# **Product datasheet**

Specification





servo motor BSH, Lexium 05, 0.9N.m, 4000rpm, 55mm, untapped shaft, Sincos single turn, with brake, IP65

BSH0552P21F2A

## 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.U60N4 at 1.5 A, 400 V, three phase			
	0.8 N.m for LXM32.U60N4 at 1.5 A, 480 V, three phase			
	0.9 N.m for LXM05CU70M2, 200240 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, three phase			
	0.9 N.m for LXM15LU60N4, 230 V, three phase			
	0.9 N.m for LXM05AD14N4, 380480 V, three phase			
	0.9 N.m for LXM05BD14N4, 380480 V, three phase			
	0.9 N.m for LXM05CD14N4, 380480 V, three phase			
Peak stall torque	2.5 N.m for LXM32.U60N4 at 1.5 A, 400 V, three phase			
	2.5 N.m for LXM32.U60N4 at 1.5 A, 480 V, three phase			
	2.5 N.m for LXM15LD13M3, 230 V, single phase			
	2.17 N.m for LXM05CU70M2, 200240 V, single phase			
	2.7 N.m for LXM05AD10M2, 200240 V, single phase			
	2.7 N.m for LXM05BD10M2, 200240 V, single phase			
	2.7 N.m for LXM05CD10M2, 200240 V, single phase			
	2.5 N.m for LXM15LD13M3, 230 V, three phase			
	2.26 N.m for LXM15LU60N4, 230 V, three phase			
	2.7 N.m for LXM05AD10M3X, 200240 V, three phase			
	2.7 N.m for LXM05AD14N4, 380480 V, three phase			
	2.7 N.m for LXM05BD10M3X, 200240 V, three phase			
	2.7 N.m for LXM05BD14N4, 380480 V, three phase			
	2.7 N.m for LXM05CD10M3X, 200240 V, three phase			
	2.7 N.m for LXM05CD14N4, 380480 V, three phase			
Nominal output power	400 W for LXM32.U60N4 at 1.5 A, 400 V, three phase			
	400 W for LXM32.U60N4 at 1.5 A, 480 V, three phase			
	250 W for LXM05AD10M2, 200240 V, single phase			
	250 W for LXM05BD10M2, 200240 V, single phase			
	250 W for LXM05CD10M2, 200240 V, single phase			
	250 W for LXM05CU70M2, 200240 V, single phase			
	310 W for LXM15LD13M3, 230 V, single phase			
	250 W for LXM05AD10M3X, 200240 V, three phase			
	250 W for LXM05AD14N4, 380480 V, three phase			
	250 W for LXM05BD10M3X, 200240 V, three phase			
	250 W for LXM05BD14N4, 380480 V, three phase			
	250 W for LXM05CD10M3X, 200240 V, three phase			
	250 W for LXM05CD14N4, 380480 V, three phase			
	310 W for LXM15LD13M3, 230 V, three phase			
	310 W for LXM15LU60N4, 230 V, three phase			

Nominal torque	0.65 N.m for LXM32.U60N4 at 1.5 A, 400 V, three phase				
	0.65 N.m for LXM32.U60N4 at 1.5 A, 480 V, three phase				
	0.75 N.m for LXM15LD13M3, 230 V, single phase				
	2.17 N.m for LXM05CU70M2, 200240 V, single phase				
	2.7 N.m for LXM05AD10M2, 200240 V, single phase				
	2.7 N.m for LXM05BD10M2, 200240 V, single phase 2.7 N.m for LXM05CD10M2, 200240 V, single phase				
	0.75 N.m for LXM15LD13M3, 230 V, three phase				
	0.75 N.m for LXM15LU60N4, 230 V, three phase				
	2.7 N.m for LXM05AD10M3X, 200240 V, three phase				
	2.7 N.m for LXM05AD14N4, 380480 V, three phase				
	2.7 N.m for LXM05BD10M3X, 200240 V, three phase				
	2.7 N.m for LXM05BD14N4, 380480 V, three phase				
	2.7 N.m for LXM05CD10M3X, 200240 V, three phase				
	2.7 N.m for LXM05CD14N4, 380480 V, three phase				
Nominal speed	6000 rpm for LXM32.U60N4 at 1.5 A, 400 V, three phase				
	6000 rpm for LXM32.U60N4 at 1.5 A, 480 V, three phase				
	4000 rpm for LXM15LD13M3, 230 V, single phase				
	4000 rpm for LXM15LU60N4, 230 V, three phase				
	3000 rpm for LXM05CU70M2, 200240 V, single phase 3000 rpm for LXM05AD10M2, 200240 V, single phase				
	3000 rpm for LXM05BD10M2, 200240 V, single phase				
	3000 rpm for LXM05CD10M2, 200240 V, single phase				
	3000 rpm for LXM05AD10M3X, 200240 V, three phase				
	3000 rpm for LXM05AD14N4, 380480 V, three phase				
	3000 rpm for LXM05BD10M3X, 200240 V, three phase				
	3000 rpm for LXM05BD14N4, 380480 V, three phase				
	3000 rpm for LXM05CD10M3X, 200240 V, three phase				
	3000 rpm for LXM05CD14N4, 380480 V, three phase				
	4000 rpm for LXM15LD13M3, 230 V, three phase				
Product compatibility	LXM05AD10M2 at 200240 V single phase				
	LXM05BD10M2 at 200240 V single phase				
	LXM05CD10M2 at 200240 V single phase				
	LXM05CU70M2 at 200240 V single phase				
	LXM15LD13M3 at 230 V single phase				
	LXM15LU60N4 at 230 V three phase				
	LXM32.U60N4 at 400 V three phase				
	LXM32.U60N4 at 480 V three 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 LXM05AD14N4 at 380480 V three phase				
	LXM05BD14N4 at 380480 V three phase				
	LXM05CD14N4 at 380480 V three phase				
Shaft end	Untapped				
IP degree of protection	IP65 standard				
ii degree or protection	IP67 with IP67 kit				
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				
.5	Lexium 15				
	Lexium 32				
supply voltage max	480 V				
Network number of phases	Three phase				
Continuous stall current	1.2 A				
maximum continuous power					
maximum continuous power	0.67 W				

