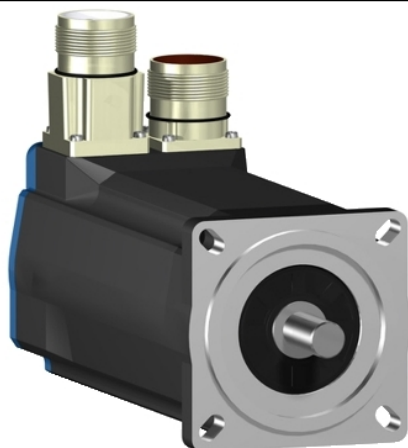


## BSH0701T22F1A

AC servo motor BSH - 0.7 N.m - 8000 rpm -  
untapped shaft - with brake - IP65



## Main

|                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|---------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product or component type | Servo motor                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Device short name         | BSH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Maximum mechanical speed  | 8000 rpm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Continuous stall torque   | <p>11.51 Lbf.In (1.3 N.m) LXM32.U90M2 3 A, 230 V, single phase</p> <p>12.39 Lbf.In (1.4 N.m) LXM05AD10M3X, 200...240 V, three phase</p> <p>12.39 Lbf.In (1.4 N.m) LXM05BD10M3X, 200...240 V, three phase</p> <p>12.39 Lbf.In (1.4 N.m) LXM05CD10M3X, 200...240 V, three phase</p> <p>12.39 Lbf.In (1.4 N.m) LXM15LD13M3, 230 V, single phase</p> <p>12.39 Lbf.In (1.4 N.m) LXM05AD10F1, 110...120 V, single phase</p> <p>12.39 Lbf.In (1.4 N.m) LXM05AD17M2, 200...240 V, single phase</p> <p>12.39 Lbf.In (1.4 N.m) LXM05BD10F1, 110...120 V, single phase</p> <p>12.39 Lbf.In (1.4 N.m) LXM05BD17M2, 200...240 V, single phase</p> <p>12.39 Lbf.In (1.4 N.m) LXM05CD10F1, 110...120 V, single phase</p> <p>12.39 Lbf.In (1.4 N.m) LXM05CD17M2, 200...240 V, single phase</p> <p>12.39 Lbf.In (1.4 N.m) LXM32.D18M2 6 A, 115 V, single phase</p> <p>6.20 Lbf.In (0.7 N.m) LXM15LU60N4, 400 V, three phase</p> <p>6.20 Lbf.In (0.7 N.m) LXM15LU60N4, 480 V, three phase</p> <p>8.05 Lbf.In (0.91 N.m) LXM15LU60N4, 230 V, three phase</p> <p>12.39 Lbf.In (1.4 N.m) LXM15LD10N4, 230 V, three phase</p> <p>12.39 Lbf.In (1.4 N.m) LXM15LD10N4, 400 V, three phase</p> <p>12.39 Lbf.In (1.4 N.m) LXM15LD10N4, 480 V, three phase</p> <p>12.39 Lbf.In (1.4 N.m) LXM15LD13M3, 230 V, three phase</p> <p>12.39 Lbf.In (1.4 N.m) LXM15LD21M3, 230 V, three phase</p> <p>12.39 Lbf.In (1.4 N.m) LXM05AD17M3X, 200...240 V, three phase</p> <p>12.39 Lbf.In (1.4 N.m) LXM05BD17M3X, 200...240 V, three phase</p> <p>12.39 lbf.in (1.4 N.m) LXM05CD17M3X, 200...240 V, three phase</p> |

