

# Product data sheet

Specifications



servo motor BCH; Lexium 28;  
80mm; 400W; 0.67kg.cm<sup>2</sup>; without  
oil seal; with key; leads connection

BCH2LF0431CA5C

## 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  | Single phase<br>Three phase                                                                                                                                                        |
| Continuous stall current  | 2.29 A                                                                                                                                                                             |
| Continuous stall torque   | 1.27 N.m for LXM28 at 2.6 A, 220 V, single phase<br>1.27 N.m for LXM28 at 2.6 A, 220 V, three phase<br>1.27 N.m for LXM28 at 5.7 A, 110 V, single phase                            |
| Continuous power          | 400 W                                                                                                                                                                              |
| Peak stall torque         | 3.81 N.m for LXM28... at 2.6 A, 220 V, single phase<br>3.81 N.m for LXM28... at 2.6 A, 220 V, three phase<br>3.81 N.m for LXM28... at 5.7 A, 110 V, single phase                   |
| Nominal output power      | 400 W for LXM28... at 2.6 A, 220 V, single phase<br>400 W for LXM28... at 2.6 A, 220 V, three phase<br>400 W for LXM28... at 5.7 A, 110 V, single phase                            |
| Nominal torque            | 1.27 N.m for LXM28... at 2.6 A, 220 V, single phase<br>1.27 N.m for LXM28... at 2.6 A, 220 V, three phase<br>1.27 N.m for LXM28... at 5.7 A, 110 V, single phase                   |
| Nominal speed             | 3000 rpm for LXM28... at 2.6 A, 220 V, single phase<br>3000 rpm for LXM28... at 2.6 A, 220 V, three phase<br>3000 rpm for LXM28... at 5.7 A, 110 V, single phase                   |
| Maximum current Irms      | 7.73 A for LXM28... at 0.4 kW, 220 V<br>7.73 A for LXM28... at 0.4 kW, 110 V                                                                                                       |
| Maximum permanent current | 2.52 A                                                                                                                                                                             |
| Product compatibility     | LXM28... servo drive motor at 0.4 kW, 220 V, single phase<br>LXM28... servo drive motor at 0.4 kW, 220 V, three phase<br>LXM28... servo drive motor at 0.4 kW, 110 V, single phase |
| Shaft end                 | Keyed                                                                                                                                                                              |
| Shaft diameter            | 14 mm                                                                                                                                                                              |
| Shaft length              | 30 mm                                                                                                                                                                              |
| key width                 | 5 mm                                                                                                                                                                               |
| Feedback type             | 20 bits single turn absolute encoder                                                                                                                                               |
| Holding brake             | Without                                                                                                                                                                            |

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

|                                       |                       |
|---------------------------------------|-----------------------|
| Mounting support                      | Asian standard flange |
| Motor flange size                     | 80 mm                 |
| Electrical connection                 | Free lead             |
| Torque constant                       | 0.55 N.m/A at 20 °C   |
| Back emf constant                     | 33.5 V/krpm at 20 °C  |
| Number of motor poles                 | 4.0                   |
| Rotor inertia                         | 0.67 kg.cm²           |
| Stator resistance                     | 3.2 Ohm at 20 °C      |
| Stator inductance                     | 11.3 mH at 20 °C      |
| Stator electrical time constant       | 3.53 ms at 20 °C      |
| Maximum radial force Fr               | 332 N at 3000 rpm     |
| Maximum axial force Fa                | 115 N                 |
| Brake pull-in power                   | 10.2 W                |
| Type of cooling                       | Natural convection    |
| Length                                | 112 mm                |
| Number of motor stacks                | 1                     |
| Centring collar diameter              | 70 mm                 |
| Centring collar depth                 | 4 mm                  |
| Number of mounting holes              | 4                     |
| Mounting holes diameter               | 6.6 mm                |
| Circle diameter of the mounting holes | 90 mm                 |
| Distance shaft shoulder-flange        | 4 mm                  |
| Product weight                        | 2 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               | IP54 IM B5, IM V1<br>IP50 IM V3 |
| 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             | 13.9 cm |
| Package 1 Width              | 17.2 cm |
| Package 1 Length             | 29.5 cm |

|                              |           |
|------------------------------|-----------|
| Package 1 Weight             | 2.47 kg   |
| Unit Type of Package 2       | S03       |
| Number of Units in Package 2 | 2         |
| Package 2 Height             | 30 cm     |
| Package 2 Width              | 30 cm     |
| Package 2 Length             | 40 cm     |
| Package 2 Weight             | 5.413 kg  |
| Unit Type of Package 3       | P06       |
| Number of Units in Package 3 | 16        |
| Package 3 Height             | 80 cm     |
| Package 3 Width              | 60 cm     |
| Package 3 Length             | 72 cm     |
| Package 3 Weight             | 50.304 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                                                                          | 2405                                          |
| Environmental Disclosure                                                                                  | <a href="#">Product Environmental Profile</a> |

