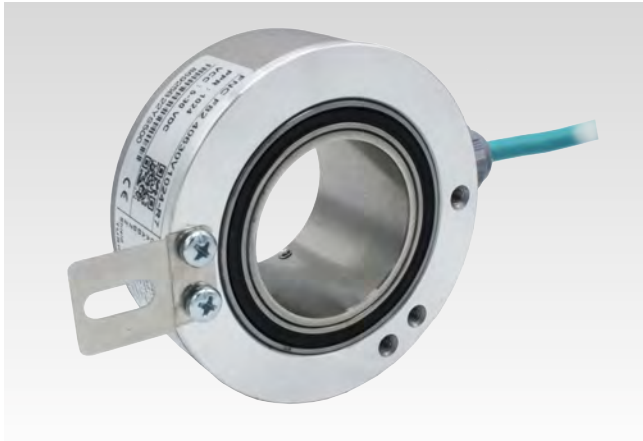


# Incremental encoders

Resolution 1024...8192 pulses



## FNC F82 Series



### Features

- Special 80 mm design, through hollow shaft
- Robust mechanical and electrical construction
- Protection up to IP65
- Up to 8192 PPR max.
- <300 kHz frequency

### PPR Options :

1024 - 2000 - 2048 - 4000 - 4096 - 8000 - 8192

### Technical data - electrical ratings

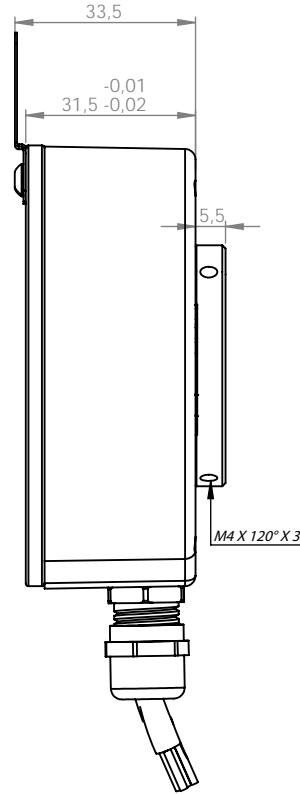
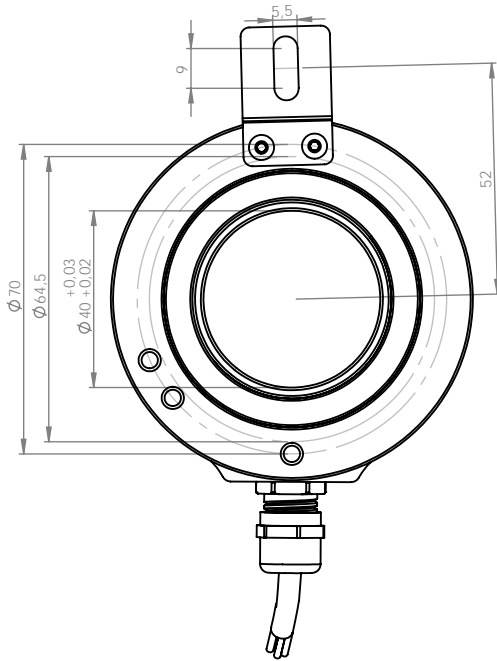
Voltage supply	4.75VDC to 30VDC 4.75VDC to 5.5VDC
Protection:	Output short circuit protection. Reverse polarity protection ( except 5V version )
Consumption w/o load	≤60 mA (24 VDC)
Resolution (steps/turn)	1024...8192
Reference signal	Zero pulse, width 90° 180°, 360° optional
Optoelectronic life time	100.000 (min)
Output frequency	<300 kHz
Output signals	90° shifted A and B, Z + inverted
Output circuit	Linedriver/RS422 Push-pull short-circuit proof NPN Open Collector
Interference immunity	DIN EN 61000-6-2
Emitted interference	DIN EN 61000-6-4
Approval	CE

