



AC servo motor BSH, Lexium 05, 1.3N.m, 3000rpm, keyed shaft, with brake, IP65

BSH0553T31F1A

! Discontinued on: 01-Nov-2020

Main

Device short name	BSH Servo motor 9000 rpm			
Product or component type				
Maximum mechanical speed				
Continuous stall torque	1.2 N.m for LXM32.U90M2 at 3 A, 230 V, single phase			
	1.3 N.m for LXM05AD17F1, 110120 V, single phase			
	1.3 N.m for LXM05AD17M2, 200240 V, single phase			
	1.3 N.m for LXM05BD17F1, 110120 V, single phase			
	1.3 N.m for LXM05BD17M2, 200240 V, single phase			
	1.3 N.m for LXM05CD17F1, 110120 V, single phase			
	1.3 N.m for LXM05CD17M2, 200240 V, single phase			
	1.2 N.m for LXM32.D18M2 at 6 A, 115 V, single phase			
	1.3 N.m for LXM05AD17M3X, 200240 V, three phase			
	1.3 N.m for LXM05BD17M3X, 200240 V, three phase			
	1.3 N.m for LXM05CD17M3X, 200240 V, three phase			
Peak stall torque	3 N.m for LXM32.U90M2 at 3 A, 230 V, single phase			
	3.31 N.m for LXM05AD17F1, 110120 V, single phase			
	3.31 N.m for LXM05AD17M2, 200240 V, single phase			
	3.31 N.m for LXM05BD17F1, 110120 V, single phase			
	3.31 N.m for LXM05BD17M2, 200240 V, single phase			
	3.31 N.m for LXM05CD17F1, 110120 V, single phase			
	3.31 N.m for LXM05CD17M2, 200240 V, single phase			
	3.3 N.m for LXM32.D18M2 at 6 A, 115 V, single phase			
	3.31 N.m for LXM05AD17M3X, 200240 V, three phase			
	3.31 N.m for LXM05BD17M3X, 200240 V, three phase			
	3.31 N.m for LXM05CD17M3X, 200240 V, three phase			
Nominal output power	550 W for LXM32.U90M2 at 3 A, 230 V, single phase			
	350 W for LXM05AD17F1, 110120 V, single phase			
	350 W for LXM05AD17M2, 200240 V, single phase			
	350 W for LXM05BD17F1, 110120 V, single phase			
	350 W for LXM05BD17M2, 200240 V, single phase			
	350 W for LXM05CD17F1, 110120 V, single phase			
	350 W for LXM05CD17M2, 200240 V, single phase			
	350 W for LXM32.D18M2 at 6 A, 115 V, single phase			
	350 W for LXM05AD17M3X, 200240 V, three phase			
	350 W for LXM05BD17M3X, 200240 V, three phase			
	350 W for LXM05CD17M3X, 200240 V, three phase			
Nominal torque	0.84 N.m for LXM32.U90M2 at 3 A, 230 V, single phase			
	1.1 N.m for LXM05AD17F1, 110120 V, single phase			
	1.1 N.m for LXM05AD17M2, 200240 V, single phase			
	1.1 N.m for LXM05BD17F1, 110120 V, single phase			
	1.1 N.m for LXM05BD17M2, 200240 V, single phase			
	1.1 N.m for LXM05CD17F1, 110120 V, single phase			
	1.1 N.m for LXM05CD17M2, 200240 V, single phase			
	1.14 N.m for LXM32.D18M2 at 6 A, 115 V, single phase			
	1.1 N.m for LXM05AD17M3X, 200240 V, three phase			
	1.1 N.m for LXM05BD17M3X, 200240 V, three phase			
	1.1 N.m for LXM05CD17M3X, 200240 V, three phase			

