# Product data sheet

Specifications



## servo motor BMI 1-phase - keyed IP65 single turn - 131072 p/t - brake

BMI0702T31F

**Product availability: Non-Stock - Not normally stocked in distribution facility**

## Main

| | |
|---|---|
| **Range Compatibility** | Lexium 32i |
| **Device short name** | BMI |
| **Product or Component Type** | Servo motor with power stage |

## Complementary

| | |
|---|---|
| **Maximum mechanical speed** | 8000 rpm |
| **[Us] rated supply voltage** | 115...230 V - 15...10 % |
| **Supply voltage limits** | 100…240 V |
| **Phase** | Single phase |
| **Supply frequency** | 50/60 Hz - 5...5 % |
| **Network frequency limits** | 47.5…63 Hz |
| **EMC filter** | Integrated |
| **Continuous output current** | 2.6 A 8 kHz |
| **Output current 3s peak** | 10.5 A 230 V 1 s |
| **Continuous stall current** | 2.6 A |
| **Continuous stall torque** | 21.95 lbf.in (2.48 N.m) 115...230 V single phase |
| **Peak stall torque** | 58.4 lbf.in (6.6 N.m) 115 V single phase<br>58.4 lbf.in (6.6 N.m) 230 V single phase |
| **Nominal output power** | 700 W 230 V single phase<br>400 W 115 V single phase |
| **Nominal torque** | 19.5 lbf.in (2.2 N.m) 115 V single phase<br>15.05 lbf.in (1.7 N.m) 230 V single phase |
| **Nominal speed** | 4000 rpm 230 V single phase<br>1700 rpm 115 V single phase |
| **Maximum current Irms** | 17.7 A 230 V, single phase<br>17.7 A 115 V, single phase |
| **Product compatibility** | Drive control unit LXM32i CANopen<br>Drive control unit LXM32i EtherCAT |
| **Shaft end** | Keyed |
| **Second shaft** | Without second shaft end |
| **Shaft diameter** | 0.4 in (11 mm) |
| **Shaft length** | 0.9 in (23 mm) |
| **key width** | 0.2 in (4 mm) |
| **Feedback type** | Absolute single turn SinCos Hiperface |

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

| | |
|---|---|
| **Speed feedback resolution** | 131072 points/turn |
| **Holding brake** | With |
| **Holding torque** | 26.6 lbf.in (3 N.m) holding brake |
| **Mounting Support** | International standard flange |
| **Motor flange size** | 2.8 in (70 mm) |
| **Electrical Connection** | Printed circuit board connector |
| **Torque constant** | 0.63 N.m/A 68 °F (20 °C) |
| **Back emf constant** | 42.1 V/krpm 68 °F (20 °C) |
| **Number of motor poles** | 10 |
| **Rotor inertia** | 1.24 kg.cm² |
| **Stator resistance** | 2.7 Ohm 68 °F (20 °C) |
| **Stator inductance** | 7.8 mH 68 °F (20 °C) |
| **Stator electrical time constant** | 2.89 ms 68 °F (20 °C) |
| **Maximum radial force Fr** | 710 N 1000 rpm<br>560 N 2000 rpm<br>490 N 3000 rpm<br>450 N 4000 rpm<br>410 N 5000 rpm<br>390 N 6000 rpm |
| **Maximum axial force Fa** | 0.2 x Fr |
| **Brake pull-in power** | 5 W |
| **type of cooling** | Natural convection |
| **Length** | 12.05 in (306 mm) |
| **Number of motor stacks** | 2 |
| **Centring collar diameter** | 2.4 in (60 mm) |
| **centring collar depth** | 0.10 in (2.5 mm) |
| **Number of mounting holes** | 4 |
| **Mounting holes diameter** | 0.2 in (5.5 mm) |
| **Circle diameter of the mounting holes** | 3.0…3.2 in (75…82 mm) |
| **Distance shaft shoulder-flange** | 0.10 in (2.5 mm) |

## Environment

| | |
|---|---|
| **IP Degree of Protection** | IP65 |

## Ordering and shipping details

| | |
|---|---|
| **Category** | US1PC5618287 |
| **Discount Schedule** | PC56 |
| **GTIN** | 3606485376219 |
| **Returnability** | No |
| **Country of origin** | DE |

## Packing Units

| | |
|---|---|
| **Unit Type of Package 1** | PCE |
| **Number of Units in Package 1** | 1 |

| | |
|---|---|
| **Package 1 Height** | 10.24 in (26.0 cm) |
| **Package 1 Width** | 7.87 in (20.0 cm) |
| **Package 1 Length** | 23.23 in (59.0 cm) |
| **Package 1 Weight** | 11.9 lb(US) (5.4 kg) |

