# Product datasheet Characteristics

## BSH1401P32A1A

AC servo motor BSH - 11.1 N.m - 1500 rpm - keyed shaft - without brake - IP65



Main		
Product or component type	Servo motor	
Device short name	BSH	
Maximum mechanical speed	4000 rpm	
Continuous stall torque	11.1 N.m for LXM32.D30N4 at 10 A, 400 V, three phase 11.1 N.m for LXM32.D30N4 at 10 A, 480 V, three phase 11.1 N.m for LXM15MD28N4, 400 V, three phase 11.1 N.m for LXM15MD28N4, 480 V, three phase 11.1 N.m for LXM15MD28N4, 230 V, three phase 11.1 N.m for LXM15MD40N4, 400 V, three phase 11.1 N.m for LXM15MD40N4, 480 V, three phase 11.1 N.m for LXM15LD28M3, 230 V, three phase 11.4 N.m for LXM05AD34N4, 380480 V, three phase 11.4 N.m for LXM05BD34N4, 380480 V, three phase 11.4 N.m for LXM05CD34N4, 380480 V, three phase	
Peak stall torque	27 N.m for LXM32.D30N4 at 10 A, 400 V, three phase 27 N.m for LXM32.D30N4 at 10 A, 480 V, three phase 23.33 N.m for LXM15MD28N4, 230 V, three phase 23.33 N.m for LXM15MD28N4, 400 V, three phase 23.33 N.m for LXM15MD28N4, 480 V, three phase 23.33 N.m for LXM15MD40N4, 480 V, three phase 23.33 N.m for LXM15MD40N4, 480 V, three phase 23.33 N.m for LXM15MD40N4, 480 V, three phase 23.8 N.m for LXM15LD28M3, 230 V, three phase 23.33 N.m for LXM05AD34N4, 380480 V, three phase 23.33 N.m for LXM05BD34N4, 380480 V, three phase 23.33 N.m for LXM05CD34N4, 380480 V, three phase 23.33 N.m for LXM05CD34N4, 380480 V, three phase	
Nominal output power	2500 W for LXM32.D30N4 at 10 A, 400 V, three phase 3000 W for LXM32.D30N4 at 10 A, 480 V, three phase 2000 W for LXM15MD28N4, 400 V, three phase 2000 W for LXM15MD40N4, 400 V, three phase 2200 W for LXM05AD34N4, 380480 V, three phase 2200 W for LXM05BD34N4, 380480 V, three phase 2200 W for LXM05CD34N4, 380480 V, three phase 2200 W for LXM05CD34N4, 380480 V, three phase 1400 W for LXM15LD28M3, 230 V, three phase 1400 W for LXM15MD28N4, 230 V, three phase 2150 W for LXM15MD28N4, 480 V, three phase 2150 W for LXM15MD28N4, 480 V, three phase 2150 W for LXM15MD40N4, 480 V, three phase	
Nominal torque	9.5 N.m for LXM32.D30N4 at 10 A, 400 V, three phase 9.5 N.m for LXM32.D30N4 at 10 A, 480 V, three phase 6.8 N.m for LXM15MD28N4, 480 V, three phase 6.8 N.m for LXM15MD40N4, 480 V, three phase 6.9 N.m for LXM05AD34N4, 380480 V, three phase 6.9 N.m for LXM05BD34N4, 380480 V, three phase 6.9 N.m for LXM05CD34N4, 380480 V, three phase	

