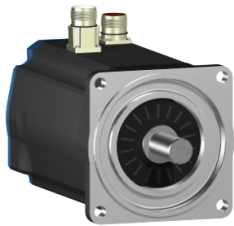


Product data sheet

Specifications



servo motor BSH, Lexium 05,
11.1N.m, 1500rpm, 140mm,
untapped shaft, Sincos single turn,
with brake, IP65, straight

BSH1401P21F1A

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

Main

| | |
|----------------------------------|--|
| Device short name | BSH |
| Product or Component Type | Servo motor |
| Maximum mechanical speed | 4000 rpm |
| Continuous stall torque | 98.2 lbf.in (11.1 N.m) LXM32.D30N4 10 A, 400 V, three phase 98.2 lbf.in (11.1 N.m) LXM32.D30N4 10 A, 480 V, three phase 98.2 lbf.in (11.1 N.m) LXM15MD28N4, 400 V, three phase 98.2 lbf.in (11.1 N.m) LXM15MD28N4 10 A, 480 V, three phase 98.2 lbf.in (11.1 N.m) LXM15MD28N4, 230 V, three phase 98.2 lbf.in (11.1 N.m) LXM15MD40N4, 400 V, three phase 98.2 lbf.in (11.1 N.m) LXM15MD40N4, 480 V, three phase 98.2 lbf.in (11.1 N.m) LXM15LD28M3, 230 V, three phase 100.9 lbf.in (11.4 N.m) LXM05AD34N4, 380...480 V, three phase 100.9 lbf.in (11.4 N.m) LXM05BD34N4, 380...480 V, three phase 100.9 lbf.in (11.4 N.m) LXM05CD34N4, 380...480 V, three phase |
| Peak stall torque | 239.0 lbf.in (27 N.m) LXM32.D30N4 10 A, 400 V, three phase 239.0 lbf.in (27 N.m) LXM32.D30N4 10 A, 480 V, three phase 206.49 lbf.in (23.33 N.m) LXM15MD28N4, 230 V, three phase 206.49 lbf.in (23.33 N.m) LXM15MD28N4 10 A, 400 V, three phase 206.49 lbf.in (23.33 N.m) LXM15MD28N4, 480 V, three phase 206.49 lbf.in (23.33 N.m) LXM15MD40N4, 400 V, three phase 206.49 lbf.in (23.33 N.m) LXM15MD40N4, 480 V, three phase 210.6 lbf.in (23.8 N.m) LXM15LD28M3, 230 V, three phase 206.49 lbf.in (23.33 N.m) LXM05AD34N4, 380...480 V, three phase 206.49 lbf.in (23.33 N.m) LXM05BD34N4, 380...480 V, three phase 206.49 lbf.in (23.33 N.m) LXM05CD34N4, 380...480 V, three phase |
| Nominal output power | 2500 W LXM32.D30N4 10 A, 400 V, three phase 3000 W LXM32.D30N4 10 A, 480 V, three phase 2000 W LXM15MD28N4, 400 V, three phase 2000 W LXM15MD40N4 10 A, 400 V, three phase 2200 W LXM05AD34N4, 380...480 V, three phase 2200 W LXM05BD34N4, 380...480 V, three phase 2200 W LXM05CD34N4, 380...480 V, three phase 1400 W LXM15LD28M3, 230 V, three phase 1400 W LXM15MD28N4, 230 V, three phase 2150 W LXM15MD28N4, 480 V, three phase 2150 W LXM15MD40N4, 480 V, three phase |
| Nominal torque | 84.08 lbf.in (9.5 N.m) LXM32.D30N4 10 A, 400 V, three phase 84.08 lbf.in (9.5 N.m) LXM32.D30N4 10 A, 480 V, three phase 60.2 lbf.in (6.8 N.m) LXM15MD28N4, 480 V, three phase 60.2 lbf.in (6.8 N.m) LXM15MD40N4 10 A, 480 V, three phase 61.07 lbf.in (6.9 N.m) LXM05AD34N4, 380...480 V, three phase 61.07 lbf.in (6.9 N.m) LXM05BD34N4, 380...480 V, three phase 61.07 lbf.in (6.9 N.m) LXM05CD34N4, 380...480 V, three phase 67.53 lbf.in (7.63 N.m) LXM15MD28N4, 400 V, three phase 67.53 lbf.in (7.63 N.m) LXM15MD40N4, 400 V, three phase 80.5 lbf.in (9.1 N.m) LXM15LD28M3, 230 V, three phase 80.5 lbf.in (9.1 N.m) LXM15MD28N4, 230 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 speed | 2500 rpm LXM32.D30N4 10 A, 400 V, three phase 3000 rpm LXM32.D30N4 10 A, 480 V, three phase 3000 rpm LXM05AD34N4, 380...480 V, three phase 3000 rpm LXM05BD34N4 10 A, 380...480 V, three phase 3000 rpm LXM05CD34N4, 380...480 V, three phase 1500 rpm LXM15MD28N4, 230 V, three phase 1500 rpm LXM15LD28M3, 230 V, three phase 2500 rpm LXM15MD28N4, 400 V, three phase 2500 rpm LXM15MD40N4, 400 V, three phase 3000 rpm LXM15MD28N4, 480 V, three phase 3000 rpm LXM15MD40N4, 480 V, three phase |
| Product compatibility | LXM15LD28M3 230 V three phase LXM05AD34N4 380...480 V three phase LXM05BD34N4 380...480 V three phase LXM05CD34N4 380...480 V three phase LXM15MD28N4 400 V three phase LXM15MD28N4 480 V three phase LXM15MD40N4 400 V three phase LXM15MD40N4 480 V three phase LXM15MD28N4 230 V three phase |
| Shaft end | Untapped |
| IP Degree of Protection | IP65 standard IP67 with IP67 kit |
| Speed feedback resolution | 131072 points/turn |
| Holding brake | With |
| Mounting Support | International standard flange |
| Electrical Connection | Straight connectors |

