

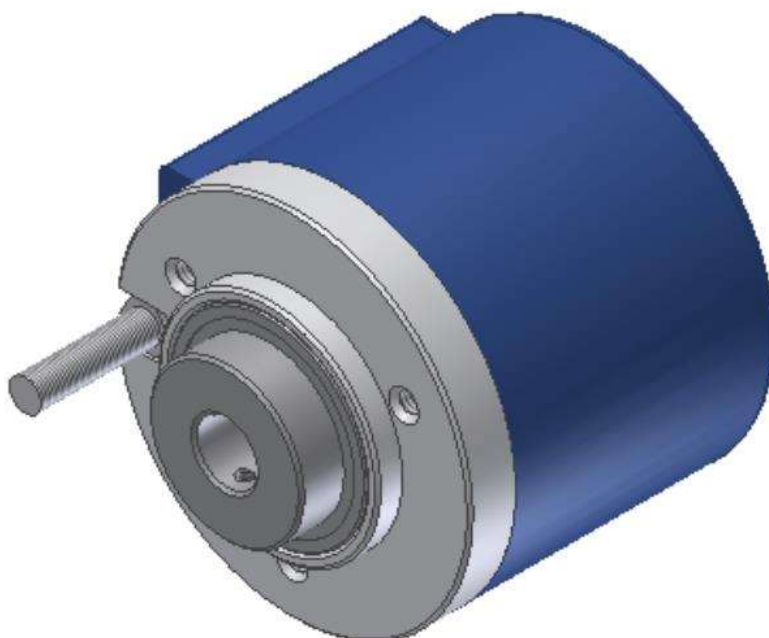


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OPTICAL

INCREMENTAL ENCODER

EN58SC



TECHNICAL DATASHEET



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OPTICAL ENCODER EN58SC

GENERAL FEATURES

- Optical rotary encoder.
- Bi-directional signals with zero pulse.
- Flange and body made of aluminium.
- Output by connector or cable (with sealing fairlead), radial or axial.



MECHANICAL AND ELECTRICAL FEATURES

MECHANICAL

- Flange and body made of aluminium.
- Shaft made of stainless steel.
- Ball bearings with special high-sealed screens.
- High protection even in harsh environmental conditions.

ELECTRICAL

- Protection against short-circuits.
- Protection against inversion of polarity.
- High stability of output signals.
- Reading device with an infra-red light emitter and receiving photodiodes.
- A and B output signals with phase displacement of 90° electrical.

Code EN58SC	PP		LD	OC
Pulses per revolution	5 to 64000 ppr			
Max. rotating speed	momentary permanent		12000 rpm 8000 rpm	
Max. load on shaft	100 N (radial) – 100 N (axial)			
Shaft (diameter A) mm	Ø6 - ø8 - ø9.52 - ø10 - ø12 - ø14 ø15 - others on request			
Hole diameter A depth	15 mm			
Protection class	IP 65			
Operating temperature	0 ÷ 70°C			
Storage temperature	-20 ÷ 80°C			
Humidity	20 ÷ 90% (not condensed)			
Power supply	5 V ± 5% 5 ÷ 28 V ± 5%			
Max. consumption at 5V (with no load)	25 mA			
Max. output current (each channel)	30 mA			
Max. frequency	300 kHz			
Output	Push-Pull	Line Driver	Open Collector	
Standard length of cable	1 m			
Electrical connections	see rel. table			
Electrical protection	inversion of power supply polarity and short-circuits on output port			
Weight (according to model)	300 ÷ 360 g			

ORDERING CODE

MODEL	CABLE / CONN. OUTPUT	ACCURACY	PPR	POWER SUPPLY	SHAFT Ø	CABLE / CONN.	OUTPUT	CONNECTION
EN58SC	HR	S	xxxxx	05V	D06	M01	LD	C

HR - radial
HA - axial

No code - standard
S - special

05V - 5V
0528 - 5÷28V

D06 - Ø6 mm
D08 - Ø8 mm
9.52 - Ø9.52 mm
D10 - Ø10 mm
D12 - Ø12 mm
D14 - Ø14 mm
D15 - Ø15 mm

