# Product data sheet

Specifications





# AC servo motor BSH, Lexium 05, 2.83N.m, 6000rpm, keyed shaft, with brake, IP50

BSH0703T11F2A

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

## Price\*: 3,330.00 USD

## Main

| Device short name         | BSH  |
|---------------------------|--|
| Product or Component Type | Servo motor  |
| Maximum mechanical speed  | 8000 rpm   |
| Continuous stall torque   | 24.8 lbf.in (2.8 N.m) LXM05AD28M2, 200240 V, single phase<br>24.8 lbf.in (2.8 N.m) LXM05BD28M2, 200240 V, single phase<br>24.8 lbf.in (2.8 N.m) LXM05CD28M2, 200240 V, single phase<br>23.01 lbf.in (2.6 N.m) LXM32.D18M2 6 A, 230 V, single phase<br>25.05 lbf.in (2.83 N.m) LXM15LD28M3, 230 V, three phase<br>24.8 lbf.in (2.8 N.m) LXM05AD28F1, 110120 V, single phase<br>24.8 lbf.in (2.8 N.m) LXM05AD28F1, 110120 V, single phase<br>24.8 lbf.in (2.8 N.m) LXM05AD28F1, 110120 V, single phase<br>24.8 lbf.in (2.8 N.m) LXM05BD28F1, 110120 V, single phase<br>24.8 lbf.in (2.8 N.m) LXM05BD28F1, 110120 V, single phase<br>24.8 lbf.in (2.8 N.m) LXM05BD42M3X, 200240 V, three phase<br>24.8 lbf.in (2.8 N.m) LXM05CD28F1, 110120 V, single phase<br>24.8 lbf.in (2.8 N.m) LXM05CD28F1, 110120 V, single phase<br>24.8 lbf.in (2.8 N.m) LXM05CD28F1, 110120 V, single phase |
| Peak stall torque         | 65.32 lbf.in (7.38 N.m) LXM05AD28F1, 110120 V, single phase<br>65.32 lbf.in (7.38 N.m) LXM05AD28M2, 200240 V, single phase<br>65.32 lbf.in (7.38 N.m) LXM05BD28H2, 100120 V, single phase<br>65.32 lbf.in (7.38 N.m) LXM05BD28M2, 200240 V, single phase<br>65.32 lbf.in (7.38 N.m) LXM05CD28F1, 110120 V, single phase<br>65.32 lbf.in (7.38 N.m) LXM05CD28H2, 200240 V, single phase<br>65.32 lbf.in (7.4 N.m) LXM05CD28M2, 200240 V, single phase<br>65.32 lbf.in (7.4 N.m) LXM32.D18M2 6 A, 230 V, single phase<br>65.32 lbf.in (7.38 N.m) LXM05AD42M3X, 200240 V, three phase<br>90.72 lbf.in (10.25 N.m) LXM05BD42M3X, 200240 V, three phase<br>90.72 lbf.in (10.25 N.m) LXM05DD42M3X, 200240 V, three phase<br>90.72 lbf.in (10.25 N.m) LXM05DD42M3X, 200240 V, three phase   |
| Nominal output power      | 750 W LXM05AD28M2, 200240 V, single phase<br>750 W LXM05BD28M2, 200240 V, single phase<br>750 W LXM05CD28M2, 200240 V, single phase<br>750 W LXM05CD28F1, 110120 V, single phase<br>750 W LXM05BD28F1, 110120 V, single phase<br>750 W LXM05CD28F1, 110120 V, single phase<br>900 W LXM32.D18M2 6 A, 230 V, single phase<br>1250 W LXM15LD28M3, 230 V, three phase<br>750 W LXM05AD42M3X, 200240 V, three phase<br>750 W LXM05BD42M3X, 200240 V, three phase<br>750 W LXM05CD42M3X, 200240 V, three phase  |
| Nominal torque            | 21.2 lbf.in (2.4 N.m) LXM05AD28M2, 200240 V, single phase<br>21.2 lbf.in (2.4 N.m) LXM05BD28M2, 200240 V, single phase<br>21.2 lbf.in (2.4 N.m) LXM05CD28M2, 200240 V, single phase<br>21.2 lbf.in (2.4 N.m) LXM05AD28F1, 110120 V, single phase<br>21.2 lbf.in (2.4 N.m) LXM05D28F1, 110120 V, single phase<br>21.2 lbf.in (2.1 N.m) LXM32.D18M2 6 A, 230 V, single phase<br>21.2 lbf.in (2.4 N.m) LXM05D28M3, 230 V, three phase<br>21.2 lbf.in (2.4 N.m) LXM05DD42M3X, 200240 V, three phase<br>21.2 lbf.in (2.4 N.m) LXM05DD42M3X, 200240 V, three phase<br>21.2 lbf.in (2.4 N.m) LXM05DD42M3X, 200240 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.

