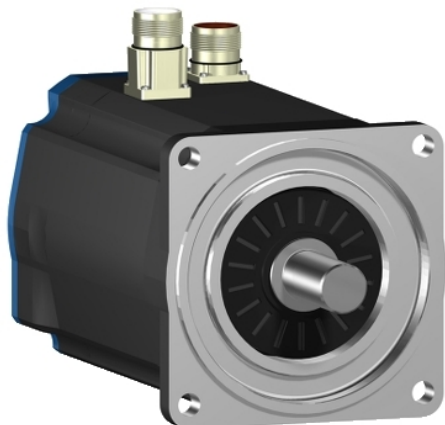


# BSH1001P12F1A

servo motor BSH, Lexium 05, 2.7N.m,  
3000rpm, 100mm, keyed shaft, Sincos multi  
turn, with brake, IP50, straight





## Main

|                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|---------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product or Component Type | Servo motor                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Device short name         | BSH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Maximum mechanical speed  | 6000 rpm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Continuous stall torque   | 30.00 Lbf.In (3.39 N.m) LXM15LD21M3, 230 V, single phase<br>23.90 Lbf.In (2.7 N.m) LXM15LD10N4, 230 V, three phase<br>30.00 Lbf.In (3.39 N.m) LXM15LD10N4, 400 V, three phase<br>30.00 Lbf.In (3.39 N.m) LXM15LD10N4, 480 V, three phase<br>30.00 Lbf.In (3.39 N.m) LXM15LD21M3, 230 V, three phase<br>30.00 Lbf.In (3.39 N.m) LXM15LD17N4, 230 V, three phase<br>30.00 Lbf.In (3.39 N.m) LXM15LD17N4, 400 V, three phase<br>30.00 Lbf.In (3.39 N.m) LXM15LD17N4, 480 V, three phase<br>30.09 Lbf.In (3.4 N.m) LXM05AD17M3X, 200...240 V, three phase<br>30.09 Lbf.In (3.4 N.m) LXM05AD22N4, 380...480 V, three phase<br>30.09 Lbf.In (3.4 N.m) LXM05BD17M3X, 200...240 V, three phase<br>30.09 Lbf.In (3.4 N.m) LXM05BD22N4, 380...480 V, three phase<br>30.09 Lbf.In (3.4 N.m) LXM05CD17M3X, 200...240 V, three phase<br>30.09 Lbf.In (3.4 N.m) LXM05CD22N4, 380...480 V, three phase<br>29.21 Lbf.In (3.3 N.m) LXM32.D18N4 6 A, 400 V, three phase<br>29.21 lbf.in (3.3 N.m) LXM32.D18N4 6 A, 480 V, three phase  |
| Peak stall torque         | 62.66 Lbf.In (7.08 N.m) LXM15LD21M3, 230 V, single phase<br>54.79 Lbf.In (6.19 N.m) LXM15LD10N4, 230 V, three phase<br>54.79 Lbf.In (6.19 N.m) LXM15LD10N4, 400 V, three phase<br>54.79 Lbf.In (6.19 N.m) LXM15LD10N4, 480 V, three phase<br>62.66 Lbf.In (7.08 N.m) LXM15LD21M3, 230 V, three phase<br>62.66 Lbf.In (7.08 N.m) LXM15LD17N4, 230 V, three phase<br>62.66 Lbf.In (7.08 N.m) LXM15LD17N4, 400 V, three phase<br>62.66 Lbf.In (7.08 N.m) LXM15LD17N4, 480 V, three phase<br>62.84 Lbf.In (7.1 N.m) LXM05AD17M3X, 200...240 V, three phase<br>62.84 Lbf.In (7.1 N.m) LXM05AD22N4, 380...480 V, three phase<br>62.84 Lbf.In (7.1 N.m) LXM05BD17M3X, 200...240 V, three phase<br>62.84 Lbf.In (7.1 N.m) LXM05BD22N4, 380...480 V, three phase<br>62.84 Lbf.In (7.1 N.m) LXM05CD17M3X, 200...240 V, three phase<br>62.84 Lbf.In (7.1 N.m) LXM05CD22N4, 380...480 V, three phase<br>84.97 Lbf.In (9.6 N.m) LXM32.D18N4 6 A, 400 V, three phase<br>84.97 lbf.in (9.6 N.m) LXM32.D18N4 6 A, 480 V, three phase |

