

# Product data sheet

Specifications



servo motor BCH, Lexium 28,  
40mm, 50W, 0.054kg.cm<sup>2</sup>, with oil  
seal, with key, leads connection

BCH2MBA533CA5C

## Main

|                           |             |
|---------------------------|-------------|
| Range compatibility       | Lexium 28   |
| Device short name         | BCH2        |
| Product or component type | Servo motor |

## Complementary

|                           |                                                                                                                                                                                                                                                                               |
|---------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Maximum mechanical speed  | 5000 rpm                                                                                                                                                                                                                                                                      |
| [Us] rated supply voltage | 220 V<br>110 V                                                                                                                                                                                                                                                                |
| Network number of phases  | Three phase<br>Single phase                                                                                                                                                                                                                                                   |
| Continuous stall current  | 0.54 A                                                                                                                                                                                                                                                                        |
| Continuous stall torque   | 0.16 N.m for LXM26D at 0.64 A, 220 V, single phase<br>0.16 N.m for LXM26D at 0.64 A, 220 V, three phase<br>0.16 N.m for LXM28 at 0.64 A, 220 V, single phase<br>0.16 N.m for LXM28 at 0.64 A, 220 V, three phase<br>0.16 N.m for LXM28 at 1.2 A, 110 V, single phase          |
| Continuous power          | 50 W                                                                                                                                                                                                                                                                          |
| Peak stall torque         | 0.48 N.m for LXM26D at 0.64 A, 220 V, single phase<br>0.48 N.m for LXM26D at 0.64 A, 220 V, three phase<br>0.48 N.m for LXM28... at 0.64 A, 220 V, single phase<br>0.48 N.m for LXM28... at 0.64 A, 220 V, three phase<br>0.48 N.m for LXM28... at 1.2 A, 110 V, single phase |
| Nominal output power      | 50 W for LXM26D at 0.64 A, 220 V, single phase<br>50 W for LXM26D at 0.64 A, 220 V, three phase<br>50 W for LXM28... at 0.64 A, 220 V, single phase<br>50 W for LXM28... at 0.64 A, 220 V, three phase<br>50 W for LXM28... at 1.2 A, 110 V, single phase                     |
| Nominal torque            | 0.16 N.m for LXM26D at 0.64 A, 220 V, single phase<br>0.16 N.m for LXM26D at 0.64 A, 220 V, three phase<br>0.16 N.m for LXM28... at 0.64 A, 220 V, single phase<br>0.16 N.m for LXM28... at 0.64 A, 220 V, three phase<br>0.16 N.m for LXM28... at 1.2 A, 110 V, single phase |
| Nominal speed             | 3000 rpm for LXM26D at 0.64 A, 220 V, single phase<br>3000 rpm for LXM26D at 0.64 A, 220 V, three phase<br>3000 rpm for LXM28... at 0.64 A, 220 V, single phase<br>3000 rpm for LXM28... at 0.64 A, 220 V, three phase<br>3000 rpm for LXM28... at 1.2 A, 110 V, single phase |
| Maximum current Irms      | 1.77 A for LXM28... at 0.05 kW, 220 V<br>1.77 A for LXM28... at 0.05 kW, 110 V                                                                                                                                                                                                |
| Maximum permanent current | 0.59 A                                                                                                                                                                                                                                                                        |

