

# AC servo motor BSH - 2.83 N.m - 6000 rpm - untapped shaft - without brake - IP50

BSH0703T02A2A

EAN Code: 3389118137493

# Main

Device short name	BSH							
Product or component type	Servo motor							
Maximum mechanical speed	8000 rpm							
Continuous stall torque	2.8 N.m for LXM05AD28M2, 200240 V, single phase							
	2.8 N.m for LXM05BD28M2, 200240 V, single phase							
	2.8 N.m for LXM05CD28M2, 200240 V, single phase							
	2.6 N.m for LXM32.D18M2 at 6 A, 230 V, single phase							
	2.83 N.m for LXM15LD28M3, 230 V, three phase							
	2.8 N.m for LXM05AD28F1 at 6 A, 110120 V, single phase							
	2.8 N.m for LXM05AD42M3X, 200240 V, three phase							
	2.8 N.m for LXM05BD28F1, 110120 V, single phase							
	2.8 N.m for LXM05BD42M3X, 200240 V, three phase							
	2.8 N.m for LXM05CD28F1, 110120 V, single phase							
	2.8 N.m for LXM05CD42M3X, 200240 V, three phase							
Peak stall torque	7.38 N.m for LXM05AD28F1, 110120 V, single phase							
	7.38 N.m for LXM05AD28M2, 200240 V, single phase							
	7.38 N.m for LXM05BD28F1, 110120 V, single phase							
	7.38 N.m for LXM05BD28M2, 200240 V, single phase							
	7.38 N.m for LXM05CD28F1, 110120 V, single phase							
	7.38 N.m for LXM05CD28M2, 200240 V, single phase							
	7.4 N.m for LXM32.D18M2 at 6 A, 230 V, single phase							
	7.38 N.m for LXM15LD28M3, 230 V, three phase							
	10.25 N.m for LXM05AD42M3X at 6 A, 200240 V, three phase							
	10.25 N.m for LXM05BD42M3X, 200240 V, three phase							
	10.25 N.m for LXM05CD42M3X, 200240 V, three phase							
Nominal output power	750 W for LXM05AD28M2, 200240 V, single phase							
	750 W for LXM05BD28M2, 200240 V, single phase							
	750 W for LXM05CD28M2, 200240 V, single phase							
	750 W for LXM05AD28F1, 110120 V, single phase							
	750 W for LXM05BD28F1, 110120 V, single phase							
	750 W for LXM05CD28F1, 110120 V, single phase							
	900 W for LXM32.D18M2 at 6 A, 230 V, single phase							
	1250 W for LXM15LD28M3, 230 V, three phase							
	750 W for LXM05AD42M3X at 6 A, 200240 V, three phase							
	750 W for LXM05BD42M3X, 200240 V, three phase							
	750 W for LXM05CD42M3X, 200240 V, three phase							
Nominal torque	2.4 N.m for LXM05AD28M2, 200240 V, single phase							
	2.4 N.m for LXM05BD28M2, 200240 V, single phase							
	2.4 N.m for LXM05CD28M2, 200240 V, single phase							
	2.4 N.m for LXM05AD28F1, 110120 V, single phase							
	2.4 N.m for LXM05BD28F1, 110120 V, single phase							
	2.4 N.m for LXM05CD28F1, 110120 V, single phase							
	2.1 N.m for LXM32.D18M2 at 6 A, 230 V, single phase							
	2 N.m for LXM15LD28M3, 230 V, three phase							
	2.4 N.m for LXM05AD42M3X at 6 A, 200240 V, three phase							
	2.4 N.m for LXM05BD42M3X, 200240 V, three phase							
	2.4 N.m for LXM05CD42M3X, 200240 V, three phase							

