Product datasheet Characteristics

BSH1002T32F1A

AC servo motor BSH - 5.5 N.m - 4000 rpm - keyed shaft - with brake - IP65



| Main | | | | | | | |
|---------------------------|--|--|--|--|--|--|--|
| Product or component type | Servo motor | | | | | | |
| Device short name | BSH | | | | | | |
| Maximum mechanical speed | 6000 rpm | | | | | | |
| Continuous stall torque | 5.8 N.m for LXM32.D30M2 at 10 A, 230 V, single phase 5.5 N.m for LXM15LD28M3, 230 V, three phase 5.5 N.m for LXM05AD42M3X, 200240 V, three phase 5.5 N.m for LXM05BD42M3X, 200240 V, three phase 5.5 N.m for LXM05CD42M3X, 200240 V, three phase | | | | | | |
| Peak stall torque | 16.4 N.m for LXM32.D30M2 at 10 A, 230 V, single phase 11.59 N.m for LXM15LD28M3, 230 V, three phase 16 N.m for LXM05AD42M3X, 200240 V, three phase 16 N.m for LXM05BD42M3X, 200240 V, three phase 16 N.m for LXM05CD42M3X, 200240 V, three phase | | | | | | |
| Nominal output power | 1500 W for LXM32.D30M2 at 10 A, 230 V, single phase 1400 W for LXM05AD42M3X, 200240 V, three phase 1400 W for LXM05BD42M3X, 200240 V, three phase 1400 W for LXM05CD42M3X, 200240 V, three phase 1700 W for LXM15LD28M3, 230 V, three phase | | | | | | |
| Nominal torque | 3.7 N.m for LXM32.D30M2 at 10 A, 230 V, single phase 4 N.m for LXM15LD28M3, 230 V, three phase 4.4 N.m for LXM05AD42M3X, 200240 V, three phase 4.4 N.m for LXM05BD42M3X, 200240 V, three phase 4.4 N.m for LXM05CD42M3X, 200240 V, three phase | | | | | | |
| Nominal speed | 4000 rpm for LXM32.D30M2 at 10 A, 230 V, single phase 3000 rpm for LXM05AD42M3X, 200240 V, three phase 3000 rpm for LXM05BD42M3X, 200240 V, three phase 3000 rpm for LXM05CD42M3X, 200240 V, three phase 4000 rpm for LXM15LD28M3, 230 V, three phase | | | | | | |
| Product compatibility | LXM32.D30M2 at 230 V single phase LXM05AD42M3X at 200240 V three phase LXM05BD42M3X at 200240 V three phase LXM05CD42M3X at 200240 V three phase LXM15LD28M3 at 230 V three phase | | | | | | |
| Shaft end | Keyed | | | | | | |
| IP degree of protection | IP65 standard IP67 with IP67 kit | | | | | | |
| Speed feedback resolution | 131072 points/turn x 4096 turns | | | | | | |
| Holding brake | With | | | | | | |
| Mounting support | International standard flange | | | | | | |

