

### Main features

Miniaturized  $\varnothing$  38 encoder series for general applications.

- Resolution up to 3600 ppr with zero signal
- Several electronic output configurations available
- Up to 28 V DC power supply
- Up to 100 kHz output frequency
- Several flanges available
- Up to 3000 RPM rotation speed
- Up to IP54 sealing



### Ordering code

full stop to separate special versions

EL 38 F 500 Z 5/28 N 6 X 3 P R . XXX

incremental encoder series **EL**

size **38**

#### Type of flange

EL 38 F model **F**

EL 38 G model **G**

#### Resolution

ppr from **1** to **3600**

*please directly contact our offices for pulses availability*

#### Zero pulse

without zero pulse **S**

with zero pulse **Z**

#### Power supply

5 ÷ 28 V DC **5/28**

*line driver available only with 5 V DC or 8-24 V DC power supply*

**R** radial

**P** cable output with SKINTOP<sup>®</sup> (standard length 0.5 m)

special version code numbered from 001 to 999

#### Max. rotation speed

**3** 3000 RPM

#### Enclosure rating

**X** IP54

#### Bore diameter

**6**  $\varnothing$  6 mm

**8**  $\varnothing$  8 mm

**9**  $\varnothing$  9.52 mm (3/8")

**10**  $\varnothing$  10 mm

#### Output type

**N** NPN

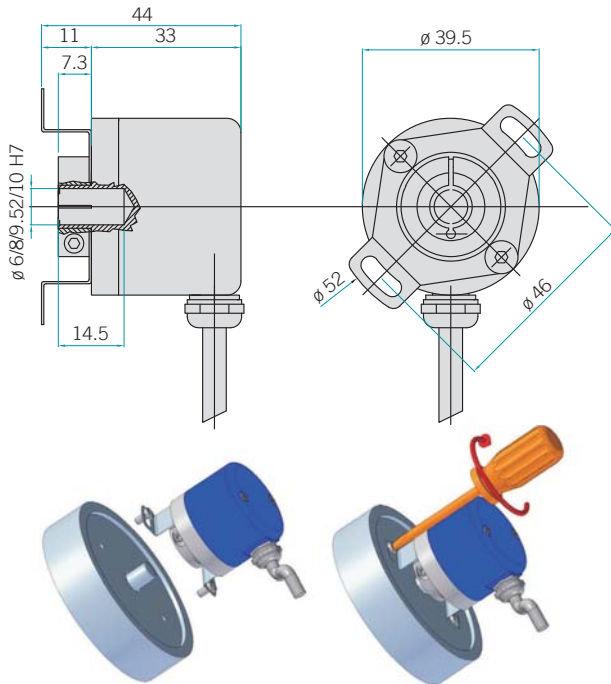
**C** NPN open collector

**P** push-pull

**L** line driver

*please refer to page 92 for optionals about output types*

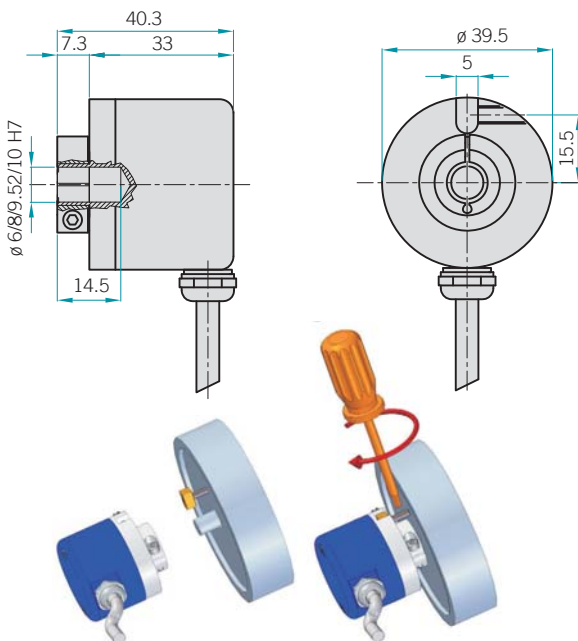
## EL 38 F



### HOW TO MOUNT IT

- 1) Couple the encoder shaft with the motor shaft.
- 2) Fix the spring to the motor flange without tightening it.
- 3) Fix the encoder shaft by the metal ring.
- 4) Turn for phasing.
- 5) Block the spring.

## EL 38 G



### HOW TO MOUNT IT

- 1) Mount the anti-rotation pin on the motor flange.
- 2) Couple the encoder shaft with the motor shaft, making sure the pin is inserted in the hole on the front part of the encoder (maintaining a minimum distance of 0.5 mm).
- 3) Fix the encoder shaft by the metal ring.

### Electrical specifications

Resolution	from 1 to 3600 ppr
Power supply	5÷28 V DC line driver available only with 5 V DC or 8÷24 V DC power supply
Current consumption without load	80 mA max.
Max. load current	50 mA for channel 20 mA for channel (line driver)
Output type	NPN / NPN open collector push-pull / line driver
Max. output frequency	100 kHz
Operating frequency	$F = \frac{\text{RPM} \cdot \text{Resolution}}{60}$

### Mechanical specifications

Bore diameter	$\varnothing 6 / 8 / 9.52 / 10$ mm
Enclosure rating	IP54
Max. rotation speed	3000 RPM
Max. shaft load	5 N (0.5 kgf) axial 5 N (0.5 kgf) radial
Shock	50 G, 11 ms
Vibration	10 G, 10÷2000 Hz
Bearing life	10 <sup>9</sup> revolutions
Bearings	2 ball bearings
Shaft material	stainless steel UNI X10CrNiS1809
Body material	aluminium UNI 9002/5
Housing material	aluminium
Operating temperature	0÷60 °C
Storage temperature	-25÷70 °C
Weight	150 g