

Product data sheet

Specifications



servo motor BSH, Lexium 32,
14.4N.m, 3000rpm, 140mm, keyed
shaft, Sincos multi turn, with brake,
IP50, straight

BSH1402T12F1P

! Discontinued

! Discontinued on: Oct 9, 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	4000 rpm
Continuous stall torque	172.6 lbf.in (19.5 N.m) LXM32.D72N4 24 A, 400 V, three phase 172.6 lbf.in (19.5 N.m) LXM32.D72N4 24 A, 480 V, three phase 127.5 lbf.in (14.4 N.m) LXM05AD42M3X, 200...240 V, three phase 127.5 lbf.in (14.4 N.m) LXM05BD42M3X, 200...240 V, three phase 127.5 lbf.in (14.4 N.m) LXM05CD42M3X, 200...240 V, three phase
Peak stall torque	524.8 lbf.in (59.3 N.m) LXM32.D72N4 24 A, 400 V, three phase 524.8 lbf.in (59.3 N.m) LXM32.D72N4 24 A, 480 V, three phase 217.37 lbf.in (24.56 N.m) LXM05AD42M3X, 200...240 V, three phase 217.37 lbf.in (24.56 N.m) LXM05BD42M3X, 200...240 V, three phase
Nominal output power	3900 W LXM32.D72N4 24 A, 400 V, three phase 3900 W LXM32.D72N4 24 A, 480 V, three phase 2900 W LXM05AD42M3X, 200...240 V, three phase 2900 W LXM05BD42M3X, 200...240 V, three phase 2900 W LXM05CD42M3X, 200...240 V, three phase
Nominal torque	108.9 lbf.in (12.3 N.m) LXM32.D72N4 24 A, 400 V, three phase 108.9 lbf.in (12.3 N.m) LXM32.D72N4 24 A, 480 V, three phase 81.4 lbf.in (9.2 N.m) LXM05AD42M3X, 200...240 V, three phase 81.4 lbf.in (9.2 N.m) LXM05BD42M3X, 200...240 V, three phase 81.4 lbf.in (9.2 N.m) LXM05CD42M3X, 200...240 V, three phase
Nominal speed	3000 rpm LXM32.D72N4 24 A, 400 V, three phase 3000 rpm LXM32.D72N4 24 A, 480 V, three phase 3000 rpm LXM05AD42M3X, 200...240 V, three phase 3000 rpm LXM05BD42M3X, 200...240 V, three phase 3000 rpm LXM05CD42M3X, 200...240 V, three phase
Product compatibility	LXM05AD42M3X 200...240 V three phase LXM05BD42M3X 200...240 V three phase LXM05CD42M3X 200...240 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 32 Lexium 05
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Price is "List Price" and may be subject to a trade discount – check with your local distributor or retailer for actual price.

supply voltage max	480 V
Phase	Three phase
Continuous stall current	22.5 A
maximum continuous power	4.2 W
Maximum current Irms	72 A LXM32.D72N4 75.2 A LXM05AD42M3X 75.2 A LXM05BD42M3X 75.2 A LXM05CD42M3X
Maximum permanent current	75.2 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)
Key width	1.6 in (40 mm)
Feedback type	Multiturn 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	2
Torque constant	0.87 N.m/A 248 °F (120 °C)
Back emf constant	101 V/krpm 248 °F (120 °C)
Rotor inertia	14.48 kg.cm ²
Stator resistance	0.6 Ohm 68 °F (20 °C)
Stator inductance	7.4 mH 68 °F (20 °C)
Stator electrical time constant	12.1 ms 68 °F (20 °C)
Maximum radial force Fr	1680 N 3000 rpm 1930 N 2000 rpm 2430 N 1000 rpm
Maximum axial force Fa	0.2 x Fr
Brake pull-in power	24 W
Type of cooling	Natural convection
Length	12.2 in (310.5 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	39.02 lb(US) (17.7 kg)
Sizing reference	BSH1402T
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	3389118361218
Returnability	No

Packing Units

Unit Type of Package 1	PCE
Nbr. of units in pkg.	1
Package 1 Height	10.6 in (27.0 cm)
Package 1 Width	10.6 in (27.0 cm)
Package 1 Length	19.0 in (48.2 cm)
Package weight(Lbs)	29.30 lb(US) (13.29 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](#)

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)
- (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	273	311

Dimensions in in.

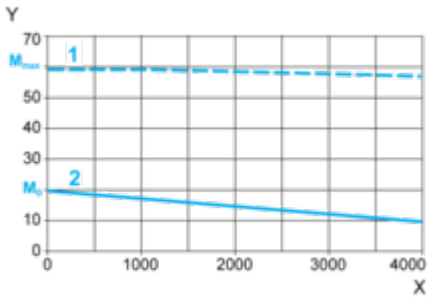
Straight connectors			Rotatable angled connectors			c (without brake)	c (with brake)
b	b1	b2	b	b1	b2		
7.57	2.12	1.00	7.81	2.36	1.55	10.74	12.24

Performance Curves

400 V 3-Phase Supply Voltage

Torque/Speed Curves

Servo motor with LXM32-D72N4 servo drive



X Speed in rpm

Y Torque in Nm

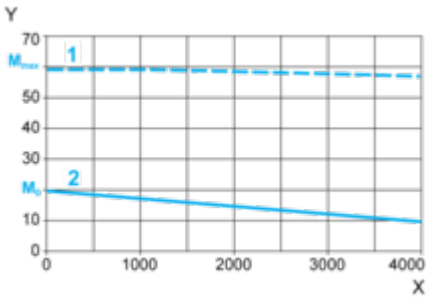
1 Peak torque

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