Product datasheet

Specifications





AC servo motor BSH, Lexium 05, 3.39N.m, 4000rpm, untapped shaft, with brake, IP65

BSH1001T21F1A

() Discontinued on: 30 Jun 2023

① Discontinued

Main

Device short name	BSH
Product or component type	Servo motor
Aaximum mechanical speed	6000 rpm
Continuous stall torque	3.3 N.m for LXM32.D30M2 at 10 A, 115 V, single phase
	3.39 N.m for LXM15LD28M3, 230 V, three phase
	3.4 N.m for LXM05AD28F1, 110120 V, single phase
	3.4 N.m for LXM05AD28M2, 200240 V, single phase
	3.4 N.m for LXM05AD42M3X, 200240 V, three phase
	3.4 N.m for LXM05BD28F1, 110120 V, single phase
	3.4 N.m for LXM05BD28M2, 200240 V, single phase
	3.4 N.m for LXM05BD42M3X, 200240 V, three phase
	3.4 N.m for LXM05CD28F1, 110120 V, single phase
	3.4 N.m for LXM05CD28M2, 200240 V, single phase
	3.4 N.m for LXM05CD42M3X, 200240 V, three phase
	2.7 N.m for LXM32.D18M2 at 6 A, 230 V, single phase
Peak stall torque	6.3 N.m for LXM32.D30M2 at 10 A, 115 V, single phase
	8.5 N.m for LXM05AD28F1, 110120 V, single phase
	8.5 N.m for LXM05AD28M2, 200240 V, single phase
	8.5 N.m for LXM05BD28F1, 110120 V, single phase
	8.5 N.m for LXM05BD28M2, 200240 V, single phase
	8.5 N.m for LXM05CD28F1, 110120 V, single phase
	8.5 N.m for LXM05CD28M2, 200240 V, single phase
	7.5 N.m for LXM32.D18M2 at 6 A, 230 V, single phase
	8.5 N.m for LXM15LD28M3, 230 V, three phase
	8.5 N.m for LXM05AD42M3X, 200240 V, three phase
	8.5 N.m for LXM05BD42M3X, 200240 V, three phase
	8.5 N.m for LXM05CD42M3X, 200240 V, three phase
Nominal output power	700 W for LXM32.D30M2 at 10 A, 115 V, single phase
	900 W for LXM32.D18M2 at 6 A, 230 V, single phase
	500 W for LXM05AD28F1, 110120 V, single phase
	500 W for LXM05BD28F1, 110120 V, single phase
	500 W for LXM05CD28F1, 110120 V, single phase
	900 W for LXM05AD28M2, 200240 V, single phase
	900 W for LXM05BD28M2, 200240 V, single phase
	900 W for LXM05CD28M2, 200240 V, single phase
	1150 W for LXM15LD28M3, 230 V, three phase
	900 W for LXM05AD42M3X, 200240 V, three phase
	900 W for LXM05BD42M3X, 200240 V, three phase
	900 W for LXM05CD42M3X, 200240 V, three phase
Iominal torque	2.75 N.m for LXM32.D30M2 at 10 A, 115 V, single phase
	2.9 N.m for LXM05AD28M2, 200240 V, single phase
	2.9 N.m for LXM05BD28M2, 200240 V, single phase
	2.9 N.m for LXM05CD28M2, 200240 V, single phase
	3.16 N.m for LXM05AD28F1, 110120 V, single phase
	3.16 N.m for LXM05BD28F1, 110120 V, single phase
	3.16 N.m for LXM05CD28F1, 110120 V, single phase
	3.16 N.m for LXM05CD28F1, 110120 V, single phase 2.2 N.m for LXM32.D18M2 at 6 A, 230 V, single phase 2.75 N.m for LXM15LD28M3, 230 V, three phase
	3.16 N.m for LXM05CD28F1, 110120 V, single phase 2.2 N.m for LXM32.D18M2 at 6 A, 230 V, single phase

