Product datasheet

Specifications





AC servo motor BSH, Lexium 05, 2.7N.m, 3000rpm, untapped shaft, with brake, IP50

BSH1001P02F1A

! Discontinued on: 01-Nov-2020

① Discontinued

Main

Main							
Device short name	BSH						
Product or component type	Servo motor						
Maximum mechanical speed	6000 rpm						
Continuous stall torque	3.39 N.m for LXM15LD21M3, 230 V, single phase						
	2.7 N.m for LXM15LD10N4, 230 V, three phase						
	3.39 N.m for LXM15LD10N4, 400 V, three phase						
	3.39 N.m for LXM15LD10N4, 480 V, three phase						
	3.39 N.m for LXM15LD21M3, 230 V, three phase						
	3.39 N.m for LXM15LD17N4, 230 V, three phase						
	3.39 N.m for LXM15LD17N4, 400 V, three phase						
	3.39 N.m for LXM15LD17N4, 480 V, three phase						
	3.4 N.m for LXM05AD17M3X, 200240 V, three phase						
	3.4 N.m for LXM05AD22N4, 380480 V, three phase						
	3.4 N.m for LXM05BD17M3X, 200240 V, three phase						
	3.4 N.m for LXM05BD22N4, 380480 V, three phase						
	3.4 N.m for LXM05CD17M3X, 200240 V, three phase						
	3.4 N.m for LXM05CD22N4, 380480 V, three phase						
	3.3 N.m for LXM32.D18N4 at 6 A, 400 V, three phase 3.3 N.m for LXM32.D18N4 at 6 A, 480 V, three phase						
Peak stall torque	7.08 N.m for LXM15LD21M3, 230 V, single phase						
·	6.19 N.m for LXM15LD10N4, 230 V, three phase						
	6.19 N.m for LXM15LD10N4, 400 V, three phase						
	6.19 N.m for LXM15LD10N4, 480 V, three phase						
	7.08 N.m for LXM15LD21M3, 230 V, three phase						
	7.08 N.m for LXM15LD17N4, 230 V, three phase						
	7.08 N.m for LXM15LD17N4, 400 V, three phase						
	7.08 N.m for LXM15LD17N4, 480 V, three phase						
	7.1 N.m for LXM05AD17M3X, 200240 V, three phase						
	7.1 N.m for LXM05AD22N4, 380480 V, three phase						
	7.1 N.m for LXM05BD17M3X, 200240 V, three phase						
	7.1 N.m for LXM05BD22N4, 380480 V, three phase						
	7.1 N.m for LXM05CD17M3X, 200240 V, three phase						
	7.1 N.m for LXM05CD22N4, 380480 V, three phase						
	9.6 N.m for LXM32.D18N4 at 6 A, 400 V, three phase						
	9.6 N.m for LXM32.D18N4 at 6 A, 480 V, three phase						
Nominal output power	1300 W for LXM15LD17N4, 400 V, three phase						
	1500 W for LXM15LD10N4, 480 V, three phase						
	950 W for LXM15LD21M3, 230 V, single phase						
	1300 W for LXM15LD10N4, 400 V, three phase						
	1500 W for LXM15LD17N4, 480 V, three phase						
	500 W for LXM05AD17M3X, 200240 V, three phase 500 W for LXM05BD17M3X, 200240 V, three phase						
	500 W for LXM05CD17M3X, 200240 V, three phase						
	850 W for LXM15LD10N4, 230 V, three phase						
	900 W for LXM05AD22N4, 380480 V, three phase						
	900 W for LXM05BD22N4, 380480 V, three phase						
	900 W for LXM05CD22N4, 380480 V, three phase						
	950 W for LXM15LD17N4, 230 V, three phase						
	950 W for LXM15LD21M3, 230 V, three phase						
	1100 W for LXM32.D18N4 at 6 A, 400 V, three phase						
	and the second s						