Nominal speed	3000 rpm for LXM05AD28M2, 200240 V, single phase 3000 rpm for LXM05BD28M2 at 6 A, 200240 V, single phase 3000 rpm for LXM05CD28M2, 200240 V, single phase 3000 rpm for LXM05AD42M3X, 200240 V, three phase
	3000 rpm for LXM05BD42M3X, 200240 V, three phase
	3000 rpm for LXM05CD42M3X, 200240 V, three phase
	3000 rpm for LXM05AD28F1, 110120 V, single phase
	3000 rpm for LXM05BD28F1, 110120 V, single phase
	3000 rpm for LXM05CD28F1, 110120 V, single phase 4000 rpm for LXM32.D18M2 at 6 A, 230 V, single phase
	6000 rpm for LXM15LD28M3, 230 V, three phase
Product compatibility	LXM05AD28F1 at 110120 V single phase
	LXM05AD28M2 at 200240 V single phase
	LXM05BD28F1 at 110120 V single phase
	LXM05BD28M2 at 200240 V single phase LXM05CD28F1 at 110120 V single phase
	LXM05CD26F1 at 110120 V single phase
	LXM32.D18M2 at 230 V single phase
	LXM05AD42M3X at 200240 V three phase
	LXM05BD42M3X at 200240 V three phase
	LXM05CD42M3X at 200240 V three phase
	LXM15LD28M3 at 230 V three phase
Shaft end	Untapped
IP degree of protection	IP50 standard
Speed feedback resolution	131072 points/turn x 4096 turns
Holding brake	Without
Mounting support	International standard flange
Electrical connection	Rotatable right-angled connectors
Complementary	
Range compatibility	Lexium 32
	Lexium 15
	Lexium 05
supply voltage max	480 V
Network number of phases	Three phase
Continuous stall current	7 A
maximum continuous power	1.7 W
Maximum current Irms	
waxiiiiuiii current irms	18 A for LXM32.D18M2
waxiiiuiii current irms	30.9 A for LXM15LD28M3
maxilliulii cuffent ifms	30.9 A for LXM15LD28M3 29.2 A for LXM05AD28F1
MAAIIIIUIII GUFFERL IFMS	30.9 A for LXM15LD28M3
MAAIIIUIII CUFFEIL IFMS	30.9 A for LXM15LD28M3 29.2 A for LXM05AD28F1 29.2 A for LXM05AD28M2
MAAIIIIUIII GUFFERL IFMS	30.9 A for LXM15LD28M3 29.2 A for LXM05AD28F1 29.2 A for LXM05AD28M2 29.2 A for LXM05AD42M3X
MAAIIIUIII CUFFEIL IFMS	30.9 A for LXM15LD28M3 29.2 A for LXM05AD28F1 29.2 A for LXM05AD28M2 29.2 A for LXM05AD42M3X 29.2 A for LXM05BD28F1 29.2 A for LXM05BD28M2 29.2 A for LXM05BD28M2 29.2 A for LXM05BD42M3X
MAAIIIIUIII GUFFERL IFMS	30.9 A for LXM15LD28M3 29.2 A for LXM05AD28F1 29.2 A for LXM05AD28M2 29.2 A for LXM05AD42M3X 29.2 A for LXM05BD28F1 29.2 A for LXM05BD28M2 29.2 A for LXM05BD42M3X 29.2 A for LXM05BD42M3X 29.2 A for LXM05BD42M3X 29.2 A for LXM05CD28F1
MAAIIIUIII GUFFERL IFMS	30.9 A for LXM15LD28M3 29.2 A for LXM05AD28F1 29.2 A for LXM05AD28M2 29.2 A for LXM05AD42M3X 29.2 A for LXM05BD28F1 29.2 A for LXM05BD28M2 29.2 A for LXM05BD28M2 29.2 A for LXM05BD42M3X
Maximum permanent current	30.9 A for LXM15LD28M3 29.2 A for LXM05AD28F1 29.2 A for LXM05AD28M2 29.2 A for LXM05AD42M3X 29.2 A for LXM05BD28F1 29.2 A for LXM05BD28M2 29.2 A for LXM05BD42M3X 29.2 A for LXM05BD42M3X 29.2 A for LXM05BD42M3X 29.2 A for LXM05CD28F1 29.2 A for LXM05CD28M2
	30.9 A for LXM15LD28M3 29.2 A for LXM05AD28F1 29.2 A for LXM05AD28M2 29.2 A for LXM05AD42M3X 29.2 A for LXM05BD28F1 29.2 A for LXM05BD28M2 29.2 A for LXM05BD42M3X 29.2 A for LXM05DD42M3X 29.2 A for LXM05DD42M3X 29.2 A for LXM05CD28F1 29.2 A for LXM05CD28M2 29.2 A for LXM05CD28M2 29.2 A for LXM05CD42M3X
Maximum permanent current	30.9 A for LXM15LD28M3 29.2 A for LXM05AD28F1 29.2 A for LXM05AD28M2 29.2 A for LXM05AD42M3X 29.2 A for LXM05BD28F1 29.2 A for LXM05BD28M2 29.2 A for LXM05BD28M2 29.2 A for LXM05D2BM3X 29.2 A for LXM05CD28F1 29.2 A for LXM05CD28M2 29.2 A for LXM05CD28M2 29.2 A for LXM05CD42M3X
Maximum permanent current Switching frequency	30.9 A for LXM15LD28M3 29.2 A for LXM05AD28F1 29.2 A for LXM05AD42M3X 29.2 A for LXM05AD42M3X 29.2 A for LXM05BD28F1 29.2 A for LXM05BD28M2 29.2 A for LXM05BD42M3X 29.2 A for LXM05CD28F1 29.2 A for LXM05CD28F1 29.2 A for LXM05CD42M3X 29.2 A for LXM05CD42M3X 29.2 A for LXM05CD42M3X
Maximum permanent current Switching frequency Second shaft	30.9 A for LXM15LD28M3 29.2 A for LXM05AD28F1 29.2 A for LXM05AD28M2 29.2 A for LXM05AD42M3X 29.2 A for LXM05BD28F1 29.2 A for LXM05BD28F1 29.2 A for LXM05BD42M3X 29.2 A for LXM05BD42M3X 29.2 A for LXM05CD28F1 29.2 A for LXM05CD28M2 29.2 A for LXM05CD28M2 29.2 A for LXM05CD42M3X 29.2 A  8 kHz  Without second shaft end
Maximum permanent current Switching frequency Second shaft Shaft diameter	30.9 A for LXM15LD28M3 29.2 A for LXM05AD28F1 29.2 A for LXM05AD42M3X 29.2 A for LXM05BD28F1 29.2 A for LXM05BD28F1 29.2 A for LXM05BD428M2 29.2 A for LXM05BD42M3X 29.2 A for LXM05BD42M3X 29.2 A for LXM05CD28F1 29.2 A for LXM05CD28M2 29.2 A for LXM05CD42M3X 29.2 A for LXM05CD42M3X  29.2 A for LXM05CD42M3X  Without second shaft end
Maximum permanent current Switching frequency Second shaft Shaft diameter Shaft length	30.9 A for LXM15LD28M3 29.2 A for LXM05AD28F1 29.2 A for LXM05AD28M2 29.2 A for LXM05AD42M3X 29.2 A for LXM05BD28F1 29.2 A for LXM05BD28M2 29.2 A for LXM05BD42M3X 29.2 A for LXM05CD28F1 29.2 A for LXM05CD28F1 29.2 A for LXM05CD28M2 29.2 A for LXM05CD42M3X 29.2 A for LXM05CD42M3X  29.2 A for LXM05CD42M3X  29.2 A for LXM05CD42M3X
Maximum permanent current Switching frequency Second shaft Shaft diameter Shaft length Feedback type	30.9 A for LXM15LD28M3 29.2 A for LXM05AD28F1 29.2 A for LXM05AD28M2 29.2 A for LXM05AD42M3X 29.2 A for LXM05BD28F1 29.2 A for LXM05BD28F1 29.2 A for LXM05BD42M3X 29.2 A for LXM05BD42M3X 29.2 A for LXM05CD28F1 29.2 A for LXM05CD28M2 29.2 A for LXM05CD42M3X 29.2 A for LXM05CD42M3X  29.2 A  8 kHz  Without second shaft end  14 mm  30 mm  Multiturn SinCos Hiperface

