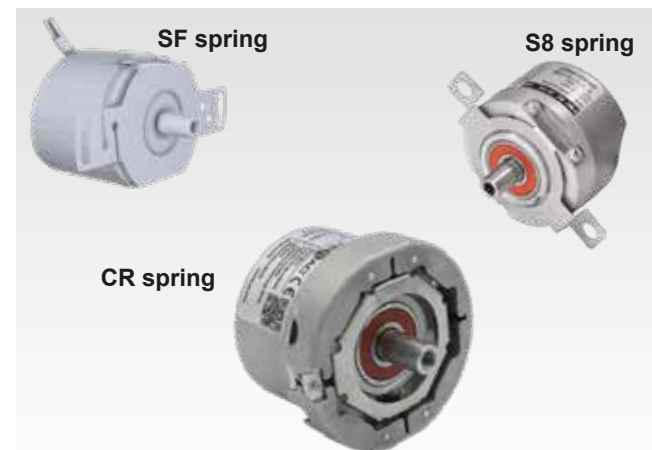


# Absolute encoders - SinCos

Integral bearing for integration in motors



## FNC SC2048 Series, SinCos motorfeedback



**FNC SC2048-R7**

(Standard comes with expanding coupling and 7 meter cable)

### Features

- Compact robust motor integration design
- 1Vpp / 1PPR accurate position information
- 2048 PPR sin cosine accurate speed information
- Installation diameter 65mm
- 1:10 taper shaft
- IP67 protection class

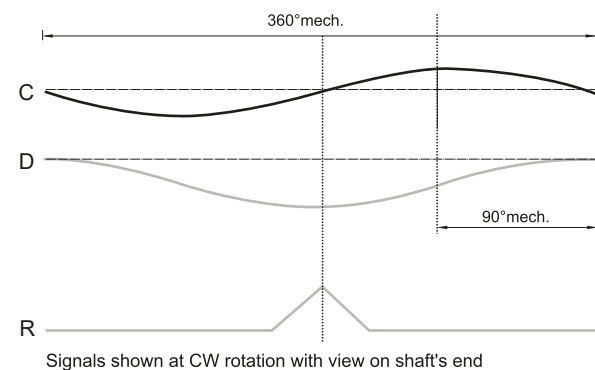
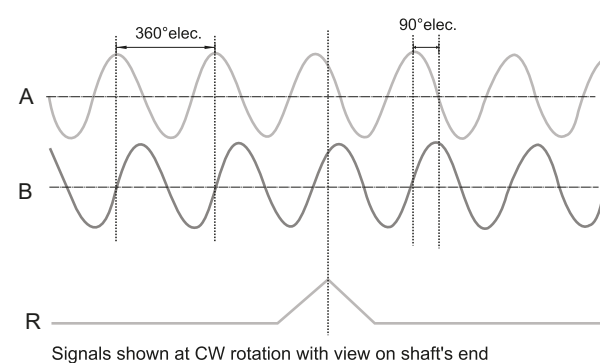
### Technical data - mechanical design

Dimensions (flange)	ø56 mm
Clamp mounting diameter	65 mm
Protection DIN EN 60529	IP 67
Operating speed	≤10000 rpm
Starting torque	≤0.03 Nm (IP 67)
Materials	Housing : Aluminium Flange : Aluminium Shaft : Stainless steel
Shaft specs	Taper shaft Ø 9.25 Taper 1:10
Operating temperature	-40...+110 °C
Storage temperature	-40 °C up to +120 °C
Weight approx.	250 g
Approval	CE

### Technical data - electrical ratings

Voltage supply	4.75VDC to 5.5VDC
Protection:	Output short circuit protection. Reverse polarity protection
Consumption w/o load	≤120 mA (5 VDC)
Interface, Output	Sine cosine / 1 Vpp
Resolution (steps/turn)	2048
Absolute accuracy	±0.17°
Absolute angle error	0.087°
Output frequency	500 kHz (max.)
Output circuit	1 Vpp incremental Sin/Cos differential driver

