

# Product data sheet

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<br>0.21 N.m for LXM32.U60N4 at 1.5 A, 400 V, three phase<br>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<br>0.8 N.m for LXM32.U60N4 at 1.5 A, 400 V, three phase<br>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<br>166 W for LXM32.U60N4 at 1.5 A, 400 V, three phase<br>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<br>0.176 N.m for LXM32.U60N4 at 1.5 A, 400 V, three phase<br>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<br>9000 rpm for LXM32.U60N4 at 1.5 A, 400 V, three phase<br>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<br>4.7 A for LXM32.U60N4 at 400 V<br>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                                                                           |

Disclaimer: This documentation is not intended as a substitute for and is not to be used for determining suitability or reliability of these products for specific user applications

|                                       |                            |
|---------------------------------------|----------------------------|
| 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.cm²                |
| 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                      |
| Product 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                      |

## 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 |

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                                           |
| Environmental Disclosure         | <a href="#">Product Environmental Profile</a> |

Use Better

| Materials and Substances               |                                                                                                                                                                                                                                                                                             |
|----------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Packaging made with recycled cardboard | Yes                                                                                                                                                                                                                                                                                         |
| Packaging without single use plastic   | No                                                                                                                                                                                                                                                                                          |
| <a href="#">EU RoHS Directive</a>      | Pro-active compliance (Product out of EU RoHS legal scope)                                                                                                                                                                                                                                  |
| SCIP Number                            | 8c11b0c9-e501-4810-83eb-05fc6605ede4                                                                                                                                                                                                                                                        |
| REACH Regulation                       | <a href="#">REACH Declaration</a>                                                                                                                                                                                                                                                           |
| California proposition 65              | WARNING: This product can expose you to chemicals including: Lead and lead compounds, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to <a href="http://www.P65Warnings.ca.gov">www.P65Warnings.ca.gov</a> |
| PVC free                               | Yes                                                                                                                                                                                                                                                                                         |

Use Again

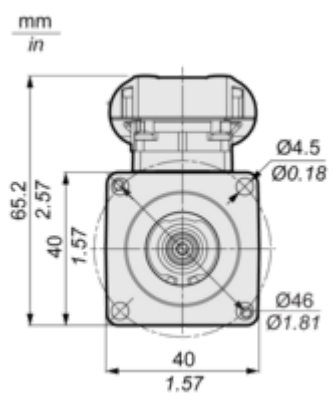
| Repack and remanufacture        |                                                                                                                                                                                                                 |
|---------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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

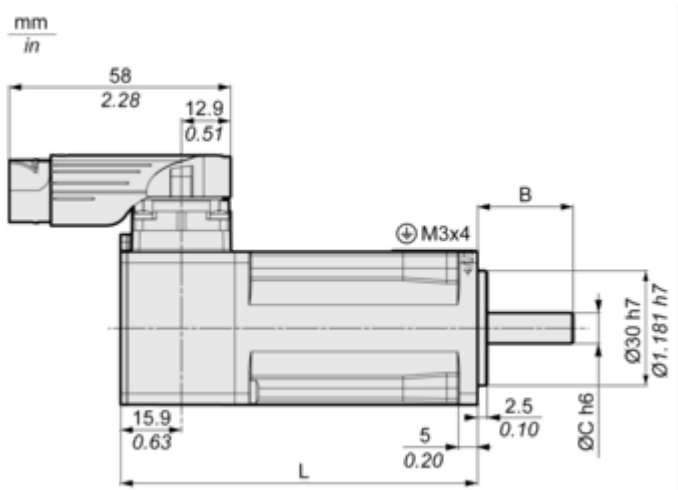
Servo Motors Dimensions

For Servo Motor with Brake

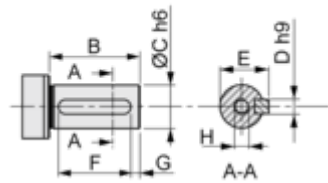
Front view



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. |
|---|-------------------|-------------------|
| E | 9.2               | 0.36              |
| F | 12                | 0.47              |
| G | 4                 | 0.16              |
| H | DIN 332 DS M3 x 9 |                   |
| A | DIN 6885-A3x3x12  |                   |