Maximum current Irms	5.9 A for LXM15LD13M3 5.9 A for LXM05CU70M2 4.8 A for LXM05AD10M2 4.8 A for LXM05AD10M3X 4.8 A for LXM05AD14N4 4.8 A for LXM05BD10M2 4.8 A for LXM05BD10M2 4.8 A for LXM05BD10M3X 4.8 A for LXM05BD10M3X 4.8 A for LXM05BD10M3X 4.8 A for LXM05CD10M3X 4.8 A for LXM05CD10M2 4.8 A for LXM05CD10M3X 4.8 A for LXM05CD10M3X 4.8 A for LXM05CD10M3X 4.8 A for LXM05CD14N4 4.8 A for LXM05CD14N4				
Maximum permanent current	4.8 A				
Switching frequency	8 kHz				
Second shaft	Without second shaft end				
Shaft diameter	9 mm				
Shaft length	20 mm				
Feedback type	Single turn SinCos Hiperface				
Holding torque	0.8 N.m holding brake				
Motor flange size	55 mm				
Number of motor stacks	2				
Torque constant	0.7 N.m/A at 120 °C				
Back emf constant	40 V/krpm at 120 °C				
Number of motor poles	6				
Rotor inertia	0.1173 kg.cm²				
Stator resistance	17.4 Ohm at 20 °C				
Stator inductance	35.3 mH at 20 °C				
Stator electrical time constant	2.03 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 ka		

# **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**

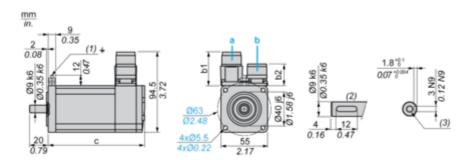
Eu Rohs Directive	Pro-active compliance (Product out of EU RoHS legal scope)		
China Rohs Regulation	China RoHS declaration		
Environmental Disclosure	Product Environmental Profile		
Weee	The product must be disposed on European Union markets following specific waste collection and never end up in rubbish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

### **BSH0552P21F2A**

### **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	onnectors	Rotatable angled connectors		- (i4b4 bl)	- (with hards)
b	b1	b	b1	c (without brake)	c (with brake)
39.5	25.5	39.5	39.5	154.5	181

### Dimensions in in

Differisions in in.						
Straight connectors		Rotatable angled connectors		a (ithatha.alaa)	- (i4b b )	
b	b1	b	b1	c (without brake)	c (with brake)	
1.55	1.00	1.55	1.55	6.08	7.12	

## **Product datasheet**

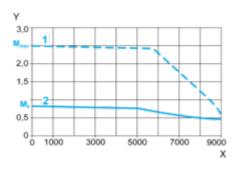
### **BSH0552P21F2A**

### Performance Curves

## 400 V 3-Phase Supply Voltage

### **Torque/Speed Curves**

Servo motor with LXM32•U60N4 servo drive

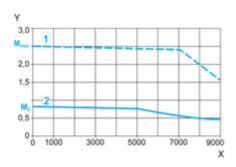


- X Speed in rpm
- Y Torque in Nm
- 1 Peak torque
- 2 Continuous torque

### 480 V 3-Phase Supply Voltage

### **Torque/Speed Curves**

Servo motor with LXM32•U60N4 servo drive



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