Product datasheet

Specifications

AC servo motor BSH - 1.3 N.m - 3000 rpm - untapped shaft - with brake - IP65

BSH0553T21F2A

EAN Code: 3389118159778

Main

Device short name	BSH
Product or component type	Servo motor
Maximum mechanical speed	9000 rpm
Continuous stall torque	1.2 N.m for LXM32.U90M2 at 3 A, 230 V, single phase 1.3 N.m for LXM05AD17F1, 110...120 V, single phase 1.3 N.m for LXM05AD17M2, 200...240 V, single phase 1.3 N.m for LXM05BD17F1, 110...120 V, single phase 1.3 N.m for LXM05BD17M2, 200...240 V, single phase 1.3 N.m for LXM05CD17F1, 110...120 V, single phase 1.3 N.m for LXM05CD17M2, 200...240 V, single phase 1.2 N.m for LXM32.D18M2 at 6 A, 115 V, single phase 1.3 N.m for LXM05AD17M3X, 200...240 V, three phase 1.3 N.m for LXM05BD17M3X at 6 A, 200...240 V, three phase 1.3 N.m for LXM05CD17M3X, 200...240 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, 110...120 V, single phase 3.31 N.m for LXM05AD17M2, 200...240 V, single phase 3.31 N.m for LXM05BD17F1, 110...120 V, single phase 3.31 N.m for LXM05BD17M2, 200...240 V, single phase 3.31 N.m for LXM05CD17F1, 110...120 V, single phase 3.31 N.m for LXM05CD17M2, 200...240 V, single phase 3.3 N.m for LXM32.D18M2 at 6 A, 115 V, single phase 3.31 N.m for LXM05AD17M3X, 200...240 V, three phase 3.31 N.m for LXM05BD17M3X at 6 A, 200...240 V, three phase 3.31 N.m for LXM05CD17M3X, 200...240 V, three phase
Nominal output power	550 W for LXM32.U90M2 at 3 A, 230 V, single phase 350 W for LXM05AD17F1, 110...120 V, single phase 350 W for LXM05AD17M2, 200...240 V, single phase 350 W for LXM05BD17F1, 110...120 V, single phase 350 W for LXM05BD17M2, 200...240 V, single phase 350 W for LXM05CD17F1, 110...120 V, single phase 350 W for LXM05CD17M2, 200...240 V, single phase 350 W for LXM32.D18M2 at 6 A, 115 V, single phase 350 W for LXM05AD17M3X, 200...240 V, three phase 350 W for LXM05BD17M3X at 6 A, 200...240 V, three phase 350 W for LXM05CD17M3X, 200...240 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, 110...120 V, single phase 1.1 N.m for LXM05AD17M2, 200...240 V, single phase 1.1 N.m for LXM05BD17F1, 110...120 V, single phase 1.1 N.m for LXM05BD17M2, 200...240 V, single phase 1.1 N.m for LXM05CD17F1, 110...120 V, single phase 1.1 N.m for LXM05CD17M2, 200...240 V, single phase 1.14 N.m for LXM32.D18M2 at 6 A, 115 V, single phase 1.1 N.m for LXM05AD17M3X, 200...240 V, three phase 1.1 N.m for LXM05BD17M3X at 6 A, 200...240 V, three phase 1.1 N.m for LXM05CD17M3X, 200...240 V, three phase

Nominal speed	6000 rpm for LXM32.U90M2 at 3 A, 230 V, single phase 3000 rpm for LXM05AD17F1, 110...120 V, single phase 3000 rpm for LXM05BD17F1, 110...120 V, single phase 3000 rpm for LXM05CD17F1, 110...120 V, single 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 LXM32.D18M2 at 6 A, 115 V, single phase 3000 rpm for LXM05AD17M3X, 200...240 V, three phase 3000 rpm for LXM05BD17M3X at 6 A, 200...240 V, three phase 3000 rpm for LXM05CD17M3X, 200...240 V, three phase
Product compatibility	LXM05AD17F1 at 110...120 V single phase LXM05AD17M2 at 200...240 V single phase LXM05BD17F1 at 110...120 V single phase LXM05BD17M2 at 200...240 V single phase LXM05CD17F1 at 110...120 V single phase LXM05CD17M2 at 200...240 V single phase LXM32.U90M2 at 230 V single phase LXM32.D18M2 at 115 V single phase LXM05AD17M3X at 200...240 V three phase LXM05BD17M3X at 200...240 V three phase LXM05CD17M3X at 200...240 V three phase
Shaft end	Untapped
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	Rotatable right-angled connectors