|                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Peak stall torque    | 30.98 Lbf.In (3.5 N.m) LXM32.U90M2 3 A, 230 V, single phase<br>28.23 Lbf.In (3.19 N.m) LXM15LD13M3, 230 V, single phase<br>21.42 Lbf.In (2.42 N.m) LXM05AD10F1, 110...120 V, single phase<br>28.23 Lbf.In (3.19 N.m) LXM05AD17M2, 200...240 V, single phase<br>21.42 Lbf.In (2.42 N.m) LXM05BD10F1, 110...120 V, single phase<br>28.23 Lbf.In (3.19 N.m) LXM05BD17M2, 200...240 V, single phase<br>21.42 Lbf.In (2.42 N.m) LXM05CD10F1, 110...120 V, single phase<br>28.23 Lbf.In (3.19 N.m) LXM05CD17M2, 200...240 V, single phase<br>30.98 Lbf.In (3.5 N.m) LXM32.D18M2 6 A, 115 V, single phase<br>16.82 Lbf.In (1.9 N.m) LXM15LU60N4, 400 V, three phase<br>16.82 Lbf.In (1.9 N.m) LXM15LU60N4, 480 V, three phase<br>16.82 Lbf.In (1.9 N.m) LXM15LU60N4, 230 V, three phase<br>25.76 Lbf.In (2.91 N.m) LXM15LD10N4, 230 V, three phase<br>25.76 Lbf.In (2.91 N.m) LXM15LD10N4, 400 V, three phase<br>25.76 Lbf.In (2.91 N.m) LXM15LD10N4, 480 V, three phase<br>28.23 Lbf.In (3.19 N.m) LXM15LD13M3, 230 V, three phase<br>28.23 Lbf.In (3.19 N.m) LXM15LD21M3, 230 V, three phase<br>21.42 Lbf.In (2.42 N.m) LXM05AD10M3X, 200...240 V, three phase<br>28.23 Lbf.In (3.19 N.m) LXM05AD17M3X, 200...240 V, three phase<br>21.42 Lbf.In (2.42 N.m) LXM05BD10M3X, 200...240 V, three phase<br>28.23 Lbf.In (3.19 N.m) LXM05BD17M3X, 200...240 V, three phase<br>21.42 Lbf.In (2.42 N.m) LXM05CD10M3X, 200...240 V, three phase<br>28.23 Lbf.in (3.19 N.m) LXM05CD17M3X, 200...240 V, three phase |
| Nominal output power | 500 W LXM32.U90M2 3 A, 230 V, single phase<br>350 W LXM32.D18M2 6 A, 115 V, single phase<br>400 W LXM05AD10M3X, 200...240 V, three phase<br>400 W LXM05BD10M3X, 200...240 V, three phase<br>400 W LXM05CD10M3X, 200...240 V, three phase<br>380 W LXM05AD10F1, 110...120 V, single phase<br>380 W LXM05BD10F1, 110...120 V, single phase<br>380 W LXM05CD10F1, 110...120 V, single phase<br>400 W LXM05AD17M2, 200...240 V, single phase<br>400 W LXM05BD17M2, 200...240 V, single phase<br>400 W LXM05CD17M2, 200...240 V, single phase<br>654 W LXM15LD13M3, 230 V, single phase<br>1000 W LXM15LD10N4, 400 V, three phase<br>1000 W LXM15LD10N4, 480 V, three phase<br>400 W LXM05AD17M3X, 200...240 V, three phase<br>400 W LXM05BD17M3X, 200...240 V, three phase<br>400 W LXM05CD17M3X, 200...240 V, three phase<br>440 W LXM15LU60N4, 230 V, three phase<br>564 W LXM15LD10N4, 230 V, three phase<br>586 W LXM15LU60N4, 400 V, three phase<br>586 W LXM15LU60N4, 480 V, three phase<br>654 W LXM15LD13M3, 230 V, three phase<br>654 W LXM15LD21M3, 230 V, three phase                                                                                                                                                                                                                                                                                                                                                                                                                        |