### Pulse Diagram



# Absolute encoders - SinCos

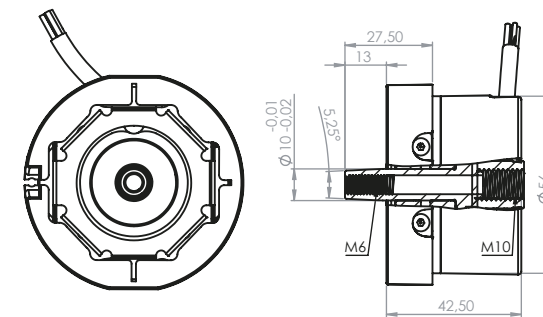
Cable/Connector Wiring, Part Number  
Pulse Diagram



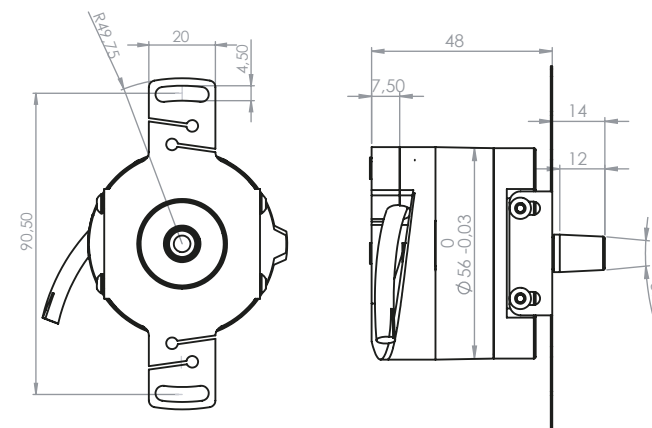
## FNC SC2048 Series, SinCos motorfeedback

### Mechanical Dimensions

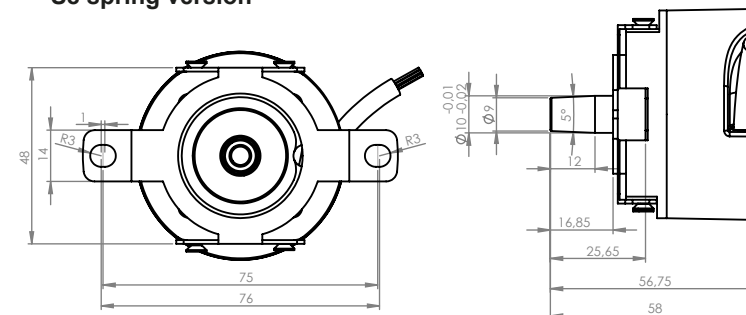
#### CR spring version



#### SF spring version



#### S8 spring version



### Cable / Connector Wiring

Function	Connector	Color	Renk
+VB	pin 1	Brown	Kahve
GND	pin 2	White	Beyaz
A	pin 3	Green	Yeşil
A'	pin 4	Green-Black	Yeşil-Siyah
B	pin 5	Yellow	Sarı
B'	pin 6	Yellow-Black	Sarı-Siyah
C	pin 7	Blue	Mavi
C'	pin 8	Blue-Black	Mavi-Siyah
D	pin 9	Orange	Turuncu
D'	pin 10	Orange-Black	Turuncu-Siyah
Z	pin 11	Gray	Gri
Z'	pin 12	Gray-Black	Gri-Siyah
Shield	Connected to housing		

### Dsub Connections

Dsub version with 30 cm cable part number  
**FNC SC2048-R30D15**

DSUB 15 2 ROW	Function	DSUB 15 2 ROW	Function
1	A	9	VDC
2	A-	10	N.C.
3	B	11	GND
4	B-	12	Z
5	C	13	Z-
6	C-	14	N.C.
7	D	15	N.C.
8	D-		

### Encoder Part Number

**FNC SC 2048 - R7 - CR**

1 PPR Sine Cosine / 1 turn      2048 PPR Sine Cosine / 1 turn

**R7** : Radial 7 meter cable  
**R30D15** : Radial 30 cm cable with 15 pin male socket

**Spring Type:**  
CR  
S8  
SF

**Female Cable Connector**

**FCSF D15 R700**

**D15** : Dsub 15 pin connector      **R700** : Radial 7 meter cable