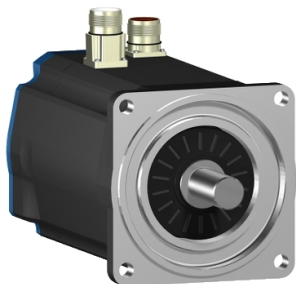


Product data sheet

Specifications



servo motor BSH, Lexium 05,
2.7N.m, 3000rpm, 100mm,
untapped shaft, Sincos multi turn,
with brake, IP65, straight

BSH1001P22F1A

⚠ Discontinued

⚠ Discontinued on: Jun 30, 2023

Product availability: Non-Stock - Not normally stocked in distribution facility

Main

| | |
|---------------------------|---|
| Device short name | BSH |
| Product or Component Type | Servo motor |
| Maximum mechanical speed | 6000 rpm |
| Continuous stall torque | 30.004 lbf.in (3.39 N.m) LXM15LD21M3, 230 V, single phase 23.9 lbf.in (2.7 N.m) LXM15LD10N4, 230 V, three phase 30.004 lbf.in (3.39 N.m) LXM15LD10N4, 400 V, three phase 30.004 lbf.in (3.39 N.m) LXM15LD10N4, 480 V, three phase 30.004 lbf.in (3.39 N.m) LXM15LD21M3, 230 V, three phase 30.004 lbf.in (3.39 N.m) LXM15LD17N4, 230 V, three phase 30.004 lbf.in (3.39 N.m) LXM15LD17N4 6 A, 400 V, three phase 30.004 lbf.in (3.39 N.m) LXM15LD17N4 6 A, 480 V, three phase 30.09 lbf.in (3.4 N.m) LXM05AD17M3X, 200...240 V, three phase 30.09 lbf.in (3.4 N.m) LXM05AD22N4, 380...480 V, three phase 30.09 lbf.in (3.4 N.m) LXM05BD17M3X, 200...240 V, three phase 30.09 lbf.in (3.4 N.m) LXM05BD22N4, 380...480 V, three phase 30.09 lbf.in (3.4 N.m) LXM05CD17M3X, 200...240 V, three phase 30.09 lbf.in (3.4 N.m) LXM05CD22N4, 380...480 V, three phase 29.2 lbf.in (3.3 N.m) LXM32.D18N4 6 A, 400 V, three phase 29.2 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 54.79 lbf.in (6.19 N.m) LXM15LD10N4, 230 V, three phase 54.79 lbf.in (6.19 N.m) LXM15LD10N4, 400 V, three phase 54.79 lbf.in (6.19 N.m) LXM15LD10N4, 480 V, three phase 62.66 lbf.in (7.08 N.m) LXM15LD21M3, 230 V, three phase 62.66 lbf.in (7.08 N.m) LXM15LD17N4, 230 V, three phase 62.66 lbf.in (7.08 N.m) LXM15LD17N4 6 A, 400 V, three phase 62.66 lbf.in (7.08 N.m) LXM15LD17N4 6 A, 480 V, three phase 62.8 lbf.in (7.1 N.m) LXM05AD17M3X, 200...240 V, three phase 62.8 lbf.in (7.1 N.m) LXM05AD22N4, 380...480 V, three phase 62.8 lbf.in (7.1 N.m) LXM05BD17M3X, 200...240 V, three phase 62.8 lbf.in (7.1 N.m) LXM05BD22N4, 380...480 V, three phase 62.8 lbf.in (7.1 N.m) LXM05CD17M3X, 200...240 V, three phase 62.8 lbf.in (7.1 N.m) LXM05CD22N4, 380...480 V, three phase 85.0 lbf.in (9.6 N.m) LXM32.D18N4 6 A, 400 V, three phase 85.0 lbf.in (9.6 N.m) LXM32.D18N4 6 A, 480 V, three phase |
| Nominal output power | 1300 W LXM15LD17N4, 400 V, three phase 1500 W LXM15LD10N4, 480 V, three phase 950 W LXM15LD21M3, 230 V, single phase 1300 W LXM15LD10N4, 400 V, three phase 1500 W LXM15LD17N4, 480 V, three phase 500 W LXM05AD17M3X, 200...240 V, three phase 500 W LXM05BD17M3X 6 A, 200...240 V, three phase 500 W LXM05CD17M3X 6 A, 200...240 V, three phase 850 W LXM15LD10N4, 230 V, three phase 900 W LXM05AD22N4, 380...480 V, three phase 900 W LXM05BD22N4, 380...480 V, three phase 900 W LXM05CD22N4, 380...480 V, three phase 950 W LXM15LD17N4, 230 V, three phase 950 W LXM15LD21M3, 230 V, three phase 1100 W LXM32.D18N4 6 A, 400 V, three phase 1100 W LXM32.D18N4 6 A, 480 V, three phase |