| Electrical connection | Straight connectors | | | | | | |
|---------------------------------------|--|--|--|--|--|--|--|
| | | | | | | | |
| Complementary | | | | | | | |
| Range compatibility | Lexium 15 | | | | | | |
| | Lexium 32 Lexium 05 | | | | | | |
| Supply voltage max | 480 V | | | | | | |
| Network number of phases | Three phase | | | | | | |
| Continuous stall current | 9.9 A | | | | | | |
| Maximum continuous power | 2.51 W | | | | | | |
| Maximum current Irms | 31.2 A for LXM15LD28M3 | | | | | | |
| Maxima in carrent inne | 35.4 A for LXM05AD42M3X | | | | | | |
| | 35.4 A for LXM05BD42M3X 35.4 A for LXM05CD42M3X | | | | | | |
| | 30 A for LXM32.D30M2 | | | | | | |
| Maximum permanent current | 35.4 A | | | | | | |
| Switching frequency | 8 kHz | | | | | | |
| Second shaft | Without second shaft end | | | | | | |
| Shaft diameter | 19 mm | | | | | | |
| Shaft length | 40 mm | | | | | | |
| Key width | 30 mm | | | | | | |
| Feedback type | Multiturn SinCos Hiperface | | | | | | |
| Holding torque | 9 N.m holding brake | | | | | | |
| Motor flange size | 100 mm | | | | | | |
| Number of motor stacks | 2 | | | | | | |
| Torque constant | 0.59 N.m/A at 120 °C | | | | | | |
| Back emf constant | 37 V/krpm at 120 °C | | | | | | |
| Number of motor poles | 8 | | | | | | |
| Rotor inertia | 2.928 kg.cm ² | | | | | | |
| Stator resistance | 0.56 Ohm at 20 °C | | | | | | |
| Stator inductance | 3 mH at 20 °C | | | | | | |
| Stator electrical time constant | 5.36 ms at 20 °C | | | | | | |
| Maximum radial force Fr | 620 N at 4000 rpm | | | | | | |
| | 690 N at 3000 rpm 790 N at 2000 rpm | | | | | | |
| | 990 N at 1000 rpm | | | | | | |
| Maximum axial force Fa | 0.2 x Fr | | | | | | |
| Brake pull-in power | 18 W | | | | | | |
| Type of cooling | Natural convection | | | | | | |
| Length | 235.5 mm | | | | | | |
| Centring collar diameter | 95 mm | | | | | | |
| Centring collar depth | 3.5 mm | | | | | | |
| Number of mounting holes | 4 | | | | | | |
| Mounting holes diameter | 9 mm | | | | | | |
| Circle diameter of the mounting holes | 115 mm | | | | | | |
| Product weight | 6.3 kg | | | | | | |
| | | | | | | | |
| Contractual warranty | | | | | | | |
| Warranty | 18 months | | | | | | |

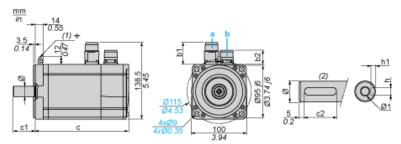
| Warranty | 18 months |
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Product datasheet Dimensions Drawings

BSH1002T32F1A

Servo Motors Dimensions

Example with Straight Connectors



- Power supply for servo motor brake a:
- b: Power supply for servo motor encoder
- (1) (2) Shaft end, keyed slot (optional)

Dimensions in mm

| Straight o | connectors | Rotatable | angled co | c (without bra | c (with bral | c1 | c2 | h | h1 | Ø | Ø1 for screws |
|------------|------------|-----------|-----------|----------------|--------------|----|----|------|----------------------------------|-------|---------------|
| b1 | b2 | b1 | b2 | | | | | | | | |
| 39.5 | 25.5 | 39.5 | 39.5 | 205 | 236 | 40 | 30 | 6 N9 | 3.5 ^{+0.1} ₀ | 19 k6 | M6 x 16 |

Dimensions in in.

| Straight o | connector | Rotatable angled co | | c (without br | c (with brak | c1 | c2 | h | h1 | Ø | Ø1 for screws |
|------------|-----------|---------------------|------|---------------|--------------|------|------|---------|-----------------------------------|---------|---------------|
| b1 | b2 | b1 | b2 | | | | | | | | |
| 1.55 | 1.00 | 1.55 | 1.55 | 8.07 | 9.29 | 1.57 | 1.18 | 0.24 N9 | 0.14 ^{+0.1} ₀ | 0.75 k6 | M6 x 0.63 |

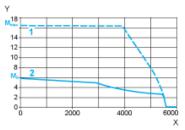
Product datasheet Performance Curves

BSH1002T32F1A

230 V Single-Phase Supply Voltage

Torque/Speed Curves

Servo motor with LXM32•D30M2 servo drive



- X Speed in rpm
- Y Torque in Nm
- 1 Peak torque
- 2 Continuous torque