1100 W for LXM32.D18N4 at 6 A, 480 V, three phase

Nominal torque	3 N.m for LXM15LD21M3, 230 V, single phase
	2.5 N.m for LXM15LD10N4, 480 V, three phase 2.5 N.m for LXM15LD17N4, 480 V, three phase
	2.7 N.m for LXM15LD10N4, 230 V, three phase
	2.7 N.m for LXM15LD10N4, 400 V, three phase
	2.7 N.m for LXM15LD17N4, 400 V, three phase
	2.92 N.m for LXM05AD22N4, 380480 V, three phase 2.92 N.m for LXM05BD22N4, 380480 V, three phase
	2.92 N.m for LXM05CD22N4, 380480 V, three phase
	3 N.m for LXM15LD17N4, 230 V, three phase
	3 N.m for LXM15LD21M3, 230 V, three phase
	3.16 N.m for LXM05AD17M3X, 200240 V, three phase
	3.16 N.m for LXM05BD17M3X, 200240 V, three phase 3.16 N.m for LXM05CD17M3X, 200240 V, three phase
	2.7 N.m for LXM32.D18N4 at 6 A, 400 V, three phase
	2.7 N.m for LXM32.D18N4 at 6 A, 480 V, three phase
Nominal speed	3000 rpm for LXM15LD10N4, 230 V, three phase
	3000 rpm for LXM15LD21M3, 230 V, single phase
	3000 rpm for LXM05AD22N4, 380480 V, three phase 3000 rpm for LXM05BD22N4, 380480 V, three phase
	3000 rpm for LXM05CD22N4, 380480 V, three phase
	3000 rpm for LXM15LD17N4, 230 V, three phase
	3000 rpm for LXM15LD21M3, 230 V, three phase
	1500 rpm for LXM05AD17M3X, 200240 V, three phase
	1500 rpm for LXM05BD17M3X, 200240 V, three phase 1500 rpm for LXM05CD17M3X, 200240 V, three phase
	4500 rpm for LXM15LD10N4, 400 V, three phase
	4500 rpm for LXM15LD17N4, 400 V, three phase
	6000 rpm for LXM15LD10N4, 480 V, three phase
	6000 rpm for LXM15LD17N4, 480 V, three phase
	4000 rpm for LXM32.D18N4 at 6 A, 400 V, three phase 4000 rpm for LXM32.D18N4 at 6 A, 480 V, three phase
Product compatibility	LXM15LD21M3 at 230 V single phase
	LXM15LD10N4 at 400 V three phase LXM05AD17M3X at 200240 V three phase
	LXM05BD17M3X at 200240 V three phase
	LXM05CD17M3X at 200240 V three phase
	LXM15LD10N4 at 230 V three phase
	LXM15LD10N4 at 480 V three phase LXM15LD21M3 at 230 V three phase
	LXM15LD17N4 at 230 V three phase
	LXM05AD22N4 at 380480 V three phase
	LXM05BD22N4 at 380480 V three phase
	LXM05CD22N4 at 380480 V three phase
	LXM15LD17N4 at 400 V three phase LXM15LD17N4 at 480 V three phase
	LXM32.D18N4 at 400 V three phase
	LXM32.D18N4 at 480 V three phase
Shaft end	Untapped
IP degree of protection	IP50 standard
Speed feedback resolution	131072 points/turn x 4096 turns
Holding brake	With
mounting support	International standard flange
Electrical connection	Straight connectors
Complementary	
Range compatibility	Lexium 15
	Lexium 32 Lexium 05
supply voltage max	480 V
Network number of phases	Three phase
Continuous stall current	3.5 A
maximum continuous power	1.6 W
	1.0 11

Maximum current Irms	12 A for LXM15LD21M3 12 A for LXM15LD10N4 12 A for LXM15LD17N4
	12 A for LXM15LD17N4 12 A for LXM05AD17M3X
	12 A for LXM05AD22N4
	12 A for LXM05BD17M3X
	12 A for LXM05BD22N4
	12 A for LXM05CD17M3X
	12 A for LXM05CD22N4 12 A for LXM32.D18N4
Maximum permanent current	12 A
Switching frequency	8 kHz
Second shaft	Without second shaft end
Shaft diameter	19 mm
Shaft length	40 mm
Feedback type	Multiturn SinCos Hiperface
Holding torque	9 N.m holding brake
Motor flange size	100 mm
Number of motor stacks	1
Torque constant	0.89 N.m/A at 120 °C
Back emf constant	60 V/krpm at 120 °C
Number of motor poles	8
Rotor inertia	2.018 kg.cm ²
Stator resistance	3.8 Ohm at 20 °C
Stator inductance	17.6 mH at 20 °C
Stator electrical time constant	4.63 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

04-Sept-2024



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.

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Transparency RoHS/REACh

Well-being performance

	Mercury Free	
⊘	Rohs Exemption Information	Yes
②	Pvc Free	

Certifications & Standards

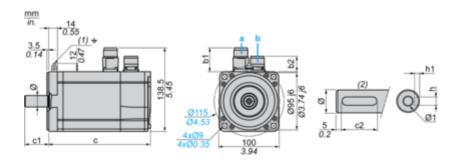
Eu Rohs Directive	Pro-active compliance (Product out of EU RoHS legal scope)
China Rohs Regulation	China RoHS declaration
Environmental Disclosure	Product Environmental Profile
Weee	The product must be disposed on European Union markets following specific waste collection and never end up in rubbish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

BSH1001P02F1A

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 connectors		Rotatable angled connectors		c (without	c (with	c1	c2	h	h1	Ø	Ø1 for
b1	b2	b1	b2	brake)	orake) 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

Product datasheet

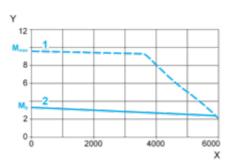
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Performance Curves

400 V 3-Phase Supply Voltage

Torque/Speed Curves

Servo motor with LXM32•D18N4 servo drive

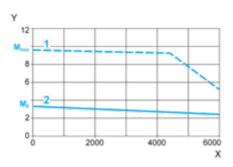


- **X** Speed in rpm
- Y Torque in Nm
- 1 Peak torque
- 2 Continuous torque

480 V 3-Phase Supply Voltage

Torque/Speed Curves

Servo motor with LXM32•D18N4 servo drive



- X Speed in rpm
- ${\bf Y}$ Torque in Nm
- 1 Peak torque
- 2 Continuous torque