# FNC TPD Wheel Series

## Features

- **Suitable for measuring the length and speed of the moving target by selecting wheel type**
- **Successively by wheel type is suitable for measuring the length or speed of the moving target.**
- **Distance measurement output wavelength and it conforms to the international measurement**
- **Different wheel diameters and surface options depending on the application**
- **Protection up to IP65 or IP54**
- **Easy Mounting**
- **<300 kHz frequency**

## Technical data - electrical ratings

| | |
|---|---|
| Voltage supply | 4.75VDC to 30VDC<br>4.75VDC to 5.5VDC |
| Protection: | Output short circuit protection.<br>Reverse polarity protection<br>( except 5V version ) |
| Consumption w/o load | ≤60 mA (24 VDC) |
| Reference signal | Zero pulse, width 90°<br>180°, 360° optional |
| Output frequency | >200 kHz |
| Output signals | 90° shifted A and B,<br>Z + inverted |
| Output circuit | Linedriver/RS422<br>Push-pull short-circuit proof |
| Interference immunity | DIN EN 61000-6-2 |
| Emitted interference | DIN EN 61000-6-4 |
| Approval | CE |

## Accessories

**Connectors and cables**
M12 4 poles , M15 8 poles and for
other connector options see page 160

## Technical data - mechanical design

| | |
|---|---|
| Protection DIN EN 60529 | IP54, IP65 |
| Operating speed | ≤10000 rpm |
| Starting torque | ≤0.020 Nm (IP 67) |
| Operating temperature | -20...+85 °C |
| Storage temperature | -30 °C up to +90 °C |
| Weight approx. | 650 g |

## Resolution

**Resolution:**

**For 250 mm Circumference Wheels**

0,1 = 1PPR = 0,1 mm = 2500 PPR Encoder
1 = 1PPR = 1 mm = 250 PPR Encoder
2 = 1PPR = 2 mm = 125 PPR Encoder
5 = 1PPR = 5 mm = 50 PPR Encoder
10 = 1PPR = 10 mm (1 cm) = 25 PPR Encoder

**For 200 mm Circumference Wheels**

2 = 1PPR = 2 mm = 100 PPR Encoder
100 = 1PPR = 100 mm (10 cm) = 2 PPR Encoder





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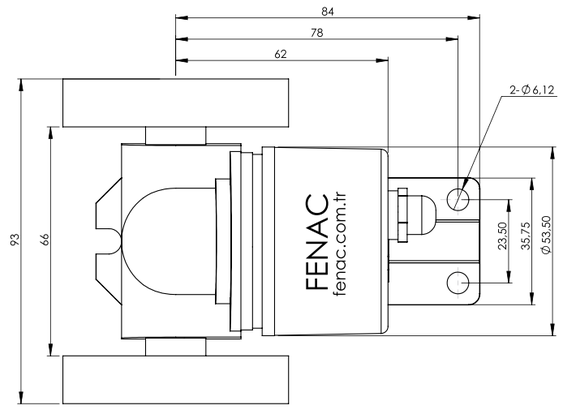
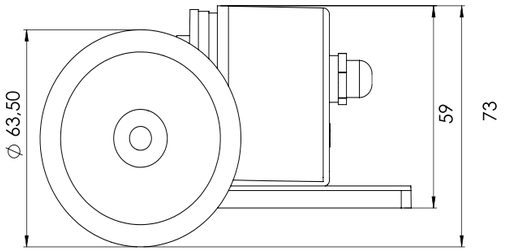
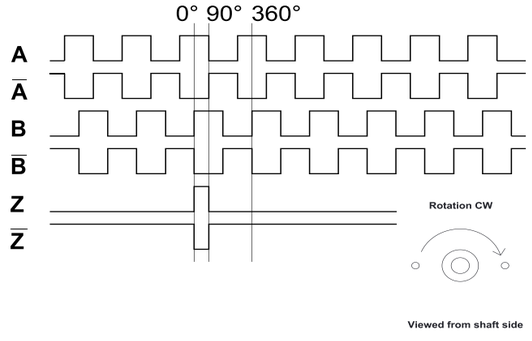
## Mechanical Dimensions




## Pulse Diagram




## 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 | TPD | 25 | 1 |
|---|---|---|---|

**PD:** Plastic Flat Surface

**Wheel Circumference**

20: 200 mm
25: 250 mm
30: 300 mm
50: 500 mm

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**For 200 mm Circumference Wheels**

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100 = 1PPR = 100 mm (10 cm) = 2 PPR Encoder

**For All TPD Models;**
**5-30VDC, Push Pull Out, A-B Channel**