# Product data sheet

Specifications

Green Premium™

## AC servo motor BSH, Lexium 05, 3.39N.m, 4000rpm, keyed shaft, without brake, IP65

BSH1001T32A1A

Discontinued on: Jun 30, 2023

Discontinued

**Product availability: Non-Stock - Not normally stocked in distribution facility**

## Main

| | |
|---|---|
| **Product Or Component Type** | Servo motor |
| **Device Short Name** | BSH |
| **Maximum Mechanical Speed** | 6000 rpm |
| **Continuous Stall Torque** | 29.21 lbf.in (3.3 N.m) LXM32.D30M2 10 A, 115 V, single phase<br>30.00 lbf.in (3.39 N.m) LXM15LD28M3, 230 V, three phase<br>30.09 lbf.in (3.4 N.m) LXM05AD28F1, 110...120 V, single phase<br>30.09 lbf.in (3.4 N.m) LXM05AD28M2, 200...240 V, single phase<br>30.09 lbf.in (3.4 N.m) LXM05AD42M3X, 200...240 V, three phase<br>30.09 lbf.in (3.4 N.m) LXM05BD28F1, 110...120 V, single phase<br>30.09 lbf.in (3.4 N.m) LXM05BD28M2, 200...240 V, single phase<br>30.09 lbf.in (3.4 N.m) LXM05BD42M3X, 200...240 V, three phase<br>30.09 lbf.in (3.4 N.m) LXM05CD28F1, 110...120 V, single phase<br>30.09 lbf.in (3.4 N.m) LXM05CD28M2, 200...240 V, single phase<br>30.09 lbf.in (3.4 N.m) LXM05CD42M3X, 200...240 V, three phase<br>23.90 lbf.in (2.7 N.m) LXM32.D18M2 6 A, 230 V, single phase |
| **Peak Stall Torque** | 55.76 lbf.in (6.3 N.m) LXM32.D30M2 10 A, 115 V, single phase<br>75.23 lbf.in (8.5 N.m) LXM05AD28F1, 110...120 V, single phase<br>75.23 lbf.in (8.5 N.m) LXM05AD28M2, 200...240 V, single phase<br>75.23 lbf.in (8.5 N.m) LXM05BD28F1, 110...120 V, single phase<br>75.23 lbf.in (8.5 N.m) LXM05BD28M2, 200...240 V, single phase<br>75.23 lbf.in (8.5 N.m) LXM05CD28F1, 110...120 V, single phase<br>75.23 lbf.in (8.5 N.m) LXM05CD28M2, 200...240 V, single phase<br>66.38 lbf.in (7.5 N.m) LXM32.D18M2 6 A, 230 V, single phase<br>75.23 lbf.in (8.5 N.m) LXM15LD28M3, 230 V, three phase<br>75.23 lbf.in (8.5 N.m) LXM05AD42M3X, 200...240 V, three phase<br>75.23 lbf.in (8.5 N.m) LXM05BD42M3X, 200...240 V, three phase<br>75.23 lbf.in (8.5 N.m) LXM05CD42M3X, 200...240 V, three phase |
| **Nominal Output Power** | 700 W LXM32.D30M2 10 A, 115 V, single phase<br>900 W LXM32.D18M2 6 A, 230 V, single phase<br>500 W LXM05AD28F1, 110...120 V, single phase<br>500 W LXM05BD28F1, 110...120 V, single phase<br>500 W LXM05CD28F1, 110...120 V, single phase<br>900 W LXM05AD28M2, 200...240 V, single phase<br>900 W LXM05BD28M2, 200...240 V, single phase<br>900 W LXM05CD28M2, 200...240 V, single phase<br>1150 W LXM15LD28M3, 230 V, three phase<br>900 W LXM05AD42M3X, 200...240 V, three phase<br>900 W LXM05BD42M3X, 200...240 V, three phase<br>900 W LXM05CD42M3X, 200...240 V, three phase |
| **Nominal Torque** | 24.34 lbf.in (2.75 N.m) LXM32.D30M2 10 A, 115 V, single phase<br>25.67 lbf.in (2.9 N.m) LXM05AD28M2, 200...240 V, single phase<br>25.67 lbf.in (2.9 N.m) LXM05BD28M2, 200...240 V, single phase<br>25.67 lbf.in (2.9 N.m) LXM05CD28M2, 200...240 V, single phase<br>27.97 lbf.in (3.16 N.m) LXM05AD28F1, 110...120 V, single phase<br>27.97 lbf.in (3.16 N.m) LXM05BD28F1, 110...120 V, single phase<br>27.97 lbf.in (3.16 N.m) LXM05CD28F1, 110...120 V, single phase<br>19.47 lbf.in (2.2 N.m) LXM32.D18M2 6 A, 230 V, single phase<br>24.34 lbf.in (2.75 N.m) LXM15LD28M3, 230 V, three phase<br>25.67 lbf.in (2.9 N.m) LXM05AD42M3X, 200...240 V, three phase<br>25.67 lbf.in (2.9 N.m) LXM05BD42M3X, 200...240 V, three phase<br>25.67 lbf.in (2.9 N.m) LXM05CD42M3X, 200...240 V, three phase |

Price is “List Price” and may be subject to a trade discount – check with your local distributor or retailer for actual price.

