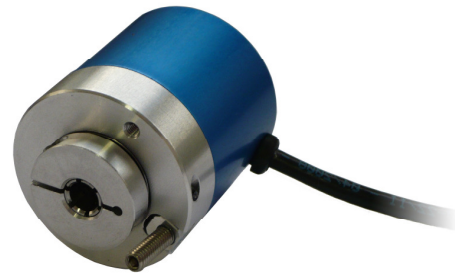


Code ST18	Project A02-D	Release A	TECHNICAL DATASHEET
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OPTICAL ENCODER EN38SC

GENERAL FEATURES

- Small-size optical rotary encoder, suitable for applications with limited installation space.
- Bi-directional signals with zero pulse.
- Aluminium flange and housing.
- Radial or axial cable output.
- Low profile.
- Suitable for motor feedback.



MECHANICAL AND ELECTRICAL CHARACTERISTICS

	Cod. EN38SC	PP	L5	
MECHANICAL <ul style="list-style-type: none"> • Flange and housing made of aluminium. • 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. • Reading device with infra-red light emitter and receiving photodiodes. 	Pulses per revolution	5 ÷ 3600 ppr		
	Max. rotating speed	continuous	6000 rpm	
		momentary	8000 rpm	
	Max. shaft load	30 N (axial) - 30 N (radial)		
	Shaft (hole diameter A) mm	ø5 H7 - ø6 H7 - ø8 H7		
	Hole depth	15 mm		
	Operating temperature	0 °C ÷ 70 °C		
	Storage temperature	-20 °C ÷ 80 °C		
	Relative humidity	20 ÷ 90 % (not condensed)		
	Protection class (EN 60529)	IP 64		
	Torque	≤ 1 Ncm		
	Output	Push-Pull	Line Driver	
	Power supply	5 ÷ 28 V ± 10%		
	Max. frequency	120 kHz		
	Current consumption at 5 V	40 mA		
	Max. output current	40 mA	70 mA	
	Standard cable length	1 m		
	Electrical connections	see related table		
Electrical protections	inversion of polarity and short circuits			
Weight	80 g			

ORDERING CODE

MODEL	FIXING	CABLE OUTPUT	PPR	POWER SUPPLY	Ø SHAFT	CABLE	OUTPUT
EN38SC	1	HR	xxxx	05V	D06	M01	L5 C

1 = elastic flange
No cod. = anti-rotation pivot

HR = radial
HA = axial

05V = 5 V
0528V = 5 ÷ 28 V

D05 = ø5 mm
D06 = ø6 mm
D08 = ø8 mm

M0.5 = 0.5 m
M01 = 1 m
M40 = 40 m_{MAX}

L5 C = LINE DRIVER
PP C = PUSH-PULL

Example  **OPTICAL ENCODER EN38SC 1 HR 0300 05V D06 M01 L5 C**

Code ST18	Project A02-D	Release A	TECHNICAL DATASHEET
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CABLE AND ELECTRICAL CONNECTIONS

Cable 8 wires $\varnothing = 4.5$ mm, PVC external sheath

Conductors section:

- power supply: 0.14 mm²
- signals: 0.14 mm²

Cable 5 wires $\varnothing = 4.1$ mm, PVC external sheath

Conductors section:

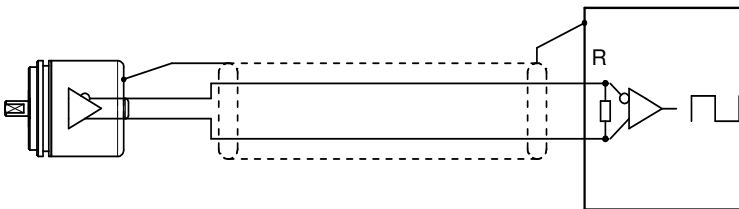
- power supply: 0.35 mm²
- signals: 0.14 mm²

PP		L5	
SIGNAL	CONDUCTOR COLOR	SIGNAL	CONDUCTOR COLOR
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

NOTE

The cable's bending radius should not be lower than 50 mm.

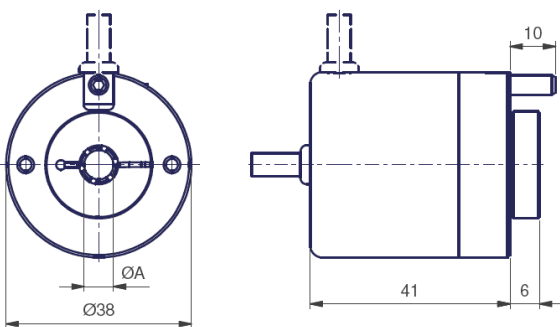
SHIELDED CABLE



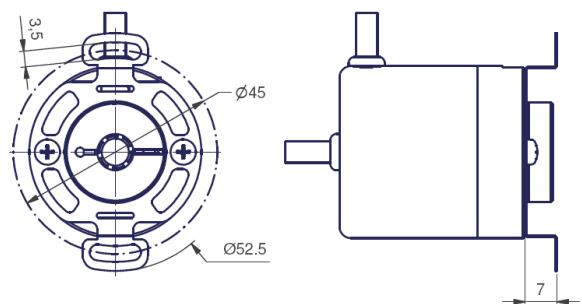
LINE DRIVER CONNECTION	
POWER SUPPLY	R
5 V	120 Ω
12 V	330 Ω
24 V	1000 Ω

DIMENSIONS

STANDARD VERSION



ELASTIC FLANGE VERSION



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.

