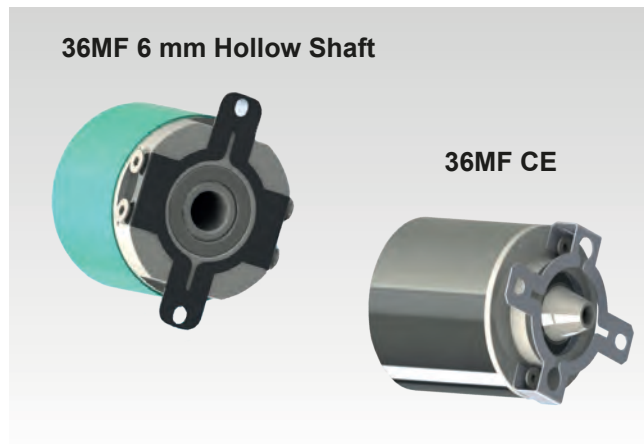


Absolute encoders - SSI/BiSS+SinCos

Integral bearing for integration in motors



FNC 36MF Series



Features

- Compact robust motor integration design
- SSI-BiSS + SinCos interface
- Singleturn 10 to 21 bit resolution
- Multiturn Gear 12 bit resolution
- Multiturn Battery up to 24 bit resolution
- IP65 protection class

Technical data - electrical ratings

Voltage supply	4.75VDC to 5.5VDC or 7 - 30V
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)	Singleturn 10 to 21 bit Multiturn Gear 12 bit Multiturn Battery up to 24 bit
Absolute accuracy	±0.01°
Absolute angle error	0.02T°
Output frequency	500 kHz (max.)
Output circuit	1 Vpp incremental Sin/Cos differential driver

Technical data - mechanical design

Dimensions (flange)	ø36 mm
Protection DIN EN 60529	IP 65
Operating speed	≤10000 rpm
Starting torque	≤0.03 Nm (IP 67)
Materials	Housing : Aluminium Flange : Aluminium Shaft : Stainless steel
Shaft specs	8 mm
Operating temperature	-40...+110 °C
Storage temperature	-40 °C up to +120 °C
Weight approx.	250 g
Approval	CE

Absolute encoders - SSI/BiSS+SinCos

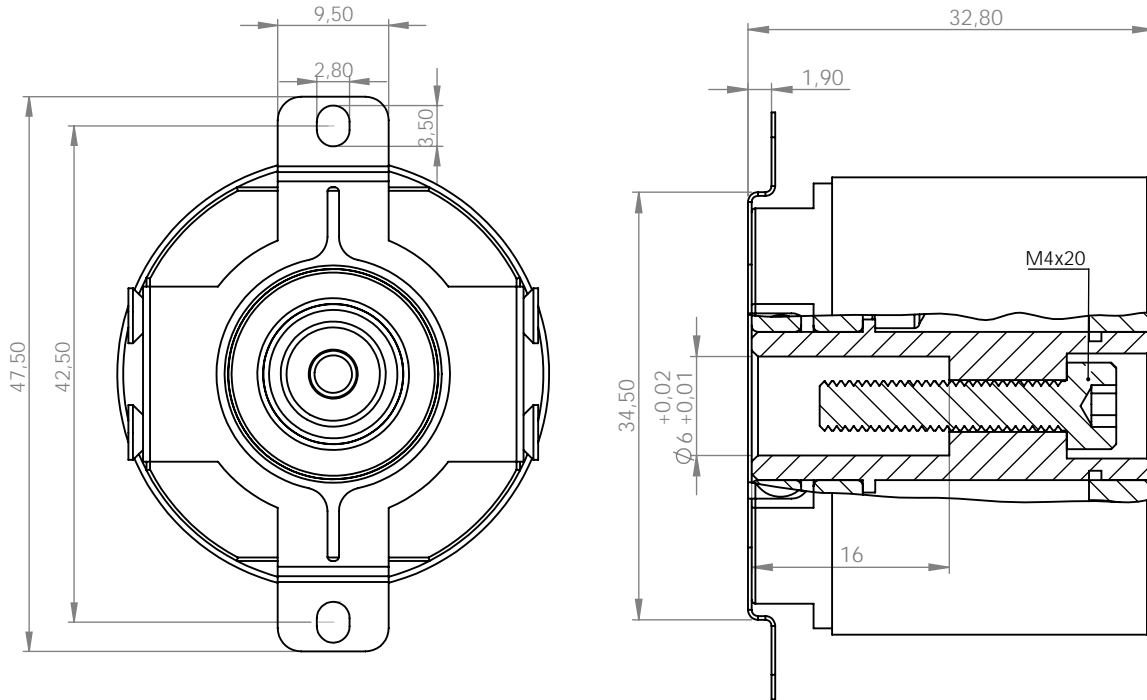
Integral bearing for integration in motors