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| Nominal speed             | 3000 rpm LXM05AD28M2, 200240 V, single phase<br>3000 rpm LXM05BD28M2, 200240 V, single phase<br>3000 rpm LXM05CD28M2, 200240 V, single phase<br>3000 rpm LXM05AD42M3X, 200240 V, three phase<br>3000 rpm LXM05BD42M3X, 200240 V, three phase<br>3000 rpm LXM05CD42M3X, 200240 V, three phase<br>3000 rpm LXM05CD42M3X, 200240 V, three phase<br>3000 rpm LXM05D28F1, 110120 V, single phase<br>3000 rpm LXM05D28F1, 110120 V, single phase<br>3000 rpm LXM05CD28F1, 110120 V, single phase<br>4000 rpm LXM05CD28F1, 200 V, single phase<br>4000 rpm LXM05CD28F1, 200 V, single phase<br>6000 rpm LXM15LD28M3, 200 V, three phase |
|---------------------------|--|
| Product compatibility     | LXM05AD28F1 110120 V single phase<br>LXM05AD28M2 200240 V single phase<br>LXM05BD28F1 110120 V single phase<br>LXM05BD28M2 200240 V single phase<br>LXM05CD28F1 110120 V single phase<br>LXM05CD28M2 200240 V single phase<br>LXM05CD28M2 200240 V single phase<br>LXM05AD42M3X 200240 V three phase<br>LXM05BD42M3X 200240 V three phase<br>LXM05CD42M3X 200240 V three phase<br>LXM05CD42M3X 200240 V three phase<br>LXM05CD42M3X 200240 V three phase<br>LXM05CD42M3X 200240 V three phase  |
| Shaft end                 | Keyed  |
| IP Degree of Protection   | IP50 standard  |
| Speed feedback resolution | 131072 points/turn   |
| Holding brake             | With   |
| Mounting Support          | International standard flange  |
| Electrical Connection     | Rotatable right-angled connectors  |

# Complementary

| <u> </u>                  |   |  |  |  |  |  |  |  |
|---------------------------|---|--|--|--|--|--|--|--|
| Range Compatibility       | Lexium 32                                 |  |  |  |  |  |  |  |
|                           | Lexium 05                                 |  |  |  |  |  |  |  |
|                           | Lexium 15                                 |  |  |  |  |  |  |  |
|                           |   |  |  |  |  |  |  |  |
| supply voltage max        | 480 V                                     |  |  |  |  |  |  |  |
| Phase                     | Three phase                               |  |  |  |  |  |  |  |
| Continuous stall current  | 7 A                                       |  |  |  |  |  |  |  |
| maximum continuous power  | 1.7 W                                     |  |  |  |  |  |  |  |
| Maximum current Irms      | 18 A LXM32.D18M2                          |  |  |  |  |  |  |  |
|                           | 30.9 A LXM15LD28M3                        |  |  |  |  |  |  |  |
|                           | 29.2 A LXM05AD28F1                        |  |  |  |  |  |  |  |
|                           | 29.2 A LXM05AD28M2                        |  |  |  |  |  |  |  |
|                           | 29.2 A LXM05AD42M3X                       |  |  |  |  |  |  |  |
|                           | 29.2 A LXM05BD28F1                        |  |  |  |  |  |  |  |
|                           | 29.2 A LXM05BD28M2                        |  |  |  |  |  |  |  |
|                           | 29.2 A LXM05BD42M3X                       |  |  |  |  |  |  |  |
|                           | 29.2 A LXM05CD28F1                        |  |  |  |  |  |  |  |
|                           | 29.2 A LXM050D201 1<br>29.2 A LXM05CD28M2 |  |  |  |  |  |  |  |
|                           | 29.2 A LXM05CD42M3Z                       |  |  |  |  |  |  |  |
|                           | 29.2 A LANIUSCD421015A                    |  |  |  |  |  |  |  |
| Maximum permanent current | 29.2 A                                    |  |  |  |  |  |  |  |
| Switching frequency       | 8 kHz                                     |  |  |  |  |  |  |  |
| Second shaft              | Without second shaft end                  |  |  |  |  |  |  |  |
| Shaft diameter            | 0.6 in (14 mm)                            |  |  |  |  |  |  |  |
| Shaft length              | 1.2 in (30 mm)                            |  |  |  |  |  |  |  |
| Key width                 | 0.8 in (20 mm)                            |  |  |  |  |  |  |  |
| Feedback type             | Single turn SinCos Hiperface              |  |  |  |  |  |  |  |
| Holding torque            | 26.6 lbf.in (3 N.m) holding brake         |  |  |  |  |  |  |  |
| Motor flange size         | 2.8 in (70 mm)                            |  |  |  |  |  |  |  |

