

# Product datasheet

Specifications



servo motor BSH, Lexium 32,  
0.21N.m, 9000rpm, 40mm,  
untapped shaft, 16 Sincos Multi turn,  
with brake, IP65

BSH0401P27F2A

## Main

Device short name	BSH
Product or component type	Servo motor
Maximum mechanical speed	10000 rpm
Continuous stall torque	0.21 N.m for LXM32.U60N4 at 1.5 A, 480 V, three phase 0.21 N.m for LXM32.U60N4 at 1.5 A, 400 V, three phase 0.21 N.m for LXM32.U45M2 at 1.5 A, 230 V, single phase
Peak stall torque	0.8 N.m for LXM32.U60N4 at 1.5 A, 480 V, three phase 0.8 N.m for LXM32.U60N4 at 1.5 A, 400 V, three phase 0.8 N.m for LXM32.U45M2 at 1.5 A, 230 V, single phase
Nominal output power	166 W for LXM32.U60N4 at 1.5 A, 480 V, three phase 166 W for LXM32.U60N4 at 1.5 A, 400 V, three phase 77 W for LXM32.U45M2 at 1.5 A, 230 V, single phase
Nominal torque	0.176 N.m for LXM32.U60N4 at 1.5 A, 480 V, three phase 0.176 N.m for LXM32.U60N4 at 1.5 A, 400 V, three phase 0.184 N.m for LXM32.U45M2 at 1.5 A, 230 V, single phase
Nominal speed	9000 rpm for LXM32.U60N4 at 1.5 A, 480 V, three phase 9000 rpm for LXM32.U60N4 at 1.5 A, 400 V, three phase 4000 rpm for LXM32.U45M2 at 1.5 A, 230 V, single phase
Shaft end	Smooth shaft
IP degree of protection	IP65 standard
Speed feedback resolution	32768 points/turn x 4096 turns
Holding brake	With
Mounting support	International standard flange
Electrical connection	Rotatable right-angled connectors

## Complementary

Range compatibility	Lexium 32
supply voltage max	400 V
Network number of phases	Three phase
Continuous stall current	1.12 A
maximum continuous power	220 W
Maximum current Irms	4.7 A for LXM32.U60N4 at 480 V 4.7 A for LXM32.U60N4 at 400 V 4.7 A for LXM32.U45M2 at 230 V
Maximum permanent current	1.12 A
Switching frequency	8 kHz
Second shaft	Without second shaft end

Shaft diameter	8 mm
Shaft length	25 mm
Feedback type	Multiturn SinCos Hiperface
Holding torque	0.4 N.m holding brake
Motor flange size	40 mm
Number of motor stacks	1
Torque constant	0.19 N.m/A at 120 °C
Back emf constant	13.6 V/krpm at 20 °C
Number of motor poles	5.0
Rotor inertia	0.04 kg.cm <sup>2</sup>
Stator resistance	17.2 Ohm at 20 °C
Stator inductance	7.3 mH at 20 °C
Stator electrical time constant	0.85 ms at 20 °C
Maximum axial force Fa	0.2 x Fr
Brake pull-in power	5.8 W
Type of cooling	Natural convection
Length	99.4 mm
Centring collar diameter	30 mm
Centring collar depth	2.5 mm
Number of mounting holes	4
Mounting holes diameter	4.5 mm
Circle diameter of the mounting holes	46 mm
Net weight	0.6 kg
Sizing reference	BSH0401P
Network number of phases	3
Accuracy error [angular]	0.08 °
Temperature copper hot	120 °C
Temperature magnet hot	100 °C
Temperature magnet rt	20 °C
Output current 3s peak	4.5 A
Inertia	0.017 kg.cm <sup>2</sup> of brake 0.023 kg.cm <sup>2</sup> of motor

## Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	11.0 cm
Package 1 Width	17.0 cm
Package 1 Length	24.0 cm
Package 1 Weight	821.0 g

# Contractual warranty

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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	199 kg CO2 eq.
Carbon footprint of the manufacturing phase [A1 to A3]	4 kg CO2 eq.
Carbon footprint of the distribution phase [A4]	0.1 kg CO2 eq.
Carbon footprint of the installation phase [A5]	0 kg CO2 eq.
Carbon footprint of the use phase [B2, B3, B4, B6]	195 kg CO2 eq.
Carbon footprint of the end-of-life phase [C1 to C4]	0.1 kg CO2 eq.

## Use Better



### Materials and Substances

Packaging made with recycled cardboard	Yes
Packaging without single use plastic	No
SCIP Number	8c11b0c9-e501-4810-83eb-05fc6605ede4
EU RoHS Directive	<a href="#">Compliant By Exemption</a>
REACH Regulation	<a href="#">Reference contains Substances of Very High Concern above the threshold</a>
PVC free	Yes

## Use Longer



### Lifetime extension

Repair	No
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## Use Again



### Repack and remanufacture

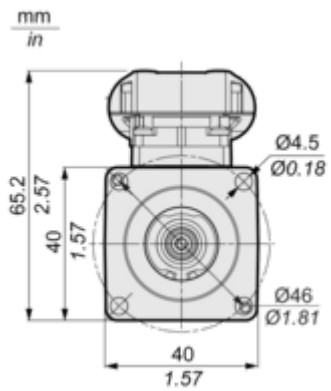
End of life manual availability	No need of specific recycling operations
Take-back	Yes
WEEE Label	 The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins

Dimensions Drawings

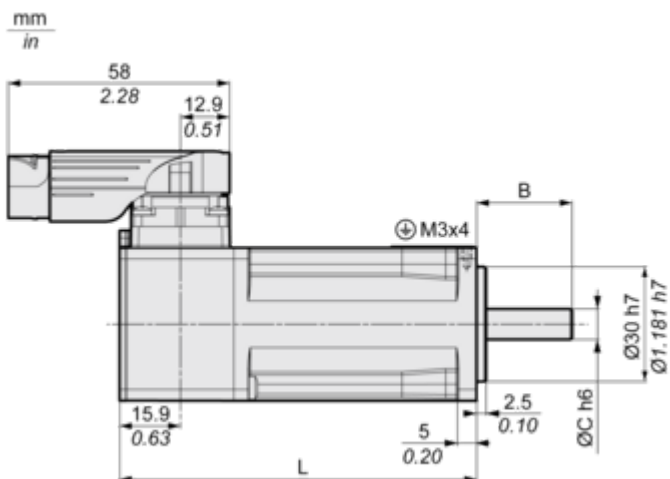
Servo Motors Dimensions

For Servo Motor with Brake

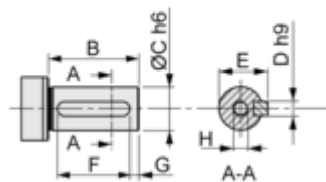
Front view



Left view



DIN 6885 A



	Dimensions in mm	Dimensions in in.
L	99.4	3.91
B	25	0.98
C	8	0.31
D	3	0.12

	Dimensions in mm	Dimensions in in.
<b>E</b>	9.2	0.36
<b>F</b>	12	0.47
<b>G</b>	4	0.16
<b>H</b>	DIN 332 DS M3 x 9	
<b>A</b>	DIN 6885-A3x3x12	