# **Product datasheet**

Specifications





# AC servo motor BSH - 0.9 N.m - 6000 rpm - keyed shaft - with brake - IP65

BSH0552T32F2A

### Main

Device short name	BSH				
Product or component type	Servo motor				
Maximum mechanical speed	9000 rpm				
Continuous stall torque	0.8 N.m for LXM32.U90M2 at 3 A, 115 V, single phase				
	0.8 N.m for LXM32.U90M2 at 3 A, 230 V, single phase				
	0.9 N.m for LXM05AD10M2, 200240 V, single phase				
	0.9 N.m for LXM05BD10M2, 200240 V, single phase				
	0.9 N.m for LXM05CD10M2, 200240 V, single phase				
	0.9 N.m for LXM05AD10M3X, 200240 V, three phase				
	0.9 N.m for LXM05BD10M3X, 200240 V, three phase				
	0.9 N.m for LXM05CD10M3X, 200240 V, three phase 0.9 N.m for LXM15LD13M3, 230 V, single phase				
	0.9 N.m for LXM15LD13M3, 230 V, single phase				
	0.77 N.m for LXM05CU70M2, 200240 V, single phase				
	0.9 N.m for LXM05AD10F1, 110120 V, single phase				
	0.9 N.m for LXM05AD17F1, 110120 V, single phase				
	0.9 N.m for LXM05BD10F1, 110120 V, single phase				
	0.9 N.m for LXM05BD17F1, 110120 V, single phase				
	0.9 N.m for LXM05CD10F1, 110120 V, single phase				
	0.9 N.m for LXM05CD17F1, 110120 V, single phase				
Peak stall torque	1.9 N.m for LXM32.U90M2 at 3 A, 115 V, single phase				
	2.5 N.m for LXM32.U90M2 at 3 A, 230 V, single phase				
	1.5 N.m for LXM15LD13M3, 230 V, single phase				
	1.31 N.m for LXM05CU70M2, 200240 V, single phase				
	1.77 N.m for LXM05AD10F1, 110120 V, single phase				
	1.77 N.m for LXM05AD10M2, 200240 V, single phase				
	2.7 N.m for LXM05AD17F1, 110120 V, single phase				
	1.77 N.m for LXM05BD10F1, 110120 V, single phase				
	1.77 N.m for LXM05BD10M2, 200240 V, single phase				
	2.7 N.m for LXM05BD17F1, 110120 V, single phase				
	1.77 N.m for LXM05CD10F1, 110120 V, single phase 1.77 N.m for LXM05CD10M2, 200240 V, single phase				
	2.7 N.m for LXM05CD17F1, 110120 V, single phase				
	1.5 N.m for LXM15LD13M3, 230 V, three phase				
	1.77 N.m for LXM05AD10M3X, 200240 V, three phase				
	1.77 N.m for LXM05BD10M3X, 200240 V, three phase				
	1.77 N.m for LXM05CD10M3X, 200240 V, three phase				
Nominal output power	250 W for LXM32.U90M2 at 3 A, 115 V, single phase				
• •	450 W for LXM32.U90M2 at 3 A, 230 V, single phase				
	240 W for LXM05CU70M2, 200240 V, single phase				
	250 W for LXM05AD10F1, 110120 V, single phase				
	250 W for LXM05AD17F1, 110120 V, single phase				
	250 W for LXM05BD10F1, 110120 V, single phase				
	250 W for LXM05BD17F1, 110120 V, single phase				
	250 W for LXM05CD10F1, 110120 V, single phase				
	250 W for LXM05CD17F1, 110120 V, single phase				
	450 W for LXM05AD10M2, 200240 V, single phase				
	450 W for LXM05BD10M2, 200240 V, single phase				
	450 W for LXM05CD10M2, 200240 V, single phase 450 W for LXM15LD13M3, 230 V, single phase				
	450 W for LXM05AD10M3X, 200 V, single phase				
	450 W for LXM05BD10M3X, 200240 V, three phase				
	450 W for LXM05CD10M3X, 200240 V, three phase				
	570 W for LXM15LD13M3, 230 V, three phase				
	, , ,				

