

**Main**

Product or component type	Servo motor
Device short name	BSH
Maximum mechanical speed	8000 rpm
Continuous stall torque	1.3 N.m for LXM32.U90M2 at 3 A, 230 V, single phase 1.4 N.m for LXM05AD10M3X, 200...240 V, three phase 1.4 N.m for LXM05BD10M3X, 200...240 V, three phase 1.4 N.m for LXM05CD10M3X, 200...240 V, three phase 1.4 N.m for LXM15LD13M3, 230 V, single phase 1.4 N.m for LXM05AD10F1, 110...120 V, single phase 1.4 N.m for LXM05AD17M2, 200...240 V, single phase 1.4 N.m for LXM05BD10F1, 110...120 V, single phase 1.4 N.m for LXM05BD17M2, 200...240 V, single phase 1.4 N.m for LXM05CD10F1, 110...120 V, single phase 1.4 N.m for LXM05CD17M2, 200...240 V, single phase 1.4 N.m for LXM32.D18M2 at 6 A, 115 V, single phase 0.7 N.m for LXM15LU60N4, 400 V, three phase 0.7 N.m for LXM15LU60N4, 480 V, three phase 0.91 N.m for LXM15LU60N4, 230 V, three phase 1.4 N.m for LXM15LD10N4, 230 V, three phase 1.4 N.m for LXM15LD10N4, 400 V, three phase 1.4 N.m for LXM15LD10N4, 480 V, three phase 1.4 N.m for LXM15LD13M3, 230 V, three phase 1.4 N.m for LXM15LD21M3, 230 V, three phase 1.4 N.m for LXM05AD17M3X, 200...240 V, three phase 1.4 N.m for LXM05BD17M3X, 200...240 V, three phase 1.4 N.m for LXM05CD17M3X, 200...240 V, three phase
Peak stall torque	3.5 N.m for LXM32.U90M2 at 3 A, 230 V, single phase 3.19 N.m for LXM15LD13M3, 230 V, single phase 2.42 N.m for LXM05AD10F1, 110...120 V, single phase 3.19 N.m for LXM05AD17M2, 200...240 V, single phase 2.42 N.m for LXM05BD10F1, 110...120 V, single phase 3.19 N.m for LXM05BD17M2, 200...240 V, single phase 2.42 N.m for LXM05CD10F1, 110...120 V, single phase 3.19 N.m for LXM05CD17M2, 200...240 V, single phase 3.5 N.m for LXM32.D18M2 at 6 A, 115 V, single phase 1.9 N.m for LXM15LU60N4, 400 V, three phase 1.9 N.m for LXM15LU60N4, 480 V, three phase 1.9 N.m for LXM15LU60N4, 230 V, three phase

Disclaimer: This documentation is not intended as a substitute for and is not to be used for determining suitability or reliability of these products for specific user applications

