Product datasheet

Specifications





AC servo motor BSH, Lexium 05, 9.31N.m, 1500rpm, untapped shaft, with brake, IP65

BSH1004P21F1A

() Discontinued on: 30 Jun 2023

① Discontinued

Main

Device short name	BSH						
Product or component type	Servo motor						
Maximum mechanical speed	6000 rpm						
Continuous stall torque	8 N.m for LXM32.D30N4 at 10 A, 400 V, three phase						
	8 N.m for LXM32.D30N4 at 10 A, 480 V, three phase						
	9.31 N.m for LXM15MD40N4, 400 V, three phase						
	9.31 N.m for LXM15MD40N4, 480 V, three phase						
	9.31 N.m for LXM15MD28M3, 230 V, three phase						
	9.31 N.m for LXM15MD28N4, 230 V, three phase						
	9.31 N.m for LXM15MD28N4, 400 V, three phase						
	9.31 N.m for LXM15MD28N4, 480 V, three phase						
	9.31 N.m for LXM15MD40N4, 230 V, three phase						
	9.31 N.m for LXM05AD34N4, 380480 V, three phase						
	9.31 N.m for LXM05AD42M3X, 200240 V, three phase						
	9.31 N.m for LXM05AD57N4, 380480 V, three phase						
	9.31 N.m for LXM05BD34N4, 380480 V, three phase						
	9.31 N.m for LXM05BD42M3X, 200240 V, three phase						
	9.31 N.m for LXM05BD57N4, 380480 V, three phase						
	9.31 N.m for LXM05CD34N4, 380480 V, three phase						
	9.31 N.m for LXM05CD42M3X, 200240 V, three phase						
	9.31 N.m for LXM05CD57N4, 380480 V, three phase						
Peak stall torque	37.9 N.m for LXM32.D30N4 at 10 A, 400 V, three phase						
	37.9 N.m for LXM32.D30N4 at 10 A, 480 V, three phase						
	25.7 N.m for LXM15MD28M3, 230 V, three phase						
	25.7 N.m for LXM15MD28N4, 230 V, three phase						
	25.7 N.m for LXM15MD28N4, 400 V, three phase						
	25.7 N.m for LXM15MD28N4, 480 V, three phase						
	33.83 N.m for LXM15MD40N4, 230 V, three phase						
	33.83 N.m for LXM15MD40N4, 400 V, three phase						
	33.83 N.m for LXM15MD40N4, 480 V, three phase						
	23.47 N.m for LXM05AD34N4, 380480 V, three phase						
	35.7 N.m for LXM05AD42M3X, 200240 V, three phase						
	35.7 N.m for LXM05AD57N4, 380480 V, three phase						
	23.47 N.m for LXM05BD34N4, 380480 V, three phase						
	35.7 N.m for LXM05BD42M3X, 200240 V, three phase						
	35.7 N.m for LXM05BD57N4, 380480 V, three phase						
	23.47 N.m for LXM05CD34N4, 380480 V, three phase						
	35.7 N.m for LXM05CD42M3X, 200240 V, three phase						
	35.7 N.m for LXM05CD57N4, 380480 V, three phase						

Nominal output power	2600 W for LXM32.D30N4 at 10 A, 480 V, three phase
	2100 W for LXM32.D30N4 at 10 A, 400 V, three phase
	1300 W for LXM05AD42M3X, 200240 V, three phase
	1300 W for LXM05BD42M3X, 200240 V, three phase
	1300 W for LXM05CD42M3X, 200240 V, three phase
	1300 W for LXM15MD28M3, 230 V, three phase
	1300 W for LXM15MD28N4, 230 V, three phase
	1300 W for LXM15MD40N4, 230 V, three phase
	2200 W for LXM05AD34N4, 380480 V, three phase
	2200 W for LXM05AD57N4, 380480 V, three phase
	2200 W for LXM05BD34N4, 380480 V, three phase
	2200 W for LXM05BD57N4, 380480 V, three phase
	2200 W for LXM05CD34N4, 380480 V, three phase
	2200 W for LXM05CD57N4, 380480 V, three phase 2200 W for LXM15MD28N4, 400 V, three phase
	2300 W for LXM15MD40N4, 400 V, three phase
	2400 W for LXM15MD40N4, 480 V, three phase
	2700 W for LXM15MD28N4, 480 V, three phase
Nominal torque	8.3 N.m for LXM32.D30N4 at 10 A, 400 V, three phase
	8.3 N.m for LXM32.D30N4 at 10 A, 480 V, three phase
	6.5 N.m for LXM15MD28N4, 480 V, three phase
	6.69 N.m for LXM15MD40N4, 480 V, three phase
	7 N.m for LXM15MD28N4, 400 V, three phase
	7.1 N.m for LXM05AD34N4, 380480 V, three phase 7.1 N.m for LXM05AD57N4, 380480 V, three phase
	7.1 N.m for LXM05BD34N4, 380480 V, three phase
	7.1 N.m for LXM05BD57N4, 380480 V, three phase
	7.1 N.m for LXM05CD34N4, 380480 V, three phase
	7.1 N.m for LXM05CD57N4, 380480 V, three phase
	7.17 N.m for LXM15MD40N4, 400 V, three phase
	8.18 N.m for LXM15MD40N4, 230 V, three phase
	8.22 N.m for LXM05AD42M3X, 200240 V, three phase
	8.22 N.m for LXM05BD42M3X, 200240 V, three phase
	8.22 N.m for LXM05CD42M3X, 200240 V, three phase
	8.22 N.m for LXM15LD28M3, 230 V, three phase
	8.22 N.m for LXM15MD28N4, 230 V, three phase
Nominal speed	2500 rpm for LXM32.D30N4 at 10 A, 400 V, three phase
·	3000 rpm for LXM32.D30N4 at 10 A, 480 V, three phase
	1500 rpm for LXM05AD42M3X, 200240 V, three phase
	1500 rpm for LXM05BD42M3X, 200240 V, three phase
	1500 rpm for LXM05CD42M3X, 200240 V, three phase
	3000 rpm for LXM05AD34N4, 380480 V, three phase
	3000 rpm for LXM05BD34N4, 380480 V, three phase
	3000 rpm for LXM05CD34N4, 380480 V, three phase
	1500 rpm for LXM15MD28M3, 230 V, three phase
	1500 rpm for LXM15MD28N4, 230 V, three phase
	1500 rpm for LXM15MD40N4, 230 V, three phase
	3000 rpm for LXM05AD57N4, 380480 V, three phase
	3000 rpm for LXM05BD57N4, 380480 V, three phase 3000 rpm for LXM05CD57N4, 380480 V, three phase
	3000 rpm for LXM15MD28N4, 400 V, three phase
	3000 rpm for LXM15MD40N4, 400 V, three phase
	3500 rpm for LXM15MD40N4, 480 V, three phase
	4000 rpm for LXM15MD28N4, 480 V, three phase
Product compatibility	LXM05AD42M3X at 200240 V three phase
	LXM05BD42M3X at 200240 V three phase
	LXM05CD42M3X at 200240 V three phase
	LXM05AD34N4 at 380480 V three phase
	LXM05BD34N4 at 380480 V three phase LXM05CD34N4 at 380480 V three phase
	LXM150D54144 at 300400 V three phase
	LXM15MD28N4 at 480 V three phase
	LXM15MD40N4 at 400 V three phase
	LXM15MD40N4 at 480 V three phase
	LXM32.D30N4 at 400 V three phase
	LXM32.D30N4 at 480 V three phase
	LXM05AD57N4 at 380480 V three phase
	LXM05BD57N4 at 380480 V three phase
	LXM05CD57N4 at 380480 V three phase
	LXM05CD57N4 at 380480 V three phase
	LXM05CD57N4 at 380480 V three phase LXM15MD28M3 at 230 V three phase

