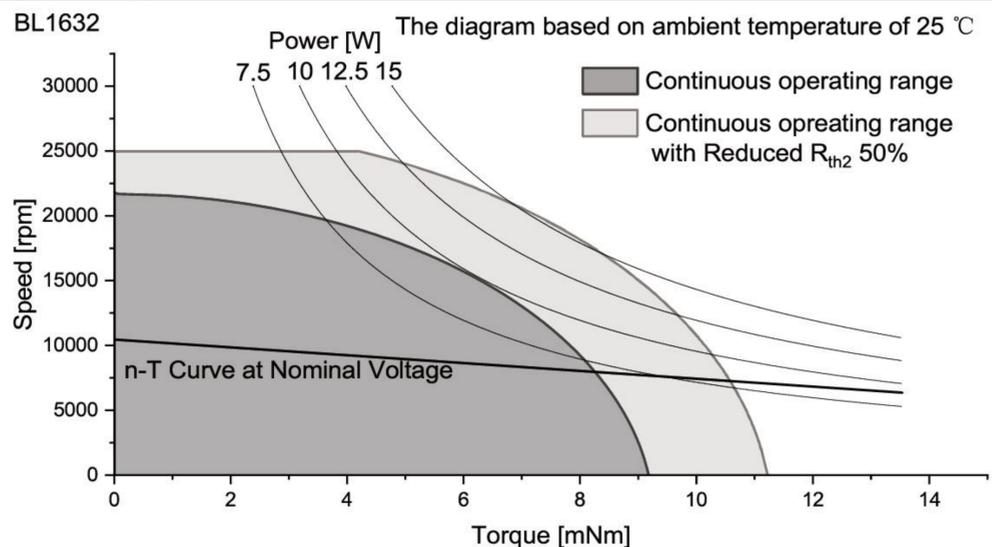


M 1:1.2

| | Sensorless | BL1632L-... | 1210 | 2410 | | | | |
|----------------------------------|--------------------------|------------------|-------|-------|--|--|--|--|
| | With hall sensor | BL1632S-... | | | | | | |
| Motor data | | | | | | | | |
| Values at nominal voltage | | | | | | | | |
| 1 | Nominal voltage | V | 12 | 24 | | | | |
| 2 | No load speed | rpm | 10233 | 10457 | | | | |
| 3 | No load current | mA | 140 | 90 | | | | |
| 4 | Nominal speed | rpm | 8142 | 8424 | | | | |
| 5 | Nominal torque | mNm | 7 | 7 | | | | |
| 6 | Nominal current | A | 0.79 | 0.43 | | | | |
| 7 | Stall torque | mNm | 34.26 | 36.00 | | | | |
| 8 | Stall current | A | 3.33 | 1.82 | | | | |
| 9 | Max. efficiency | % | 63.2 | 60.5 | | | | |
| 10 | Terminal resistance | Ω | 3.6 | 13.2 | | | | |
| 11 | Terminal inductance | mH | 0.39 | 1.52 | | | | |
| 12 | Torque constant | mNm/A | 10.73 | 20.83 | | | | |
| 13 | Speed constant | rpm/V | 890 | 458 | | | | |
| 14 | Speed/torque gradient | rpm/mNm | 299 | 290 | | | | |
| 15 | Mechanical time constant | ms | 1.4 | 1.4 | | | | |
| 16 | Rotor inertia | gcm ² | 0.46 | 0.46 | | | | |

| | | |
|----|--------------------------------------|-----------------------------------|
| 17 | Thermal resistance housing-ambient | 20.7 K/W |
| 18 | Thermal resistance winding-housing | 10.5 K/W |
| 19 | Thermal time constant winding | 8 s |
| 20 | Thermal time constant motor | 268 s |
| 21 | Ambient temperature | -30...+100°C |
| 22 | Max. permissible winding temperature | +150°C |
| 23 | Max. permissible speed | 25000 rpm |
| 24 | Axial play at axial load | <1.8 N 0 mm >1.8 N max. 0.3 mm |
| 25 | Radial play | preloaded |
| 26 | Max. axial load (dynamic) | 1.3 N |
| 27 | Max. force for press fits (static) | 15 N |
| | (static, shaft supported) | 350 N |
| 28 | Max. radial loading, 5mm from flange | 5 N |
| 29 | Number of pole pairs | 2 |
| 30 | Number of phases | 3 |
| 31 | Weight of motor | 25 g |

Operating Range



Connection

| Connection A (Sensor) | | PTFE |
|------------------------------|------------------|--------------|
| Pin 1 | Vhall 3-18 VDC | AWG30 black |
| Pin 2 | Hall sensor HA | AWG30 black |
| Pin 3 | Hall sensor HB | AWG30 black |
| Pin 4 | Hall sensor HC | AWG30 black |
| Pin 5 | GND | AWG30 black |
| Pin 6 | Motor winding MA | AWG30 black |
| Pin 7 | Motor winding MB | AWG30 black |
| Pin 8 | Motor winding MC | AWG30 black |
| Conector | | JST PH2.0-8P |

| Connection B (Sensorless) | | PVC |
|----------------------------------|------------------|--------------|
| Pin 1 | Motor winding MA | AWG26 yellow |
| Pin 2 | Motor winding MB | AWG26 green |
| Pin 3 | Motor winding MC | AWG26 blue |

Configuration

Performance: Customized in the continuous operating range
 Ball bearing: Preload
 Flange: Standard frange front&back/customize the frange
 Shaft: Length/Diameter/Cut face/double shaft/hollow shaft
 Leadwire: PVC/Silicon/Teflon/UL No/Dimension/length
 Connector: JST/MOLEX/TE