M.5 - 0.5m
M01 - 1m
CE - 7P Amph.
CF - 10P Amph.
CG - 12P Connel

LD - LINE DRIVER
PP - PUSH-PULL
ON - OC NPN
OP - OC PNP

C - cable
n - no. wiring

Example OPTICAL ENCODER EN58SC HRS 01000 05V D08CE PP2



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CABLE AND ELECTRICAL CONNECTIONS

Cable 8 cores $\varnothing = 6.5$ mm, PVC external sheath

Wires section:

- for power supply: 0.5 mm^2
- for signals: 0.14 mm^2

Cable 5 cores $\varnothing = 5.4$ mm, PVC external sheath

Wires section:

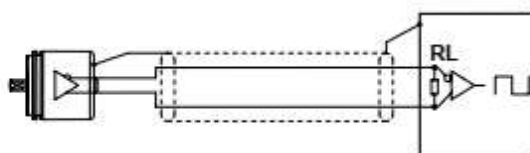
- for power supply: 0.22 mm^2
- for signals: 0.14 mm^2

NOTES:

Do not exceed the minimum cable bending radius of 30 mm.

PP / OC		LD	
SIGNAL	WIRE COLOUR	SIGNAL	WIRE COLOUR
A	Green	A	Green
B	White	B	White
Z	Brown	Z	Brown
		$\bar{A}$	Orange
		$\bar{B}$	Light Blue
		$\bar{Z}$	Yellow
V+	Red	V+	Red
GND	Blue	GND	Blue
	Shield		Shield

SHIELDED CABLE

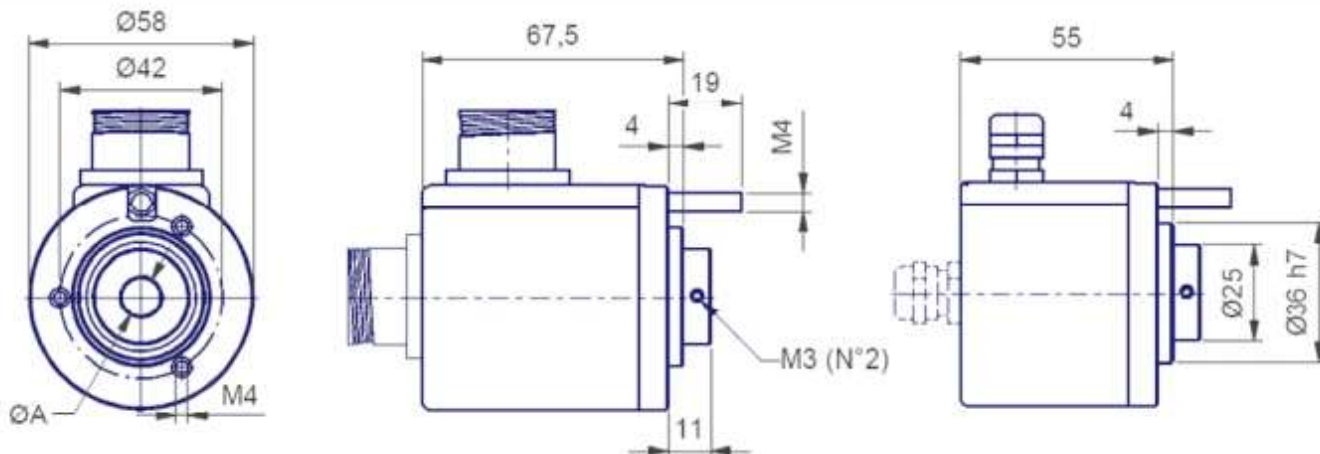


LINE DRIVER CONNECTION

POWER SUPPLY	RL
5 V	120 Ω
12 V	330 Ω
24 V	1000 Ω

In case of cable extension, the electrical connection between the body of connectors must be ensured.

DIMENSIONS AND RECOMMENDED FIXING



WHAT TO AVOID

- Any type of mechanical working (cut, drill, mill, etc.)
- Any modification either on the body or on the shaft of the encoder
- Any kind of bad usage
- External hits or stresses

