

# Incremental encoders

Resolution 1024...10.000 pulses



## FNC 100H Series



### Features

- Industry 100 mm design, through hollow shaft
- Robust mechanical and electrical construction
- Protection up to IP67
- Up to 10.000 PPR max.
- <300 kHz frequency

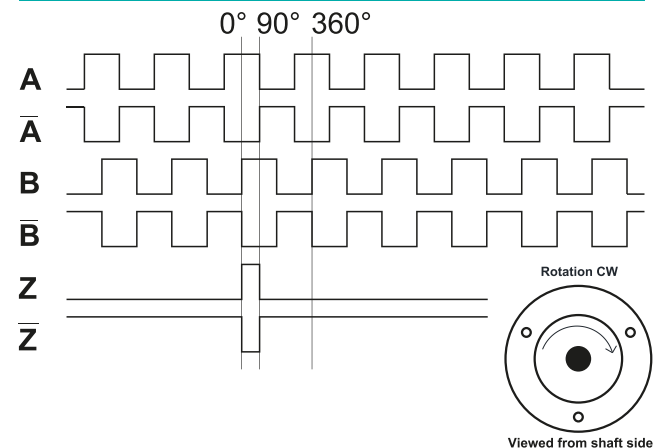
### PPR Options :

1024 - 2000 - 2048 - 2500 - 4000 - 4096 - 5000  
- 8000 - 8192 - 10000

### Technical data - mechanical design

Dimensions (flange)	ø100 mm
Shaft loading	≤140 N axial ≤240 N radial
Protection DIN EN 60529	IP54, IP65
Operating speed	≤10.000 rpm
Starting torque	≤0.025 Nm (IP 67)
Materials	Housing: aluminium Flange: aluminium Shaft : stainless steel
Shaft diameter:	26, 28, 30, 32, 38 ,40 ,42 mm ( other diameters on request )
Bearings lifetime:	2x10 <sup>9</sup> rev. at 100% of full rated shaft load (minimum)
Operating temperature	-20...+85 °C
Storage temperature	-30 °C up to +90 °C
Weight approx.	700 g

### Pulse Diagram



### Technical data - electrical ratings

Voltage supply	4.75VDC to 30VDC 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)	1024...10.000
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 NPN Open Collector
Interference immunity	DIN EN 61000-6-2
Emitted interference	DIN EN 61000-6-4
Approval	CE

### Accessories

- Connectors and cables**  
CRM1208 M12 8 poles female connector or see page 206
- Mounting coupling**  
See page 204
- Mounting accessories**  
YY ASTK spring or see page 202-203

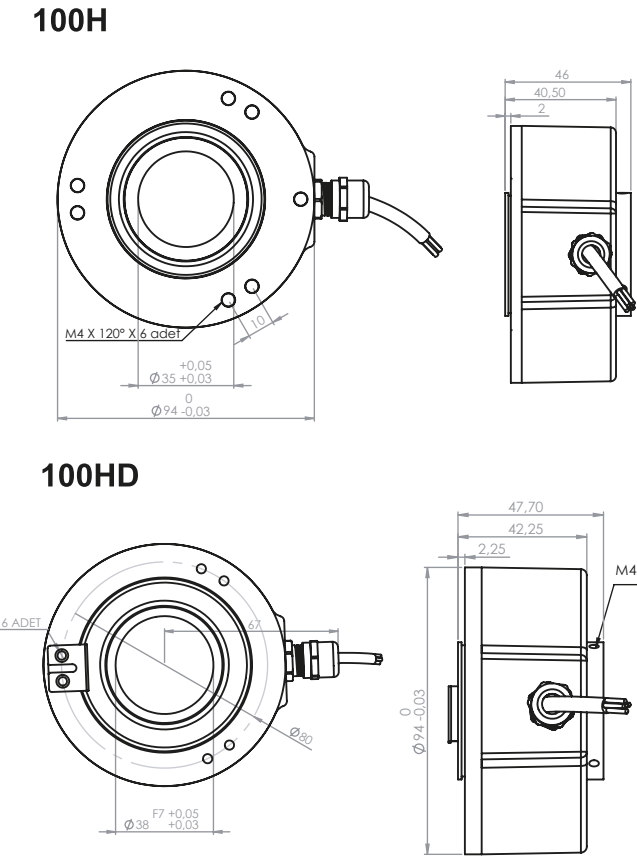
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Mechanical Dimensions  
Cable/Connector Wiring, Part Number

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### Mechanical Dimensions



### 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.
CRM2312R	2-12	10-11	5	6	8	1	3	4	o.r.
CRM2312L	2-12	10-11	5	6	8	1	3	4	o.r.

For further information please see page 206

### 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 100 H 38 6 30V 1024 - R2**

**Housing:**  
100 : 100mm

**Flange Type:**  
H : Through hollow shaft  
HD : Through hollow shaft - thick version

**Shaft diameter :** 26, 28, 30, 32, 38, 40, 42, 44, 45  
Other dimensions on request

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

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

**Connector:**  
R1204 R1607  
R1205 R1614  
R1208 R2312R  
R1212 R2312L

**PPR Options :**  
1024 - 2000 - 2048 - 2500 - 4000 - 4096 - 5000  
- 8000 - 8192 - 10000

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