

Incremental encoders

Resolution 1...4096 pulses



FNC 40E Series



Features

- Industry 40 mm size, 20mm diameter clamping flange
- Universal 40 mm encoders
- Robust Mechanical and Electrical Construction
- Protection to IP65
- Up to 4096 PPR max.
- <300 kHz frequency

PPR Options :

1 to 1024 ALL PPR - 2048 - 4096

Technical data - electrical ratings

Voltage supply	4.75VDC to 30VDC HTL 4.75VDC to 5.5VDC TTL
Protection:	Output short circuit protection. Reverse polarity protection (except 5V version)
Consumption w/o load	≤60 mA (24 VDC)
Resolution (steps/turn)	1...4096
Reference signal	Zero pulse, width 90° 180°, 360° optional
Optoelectronic life time	100.000 (min)
Output frequency	>200 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)	ø40 mm
Shaft loading	≤60 N axial ≤80 N radial
Protection DIN EN 60529	IP54, IP65
Operating speed	≤10000 rpm
Starting torque	≤0.020 Nm (IP 67)
Materials	Housing: Aluminium Flange: Aluminium Shaft : Stainless steel
Shaft diameter:	4, 5, 6, 8 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.	150 g

Connector Wiring

Connector Type	+Vcc	GND	A	A'	B	B'	Z	Z'	Shield
CRM1204	1	2	3	4					o.r.
CRM1205	1	2	3	4			5		o.r.
CRM1208	1	2	3	6	4	7	5	8	o.r.
CRM1212	1	2	3	6	4	7	5	8	o.r.
CRM1607	1	2	3	4			5		o.r.
CRM1614	Customer Specific								o.r.

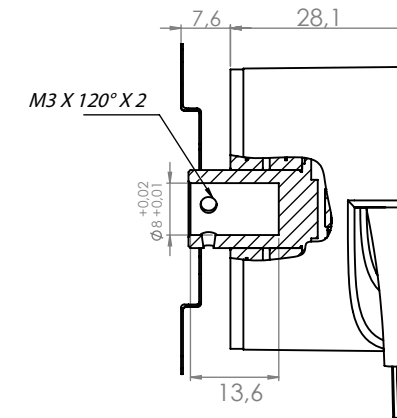
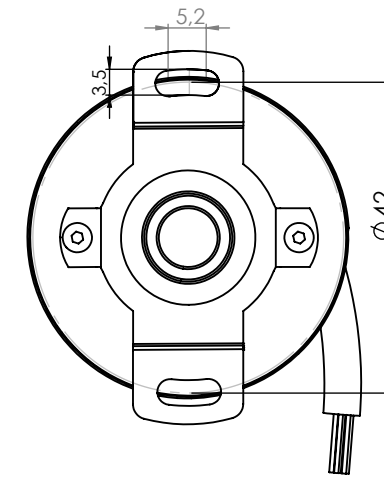
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Mechanical Dimensions
Cable/Connector Wiring, Part Number

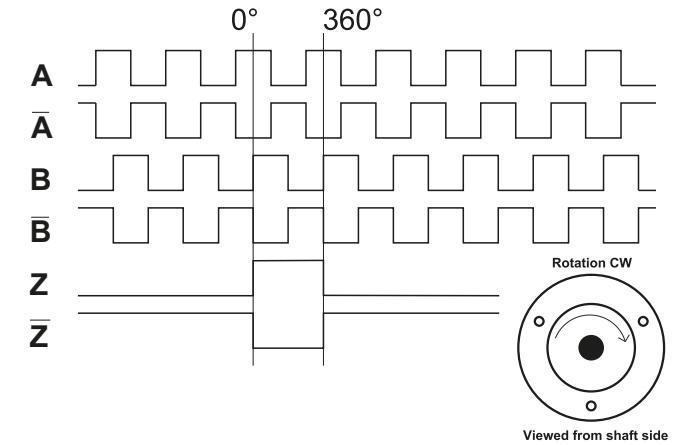
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Mechanical Dimensions



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 40 E 6 6 30V 1024 - R2

Housing: 40 : 40mm	Electrical Connections: Cable R2 : radial 2m, shield not connected (standart) A2 : axial 2m, shield not connected (standart) Connector: R1204 R1212 R1205 R1607 R1208 R1614
Flange Type: E : End shaft	
Shaft diameter : 4, 5, 6, 8 mm Other dimensions on request	
Output Channels 1 : A 2 : AB 3 : ABZ 4 : AB+A' B' 6 : ABZ+A' B' Z'	
PPR Options : 1 to 1024 - 2048 - 4096	
Supply Voltage and output circuit : 5V : 5V in / out 245V : 5-30V in 5V out 30V : 5-30V in / out	