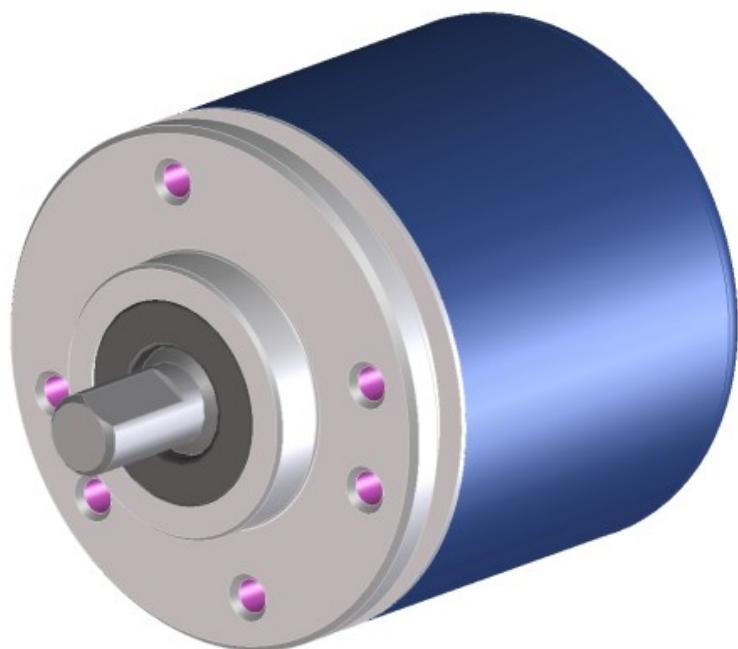




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OPTICAL  
INCREMENTAL ENCODER

**EN38MN**



**TECHNICAL DATASHEET**

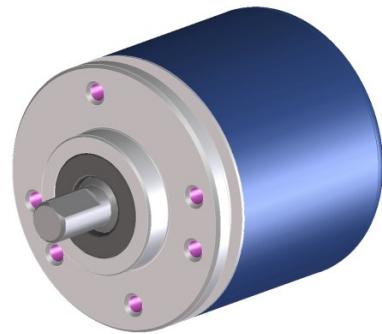


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## OPTICAL ENCODER EN38MN

### 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	Code EN38MN	PP	L5
• Flange and body made of aluminium.	Pulses per revolution	from 5 to 3600 ppr	
• Ring for high protection.	Max. rotating speed	momentary 8000rpm	
• Shaft made of stainless steel.		permanent 6000rpm	
• Ball bearings.	Max. load on shaft	30 N (radial) – 30 N (axial)	
• Fixing by no. 3 screws M3 at 120° or no. 4 screws M3 at 90°.	Shaft (diameter A x length L) mm	ø6 h7 – ø8 h7	
• Centring diameter 20mm.	Protection class	IP65 (standard) *	IP67 (optional)
• High rotational precision.	Operating temperature	0 + 70° C	
• High protection against environmental conditions.	Storage temperature	-20 + 80° C	
<b>ELECTRICAL</b>	Humidity	20 + 90 % (not condensed)	
• Protection against shorts.	Power supply	5 + 28V ± 10%	
• High stability of output signals.	Current consumption at 5V	40 mA	40 mA
	Max. output current	70 mA	
	Max. frequency	120 kHz	
	Output	Push-Pull	Line Driver
	Standard length of cable	1m	
	Electrical connections	see rel. table	
	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
EN38MN	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 = 40m<sub>MAX</sub>

L5 C = LINE DRIVER  
PP C = PUSH-PULL

No code = standard configuration  
V2 = protection class IP67

Example ↗ OPTICAL ENCODER EN38MN 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:  $0.14\text{mm}^2$
- for signals:  $0.14\text{mm}^2$

Cable 5 cores  $\varnothing = 4.1\text{mm}$ , PVC external sheath

**Wires section:**

- for power supply:  $0.35\text{mm}^2$
- for signals:  $0.14\text{mm}^2$

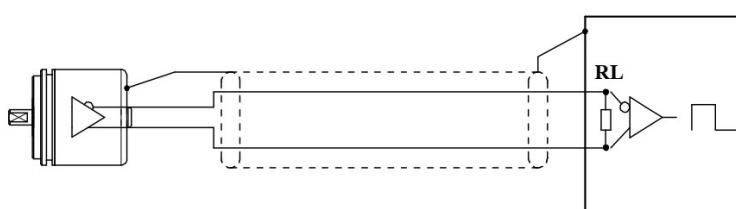
NOTES:

Respect a minimum bending radius of 50mm for cables.

N.C. = Wire not connected

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	$\perp$	Shield

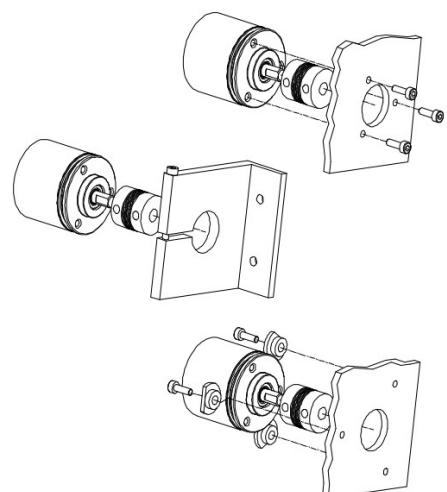
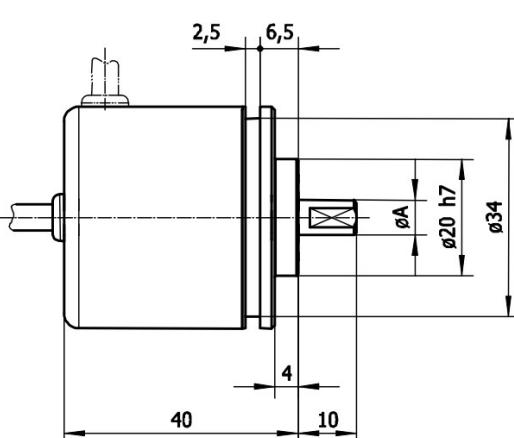
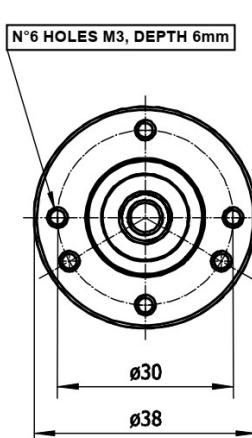
## SHIELDED CABLE



LINE-DRIVER CONNECTION	
POWER SUPPLY	RL
5V	120 $\Omega$
12V	330 $\Omega$
24V	1000 $\Omega$

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.
- For fixing through brackets, drill on the mounting surface no. 3 holes M4 on a diameter of 50mm.

## 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

