

Incremental encoders

Resolution 1...5.000 pulses



FNC 68K ALM Series



Features

- Industry 68 mm special size, square flange
- Robust mechanical and electrical construction
- Protection up to IP67
- Up to 5.000 PPR max.
- <300 kHz frequency

PPR Options :

1 to 128 - 25 - 50 - 100 - 200 - 250 - 300 - 360 - 400 - 500 - 512 - 600 - 720 - 800 - 900 - 1000 - 1024 - 1250 - 2000 - 2048 - 2500 - 3000 - 3600 - 4000 - 4096 - 5000

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)	1...5.000 up to 65536
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)	ø68 mm
Shaft loading	≤120 N axial ≤160 N radial
Protection DIN EN 60529	IP54, IP65
Operating speed	≤10000 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.	200 g

Accessories

Connectors and cables

See page 160

Mounting coupling

See page 158

Mounting accessories

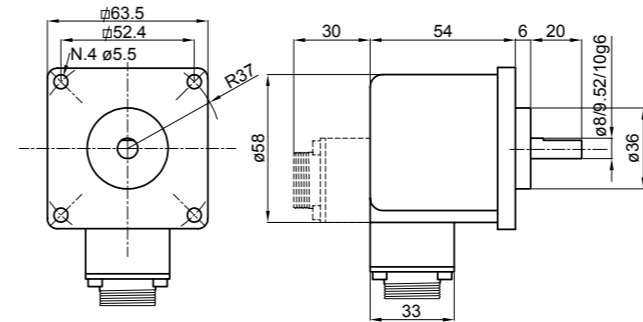
See page 156-157

Incremental encoders

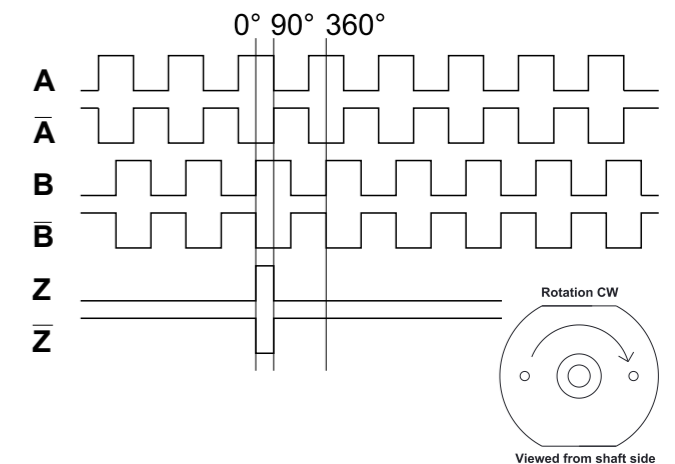
Mechanical Dimensions
Cable/Connector Wiring, Part Number

FNC 68K ALM Series

Mechanical Dimensions



Pulse Diagram



Connector Wiring

Pin	Assignment
A	A Channel
B	Z Channel
C	B Channel
E	Shield
H	Vcc
K	0V
N	A' Channel
P	Z' Channel
R	B' Channel

For further information please see page 112

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 68 K 10 6 30V 1024 - R2

Housing:
63 : 68mm

Flange Type:
K : Square flange, 36mm clamp
D : Square flange, 32mm clamp

Shaft diameter : 10, 12
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)
A2 : axial 2m, shield not connected (standart)

Connector:
CRM1204 CRM1607
CRM1205 CRM1614
CRM1208 CRM2312R
CRM1212 CRM2312L

PPR Options :
1 to 128 - 25 - 50 - 100 - 200 - 250 - 300 - 360 - 400 - 500 - 512 - 600 - 720 - 800 - 900 - 1000 - 1024 - 1250 - 2000 - 2048 - 2500 - 3000 - 3600 - 4000 - 4096 - 5000

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