

## BSH1401P11A2A

servo motor BSH, Lexium 05, 11.1N.m,  
1500rpm, 140mm, keyed shaft, Sincos single  
turn, without brake, IP50





## Main

|                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|---------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product or component type | Servo motor                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Device short name         | BSH                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Maximum mechanical speed  | 4000 rpm                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Continuous stall torque   | 11.1 N.M for LXM15MD28N4, 400 V, three phase<br>11.1 N.M for LXM15MD28N4, 480 V, three phase<br>11.1 N.M for LXM15MD28N4, 230 V, three phase<br>11.1 N.M for LXM15MD40N4, 400 V, three phase<br>11.1 N.M for LXM15MD40N4, 480 V, three phase<br>11.1 N.M for LXM15LD28M3, 230 V, three phase<br>11.4 N.M for LXM05AD34N4, 380...480 V, three phase<br>11.4 N.M for LXM05BD34N4, 380...480 V, three phase<br>11.4 N.m for LXM05CD34N4, 380...480 V, three phase          |
| Peak stall torque         | 23.33 N.M for LXM15MD28N4, 230 V, three phase<br>23.33 N.M for LXM15MD28N4, 400 V, three phase<br>23.33 N.M for LXM15MD28N4, 480 V, three phase<br>23.33 N.M for LXM15MD40N4, 400 V, three phase<br>23.33 N.M for LXM15MD40N4, 480 V, three phase<br>23.33 N.M for LXM05AD34N4, 380...480 V, three phase<br>23.33 N.M for LXM05BD34N4, 380...480 V, three phase<br>23.33 N.M for LXM05CD34N4, 380...480 V, three phase<br>23.33 N.m for LXM15LD28M3, 230 V, three phase |
| Nominal output power      | 2000 W for LXM15MD28N4, 400 V, three phase<br>2000 W for LXM15MD40N4, 400 V, three phase<br>2200 W for LXM05AD34N4, 380...480 V, three phase<br>2200 W for LXM05BD34N4, 380...480 V, three phase<br>2200 W for LXM05CD34N4, 380...480 V, three phase<br>1400 W for LXM15LD28M3, 230 V, three phase<br>1400 W for LXM15MD28N4, 230 V, three phase<br>2150 W for LXM15MD28N4, 480 V, three phase<br>2150 W for LXM15MD40N4, 480 V, three phase                            |
| Nominal torque            | 6.8 N.M for LXM15MD28N4, 480 V, three phase<br>6.8 N.M for LXM15MD40N4, 480 V, three phase<br>6.9 N.M for LXM05AD34N4, 380...480 V, three phase<br>6.9 N.M for LXM05BD34N4, 380...480 V, three phase<br>6.9 N.M for LXM05CD34N4, 380...480 V, three phase<br>7.63 N.M for LXM15MD28N4, 400 V, three phase<br>7.63 N.M for LXM15MD40N4, 400 V, three phase<br>9.1 N.M for LXM15LD28M3, 230 V, three phase<br>9.1 N.m for LXM15MD28N4, 230 V, three phase                 |
| Nominal speed             | 3000 rpm for LXM05AD34N4, 380...480 V, three phase<br>3000 rpm for LXM05BD34N4, 380...480 V, three phase<br>3000 rpm for LXM05CD34N4, 380...480 V, three phase<br>1500 rpm for LXM15MD28N4, 230 V, three phase<br>1500 rpm for LXM15LD28M3, 230 V, three phase<br>2500 rpm for LXM15MD28N4, 400 V, three phase<br>2500 rpm for LXM15MD40N4, 400 V, three phase<br>3000 rpm for LXM15MD28N4, 480 V, three phase<br>3000 rpm for LXM15MD40N4, 480 V, three phase          |