	2.91 N.m for LXM15LD10N4, 230 V, three phase 2.91 N.m for LXM15LD10N4, 400 V, three phase 2.91 N.m for LXM15LD10N4, 480 V, three phase 3.19 N.m for LXM15LD13M3, 230 V, three phase 3.19 N.m for LXM15LD21M3, 230 V, three phase 2.42 N.m for LXM05AD10M3X, 200...240 V, three phase 3.19 N.m for LXM05AD17M3X, 200...240 V, three phase 2.42 N.m for LXM05BD10M3X, 200...240 V, three phase 3.19 N.m for LXM05BD17M3X, 200...240 V, three phase 2.42 N.m for LXM05CD10M3X, 200...240 V, three phase 3.19 N.m for LXM05CD17M3X, 200...240 V, three phase
Nominal output power	500 W for LXM32.U90M2 at 3 A, 230 V, single phase 350 W for LXM32.D18M2 at 6 A, 115 V, single phase 400 W for LXM05AD10M3X, 200...240 V, three phase 400 W for LXM05BD10M3X, 200...240 V, three phase 400 W for LXM05CD10M3X, 200...240 V, three phase 380 W for LXM05AD10F1, 110...120 V, single phase 380 W for LXM05BD10F1, 110...120 V, single phase 380 W for LXM05CD10F1, 110...120 V, single phase 400 W for LXM05AD17M2, 200...240 V, single phase 400 W for LXM05BD17M2, 200...240 V, single phase 400 W for LXM05CD17M2, 200...240 V, single phase 654 W for LXM15LD13M3, 230 V, single phase 1000 W for LXM15LD10N4, 400 V, three phase 1000 W for LXM15LD10N4, 480 V, three phase 400 W for LXM05AD17M3X, 200...240 V, three phase 400 W for LXM05BD17M3X, 200...240 V, three phase 400 W for LXM05CD17M3X, 200...240 V, three phase 440 W for LXM15LU60N4, 230 V, three phase 564 W for LXM15LD10N4, 230 V, three phase 586 W for LXM15LU60N4, 400 V, three phase 586 W for LXM15LU60N4, 480 V, three phase 654 W for LXM15LD13M3, 230 V, three phase 654 W for LXM15LD21M3, 230 V, three phase
Nominal torque	0.94 N.m for LXM32.U90M2 at 3 A, 230 V, single phase 1.25 N.m for LXM15LD13M3, 230 V, single phase 1.36 N.m for LXM32.D18M2 at 6 A, 115 V, single phase 0.7 N.m for LXM15LU60N4, 230 V, three phase 0.7 N.m for LXM15LU60N4, 400 V, three phase 0.7 N.m for LXM15LU60N4, 480 V, three phase 1.23 N.m for LXM15LD10N4, 400 V, three phase 1.23 N.m for LXM15LD10N4, 480 V, three phase 1.25 N.m for LXM15LD10N4, 230 V, three phase 1.25 N.m for LXM15LD13M3, 230 V, three phase 1.25 N.m for LXM15LD21M3, 230 V, three phase
Nominal speed	5000 rpm for LXM32.U90M2 at 3 A, 230 V, single phase 3000 rpm for LXM05AD10F1, 110...120 V, single phase 3000 rpm for LXM05BD10F1, 110...120 V, single phase 3000 rpm for LXM05CD10F1, 110...120 V, single phase 3000 rpm for LXM05AD10M3X, 200...240 V, three phase 3000 rpm for LXM05BD10M3X, 200...240 V, three phase 3000 rpm for LXM05CD10M3X, 200...240 V, three phase 8000 rpm for LXM15LD10N4, 400 V, three phase 3000 rpm for LXM05AD17M2, 200...240 V, single phase 3000 rpm for LXM05BD17M2, 200...240 V, single phase 3000 rpm for LXM05CD17M2, 200...240 V, single phase 3000 rpm for LXM05AD17M3X, 200...240 V, three phase 3000 rpm for LXM05BD17M3X, 200...240 V, three phase 3000 rpm for LXM05CD17M3X, 200...240 V, three phase 5000 rpm for LXM15LD13M3, 230 V, single phase 2500 rpm for LXM32.D18M2 at 6 A, 115 V, single phase 5000 rpm for LXM15LD10N4, 230 V, three phase 5000 rpm for LXM15LD13M3, 230 V, three phase 5000 rpm for LXM15LD21M3, 230 V, three phase 6000 rpm for LXM15LU60N4, 230 V, three phase 8000 rpm for LXM15LD10N4, 480 V, three phase 8000 rpm for LXM15LU60N4, 400 V, three phase 8000 rpm for LXM15LU60N4, 480 V, three phase
Product compatibility	LXM05AD10F1 at 110...120 V single phase LXM05AD17M2 at 200...240 V single phase LXM05BD10F1 at 110...120 V single phase LXM05BD17M2 at 200...240 V single phase LXM05CD10F1 at 110...120 V single phase LXM05CD17M2 at 200...240 V single phase

LXM15LD13M3 at 230 V single phase  
 LXM32.U90M2 at 230 V single phase  
 LXM32.D18M2 at 115 V single phase  
 LXM15LU60N4 at 230 V three phase  
 LXM05AD10M3X at 200...240 V three phase  
 LXM05BD10M3X at 200...240 V three phase  
 LXM05CD10M3X at 200...240 V three phase  
 LXM15LD13M3 at 230 V three phase  
 LXM15LU60N4 at 400 V three phase  
 LXM15LU60N4 at 480 V three phase  
 LXM15LD10N4 at 400 V three phase  
 LXM05AD17M3X at 200...240 V three phase  
 LXM05BD17M3X at 200...240 V three phase  
 LXM05CD17M3X at 200...240 V three phase  
 LXM15LD10N4 at 230 V three phase  
 LXM15LD10N4 at 480 V three phase  
 LXM15LD21M3 at 230 V three phase

Shaft end	Keyed
IP degree of protection	IP50 standard
Speed feedback resolution	131072 points/turn
Holding brake	With
Mounting support	International standard flange
Electrical connection	Rotatable right-angled connectors

