

Absolute encoders

Singleturn 12...19 bit
Multiturn 4...32 bit



FNC AS58H Series



Features

- Encoder single or multiturn SSI/BiSS
- Magnetic or optical sensing
- Optical singleturn resolution: 12...19 bit
- Magnetic singleturn resolution: 9...13 bit
- Multiturn 4...32 bit
- Through hollow shaft
- Permanent check of code continuity
- Extreme resistance to shock and vibration
- Encoder with electronic reset

Technical data-electrical ratings

| | |
|--------------------------|--|
| Voltage supply | 5.5VDC to 30VDC 4.75VDC to 5.5VDC |
| Protection | Output short circuit protection. Reverse polarity protection (except 5V version) |
| Consumption w/o load | ≤50 mA (24 VDC) |
| Interface | SSI or BiSS |
| Resolution (steps/turn) | Magnetic : 13 bit Optic : 19 bit |
| Absolute accuracy | Magnetic: ± 0,1° Optic : ± 0,01° |
| Optoelectronic life time | 100,000 (min) |
| Code | Gray or Binary |
| Inputs | SSI differential clock Direction (only for magnetic) Electronic zero setting |
| Output frequency | up to 2 MHz (SSI) up to 10 MHz (BiSS) |
| Output circuit | SSI data linedriver RS485 |
| Interference immunity | DIN EN 61000-6-2 |
| Emitted interference | DIN EN 61000-6-4 |
| Approval | CE |

Technical data-mechanical ratings

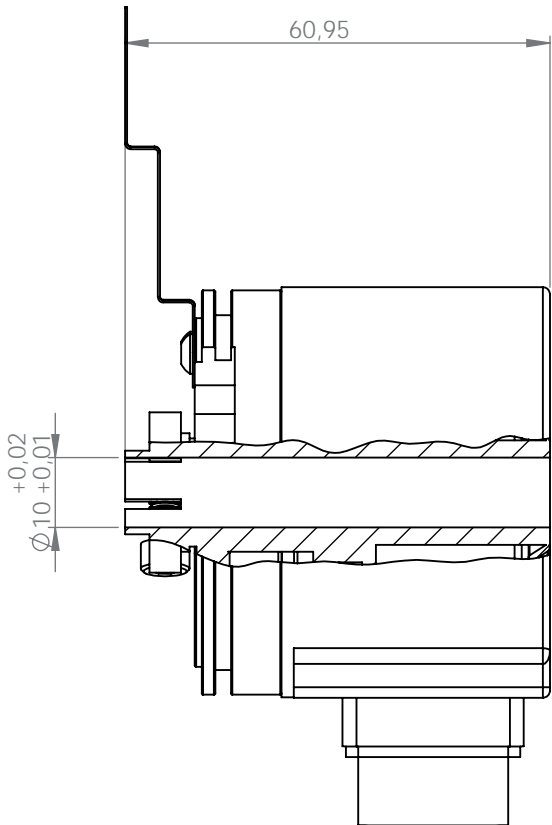
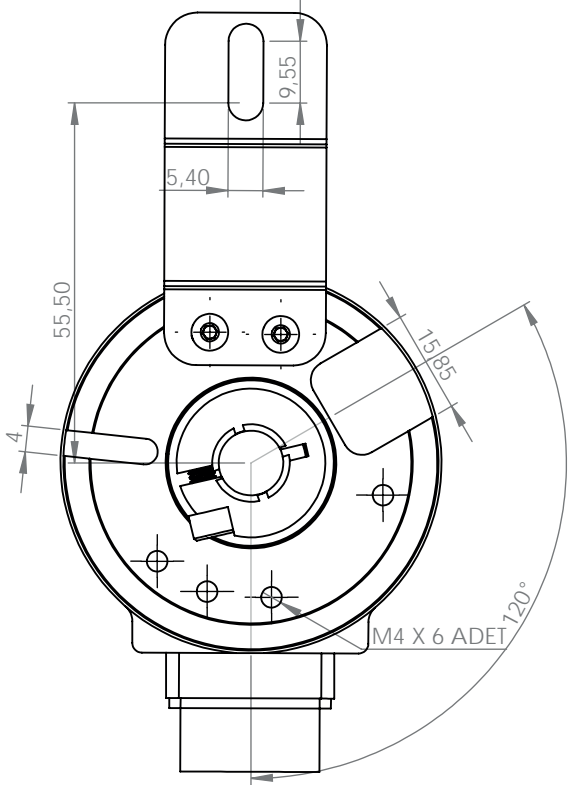
| | |
|-------------------------|--|
| Dimensions (flange) | Ø58 mm |
| Shaft loading | ≤140 N axial ≤240 N radial |
| Protection DIN EN 60529 | IP54, IP65 |
| Operating speed | ≤10,000 rpm |
| Starting torque | ≤0.025 Nm (IP67) |
| Materials | Housing: aluminum Shaft: stainless steel |
| Shaft diameter | 6, 8, 10, 12 mm (other diameters on request) |
| Bearings lifetime | 2x10 ⁹ rev. at 100% of full rated shaft load (minimum) |
| Operating temperature | -40...+110°C |
| Storage temperature | -40°C up to +120°C |
| Weight approx. | 250 g |