Shaft end

Untapped

IP degree of protection	IP65 standard IP67 with IP67 kit
Speed feedback resolution	131072 points/turn
Holding brake	With
mounting support	International standard flange
Electrical connection	Straight connectors

Complementary

e emprementar y	
Range compatibility	Lexium 15
0 1 5	Lexium 05
	Lexium 32
supply voltage max	480 V
Network number of phases	Three phase
Continuous stall current	6.2 A
maximum continuous power	3.64 W
Maximum current Irms	34.8 A for LXM15LD28M3
	34.8 A for LXM15MD28N4
	34.8 A for LXM15MD40N4
	32.3 A for LXM05AD42M3X
	32.3 A for LXM05AD34N4
	32.3 A for LXM05AD57N4
	32.3 A for LXM05BD42M3X
	32.3 A for LXM05BD34N4
	32.3 A for LXM05BD57N4
	32.3 A for LXM05CD42M3X
	32.3 A for LXM05CD34N4
	32.3 A for LXM05CD57N4
	30 A for LXM32.D30N4
Maximum permanent current	32.3 A
Switching frequency	8 kHz
Second shaft	Without second shaft end
Shaft diameter	24 mm
Shaft length	50 mm
Feedback type	Single turn SinCos Hiperface
Holding torque	12 N.m holding brake
Motor flange size	100 mm
Number of motor stacks	4
Torque constant	1.62 N.m/A at 120 °C
Back emf constant	103 V/krpm at 120 °C
Number of motor poles	8
Rotor inertia	5.245 kg.cm ²
Stator resistance	1.81 Ohm at 20 °C
Stator inductance	11.8 mH at 20 °C
Stator electrical time constant	6.52 ms at 20 °C
Maximum radial force Fr	1070 N at 1000 rpm
	740 N at 3000 rpm
	850 N at 2000 rpm
	· · ·
Maximum axial force Fa	0.2 x Fr
Brake pull-in power	17 W

Type of cooling	Natural convection					
Length	307.5 mm					
Centring collar diameter	95 mm					
Centring collar depth	3.5 mm					
Number of mounting holes	4					
Mounting holes diameter	9 mm					
Circle diameter of the mounting holes	115 mm					
Net weight	9.9 kg					

Packing Units

•	
Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	18.3 cm
Package 1 Width	16.3 cm
Package 1 Length	49.2 cm
Package 1 Weight	8.15 kg

Contractual warranty

Warranty

18 months

Sustainability Screen Premium

Green PremiumTM 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-CO₂ 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



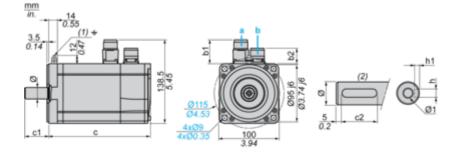
Certifications & Standards

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				

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	277	308	50	40	8 N9	4 ^{+0.1} 0	24 k6	M8 x 19

Dimensions in in.

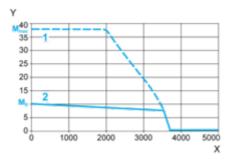
Straight Rotatable angled connectors connectors			c (with	c1	c2	h	h1	ø	Ø1 for		
b1	b2	b1	b2	brake)	brake)						screws
1.55	1.00	1.55	1.55	10.90	12.12	1.96	1.57	0.31 N9	0.16 ^{+0.1} 0	0.94 k6	M8 x 0.75

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

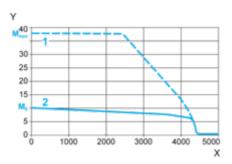
1 Peak torque

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