

Code TBD	Project TBD	Release TBD	TECHNICAL DATASHEET
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OPTICAL ENCODER EN570

GENERAL FEATURES

- Optical rotary encoder.
- Bi-directional signals with zero pulse.
- Aluminium flange and body.
- Output by connector or cable (with sealing faillead), radial or axial.



MECHANICAL AND ELECTRICAL CHARACTERISTICS

MECHANICAL <ul style="list-style-type: none"> • Aluminium flange and body. • Stainless steel shaft. • Ball bearings with special high-sealed screens. • High protection even in harsh environmental conditions. ELECTRICAL <ul style="list-style-type: none"> • Protection against short circuits. • Protection against inversion of polarity. • High stability of output signals. • Receiving device with infra-red light emitter and receiving photodiodes. • A and B output signals with phase displacement of 90° electrical. 	Cod. EN570		
	Output	PP or LD	1 Vpp sine wave
	Pulses per revolution	18000, 36000, 90000, 180000, 360000, 450000, 900000, 1800000	18000
	Max. consumption at 5V (with no load)	150 mA	100 mA
	Max. frequency	150-4500 kHz	(-3db cutoff) ≥ 180 kHz
	Max. rotating speed	continuous 500 rpm momentary 1000 rpm	
	Max. shaft load	30 N (axial) - 30 N (radial)	
	Shaft (diameter x length) mm	Ø 14x21	
	Operating temperature	0 °C ÷ 70 °C	
	Storage temperature	-30 °C ÷ 85 °C	
	Relative humidity	98% (without condensation)	
	Protection class (EN 60529)	IP 64	
	Power supply	5 V ± 5%	
	Cable length (standard)	1 m	
	Electrical protections	inversion of power supply polarity and short circuits	
Electrical connections	see related table		
Weight	3500 g		

ORDERING CODE

MODEL	CABLE / CONN. OUTPUT	PPR	POWER SUPPLY	SHAFT Ø	CABLE / CONNECTOR	OUTPUT SIGNALS	CONNECTION	OPTIONS
EN570	HR	18000	05V	D14	M01	SV	C	

HR = radial **05V** = 5 V **D14** = ø 14 x 21 mm **M.5** = 0.5 m
M01 = 1 m **SV** = 1 Vpp **C** = cable **No cod.** = standard
CE = 7P Amph. **PP** = Push-Pull **n** = connection
CF = 10P Amph. **LD** = Line Driver number
CG = 12P Connei

Example  **OPTICAL ENCODER EN570 HR 18000 05V D14 M01 SVC**

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CABLE AND ELECTRICAL CONNECTIONS

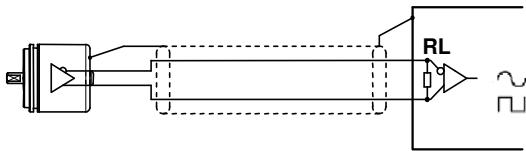
Cable 8 cores $\phi = 6.5$ mm, PVC external sheath
 Wires section:
 - power supply: 0.5 mm^2
 - signals: 0.14 mm^2

Cable 5 cores $\phi = 5.4$ mm, PVC external sheath
 Wires section:
 - power supply: 0.22 mm^2
 - signals: 0.14 mm^2

NOTE.
 The cable's bending radius should not be lower than 45 mm.

SV (1 Vpp)		LD		PP	
SIGNAL	WIRE COLOR	SIGNAL	WIRE COLOR	SIGNAL	WIRE COLOR
A	Pink	A	Pink	A	Pink
B	White	B	White	B	White
Z	Yellow	Z	Yellow	Z	Yellow
A -	Grey	A -	Grey		
B -	Brown	B -	Brown		
Z -	Green	Z -	Green		
V+	Red	V+	Red	V+	Red
GND	Blue	GND	Blue	GND	Blue
Sense V+	Black				
Sense OV	Violet				
	Shield		Shield		Shield

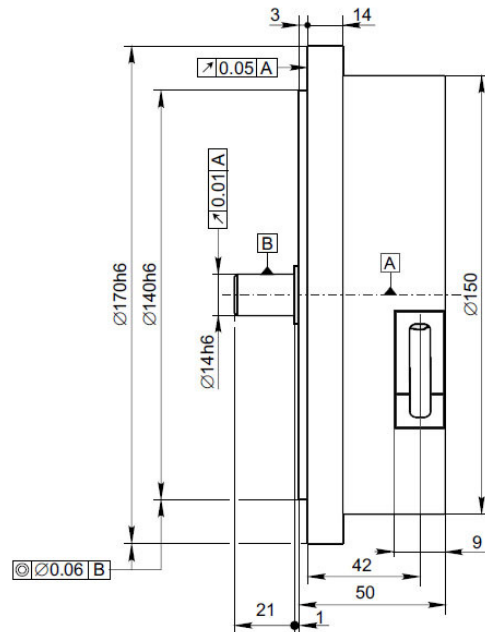
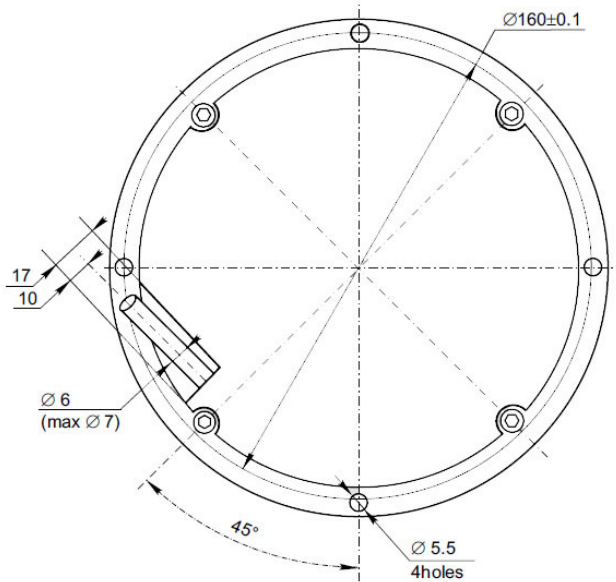
SHIELDED CABLE



POWER SUPPLY	LR
5 V 1 Vpp	120 Ω
5 V LD/PP	120 Ω

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

DIMENSIONS AND RECOMMENDED FIXING



WHAT TO AVOID

- Any mechanical working (cutting, drilling, milling, etc.).
- Any modification of the encoder body or shaft.
- Any improper use, not complying with the technical instructions provided by the Manufacturer.
- External shocks or stresses.

