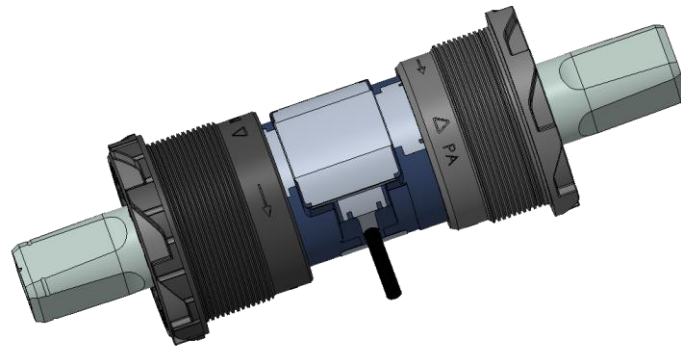


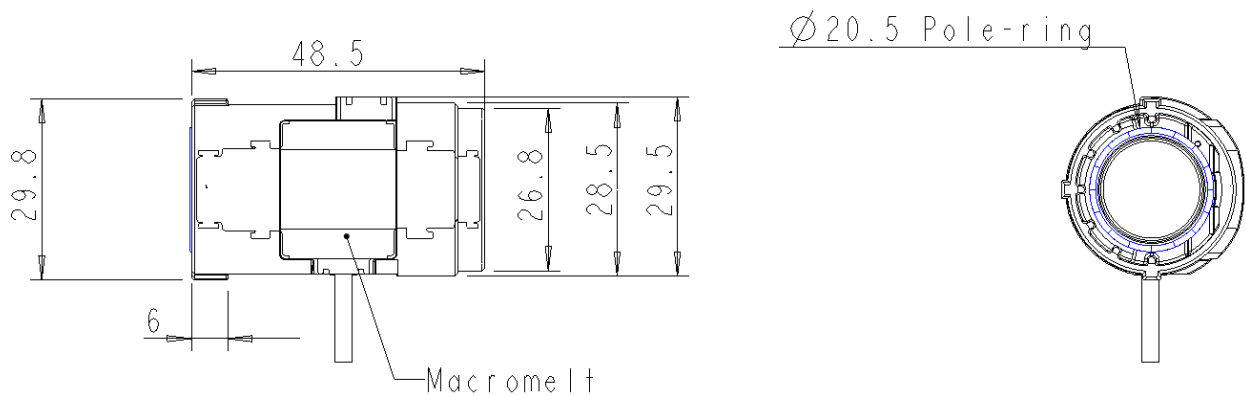
Data Sheet for Bottom Bracket Torque Sensor BBTS100



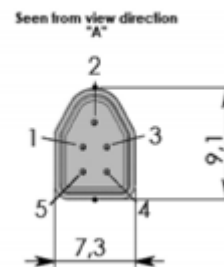
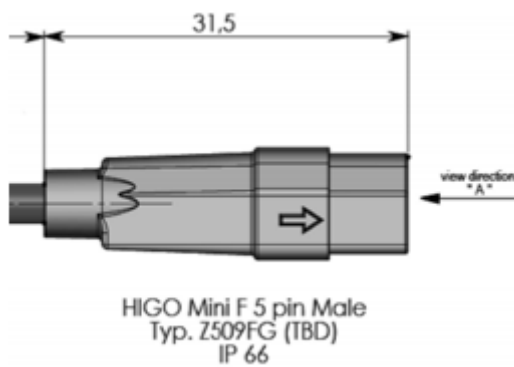
Technical Specification

| Description | Value |
|--------------------------------------------|----------------------------|
| Nominal torque | 100Nm |
| Voltage at zero torque | 2500±20mV |
| Sensitivity | -10mV/Nm |
| Measuring range | +200Nm -200Nm |
| Break in torque | 250Nm |
| Accuracy of signals: Torque | ±2.5% FS |
| Operating temperature | -40 °C to +80 °C |
| PCB nano-coated | |
| Output measurement range (FS) | ±200Nm |
| Maximal mechanical load | 250Nm |
| Rotational signal variation (Peak to Peak) | <±1% of FS |
| Rotational speed | Max: 200 rpm / Min: 60 rpm |

Overall Dimensions (mm):