## Contractual warranty

| | |
|---|---|
| **Warranty** | 18 months |

## 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 Better

### Materials and Substances

| | |
|---|---|
| Packaging made with recycled cardboard | Yes |
| Packaging without single use plastic | No |
| 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 |
| PVC free | Yes |

## Use Again

### Repack and remanufacture

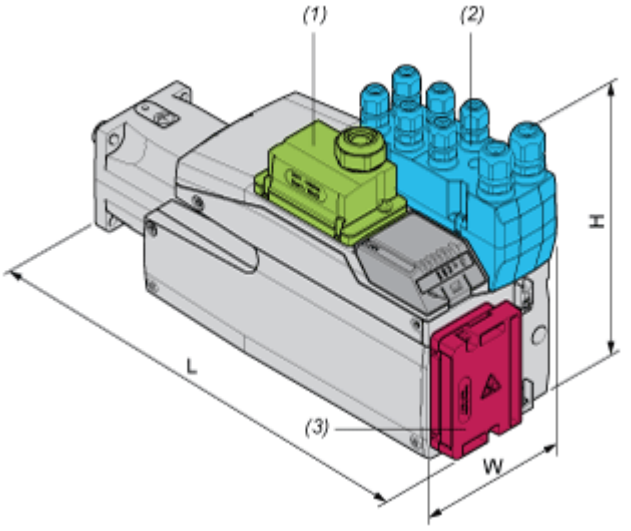
| | |
|---|---|
| Circularity Profile | End of Life Information |
| WEEE | The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins. |
| Take-back | No |

## Dimensions Drawings

### External Dimensions

#### With Standard Braking Resistor

**Mounting type A**




(1) Module for supply voltage

(2) I/O module

(3) Standard braking resistor

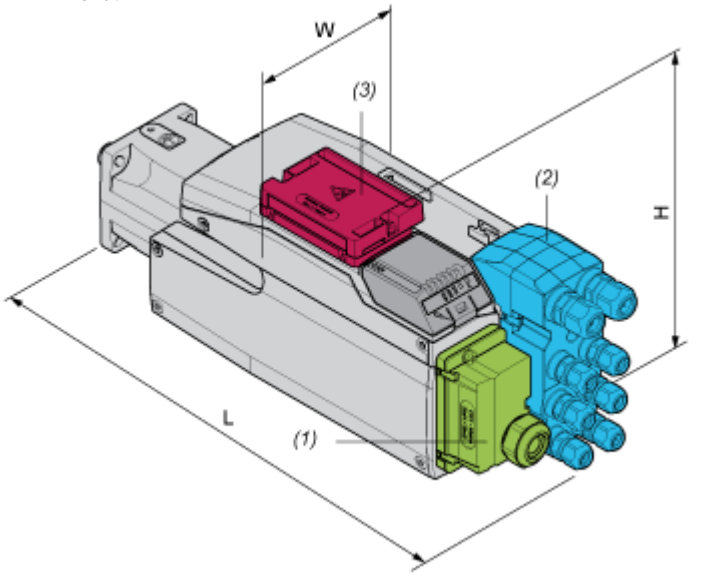
Dimensions in mm

| W | H | L |
|---|---|---|
| 99 | 187 | 327 |

Dimensions in in.

| W | H | L |
|---|---|---|
| 3,90 | 7,36 | 12,87 |

**Mounting type B**




(1) Module for supply voltage

(2) I/O module

(3) Standard braking resistor

Dimensions in mm

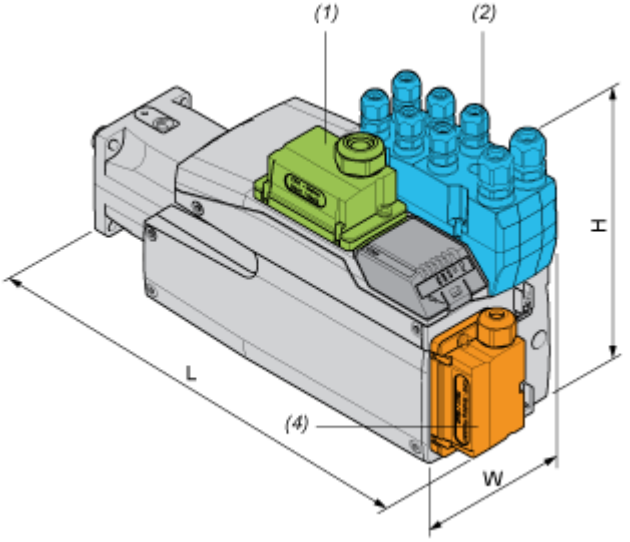
| W | H | L |
|---|---|---|
| 99 | 138,5 | 376 |

