

# Thin section incremental encoders

## FNC TI 58 Series



### Features

- Industry 58 mm standart size, through hollow shaft
- Robust Mechanical and Electrical Construction
- Protection to IP40
- <300 kHz frequency

### PPR Options :

up to 65.536

### Technical data - electrical ratings

Voltage supply	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)	up to 65536
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
Interference immunity	DIN EN 61000-6-2
Emitted interference	DIN EN 61000-6-4
Approval	CE

### Technical data - mechanical design

Dimensions (flange)	ø50 mm
Shaft loading	≤80 N axial ≤100 N radial
Protection DIN EN 60529	IP40
Operating speed	≤10000 rpm
Starting torque	≤0.025 Nm
Materials	Housing: Aluminum Flange: Aluminum Shaft : Stainless steel
Shaft diameter:	20 mm ( other diameters on request )
Bearings lifetime:	2x10 <sup>9</sup> rev. at 100% of full rated shaft load (minimum)
Operating temperature	-40...+85°C
Storage temperature	-40 °C up to +90 °C
Weight approx.	150 g

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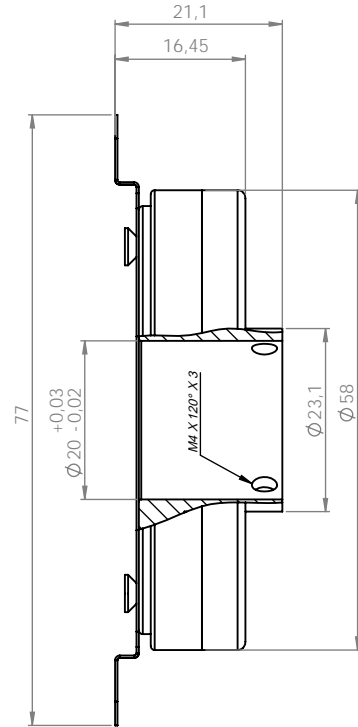
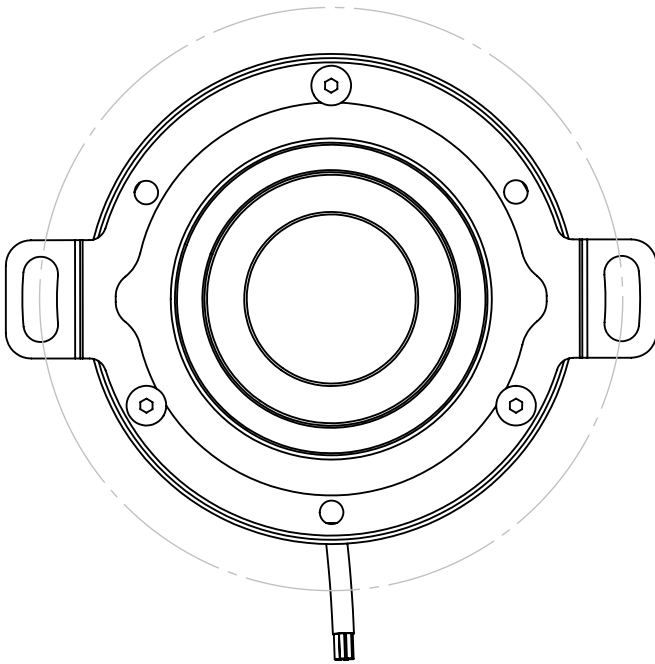


Mechanical Dimensions  
Cable/Connector Wiring, Part Number

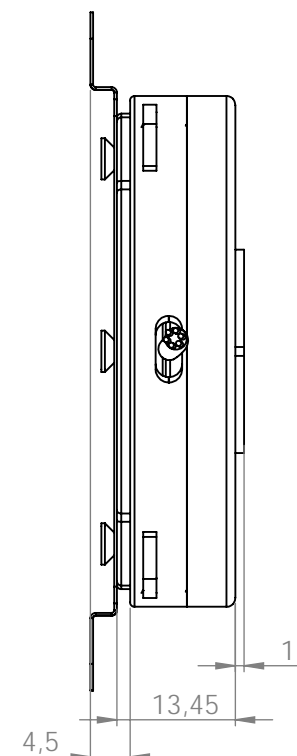
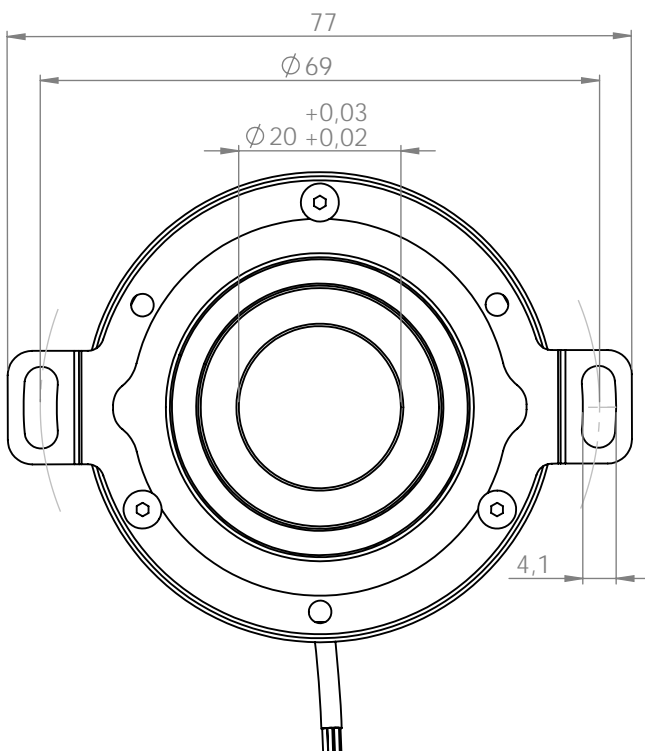
## FNC TI 58 Series