Disclaimer: This documentation is not intended as a substitute for and is not to be used for determining suitability or reliability of these products for specific user applications

| | |
|---|---|
| **Nominal Speed** | 2500 rpm LXM32.D30M2 10 A, 115 V, single phase<br>3000 rpm LXM05AD28M2, 200...240 V, single phase<br>3000 rpm LXM05BD28M2, 200...240 V, single phase<br>3000 rpm LXM05CD28M2, 200...240 V, single phase<br>3000 rpm LXM05AD42M3X, 200...240 V, three phase<br>3000 rpm LXM05BD42M3X, 200...240 V, three phase<br>3000 rpm LXM05CD42M3X, 200...240 V, three phase<br>4000 rpm LXM32.D18M2 6 A, 230 V, single phase<br>1500 rpm LXM05AD28F1, 110...120 V, single phase<br>1500 rpm LXM05BD28F1, 110...120 V, single phase<br>1500 rpm LXM05CD28F1, 110...120 V, single phase<br>4000 rpm LXM15LD28M3, 230 V, three phase |
| **Product Compatibility** | LXM05AD28F1 110...120 V single phase<br>LXM05AD28M2 200...240 V single phase<br>LXM05BD28F1 110...120 V single phase<br>LXM05BD28M2 200...240 V single phase<br>LXM05CD28F1 110...120 V single phase<br>LXM05CD28M2 200...240 V single phase<br>LXM32.D30M2 115 V single phase<br>LXM32.D18M2 230 V single phase<br>LXM05AD42M3X 200...240 V three phase<br>LXM05BD42M3X 200...240 V three phase<br>LXM05CD42M3X 200...240 V three phase<br>LXM15LD28M3 230 V three phase |
| **Shaft End** | Keyed |
| **Ip Degree Of Protection** | IP65 standard<br>IP67 with IP67 kit |
| **Speed Feedback Resolution** | 131072 points/turn x 4096 turns |
| **Holding Brake** | Without |
| **Mounting Support** | International standard flange |
| **Electrical Connection** | Straight connectors |

## Complementary

| | |
|---|---|
| **Range Compatibility** | Lexium 15<br>Lexium 05<br>Lexium 32 |
| **Supply Voltage Max** | 480 V |
| **Phase** | Three phase |
| **Continuous Stall Current** | 7.3 A |
| **Maximum Continuous Power** | 1.6 W |
| **Maximum Current Irms** | 18 A LXM32.D18M2 230 V<br>15 A LXM32.D30M2 115 V<br>23 A LXM15LD28M3<br>25.1 A LXM05AD28F1<br>25.1 A LXM05AD28M2<br>25.1 A LXM05AD42M3X<br>25.1 A LXM05BD28F1<br>25.1 A LXM05BD28M2<br>25.1 A LXM05BD42M3X<br>25.1 A LXM05CD28F1<br>25.1 A LXM05CD28M2<br>25.1 A LXM05CD42M3X |
| **Maximum Permanent Current** | 25.1 A |
| **Switching Frequency** | 8 kHz |
| **Second Shaft** | Without second shaft end |
| **Shaft Diameter** | 0.75 in (19 mm) |
| **Shaft Length** | 1.57 in (40 mm) |
| **Key Width** | 1.18 in (30 mm) |
| **Feedback Type** | Multiturn SinCos Hiperface |

| | |
|---|---|
| **Motor Flange Size** | 3.94 in (100 mm) |
| **Number Of Motor Stacks** | 1 |
| **Torque Constant** | 0.45 N.m/A 248 °F (120 °C) |
| **Back Emf Constant** | 29 V/krpm 248 °F (120 °C) |
| **Number Of Motor Poles** | 8 |
| **Rotor Inertia** | 1.4 kg.cm² |
| **Stator Resistance** | 0.87 Ohm 68 °F (20 °C) |
| **Stator Inductance** | 4 mH 68 °F (20 °C) |
| **Stator Electrical Time Constant** | 4.6 ms 68 °F (20 °C) |
| **Maximum Radial Force Fr** | 530 N 5000 rpm<br>570 N 4000 rpm<br>630 N 3000 rpm<br>720 N 2000 rpm<br>900 N 1000 rpm |
| **Maximum Axial Force Fa** | 0.2 x Fr |
| **Type Of Cooling** | Natural convection |
| **Length** | 6.63 in (168.5 mm) |
| **Centring Collar Diameter** | 3.74 in (95 mm) |
| **Centring Collar Depth** | 0.14 in (3.5 mm) |
| **Number Of Mounting Holes** | 4 |
| **Mounting Holes Diameter** | 0.35 in (9 mm) |
| **Circle Diameter Of The Mounting Holes** | 4.53 in (115 mm) |
| **Net Weight** | 9.26 lb(US) (4.2 kg) |

## Ordering and shipping details

| | |
|---|---|
| **Category** | US1PC5318282 |
| **Discount Schedule** | PC53 |
| **Gtin** | 3389118138735 |
| **Returnability** | No |
| **Country Of Origin** | DE |