Price is "List Price" and may be subject to a trade discount – check with your local distributor or retailer for actual price.

| | |
|-----------------------|---|
| Nominal torque | <p>26.6 lbf.in (3 N.m) LXM15LD21M3, 230 V, single phase</p> <p>22.1 lbf.in (2.5 N.m) LXM15LD10N4, 480 V, three phase</p> <p>22.1 lbf.in (2.5 N.m) LXM15LD17N4, 480 V, three phase</p> <p>23.9 lbf.in (2.7 N.m) LXM15LD10N4, 230 V, three phase</p> <p>23.9 lbf.in (2.7 N.m) LXM15LD10N4, 400 V, three phase</p> <p>23.9 lbf.in (2.7 N.m) LXM15LD17N4, 400 V, three phase</p> <p>25.84 lbf.in (2.92 N.m) LXM05AD22N4 6 A, 380...480 V, three phase</p> <p>25.84 lbf.in (2.92 N.m) LXM05BD22N4 6 A, 380...480 V, three phase</p> <p>25.84 lbf.in (2.92 N.m) LXM05CD22N4, 380...480 V, three phase</p> <p>26.6 lbf.in (3 N.m) LXM15LD17N4, 230 V, three phase</p> <p>26.6 lbf.in (3 N.m) LXM15LD21M3, 230 V, three phase</p> <p>27.97 lbf.in (3.16 N.m) LXM05AD17M3X, 200...240 V, three phase</p> <p>27.97 lbf.in (3.16 N.m) LXM05BD17M3X, 200...240 V, three phase</p> <p>27.97 lbf.in (3.16 N.m) LXM05CD17M3X, 200...240 V, three phase</p> <p>23.9 lbf.in (2.7 N.m) LXM32.D18N4 6 A, 400 V, three phase</p> <p>23.9 lbf.in (2.7 N.m) LXM32.D18N4 6 A, 480 V, three phase</p> |
|-----------------------|---|

| | |
|----------------------|---|
| Nominal speed | <p>3000 rpm LXM15LD10N4, 230 V, three phase</p> <p>3000 rpm LXM15LD21M3, 230 V, single phase</p> <p>3000 rpm LXM05AD22N4, 380...480 V, three phase</p> <p>3000 rpm LXM05BD22N4, 380...480 V, three phase</p> <p>3000 rpm LXM05CD22N4, 380...480 V, three phase</p> <p>3000 rpm LXM15LD17N4, 230 V, three phase</p> <p>3000 rpm LXM15LD21M3 6 A, 230 V, three phase</p> <p>1500 rpm LXM05AD17M3X 6 A, 200...240 V, three phase</p> <p>1500 rpm LXM05BD17M3X, 200...240 V, three phase</p> <p>1500 rpm LXM05CD17M3X, 200...240 V, three phase</p> <p>4500 rpm LXM15LD10N4, 400 V, three phase</p> <p>4500 rpm LXM15LD17N4, 400 V, three phase</p> <p>6000 rpm LXM15LD10N4, 480 V, three phase</p> <p>6000 rpm LXM15LD17N4, 480 V, three phase</p> <p>4000 rpm LXM32.D18N4 6 A, 400 V, three phase</p> <p>4000 rpm LXM32.D18N4 6 A, 480 V, three phase</p> |
|----------------------|---|