Complementary

| | |
|----------------------------------|--|
| Range Compatibility | Lexium 15 Lexium 32 Lexium 05 |
| supply voltage max | 480 V |
| Phase | Three phase |
| Continuous stall current | 7.8 A |
| maximum continuous power | 3.6 W |
| Maximum current Irms | 20.8 A LXM15LD28M3 20.8 A LXM15MD28N4 20.8 A LXM15MD40N4 20.8 A LXM05AD34N4 20.8 A LXM05BD34N4 20.8 A LXM05CD34N4 20.8 A LXM32.D30N4 |
| Maximum permanent current | 20.8 A |
| Switching frequency | 8 kHz |
| Second shaft | Without second shaft end |
| Shaft diameter | 0.9 in (24 mm) |
| Shaft length | 2.0 in (50 mm) |
| Feedback type | Single turn SinCos Hiperface |
| Holding torque | 203.6 lbf.in (23 N.m) holding brake |
| Motor flange size | 5.5 in (140 mm) |
| Number of motor stacks | 1 |
| Torque constant | 1.43 N.m/A 248 °F (120 °C) |
| Back emf constant | 100 V/krpm 248 °F (120 °C) |

| | |
|---------------------------------------|---|
| Number of motor poles | 5.0 |
| Rotor inertia | 9.21 kg.cm ² |
| Stator resistance | 1.41 Ohm 68 °F (20 °C) |
| Stator inductance | 8.17 mH 68 °F (20 °C) |
| Stator electrical time constant | 11.06 ms 68 °F (20 °C) |
| Maximum radial force Fr | 1530 N 3000 rpm 1760 N 2000 rpm 2210 N 1000 rpm |
| Maximum axial force Fa | 0.2 x Fr |
| Brake pull-in power | 24 W |
| Type of cooling | Natural convection |
| Length | 10.06 in (255.5 mm) |
| Centring collar diameter | 5.1 in (130 mm) |
| Centring collar depth | 0.1 in (3.5 mm) |
| Number of mounting holes | 4 |
| Mounting holes diameter | 0.4 in (11 mm) |
| Circle diameter of the mounting holes | 6.5 in (165 mm) |
| Net Weight | 28.7 lb(US) (13 kg) |
| Sizing reference | BSH1401P |
| 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) |
| Output current 3s peak | 20.8 A |
| Inertia | 1.8 kg.cm ² of brake 7.41 kg.cm ² of motor |

