

Product datasheet

Specifications



servo motor BSH, Lexium 05,
36N.m, 1500rpm, 205mm, keyed
shaft, Sincos multi turn, with brake,
IP50, straight

BSH2051M12F1A

! Discontinued

EAN Code: 3389118160064

Main

| | |
|---------------------------|---|
| Device short name | BSH |
| Product or component type | Servo motor |
| Maximum mechanical speed | 3800 rpm |
| Continuous stall torque | 36 N.m for LXM15MD40N4, 400 V, three phase 36 N.m for LXM15MD40N4, 480 V, three phase 36 N.m for LXM15MD56N4, 400 V, three phase 36 N.m for LXM15MD56N4, 480 V, three phase 36 N.m for LXM15HC11N4X, 400 V, three phase 36 N.m for LXM15HC11N4X, 480 V, three phase 34.4 N.m for LXM05AD57N4, 380...480 V, three phase 34.4 N.m for LXM05BD57N4, 380...480 V, three phase 34.4 N.m for LXM05CD57N4, 380...480 V, three phase |
| Peak stall torque | 68.33 N.m for LXM15MD40N4, 400 V, three phase 68.33 N.m for LXM15MD40N4, 480 V, three phase 68.33 N.m for LXM15MD56N4, 400 V, three phase 68.33 N.m for LXM15MD56N4, 480 V, three phase 68.33 N.m for LXM15HC11N4X, 400 V, three phase 68.33 N.m for LXM15HC11N4X, 480 V, three phase 110 N.m for LXM05AD57N4, 380...480 V, three phase 110 N.m for LXM05BD57N4, 380...480 V, three phase 110 N.m for LXM05CD57N4, 380...480 V, three phase |
| Nominal output power | 4500 W for LXM05AD57N4, 380...480 V, three phase 4500 W for LXM05BD57N4, 380...480 V, three phase 4500 W for LXM05CD57N4, 380...480 V, three phase 5000 W for LXM15HC11N4X, 400 V, three phase 5000 W for LXM15MD40N4, 400 V, three phase 5000 W for LXM15MD56N4, 400 V, three phase 5500 W for LXM15HC11N4X, 480 V, three phase 5500 W for LXM15MD40N4, 480 V, three phase 5500 W for LXM15MD56N4, 480 V, three phase |
| Nominal torque | 28.2 N.m for LXM05AD57N4, 380...480 V, three phase 28.2 N.m for LXM05BD57N4, 380...480 V, three phase 28.2 N.m for LXM05CD57N4, 380...480 V, three phase 31.2 N.m for LXM15HC11N4X, 480 V, three phase 31.2 N.m for LXM15MD40N4, 480 V, three phase 31.2 N.m for LXM15MD56N4, 480 V, three phase 32 N.m for LXM15HC11N4X, 400 V, three phase 32 N.m for LXM15MD40N4, 400 V, three phase 32 N.m for LXM15MD56N4, 400 V, three phase |
| Nominal speed | 1500 rpm for LXM15MD40N4, 400 V, three phase 1500 rpm for LXM05AD57N4, 380...480 V, three phase 1500 rpm for LXM05BD57N4, 380...480 V, three phase 1500 rpm for LXM05CD57N4, 380...480 V, three phase 1500 rpm for LXM15HC11N4X, 400 V, three phase 1500 rpm for LXM15MD56N4, 400 V, three phase 1700 rpm for LXM15HC11N4X, 480 V, three phase 1700 rpm for LXM15MD40N4, 480 V, three phase 1700 rpm for LXM15MD56N4, 480 V, three phase |

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|----------------------------------|--|
| Product compatibility | LXM15MD40N4 at 400 V three phase LXM15MD40N4 at 480 V three phase LXM05AD57N4 at 380...480 V three phase LXM05BD57N4 at 380...480 V three phase LXM05CD57N4 at 380...480 V three phase LXM15MD56N4 at 400 V three phase LXM15MD56N4 at 480 V three phase LXM15HC11N4X at 400 V three phase LXM15HC11N4X at 480 V three phase |
| Shaft end | Keyed |
| IP degree of protection | IP50 standard |
| 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 Lexium 15 |
| supply voltage max | 480 V |
| Network number of phases | Three phase |
| Continuous stall current | 11.1 A |
| maximum continuous power | 7.44 W |
| Maximum current Irms | 40.4 A for LXM15MD40N4 40.4 A for LXM15MD56N4 40.4 A for LXM15HC11N4X 40.4 A for LXM05AD57N4 40.4 A for LXM05BD57N4 40.4 A for LXM05CD57N4 |
| Maximum permanent current | 45.2 A |
| Switching frequency | 4 kHz |
| Second shaft | Without second shaft end |
| Shaft diameter | 38 mm |
| Shaft length | 80 mm |
| Key width | 70 mm |
| Feedback type | Multiturn SinCos Hiperface |
| Holding torque | 80 N.m holding brake |
| Motor flange size | 205 mm |
| Number of motor stacks | 1 |
| Torque constant | 3.3 N.m/A at 120 °C |
| Back emf constant | 208 V/krpm at 120 °C |
| Rotor inertia | 93 kg.cm ² |
| Stator resistance | 1.1 Ohm at 20 °C |
| Stator inductance | 21.3 mH at 20 °C |
| Stator electrical time constant | 19.36 ms at 20 °C 19.4 ms at 20 °C |
| Maximum radial force Fr | 2580 N at 3000 rpm 2960 N at 2000 rpm 3730 N at 1000 rpm |

| | |
|---------------------------------------|--------------------|
| Maximum axial force Fa | 0.2 x Fr |
| Brake pull-in power | 40 W |
| Type of cooling | Natural convection |
| Length | 370.5 mm |
| Centring collar diameter | 180 mm |
| Centring collar depth | 4 mm |
| Number of mounting holes | 4 |
| Mounting holes diameter | 14 mm |
| Circle diameter of the mounting holes | 215 mm |
| Net weight | 38.6 kg |
| Sizing reference | BSH2051M |
| Network number of phases | 3 |
| Accuracy error [angular] | 1.4 ° |
| Temperature copper hot | 120 °C |
| Temperature magnet hot | 100 °C |
| Temperature magnet rt | 20 °C |

Packing Units

| | |
|------------------------------|-----|
| Unit Type of Package 1 | PCE |
| Number of Units in Package 1 | 1 |

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 Longer



Lifetime extension

Repair

No