

# Product datasheet

Specifications



servo motor BCH, no oil seal,  
smooth, 20-bit encoder, w/o brake-  
straight con

BCH1803M02A1C

⚠ Discontinued on: 7 Sept 2022

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EAN Code: 3606485217147

## Main

|                           |                |
|---------------------------|----------------|
| Range compatibility       | Lexium 23 Plus |
| Device short name         | BCH            |
| Product or component type | Servo motor    |

## Complementary

|                                 |                             |
|---------------------------------|-----------------------------|
| Maximum mechanical speed        | 3000 rpm                    |
| [Us] rated supply voltage       | 220 V                       |
| Network number of phases        | Three phase                 |
| Continuous stall current        | 32.5 A                      |
| Continuous power                | 3.5 kW                      |
| Shaft end                       | Smooth shaft                |
| Second shaft                    | Without second shaft end    |
| Shaft length                    | 73 mm                       |
| Feedback type                   | 20 bits incremental encoder |
| Holding brake                   | Without                     |
| Mounting support                | Asian standard flange       |
| Motor flange size               | 180 mm                      |
| Torque constant                 | 0.88 N.m/A                  |
| Back emf constant               | 32 V/krpm at 20 °C          |
| Rotor inertia                   | 77.75 kg.cm <sup>2</sup>    |
| Stator resistance               | 0.032 Ohm at 20 °C          |
| Stator inductance               | 0.89 mH at 20 °C            |
| Stator electrical time constant | 27.8 ms at 20 °C            |
| Maximum radial force Fr         | 1470 N                      |
| Maximum axial force Fa          | 490 N                       |
| Brake pull-in power             | 20.4 W                      |
| Type of cooling                 | Natural convection          |
| Number of motor stacks          | 3                           |
| Centring collar diameter        | 114.3 mm                    |
| Centring collar depth           | 4 mm                        |

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

|                                       |         |
|---------------------------------------|---------|
| Number of mounting holes              | 4       |
| Mounting holes diameter               | 13.5 mm |
| Circle diameter of the mounting holes | 200 mm  |
| Distance shaft shoulder-flange        | 73 mm   |
| Net weight                            | 23.8 kg |

## Environment

|                                       |           |
|---------------------------------------|-----------|
| IP degree of protection               | IP40      |
| Ambient air temperature for operation | 0...40 °C |

## Packing Units

|                              |         |
|------------------------------|---------|
| Unit Type of Package 1       | PCE     |
| Number of Units in Package 1 | 1       |
| Package 1 Height             | 35.5 cm |
| Package 1 Width              | 25.4 cm |
| Package 1 Length             | 58.8 cm |
| Package 1 Weight             | 23.8 kg |

## Contractual warranty

|                      |    |
|----------------------|----|
| 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

Environmental Disclosure

[Product Environmental Profile](#)

## Use Longer



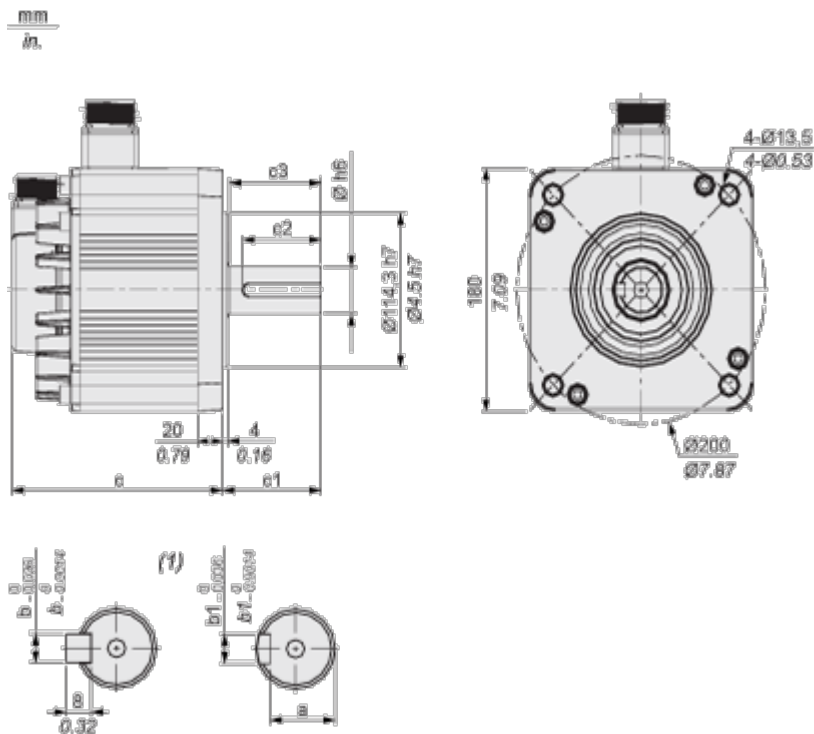
### Lifetime extension

Repair

No

Dimensions Drawings

Dimensions



(1) Shaft end, keyed slot (optional)

Dimensions in mm

| Ø  | a  | b  | b1 | c (without holding brake) | c (with holding brake) | c1 | c2 | c3 |
|----|----|----|----|---------------------------|------------------------|----|----|----|
| 35 | 30 | 10 | 10 | 235.3                     | 279.3                  | 79 | 63 | 73 |

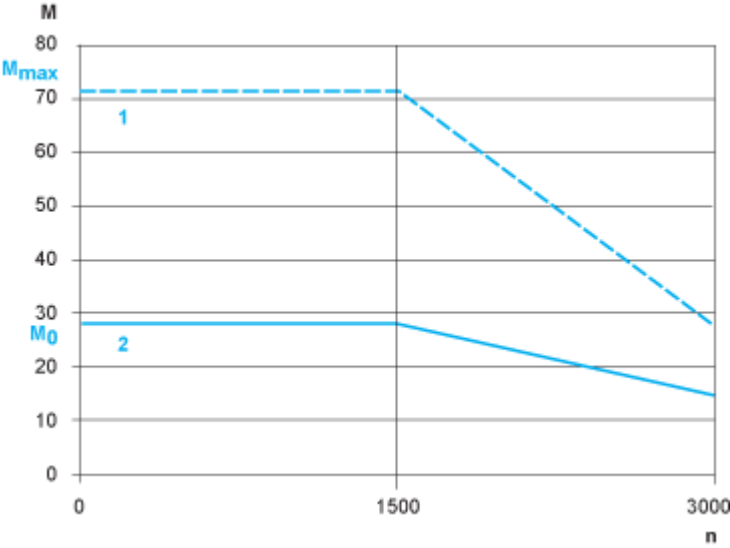
Dimensions in in.

| Ø    | a    | b    | b1   | c (without holding brake) | c (with holding brake) | c1   | c2   | c3   |
|------|------|------|------|---------------------------|------------------------|------|------|------|
| 1.38 | 1.18 | 0.39 | 0.39 | 9.26                      | 11.00                  | 3.11 | 2.48 | 2.87 |

Performance Curves

Torque/Speed Curves with 220 V Three Phase Supply Voltage

Servo Motor with LXM23•U45M3X Servo Drive



M : Torque in Nm

n : Speed in rpm

1 : Peak torque

2 : Continuous torque