Nominal torque	0.77 N.m for LXM32.U90M2 at 3 A, 115 V, single phase			
	0.74 N.m for LXM32.U90M2 at 3 A, 230 V, single phase			
	0.72 N.m for LXM15LD13M3, 230 V, single phase			
	0.77 N.m for LXM05CU70M2, 200240 V, single phase 0.9 N.m for LXM05AD10F1, 110120 V, single phase			
	0.9 N.m for LXM05AD10M2, 200240 V, single phase			
	0.9 N.m for LXM05AD17F1, 110120 V, single phase			
	0.9 N.m for LXM05BD10F1, 110120 V, single phase			
	0.9 N.m for LXM05BD10M2, 200240 V, single phase			
	0.9 N.m for LXM05BD17F1, 110120 V, single phase			
	0.9 N.m for LXM05CD10F1, 110120 V, single phase 0.9 N.m for LXM05CD10M2, 200240 V, single phase			
	0.9 N.m for LXM05CD17F1, 110120 V, single phase			
	0.68 N.m for LXM15LD13M3, 230 V, three phase			
	0.9 N.m for LXM05AD10M3X, 200240 V, three phase			
	0.9 N.m for LXM05BD10M3X, 200240 V, three phase			
	0.9 N.m for LXM05CD10M3X, 200240 V, three phase			
Nominal speed	3000 rpm for LXM32.U90M2 at 3 A, 115 V, single phase			
	6000 rpm for LXM32.U90M2 at 3 A, 230 V, single phase			
	3000 rpm for LXM05AD10F1, 110120 V, single phase			
	3000 rpm for LXM05BD10F1, 110120 V, single phase			
	3000 rpm for LXM05CD10F1, 110120 V, single phase			
	3000 rpm for LXM05CU70M2, 200240 V, single phase 6000 rpm for LXM05AD10M2, 200240 V, single phase			
	6000 rpm for LXM05BD10M2, 200240 V, single phase			
	6000 rpm for LXM05CD10M2, 200240 V, single phase			
	6000 rpm for LXM05AD10M3X, 200240 V, three phase			
	6000 rpm for LXM05BD10M3X, 200240 V, three phase			
	6000 rpm for LXM05CD10M3X, 200240 V, three phase			
	8000 rpm for LXM15LD13M3, 230 V, three phase 3000 rpm for LXM05AD17F1, 110120 V, single phase			
	3000 rpm for LXM05BD17F1, 110120 V, single phase			
	3000 rpm for LXM05CD17F1, 110120 V, single phase			
	6000 rpm for LXM15LD13M3, 230 V, single phase			
Product compatibility	LXM05AD10F1 at 110120 V single phase			
• •	LXM05AD10M2 at 200240 V single phase			
	LXM05AD17F1 at 110120 V single phase			
	LXM05BD10F1 at 110120 V single phase			
	LXM05BD10M2 at 200240 V single phase			
	LXM05BD17F1 at 110120 V single phase			
	LXM05CD10F1 at 110120 V single phase LXM05CD10M2 at 200240 V single phase			
	LXM05CD17F1 at 110120 V single phase			
	LXM05CU70M2 at 200240 V single phase			
	LXM15LD13M3 at 230 V single phase			
	LXM32.U90M2 at 115 V single phase			
	LXM32.U90M2 at 230 V single phase LXM05AD10M3X at 200240 V three phase			
	LXM05BD10M3X at 200240 V three phase			
	LXM05CD10M3X at 200240 V three phase			
	LXM15LD13M3 at 230 V three phase			
Shaft end	Keyed			
IP degree of protection	IDSS standard			
acgree or protection	IP65 standard IP67 with IP67 kit			
Speed feedback resolution	131072 points/turn x 4096 turns			
Holding brake	With			
mounting support	International standard flange			
Electrical connection	Rotatable right-angled connectors			
Complementer:				
Complementary				
Range compatibility	Lexium 15			
	Lexium 32			
	Lexium 05			
supply voltage max	Lexium 05 480 V			
	480 V			
supply voltage max  Network number of phases  Continuous stall current				

