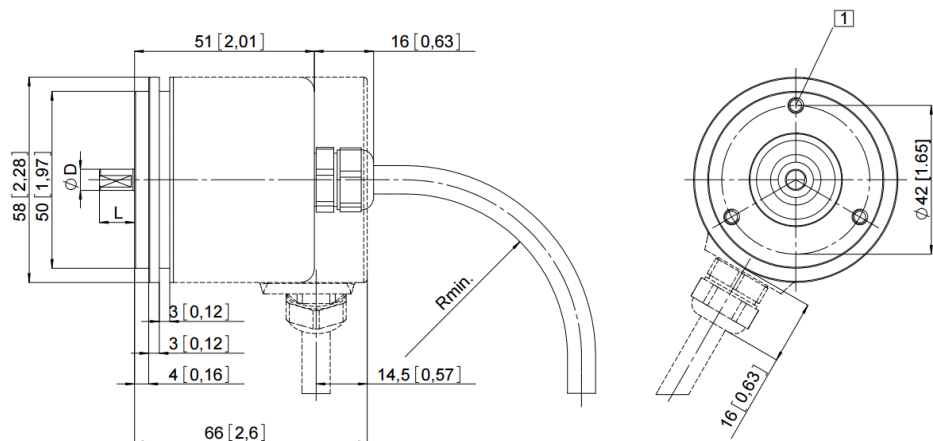
1 - 3 x M3, 6 [0.24] deep

Synchro flange, ø 58

Dimension in mm [inch]

D	Passung	L
6 [0.24]	h7	10 [0.39]
10 [0.39]	f7	20 [0.79]

Rmin.: - fixed laying: 55 [2.17]
- flexible appl.: 70 [2.76]



1 - 3 x M3, 6 [0.24] deep

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Order code

ESI 58 HA		955	x.	x	x.	x	x	x
955	ESI58HA							
FLANGE								
0	Clamping flange Ø 58							
1	Synchro flange Ø 58							
SHAFT								
0	Ø 6 x 10 mm							
1	Ø 10 x 20 mm							
OUTPUT CIRCUIT								
0	RS 422 (with invertation) 5V							
1	RS 422 (with invertation) 10...30V							
2	Push-pull (with invertation) 10...30V							
3	Push-pull (without invertation) 10...30V							
CONNECTION								
0	Cable axial (1m PUR-Kabel)							
1	Cable radial (1m PUR-Kabel)							
2	M23-connector axial 12-pol. without mating connector							
3	M23-connector radial 12-pol. without mating connector							
4	M12-connector axial 8-pol. without mating connector							
5	M12-connector radial 8-pol. without mating connector							
6	Cable axial, special length PUR (*)							
7	Cable radial, special length PUR (*)							
PULSES								
0	6000							
1	7200							
2	8000							
3	8192							
4	9000							
5	10000							
6	18000							
7	36000							
SPECIAL LENGTH PUR (*)								
0	Connection standard							
1	2m							
2	3m							
3	5m							
4	8m							
5	10m							
6	15m							



Questions?

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Incremental Encoder with high resolution

MICRONOR[®]
mechanical products

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