

Incremental encoders Optical and Magnetic Programming Options

Programmable Resolution 1...65.536 pulses

FNC 50 Series Programmable



Features

- Industry 50 mm standart size,
- Clamping- servo- end hollow shaft flange versions
- Robust mechanical and electrical construction
- Protection up to IP67
- Up to 65.536 PPR max.
- ≤2 MHz frequency
- Programming via FNC PT - PC Programming tool
- FNC PT - PS easy programming software

PPR Options :

1 to 65.536 programmable PPR

Technical data - electrical ratings

Voltage supply	4.75VDC to 30VDC 4.75VDC to 5.5VDC
Protection	Output short circuit protection. Reverse polarity protection Over voltage protection (except 5V version)
Consumption w/o load	≤60 mA (5 VDC) ≤35 mA (12 VDC) ≤26 mA (24 VDC) ≤27 mA (30 VDC)
Resolution (steps/turn)	1...65.536
Reference signal	Programmable length, 90° 180°, 270°, 360°
Output frequency	≤2 MHz
Output signals	90° shifted A and B, Z + all channels can be set indepently 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	≤140 N axial ≤240 N radial
Protection DIN EN 60529	IP54, IP65
Operating speed	≤12000 rpm
Starting torque	≤0.025 Nm (IP 67)
Materials	Housing: Aluminium Flange: Aluminium Shaft : Stainless steel
Shaft diameter	6, 8, 10, 12 mm (other diameters on request)
Bearings lifetime	2x10 ⁹ rev. at 100% of full rated shaft load (minimum)
Operating temperature	-20...+85 °C
Storage temperature	-30 °C up to +90 °C
Weight approx	250 g

Accessories

Connectors and cables
CRM2312 M23 12 poles female connector or see page 206

Mounting coupling
PF481010 plastic or see page 204

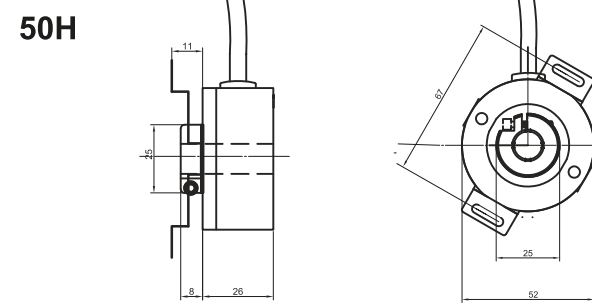
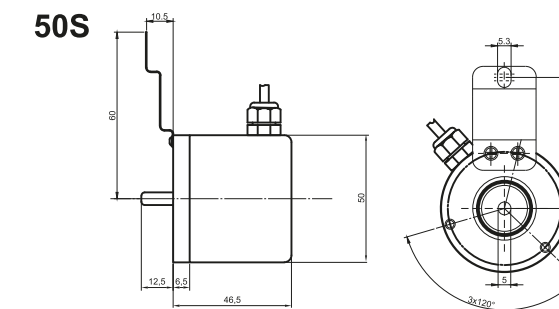
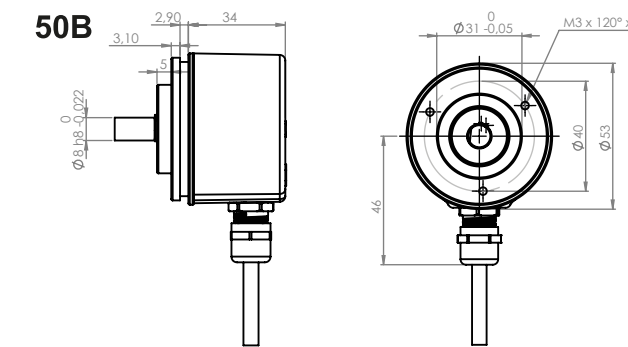
Mounting accessories
SF50B square flange or see page 202-203

Incremental encoders

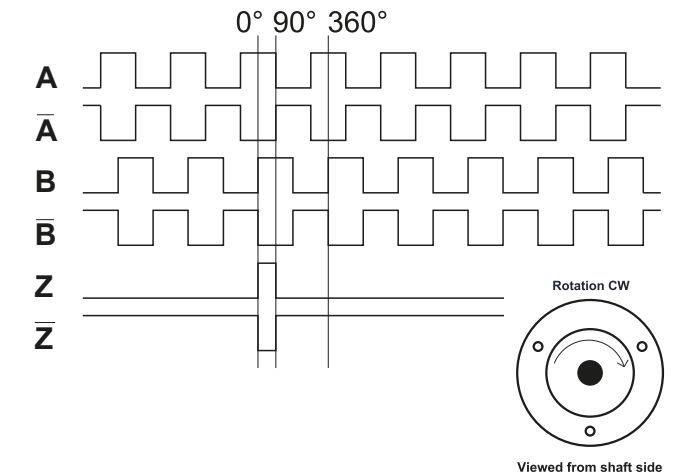
Mechanical Dimensions
Cable/Connector Wiring, Part Number

FNC 50 Series Programmable

Mechanical Dimensions



Pulse Diagram



Cable Wiring

Function	Color	Renk	Explanation
+VB	Brown-Green	Kahve-Yeşil	Vcc
GND	White-Green	Beyaz-Yeşil	GND
A	Green	Yeşil	A
A'	Green-Black	Yeşil-Siyah	A Inverse
B	Yellow	Sarı	B
B'	Yellow-Black	Sarı- Siyah	B Inverse
Z	Gray	Gri	Z
Z'	Gray-Black	Gri-Siyah	Z Inverse
C	Blue	Mavi	Clock
D	Orange	Turuncu	Data
Shield	Black	Siyah	Shield

Encoder Part Number

FNCP 50 B O 10 6 30V X - R2

Housing:
50 : 50mm

Flange Type:
S : Servo flange
B : Clamping flange
H : Through hollow shaft

O : Optical programmable **M :** Magnetic programmable

Shaft diameter : 4, 6, 8, 10, 12, 14
Other dimensions on request

Output Channels
3 : ABZ
4 : AB+A' B'
6 : ABZ+A' B' Z'

Electrical Connections:
Cable
R2 : radial 2m, shield not connected (standart)
A2 : axial 2m, shield not connected (standart)

Connector:
R1204 R1607 R1208 R2312R
R1205 R1614 R1212 R2312L

PPR Options :
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Supply Voltage and output circuit :
5V : 5V in / out
245V : 5-30V in 5V out
30V : 5-30V in / out