|                           |                                                                                                                                                                                                                                                                                                                                                    |
|---------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product compatibility     | LXM15LD28M3 at 230 V three phase<br>LXM05AD34N4 at 380...480 V three phase<br>LXM05BD34N4 at 380...480 V three phase<br>LXM05CD34N4 at 380...480 V three phase<br>LXM15MD28N4 at 400 V three phase<br>LXM15MD28N4 at 480 V three phase<br>LXM15MD40N4 at 400 V three phase<br>LXM15MD40N4 at 480 V three phase<br>LXM15MD28N4 at 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 15<br>Lexium 05                                         |
| Supply voltage max                    | 480 V                                                          |
| Network number of phases              | Three phase                                                    |
| Continuous stall current              | 7.8 A                                                          |
| Maximum continuous power              | 3.6 W                                                          |
| Maximum permanent current             | 20.8 A                                                         |
| Second shaft                          | Without second shaft end                                       |
| Shaft diameter                        | 24 mm                                                          |
| Shaft length                          | 50 mm                                                          |
| Key width                             | 40 mm                                                          |
| Feedback type                         | Single turn SinCos Hiperface                                   |
| Motor flange size                     | 140 mm                                                         |
| Number of motor stacks                | 1                                                              |
| Torque constant                       | 1.43 N.m/A at 120 °C                                           |
| Back emf constant                     | 100 V/krpm at 120 °C                                           |
| Number of motor poles                 | 10                                                             |
| Rotor inertia                         | 7.41 kg.cm <sup>2</sup>                                        |
| Stator resistance                     | 1.41 Ohm at 20 °C                                              |
| Stator inductance                     | 15.6 MH at 20 °C<br>16.34 mH at 20 °C                          |
| Stator electrical time constant       | 11.06 Ms at 20 °C<br>11.59 ms at 20 °C                         |
| Maximum radial force Fr               | 1530 N at 3000 rpm<br>1760 N at 2000 rpm<br>2210 N at 1000 rpm |
| Maximum axial force Fa                | 0.2 x Fr                                                       |
| Type of cooling                       | Natural convection                                             |
| Length                                | 217.5 mm                                                       |
| Centring collar diameter              | 130 mm                                                         |
| Centring collar depth                 | 3.5 mm                                                         |
| Number of mounting holes              | 4                                                              |
| Mounting holes diameter               | 11 mm                                                          |
| Circle diameter of the mounting holes | 165 mm                                                         |
| Net weight                            | 11.9 kg                                                        |

## Packing Units

|                              |         |
|------------------------------|---------|
| Unit Type of Package 1       | PCE     |
| Number of Units in Package 1 | 1       |
| Package 1 Height             | 27.0 cm |
| Package 1 Width              | 27.0 cm |
| Package 1 Length             | 48.2 cm |
| Package 1 Weight             | 8.0 kg  |

## Offer Sustainability

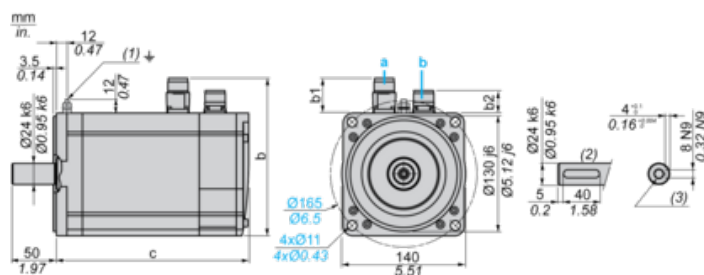
|                            |                                                                                                                                 |
|----------------------------|---------------------------------------------------------------------------------------------------------------------------------|
| Sustainable offer status   | Green Premium product                                                                                                           |
| 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 |
|----------|-----------|

## 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)  
(3) For screws M8 x 19 mm/M8 x 0.75 in.

Dimensions in mm

| Straight connectors |      |      | Rotatable angled connectors |      |      | c (without brake) | c (with brake) |
|---------------------|------|------|-----------------------------|------|------|-------------------|----------------|
| b                   | b1   | b2   | b                           | b1   | b2   |                   |                |
| 178                 | 39.5 | 25.5 | 178                         | 39.5 | 39.5 | 218               | 256            |

Dimensions in in.

| Straight connectors |      |      | Rotatable angled connectors |      |      | c (without brake) | c (with brake) |
|---------------------|------|------|-----------------------------|------|------|-------------------|----------------|
| b                   | b1   | b2   | b                           | b1   | b2   |                   |                |
| 7.00                | 1.55 | 1.00 | 7.00                        | 1.55 | 1.55 | 8.58              | 10.07          |

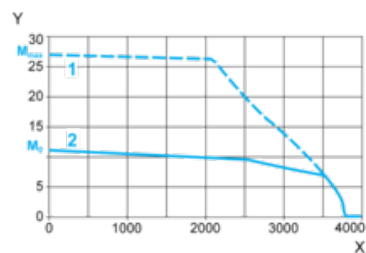
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### 400 V 3-Phase Supply Voltage

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#### Torque/Speed Curves

Servo motor with LXM32•D30N4 servo drive



X Speed in rpm

Y Torque in Nm

1 Peak torque

2 Continuous torque

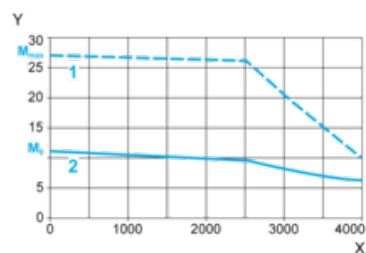
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### 480 V 3-Phase Supply Voltage

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#### Torque/Speed Curves

Servo motor with LXM32•D30N4 servo drive



X Speed in rpm

Y Torque in Nm

1 Peak torque

2 Continuous torque