# Product data sheet

Specifications



## servo motor BCH, Lexium 28, 80mm, 750W, 1.24kg.cm², without oil seal, with key, brake, leads connection

BCH2LF0731CF5C

**Product availability: Stock - Normally stocked in distribution facility**

## 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 |
| **Phase** | Three phase<br>Single phase |
| **Continuous stall current** | 4.01 A |
| **Continuous stall torque** | 21.15 lbf.in (2.39 N.m) LXM28 4.5 A, 220 V, single phase<br>21.15 lbf.in (2.39 N.m) LXM28 4.5 A, 220 V, three phase<br>21.15 lbf.in (2.39 N.m) LXM28 9 A, 110 V, single phase |
| **Continuous power** | 750 W |
| **Peak stall torque** | 63.37 lbf.in (7.16 N.m) LXM28... 4.5 A, 220 V, single phase<br>63.37 lbf.in (7.16 N.m) LXM28... 4.5 A, 220 V, three phase<br>63.37 lbf.in (7.16 N.m) LXM28... 9 A, 110 V, single phase |
| **Nominal output power** | 750 W LXM28... 4.5 A, 220 V, single phase<br>750 W LXM28... 4.5 A, 220 V, three phase<br>750 W LXM28... 9 A, 110 V, single phase |
| **Nominal torque** | 21.15 lbf.in (2.39 N.m) LXM28... 4.5 A, 220 V, single phase<br>21.15 lbf.in (2.39 N.m) LXM28... 4.5 A, 220 V, three phase<br>21.15 lbf.in (2.39 N.m) LXM28... 9 A, 110 V, single phase |
| **Nominal speed** | 3000 rpm LXM28... 4.5 A, 220 V, single phase<br>3000 rpm LXM28... 4.5 A, 220 V, three phase<br>3000 rpm LXM28... 9 A, 110 V, single phase |
| **Maximum current Irms** | 13.23 A LXM28... 0.75 kW, 220 V<br>13.23 A LXM28... 0.75 kW, 110 V |
| **Maximum permanent current** | 4.29 A |
| **Product compatibility** | LXM28... servo drive 0.75 kW, 220 V, single phase<br>LXM28... servo drive 0.75 kW, 220 V, three phase<br>LXM28... servo drive 0.75 kW, 110 V, single phase |
| **Shaft end** | Keyed |
| **Shaft diameter** | 0.7 in (19 mm) |
| **Shaft length** | 1.4 in (35 mm) |
| **key width** | 0.2 in (6 mm) |

Price is “List Price” and may be subject to a trade discount – check with your local distributor or retailer for actual price.

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

| | |
|---|---|
| **Feedback type** | 20 bits single turn absolute encoder |
| **Holding brake** | With |
| **Holding torque** | 22.1 lbf.in (2.5 N.m) built-in |
| **Mounting Support** | Asian standard flange |
| **Motor flange size** | 3.1 in (80 mm) |
| **Electrical connection** | Free lead |
| **Torque constant** | 0.6 N.m/A 68 °F (20 °C) |
| **Back emf constant** | 36 V/krpm 68 °F (20 °C) |
| **Number of motor poles** | 4.0 |
| **Rotor inertia** | 1.24 kg.cm² |
| **Stator resistance** | 1.5 Ohm 68 °F (20 °C) |
| **Stator inductance** | 6.1 mH 68 °F (20 °C) |
| **Stator electrical time constant** | 4.07 ms 68 °F (20 °C) |
| **Maximum radial force Fr** | 332 N 3000 rpm |
| **Maximum axial force Fa** | 115 N |
| **Brake pull-in power** | 10.2 W |
| **type of cooling** | Natural convection |
| **Length** | 7.008 in (178 mm) |
| **Number of motor stacks** | 2 |
| **Centring collar diameter** | 2.8 in (70 mm) |
| **centring collar depth** | 0.2 in (4 mm) |
| **Number of mounting holes** | 4 |
| **Mounting holes diameter** | 0.3 in (6.6 mm) |
| **Circle diameter of the mounting holes** | 3.5 in (90 mm) |
| **Distance shaft shoulder-flange** | 0.2 in (4 mm) |
| **Net Weight** | 7.9 lb(US) (3.6 kg) |
| **Sizing reference** | BCH2 |
| **Network number of phases** | 1 |
| **Accuracy error [angular]** | 0.044 ° |
| **Coefficient 1_1** | -0.0000187500000003 N.m/rpm |
| **Coefficient 1_2** | 0.000000000000000000562440546 N.m/rpm² |
| **Coefficient 1_3** | -0.000000000000000000000002965143 N.m/rpm3 |
| **Coefficient 1_4** | 0.000000000000000000000000000711 N.m/rpm4 |
| **Coefficient 1_5** | -0.000000000000000000000000000078919 N.m/rpm5 |
| **Coefficient 1_6** | 0.000000000000000000000000000000032 N.m/rpm6 |
| **Saturation coefficient 1** | -0.000000000000000000038243890773 |
| **Saturation coefficient 2** | -0.0078140960163432 |
| **Saturation coefficient 3** | 0.000000000000000000158151428 |
| **Coefficient 2_0** | 0.0000000000 lbf.in (0 N.m) |
| **Coefficient 2_1** | 0.00000875000000000026 N.m/rpm |

| | |
|---|---|
| **Temperature copper hot** | 275 °F (135 °C) |
| **Temperature magnet hot** | 212 °F (100 °C) |
| **Temperature magnet rt** | 68 °F (20 °C) |
| **Motor voltage drop coefficient** | 1 |

