

# Product datasheet

Specifications



servo motor BSH, Lexium 15,  
22.4N.m, 1500rpm, 205mm,  
untapped shaft, Sincos multi turn,  
with brake, IP50, straight

BSH2051P02F1A

! Discontinued

! Discontinued on: 31 Dec 2020

! End-of-service on: 25 Jan 2021

## Main

Device short name	BSH
Product or component type	Servo motor
Maximum mechanical speed	3800 rpm
Continuous stall torque	22.4 N.m for LXM15MD40N4, 230 V, three phase 22.4 N.m for LXM15MD40N4, 400 V, three phase 22.4 N.m for LXM15MD40N4, 480 V, three phase 32 N.m for LXM15MD56N4, 230 V, three phase 32 N.m for LXM15MD56N4, 400 V, three phase 32 N.m for LXM15MD56N4, 480 V, three phase 34 N.m for LXM15HC11N4X, 400 V, three phase 34 N.m for LXM15HC11N4X, 480 V, three phase 36 N.m for LXM15HC11N4X, 230 V, three phase
Peak stall torque	43.8 N.m for LXM15MD40N4, 230 V, three phase 43.8 N.m for LXM15MD40N4, 400 V, three phase 43.8 N.m for LXM15MD40N4, 480 V, three phase 61.2 N.m for LXM15MD56N4, 230 V, three phase 61.2 N.m for LXM15MD56N4, 400 V, three phase 61.2 N.m for LXM15MD56N4, 480 V, three phase 110 N.m for LXM15HC11N4X, 400 V, three phase 110 N.m for LXM15HC11N4X, 480 V, three phase 82 N.m for LXM15HC11N4X, 230 V, three phase
Nominal output power	3500 W for LXM15HC11N4X, 230 V, three phase 3500 W for LXM15MD40N4, 230 V, three phase 3500 W for LXM15MD56N4, 230 V, three phase 6600 W for LXM15HC11N4X, 400 V, three phase 6600 W for LXM15HC11N4X, 480 V, three phase 6600 W for LXM15MD40N4, 400 V, three phase 6600 W for LXM15MD40N4, 480 V, three phase 6600 W for LXM15MD56N4, 400 V, three phase 6600 W for LXM15MD56N4, 480 V, three phase
Nominal torque	21 N.m for LXM15HC11N4X, 400 V, three phase 21 N.m for LXM15HC11N4X, 480 V, three phase 21 N.m for LXM15MD40N4, 400 V, three phase 21 N.m for LXM15MD40N4, 480 V, three phase 21 N.m for LXM15MD56N4, 400 V, three phase 21 N.m for LXM15MD56N4, 480 V, three phase 22.4 N.m for LXM15HC11N4X, 230 V, three phase 22.4 N.m for LXM15MD40N4, 230 V, three phase 22.4 N.m for LXM15MD56N4, 230 V, three phase
Nominal speed	1500 rpm for LXM15MD40N4, 230 V, three phase 3000 rpm for LXM15MD40N4, 400 V, three phase 3000 rpm for LXM15MD40N4, 480 V, three phase 1500 rpm for LXM15MD56N4, 230 V, three phase 3000 rpm for LXM15MD56N4, 400 V, three phase 3000 rpm for LXM15MD56N4, 480 V, three phase 1500 rpm for LXM15HC11N4X, 230 V, three phase 3000 rpm for LXM15HC11N4X, 400 V, three phase 3000 rpm for LXM15HC11N4X, 480 V, three phase

<b>Product compatibility</b>	LXM15MD40N4 at 400 V three phase LXM15MD40N4 at 480 V three phase LXM15MD40N4 at 230 V three phase LXM15MD56N4 at 230 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 LXM15HC11N4X at 230 V three phase
<b>Shaft end</b>	Untapped
<b>IP degree of protection</b>	IP50 standard
<b>Speed feedback resolution</b>	131072 points/turn x 4096 turns
<b>Holding brake</b>	With
<b>Mounting support</b>	International standard flange
<b>Electrical connection</b>	Straight connectors

## Complementary

<b>Range compatibility</b>	Lexium 15
<b>supply voltage max</b>	480 V
<b>Network number of phases</b>	Three phase
<b>Continuous stall current</b>	21.5 A
<b>maximum continuous power</b>	6.93 W
<b>Maximum current Irms</b>	78.1 A for LXM15MD40N4 78.1 A for LXM15MD56N4 78.1 A for LXM15HC11N4X
<b>Maximum permanent current</b>	87.2 A
<b>Second shaft</b>	Without second shaft end
<b>Shaft diameter</b>	38 mm
<b>Shaft length</b>	80 mm
<b>Feedback type</b>	Multiturn SinCos Hiperface
<b>Holding torque</b>	80 N.m holding brake
<b>Motor flange size</b>	205 mm
<b>Number of motor stacks</b>	1
<b>Torque constant</b>	1.1 N.m/A at 120 °C
<b>Back emf constant</b>	104 V/krpm at 120 °C
<b>Rotor inertia</b>	93 kg.cm <sup>2</sup>
<b>Stator resistance</b>	0.3 Ohm at 20 °C
<b>Stator inductance</b>	5.7 mH at 20 °C
<b>Stator electrical time constant</b>	19 ms at 20 °C
<b>Maximum radial force Fr</b>	2580 N at 3000 rpm 2960 N at 2000 rpm 3730 N at 1000 rpm
<b>Maximum axial force Fa</b>	0.2 x Fr
<b>Brake pull-in power</b>	40 W
<b>Type of cooling</b>	Natural convection
<b>Length</b>	370.5 mm
<b>Centring collar diameter</b>	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
Product weight	38.6 kg
Sizing reference	BSH2051P
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
Package 1 Height	41 cm
Package 1 Width	31 cm
Package 1 Length	58.5 cm
Package 1 Weight	38.6 kg

## Contractual warranty

Warranty (in months)	18
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## 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

[Compliant By Exemption](#)

PVC free

Yes

### Use Longer



#### Lifetime extension

Repair

No

### Use Again



#### Repack and remanufacture

End of life manual availability

No need of specific recycling operations

WEEE Label



The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins