

Incremental encoders

Optical Programming Options



Programmable Resolution 1...100.000 pulses

FNCP 40H Series Programmable



Features

- Industry 40 mm standard size,
- Hollow shaft version
- Robust mechanical and electrical construction
- Protection up to IP67
- Up to 100.000 PPR max.
- ≤ 2 MHz frequency
- Programming vi FNC PT - PC Programming tool
- FNC PT - PS easy programming software

PPR Options :

1 to 100.000 ppr for optical version
up to 2.000.000 on request

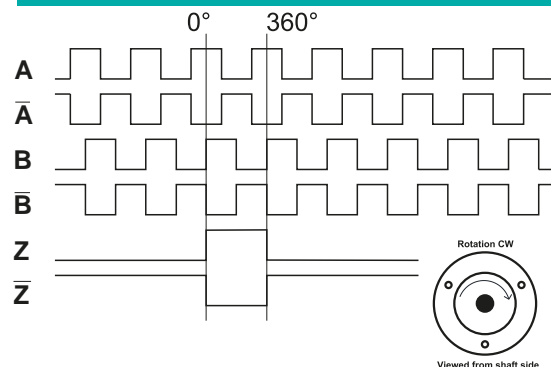
Technical data - electrical ratings

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)
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

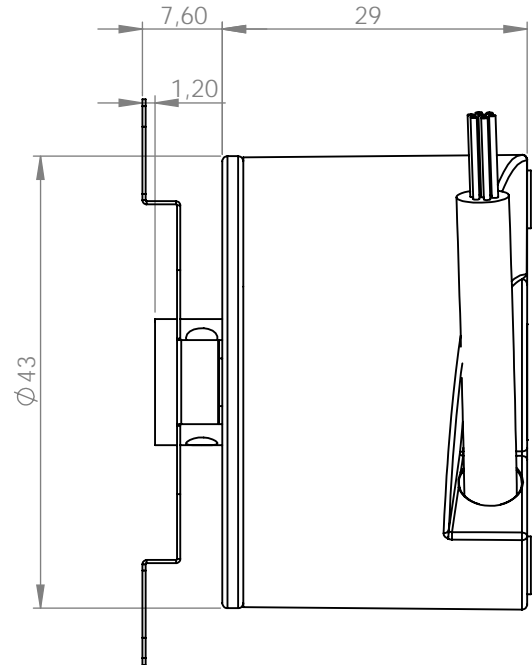
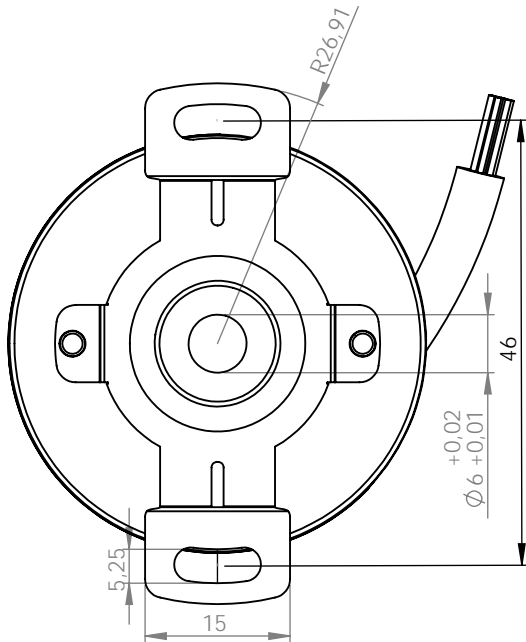
Dimensions (flange)	ø40 mm
Shaft loading	≤ 140 N axial ≤ 240 N radial
Protection DIN EN 60529	IP54, IP65
Operating speed	≤ 12000 rpm
Starting torque	≤ 0.025 Nm (IP67)
Materials	Housing: Aluminum Flange: Aluminum Shaft : Stainless steel
Shaft diameter	4, 6, 8, 10, 12 mm (other diameters on request)
Bearings 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