Dimensions in in.

| W | H | L |
|---|---|---|
| 3,90 | 5,45 | 14,8 |

### With External Braking Resistor

**Mounting type C**




(1) Module for supply voltage

(2) I/O module

(4) External braking resistor

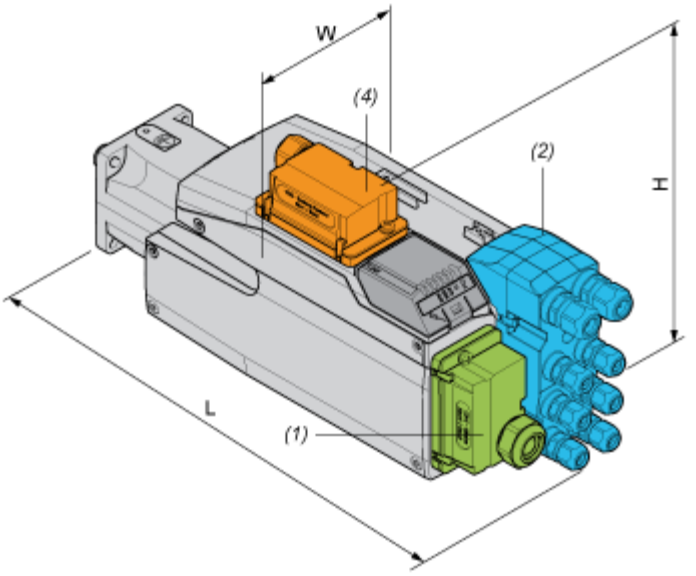
Dimensions in mm

| W | H | L |
|---|---|---|
| 99 | 187 | 339 |

Dimensions in in.

| W | H | L |
|---|---|---|
| 3,90 | 7,36 | 13,35 |

**Mounting type D**




(1) Module for supply voltage

(2) I/O module

(4) External braking resistor

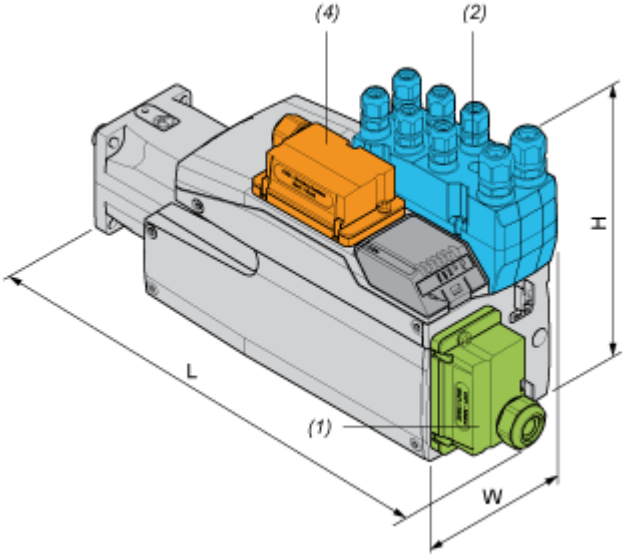
Dimensions in mm

| W | H | L |
|---|---|---|
| 99 | 160 | 376 |

Dimensions in in.

| W | H | L |
|---|---|---|
| 3,90 | 6,3 | 14,8 |

**Mounting type E**




(1) Module for supply voltage

(2) I/O module

(4) External braking resistor

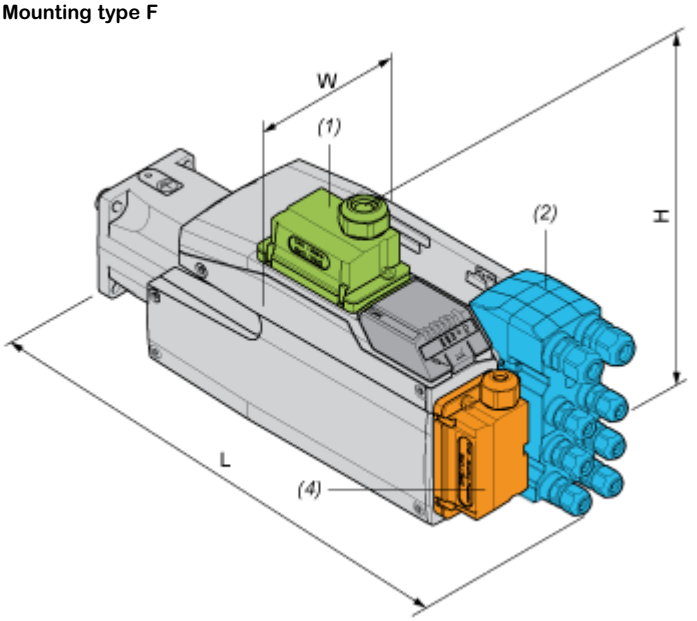
Dimensions in mm

| W | H | L |
|---|---|---|
| 99 | 187 | 366 |

Dimensions in in.

