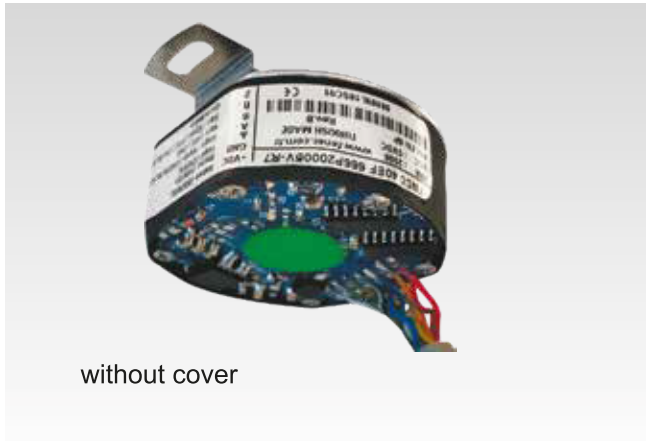


# Absolute commutation encoders

Resolution 1...5000 pulses



## FNC 46MFS Serial Motor Feedback Encoder



without cover



with cover

### 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)                                                                          |
| Resolution (steps/turn)  | 1...5000                                                                                 |
| Reference signal         | Zero pulse, width 90°<br>180°, 360° optional                                             |
| Optoelectronic life time | 100.000 (min)                                                                            |
| 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                                                                                       |

### Features

- Industry 46 mm, through hollow shaft
- Robust mechanical and electrical construction
- Protection up to IP67

### Technical data - mechanical design

|                         |                                                                      |
|-------------------------|----------------------------------------------------------------------|
| Dimensions (flange)     | ø40 mm                                                               |
| Shaft loading           | ≤80 N axial<br>≤100 N radial                                         |
| Protection DIN EN 60529 | IP 67                                                                |
| Operating speed         | ≤10000 rpm                                                           |
| Starting torque         | ≤0.025 Nm (IP 67)                                                    |
| Materials               | Housing: Aluminium<br>Flange: Aluminium<br>Shaft : Stainless steel   |
| Shaft diameter:         | 4, 5, 6, 7, 8 mm<br>( other diameters on request )                   |
| Bearings lifetime:      | 2x10 <sup>9</sup> rev. at 100% of full rated<br>shaft load (minimum) |
| Operating temperature   | -20...+85 °C                                                         |
| Storage temperature     | -30 °C up to +90 °C                                                  |
| Weight approx.          | 250 g                                                                |

# Absolute commutation encoders

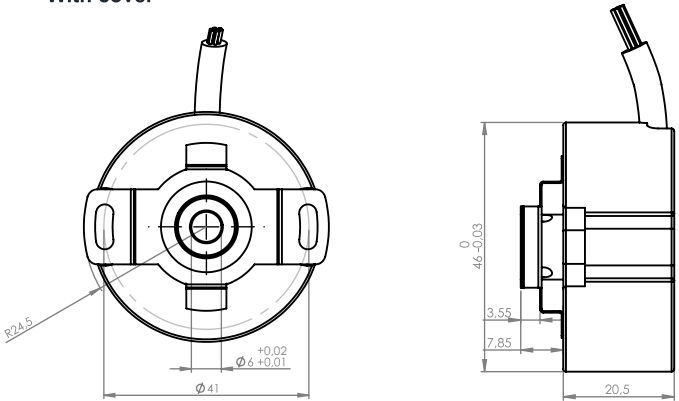
Mechanical Dimensions

Cable/Connector Wiring, Part Number

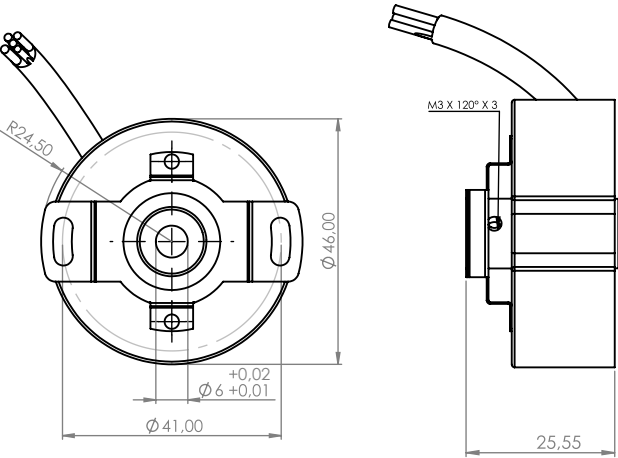
## FNC 46MFS Serial Motor Feedback Encoder

### Mechanical Dimensions

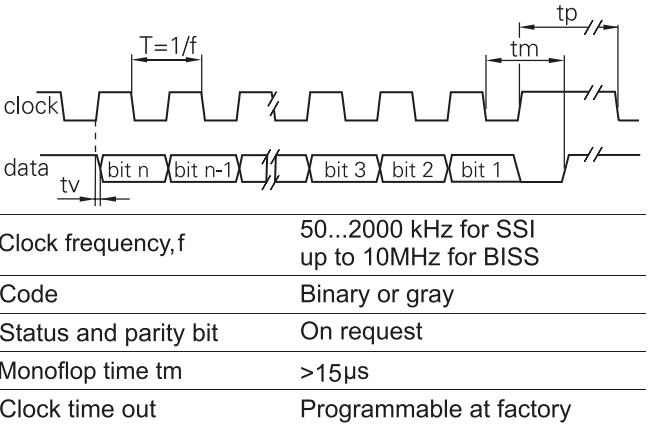
With cover



Without cover



### Pulse Diagram



### Cable / Connector Wiring

| Connector                                | Core colour  | Signals | Description        |
|------------------------------------------|--------------|---------|--------------------|
| Pin 1                                    | blue         | Clock+  | Clock signal       |
| Pin 2                                    | blue-black   | Clock-  | Clock signal       |
| Pin 3                                    | orange       | Data+   | Data signal        |
| Pin 4                                    | orange-black | Data-   | Data signal        |
| Pin 5                                    | gray         | Zero    | Zero setting input |
| Pin 6,7,8,9                              | —            | n.c.    | —                  |
| Pin 10                                   | gray-black   | up/down | direction input    |
| Pin 11                                   | white        | 0 V     | GND                |
| Pin 12                                   | brown        | +Vs     | Supply voltage     |
| Screen: not connected to housing         |              |         |                    |
| Cable data: 4 x 2 x 0.14 mm <sup>2</sup> |              |         |                    |

### Encoder Part Number

