# BMI0702P31A

servo motor BMI 3-phase - keyed IP65 single turn - 131072 p/t





## Main

Range compatibility	Lexium 32i
Device short name	BMI
Product or component type	Servo motor with power stage

Complementary

Complementary		
Maximum mechanical speed	8000 rpm	
[Us] rated supply voltage	208480 V - 1510 %	
Supply voltage limits	208480 V	
Network number of phases	Three phase	
Supply frequency	50/60 Hz - 55 %	
Network frequency limits	47.563 Hz	
EMC filter	Integrated	
Continuous output current	2 A at 8 kHz	
Output current 3s peak	6 A at 400 V for 3 s	
Continuous stall current	2 A	
Continuous stall torque	2.48 N.m at 208480 V three phase	
Peak stall torque	6.8 N.M at 208 V three phase 6.8 N.M at 400 V three phase 6.8 N.m at 480 V three phase	
Nominal output power	400 W at 208 V three phase 800 W at 400 V three phase 900 W at 480 V three phase	
Nominal torque	2.4 N.M at 208 V three phase 2.2 N.M at 400 V three phase 2 N.m at 480 V three phase	
Nominal speed	1800 rpm at 208 V three phase 3600 rpm at 400 V three phase 4400 rpm at 480 V three phase	
Maximum current Irms	9.6 A at 208 V, three phase 9.6 A at 400 V, three phase 9.6 A at 480 V, three phase	
Product compatibility	Drive control unit LXM32i CANopen[RETURN]Drive control unit LXM32i EtherCAT	
Shaft end	Keyed	
Second shaft	Without second shaft end	
Shaft diameter	11 mm	
Shaft length	23 mm	
Key width	4 mm	
Feedback type	Absolute single turn SinCos Hiperface	
Speed feedback resolution	131072 points/turn	
Holding brake	Without	
Mounting support	International standard flange	

Motor flange size	70 mm	
Electrical connection	Printed circuit board connector	
Torque constant	1.15 N.m/A at 20 °C	
Back emf constant	77.18 V/krpm at 20 °C	
Number of motor poles	10	
Rotor inertia	1.13 kg.cm²	
Stator resistance	8.89 Ohm at 20 °C	
Stator inductance	25.75 mH at 20 °C	
Stator electrical time constant	2.9 ms at 20 °C	
Maximum radial force Fr	710 N at 1000 rpm 560 N at 2000 rpm 490 N at 3000 rpm 450 N at 4000 rpm 410 N at 5000 rpm 390 N at 6000 rpm	
Maximum axial force Fa	0.2 x Fr	
Type of cooling	Natural convection	
Length	268 mm	
Number of motor stacks	2	
Centring collar diameter	60 mm	
Centring collar depth	2.5 mm	
Number of mounting holes	4	
Mounting holes diameter	5.5 mm	
Circle diameter of the mounting holes	7582 mm	
Distance shaft shoulder-flange	2.5 mm	

# Environment

IP degree of protection IP65	
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# Packing Units

PCE	
1	
26.0 cm	
20.0 cm	
59.0 cm	
5.4 kg	
_	1 26.0 cm 20.0 cm 59.0 cm

# Offer Sustainability

Sustainable offer status	Green Premium product	
REACh Regulation	☑ REACh Declaration	
EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope)	
Mercury free	Yes	
China RoHS Regulation	☑ China RoHS Declaration	
RoHS exemption information	₫Yes	
Environmental Disclosure	☑ Product Environmental Profile	
Circularity Profile	<sup>™</sup> 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	
PVC free	Yes	

## Contractual warranty

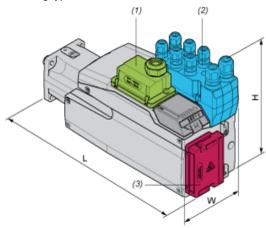
Oontractaar warranty	
Warranty	18 months

# BMI0702P31A

## **External Dimensions**

# With Standard Braking Resistor

# Mounting type A



- (1) Module for supply voltage
- I/O module
- Standard braking resistor

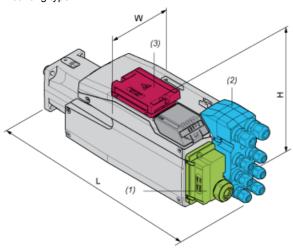
#### Dimensions in mm

W	Н	L
99	187	289

#### Dimensions in in.

W	н	L
3,9	7,36	11,38

## Mounting type B



- Module for supply voltage
- (2) (3) I/O module
- Standard braking resistor

#### Dimensions in mm

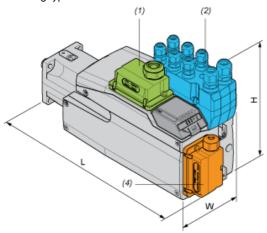
W	н	L
99	138,5	338

Dimensions in in.