### Mechanical Dimensions

#### Spring (SP) fixing from housing - PCB Side Setscrew (PS) - with Seal & Cover



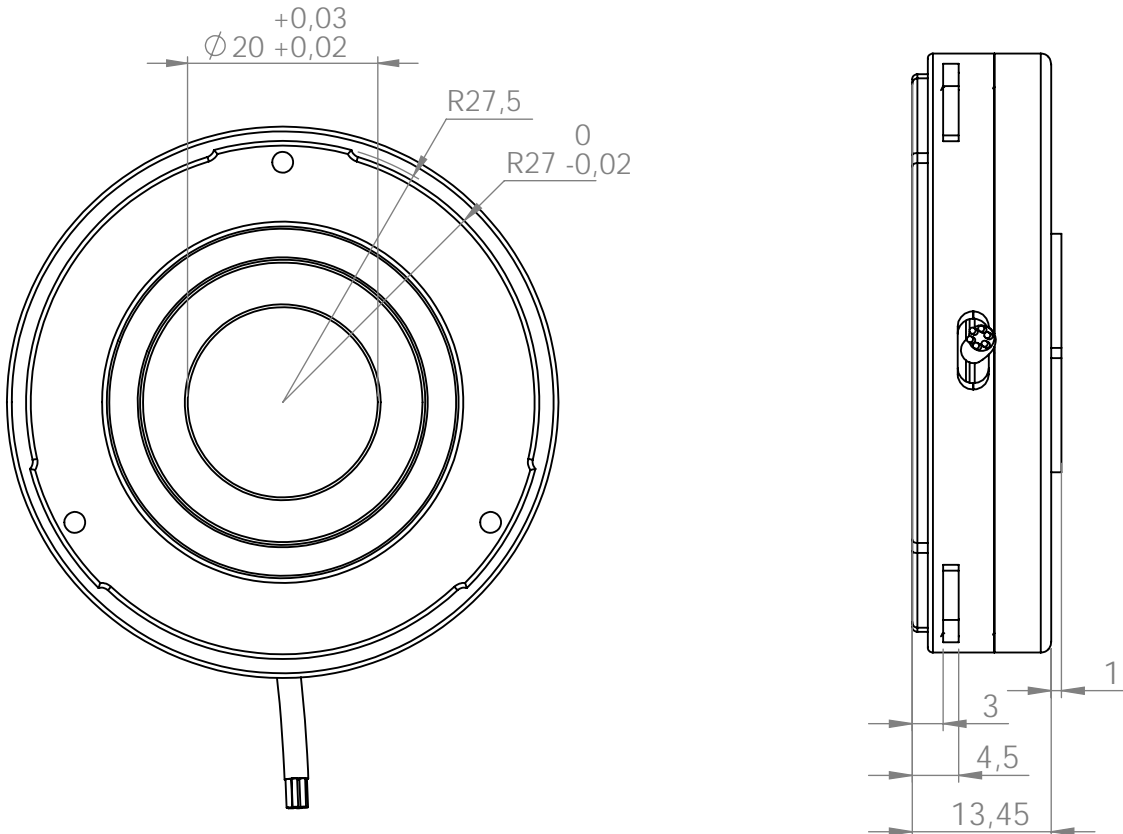
#### Spring (SP) fixing from housing - Rove (R) fixing from shaft - with Seal & Cover



## FNC TI 58 Series

### Mechanical Dimensions

Side Fixing from housing (SF) - Rove (R) Fixing from shaft version- with Seal & Cover

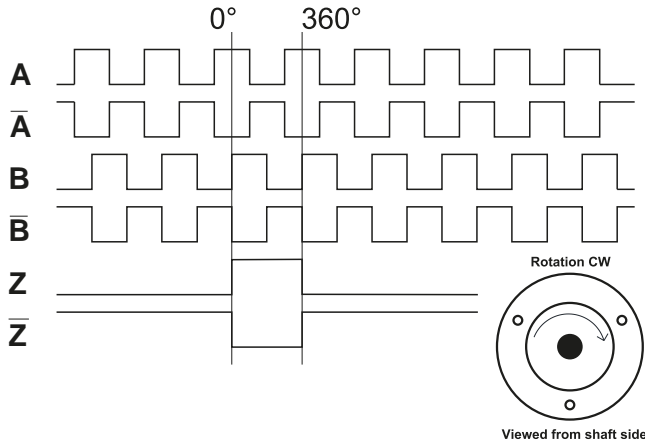


Ensure operation in a moisture-free and dust-free environment.

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### Pulse Diagram



### 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

### Encoder Part Number

**FNC** **TI** **SF** **R** **58** **K** **20** **6** **5V** **10.000** - **R2**

TI : Thin incremental

#### Montage Options - Housing Side

SF : Side Fixing  
SP : Spring Option

#### Montage Options - Shaft Side

R : Rove  
PS : PCB Side Setscrew

#### Housing

58 : 58 mm

K : Sealed version

#### Shaft diameter

12,7 (0,5"), 14, 15, 16, 20 mm (others on request)

#### Electrical Connections:

R2 : radial 2m, shield not connected (standart)

#### PPR Options :

up tp 65.536

#### Supply Voltage and output circuit :

5V : 5V in / out

#### Output Channels

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