Absolute encoders

Mechanical Dimensions

FNC AS58H Series

Mechanical Dimensions




Absolute encoders

Cable / Connector Wiring, Part Number





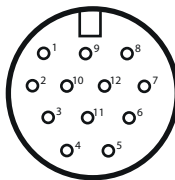
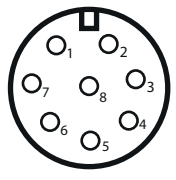
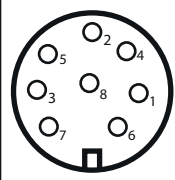
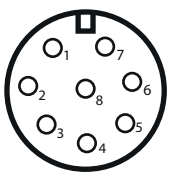


FNC AS58H Series

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 |
| DIRECTION |  Gray-Black | Gri-Siyah | Grau-Schwarz | Серо-черный |
| PRESET |  Gray | Gri | Grau | Серый |
| Shield | Black | Siyah | Schwarz | Чернить |

Connector Connection

| Function | R2312R | R1208 | R1508 | R1608 |
|------------|---|---|---|--|
| +VB | pin 12 | pin 5 | pin 5 | pin 5 |
| GND | pin 11 | pin 6 | pin 6 | pin 6 |
| DATA+ | pin 3 | pin 3 | pin 3 | pin 3 |
| DATA- | pin 4 | pin 4 | pin 4 | pin 4 |
| CLOCK+ | pin 1 | pin 2 | pin 2 | pin 2 |
| CLOCK- | pin 2 | pin 1 | pin 1 | pin 1 |
| DIRECTION | pin 10 | pin 8 | pin 8 | pin 8 |
| PRESET | pin 5 | pin 7 | pin 7 | pin 7 |
| Connector |  |  |  |  |
| Pin Design |  |  |  |  |

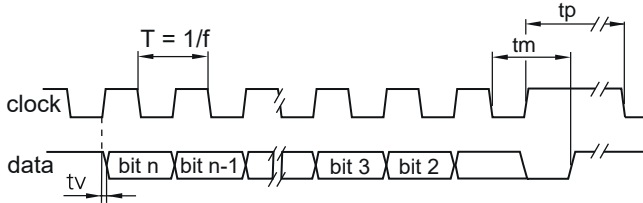
** for other connector options visit www.fenac.com.tr

Absolute encoders

Pulse Diagram, Part Number

FNC AS58H Series

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 t_m | $>15\mu s$ |
| 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. |
| Zero | Input for setting a zero point anywhere within the encoder resolution. The zero setting operation is triggered with Vs. |

Encoder Part Number