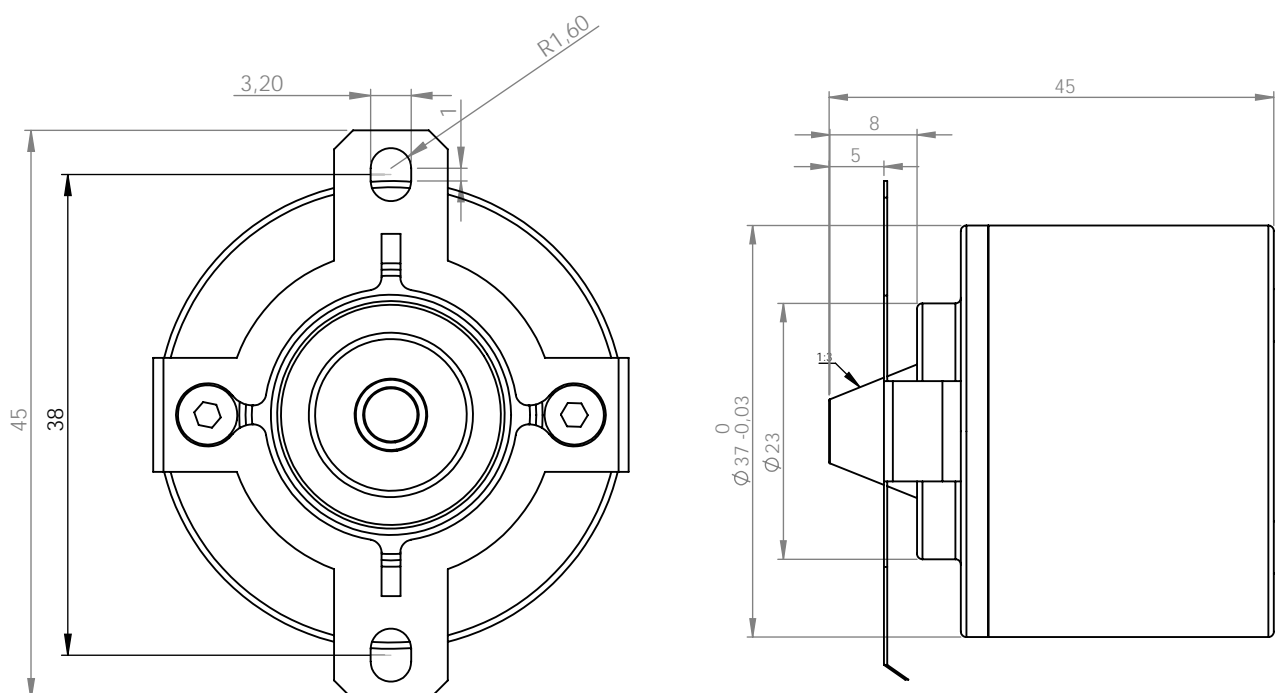
FNC 36MF Series

Mechanical Dimensions

36MF 6 mm hollow shaft gear version



36MF Conic External



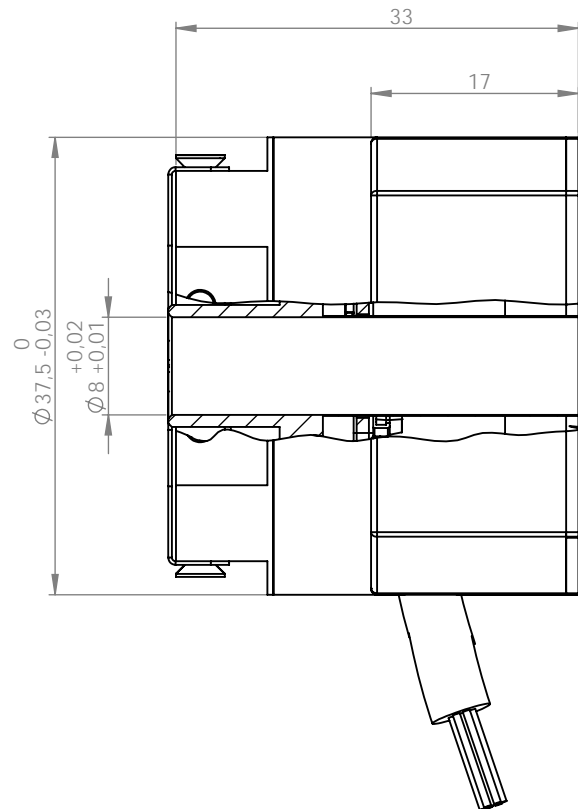
