# Product data sheet

Specifications





# AC servo motor BSH, Lexium 05, 7.8N.m, 2500rpm, untapped shaft, without brake, IP50

BSH1003P02A2A

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

## Price\*: 3,000.00 USD

## Main

Product Or Component Type	Servo motor						
Device Short Name	BSH						
Maximum Mechanical Speed	6000 rpm						
Continuous Stall Torque	70.81 lbf.in (8 N.m) LXM32.D30N4 10 A, 400 V, three phase 70.81 lbf.in (8 N.m) LXM32.D30N4 10 A, 480 V, three phase 69.04 lbf.in (7.8 N.m) LXM05CD28M2, 200240 V, single phase 69.04 lbf.in (7.8 N.m) LXM05DD28M2, 200240 V, single phase 69.04 lbf.in (7.8 N.m) LXM05DD28M2, 200240 V, single phase 69.04 lbf.in (7.8 N.m) LXM05DD28M2, 200240 V, single phase 69.04 lbf.in (7.8 N.m) LXM05DD24M3, 200240 V, three phase 69.04 lbf.in (7.8 N.m) LXM05DD24M3X, 200240 V, three phase 69.04 lbf.in (7.8 N.m) LXM05CD34N4, 380480 V, three phase 69.04 lbf.in (7.8 N.m) LXM05CD34N3, 200240 V, three phase 59.30 lbf.in (6.7 N.m) LXM05CD42M3X, 200240 V, three phase 59.30 lbf.in (6.7 N.m) LXM15LD21M3, 230 V, three phase 59.30 lbf.in (6.7 N.m) LXM15LD17N4, 400 V, three phase 59.30 lbf.in (6.7 N.m) LXM15LD17N4, 400 V, three phase 69.04 lbf.in (7.8 N.m) LXM15LD28M3, 230 V, three phase 69.04 lbf.in (7.8 N.m) LXM15LD28M3, 230 V, three phase 69.04 lbf.in (7.8 N.m) LXM15LD28N4, 400 V, three phase 69.04 lbf.in (7.8 N.m) LXM15MD28N4, 480 V, three phase 69.04 lbf.in (7.8 N.m) LXM05AD34N4, 380480 V, three phase 69.04 lbf.in (7.8 N.m) LXM05AD34N4, 380480 V, three phase 69.04 lbf.in (7.8 N.m) LXM05AD34N4, 380480 V, three phase						
Peak Stall Torque	250.48 lbf.in (28.3 N.m) LXM32.D30N4 10 A, 400 V, three phase 250.48 lbf.in (28.3 N.m) LXM32.D30N4 10 A, 480 V, three phase 174.27 lbf.in (19.69 N.m) LXM05AD28M2, 200240 V, single phase 174.27 lbf.in (19.69 N.m) LXM05BD28M2, 200240 V, single phase 174.27 lbf.in (19.69 N.m) LXM05CD28M2, 200240 V, single phase 137.19 lbf.in (15.5 N.m) LXM05CD28M2, 200240 V, single phase 137.19 lbf.in (12.5 N.m) LXM15LD21M3, 230 V, three phase 110.63 lbf.in (12.5 N.m) LXM15LD17N4, 230 V, three phase 110.63 lbf.in (12.5 N.m) LXM15LD17N4, 400 V, three phase 110.63 lbf.in (12.5 N.m) LXM15LD17N4, 400 V, three phase 174.27 lbf.in (19.69 N.m) LXM15LD28M3, 230 V, three phase 174.27 lbf.in (19.69 N.m) LXM15MD28N4, 400 V, three phase 174.27 lbf.in (19.69 N.m) LXM15MD28N4, 480 V, three phase 205.07 lbf.in (23.17 N.m) LXM15MD40N4, 480 V, three phase 205.07 lbf.in (23.17 N.m) LXM15MD40N4, 480 V, three phase 205.07 lbf.in (23.17 N.m) LXM05AD34N4, 380480 V, three phase 205.07 lbf.in (23.17 N.m) LXM05BD42M3X, 200240 V, three phase 205.07 lbf.in (23.01 N.m) LXM05BD42M3X, 200240 V, three phase 205.07 lbf.in (23.01 N.m) LXM05BD42M3X, 200240 V, three phase 205.07 lbf.in (23.17 N.m) LXM05CD42M3X, 200240 V, three phase 205.07 lbf.in (23.17 N.m) LXM05CD42M3X, 200240 V, three phase						