Nominal speed Product compatibility	6000 rpm for LXM32.U90M2 at 3 A, 230 V, single 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 3000 rpm for LXM05CD17F1, 110120 V, single phase 3000 rpm for LXM05AD17M2, 200240 V, single phase 3000 rpm for LXM05CD17M2, 200240 V, single phase 3000 rpm for LXM05CD17M2, 200240 V, single phase 3000 rpm for LXM05CD17M3, 200240 V, single phase 3000 rpm for LXM05AD17M3X, 200240 V, three phase 3000 rpm for LXM05AD17M3X, 200240 V, three phase 3000 rpm for LXM05CD17M3X, 200240 V, three phase LXM05AD17F1 at 110120 V single phase LXM05AD17F1 at 110120 V single phase LXM05BD17M2 at 200240 V single phase LXM05CD17F1 at 110120 V single phase LXM05CD17F1 at 110120 V single phase LXM05CD17F1 at 200240 V single phase LXM05CD17M2 at 200240 V single phase LXM05CD17M2 at 200 V single phase LXM32.U90M2 at 230 V single phase LXM32.U90M2 at 230 V single phase LXM32.D18M2 at 115 V single phase LXM05AD17M3X at 200240 V three phase LXM05BD17M3X at 200240 V three phase LXM05BD17M3X at 200240 V three phase				
Shaft end	LXM05CD17M3X at 200240 V three phase Keyed				
IP degree of protection	IP65 standard IP67 with IP67 kit				
Speed feedback resolution	131072 points/turn				
Holding brake	With				
mounting support	International standard flange				
Electrical connection	Straight connectors				
Complementary Range compatibility	Lexium 32 Lexium 05				
	Lexium 05				
supply voltage max	Lexium 05 480 V				
supply voltage max Network number of phases					
	480 V				
Network number of phases	480 V Three phase				
Network number of phases Continuous stall current	480 V Three phase 3.1 A				
Network number of phases Continuous stall current maximum continuous power	480 V Three phase 3.1 A 0.97 W 11.9 A for LXM05AD17F1 11.9 A for LXM05AD17M2 11.9 A for LXM05AD17M3X 11.9 A for LXM05BD17M3X 11.9 A for LXM05BD17M2 11.9 A for LXM05BD17M2 11.9 A for LXM05BD17M2 11.9 A for LXM05D17M3X 11.9 A for LXM05CD17F1 11.9 A for LXM05CD17F1 11.9 A for LXM05CD17M2 11.9 A for LXM05CD17M2 11.9 A for LXM05CD17M3X 10 A for LXM05CD17M3X				
Network number of phases Continuous stall current maximum continuous power Maximum current Irms	480 V Three phase 3.1 A 0.97 W 11.9 A for LXM05AD17F1 11.9 A for LXM05AD17M2 11.9 A for LXM05AD17M3X 11.9 A for LXM05BD17F1 11.9 A for LXM05BD17F1 11.9 A for LXM05BD17M2 11.9 A for LXM05D17M2 11.9 A for LXM05CD17F1 11.9 A for LXM05CD17M3X 11.9 A for LXM05CD17M3X 11.9 A for LXM05CD17M2 11.9 A for LXM05CD17M2 11.9 A for LXM05CD17M3X 10 A for LXM32.D18M2 9 A for LXM32.U90M2				
Network number of phases Continuous stall current maximum continuous power Maximum current Irms Maximum permanent current	Three phase 3.1 A 0.97 W 11.9 A for LXM05AD17F1 11.9 A for LXM05AD17M2 11.9 A for LXM05AD17M3X 11.9 A for LXM05BD17F1 11.9 A for LXM05BD17F1 11.9 A for LXM05BD17M2 11.9 A for LXM05BD17M3X 11.9 A for LXM05CD17M3X 11.9 A for LXM05CD17F1 11.9 A for LXM05CD17M2 11.9 A for LXM05CD17M2 11.9 A for LXM05CD17M3X 10 A for LXM32.D18M2 9 A for LXM32.U90M2				
Network number of phases Continuous stall current maximum continuous power Maximum current Irms Maximum permanent current Switching frequency	Three phase 3.1 A 0.97 W 11.9 A for LXM05AD17F1 11.9 A for LXM05AD17M2 11.9 A for LXM05AD17M3X 11.9 A for LXM05BD17M3 11.9 A for LXM05BD17M2 11.9 A for LXM05BD17M2 11.9 A for LXM05BD17M3X 11.9 A for LXM05CD17F1 11.9 A for LXM05CD17M2 11.9 A for LXM05CD17M2 11.9 A for LXM05CD17M2 11.9 A for LXM05CD17M3X 10 A for LXM032.D18M2 9 A for LXM32.U90M2 11.9 A				
Network number of phases Continuous stall current maximum continuous power Maximum current Irms Maximum permanent current Switching frequency Second shaft	Three phase 3.1 A 0.97 W 11.9 A for LXM05AD17F1 11.9 A for LXM05AD17M2 11.9 A for LXM05AD17M3X 11.9 A for LXM05BD17M3X 11.9 A for LXM05BD17M2 11.9 A for LXM05BD17M2 11.9 A for LXM05CD17F1 11.9 A for LXM05CD17F1 11.9 A for LXM05CD17M2 11.9 A for LXM05CD17M2 11.9 A for LXM05CD17M3X 10 A for LXM05CD17M3X 10 A for LXM32.D18M2 9 A for LXM32.U90M2 11.9 A 8 kHz Without second shaft end				
Network number of phases Continuous stall current maximum continuous power Maximum current Irms Maximum permanent current Switching frequency Second shaft Shaft diameter	## Three phase 3.1 A 0.97 W ## 11.9 A for LXM05AD17F1 11.9 A for LXM05AD17M2 11.9 A for LXM05AD17M3X 11.9 A for LXM05BD17M2 11.9 A for LXM05BD17M2 11.9 A for LXM05BD17M3X 11.9 A for LXM05BD17M3X 11.9 A for LXM05CD17F1 11.9 A for LXM05CD17M2 11.9 A for LXM05CD17M2 11.9 A for LXM05CD17M3X 10 A for LXM05CD17M3X 10 A for LXM32.U90M2 11.9 A 8 kHz Without second shaft end 9 mm				
Network number of phases Continuous stall current maximum continuous power Maximum current Irms Maximum permanent current Switching frequency Second shaft Shaft diameter Shaft length	Three phase 3.1 A 0.97 W 11.9 A for LXM05AD17F1 11.9 A for LXM05AD17M2 11.9 A for LXM05AD17M3X 11.9 A for LXM05BD17F1 11.9 A for LXM05BD17M2 11.9 A for LXM05BD17M3X 11.9 A for LXM05CD17F1 11.9 A for LXM05CD17F1 11.9 A for LXM05CD17M3X 10 A for LXM05CD17M3X 10 A for LXM032.D18M2 9 A for LXM32.U90M2 11.9 A 8 kHz Without second shaft end 9 mm 20 mm				
Network number of phases Continuous stall current maximum continuous power Maximum current Irms Maximum permanent current Switching frequency Second shaft Shaft diameter Shaft length Key width	Three phase 3.1 A 0.97 W 11.9 A for LXM05AD17F1 11.9 A for LXM05AD17M2 11.9 A for LXM05AD17M2 11.9 A for LXM05BD17M3X 11.9 A for LXM05BD17M2 11.9 A for LXM05BD17M2 11.9 A for LXM05CD17M2 11.9 A for LXM05CD17M2 11.9 A for LXM05CD17M2 11.9 A for LXM05CD17M2 11.9 A for LXM03CD17M3X 10 A for LXM32.D18M2 9 A for LXM32.U90M2 11.9 A 8 kHz Without second shaft end 9 mm 20 mm				

