

### Main features

∅ 50 encoder series recommended as motor feedback.

- Several ways to fix it
- Easy mechanical mounting
- Small dimensions
- Up to 5000 ppr with zero signal
- Several output types available
- Up to 150 kHz output frequency
- Up to 6000 RPM rotation speed
- IP55 sealing



### Ordering code

EL 50 G P 1000 Z 5/28 P 8 X 3 P R . XXX

incremental encoder series **EL**

size **50**

#### Type of flange

fixing with spring **F**  
fixing with pin **G**

through hollow shaft with front fixing **A**  
through hollow shaft with rear fixing **P**

#### Resolution

ppr from **1** to **5000**

*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*

full stop to separate  
special versions

special version  
code numbered  
from 001 to 999

**R** radial

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

#### Max. rotation speed

**3** 3000 RPM  
**6** 6000 RPM

*3000 RPM max. with "S" enclosure rating*

#### Enclosure rating

**X** IP40 standard  
**S** IP55 optional

#### Bore diameter

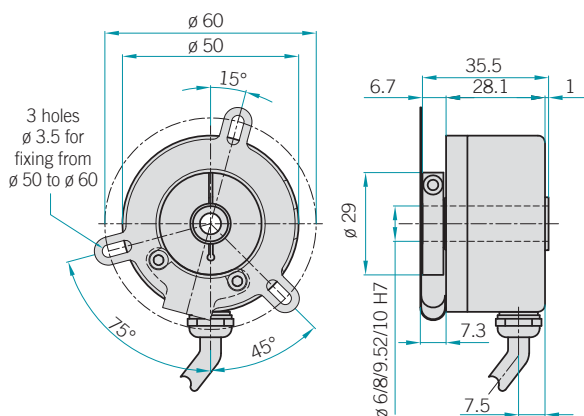
**6** ∅ 6 mm  
**8** ∅ 8 mm  
**9** ∅ 9.52 mm (3/8")  
**10** ∅ 10 mm

#### Output type

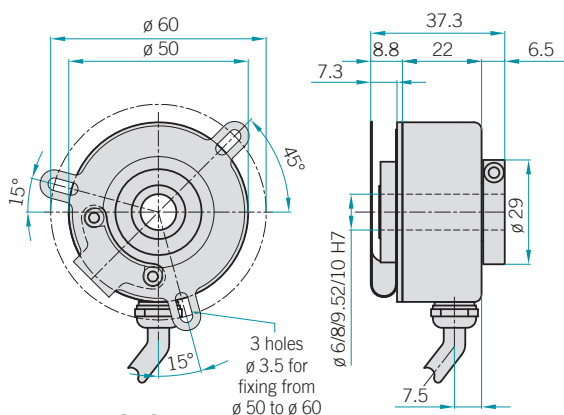
**N** NPN  
**C** NPN open collector  
**P** push-pull  
**L** line driver

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

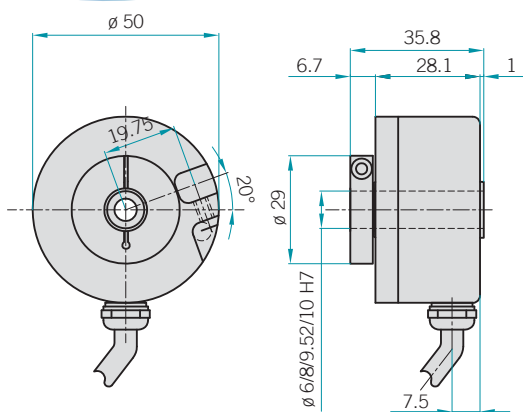
## EL 50 FA



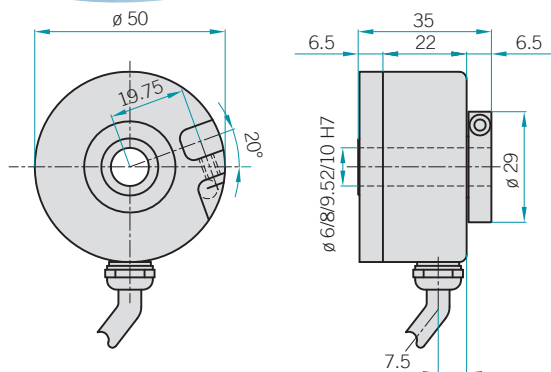
## EL 50 FP



## EL 50 GA



## EL 50 GP

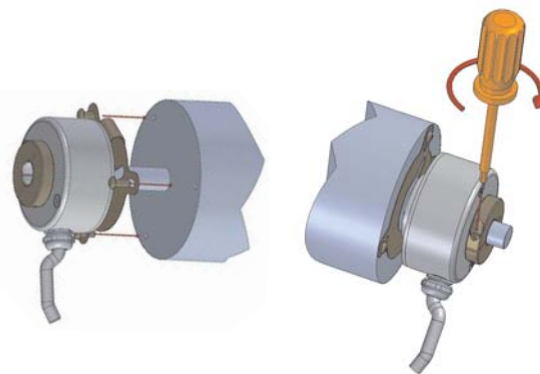


## Electrical specifications

Resolution	from 1 to 5000 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	150 mA max.
Max. load current	30 mA for channel 15 mA for channel (line driver)
Output type	NPN / NPN open collector push-pull / line driver
Max. output frequency	150 kHz
Operating frequency	$F = \frac{\text{RPM} \cdot \text{Resolution}}{60}$

## Mechanical specifications

Bore diameter	6 / 8 / 9.52 / 10 mm
Enclosure rating	IP40 standard IP55 optional
Max. rotation speed	3000 RPM 6000 RPM 3000 RPM max. with "S" enclosure rating
Shock	50 G, 11 ms
Vibration	5 G, 10÷500 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 UNI 9002/5
Operating temperature	0÷60 °C
Storage temperature	-25÷70 °C
Weight	150 g



### 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.