

# BSH1403T22A1P

AC servo motor BSH - 27.8 N.m - 3000 rpm -  
untapped shaft - without brake - IP65



## Main

|                           |                                                                                                                                |
|---------------------------|--------------------------------------------------------------------------------------------------------------------------------|
| Product or component type | Servo motor                                                                                                                    |
| Device short name         | BSH                                                                                                                            |
| Maximum mechanical speed  | 4800 rpm                                                                                                                       |
| Continuous stall torque   | 246.05 Lbf.in (27.8 N.m) LXM32.D72N4 24 A, 400 V, three phase<br>246.05 lbf.in (27.8 N.m) LXM32.D72N4 24 A, 480 V, three phase |
| Peak stall torque         | 798.34 Lbf.in (90.2 N.m) LXM32.D72N4 24 A, 400 V, three phase<br>798.34 lbf.in (90.2 N.m) LXM32.D72N4 24 A, 480 V, three phase |
| Nominal output power      | 4100 W LXM32.D72N4 24 A, 400 V, three phase<br>4100 W LXM32.D72N4 24 A, 480 V, three phase                                     |
| Nominal torque            | 114.17 Lbf.in (12.9 N.m) LXM32.D72N4 24 A, 400 V, three phase<br>114.17 lbf.in (12.9 N.m) LXM32.D72N4 24 A, 480 V, three phase |
| Nominal speed             | 3000 rpm LXM32.D72N4 24 A, 400 V, three phase<br>3000 rpm LXM32.D72N4 24 A, 480 V, three phase                                 |
| Product compatibility     | LXM32.D72N4 400 V three phase<br>LXM32.D72N4 480 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             | Without                                                                                                                        |
| Mounting support          | International standard                                                                                                         |
| Electrical connection     | Straight connectors                                                                                                            |

## Complementary

|                           |                            |
|---------------------------|----------------------------|
| Range compatibility       | Lexium 32                  |
| Supply voltage max        | 480 V                      |
| Phase                     | Three phase                |
| Continuous stall current  | 22.3 A                     |
| Maximum continuous power  | 3.3 W                      |
| Maximum current Irms      | 72 A LXM32.D72N4           |
| Maximum permanent current | 81.3 A                     |
| Switching frequency       | 8 kHz                      |
| Second shaft              | Without second shaft end   |
| Shaft diameter            | 0.94 in (24 mm)            |
| Shaft length              | 1.97 in (50 mm)            |
| Feedback type             | Multiturn SinCos Hiperface |
| Motor flange size         | 5.51 in (140 mm)           |
| Number of motor stacks    | 3                          |
| Torque constant           | 1.58 N.m/A 248 °F (120 °C) |
| Back emf constant         | 105 V/krpm 248 °F (120 °C) |
| Number of motor poles     | 10                         |
| Rotor inertia             | 12.68 kg.cm <sup>2</sup>   |
| Stator resistance         | 0.4 Ohm 68 °F (20 °C)      |

|                                       |                                                       |
|---------------------------------------|-------------------------------------------------------|
| Stator inductance                     | 5.1 mH 68 °F (20 °C)                                  |
| Stator electrical time constant       | 12.75 ms 68 °F (20 °C)                                |
| Maximum radial force Fr               | 1780 N 3000 rpm<br>2030 N 2000 rpm<br>2560 N 1000 rpm |
| Maximum axial force Fa                | 0.2 x Fr                                              |
| Type of cooling                       | Natural convection                                    |
| Length                                | 12.89 in (327.5 mm)                                   |
| Centring collar diameter              | 5.12 in (130 mm)                                      |
| Centring collar depth                 | 0.14 in (3.5 mm)                                      |
| Number of mounting holes              | 4                                                     |
| Mounting holes diameter               | 0.43 in (11 mm)                                       |
| Circle diameter of the mounting holes | 6.50 in (165 mm)                                      |
| Net Weight                            | 46.74 lb(US) (21.2 kg)                                |

### Ordering and shipping details

|                       |                        |
|-----------------------|------------------------|
| GTIN                  | 03606485201481         |
| Nbr. of units in pkg. | 1                      |
| Package weight(Lbs)   | 25.35 lb(US) (11.5 kg) |

### Packing Units

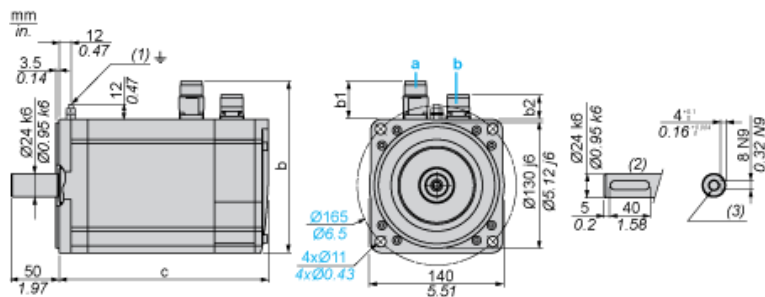
|                        |                    |
|------------------------|--------------------|
| Unit Type of Package 1 | PCE                |
| Package 1 Height       | 10.63 in (27 cm)   |
| Package 1 width        | 10.63 in (27 cm)   |
| Package 1 Length       | 18.98 in (48.2 cm) |

### 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)
- (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   |                   |                |
| 192.5               | 54 | 25.5 | 198.5                       | 60 | 39.5 | 328               | 366            |

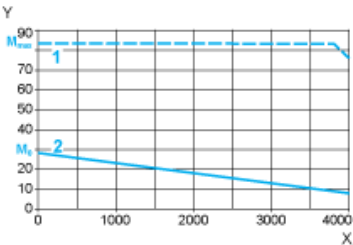
Dimensions in in.

| Straight connectors |      |      | Rotatable angled connectors |      |      | c (without brake) | c (with brake) |
|---------------------|------|------|-----------------------------|------|------|-------------------|----------------|
| b                   | b1   | b2   | b                           | b1   | b2   |                   |                |
| 7.57                | 2.12 | 1.00 | 7.81                        | 2.36 | 1.55 | 12.91             | 14.40          |

400 V 3-Phase Supply Voltage

Torque/Speed Curves

Servo motor with LXM32•D72N4 servo drive

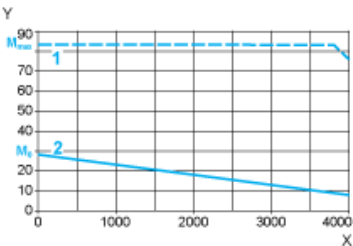


- X Speed in rpm  
Y Torque in Nm  
1 Peak torque  
2 Continuous torque

480 V 3-Phase Supply Voltage

Torque/Speed Curves

Servo motor with LXM32•D72N4 servo drive



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