Ordering and shipping details

| | |
|-------------------|---------------|
| Category | US1PC5318282 |
| Discount Schedule | PC53 |
| GTIN | 3389118140868 |
| Returnability | No |
| Country of origin | DE |

Packing Units

| | |
|------------------------|--------------------------|
| Unit Type of Package 1 | PCE |
| Nbr. of units in pkg. | 1 |
| Package 1 Height | 10.630 in (27.000 cm) |
| Package 1 Width | 10.630 in (27.000 cm) |
| Package 1 Length | 18.976 in (48.200 cm) |
| Package weight(Lbs) | 21.583 lb(US) (9.790 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 >](#)



Environmental footprint

| | |
|--|------------------|
| Total lifecycle Carbon footprint | 3 281 kg CO2 eq. |
| Carbon footprint of the manufacturing phase [A1 to A3] | 43 kg CO2 eq. |
| Carbon footprint of the distribution phase [A4] | 1 kg CO2 eq. |
| Carbon footprint of the installation phase [A5] | 0.1 kg CO2 eq. |
| Carbon footprint of the use phase [B2, B3, B4, B6] | 3 236 kg CO2 eq. |
| Carbon footprint of the end-of-life phase [C1 to C4] | 0.9 kg CO2 eq. |

Use Better



Materials and Substances

| | |
|--|---|
| Packaging made with recycled cardboard | Yes |
| Packaging without single use plastic | No |
| EU RoHS Directive | Pro-active compliance (Product out of EU RoHS legal scope) |
| REACH Regulation | REACH Declaration |
| 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



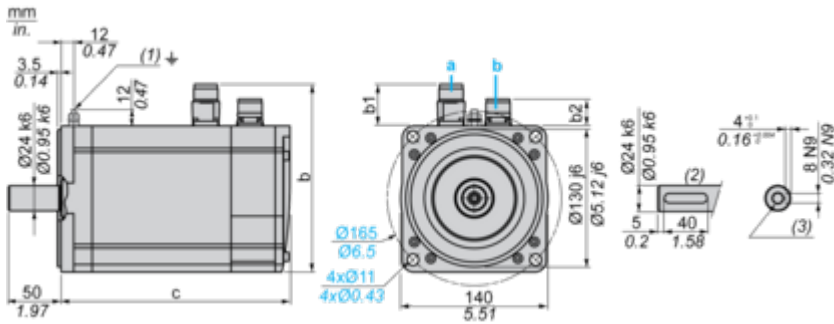
Repack and remanufacture

| | |
|---------------------|--|
| Circularity Profile | No need of specific recycling operations |
| Take-back | No |

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)
- (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.

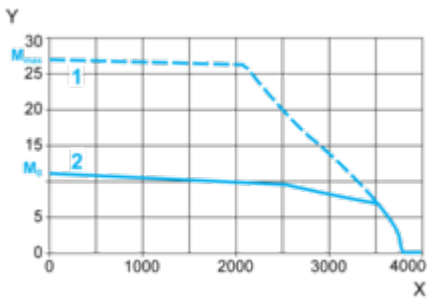
| Straight connectors | | | Rotatable angled connectors | | | c (without brake) | c (with brake) |
|---------------------|------|------|-----------------------------|------|------|-------------------|----------------|
| b | b1 | b2 | b | b1 | b2 | | |
| 7.00 | 1.55 | 1.00 | 7.00 | 1.55 | 1.55 | 8.58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

Performance Curves

400 V 3-Phase Supply Voltage

Torque/Speed Curves

Servo motor with LXM32•D30N4 servo drive



X Speed in rpm

Y Torque in Nm

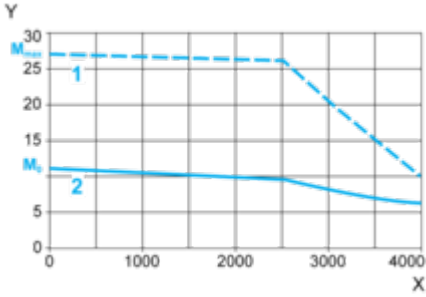
1 Peak torque

2 Continuous torque

480 V 3-Phase Supply Voltage

Torque/Speed Curves

Servo motor with LXM32•D30N4 servo drive



X Speed in rpm

Y Torque in Nm

1 Peak torque

2 Continuous torque