## **Product datasheet**

Specifications





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

BSH1001T22F1A

() 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
Nominal 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 LXM05AD28F1, 110120 V, single phase 3.16 N.m for LXM05BD28F1, 110120 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 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 2.2 N.m for LXM32.D18M2 at 6 A, 230 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 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 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 2.2 N.m for LXM32.D18M2 at 6 A, 230 V, single phase

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 LXM05AD42M3X, 200240 V, three phase							
3000 rpm for LXM05BD42M3X, 200240 V, three phase							
3000 rpm for LXM05CD42M3X, 200240 V, three phase							
4000 rpm for LXM32.D18M2 at 6 A, 230 V, single phase							
1500 rpm for LXM05AD28F1, 110120 V, single phase							
1500 rpm for LXM05BD28F1, 110120 V, single phase							
1500 rpm for LXM05CD28F1, 110120 V, single phase							
4000 rpm for LXM15LD28M3, 230 V, three phase							
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							
LXM15LD28M3 at 230 V three phase							
Untapped							
IP65 standard							
IP67 with IP67 kit							
131072 points/turn x 4096 turns							
With							
International standard flange							
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	Multiturn 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 <sup>2</sup>
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 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.

Yes

Learn more about Green Premium >

Guide to assess a product's sustainability >



Transparency RoHS/REACh

#### Well-being performance

Mercury Free

Rohs Exemption Information

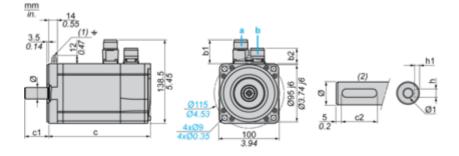
#### **Certifications & Standards**

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.

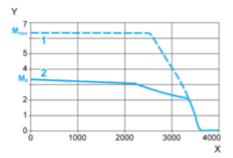
•		Rotatable	•	c (without	c (with	c1	c2	h	h1	ø	Ø1 for
b1	b2	b1	b2	brake)	brake)						screws
1.55	1.00	1.55	1.55	6.65	7.87	1.57	1.18	0.24 N9	0.14 <sup>+0.1</sup> 0	0.75 k6	M6 x 0.63

#### Performance Curves

#### 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

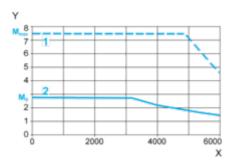
1 Peak torque

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