## Packing Units

| | |
|---|---|
| **Unit Type Of Package 1** | PCE |
| **Number Of Units In Package 1** | 1 |
| **Package 1 Height** | 6.06 in (15.4 cm) |
| **Package 1 Width** | 6.42 in (16.3 cm) |
| **Package 1 Length** | 16.02 in (40.7 cm) |
| **Package 1 Weight** | 9.48 lb(US) (4.3 kg) |

## Contractual warranty

| | |
|---|---|
| **Warranty** | 18 months |

## Sustainability

**Green Premium™ label** is Schneider Electric's commitment to delivering products with best-in-class environmental performance. Green Premium promises compliance with the latest regulations, transparency on environmental impacts, as well as circular and low-$CO_2$ products.

**Guide to assessing product sustainability** is a white paper that clarifies global eco-label standards and how to interpret environmental declarations.

Learn more about Green Premium >

Guide to assess a product's sustainability >

Transparency RoHS/REACh

## Well-being performance

Mercury Free

| | |
|---|---|
| Rohs Exemption Information | Yes |

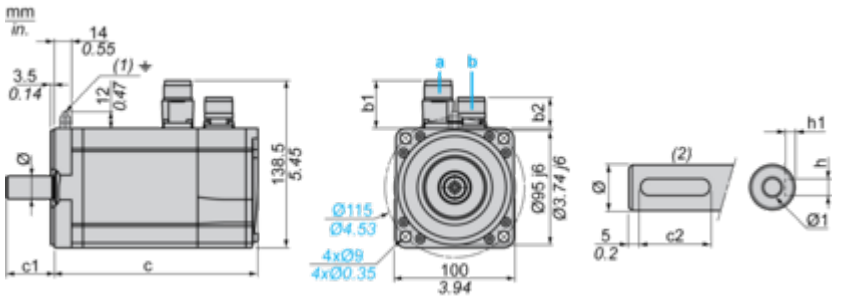
## Certifications & Standards

| | |
|---|---|
| **Reach Regulation** | REACh Declaration |
| **Eu Rohs Directive** | Pro-active compliance (Product out of EU RoHS legal scope) |
| **China Rohs Regulation** | China RoHS declaration |
| **Environmental Disclosure** | Product Environmental Profile |
| **Weee** | The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins. |
| **Circularity Profile** | No need of specific recycling operations |
| **California Proposition 65** | WARNING: This product can expose you to chemicals including: Lead and lead compounds, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov |

## Dimensions Drawings

### Servo Motors Dimensions

#### Example with Straight Connectors




**a:** Power supply for servo motor brake
**b:** Power supply for servo motor encoder
**(1)** M4 screw
**(2)** Shaft end, keyed slot (optional)

Dimensions in mm

| Straight connectors | | Rotatable angled connectors | | c (without brake) | c (with brake) | c1 | c2 | h | h1 | Ø | Ø1 for screws |
|---|---|---|---|---|---|---|---|---|---|---|---|
| b1 | b2 | b1 | b2 | | | | | | | | |
| 39.5 | 25.5 | 39.5 | 39.5 | 169 | 200 | 40 | 30 | 6 N9 | $3.5^{+0.1}_{0}$ | 19 k6 | M6 x 16 |

Dimensions in in.

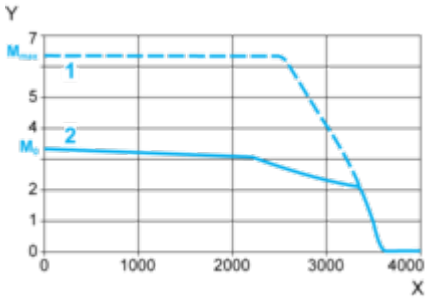
| Straight connectors | | Rotatable angled connectors | | c (without brake) | c (with brake) | c1 | c2 | h | h1 | Ø | Ø1 for screws |
|---|---|---|---|---|---|---|---|---|---|---|---|
| b1 | b2 | b1 | b2 | | | | | | | | |
| 1.55 | 1.00 | 1.55 | 1.55 | 6.65 | 7.87 | 1.57 | 1.18 | 0.24 N9 | $0.14^{+0.1}_{0}$ | 0.75 k6 | M6 x 0.63 |

## Performance Curves

### 115 V Single-Phase Supply Voltage

### Torque/Speed Curves

**Servo motor with LXM32•D30M2 servo drive**

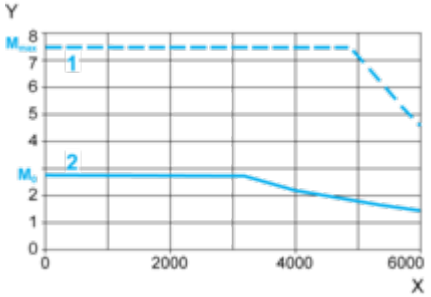



**X** Speed in rpm
**Y** Torque in Nm
**1** Peak torque
**2** Continuous torque

## 230 V Single-Phase Supply Voltage

### Torque/Speed Curves

**Servo motor with LXM32•D18M2 servo drive**




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