### Technical data - mechanical design

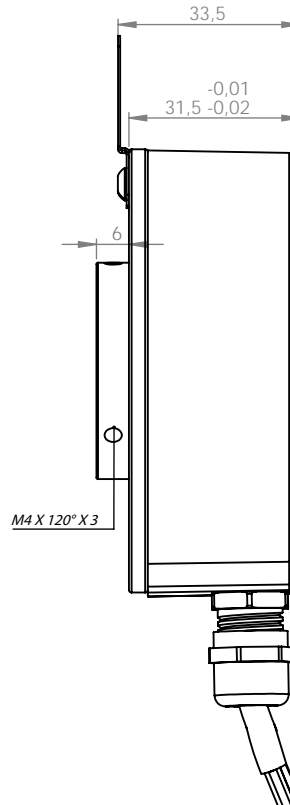
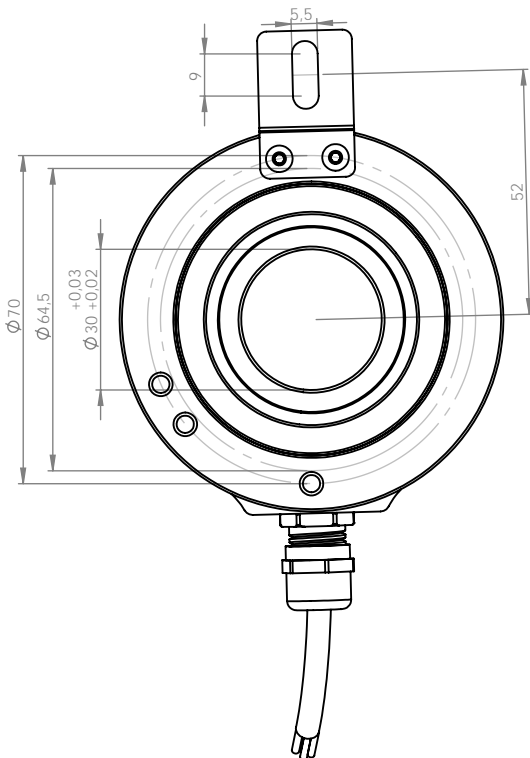
Dimensions (flange)	ø80 mm
Shaft loading	≤140 N axial ≤240 N radial
Protection DIN EN 60529	IP54, IP65
Operating speed	≤10000 rpm
Starting torque	≤0.025 Nm
Materials	Housing: Stainless steel Flange: Stainless steel Shaft : Stainless steel
Shaft diameter:	38, 40, 42, 44 mm ( other diameters on request )
Bearings lifetime:	2x10 <sup>9</sup> rev. at 100% of full rated shaft load (minimum)
Operating temperature	-20...+85 °C
Storage temperature	-30 °C up to +90 °C
Weight approx.	300 g

### Mechanical Dimensions

#### Standard Version



#### BS Verison (Screw from Bearing Side)



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# Incremental encoders

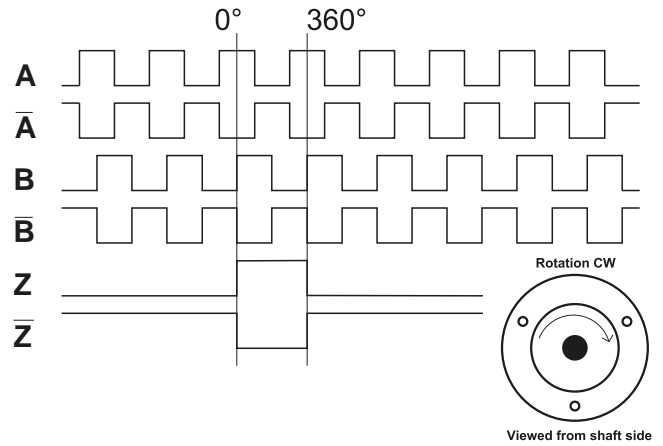
Resolution 1024...8192 pulses

## FNC F82 Series

### Cable Wiring

Function	Color	Renk	Explanation
+VB	Brown	Kahve	Supply Voltage
GND	White	Beyaz	Ground
A	Green	Yeşil	A Channel
A'	Red	Kırmızı	A Inverted Channel
B	Yellow	Sarı	B Channel
B'	Pink	Pembe	B Inverted Channel
Z	Gray	Gri	Z Channel
Z'	Blue	Mavi	Z Inverted Channel
Shield	Black	Siyah	Shield

### Pulse Diagram



### Encoder Part Number

**FNC** **F82** **44** **6** **30V** **1024** - **R7**

**F82** : Standard Model Shaft Screw from Seal Side  
**F82BS** : Shaft Screw from Bearing Side

**Shaft diameter** : 25, 28, 30, 32, 34, 35, 38, 40, 42, 44 mm  
 Other dimensions on request

#### Output Channels

- 1 : A
- 2 : AB
- 3 : ABZ
- 4 : AB+A' B'
- 6 : ABZ+A' B' Z'

#### Electrical Connections:

**Cable**  
 R7 : radial 7m, shield not connected (standart)

**Connector:**  
 R1204, R1205, R1608, R2312R, R2312L

#### PPR Options :

1024 - 2000 - 2048 - 4000 - 4096 - 8000 - 8192

#### Supply Voltage and output circuit :

**5V** : 5V in / out  
**245V** : 5-30V in 5V out  
**30V** : 5-30V in / out