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

|                                       |                                                                                                                                                                                                                                                                                                              |
|---------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product compatibility                 | LXM26D servo drive motor at 0.05 kW, 220 V, single phase<br>LXM26D servo drive motor at 0.05 kW, 220 V, three phase<br>LXM28... servo drive motor at 0.05 kW, 220 V, single phase<br>LXM28... servo drive motor at 0.05 kW, 220 V, three phase<br>LXM28... servo drive motor at 0.05 kW, 110 V, single phase |
| Shaft end                             | Keyed                                                                                                                                                                                                                                                                                                        |
| Shaft diameter                        | 8 mm                                                                                                                                                                                                                                                                                                         |
| Shaft length                          | 25 mm                                                                                                                                                                                                                                                                                                        |
| key width                             | 3 mm                                                                                                                                                                                                                                                                                                         |
| Feedback type                         | 20 bits single turn absolute encoder                                                                                                                                                                                                                                                                         |
| Holding brake                         | Without                                                                                                                                                                                                                                                                                                      |
| Mounting support                      | Asian standard flange                                                                                                                                                                                                                                                                                        |
| Motor flange size                     | 40 mm                                                                                                                                                                                                                                                                                                        |
| Electrical connection                 | Free lead                                                                                                                                                                                                                                                                                                    |
| Torque constant                       | 0.3 N.m/A at 20 °C                                                                                                                                                                                                                                                                                           |
| Back emf constant                     | 18 V/krpm at 20 °C                                                                                                                                                                                                                                                                                           |
| Number of motor poles                 | 4.0                                                                                                                                                                                                                                                                                                          |
| Rotor inertia                         | 0.054 kg.cm <sup>2</sup>                                                                                                                                                                                                                                                                                     |
| Stator resistance                     | 31 Ohm at 20 °C                                                                                                                                                                                                                                                                                              |
| Stator inductance                     | 24.7 mH at 20 °C                                                                                                                                                                                                                                                                                             |
| Stator electrical time constant       | 0.8 ms at 20 °C                                                                                                                                                                                                                                                                                              |
| Maximum radial force Fr               | 85 N at 3000 rpm                                                                                                                                                                                                                                                                                             |
| Maximum axial force Fa                | 40 N                                                                                                                                                                                                                                                                                                         |
| Brake pull-in power                   | 4.35 W                                                                                                                                                                                                                                                                                                       |
| Type of cooling                       | Natural convection                                                                                                                                                                                                                                                                                           |
| Length                                | 82 mm                                                                                                                                                                                                                                                                                                        |
| Number of motor stacks                | 1                                                                                                                                                                                                                                                                                                            |
| Centring collar diameter              | 30 mm                                                                                                                                                                                                                                                                                                        |
| Centring collar depth                 | 3 mm                                                                                                                                                                                                                                                                                                         |
| Number of mounting holes              | 4                                                                                                                                                                                                                                                                                                            |
| Mounting holes diameter               | 4.5 mm                                                                                                                                                                                                                                                                                                       |
| Circle diameter of the mounting holes | 46 mm                                                                                                                                                                                                                                                                                                        |
| Distance shaft shoulder-flange        | 3 mm                                                                                                                                                                                                                                                                                                         |
| Product weight                        | 0.4 kg                                                                                                                                                                                                                                                                                                       |
| Sizing reference                      | BCH2                                                                                                                                                                                                                                                                                                         |
| Network number of phases              | 1                                                                                                                                                                                                                                                                                                            |
| Accuracy error [angular]              | 0.044 °                                                                                                                                                                                                                                                                                                      |
| Temperature copper hot                | 135 °C                                                                                                                                                                                                                                                                                                       |
| Temperature magnet hot                | 100 °C                                                                                                                                                                                                                                                                                                       |
| Temperature magnet rt                 | 20 °C                                                                                                                                                                                                                                                                                                        |

## Environment

|                                       |                   |
|---------------------------------------|-------------------|
| IP degree of protection               | IP50 IM V3        |
|                                       | IP65 IM B5, IM V1 |
| Ambient air temperature for operation | -20...40 °C       |

## Packing Units

|                              |           |
|------------------------------|-----------|
| Unit Type of Package 1       | PCE       |
| Number of Units in Package 1 | 1         |
| Package 1 Height             | 8.300 cm  |
| Package 1 Width              | 13.200 cm |
| Package 1 Length             | 24.500 cm |
| Package 1 Weight             | 713.000 g |
| Unit Type of Package 2       | S02       |
| Number of Units in Package 2 | 3         |
| Package 2 Height             | 15.000 cm |
| Package 2 Width              | 30.000 cm |
| Package 2 Length             | 40.000 cm |
| Package 2 Weight             | 2.477 kg  |

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 | 568                                           |
| 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)                                                                                                                                                                                                                                  |
| 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                                                                                                                                                                                                                                                                                         |