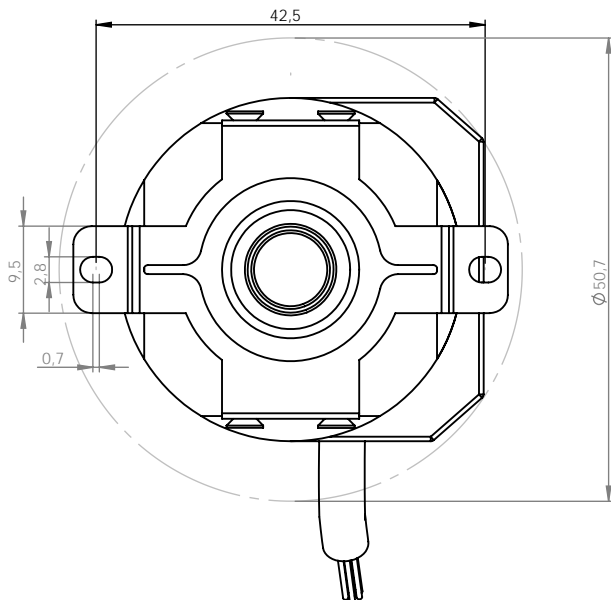
Absolute encoders - SSI/BiSS+SinCos

Integral bearing for integration in motors

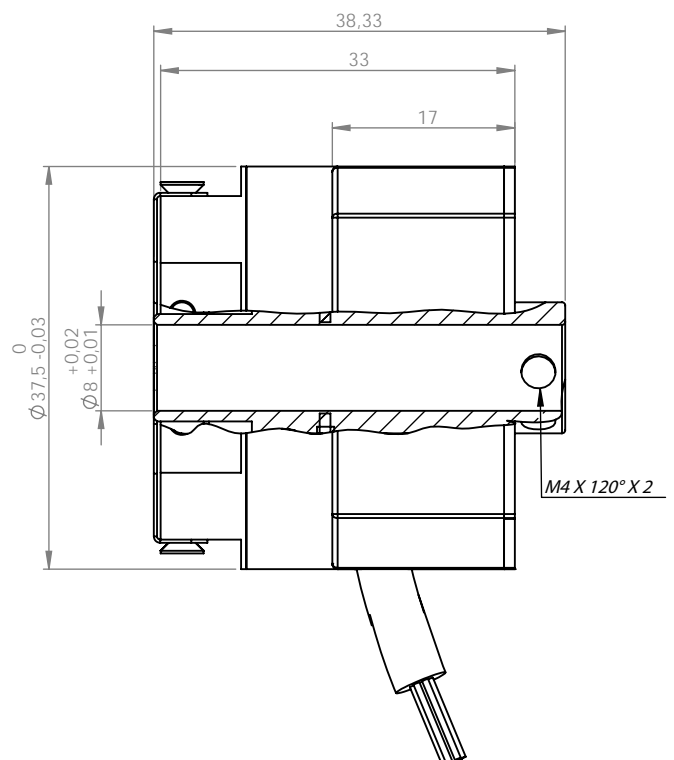
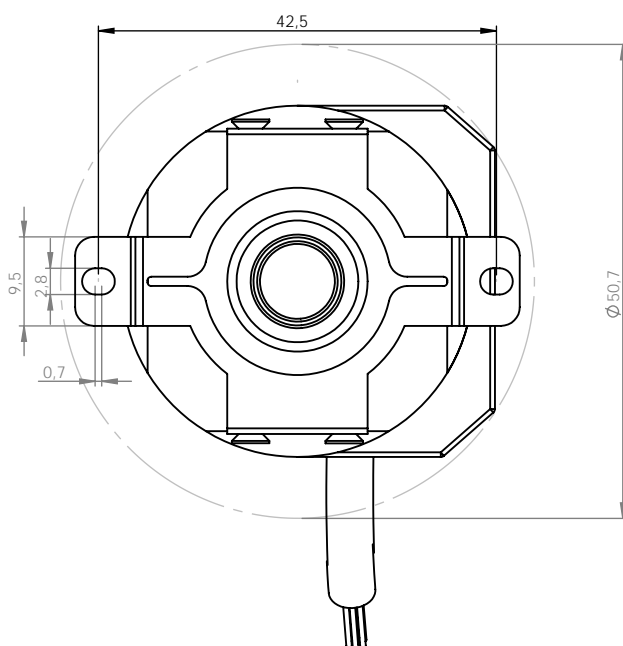
FNC 36MF Series