| | |
|------------------------------|---|
| Product compatibility | <p>LXM15LD21M3 230 V single phase</p> <p>LXM15LD10N4 400 V three phase</p> <p>LXM05AD17M3X 200...240 V three phase</p> <p>LXM05BD17M3X 200...240 V three phase</p> <p>LXM05CD17M3X 200...240 V three phase</p> <p>LXM15LD10N4 230 V three phase</p> <p>LXM15LD10N4 480 V three phase</p> <p>LXM15LD21M3 230 V three phase</p> <p>LXM15LD17N4 230 V three phase</p> <p>LXM05AD22N4 380...480 V three phase</p> <p>LXM05BD22N4 380...480 V three phase</p> <p>LXM05CD22N4 380...480 V three phase</p> <p>LXM15LD17N4 400 V three phase</p> <p>LXM15LD17N4 480 V three phase</p> <p>LXM32.D18N4 400 V three phase</p> <p>LXM32.D18N4 480 V three phase</p> |
|------------------------------|---|

| | |
|------------------|----------|
| Shaft end | Untapped |
|------------------|----------|

| | |
|--------------------------------|--|
| IP Degree of Protection | <p>IP65 standard</p> <p>IP67 with IP67 kit</p> |
|--------------------------------|--|

| | |
|----------------------------------|---------------------------------|
| Speed feedback resolution | 131072 points/turn x 4096 turns |
|----------------------------------|---------------------------------|

| | |
|----------------------|------|
| Holding brake | With |
|----------------------|------|

| | |
|-------------------------|-------------------------------|
| Mounting Support | International standard flange |
|-------------------------|-------------------------------|

| | |
|------------------------------|---------------------|
| Electrical Connection | Straight connectors |
|------------------------------|---------------------|

Complementary

| | |
|----------------------------|--|
| Range Compatibility | <p>Lexium 05</p> <p>Lexium 15</p> <p>Lexium 32</p> |
|----------------------------|--|

| | |
|---------------------------|-------|
| 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 12 A LXM15LD10N4 12 A LXM15LD17N4 12 A LXM05AD17M3X 12 A LXM05AD22N4 12 A LXM05BD17M3X 12 A LXM05BD22N4 12 A LXM05CD17M3X 12 A LXM05CD22N4 12 A LXM32.D18N4 |
| Maximum permanent current | 12 A |
| Switching frequency | 8 kHz |
| Second shaft | Without second shaft end |
| Shaft diameter | 0.7 in (19 mm) |
| Shaft length | 1.6 in (40 mm) |
| Feedback type | Multiturn SinCos Hiperface |
| Holding torque | 79.7 lbf.in (9 N.m) holding brake |
| Motor flange size | 3.9 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.cm ² |
| 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 570 N 4000 rpm 630 N 3000 rpm 720 N 2000 rpm 900 N 1000 rpm |
| Maximum axial force Fa | 0.2 x Fr |
| Brake pull-in power | 18 W |
| Type of cooling | Natural convection |
| Length | 7.9 in (199.5 mm) |
| Centring collar diameter | 3.7 in (95 mm) |
| Centring collar depth | 0.1 in (3.5 mm) |
| Number of mounting holes | 4 |
| Mounting holes diameter | 0.4 in (9 mm) |
| Circle diameter of the mounting holes | 4.5 in (115 mm) |
| Net Weight | 10.6 lb(US) (4.8 kg) |
| Sizing reference | BSH1001P |
| Network number of phases | 3 |
| Accuracy error [angular] | 1.4 ° |
| Temperature copper hot | 248 °F (120 °C) |
| Temperature magnet hot | 212 °F (100 °C) |
| Temperature magnet rt | 68 °F (20 °C) |

