

# Absolute encoders

Singleturn up to 21 bit

## FNC MRS104 Absolute Series



### Features

- **Bearingless encoders**
- **Robust mechanical and electrical construction**
- **Protection to IP65**
- **Up to 21 bit resolution**

### Technical data-electrical ratings

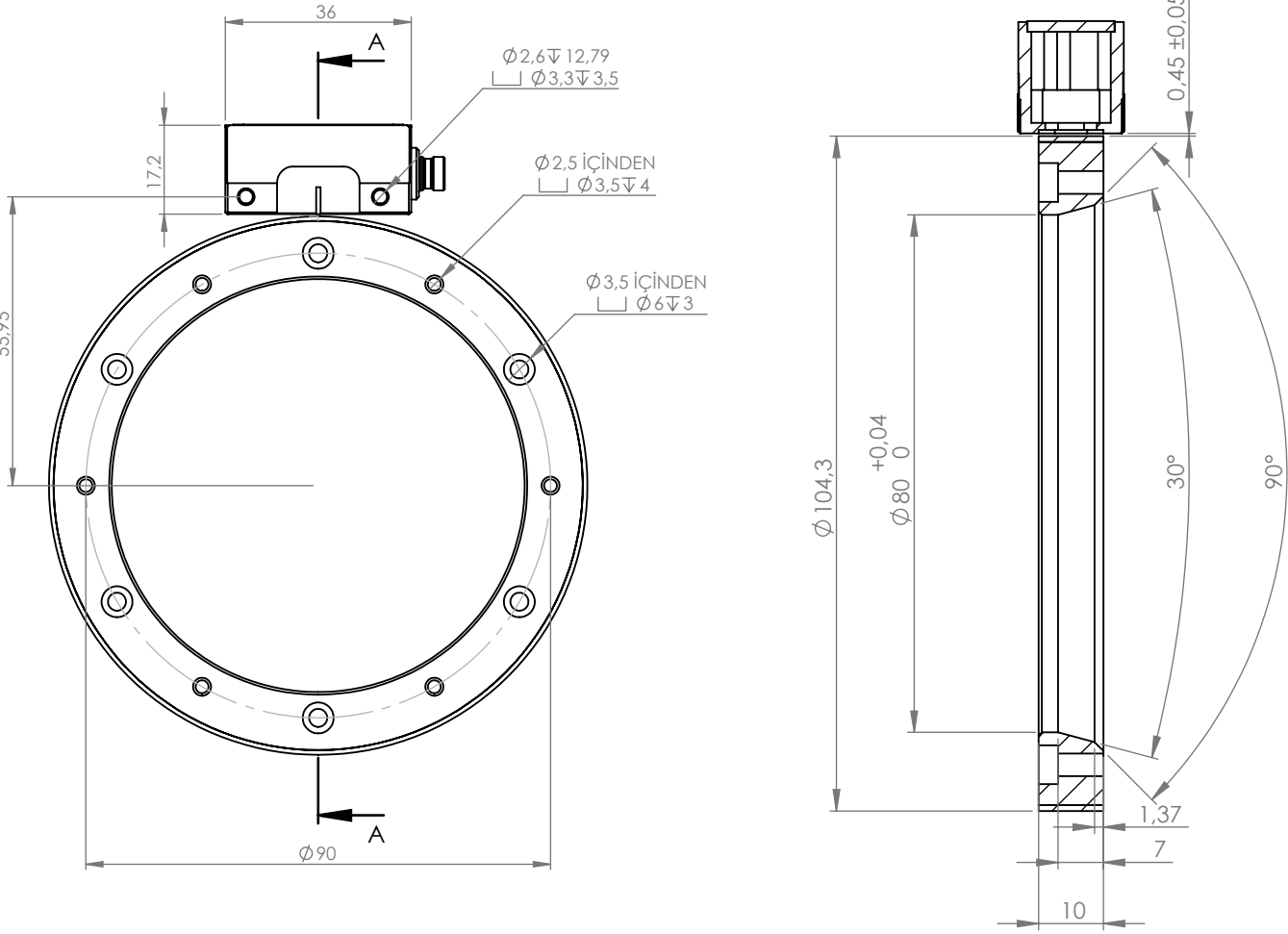
Voltage supply	4.75VDC to 5.5VDC
Protection	Output short circuit protection
Consumption w/o load	≤100 mA
Interface	SSI or BiSS
Resolution (steps/turn)	21 bit
Code	Gray or Binary
Inputs	SSI differential clock
Output frequency	up to 2 MHz (SSI) up to 10 MHz (BiSS)
Output circuit	SSI data linedriver RS485 / RS422
Interference immunity	DIN EN 61000-6-2
Emitted interference	DIN EN 61000-6-4
Approval	CE

