

FNC TASO 37HBK4 Series



Features

- SSI or BiSS Interface Rotary Encoder
- Optical sensing
- Resolution up to 21 bit
- 37 mm diameter body
- 10 mm diameter hollow shaft

Technical data - Mechanical Ratings

Dimensions:	37 mm
Shaft Diameter:	6, 8, 10 mm
Materials:	Housing: Aluminium Shaft : Stainless Steel
Weight:	21 gr
Operating Temperature	-40 to +85°C

Technical data - Electrical Ratings

Supply Voltage:	5V DC \pm 5%
Interfaces	SSI / BiSS
Resolution (steps/turn):	up to 21 bit
Absolute accuracy:	<60-80 arcsec
High accuracy:	<30 arcsec
Code :	Gray or binary
Protection:	Reverse voltage protection Over voltage protection

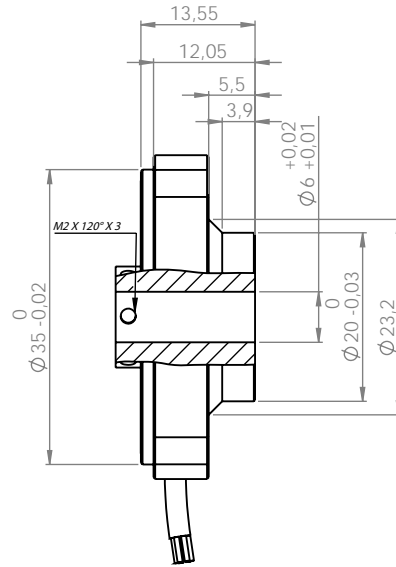
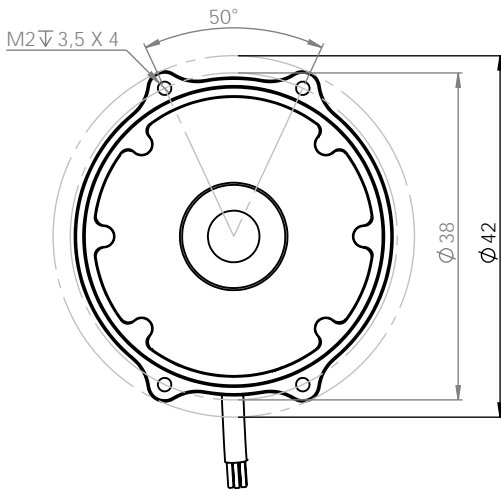
Cable Wiring

Function	Pin Out	Color	Renk
+5V	1	 Brown	Kahverengi
GND	2	 White	Beyaz
Clock+	3	 Blue	Mavi
Clock-	5	 Gray	Gri
Data+	6	 Orange	Turuncu
Data-	4	 Pink	Pembe

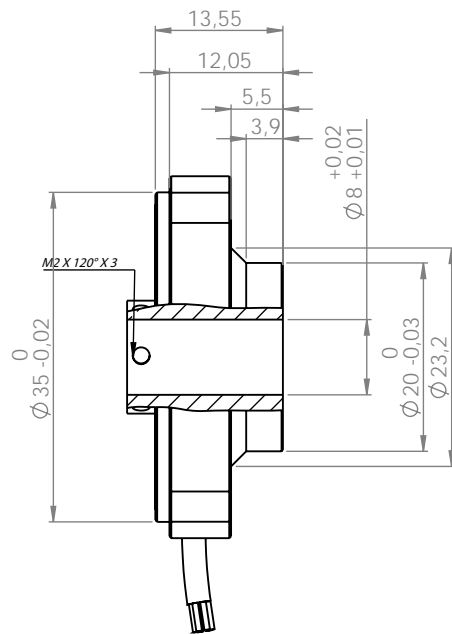
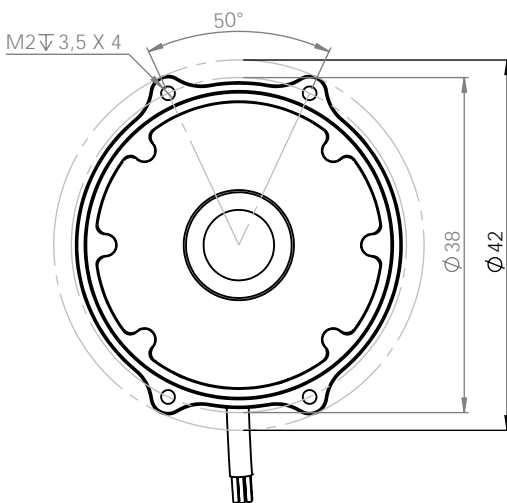
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Mechanical Dimensions