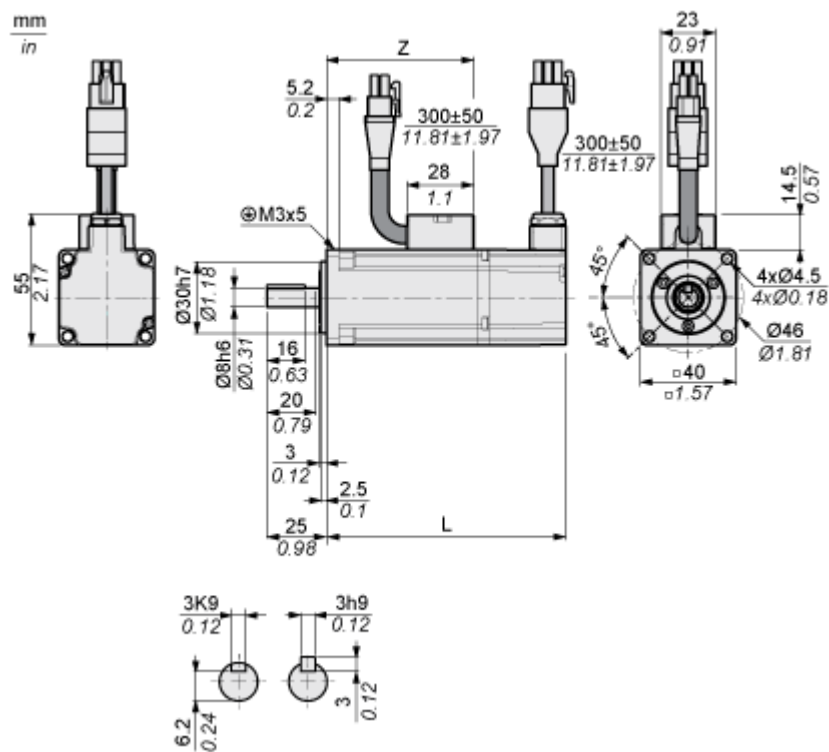
Use Again

| Repack and remanufacture        |                                         |
|---------------------------------|-----------------------------------------|
| End of life manual availability | <a href="#">End of Life Information</a> |
| Take-back                       | No                                      |

Dimensions Drawings

Dimensions

Dimensions of Motor

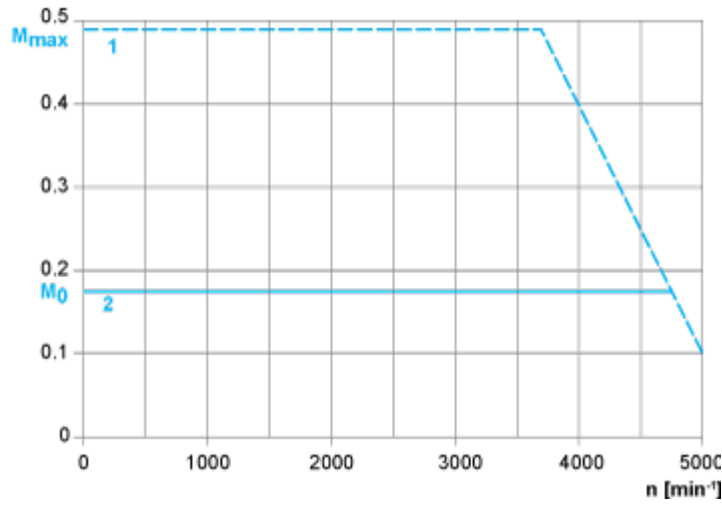


|                           | mm   | in.  |
|---------------------------|------|------|
| L (without holding brake) | 82   | 3.23 |
| L (with holding brake)    | 112  | 4.41 |
| Z                         | 43.5 | 1.71 |

Performance Curves

Torque/Speed Curves with 230 V Single/Three Phase Supply Voltage

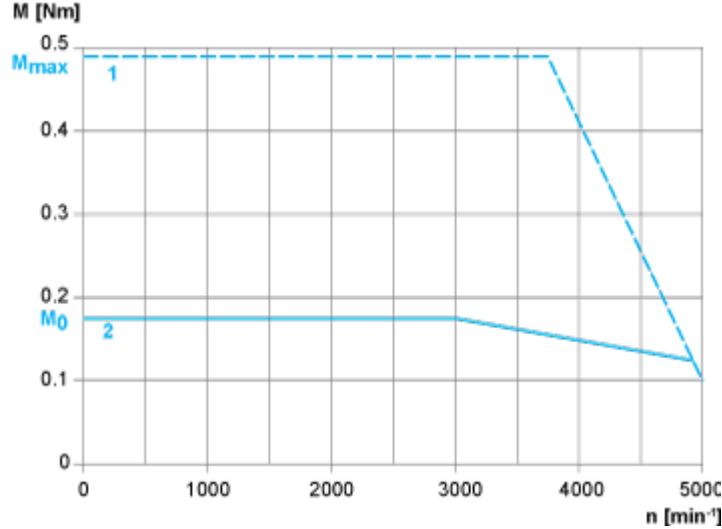
Servo Motor Without Shaft Sealing Ring and LXM28AUA5 Servo Drive



- 1 : Peak torque
- 2 : Continuous torque

Torque/Speed Curves with 230 V Single/Three Phase Supply Voltage

Servo Motor with shaft sealing ring and LXM28AUA5 Servo Drive



- 1 : Peak torque
- 2 : Continuous torque