## Environment

| | |
|---|---|
| **IP Degree of Protection** | IP54 IM B5, IM V1<br>IP50 IM V3 |
| **Ambient air temperature for operation** | 32…104 °F (0…40 °C) |

## Ordering and shipping details

| | |
|---|---|
| **Category** | US1PC5318281 |
| **Discount Schedule** | PC53 |
| **GTIN** | 3606480733833 |
| **Returnability** | Yes |
| **Country of origin** | CN |

## Packing Units

| | |
|---|---|
| **Unit Type of Package 1** | PCE |
| **Number of Units in Package 1** | 1 |
| **Package 1 Height** | 5.43 in (13.8 cm) |
| **Package 1 Width** | 6.89 in (17.5 cm) |
| **Package 1 Length** | 11.65 in (29.6 cm) |
| **Package 1 Weight** | 9.28 lb(US) (4.21 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

| | |
|---|---|
| Carbon footprint (kg CO2 eq, Total Life cycle) | 466 |
| Environmental Disclosure | Product Environmental Profile |

## Use Better

### Materials and Substances

| | |
|---|---|
| EU RoHS Directive | Pro-active compliance (Product out of EU RoHS legal scope) |
| REACh Regulation | REACh Declaration |
| China RoHS Regulation | China RoHS declaration |
| 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 www.P65Warnings.ca.gov |

## Use Again

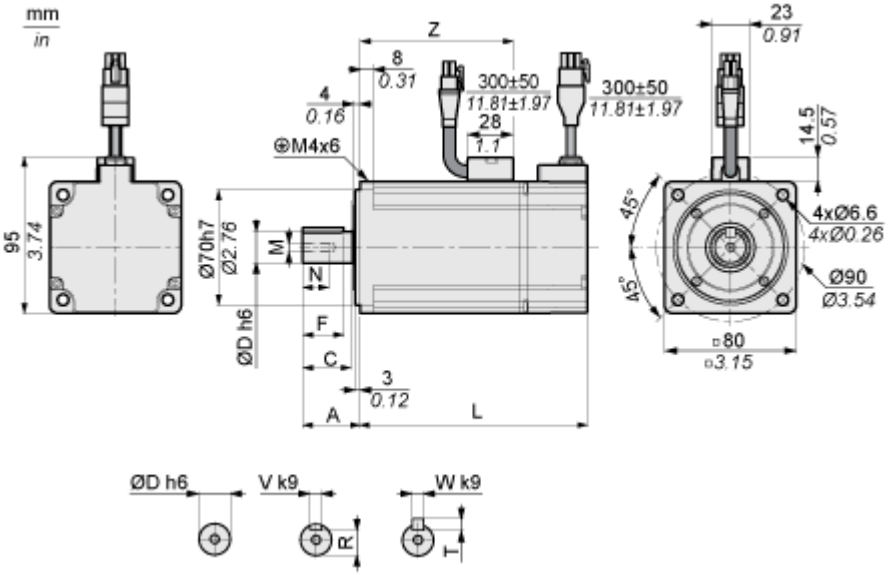
### Repack and remanufacture

| | |
|---|---|
| Circularity Profile | End of Life Information |
| Take-back | No |

Dimensions Drawings

## Dimensions

### Dimensions of Motor

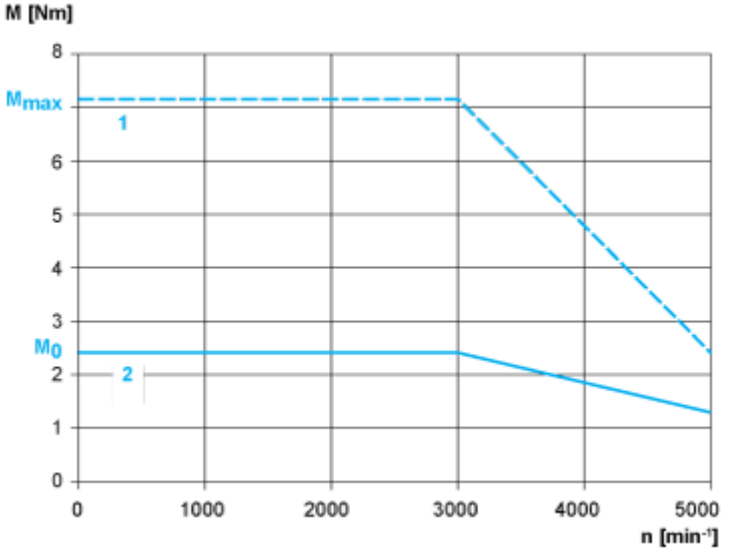



| | mm | in. |
|---|---|---|
| L (without holding brake) | 138 | 5.43 |
| L (with holding brake) | 178 | 7.01 |
| A | 35 | 1.38 |
| C | 29.5 | 1.16 |
| D | 19 | 0.75 |
| F | 25 | 0.98 |
| R | 15.5 | 0.61 |
| T | 6 | 0.24 |
| V | 6 | 0.24 |
| W | 6 | 0.24 |
| Z | 93 | 3.66 |

## 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