|                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Nominal output power | 1300 W LXM15LD17N4, 400 V, three phase<br>1500 W LXM15LD10N4, 480 V, three phase<br>950 W LXM15LD21M3, 230 V, single phase<br>1300 W LXM15LD10N4, 400 V, three phase<br>1500 W LXM15LD17N4, 480 V, three phase<br>500 W LXM05AD17M3X, 200...240 V, three phase<br>500 W LXM05BD17M3X, 200...240 V, three phase<br>500 W LXM05CD17M3X, 200...240 V, three phase<br>850 W LXM15LD10N4, 230 V, three phase<br>900 W LXM05AD22N4, 380...480 V, three phase<br>900 W LXM05BD22N4, 380...480 V, three phase<br>900 W LXM05CD22N4, 380...480 V, three phase<br>950 W LXM15LD17N4, 230 V, three phase<br>950 W LXM15LD21M3, 230 V, three phase<br>1100 W LXM32.D18N4 6 A, 400 V, three phase<br>1100 W LXM32.D18N4 6 A, 480 V, three phase                                                                                                                                                                                                                                                                           |
| Nominal torque       | 26.55 Lbf.In (3 N.m) LXM15LD21M3, 230 V, single phase<br>22.13 Lbf.In (2.5 N.m) LXM15LD10N4, 480 V, three phase<br>22.13 Lbf.In (2.5 N.m) LXM15LD17N4, 480 V, three phase<br>23.90 Lbf.In (2.7 N.m) LXM15LD10N4, 230 V, three phase<br>23.90 Lbf.In (2.7 N.m) LXM15LD10N4, 400 V, three phase<br>23.90 Lbf.In (2.7 N.m) LXM15LD17N4, 400 V, three phase<br>25.84 Lbf.In (2.92 N.m) LXM05AD22N4, 380...480 V, three phase<br>25.84 Lbf.In (2.92 N.m) LXM05BD22N4, 380...480 V, three phase<br>25.84 Lbf.In (2.92 N.m) LXM05CD22N4, 380...480 V, three phase<br>26.55 Lbf.In (3 N.m) LXM15LD17N4, 230 V, three phase<br>26.55 Lbf.In (3 N.m) LXM15LD21M3, 230 V, three phase<br>27.97 Lbf.In (3.16 N.m) LXM05AD17M3X, 200...240 V, three phase<br>27.97 Lbf.In (3.16 N.m) LXM05BD17M3X, 200...240 V, three phase<br>27.97 Lbf.In (3.16 N.m) LXM05CD17M3X, 200...240 V, three phase<br>23.90 Lbf.In (2.7 N.m) LXM32.D18N4 6 A, 400 V, three phase<br>23.90 lbf.in (2.7 N.m) LXM32.D18N4 6 A, 480 V, three phase |
| Nominal speed        | 3000 rpm LXM15LD10N4, 230 V, three phase<br>3000 rpm LXM15LD21M3, 230 V, single phase<br>3000 rpm LXM05AD22N4, 380...480 V, three phase<br>3000 rpm LXM05BD22N4, 380...480 V, three phase<br>3000 rpm LXM05CD22N4, 380...480 V, three phase<br>3000 rpm LXM15LD17N4, 230 V, three phase<br>3000 rpm LXM15LD21M3, 230 V, three phase<br>1500 rpm LXM05AD17M3X, 200...240 V, three phase<br>1500 rpm LXM05BD17M3X, 200...240 V, three phase<br>1500 rpm LXM05CD17M3X, 200...240 V, three phase<br>4500 rpm LXM15LD10N4, 400 V, three phase<br>4500 rpm LXM15LD17N4, 400 V, three phase<br>6000 rpm LXM15LD10N4, 480 V, three phase<br>6000 rpm LXM15LD17N4, 480 V, three phase<br>4000 rpm LXM32.D18N4 6 A, 400 V, three phase<br>4000 rpm LXM32.D18N4 6 A, 480 V, three phase                                                                                                                                                                                                                                 |