Ordering and shipping details

| | |
|-------------------|---------------|
| Category | US1PC5318282 |
| Discount Schedule | PC53 |
| GTIN | 3389118138346 |
| Returnability | No |

Packing Units

| | |
|------------------------|------------------------|
| Unit Type of Package 1 | PCE |
| Nbr. of units in pkg. | 1 |
| Package 1 Height | 6.06 in (15.4 cm) |
| Package 1 Width | 6.4 in (16.3 cm) |
| Package 1 Length | 16.02 in (40.7 cm) |
| Package weight(Lbs) | 10.91 lb(US) (4.95 kg) |

Contractual warranty

| | |
|----------------------|----|
| Warranty (in months) | 18 |
|----------------------|----|



Environmental Data

Schneider Electric aims to achieve Net Zero status by 2050 through supply chain partnerships, lower impact materials, and circularity via our ongoing “Use Better, Use Longer, Use Again” campaign to extend product lifetimes and recyclability.

[Environmental Data explained >](#)

[How we assess product sustainability >](#)

Use Better

Materials and Substances

[EU RoHS Directive](#)

Pro-active compliance (Product out of EU RoHS legal scope)

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 www.P65Warnings.ca.gov

Use Longer

Lifetime extension

Repair

No

Use Again

Repack and remanufacture

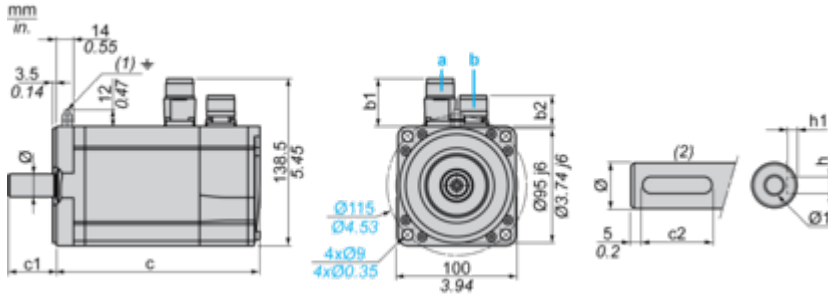
Circularity Profile

No need of specific recycling operations

Dimensions Drawings

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.

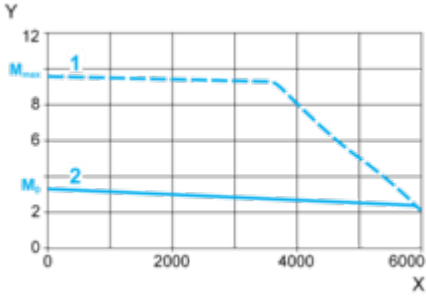
| Straight connectors | | Rotatable angled connectors | | c (without brake) | c (with brake) | c1 | c2 | h | h1 | Ø | Ø1 for screws |
|---------------------|------|-----------------------------|------|-------------------|----------------|------|------|---------|-----------------------------------|---------|---------------|
| 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 |

Performance Curves

400 V 3-Phase Supply Voltage

Torque/Speed Curves

Servo motor with LXM32•D18N4 servo drive



X Speed in rpm

Y Torque in Nm

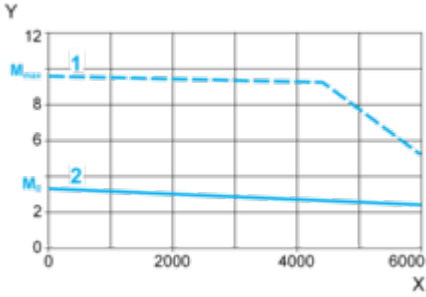
1 Peak torque

2 Continuous torque

480 V 3-Phase Supply Voltage

Torque/Speed Curves

Servo motor with LXM32•D18N4 servo drive



X Speed in rpm

Y Torque in Nm

1 Peak torque

2 Continuous torque