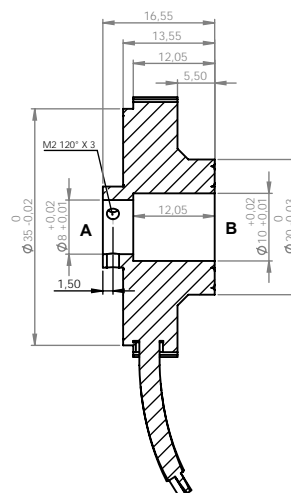
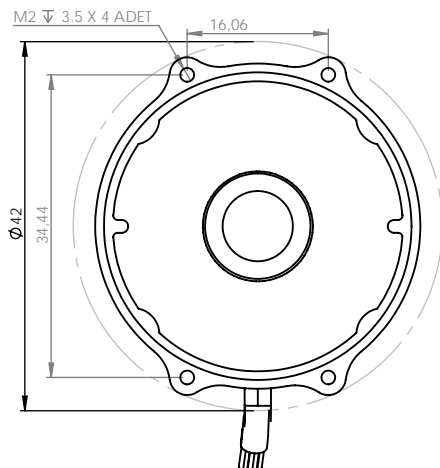
6 mm shaft version



8 mm shaft version



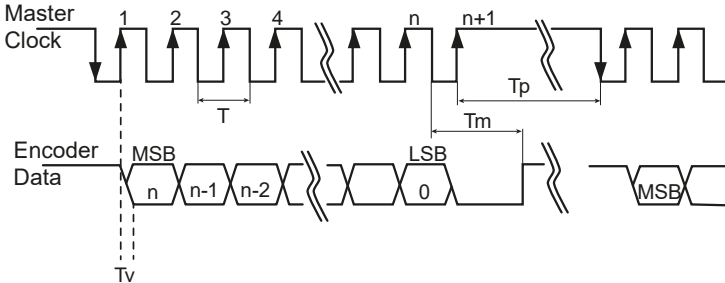
8-10 mm shaft version



Hollow Shaft Optical Absolute Encoders

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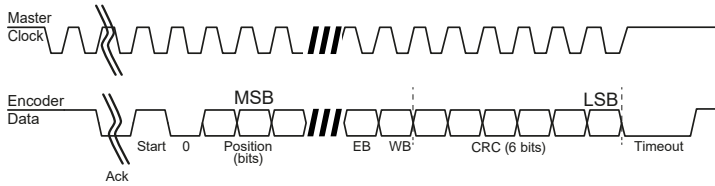
Pulse Diagram SSI



Symbol	Description
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n	Total number of data bits
T	Clock Period
$f=1/T$	Clock frequency
Tv	Bit update time
Tp	Pause time
Tm	Monoflop time

Pulse Diagram BiSS



Bit#	Symbol	Description	Default	Length
	ACK	Absolute position one clock cycle	0	
30	Start	Encoder signal for "start" data transmit	1	1 bit
29	"0"	Start with follower	0	1 bit
8-28	AP	Absolute position data	1	21 bit
7	EB	Error bit	1	1 bit
6	WB	Warning bit		1 bit
0-5	CRC	Cyclic redundancy check (polynomial 0x43)		6 bit
	Timeout	Elapse between the sequential "start" request cycle's		20 μ S

Part Number

FNC **TASO** **37** **HBK4** **810** **S21** **5V** **B** - **R02** - **HA**

TASO : Thin Absolute SSI Optical
TABO : Thin Absolute BiSS Optical

Housing
37 : 37 mm

6 : flat 6 mm
8 : flat 8 mm
10 : flat 10 mm
810 : A side 8 mm, B side 10 mm (check the drawing)

Singleturn resolution
S : Single Turn
up to 21 bit

****** : Standard (60-80 arcsec)
HA : High accuracy (30 arcsec)

Electrical Connections:

R02 : radial 20 cm, shield not connected (standart)
R02S : radial 20 cm, shield connected to housing

B : Binary **G** : Gray

Supply Voltage and output circuit :

5V : 5V in / out