

# Product data sheet

Specifications



AC servo motor BSH, Lexium 05,  
3.39N.m, 4000rpm, keyed shaft,  
without brake, IP50

BSH1001T11A2A

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

Price\*: 1,920.00 USD

## Main

|                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|---------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Device short name         | BSH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Product or Component Type | Servo motor                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Maximum mechanical speed  | 6000 rpm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Continuous stall torque   | 29.2 lbf.in (3.3 N.m) LXM32.D30M2 10 A, 115 V, single phase<br>30.004 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>23.9 lbf.in (2.7 N.m) LXM32.D18M2 6 A, 230 V, single phase |
| Peak stall torque         | 55.8 lbf.in (6.3 N.m) LXM32.D30M2 10 A, 115 V, single phase<br>75.2 lbf.in (8.5 N.m) LXM05AD28F1, 110...120 V, single phase<br>75.2 lbf.in (8.5 N.m) LXM05AD28M2, 200...240 V, single phase<br>75.2 lbf.in (8.5 N.m) LXM05BD28F1, 110...120 V, single phase<br>75.2 lbf.in (8.5 N.m) LXM05BD28M2, 200...240 V, single phase<br>75.2 lbf.in (8.5 N.m) LXM05CD28F1, 110...120 V, single phase<br>75.2 lbf.in (8.5 N.m) LXM05CD28M2, 200...240 V, single phase<br>66.4 lbf.in (7.5 N.m) LXM32.D18M2 6 A, 230 V, single phase<br>75.2 lbf.in (8.5 N.m) LXM15LD28M3, 230 V, three phase<br>75.2 lbf.in (8.5 N.m) LXM05AD42M3X, 200...240 V, three phase<br>75.2 lbf.in (8.5 N.m) LXM05BD42M3X, 200...240 V, three phase<br>75.2 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>25.7 lbf.in (2.9 N.m) LXM05AD28M2, 200...240 V, single phase<br>25.7 lbf.in (2.9 N.m) LXM05BD28M2, 200...240 V, single phase<br>25.7 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>19.5 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>25.7 lbf.in (2.9 N.m) LXM05AD42M3X, 200...240 V, three phase<br>25.7 lbf.in (2.9 N.m) LXM05BD42M3X, 200...240 V, three phase<br>25.7 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   | IP50 standard                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Speed feedback resolution | 131072 points/turn                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Holding brake             | Without                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Mounting Support          | International standard flange                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Electrical Connection     | Rotatable right-angled connectors                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

## Complementary

|                           |                                                                                                                                                                                                                                                                               |
|---------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Range Compatibility       | Lexium 05<br>Lexium 15<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            | 0.7 in (19 mm)                                                                                                                                                                                                                                                                |
| Shaft length              | 1.6 in (40 mm)                                                                                                                                                                                                                                                                |
| Key width                 | 1.2 in (30 mm)                                                                                                                                                                                                                                                                |
| Feedback type             | Single turn SinCos Hiperface                                                                                                                                                                                                                                                  |

|                                       |                                                                                        |
|---------------------------------------|----------------------------------------------------------------------------------------|
| Motor flange size                     | 3.9 in (100 mm)                                                                        |
| Number of motor stacks                | 1                                                                                      |
| Torque constant                       | 0.45 N.m/A 248.0000000000 °F (120 °C)                                                  |
| Back emf constant                     | 29 V/krpm 248.0000000000 °F (120 °C)                                                   |
| Number of motor poles                 | 8                                                                                      |
| Rotor inertia                         | 1.4 kg.cm²                                                                             |
| Stator resistance                     | 0.87 Ohm 68.0000000000 °F (20 °C)                                                      |
| Stator inductance                     | 4 mH 68.0000000000 °F (20 °C)                                                          |
| Stator electrical time constant       | 4.6 ms 68.0000000000 °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                                | 6.6 in (168.5 mm)                                                                      |
| Centring collar diameter              | 3.7 in (95 mm)                                                                         |
| Centring collar depth                 | 0.1 in (3.5 mm)                                                                        |
| Number of mounting holes              | 4                                                                                      |
| Mounting holes diameter               | 0.4 in (9 mm)                                                                          |
| Circle diameter of the mounting holes | 4.5 in (115 mm)                                                                        |
| Net Weight                            | 9.3 lb(US) (4.2 kg)                                                                    |

## Ordering and shipping details

|                   |               |
|-------------------|---------------|
| Category          | US1PC5318282  |
| Discount Schedule | PC53          |
| GTIN              | 3389118138520 |
| 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              | 6.4 in (16.3 cm)    |
| Package 1 Length             | 16.02 in (40.7 cm)  |
| Package 1 Weight             | 9.5 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<sub>2</sub> 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 |
| ✓ | Pvc Free                   |     |

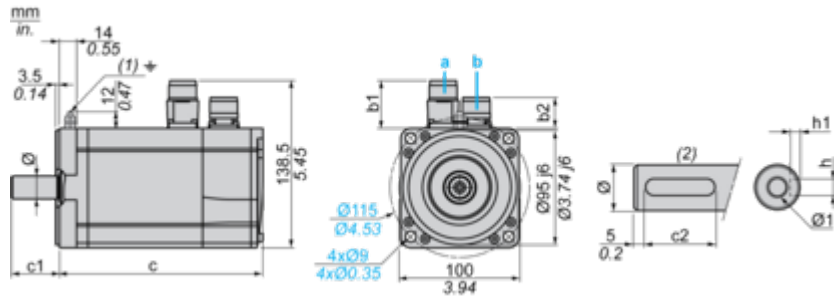
Certifications & Standards

|                           |                                                                                                                                                                                                                                                                 |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Reach Regulation          | <a href="#">REACH Declaration</a>                                                                                                                                                                                                                               |
| Eu Rohs Directive         | Pro-active compliance (Product out of EU RoHS legal scope)                                                                                                                                                                                                      |
| China Rohs Regulation     | <a href="#">China RoHS declaration</a>                                                                                                                                                                                                                          |
| Environmental Disclosure  | <a href="#">Product Environmental Profile</a>                                                                                                                                                                                                                   |
| 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 <a href="#">www.P65Warnings.ca.gov</a> |

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 <sup>+0.1</sup> <sub>0</sub> | 19 k6 | M6 x 16       |

Dimensions in in.

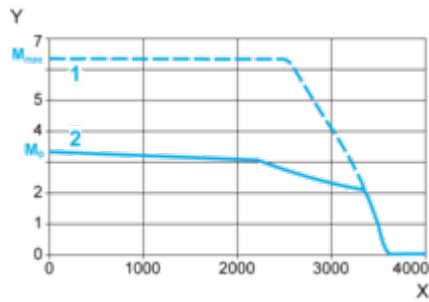
| Straight connectors |      | Rotatable angled connectors |      | c (without brake) | c (with brake) | c1   | c2   | h       | h1                                | Ø       | Ø1 for screws |
|---------------------|------|-----------------------------|------|-------------------|----------------|------|------|---------|-----------------------------------|---------|---------------|
| 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 <sup>+0.1</sup> <sub>0</sub> | 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

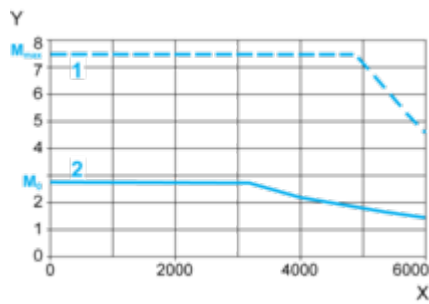


- X Speed in rpm
- Y Torque in Nm
- 1 Peak torque
- 2 Continuous torque

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