

Product data sheet

Specifications



servo motor BSH, Lexium 32,
27.8N.m, 3000rpm, 140mm, keyed
shaft, Sincos single turn, without
brake, IP65

BSH1403T31A2P

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

Main

Device short name	BSH
Product or Component Type	Servo motor
Maximum mechanical speed	4800 rpm
Continuous stall torque	246.05 lbf.in (27.8 N.m) LXM32.D72N4 24 A, 400 V, three phase 246.05 lbf.in (27.8 N.m) LXM32.D72N4 24 A, 480 V, three phase
Peak stall torque	798.3 lbf.in (90.2 N.m) LXM32.D72N4 24 A, 400 V, three phase 798.3 lbf.in (90.2 N.m) LXM32.D72N4 24 A, 480 V, three phase
Nominal output power	4100 W LXM32.D72N4 24 A, 400 V, three phase 4100 W LXM32.D72N4 24 A, 480 V, three phase
Nominal torque	114.2 lbf.in (12.9 N.m) LXM32.D72N4 24 A, 400 V, three phase 114.2 lbf.in (12.9 N.m) LXM32.D72N4 24 A, 480 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
Product compatibility	LXM32.D72N4 400 V three phase LXM32.D72N4 480 V three phase
Shaft end	Keyed
IP Degree of Protection	IP65 standard IP67 with IP67 kit
Speed feedback resolution	131072 points/turn
Holding brake	Without
Mounting Support	International standard
Electrical Connection	Rotatable right-angled connectors

Complementary

Range Compatibility	Lexium 32
supply voltage max	480 V
Phase	Three phase
Continuous stall current	22.3 A
maximum continuous power	3.3 W
Maximum current Irms	72 A LXM32.D72N4
Maximum permanent current	81.3 A
Switching frequency	8 kHz
Second shaft	Without second shaft end
Shaft diameter	0.9 in (24 mm)

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

Disclaimer: This documentation is not intended as a substitute for and is not to be used for determining suitability or reliability of these products for specific user applications

Shaft length	2.0 in (50 mm)
key width	1.6 in (40 mm)
Feedback type	Single turn SinCos Hiperface
Motor flange size	5.5 in (140 mm)
Number of motor stacks	3
Torque constant	1.25 N.m/A 248 °F (120 °C)
Back emf constant	105 V/krpm 248 °F (120 °C)
Number of motor poles	10
Rotor inertia	12.68 kg.cm ²
Stator resistance	0.4 Ohm 68 °F (20 °C)
Stator inductance	5.1 mH 68 °F (20 °C)
Stator electrical time constant	12.75 ms 68 °F (20 °C)
Maximum radial force Fr	1780 N 3000 rpm 2030 N 2000 rpm 2560 N 1000 rpm
Maximum axial force Fa	0.2 x Fr
type of cooling	Natural convection
Length	12.9 in (327.5 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	46.7 lb(US) (21.2 kg)
Sizing reference	BSH1403T
Network number of phases	3
Accuracy error [angular]	1.4 °
Coefficient 1_1	-0.0049666666666668526 N.m/rpm
Coefficient 1_2	0.000000000000000057467972970911 N.m/rpm ²
Coefficient 1_3	-0.00000000000000000063275779791 N.m/rpm ³
Coefficient 1_4	0.000000000000000000031221968 N.m/rpm ⁴
Coefficient 1_5	-0.000000000000000000007068 N.m/rpm ⁵
Coefficient 1_6	0 N.m/rpm ⁶
Saturation coefficient 1	-0.000000000000000014061099690279
Saturation coefficient 2	-0.00514459240608749
Saturation coefficient 3	0.00000000000000000733247529861
Temperature copper hot	248 °F (120 °C)
Temperature magnet hot	212 °F (100 °C)
Temperature magnet rt	68 °F (20 °C)
Motor voltage drop coefficient	1

Ordering and shipping details

Category	US1PC5318282
Discount Schedule	PC53
GTIN	3606485201535
Returnability	No
Country of origin	DE

Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	10.63 in (27.0 cm)
Package 1 Width	10.63 in (27.0 cm)
Package 1 Length	18.98 in (48.2 cm)
Package 1 Weight	25.4 lb(US) (11.5 kg)

Contractual warranty

Warranty	18 months
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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 >](#)

Environmental footprint	
Carbon footprint (kg CO2 eq, Total Life cycle)	4469
Environmental Disclosure	Product Environmental Profile

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
PVC free	Yes

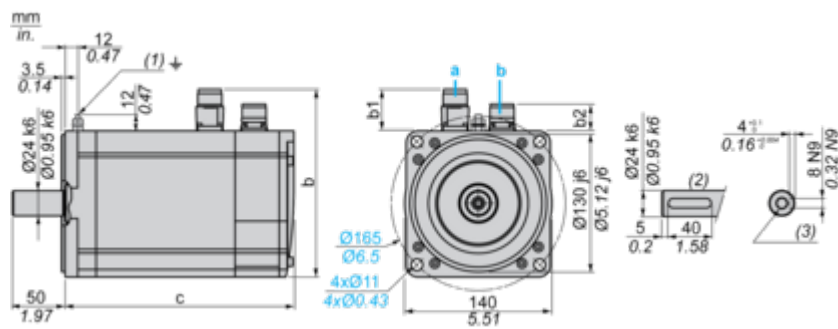
Use Again

Repack and remanufacture	
Circularity Profile	No need of specific recycling operations
Take-back	No
WEEE	 The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins.

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.

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	328	366

Dimensions in in.

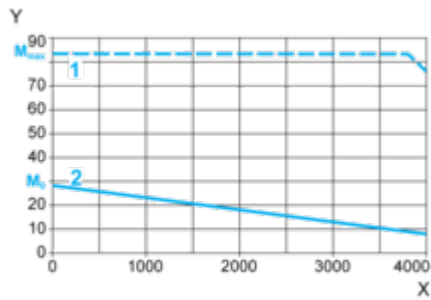
Straight connectors			Rotatable angled connectors			c (without brake)	c (with brake)
b	b1	b2	b	b1	b2		
7.57	2.12	1.00	7.81	2.36	1.55	12.91	14.40

Performance Curves

400 V 3-Phase Supply Voltage

Torque/Speed Curves

Servo motor with LXM32•D72N4 servo drive

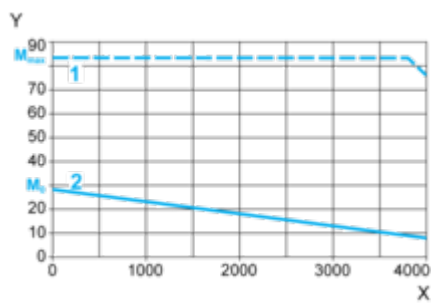


- X Speed in rpm
- Y Torque in Nm
- 1 Peak torque
- 2 Continuous torque

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