Number of motor stacks	3			
Torque constant	0.39 N.m/A at 120 °C			
Back emf constant	22 V/krpm at 120 °C			
Number of motor poles	6			
Rotor inertia	0.1553 kg.cm²			
Stator resistance	3.1 Ohm at 20 °C			
Stator inductance	7.4 mH at 20 °C			
Stator electrical time constant	2.39 ms at 20 °C			
Maximum radial force Fr	190 N at 8000 rpm 200 N at 7000 rpm 210 N at 6000 rpm 230 N at 5000 rpm 240 N at 4000 rpm 270 N at 3000 rpm 310 N at 2000 rpm 390 N at 1000 rpm			
Maximum axial force Fa	0.2 x Fr			
Brake pull-in power	10 W			
Type of cooling	Natural convection			
Length	203 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	1.9 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	1.55 kg

Contractual warranty

Warranty 18 months



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Transparency RoHS/REACh

Well-being performance



Mercury Free



Rohs Exemption Information

Yes

Certifications & Standards

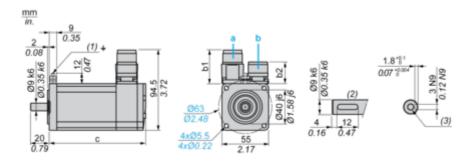
Eu Rohs Directive	Pro-active compliance (Product out of EU RoHS legal scope)		
China Rohs Regulation	China RoHS declaration		
Environmental Disclosure	Product Environmental Profile		
Weee	The product must be disposed on European Union markets following specific waste collection and never end up in rubbish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

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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		- (itht hl)	- (with hards)
b	b1	b	b1	c (without brake)	c (with brake)
39.5	25.5	39.5	39.5	176.5	203

Dimensions in in

Difficiologo in in.					
Straight connectors		Rotatable angled connectors		- (itht hl)	a (with harden)
b	b1	b	b1	c (without brake)	c (with brake)
1.55	1.00	1.55	1.55	6.94	7.99

Product datasheet

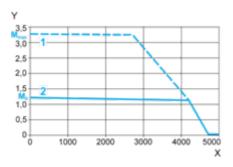
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Performance Curves

115 V Single-Phase Supply Voltage

Torque/Speed Curves

Servo motor with LXM32•D18M2 servo drive

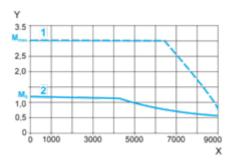


- X Speed in rpm
- Y Torque in Nm
- 1 Peak torque
- 2 Continuous torque

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