## **Product datasheet**

Specifications





# AC servo motor BSH, Lexium 05, 2.7N.m, 3000rpm, untapped shaft, without brake, IP65

BSH1001P22A2A

#### 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, 200 V, three phase					
	6.19 N.m for LXM15LD1014, 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 LXM15LD17N4, 230 V, three phase 950 W for LXM15LD21M3, 230 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	IP65 standard
	IP67 with IP67 kit
Speed feedback resolution	131072 points/turn x 4096 turns
Holding brake	Without
mounting support	International standard flange
Electrical connection	Rotatable right-angled connectors
Complementary	
Range compatibility	Lexium 15
	Lexium 32

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

Maximum current Irms	12 A for LXM15LD21M3 12 A for LXM15LD10N4 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 LXM05CD17M3X 12 A for LXM05CD22N4 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
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	1.4 kg.cm <sup>2</sup>
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
Type of cooling	Natural convection
Length	168.5 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	4.2 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	4.3 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.

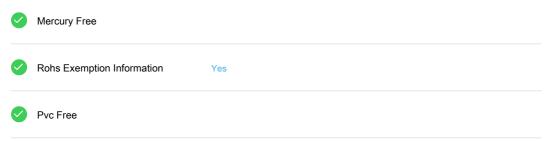
Learn more about Green Premium >

Guide to assess a product's sustainability >



Transparency RoHS/REACh

#### Well-being performance



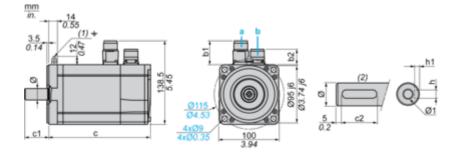
#### **Certifications & Standards**

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 <sup>+0.1</sup> 0	19 k6	M6 x 16

Dimensions in in.

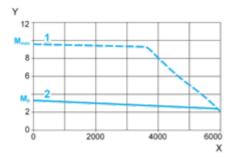
Straight Rotatable angled connectors connectors			c (with	` C1	c2	h	h1	ø	Ø1 for		
b1	b2	b1	b2	brake)	brake)						screws
1.55	1.00	1.55	1.55	6.65	7.87	1.57	1.18	0.24 N9	0.14 <sup>+0.1</sup> 0	0.75 k6	M6 x 0.63

#### Performance Curves

#### 400 V 3-Phase Supply Voltage

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

Servo motor with LXM32•D18N4 servo drive



 $\boldsymbol{X}$  Speed in rpm

Y Torque in Nm

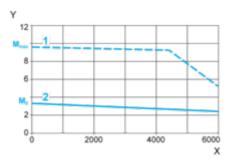
1 Peak torque

2 Continuous torque

#### 480 V 3-Phase Supply Voltage

#### Torque/Speed Curves

Servo motor with LXM32•D18N4 servo drive



X Speed in rpm

Y Torque in Nm

1 Peak torque

2 Continuous torque