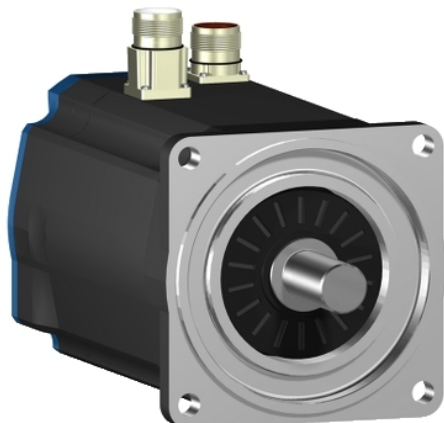


# BSH1001T12F1A

AC servo motor BSH - 3.39 N.m - 4000 rpm -  
keyed shaft - with brake - IP50



## 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                                                                                                                                                                                                             |

The information provided in this documentation contains general descriptions and/or technical characteristics of the performance of the products contained herein. 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. It is the duty of any such user or integrator to perform the appropriate and complete risk analysis, evaluation and testing of the products with respect to the relevant specific application or use thereof. Neither Schneider Electric Industries SAS nor any of its affiliates or subsidiaries shall be responsible or liable for misuse of the information contained herein.

|                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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 |
| 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 x 4096 turns                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Holding brake             | With                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Mounting support          | International standard flange                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Electrical connection     | Straight connectors                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

## Complementary

|                          |                                     |
|--------------------------|-------------------------------------|
| Range compatibility      | Lexium 32<br>Lexium 05<br>Lexium 15 |
| 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                                                                                                                                                                                                                                                    |
| Holding torque                        | 79.66 lbf.in (9 N.m) holding brake                                                                                                                                                                                                                                            |
| 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                         | 2.018 kg.cm <sup>2</sup>                                                                                                                                                                                                                                                      |
| 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                                                                                                                                                                                                                                                                      |
| Brake pull-in power                   | 18 W                                                                                                                                                                                                                                                                          |
| Type of cooling                       | Natural convection                                                                                                                                                                                                                                                            |
| Length                                | 7.85 in (199.5 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                            | 10.58 lb(US) (4.8 kg)                                                                                                                                                                                                                                                         |

### Ordering and shipping details

|                       |                          |
|-----------------------|--------------------------|
| Category              | 18282 - LEXIUM 32 MOTORS |
| Discount Schedule     | PC53                     |
| GTIN                  | 03389118138575           |
| Nbr. of units in pkg. | 1                        |
| Package weight(Lbs)   | 10.9 lb(US) (4.94 kg)    |
| Returnability         | No                       |
| Country of origin     | DE                       |

### Packing Units

|                        |                    |
|------------------------|--------------------|
| Unit Type of Package 1 | PCE                |
| 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) |

Contractual warranty

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

## 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       |

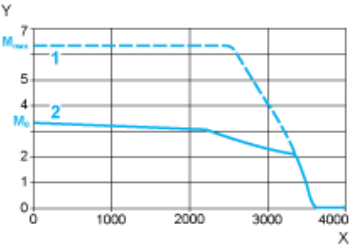
Dimensions in in.

| 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     |

115 V Single-Phase Supply Voltage

Torque/Speed Curves

Servo motor with LXM32•D30M2 servo drive

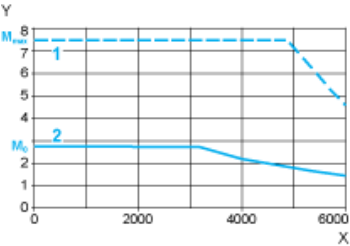


- X Speed in rpm  
Y Torque in Nm  
1 Peak torque  
2 Continuous torque

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