Back emf constant	29 V/krpm at 120 °C
Number of motor poles	3.0
Rotor inertia	0.58 kg.cm <sup>2</sup>
Stator resistance	0.91 Ohm at 20 °C
Stator inductance	2.45 mH at 20 °C
Stator electrical time constant	4.84 ms at 20 °C
Maximum radial force Fr	400 N at 6000 rpm 430 N at 5000 rpm 460 N at 4000 rpm 510 N at 3000 rpm 580 N at 2000 rpm 730 N at 1000 rpm
Maximum axial force Fa	0.2 x Fr
type of cooling	Natural convection
Length	220 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
Net weight	3.62 kg
Sizing reference	BSH0703T
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

# **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	3.6 kg

# **Logistical informations**

Country of origin

# **Contractual warranty**

Warranty 18 months



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									
Carbon footprint (kg.eq.CO2 per CR, Total Life cycle)	1375								
Environmental Disclosure	Product Environmental Profile								

#### **Use Better**

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

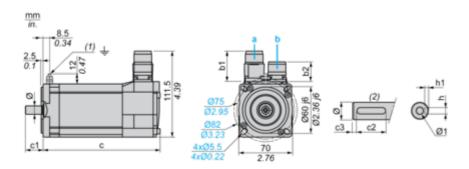
○ Repack and remanufacture	
Circularity Profile	No need of specific recycling operations
Take-back	No
WEEE	The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins

## BSH0703T02A2A

#### **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)

#### Dimensions in mm

Straight Rotatable connectors connector		•	c (without	c (with	c1	c2	сЗ	h	h1	Ø	Ø1 for	
b1	b2	b1	b2	brake)	brake)							screws
39.5	25.5	39.5	39.5	220	254	30	20	5	5 N9	3 <sup>+0.1</sup> <sub>0</sub>	14 k6	M5 x 12.5

#### Dimensions in in.

connec	Straight connectors Rotatable angled connectors		c (without brake)	c (with brake)	с1	c2	сЗ	h	h1	Ø	Ø1 for screws	
b1	b2	b1	b2	2.0								
1.55	1.00	1.55	1.55	8.66	10.00	1.18	0.78	0.19	0.20 N9	0.12 <sup>+0.004</sup> 0	0.55 k6	M5 x 0.49

## **Product datasheet**

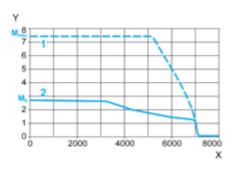
## BSH0703T02A2A

Performance Curves

### 230 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