Use Better

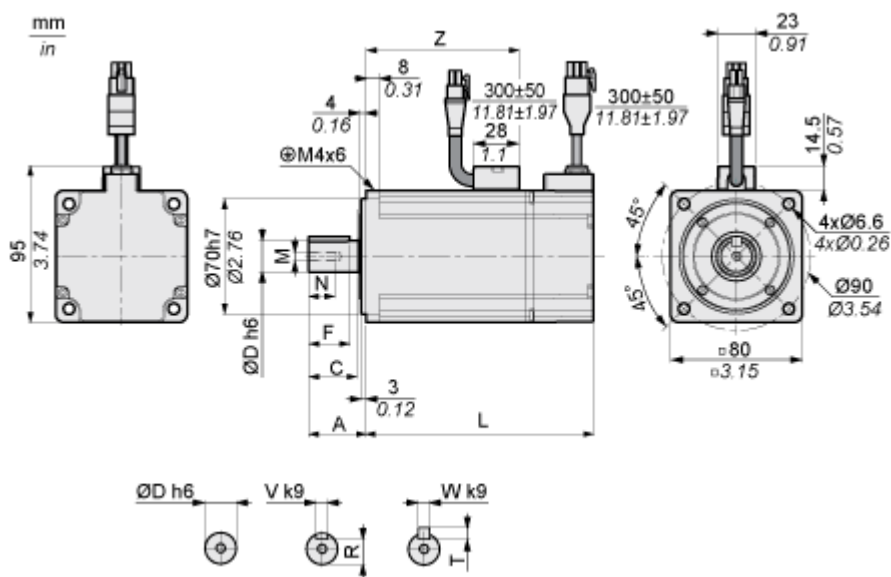
|  Materials and Substances |                                                                                                                                                                                                                                                                                             |
|------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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                                      |

**BCH2LF0431CA5C**

## Dimensions

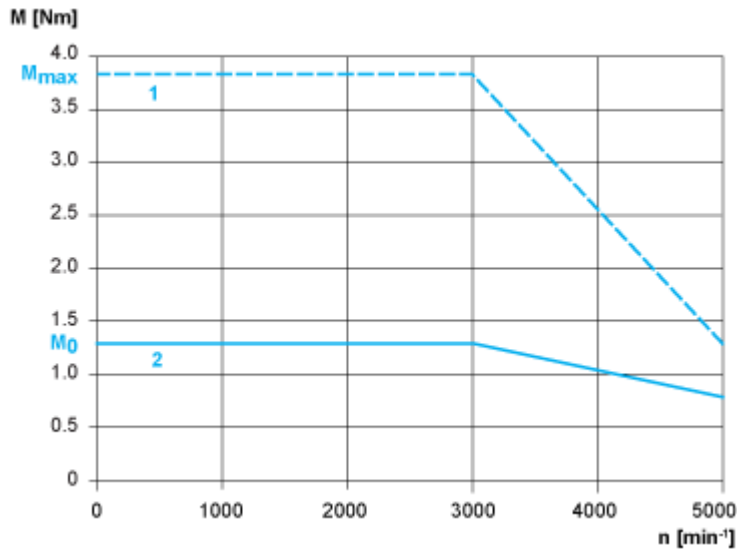


|                           | mm   | in.  |
|---------------------------|------|------|
| L (without holding brake) | 112  | 4.41 |
| L (with holding brake)    | 152  | 5.98 |
| A                         | 30   | 1.18 |
| C                         | 24.5 | 0.96 |
| D                         | 14   | 0.55 |
| F                         | 20   | 0.79 |
| R                         | 11   | 0.43 |
| T                         | 5    | 0.2  |
| V                         | 5    | 0.2  |
| W                         | 5    | 0.2  |
| Z                         | 68   | 2.68 |

Performance Curves

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

Servo Motor with LXM28AU02 Servo Drive



- 1 : Peak torque
- 2 : Continuous torque