Nominal speed	2500 rpm for LXM32.D30M2 at 10 A, 115 V, single phase 3000 rpm for LXM05AD28M2, 200240 V, single phase 3000 rpm for LXM05BD28M2, 200240 V, single phase 3000 rpm for LXM05CD28M2, 200240 V, single phase 3000 rpm for LXM05BD42M3X, 200240 V, three phase 3000 rpm for LXM05CD42M3X, 200240 V, three phase 3000 rpm for LXM05CD42M3X, 200240 V, three phase 4000 rpm for LXM05CD42M3X, 200240 V, single phase 1500 rpm for LXM05AD28F1, 110120 V, single phase 1500 rpm for LXM05CD28F1, 110120 V, single phase 4000 rpm for LXM05CD28F1, 110120 V, single phase
Product compatibility	LXM05AD28F1 at 110120 V single phase LXM05AD28M2 at 200240 V single phase LXM05BD28F1 at 110120 V single phase LXM05BD28M2 at 200240 V single phase LXM05CD28F1 at 110120 V single phase LXM05CD28M2 at 200240 V single phase LXM32.D30M2 at 115 V single phase LXM32.D18M2 at 230 V single phase LXM05AD42M3X at 200240 V three phase LXM05BD42M3X at 200240 V three phase LXM05CD42M3X at 200240 V three phase LXM05CD42M3X at 200240 V three phase LXM05CD42M3X 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

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Range compatibility	Lexium 32 Lexium 15 Lexium 05					
supply voltage max	480 V					
Network number of phases	Three phase					
Continuous stall current	7.3 A					
maximum continuous power	1.6 W					
Maximum current Irms	18 A for LXM32.D18M2 at 230 V 15 A for LXM32.D30M2 at 115 V 23 A for LXM15LD28M3 25.1 A for LXM05AD28F1 25.1 A for LXM05AD28M2 25.1 A for LXM05AD42M3X 25.1 A for LXM05BD28F1 25.1 A for LXM05BD28M2 25.1 A for LXM05BD42M3X 25.1 A for LXM05CD28F1 25.1 A for LXM05CD28M2 25.1 A for LXM05CD28M2 25.1 A for LXM05CD24M3X					
Maximum permanent current	25.1 A					
Switching frequency	8 kHz					
Second shaft	Without second shaft end					
Shaft diameter	19 mm					
Shaft length	40 mm					
Feedback type	Single turn SinCos Hiperface					
Holding torque	9 N.m holding brake					

Motor flange size	100 mm
Number of motor stacks	1
Torque constant	0.45 N.m/A at 120 °C
Back emf constant	29 V/krpm at 120 °C
Number of motor poles	8
Rotor inertia	2.018 kg.cm ²
Stator resistance	0.87 Ohm at 20 °C
Stator inductance	4 mH at 20 °C
Stator electrical time constant	4.6 ms at 20 °C
Maximum radial force Fr	530 N at 5000 rpm 570 N at 4000 rpm 630 N at 3000 rpm 720 N at 2000 rpm 900 N at 1000 rpm
Maximum axial force Fa	0.2 x Fr
Brake pull-in power	18 W
Type of cooling	Natural convection
Length	199.5 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	4.8 kg

Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	15.4 cm
Package 1 Width	16.3 cm
Package 1 Length	40.7 cm
Package 1 Weight	4.95 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



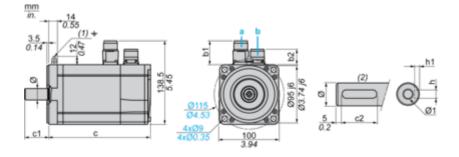
Certifications & Standards

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	169	200	40	30	6 N9	3.5 ^{+0.1} 0	19 k6	M6 x 16

Dimensions in in.

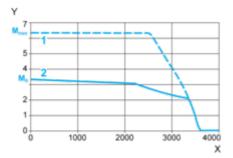
Straight Rotatable angled connectors connectors			c (with	` C1	c2	h	h1	ø	Ø1 for		
b1	b2	b1	b2	brake)	brake)						screws
1.55	1.00	1.55	1.55	6.65	7.87	1.57	1.18	0.24 N9	0.14 ^{+0.1} 0	0.75 k6	M6 x 0.63

Performance Curves

115 V Single-Phase Supply Voltage

Torque/Speed Curves

Servo motor with LXM32•D30M2 servo drive



 \boldsymbol{X} Speed in rpm

Y Torque in Nm

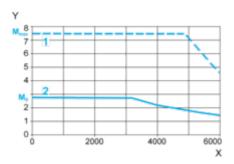
1 Peak torque

2 Continuous torque

230 V Single-Phase Supply Voltage

Torque/Speed Curves

Servo motor with LXM32•D18M2 servo drive



X Speed in rpm

Y Torque in Nm

1 Peak torque

2 Continuous torque