|                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|---------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product compatibility     | LXM15LD21M3 230 V single phase<br>LXM15LD10N4 400 V three phase<br>LXM05AD17M3X 200...240 V three phase<br>LXM05BD17M3X 200...240 V three phase<br>LXM05CD17M3X 200...240 V three phase<br>LXM15LD10N4 230 V three phase<br>LXM15LD10N4 480 V three phase<br>LXM15LD21M3 230 V three phase<br>LXM15LD17N4 230 V three phase<br>LXM05AD22N4 380...480 V three phase<br>LXM05BD22N4 380...480 V three phase<br>LXM05CD22N4 380...480 V three phase<br>LXM15LD17N4 400 V three phase<br>LXM15LD17N4 480 V three phase<br>LXM32.D18N4 400 V three phase<br>LXM32.D18N4 480 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 05<br>Lexium 32<br>Lexium 15                                                                                                                                                                     |
| Supply voltage max              | 480 V                                                                                                                                                                                                   |
| Phase                           | Three phase                                                                                                                                                                                             |
| Continuous stall current        | 3.5 A                                                                                                                                                                                                   |
| Maximum continuous power        | 1.6 W                                                                                                                                                                                                   |
| Maximum current Irms            | 12 A LXM15LD21M3<br>12 A LXM15LD10N4<br>12 A LXM15LD17N4<br>12 A LXM05AD17M3X<br>12 A LXM05AD22N4<br>12 A LXM05BD17M3X<br>12 A LXM05BD22N4<br>12 A LXM05CD17M3X<br>12 A LXM05CD22N4<br>12 A LXM32.D18N4 |
| Maximum permanent current       | 12 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                 | 0.89 N.m/A 248 °F (120 °C)                                                                                                                                                                              |
| Back emf constant               | 60 V/krpm 248 °F (120 °C)                                                                                                                                                                               |
| Number of motor poles           | 8                                                                                                                                                                                                       |
| Rotor inertia                   | 2.018 kg.cm²                                                                                                                                                                                            |
| Stator resistance               | 3.8 Ohm 68 °F (20 °C)                                                                                                                                                                                   |
| Stator inductance               | 17.6 mH 68 °F (20 °C)                                                                                                                                                                                   |
| Stator electrical time constant | 4.63 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              | 3389118138261          |
| 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             | 10.91 lb(US) (4.95 kg) |

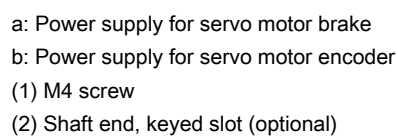
### Offer Sustainability

|                            |                                                                                                                                                                                                                                                                                             |
|----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Sustainable offer status   | Green Premium product                                                                                                                                                                                                                                                                       |
| 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="http://www.P65Warnings.ca.gov">www.P65Warnings.ca.gov</a> |
| REACH Regulation           | <a href="#">REACH Declaration</a>                                                                                                                                                                                                                                                           |
| EU RoHS Directive          | Pro-active compliance (Product out of EU RoHS legal scope)                                                                                                                                                                                                                                  |
| Mercury free               | Yes                                                                                                                                                                                                                                                                                         |
| China RoHS Regulation      | <a href="#">China RoHS Declaration</a>                                                                                                                                                                                                                                                      |
| RoHS exemption information | <a href="#">Yes</a>                                                                                                                                                                                                                                                                         |
| Environmental Disclosure   | <a href="#">Product Environmental Profile</a>                                                                                                                                                                                                                                               |
| Circularity Profile        | No need of specific recycling operations                                                                                                                                                                                                                                                    |
| WEEE                       | The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins.                                                                                                                                                                |
| PVC free                   | Yes                                                                                                                                                                                                                                                                                         |

### Contractual warranty

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

### Example with Straight Connectors



| 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       |

| 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     |

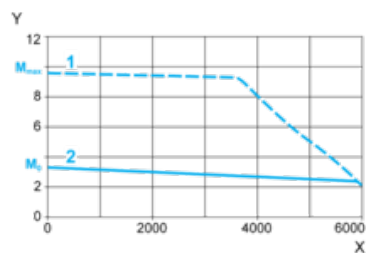
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### 400 V 3-Phase Supply Voltage

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#### Torque/Speed Curves

Servo motor with LXM32•D18N4 servo drive



X Speed in rpm

Y Torque in Nm

1 Peak torque

2 Continuous torque

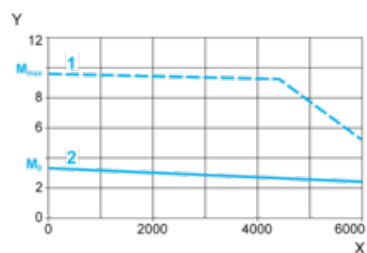
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### 480 V 3-Phase Supply Voltage

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#### Torque/Speed Curves

Servo motor with LXM32•D18N4 servo drive



X Speed in rpm

Y Torque in Nm

1 Peak torque

2 Continuous torque