Complementary

Range compatibility	Lexium 05 Lexium 32
supply voltage max	480 V
Network number of phases	Three phase
Continuous stall current	3.1 A
maximum continuous power	0.97 W
Maximum current Irms	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 LXM05CD17M2 11.9 A for LXM05CD17M3X 10 A for LXM32.D18M2 9 A for LXM32.U90M2
Maximum permanent current	11.9 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	3

Torque constant	0.39 N.m/A at 120 °C
Back emf constant	22 V/krpm at 120 °C
Number of motor poles	3.0
Rotor inertia	0.1553 kg.cm²
Stator resistance	3.1 Ohm at 20 °C
Stator inductance	3.9 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
Sizing reference	BSH0553T
Network number of phases	3
Accuracy error [angular]	1.4 °
Temperature copper hot	120 °C
Temperature magnet hot	100 °C
Temperature magnet rt	20 °C
Output current 3s peak	11.9 A
Inertia	0.021 kg.cm² of brake 0.134 kg.cm² of motor

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

Logistical informations

Country of origin	DE

Contractual warranty

Warranty (in months)	18

Environmental Data

Schneider Electric aims to achieve Net Zero status by 2050 through supply chain partnerships, lower impact materials, and circularity via our ongoing “Use Better, Use Longer, Use Again” campaign to extend product lifetimes and recyclability.

Environmental Data explained >

How we assess product sustainability >

Environmental footprint

Total lifecycle Carbon footprint	614
Environmental Disclosure	Product Environmental Profile

Use Better

Materials and Substances

Packaging made with recycled cardboard	Yes
Packaging without single use plastic	No
EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope)
SCIP Number	8c11b0c9-e501-4810-83eb-05fc6605ede4
REACh Regulation	REACh Declaration
PVC free	Yes

Use Again

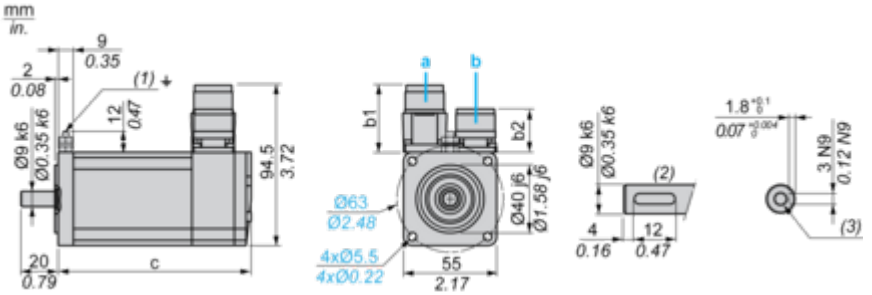
Repack and remanufacture

End of life manual availability	No need of specific recycling operations
Take-back	No
WEEE Label	The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins

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 connectors		Rotatable angled connectors		c (without brake)	c (with brake)
b	b1	b	b1		
39.5	25.5	39.5	39.5	176.5	203

Dimensions in in.

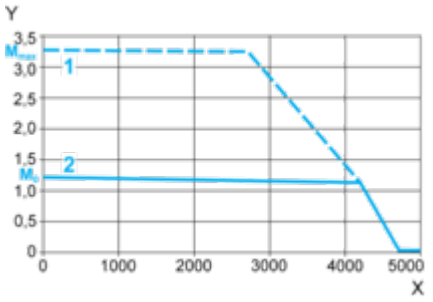
Straight connectors		Rotatable angled connectors		c (without brake)	c (with brake)
b	b1	b	b1		
1.55	1.00	1.55	1.55	6.94	7.99

Performance Curves

115 V Single-Phase Supply Voltage

Torque/Speed Curves

Servo motor with LXM32•D18M2 servo drive

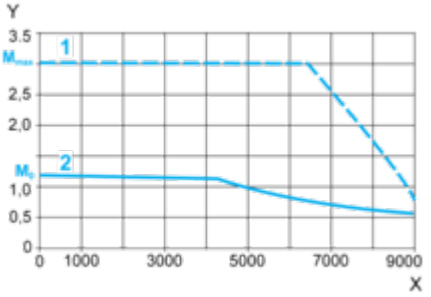


X Speed in rpm
Y Torque in Nm
1 Peak torque
2 Continuous torque

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
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