|                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Nominal torque        | 8.32 Lbf.In (0.94 N.m) LXM32.U90M2 3 A, 230 V, single phase<br>11.06 Lbf.In (1.25 N.m) LXM15LD13M3, 230 V, single phase<br>12.04 Lbf.In (1.36 N.m) LXM32.D18M2 6 A, 115 V, single phase<br>6.20 Lbf.In (0.7 N.m) LXM15LU60N4, 230 V, three phase<br>6.20 Lbf.In (0.7 N.m) LXM15LU60N4, 400 V, three phase<br>6.20 Lbf.In (0.7 N.m) LXM15LU60N4, 480 V, three phase<br>10.89 Lbf.In (1.23 N.m) LXM15LD10N4, 400 V, three phase<br>10.89 Lbf.In (1.23 N.m) LXM15LD10N4, 480 V, three phase<br>11.06 Lbf.In (1.25 N.m) LXM15LD10N4, 230 V, three phase<br>11.06 Lbf.In (1.25 N.m) LXM15LD13M3, 230 V, three phase<br>11.06 lbf.in (1.25 N.m) LXM15LD21M3, 230 V, three phase                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Nominal speed         | 5000 rpm LXM32.U90M2 3 A, 230 V, single phase<br>3000 rpm LXM05AD10F1, 110...120 V, single phase<br>3000 rpm LXM05BD10F1, 110...120 V, single phase<br>3000 rpm LXM05CD10F1, 110...120 V, single phase<br>3000 rpm LXM05AD10M3X, 200...240 V, three phase<br>3000 rpm LXM05BD10M3X, 200...240 V, three phase<br>3000 rpm LXM05CD10M3X, 200...240 V, three phase<br>8000 rpm LXM15LD10N4, 400 V, three phase<br>3000 rpm LXM05AD17M2, 200...240 V, single phase<br>3000 rpm LXM05BD17M2, 200...240 V, single phase<br>3000 rpm LXM05CD17M2, 200...240 V, single phase<br>3000 rpm LXM05AD17M3X, 200...240 V, three phase<br>3000 rpm LXM05BD17M3X, 200...240 V, three phase<br>3000 rpm LXM05CD17M3X, 200...240 V, three phase<br>5000 rpm LXM15LD13M3, 230 V, single phase<br>2500 rpm LXM32.D18M2 6 A, 115 V, single phase<br>5000 rpm LXM15LD10N4, 230 V, three phase<br>5000 rpm LXM15LD13M3, 230 V, three phase<br>5000 rpm LXM15LD21M3, 230 V, three phase<br>6000 rpm LXM15LU60N4, 230 V, three phase<br>8000 rpm LXM15LD10N4, 480 V, three phase<br>8000 rpm LXM15LU60N4, 400 V, three phase<br>8000 rpm LXM15LU60N4, 480 V, three phase |
| Product compatibility | LXM05AD10F1 110...120 V single phase<br>LXM05AD17M2 200...240 V single phase<br>LXM05BD10F1 110...120 V single phase<br>LXM05BD17M2 200...240 V single phase<br>LXM05CD10F1 110...120 V single phase<br>LXM05CD17M2 200...240 V single phase<br>LXM15LD13M3 230 V single phase<br>LXM32.U90M2 230 V single phase<br>LXM32.D18M2 115 V single phase<br>LXM15LU60N4 230 V three phase<br>LXM05AD10M3X 200...240 V three phase<br>LXM05BD10M3X 200...240 V three phase<br>LXM05CD10M3X 200...240 V three phase<br>LXM15LD13M3 230 V three phase<br>LXM15LU60N4 400 V three phase<br>LXM15LU60N4 480 V three 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                                                                                                                                                                                                                                                                      |
| Shaft end             | Untapped                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |

|                           |                                     |
|---------------------------|-------------------------------------|
| IP degree of protection   | IP65 standard<br>IP67 with IP67 kit |
| 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              | 3.2 A                                                                                                                   |
| Maximum continuous power              | 1.06 W                                                                                                                  |
| Maximum current Irms                  | 10 A LXM32.D18M2<br>9 A LXM32.U90M2<br>9.9 A LXM15LD13M3<br>9.9 A LXM15LD21M3<br>9.9 A LXM15LU60N4<br>9.9 A LXM15LD10N4 |
| Maximum permanent current             | 10.1 A                                                                                                                  |
| Switching frequency                   | 8 kHz                                                                                                                   |
| Second shaft                          | Without second shaft end                                                                                                |
| Shaft diameter                        | 0.43 in (11 mm)                                                                                                         |
| Shaft length                          | 0.91 in (23 mm)                                                                                                         |
| Feedback type                         | Multiturn SinCos Hiperface                                                                                              |
| Holding torque                        | 17.70 lbf.in (2 N.m) holding brake                                                                                      |
| Motor flange size                     | 2.76 in (70 mm)                                                                                                         |
| Number of motor stacks                | 1                                                                                                                       |
| Torque constant                       | 0.44 N.m/A 248 °F (120 °C)                                                                                              |
| Back emf constant                     | 26 V/krpm 248 °F (120 °C)                                                                                               |
| Number of motor poles                 | 6                                                                                                                       |
| Rotor inertia                         | 0.322 kg.cm <sup>2</sup>                                                                                                |
| Stator resistance                     | 3.3 Ohm 68 °F (20 °C)                                                                                                   |
| Stator inductance                     | 12.3 mH 68 °F (20 °C)                                                                                                   |
| Stator electrical time constant       | 3.73 ms 68 °F (20 °C)                                                                                                   |
| Maximum radial force Fr               | 360 N 6000 rpm<br>380 N 5000 rpm<br>410 N 4000 rpm<br>460 N 3000 rpm<br>520 N 2000 rpm<br>660 N 1000 rpm                |
| Maximum axial force Fa                | 0.2 x Fr                                                                                                                |
| Brake pull-in power                   | 10 W                                                                                                                    |
| Type of cooling                       | Natural convection                                                                                                      |
| Length                                | 7.07 in (179.5 mm)                                                                                                      |
| Centring collar diameter              | 2.36 in (60 mm)                                                                                                         |
| Centring collar depth                 | 0.10 in (2.5 mm)                                                                                                        |
| Number of mounting holes              | 4                                                                                                                       |
| Mounting holes diameter               | 0.22 in (5.5 mm)                                                                                                        |
| Circle diameter of the mounting holes | 3.23 in (82 mm)                                                                                                         |
| Net weight                            | 5.07 lb(US) (2.3 kg)                                                                                                    |

