



Incremental rotary encoder

ENI58PU-S*

- Housing Ø 58 mm
- Solid shaft
- Up to 2048 pulses
- Clamping flange
- Universal output driver
- BlueBeam technology for ultimate precision

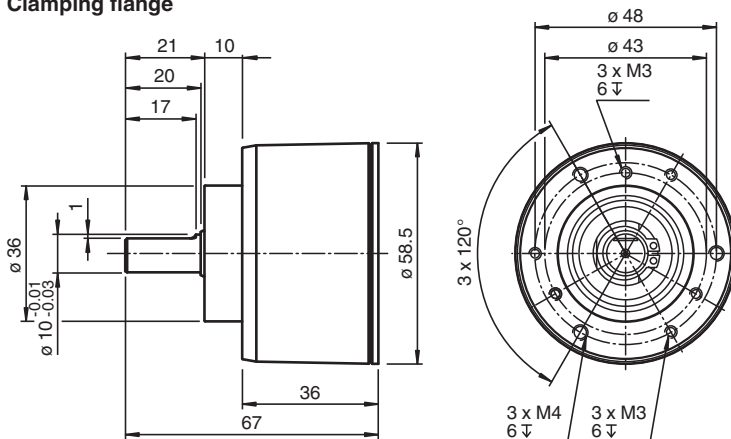


Function

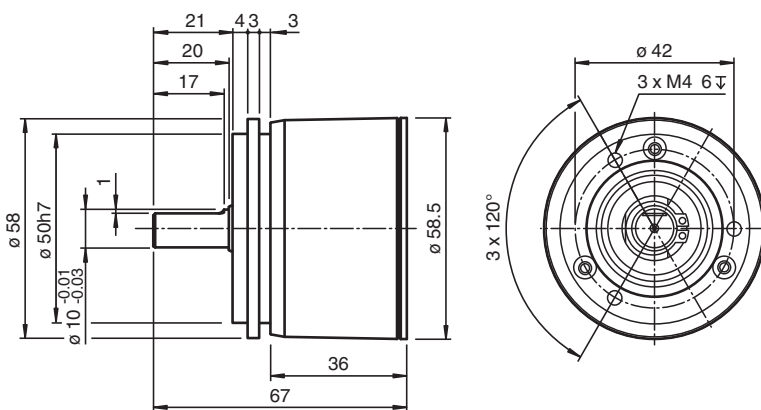
The ENI58PU is the basic version of the ENI58 series and impresses with its high robustness and modular design, which includes cable lengths and mechanical variants. With its high-precision BlueBeam technology and innovative housing design, the ENI58PU sets the new market standard for incremental rotary encoders.

Dimensions

Clamping flange



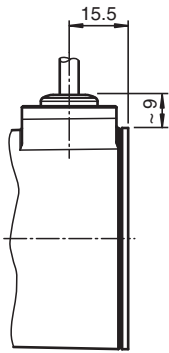
Servo flange



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Dimensions

Connection



Technical Data

General specifications	
Detection type	photoelectric sampling
Linearity error	$\pm 0.025^\circ$
Pulse count	max. 2048
Electrical specifications	
Operating voltage	U_B 4.75 ... 30 V DC
No-load supply current	I_0 max. 50 mA
Output	
Output type	push-pull or RS422 (universal output driver, output level depending on input voltage)
Load current	max. per channel 40 mA , short-circuit protected, reverse polarity protected
Output frequency	max. 400 kHz
Rise time	300 ns
Phase position A to B	$90^\circ \pm 9^\circ$ electrical
Duty cycle	$1/2 \pm 10\%$
Connection	
Cable	$\varnothing 6$ mm, 4 x 2 x 0.14 mm ²
Standard conformity	
Degree of protection	DIN EN 60529, IP54
Climatic testing	DIN EN 60068-2-78 , no moisture condensation
Emitted interference	EN IEC 61000-6-4:2019
Noise immunity	EN IEC 61000-6-2:2019
Shock resistance	DIN EN 60068-2-27, 100 g, 6 ms
Vibration resistance	DIN EN 60068-2-6, 10 g, 10 ... 2000 Hz
Approvals and certificates	
UL approval	E223176 , cULus Listed, General Purpose, Class 2 Power Source, Type 1 enclosure , if UL marking is marked on the product. For use in NFPA 79 Applications only. adapters providing field wiring on request
Maximum permissible ambient temperature	max. 80 °C (max. 176 °F)
Ambient conditions	
Operating temperature	-20 ... 70 °C (-4 ... 158 °F) , cable, fixed installation -5 ... 70 °C (23 ... 158 °F) , movable cable
Storage temperature	-20 ... 70 °C (-4 ... 158 °F)
Mechanical specifications	
Material	
Housing	aluminum, blank
Flange	aluminum, blank
Shaft	Solid shaft Stainless steel
Mass	< 300 g without cable
Rotational speed	max. 6000 min ⁻¹
Moment of inertia	≤ 35 gcm ²

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Technical Data

Starting torque	≤ 0.01 Nm
Shaft load	
Axial	≤ 40 N
Radial	≤ 80 N
Dimensions	
Diameter	58.5 mm

Type Code

Structure of the type code

E	N	I	5	8	P	U	-	S	(1)	(1)	(2)	(2)	4	-	(3)	(3)	(3)	(3)	(4)	(4)	(4)	-	R	(5)	(5)
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ENI	Device type
ENI	Incremental rotary encoder

58	Size
58	Housing diameter 58 mm

PU	Version
PU	Pure Line

S	Shaft type
S	Solid shaft

(1) (1)	Shaft diameter
08	8 x 20 mm
10	10 x 20 mm
U2	1/4 inch x 23 mm
U3	3/8 inch x 23 mm

(2) (2)	Flange
CA	Clamping flange
SA	Servo flange

4	Degree of protection
4	IP54

(3) (3) (3) (3)	Pulse count
0360	360 pulses
1024	1024 pulses
2048	2048 pulses

(4) (4) (4)	Electrical interface
UD1	Universal output driver, U_B 4.75 V ... 30 V
UD2	RS422, U_B 4.75 V ... 30 V

R	Connection alignment
R	Radial

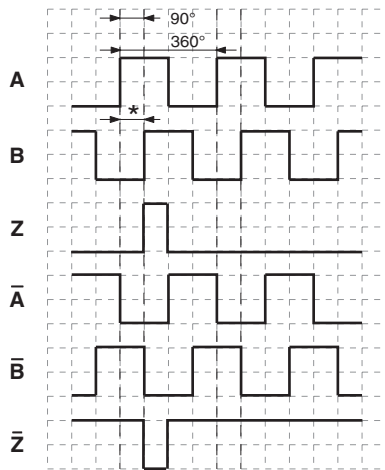
(5) (5)	Connection type
C1	Cable, 1 m
C2	Cable, 2 m
C5	Cable, 5 m

Connection

Signal	Cable
GND	White
U _b	Brown
A	Green
B	Grey
\bar{A}	Yellow
\bar{B}	Pink
Z	Blue
\bar{Z}	Red
Shielding	Shield
	Note: Unused cores must be insulated individually before commissioning in order to avoid interference.

Operation

Signal outputs



↻ cw - with view onto the flange
 phase relationships electrical
 * 1 Measuring step is 90° electrical

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