

Product data sheet

Specifications



servo motor BSH, Lexium 32,
14.4N.m, 3000rpm, 140mm,
untapped shaft, Sincos single turn,
without brake, IP65

BSH1402T21A2P

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	Untapped
IP Degree of Protection	IP65 standard IP67 with IP67 kit
Speed feedback resolution	131072 points/turn
Holding brake	Without
Mounting Support	International standard flange
Electrical Connection	Rotatable right-angled connectors

Complementary

Range Compatibility	Lexium 32 Lexium 05
supply voltage max	480 V

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

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)
Feedback type	Single turn SinCos Hiperface
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)
Number of motor poles	5.0
Rotor inertia	12.68 kg.cm ²
Stator resistance	0.6 Ohm 68 °F (20 °C)
Stator inductance	1.325 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
Type of cooling	Natural convection
Length	10.7 in (272.5 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)
Product Weight	36.6 lb(US) (16.6 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)
Output current 3s peak	75.2 A
Inertia	0.0 kg.cm ² of brake 12.68 kg.cm ² of motor

Ordering and shipping details

Category	US1PC5318282
Discount Schedule	PC53
GTIN	3389118361249
Returnability	No
Country of origin	DE

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)	38.1 lb(US) (17.3 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	4 255 kg CO2 eq.
Carbon footprint of the manufacturing phase [A1 to A3]	50 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]	4 202 kg CO2 eq.
Carbon footprint of the end-of-life phase [C1 to C4]	1 kg CO2 eq.

Use Better



Materials and Substances

Packaging made with recycled cardboard	Yes
Packaging without single use plastic	No
EU RoHS Directive	Compliant By Exemption
REACH Regulation	Reference contains Substances of Very High Concern above the threshold
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		
192.5	54	25.5	198.5	60	39.5	273	311

Dimensions in in.

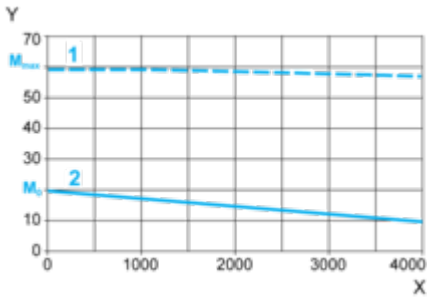
Straight connectors			Rotatable angled connectors			c (without brake)	c (with brake)
b	b1	b2	b	b1	b2		
7.57	2.12	1.00	7.81	2.36	1.55	10.74	12.24

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

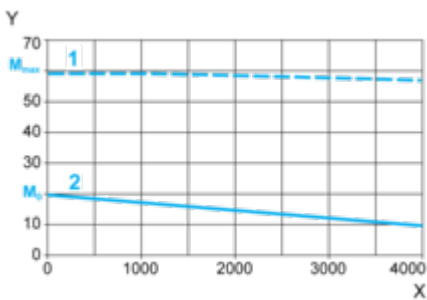
1 Peak torque

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