| Number of motor stacks                | 3  |
|---------------------------------------|--|
| Torque constant                       | 0.44 N.m/A 248 °F (120 °C)   |
| Back emf constant                     | 29 V/krpm 248 °F (120 °C)  |
| Number of motor poles                 | 6  |
| Rotor inertia                         | 0.81 kg.cm <sup>2</sup>  |
| Stator resistance                     | 0.91 Ohm 68 °F (20 °C)   |
| Stator inductance                     | 4.4 mH 68 °F (20 °C)   |
| Stator electrical time constant       | 4.84 ms 68 °F (20 °C)  |
| Maximum radial force Fr               | 400 N 6000 rpm<br>430 N 5000 rpm<br>460 N 4000 rpm<br>510 N 3000 rpm<br>580 N 2000 rpm<br>730 N 1000 rpm |
| Maximum axial force Fa                | 0.2 x Fr   |
| Brake pull-in power                   | 12 W   |
| Type of cooling                       | Natural convection   |
| Length                                | 10.000000000 in (254 mm)   |
| Centring collar diameter              | 2.4 in (60 mm)   |
| Centring collar depth                 | 0.10 in (2.5 mm)   |
| Number of mounting holes              | 4  |
| Mounting holes diameter               | 0.2 in (5.5 mm)  |
| Circle diameter of the mounting holes | 3.2 in (82 mm)   |
| Net Weight                            | 8.4 lb(US) (3.8 kg)  |
|                                       |  |

# Ordering and shipping details

| Category          | US1PC5318282  |
|-------------------|---------------|
| Discount Schedule | PC53          |
| GTIN              | 3389118137554 |
| Returnability     | No            |
| Country of origin | DE            |

# **Packing Units**

| Unit Type of Package 1       | PCE                   |
|------------------------------|-----------------------|
| Number of Units in Package 1 | 1                     |
| Package 1 Height             | 4.8 in (12.3 cm)      |
| Package 1 Width              | 5.04 in (12.8 cm)     |
| Package 1 Length             | 14.8 in (37.7 cm)     |
| Package 1 Weight             | 8.93 lb(US) (4.05 kg) |

## **Contractual warranty**

Warranty

18 months

# Sustainability Screen Premium

**Green Premium<sup>TM</sup> label** is Schneider Electric's commitment to delivering products with best-inclass 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.

Yes

Learn more about Green Premium >

Guide to assess a product's sustainability >



Transparency RoHS/REACh

## Well-being performance



Rohs Exemption Information

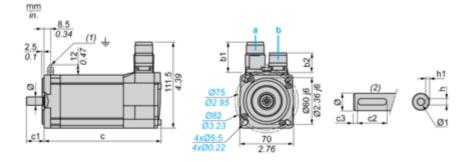
## **Certifications & Standards**

| 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<br>compounds, which is known to the State of California to cause cancer and birth<br>defects or other reproductive harm. For more information go to<br>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 Rotatable angled connectors connectors |      | •    | c (without | c (with | c1     | c2 | c3 | h | h1      | ø                   | Ø1 for   |              |
|---|------|------|------------|---------|--------|----|----|---|---------|---------------------|----------|--------------|
| b1  | b2   | b1   | b2         | brake)  | brake) |    |    |   |         |                     |          | screws       |
| 39.5  | 25.5 | 39.5 | 39.5       | 220     | 254    | 30 | 20 | 5 | 5<br>N9 | 3 <sup>+0.1</sup> 0 | 14<br>k6 | M5 x<br>12.5 |

Dimensions in in.

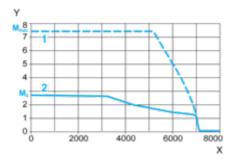
| Straigh<br>conneo | ctors | Rotatal<br>angled<br>connec | tors | c<br>(without<br>brake) | c (with<br>brake) | c1   | c2   | c3   | h          | h1                       | ø          | Ø1 for<br>screws |
|-------------------|-------|-----------------------------|------|-------------------------|-------------------|------|------|------|------------|--------------------------|------------|------------------|
| b1                | b2    | b1                          | b2   | ,                       |                   |      |      |      |            |                          |            |                  |
| 1.55              | 1.00  | 1.55                        | 1.55 | 8.66                    | 10.00             | 1.18 | 0.78 | 0.19 | 0.20<br>N9 | 0.12 <sup>+0.004</sup> 0 | 0.55<br>k6 | M5 x<br>0.49     |

#### Performance Curves

### 230 V Single-Phase Supply Voltage

#### **Torque/Speed Curves**

Servo motor with LXM32•D18M2 servo drive



 ${\bf X}$  Speed in rpm

Y Torque in Nm

1 Peak torque

2 Continuous torque