maximum continuous power	0.67 W			
Maximum current Irms	6 A for LXM32.U90M2 at 115 V 8.8 A for LXM32.U90M2 at 230 V			
	10.3 A for LXM15LD13M3 8.8 A for LXM05AD10F1			
	8.8 A for LXM05AD17F1			
	8.8 A for LXM05CU70M2			
	8.8 A for LXM05AD10M2			
	8.8 A for LXM05AD10M3X 8.8 A for LXM05BD10F1			
	8.8 A for LXM05BD17F1			
	8.8 A for LXM05BD10M2			
	8.8 A for LXM05BD10M3X			
	8.8 A for LXM05CD10F1 8.8 A for LXM05CD17F1			
	8.8 A for LXM05CD10M2			
	8.8 A for LXM05CD10M3X			
Maximum permanent current	8.8 A			
Switching frequency	8 kHz			
Second shaft	Without second shaft end			
Shaft diameter	9 mm			
Shaft length	20 mm			
Key width	12 mm			
Feedback type	Multiturn SinCos Hiperface			
Holding torque	0.8 N.m holding brake			
Motor flange size	55 mm			
Number of motor stacks	2			
Torque constant	0.36 N.m/A at 120 °C			
Back emf constant	22 V/krpm at 120 °C			
Number of motor poles	6			
Rotor inertia	0.1173 kg.cm²			
Stator resistance	5.2 Ohm at 20 °C			
Stator inductance	10.6 mH at 20 °C			
Stator electrical time constant	2.04 ms at 20 °C			
Maximum radial force Fr	190 N at 7000 rpm			
	190 N at 8000 rpm 200 N at 6000 rpm			
	220 N at 5000 rpm			
	230 N at 4000 rpm			
	260 N at 3000 rpm 290 N at 2000 rpm			
	370 N at 1000 rpm			
Maximum axial force Fa	0.2 x Fr			
Brake pull-in power	10 W			
Type of cooling	Natural convection			
Length	181 mm			
Centring collar diameter	40 mm			
Centring collar depth	2 mm			
Number of mounting holes	4			
Mounting holes diameter	5.5 mm			
Circle diameter of the mounting holes	63 mm			

Net weight 1.6 kg

# **Packing Units**

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	12.3 cm
Package 1 Width	12.8 cm
Package 1 Length	37.7 cm
Package 1 Weight	1.25 kg

# **Contractual warranty**

Warranty 18 months



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Transparency RoHS/REACh

### Well-being performance

	Mercury Free	
<b>⊘</b>	Rohs Exemption Information	Yes
	Pvc Free	

#### **Certifications & Standards**

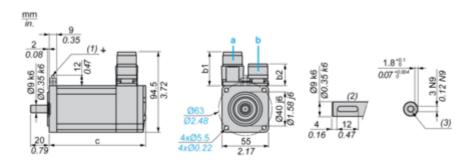
Eu Rohs Directive	Pro-active compliance (Product out of EU RoHS legal scope)			
China Rohs Regulation	China RoHS declaration			
Environmental Disclosure	Product Environmental Profile			
Weee	The product must be disposed on European Union markets following specific waste collection and never end up in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

#### BSH0552T32F2A

#### **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)
- (3) For screw M3 x 9 mm/M3 x 0.35 in.

#### Dimensions in mm

Straight c	traight connectors Rotatable angled connectors		- (itht hl)	a (with harden)	
b	b1	b	b1	c (without brake)	c (with brake)
39.5	25.5	39.5	39.5	154.5	181

#### Dimensions in in.

Straight connectors		Rotatable angled connectors		a (ithatha.alaa)	- (i4h h
b	b1	b	b1	c (without brake)	c (with brake)
1.55	1.00	1.55	1.55	6.08	7.12

## **Product datasheet**

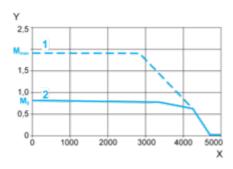
## BSH0552T32F2A

#### Performance Curves

### 115 V Single-Phase Supply Voltage

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

Servo motor with LXM32•U90M2 servo drive

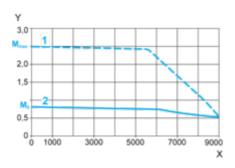


- X Speed in rpm
- Y Torque in Nm
- 1 Peak torque
- 2 Continuous torque

#### 230 V Single-Phase Supply Voltage

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

Servo motor with LXM32•U90M2 servo drive



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