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

000 W LXM32.D30N4 10 A, 400 V, three phase 600 W LXM32.D30N4 10 A, 480 V, three phase 100 W LXM05AD28M2, 200240 V, single phase 100 W LXM05BD28M2, 200240 V, single phase 100 W LXM05CD28M2, 200240 V, single phase 100 W LXM05AD42M3X, 200240 V, three phase 100 W LXM05BD42M3X, 200240 V, three phase 100 W LXM05CD42M3X, 200240 V, three phase							
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100 W LXM05BD42M3X, 200240 V, three phase							
100 W LXM05CD42M3X, 200240 V, three phase							
300 W LXM15LD28M3, 230 V, three phase							
700 W LXM15LD17N4, 230 V, three phase							
700 W LXM15LD21M3, 230 V, three phase							
800 W LXM05AD34N4, 380480 V, three phase							
800 W LXM05BD34N4, 380480 V, three phase							
800 W LXM05CD34N4, 380480 V, three phase							
000 W LXM15MD28N4, 400 V, three phase							
000 W LXM15MD40N4, 400 V, three phase							
200 W LXM15LD17N4, 400 V, three phase							
200 W LXM15MD28N4, 480 V, three phase							
200 W LXM15MD40N4, 480 V, three phase							
300 W LXM15LD17N4, 480 V, three phase							
5.76 lbf.in (6.3 N.m) LXM32.D30N4 10 A, 400 V, three phase							
5.76 lbf.in (6.3 N.m) LXM32.D30N4 10 A, 480 V, three phase							
2.75 lbf.in (3.7 N.m) LXM15LD17N4, 480 V, three phase							
9.57 lbf.in (6.73 N.m) LXM05AD28M2, 200240 V, single phase							
9.57 lbf.in (6.73 N.m) LXM05BD28M2, 200240 V, single phase							
9.57 lbf.in (6.73 N.m) LXM05CD28M2, 200240 V, single phase							
0.71 lbf.in (4.6 N.m) LXM15MD28N4, 480 V, three phase							
0.71 lbf.in (4.6 N.m) LXM15MD40N4, 480 V, three phase							
41.60 lbf.in (4.7 N.m) LXM15LD17N4, 400 V, three phase 44.25 lbf.in (5 N.m) LXM15MD28N4, 400 V, three phase							
0.45 lbf.in (5.7 N.m) LXM05AD34N4, 380480 V, three phase							
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0.45 lbf.in (5.7 N.m) LXM05CD34N4, 380480 V, three phase							
3.10 lbf.in (6 N.m) LXM15LD17N4, 230 V, three phase							
3.10 lbf.in (6 N.m) LXM15LD21M3, 230 V, three phase							
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500 rpm LXM15LD17N4, 230 V, three phase 500 rpm LXM15LD21M3, 230 V, three phase 000 rpm LXM05AD34N4, 380480 V, three phase 000 rpm LXM05BD34N4, 380480 V, three phase 000 rpm LXM05CD34N4, 380480 V, three phase 000 rpm LXM15MD28N4, 400 V, three phase 000 rpm LXM15MD40N4, 400 V, three phase							
500 rpm LXM15LD17N4, 230 V, three phase 500 rpm LXM15LD21M3, 230 V, three phase 000 rpm LXM05AD34N4, 380480 V, three phase 000 rpm LXM05BD34N4, 380480 V, three phase 000 rpm LXM05CD34N4, 380480 V, three phase 000 rpm LXM15MD28N4, 400 V, three phase							

Product Compatibility	LXM05AD28M2 200240 V single phase
	LXM05BD28M2 200240 V single phase
	LXM05CD28M2 200240 V single phase
	LXM15LD21M3 230 V three phase
	LXM05AD42M3X 200240 V three phase
	LXM05BD42M3X 200240 V three phase
	LXM05CD42M3X 200240 V three phase
	LXM15LD17N4 230 V three phase
	LXM15LD17N4 400 V three phase
	LXM15LD17N4 480 V three phase
	LXM15LD28M3 230 V three phase
	LXM05AD34N4 380480 V three phase
	LXM05BD34N4 380480 V three phase
	LXM05CD34N4 380480 V three phase
	LXM15MD28N4 400 V three phase
	LXM15MD28N4 480 V three phase
	LXM15MD40N4 400 V three phase
	LXM15MD40N4 480 V three phase
	LXM32.D30N4 400 V three phase
	LXM32.D30N4 480 V three phase
Shaft End	Untapped
Ip Degree Of Protection	IP50 standard
Speed Feedback Resolution	131072 points/turn x 4096 turns
Holding Brake	Without
Mounting Support	International standard flange
Electrical Connection	Rotatable right-angled connectors

# Complementary

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Range Compatibility	Lexium 05
	Lexium 32
	Lexium 15
Supply Voltage Max	480 V
Phase	Three phase
Continuous Stall Current	6.6 A
Maximum Continuous Power	3.14 W
Maximum Current Irms	28.3 A LXM15LD21M3
	28.3 A LXM15LD28M3
	28.3 A LXM15LD17N4
	28.3 A LXM15MD28N4
	28.3 A LXM15MD40N4
	28.3 A LXM05AD28M2
	28.3 A LXM05AD42M3X
	28.3 A LXM05AD34N4
	28.3 A LXM05BD28M2
	28.3 A LXM05BD42Mi2 28.3 A LXM05BD42M3X
	28.3 A LXM05BD34N4
	28.3 A LXM05CD28M2
	28.3 A LXM05CD42M3X
	28.3 A LXM05CD34N4
	28.3 A LXM32.D30N4
Maximum Permanent Current	28.3 A
Switching Frequency	8 kHz
Second Shaft	Without second shaft end
Shaft Diameter	0.75 in (19 mm)
Shaft Length	1.57 in (40 mm)
Feedback Type	Multiturn SinCos Hiperface
Motor Flange Size	3.94 in (100 mm)
Number Of Motor Stacks	3