### Technical data-mechanical ratings

Diameter	Mounting hole : Ø90 mm Inner diameter : Ø80 mm Outer diameter : Ø104 mm
Travel speed	≤10,000 rpm
Materials	Ring : stainless steel
System accuracy	0.05°
Operating temperature	-40...+85°C (+125°C on request)
Storage temperature	-45... +85°C (+125°C on request)
Weight approx.	250 g

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Mechanical Dimensions






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Cable / Connector Wiring, Part Number

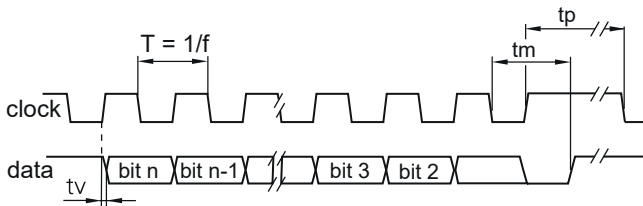


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### Cable Connection

Function	Color	Renk	Farbe	Цвет
+VB	 Brown	Kahve	Braun	Коричневый
GND	 White	Beyaz	Wei	Белый
DATA+	 Orange	Turuncu	Orange	Оранжевый
DATA-	 Orange-Black	Turuncu-Siyah	Orange-Schwarz	Оранжево-черный
CLOCK-	 Blue	Mavi	Gelb	синий
CLOCK+	 Blue-Black	Mavi-Siyah	Gelb-Schwarz	сине-черный
Shield	Black	Siyah	Schwarz	Чернить

### Pulse Diagram



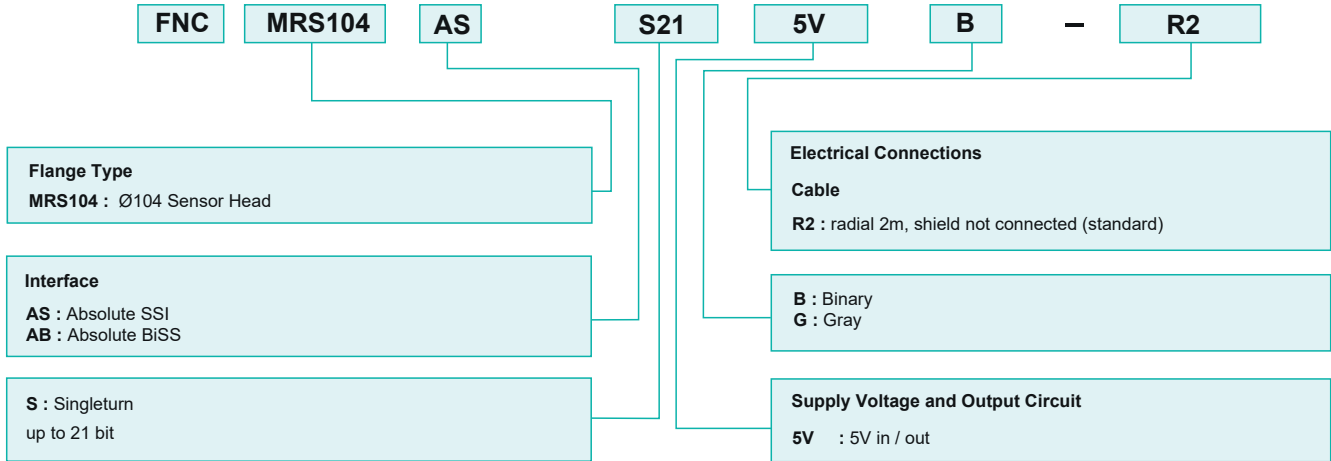
Clock frequency, f	50...2000 kHz for SSI up to 10 MHz for BiSS
Code	Binary or Gray
Status and parity bit	On request
Monoflop time tm	>15µs
Clock time out	Programmable at factory

### Terminal Significance

+Vs	Encoder supply voltage
0 V	Encoder ground connection relating to +Vs
Data+	Positive data output.
Data-	Negative data output.
Clock+	Positive SSI clock output.
Clock-	Negative SSI clock output.

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#### Encoder Part Number for Sensor Head



#### Encoder Part Number for Magnetic Ring