	7.63 N.m for LXM15MD28N4, 400 V, three phase 7.63 N.m for LXM15MD40N4, 400 V, three phase 9.1 N.m for LXM15LD28M3, 230 V, three phase 9.1 N.m for LXM15MD28N4, 230 V, three phase
Nominal speed	2500 rpm for LXM32.D30N4 at 10 A, 400 V, three phase 3000 rpm for LXM32.D30N4 at 10 A, 480 V, three phase 3000 rpm for LXM05AD34N4, 380480 V, three phase 3000 rpm for LXM05BD34N4, 380480 V, three phase 3000 rpm for LXM05CD34N4, 380480 V, three phase 3000 rpm for LXM05CD34N4, 380480 V, three phase 1500 rpm for LXM15MD28N4, 230 V, three phase 1500 rpm for LXM15LD28M3, 230 V, three phase 2500 rpm for LXM15MD28N4, 400 V, three phase 2500 rpm for LXM15MD40N4, 400 V, three phase 3000 rpm for LXM15MD28N4, 480 V, three phase 3000 rpm for LXM15MD40N4, 480 V, three phase 3000 rpm for LXM15MD40N4, 480 V, three phase
Product compatibility	LXM15LD28M3 at 230 V three phase LXM05AD34N4 at 380480 V three phase LXM05BD34N4 at 380480 V three phase LXM05CD34N4 at 380480 V three phase LXM15MD28N4 at 400 V three phase LXM15MD28N4 at 400 V three phase LXM15MD28N4 at 480 V three phase LXM15MD40N4 at 400 V three phase LXM15MD40N4 at 480 V three phase LXM15MD40N4 at 480 V three phase LXM15MD28N4 at 230 V three phase
Shaft end	Keyed
IP degree of protection	IP65 standard IP67 with IP67 kit
Speed feedback resolution	131072 points/turn x 4096 turns
Holding brake	Without
Mounting support	International standard flange
Electrical connection	Straight connectors

Complementary			
Range compatibility	Lexium 32 Lexium 15 Lexium 05		
Supply voltage max	480 V		
Network number of phases	Three phase		
Continuous stall current	7.8 A		
Maximum continuous power	3.6 W		
Maximum current Irms  20.8 A for LXM15LD28M3 20.8 A for LXM15MD28N4 20.8 A for LXM15MD40N4 20.8 A for LXM05AD34N4 20.8 A for LXM05BD34N4 20.8 A for LXM05CD34N4 20.8 A for LXM32.D30N4			
Maximum permanent current	20.8 A		
Switching frequency	8 kHz		
Second shaft	Without second shaft end		
Shaft diameter	24 mm		
Shaft length	50 mm		
Key width	40 mm		
Feedback type	Multiturn SinCos Hiperface		
Motor flange size	140 mm		
Number of motor stacks	1		
Torque constant	1.43 N.m/A at 120 °C		
Back emf constant	100 V/krpm at 120 °C		
Number of motor poles	10		
Rotor inertia	7.41 kg.cm²		
Stator resistance	1.41 Ohm at 20 °C		
Stator inductance	15.6 mH at 20 °C		

Stator electrical time constant	11.06 ms at 20 °C			
Maximum radial force Fr	1530 N at 3000 rpm 1760 N at 2000 rpm 2210 N at 1000 rpm			
Maximum axial force Fa	0.2 x Fr			
Type of cooling	Natural convection			
Length	217.5 mm			
Centring collar diameter	130 mm			
Centring collar depth	3.5 mm			
Number of mounting holes	4			
Mounting holes diameter	11 mm			
Circle diameter of the mounting holes	165 mm			
Product weight	11.9 kg			

#### Contractual warranty

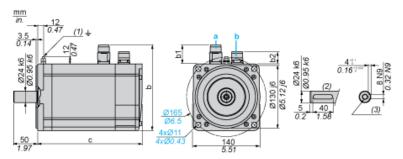
14/	40	
Warranty	18 months	

### Product datasheet **Dimensions Drawings**

### BSH1401P32A1A

#### Servo Motors Dimensions

#### **Example with Straight Connectors**



Power supply for servo motor brake a:

b: Power supply for servo motor encoder

M4 screw

(1) (2) Shaft end, keyed slot (optional)

(3) For screws M8 x 19 mm/M8 x 0.75 in.

#### Dimensions in mm

Straight connectors		Rotatable angled connectors			c (without brake)	c (with brake)	
b	b1	b2	b	b1	b2		
178	39.5	25.5	178	39.5	39.5	218	256

#### Dimensions in in.

Straight connectors		Rotatable angled connectors			c (without brake)	c (with brake)	
b	b1	b2	b	b1	b2		
7.00	1.55	1.00	7.00	1.55	1.55	8.58	10.07

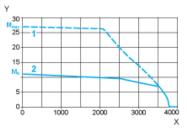
## Product datasheet Performance Curves

## BSH1401P32A1A

#### 400 V 3-Phase Supply Voltage

#### Torque/Speed Curves

Servo motor with LXM32•D30N4 servo drive



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

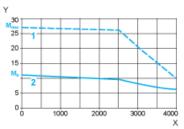
# Product datasheet Performance Curves

## BSH1401P32A1A

### 480 V 3-Phase Supply Voltage

#### Torque/Speed Curves

Servo motor with LXM32•D30N4 servo drive



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