Mechanical Dimensions

Battery hollow shaft



Battery hollow shaft setscrew

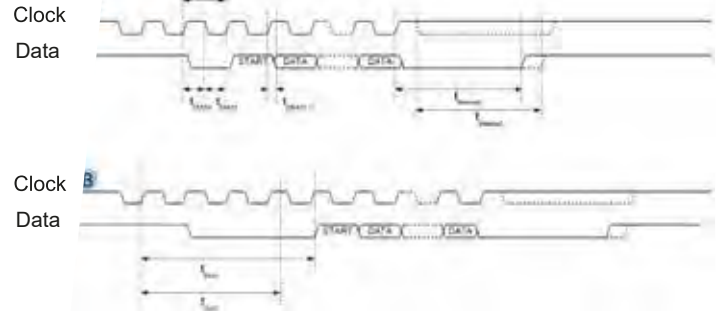


FNC 36MF Series

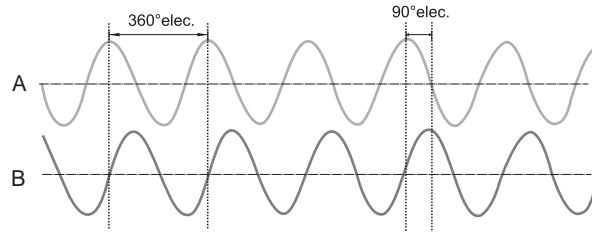
Cable / Connector Wiring

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
Clock	pin 7	Blue	Mavi
Clock-	pin 8	Blue-Black	Mavi-Siyah
Data	pin 9	Orange	Turuncu
Data-	pin 10	Orange-Black	Turuncu-Siyah
Preset	pin 11	Gray	Gri
Direction	pin 12	Gray-Black	Gri-Siyah
Shield	Connected to housing		

Pulse diagram



Symbol	Parameter	Conditions	Min	Max	Unit
tMAS	Permissible Clock Period	TIMO in accordance	100	2 x ttimeout	ns
tMASH	Permissible Signal Hi Level Duration		50	ttimeout	ns
tMASL	Permissible Signal Lo Level Duration		50		ns
treq	REQ Lo Level Duration		50	ttimeout	ns



Signals shown at CW rotation with view on shaft's end

Encoder Part Number

FNC 36 MF S 6 S21 MB12 SC1 5 B - R1

Housing:
36 : 36 mm

Flange Type:
MF : Motor Feedback

S : SSI
B : BiSS

Flange Type:
6 : 6 mm hollow shaft
CI : Conic internal
CE : Conic external

Singleturn options
S21 : 10 to 21 bit

Electrical Connections:
Cable
R1 : radial 1m cable C14 : connector after 1m cable
Connector: R2312L R2312R

B : Binary
G : Gray

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

SC1 : 1024 SinCos
SC2 : 2048 SinCos

MG12 : Gear Multiturn 12 bit,
MB12 : Battery Multiturn 12 bit, MB14, MB16, MB18, MB20, MB24