Pulse Diagram

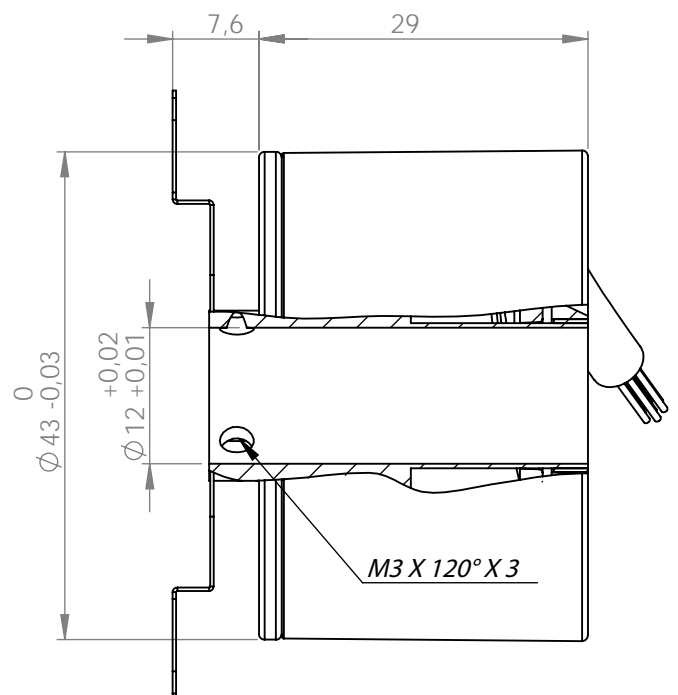
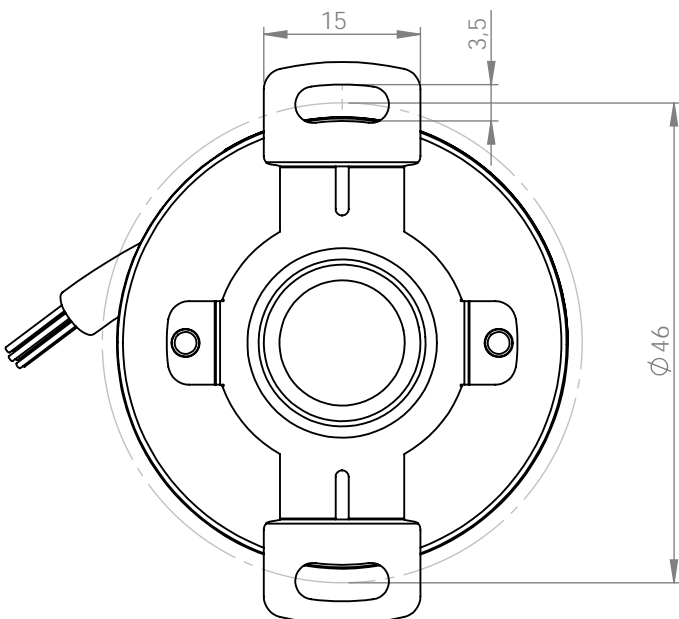


FNCP 40H Series Programmable

Mechanical Dimensions



12 mm hollow shaft version



Incremental encoders

Optical Programming Options

Programmable Resolution 1...100.000 pulses

FNCP 40H Series Programmable

Cable Wiring

Function	Color	Renk	Farbe	Цвет	颜色	M2312 Connector
+VB	Brown	Kahve	Braun	Коричневый	棕色的	pin 2
GND	White	Beyaz	Weiß	Белый	白色的	pin 10
A	Green	Yeşil	Grün	Зеленый	绿	pin 5
A'	Green-Black	Yeşil-Siyah	Grün-Schwarz	Зелено-черный	绿-蓝色的	pin 6
B	Yellow	Sarı	Gelb	Желтый	黄色的	pin 8
B'	Yellow-Black	Sarı-Siyah	Gelb-Schwarz	Желто-черный	黄色的-蓝色的	pin 1
Z	Gray	Gri	Grau	Серый	灰色的	pin 3
Z'	Gray-Black	Gri-Siyah	Grau-Schwarz	Серо-черный	灰色的-蓝色的	pin 4
NSS	Blue-Black	Mavi-Siyah	Blau-Schwarz	Сине-черный	蓝色的-蓝色的	pin 7
SCK	Blue	Mavi	Blau	Синий	蓝色的	pin 9
MISO	Orange	Turuncu	Orange	Оранжевый	橙	pin 11
MOSI	Orange-Black	Turuncu-Siyah	Orange	Оранжево-черный	橙-蓝色的	pin 12
CLK	Blue	Mavi	Blau	Синий	蓝色的	pin 7
DAT	Orange	Turuncu	Orange	Оранжевый	橙	pin 9

Programming Wires
Optical
Magnetic

FNC PT-PC Programming Device



Programming Device - PC Cable

FNCNCP 40HO 8630VX-R2

Encoder Part Number

FNCP 40 H O 8 6 30V X - R2

Housing: 40 : 40 mm	Electrical Connections: Cable R2 : radial 2m, shield not connected (standart) A2 : axial 2m, shield not connected (standart)
Flange Type H : Hollow Shaft	PPR Options : 1 to 100.000 ppr for optical version up to 2.000.000 on request
O : Optical programmable	Supply Voltage and output circuit : 5V : 5V in / out 245V : 5-30V in 5V out 30V : 5-30V in / out
Shaft diameter : 4, 6, 8, 10 Other dimensions on request	
Output Channels 3 : ABZ 4 : AB+A' B' 6 : ABZ+A' B' Z'	

Incremental encoders

Optical Programming Options



FNC PT-PC Programming Device

Optical Programming PC view

ENCODER PROGRAMMER UTILITY V1.6.14.06.2020

INCREMENTAL PARAMETERS	OPTICAL PROGRAMMABLE ENCODER	ANGLE
Resolution: 1000000 Z Gate: 360°(A) Direction of Rotation: CW		
PULSE DIAGRAM 	STATUS PROGRAMMER: ENCODER: TESTING	ENCODER ENCODER PULSE: 999986 ENCODER ANGLE: 359,99
OPERATION READ WRITE STOP TEST		
CONFIG FILE OPEN SAVE		