### Complementary

Range compatibility	Lexium 05 Lexium 32 Lexium 15
Supply voltage max	480 V
Network number of phases	Three phase
Continuous stall current	3.2 A
Maximum continuous power	1.06 W
Maximum current $I_{rms}$	10 A for LXM32.D18M2 9 A for LXM32.U90M2 9.9 A for LXM15LD13M3 9.9 A for LXM15LD21M3 9.9 A for LXM15LU60N4 9.9 A for LXM15LD10N4
Maximum permanent current	10.1 A
Switching frequency	8 kHz
Second shaft	Without second shaft end
Shaft diameter	11 mm
Shaft length	23 mm
Key width	18 mm
Feedback type	Single turn SinCos Hiperface
Holding torque	2 N.m holding brake
Motor flange size	70 mm
Number of motor stacks	1
Torque constant	0.44 N.m/A at 120 °C
Back emf constant	26 V/krpm at 120 °C
Number of motor poles	6
Rotor inertia	0.322 kg.cm <sup>2</sup>
Stator resistance	3.3 Ohm at 20 °C
Stator inductance	12.3 mH at 20 °C
Stator electrical time constant	3.73 ms at 20 °C
Maximum radial force $F_r$	360 N at 6000 rpm 380 N at 5000 rpm 410 N at 4000 rpm 460 N at 3000 rpm 520 N at 2000 rpm 660 N at 1000 rpm

Maximum axial force Fa	0.2 x Fr
Brake pull-in power	10 W
Type of cooling	Natural convection
Length	179.5 mm
Centring collar diameter	60 mm
Centring collar depth	2.5 mm
Number of mounting holes	4
Mounting holes diameter	5.5 mm
Circle diameter of the mounting holes	82 mm
Product weight	2.3 kg

### Offer Sustainability

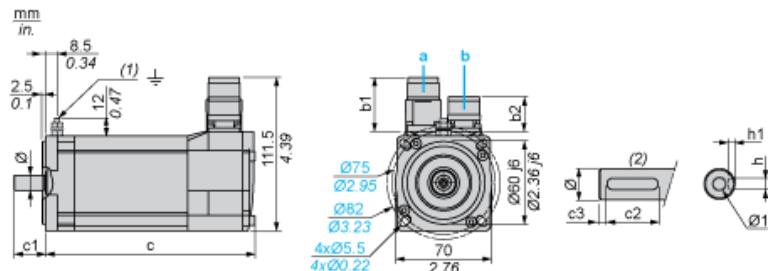
Sustainable offer status	Green Premium product
REACH Regulation	<a href="#">REACH Declaration</a>
EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope) <a href="#">EU RoHS Declaration</a>
Mercury free	Yes
RoHS exemption information	<a href="#">Yes</a>
China RoHS Regulation	<a href="#">China RoHS declaration</a>
Environmental Disclosure	<a href="#">Product Environmental Profile</a>
Circularity Profile	No need of specific recycling operations
WEEE	The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins

### Contractual warranty

Warranty	18 months
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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 brake)	c (with brake)	c1	c2	c3	h	h1	Ø	Ø1 for screws
b1	b2	b1	b2									
39.5	25.5	39.5	39.5	154	180	23	18	2.5	4 N9	2.5 <sup>+0.1</sup> <sub>0</sub>	11 k6	M4 x 10

Dimensions in in.

Straight connectors		Rotatable angled connectors		c (without brake)	c (with brake)	c1	c2	c3	h	h1	Ø	Ø1 for screws
b1	b2	b1	b2									
1.55	1.00	1.55	1.55	6.06	7.08	0.90	0.70	0.09	0.16 N9	0.01 <sup>+0.004</sup> <sub>0</sub>	0.43 k6	M4 x 0.39

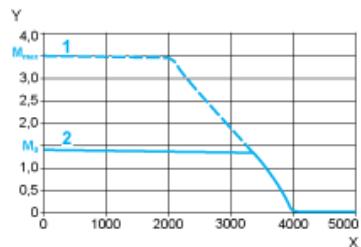
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115 V Single-Phase Supply Voltage

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Torque/Speed Curves

Servo motor with LXM32-D18M2 servo drive



X Speed in rpm

Y Torque in Nm

1 Peak torque

2 Continuous torque

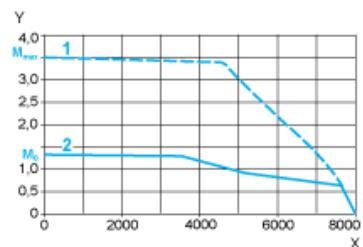
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## 230 V Single-Phase Supply Voltage

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### Torque/Speed Curves

Servo motor with LXM32•U90M2 servo drive



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