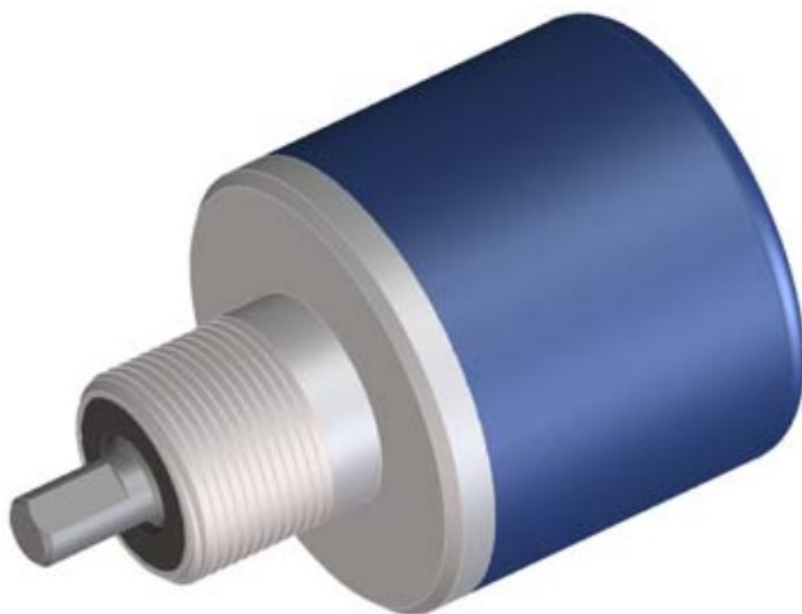




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OPTICAL
INCREMENTAL ENCODER

EN38FN



TECHNICAL DATASHEET

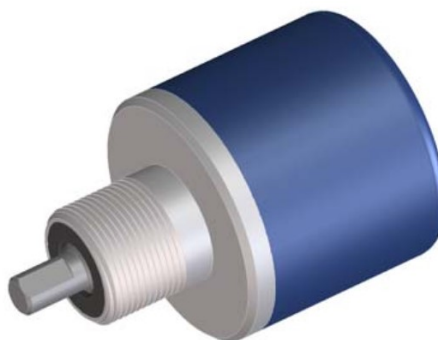


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OPTICAL ENCODER EN38FN

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

- Flange and body made of aluminium.
- Ring for high protection.
- Shaft made of stainless steel.
- Ball bearings.
- Fixing by threaded nut M18x1.

ELECTRICAL

- Protection against shortcuts.
- High stability of output signals.

Cod. EN38FN	PP	L5
Pulses per revolution	from 5 to 3600 ppr	
Max. rotating speed	momentary 8000rpm	permanent 6000rpm
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 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
EN38FN	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 _{MAX}							
L5 C = LINE DRIVER PP C = PUSH-PULL							
No code = standard configuration V2 = protection class IP67							

Example ➤ **OPTICAL ENCODER EN38FN 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

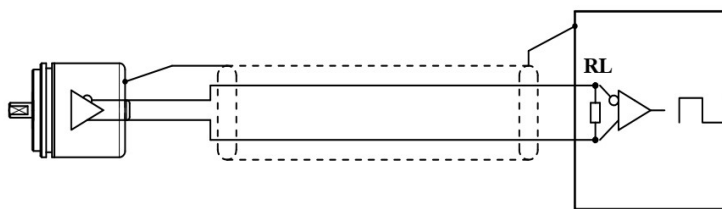
NOTES:

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	$\perp$	Shield

N.C. = Wire not connected

SHIELDED CABLE

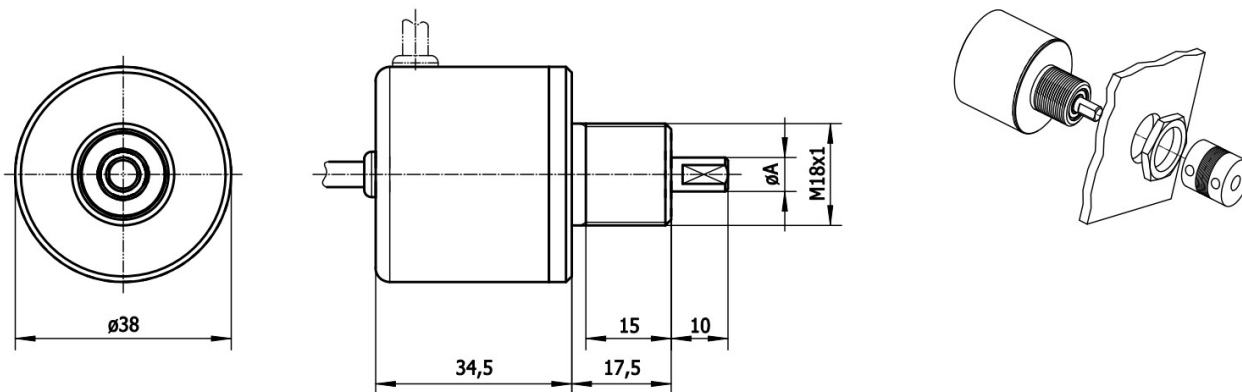


LINE-DRIVER CONNECTION

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