Torque Constant	1.22 N.m/A 248 °F (120 °C)
Back Emf Constant	77 V/krpm 248 °F (120 °C)
Number Of Motor Poles	8
Rotor Inertia	3.22 kg.cm <sup>2</sup>
Stator Resistance	1.43 Ohm 68 °F (20 °C)
Stator Inductance	8.8 mH 68 °F (20 °C)
Stator Electrical Time Constant	6.15 ms 68 °F (20 °C)
Maximum Radial Force Fr	1050 N 1000 rpm 660 N 4000 rpm 730 N 3000 rpm 830 N 2000 rpm
Maximum Axial Force Fa	0.2 x Fr
Type Of Cooling	Natural convection
Length	9.47 in (240.5 mm)
Centring Collar Diameter	3.74 in (95 mm)
Centring Collar Depth	0.14 in (3.5 mm)
Number Of Mounting Holes	4
Mounting Holes Diameter	0.35 in (9 mm)
Circle Diameter Of The Mounting Holes	4.53 in (115 mm)
Net Weight	16.31 lb(US) (7.4 kg)

# Ordering and shipping details

Category	US1PC5318282
Discount Schedule	PC53
Gtin	3389118140097
Returnability	No
Country Of Origin	DE

## **Packing Units**

Unit Type Of Package 1	PCE
Number Of Units In Package 1	1
Package 1 Height	6.06 in (15.4 cm)
Package 1 Width	6.42 in (16.3 cm)
Package 1 Length	16.02 in (40.7 cm)
Package 1 Weight	16.53 lb(US) (7.5 kg)

# **Contractual warranty**

Warranty

18 months

## Sustainability Screen Premium

**Green Premium<sup>TM</sup> label** is Schneider Electric's commitment to delivering products with best-inclass environmental performance. Green Premium promises compliance with the latest regulations, transparency on environmental impacts, as well as circular and low-CO<sub>2</sub> products.

**Guide to assessing product sustainability** is a white paper that clarifies global eco-label standards and how to interpret environmental declarations.

Learn more about Green Premium >

Guide to assess a product's sustainability >



Transparency RoHS/REACh

#### Well-being performance

Mercury Free
Rohs Exemption Information Yes
Pvc Free

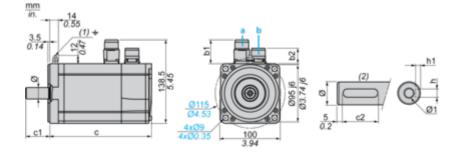
## **Certifications & Standards**

Reach Regulation	REACh Declaration						
Eu Rohs Directive	Pro-active compliance (Product out of EU RoHS legal scope)						
China Rohs Regulation	China RoHS declaration						
Environmental Disclosure	Product Environmental Profile						
Weee	The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins.						
Circularity Profile	No need of specific recycling operations						
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						

#### **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)

Dimensions in mm

Straight connectors		Rotatable angled connectors		c (without	c (with	c1	c2	h	h1	ø	Ø1 for
b1	b2	b1	b2	brake)	brake)						screws
39.5	25.5	39.5	39.5	241	272	40	30	6 N9	3.5 <sup>+0.1</sup> 0	19 k6	M6 x 16

Dimensions in in.

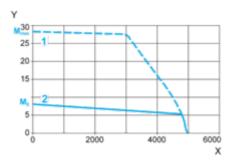
Straight Rotatable angled connectors connectors		c (without c (with		c1	c2	h	h1	ø	Ø1 for		
b1	b2	b1	b2	brake)	brake)						screws
1.55	1.00	1.55	1.55	9.48	10.70	1.57	1.18	0.24 N9	0.14 <sup>+0.1</sup> 0	0.75 k6	M6 x 0.63

### Performance Curves

#### 400 V 3-Phase Supply Voltage

#### **Torque/Speed Curves**

Servo motor with LXM32•D30N4 servo drive



 $\boldsymbol{X}$  Speed in rpm

Y Torque in Nm

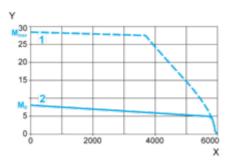
1 Peak torque

2 Continuous torque

#### 480 V 3-Phase Supply Voltage

#### **Torque/Speed Curves**

Servo motor with LXM32•D30N4 servo drive



X Speed in rpm

Y Torque in Nm

1 Peak torque

2 Continuous torque