W	н	L
3,9	5,45	13,31

# With External Braking Resistor

# Mounting type C



- (1) Module for supply voltage(2) I/O module(4) External braking resistor Module for supply voltage I/O module

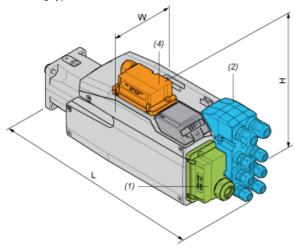
#### Dimensions in mm

W	Н	L
99	187	301

#### Dimensions in in.

W	н	L
3,9	7,36	11,85

## Mounting type D



- (1) (2) Module for supply voltage
- (2) I/O module(4) External braking resistor

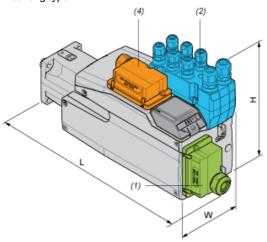
## Dimensions in mm

W	Н	L
99	160	338

## Dimensions in in.

W	Н	L
3,9	6,3	13,31

## Mounting type E



- (1) (2) Module for supply voltage I/O module
- (4) External braking resistor

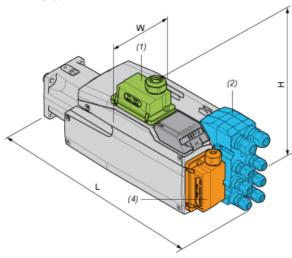
## Dimensions in mm

W	Н	L
99	187	328

#### Dimensions in in.

W	Н	L
3,9	7,36	12,91

# Mounting type F



- (1) (2) Module for supply voltage
- I/O module
- (4) External braking resistor

## Dimensions in mm

W	Н	L
99	180	338

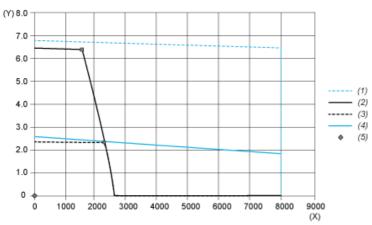
# Dimensions in in.

W	Н	L
3,9	7,09	13,31

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#### **Performance Curves**

# Torque/Speed Curves with 208 V Three Phases Supply Voltage

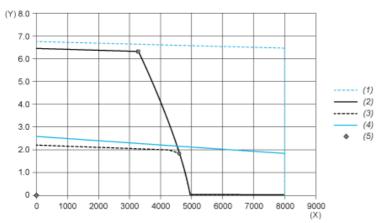


- Speed (rpm)
- (Y) Torque (N.m)
- (1) Motor peal (2) Drive peak (3) Drive cont Motor peak Drive peak
- (4) Motor cont
- Operating point

	Power	At Speed	With Torque
max. Peak Power	1013 W	1520 rpm	6.36 N.m
max Cont Power (Drive)	519 W	2240 rpm	2 21 N m

#### **Performance Curves**

## Torque/Speed Curves with 400 V Three Phases Supply Voltage



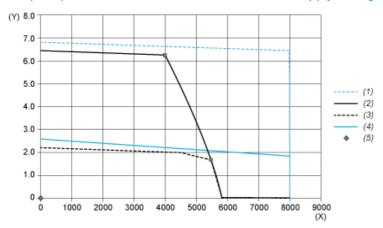
- Speed (rpm)
- (Y) Torque (N.m)
- Motor peak (1)
- (2) Drive peak (3) Drive cont Drive peak
- (4) Motor cont
- Operating point

		Power	At Speed	With Torque
max. Peak Power	•	2161 W	3280 rpm	6.29 N.m

		Power	At Speed	With Torque
max Cont. Power (Drive)	•	892 W	4560 rpm	1.87 N.m

## Performance Curves

# Torque/Speed Curves with 480 V Three Phases Supply Voltage



- (X) Speed (rpm) (Y) Torque (N.m)
- (1) (2) Motor peak
  Drive peak

- (3) Drive cont(4) Motor cont(5) Operating point

		Power	At Speed	With Torque
max. Peak Power		2623 W	4000 rpm	6.26 N.m
max Cont. Power (Drive)	•	943 W	5600 rpm	1.61 N.m