

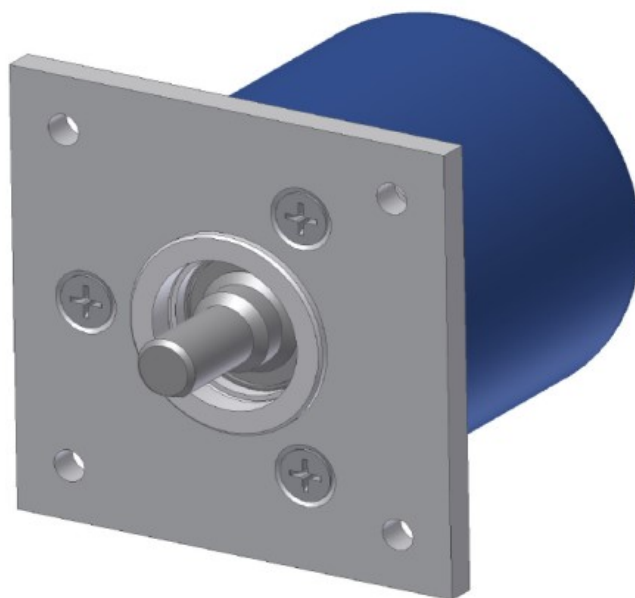


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OPTICAL

INCREMENTAL ENCODER

EN38BB



TECHNICAL DATASHEET

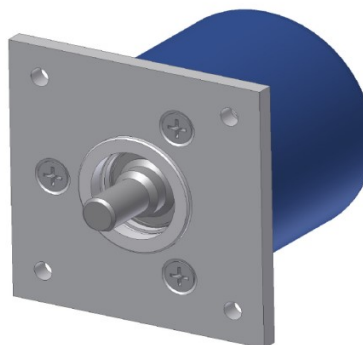


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OPTICAL ENCODER EN38BB

GENERAL FEATURES

- Incremental optical rotary encoder with small overall dimensions.
- Flange and body made of aluminium.
- Sealed cable output either radial or axial position.



MECHANICAL AND ELECTRICAL FEATURES

MECHANICAL	Cod. EN38BB		PP	L5
	Pulses per revolution		from 5 to 3600 ppr	
• Flange and body made of aluminium. • Ring for high protection. • Shaft made of stainless steel. • Ball bearings. • Centring diameter 20mm. • High rotational precision. • High protection against environmental conditions.	Max. rotating speed		momentary	8000rpm
	Max. load on shaft		30 N (radial) – 30 N (axial)	
	Shaft (diameter A x length L) mm		ø6 h7 – ø8 h7	
	Protection class		IP65 (standard) * IP67 (optional)	
	Operating temperature		0 + 70° C	
	Storage temperature		-20 + 80° C	
	Humidity		20 + 90 % (not condensed)	
	Power supply		5 + 28V ± 10%	
	Current consumption at 5V		40 mA	
	Max. output current		40 mA	70 mA
	Max. frequency		120 kHz	
	Output		Push-Pull	Line Driver
	Standard length of cable		1m	
	Electrical connections		see rel. table	
ELECTRICAL	Electrical protections		inversion of power supply polarity short-circuits on output port	
	Weight		80 g	

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

ORDERING CODE

MODEL	CABLE OUTPUT	PPR	POWER SUPPLY	SHAFT Ø	CABLE	OUTPUT	OPTIONS
EN38BB	HR	xxxxx	05V	D06	M01	L5 C	V2
HR = radial HA = axial		05V = 5V 0528 = 5+28V		D06 = ø6mm D08 = ø8mm		M0.5 = 0.5m M01 = 1m M40 = 40mMAX	
						L5 C = LINE DRIVER PP C = PUSH-PULL	
						No code = standard configuration V2 = protection class IP67	

Example OPTICAL ENCODER EN38BB HR 00300 05V D06M01 L5 C V2



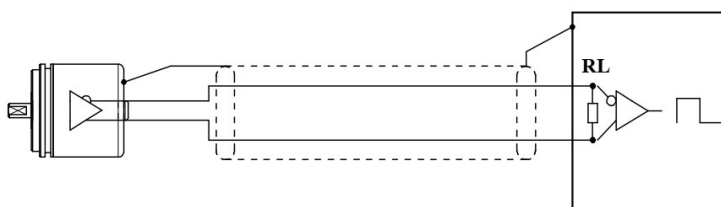
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CABLE AND ELECTRICAL CONNECTIONS

Cable 8 cores $\varnothing = 4.5\text{mm}$, PVC external sheath Wires section: - for power supply: 0.14mm^2 - for signals: 0.14mm^2 Cable 5 cores $\varnothing = 4.1\text{mm}$, PVC external sheath Wires section: - for power supply: 0.35mm^2 - for signals: 0.14mm^2 NOTES: Respect a minimum bending radius of 50mm for cables.	PP		L5	
	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
		$\perp$	Shield	Shield

N.C. = Wire not connected

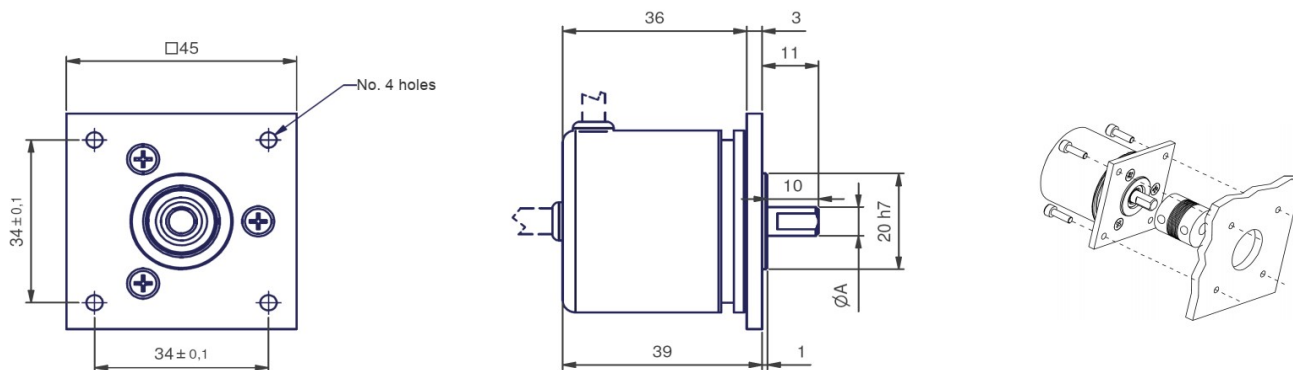
SHIELDED CABLE



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

In case of cable extension, ensure the electrical connection between the body of connectors.

DIMENSIONS AND RECOMMENDED FIXING



- Use an elastic coupling for shaft junction.

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

