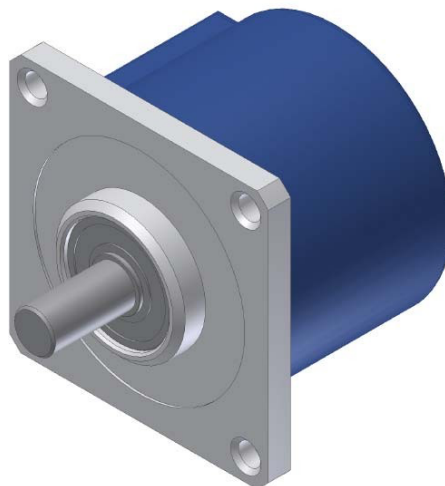


Code ST03	Project A33	Release B	Title TECHNICAL DATASHEET
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OPTICAL ENCODER EN600

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 EN600	PP	LD	OC
Pulses per revolution	5 to 64000 ppr		
Max. rotating speed	momentary	12000 rpm	
	permanent	8000 rpm	
Max. load on the shaft	100 N (radial) – 100 N (axial)		
Shaft (diameter A x length L) mm	Ø6x10-Ø8x20 -Ø9.52x20 -Ø10x20 others on request		
Protection class	IP65 (standard)* IP67 (optional)		
Operating temperature	0 + 70°C		
Storage temperature	-20 + 80°C		
Relative 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 polarity on power supply and short-circuits on output port		
Weight (according to model)	260 + 320 g		

* It is important to note that shaft rotates more freely in the version with protection class IP65.

ORDERING CODE

MODEL	CABLE/ CONN. OUTPUT	ACCURACY	PPR	POWER SUPPLY	SHAFT Ø	CABLE / CONN.	OUTPUT	CONNECTION	OPTIONS
EN600	HR	S	xxxxx	05V	D06	CE	PP	2	V2

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

M.5 = 0.5m
M01 = 1m
CE = 7P Amph.
CF = 10P Amph.
CG = 12P Connei

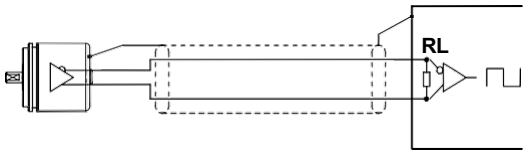
LD = LINE DRIVER
PP = PUSH-PULL
ON = OC NPN
OP = OC PNP

C = cable
n = no. wiring

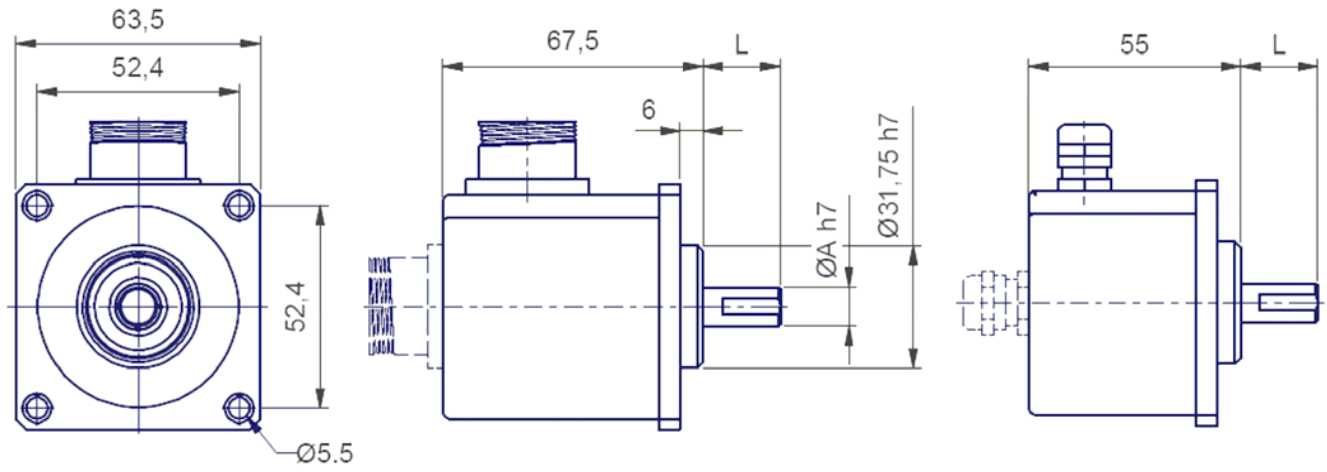
No code = standard configuration
V2 = protection class IP67

Code ST03	Project A33	Release B	Title TECHNICAL DATASHEET
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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	PP / OC		LD	
	SIGNAL	WIRE COLOUR	SIGNAL	WIRE COLOUR
NOTES: Do not exceed the minimum cable bending radius of 30 mm.	A	Green	A	Green
	B	White	B	White
	Z	Brown	Z	Brown
			A	Orange
			B	Light Blue
			Z	Yellow
	V+	Red	V+	Red
	GND	Blue	GND	Blue
	\equiv	Shield	\equiv	Shield

	LINE DRIVER CONNECTION	
	POWER SUPPLY	RL
	5V	120 Ω
	12V	330 Ω
	24V	1000 Ω

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

DIMENSIONS AND RECOMMENDED FIXING		
		
<ul style="list-style-type: none"> Use an elastic coupling for shaft junction. 		

WHAT TO AVOID	
<ul style="list-style-type: none"> 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 	