| W | H | L |
|---|---|---|
| 3,90 | 7,36 | 14,41 |

**Mounting type F**




(1) Module for supply voltage

(2) I/O module

(4) External braking resistor

Dimensions in mm

| W | H | L |
|---|---|---|
| 99 | 180 | 376 |

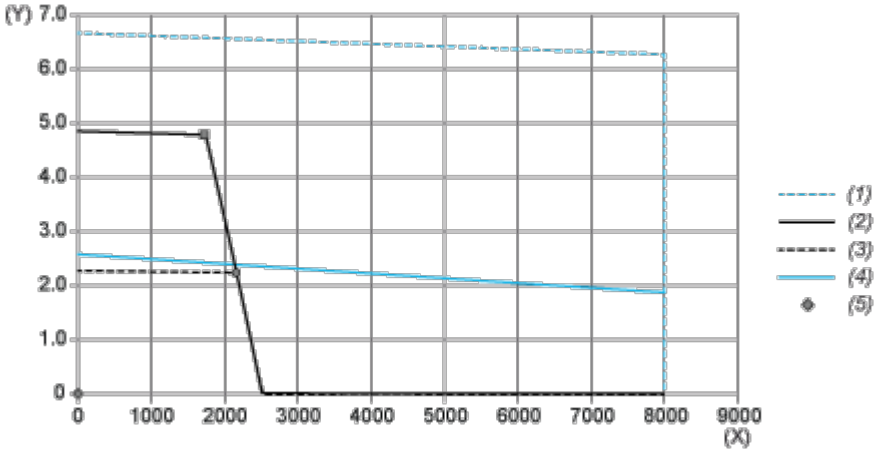
Dimensions in in.

| W | H | L |
|---|---|---|
| 3,90 | 7,09 | 14,8 |

Performance Curves

## Performance Curves

### Torque/Speed Curves with 115 V Single Phase Supply Voltage




(X) Speed (rpm)

(Y) Torque (N.m)

(1) Motor peak

(2) Drive peak

(3) Drive cont

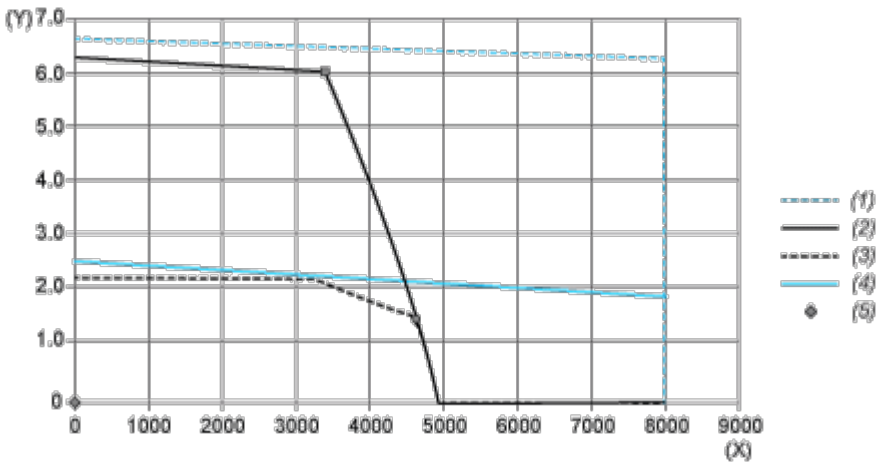
(4) Motor cont

(5) Operating point

| | | Power | At Speed | With Torque |
|---|---|---|---|---|
| max. Peak Power | ■ | 860 W | 1760 rpm | 4.67 N.m |
| max Cont. Power (Drive) | ● | 499 W | 2160 rpm | 2.21 N.m |

## Performance Curves

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




(X) Speed (rpm)

(Y) Torque (N.m)

(1) Motor peak

(2) Drive peak

(3) Drive cont

(4) Motor cont

(5) Operating point

| | | Power | At Speed | With Torque |
|---|---|---|---|---|
| max. Peak Power | ■ | 2129 W | 3360 rpm | 6.05 N.m |
| max Cont. Power (Drive) | ● | 736 W | 4640 rpm | 1.51 N.m |