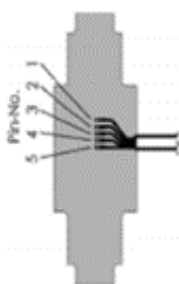


Connector pinout type1:



| Connecting plug, HIGO F 5 pin. Z509FG (TBD), Male, PIN-OUT Table 2 | | |
|--------------------------------------------------------------------------|--------|------------------------------|
| Pin Number | Colour | Function |
| 1 | RED | POWER supply (+) 6 to 16V DC |
| 2 | WHITE | Torque signal |
| 3 | BLUE | Speed 2 |
| 4 | GREEN | Speed 1 |
| 5 | BLACK | Ground (-) |

| CONNECTOR PI PIN-OUT TABLE 2 | | |
|------------------------------|----------|-------|
| PIN NUMBER | FUNCTION | COLOR |
| 1 | OUTA/SCL | GREEN |
| 2 | OUTB/SDA | BLUE |
| 3 | VIN | RED |
| 4 | OUT | WHITE |
| 5 | GND | BLACK |



| Connector PCB PIN-OUT | | |
|-----------------------|--------|---------------|
| Pin Number | Colour | Function |
| 1 | GREEN | Speed 1 |
| 2 | BLUE | Speed 2 |
| 3 | RED | POWER supply |
| 4 | WHITE | Torque signal |
| 5 | BLACK | Ground |

Connector pinout type2:



HIGO Mini B 5 pin Male;
Typ. Z509BG. 80 mm: IPX6

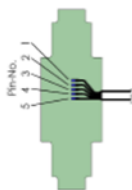
Connecting plug,
HIGO Mini B 5 Pin Male; Typ Z509BG ; 80 mm; IP66
Table 2

| Pin Number | Colour | Function |
|------------|--------|------------------------------|
| 1 | RED | Torque signal |
| 2 | WHITE | POWER supply (+) 6 to 12V DC |
| 3 | BLUE | Speed 2 (cos) |
| 4 | GREEN | Speed 1 (sin) |
| 5 | BLACK | Ground (-) |

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PCB PADS PI PIN-OUT TABLE 4

| PIN NUMBER | FUNCTION | COLOR |
|------------|----------|-------|
| 1 | OUTA/SCL | GREEN |
| 2 | OUTB/SDA | BLUE |
| 3 | VIN | WHITE |
| 4 | OUT | RED |
| 5 | GND | BLACK |

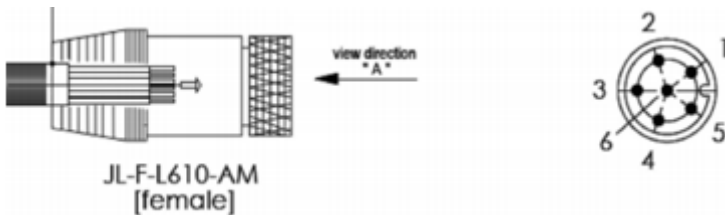


Connector PCB PIN-OUT (Customer No. 100200)

| Pin Number | Colour | Function |
|------------|--------|---------------|
| 1 | GREEN | Speed 1 (sin) |
| 2 | BLUE | Speed 2 (cos) |
| 3 | WHITE | POWER supply |
| 4 | RED | Torque signal |
| 5 | BLACK | Ground (-) |

07.11.2019

Connector pinout type3:



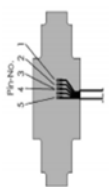
JL-F-L610-AM
[female]

Connecting plug, JL-F-L610-AM, Female, PIN-OUT
Table 2

| Pin Number | Colour | Function |
|------------|--------|---------------------------------|
| 1 | RED | POWER supply (+) 6 to 16V DC |
| 2 | BLACK | Ground (-) |
| 3 | BLUE | Sine signal (Rotation signal) |
| 4 | GREEN | Cosine signal (Rotation signal) |
| 5 | --- | free |
| 6 | WHITE | Torque signal |

CONNECTOR PI PIN-OUT TABLE 2

| PIN NUMBER | FUNCTION | COLOR |
|------------|----------|-------|
| 1 | OUTA/SCL | GREEN |
| 2 | OUTB/SDA | BLUE |
| 3 | VIN | RED |
| 4 | OUT | WHITE |
| 5 | GND | BLACK |



Connector PCB PIN-OUT Table 1

| Pin Number | Colour | Function |
|------------|--------|---------------------------------|
| 1 | GREEN | Cosine signal (Rotation signal) |
| 2 | BLUE | Sine signal (Rotation signal) |
| 3 | RED | POWER supply |
| 4 | WHITE | Torque signal |
| 5 | BLACK | Ground |

| Description | Value |
|---------------------------|--------------------------------|
| Output signal | Positive 4.5V / Negative 0.5 V |
| Output in neutral state | 2.5V |
| Zero offset signal | $\pm 100\text{mV}$ |
| Output signal noise level | 5mV |
| Sensor system frequency | 250Hz |
| Start-up current | <100mA |
| Operating current | <30mA |
| Supply voltage range | 6V - 16V |