

Incremental encoders

Optical and Magnetic Programming Options

Programmable Resolution 1...100.000 pulses

FNC 58E Series Programmable



Features

- Industry 58 mm standart size,
- End 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 65.536 ppr for magnetic version
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

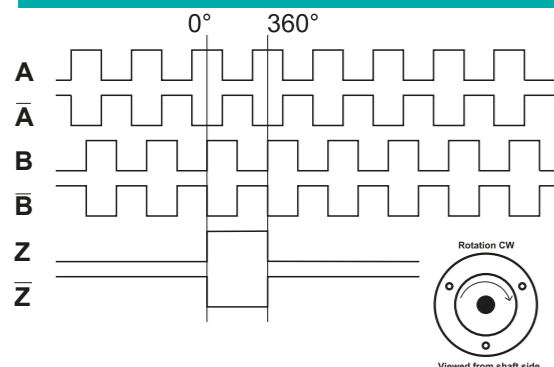
Technical data - mechanical design

Dimensions (flange)	ø58 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: Aluminum Flange: Aluminum 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

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

Pulse Diagram



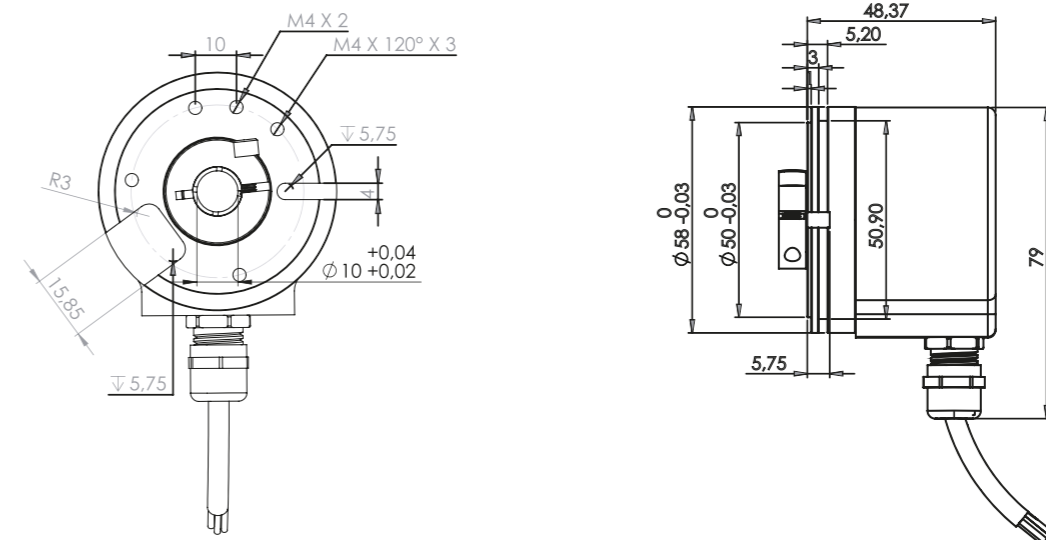
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Mechanical Dimensions
Cable/Connector Wiring, Part Number

FNC 58E Series Programmable



Mechanical Dimensions



FNCP 58EO 10630VX-R2

Encoder Part Number

FNCP 58 E O 10 6 30V X - R2

Housing: 58 : 58mm	Electrical Connections: Cable R2 : radial 2m, shield not connected (standart) A2 : axial 2m, shield not connected (standart)
Flange Type E : End Hollow Shaft	PPR Options : 1 to 65.536 ppr for magnetic version 1 to 100.000 ppr for optical version up to 2.000.000 on request
O : Optical programmable M : Magnetic 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, 12 Other dimensions on request	
Output Channels 3 : ABZ 4 : AB+A' B' 6 : ABZ+A' B' Z'	

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FNC PT-PC Programming Device

Magnetic Programming PC view

ENCODER PROGRAMMER UTILITY V1.6.14.06.2020

INCREMENTAL PARAMETERS	MAGNETIC PROGRAMMABLE ENCODER	ANGLE
Resolution: <input type="text" value="2048"/> Index Pulse Length: <input type="text" value="360°"/> Direction of Rotation: <input type="text" value="CW"/>		
PULSE DIAGRAM A: [Square wave] B: [Square wave] Z: [Pulse]	STATUS PROGRAMMER: ● ENCODER: ● TESTING	ENCODER ENCODER PULSE: 1049 ENCODER ANGLE: 184,39
OPERATION <input type="button" value="READ"/> <input type="button" value="WRITE"/> <input type="button" value="STOP TEST"/>		
CONFIG FILE <input type="button" value="OPEN"/> <input type="button" value="SAVE"/>		

Optical Programming PC view

ENCODER PROGRAMMER UTILITY V1.6.14.06.2020

INCREMENTAL PARAMETERS	OPTICAL PROGRAMMABLE ENCODER	ANGLE
Resolution: <input type="text" value="1000000"/> Z Gate: <input type="text" value="360°(A)"/> Direction of Rotation: <input type="text" value="CW"/>		
PULSE DIAGRAM A: [Square wave] B: [Square wave] Z: [Pulse]	STATUS PROGRAMMER: ● ENCODER: ● TESTING	ENCODER ENCODER PULSE: 999986 ENCODER ANGLE: 359,99
OPERATION <input type="button" value="READ"/> <input type="button" value="WRITE"/> <input type="button" value="STOP TEST"/>		
CONFIG FILE <input type="button" value="OPEN"/> <input type="button" value="SAVE"/>		