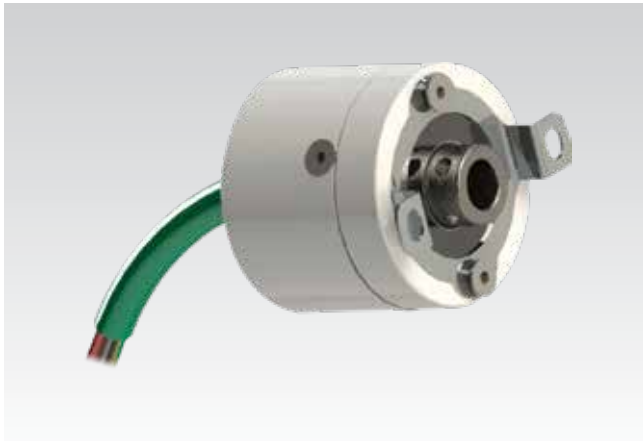


# Incremental encoders

Resolution 1...2500 pulses

## FNC 30E Series

36



### Features

- Industry 30 mm special size, servo flange
- Robust mechanical and electrical construction
- Protection up to IP67
- Up to 2500 PPR max.
- <300 kHz frequency

### PPR Options :

1 to- 1024 all PPR, - 360 - 500 - 512 - 720 - 1000 - 1024  
1440 - 2000 - 2048 -2500

### 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	≤30 mA (24 VDC)
Resolution (steps/turn)	1...2500
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)	ø30 mm
Shaft loading	≤20 N axial ≤30 N radial
Protection DIN EN 60529	IP54, IP65
Operating speed	≤10000 rpm
Starting torque	≤0.01 Nm (IP 67)
Materials	Housing: stainless steel Flange: stainless steel Shaft : stainless steel
Shaft Diameter:	4, 6, 8 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.	80 g

### Accessories

#### Connectors and cables

CRM1204 M12 4 poles female connector or see page 160

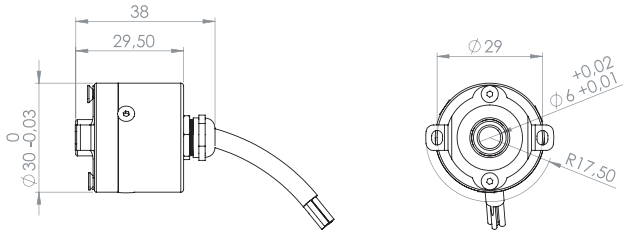
#### Mounting coupling

SK240606 plastic or see page 158

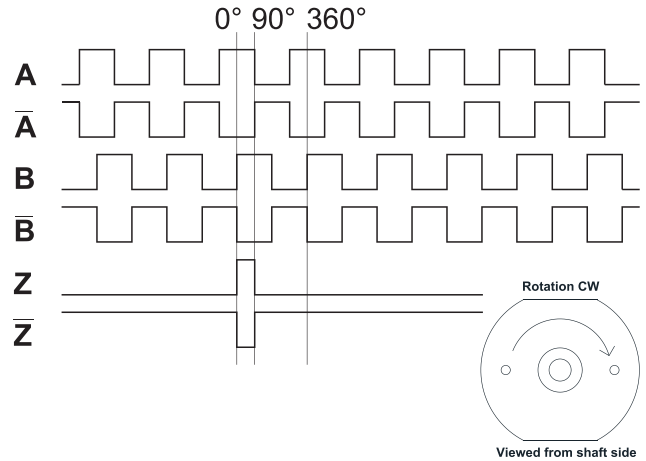
#### Mounting accessories

YY RST Spring or see page 156-157

#### Mechanical Dimensions



#### Pulse Diagram



#### 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.

For further information please see page 64

#### 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 30 E 6 6 30V 1000 - R2**

**Housing:**  
30 : 30mm

**Flange Type:**  
E : End hollow shaft

**Shaft diameter : 4, 6, 8**  
Other dimensions on request

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

**Electrical Connections:**  
**Cable**  
A2 : axial 2m, Total length 25 mm  
R2 : radial Total length 35 mm

**Connector:**  
CAM1204 CAM1607  
CAM1205 CAM1614

**PPR Options :**  
1 to- 1024 all PPR, - 360 - 500 - 512 - 720 - 1000 - 1024 - 1440 - 2000 - 2048 - 2500

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