### Ordering and shipping details

|                       |                          |
|-----------------------|--------------------------|
| Category              | 18282 - LEXIUM 32 MOTORS |
| Discount Schedule     | PC53                     |
| GTIN                  | 03389118136083           |
| Nbr. of units in pkg. | 1                        |
| Package weight(Lbs)   | 1 lb(US) (0.45 kg)       |
| Returnability         | No                       |
| Country of origin     | DE                       |

### Packing Units

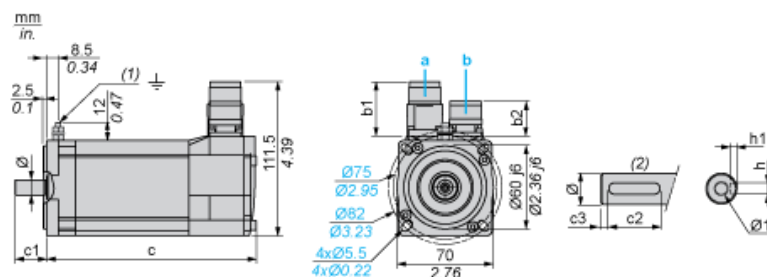
|                        |                    |
|------------------------|--------------------|
| Unit Type of Package 1 | PCE                |
| Package 1 Height       | 4.84 in (12.3 cm)  |
| Package 1 width        | 5.04 in (12.8 cm)  |
| Package 1 Length       | 14.84 in (37.7 cm) |

### 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 | c3  | h    | h1                               | Ø     | Ø1 for screws |
|---------------------|------|-----------------------------|------|-------------------|----------------|----|----|-----|------|----------------------------------|-------|---------------|
| b1                  | b2   | b1                          | b2   |                   |                |    |    |     |      |                                  |       |               |
| 39.5                | 25.5 | 39.5                        | 39.5 | 154               | 180            | 23 | 18 | 2.5 | 4 N9 | 2.5 <sup>+0.1</sup> <sub>0</sub> | 11 k6 | M4 x 10       |

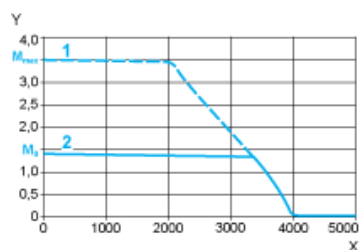
Dimensions in in.

| Straight connectors |      | Rotatable angled connectors |      | c (without brake) | c (with brake) | c1   | c2   | c3   | h       | h1                                  | Ø       | Ø1 for screws |
|---------------------|------|-----------------------------|------|-------------------|----------------|------|------|------|---------|-------------------------------------|---------|---------------|
| b1                  | b2   | b1                          | b2   |                   |                |      |      |      |         |                                     |         |               |
| 1.55                | 1.00 | 1.55                        | 1.55 | 6.06              | 7.08           | 0.90 | 0.70 | 0.09 | 0.16 N9 | 0.01 <sup>+0.004</sup> <sub>0</sub> | 0.43 k6 | M4 x 0.39     |

## 115 V Single-Phase Supply Voltage

### Torque/Speed Curves

Servo motor with LXM32•D18M2 servo drive

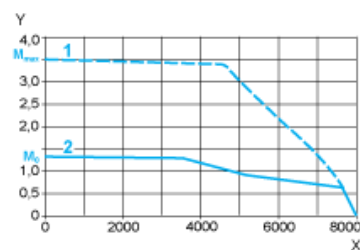


- X Speed in rpm  
Y Torque in Nm  
1 Peak torque  
2 Continuous torque

## 230 V Single-Phase Supply Voltage

### Torque/Speed Curves

Servo motor with LXM32•U90M2 servo drive



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