# BMI1002P22A

servo motor BMI 3-phase - untapped IP65 multiturn - 131072 p/t x 4096 t





#### Main

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

Complementary

1	
Maximum mechanical speed	6000 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	4 A at 8 kHz
Output current 3s peak	12 A at 400 V for 3 s
Continuous stall current	4 A
Continuous stall torque	6 N.m at 208480 V three phase
Peak stall torque	14 N.M at 208 V three phase 14 N.M at 400 V three phase 14 N.m at 480 V three phase
Nominal output power	1000 W at 208 V three phase 1900 W at 400 V three phase 1900 W at 480 V three phase
Nominal torque	5.1 N.M at 400 V three phase 5.4 N.M at 208 V three phase 4.1 N.m at 480 V three phase
Nominal speed	1900 rpm at 208 V three phase 3800 rpm at 400 V three phase 4700 rpm at 480 V three phase
Maximum current Irms	17.5 A at 208 V, three phase 17.5 A at 400 V, three phase 17.5 A at 480 V, three phase
Product compatibility	Drive control unit LXM32i CANopen Drive control unit LXM32i EtherCAT
Shaft end	Untapped
Second shaft	Without second shaft end
Shaft diameter	19 mm
Shaft length	40 mm
Feedback type	Absolute multiturn SinCos Hiperface
Speed feedback resolution	131072 points/turn x 4096 turns
Holding brake	Without
Mounting support	International standard flange

Motor flange size	100 mm
Electrical connection	Printed circuit board connector
Torque constant	1.28 N.m/A at 20 °C
Back emf constant	84.52 V/krpm at 20 °C
Number of motor poles	10
Rotor inertia	6.28 kg.cm²
Stator resistance	2.347 Ohm at 20 °C
Stator inductance	9.79 mH at 20 °C
Stator electrical time constant	4.17 ms at 20 °C
Maximum radial force Fr	990 N at 1000 rpm 790 N at 2000 rpm 690 N at 3000 rpm 620 N at 4000 rpm 580 N at 5000 rpm
Maximum axial force Fa	0.2 x Fr
Type of cooling	Natural convection
Length	273 mm
Number of motor stacks	2
Centring collar diameter	95 mm
Centring collar depth	3.5 mm
Number of mounting holes	4
Mounting holes diameter	9 mm
Circle diameter of the mounting holes	115 mm
Distance shaft shoulder-flange	3.5 mm

## Environment

 P degree of protection	11	065
r degree of protection	11	-05

# Packing Units

PCE	
1	
25.0 cm	
18.6 cm	
55.0 cm	
9.5 kg	
	1 25.0 cm 18.6 cm 55.0 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	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

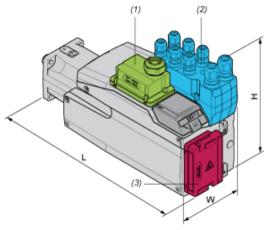
	•
Warranty	18 months

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#### **External Dimensions**

## With Standard Braking Resistor

Mounting type A



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

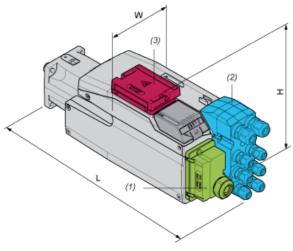
#### Dimensions in mm

W	Н	L
132,6	217	294

#### Dimensions in in.

W	Н	L
5,22	8,54	11,57

#### Mounting type B



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

#### Dimensions in mm

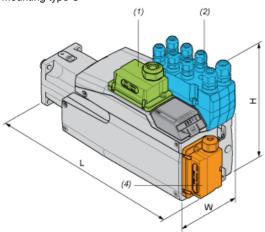
W	н	L
132,6	168	343

Dimensions in in.

W	н	L
5,22	6,61	13,5

## With External Braking Resistor

Mounting type C



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

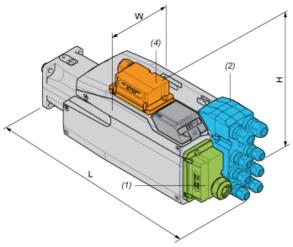
Dimensions in mm

W	Н	L	
132,6	217	306	

Dimensions in in.

W	Н	L
5,22	8,54	12,05

Mounting type D



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

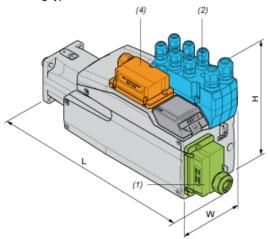
Dimensions in mm

W	н	L
132,6	180	343

Dimensions in in.

W	н	L
5,22	7,09	13,5

#### Mounting type E



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

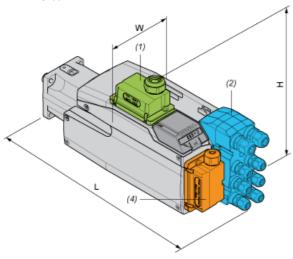
#### Dimensions in mm

W	Н	L
132,6	217	333

#### Dimensions in in.

W	Н	L	
5,22	8,54	13,11	

## Mounting type F



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

#### Dimensions in mm

W	Н	L
132,6	206,5	343

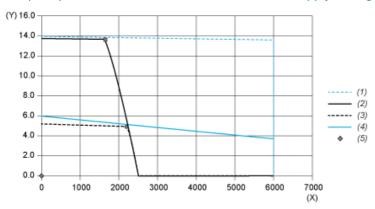
## Dimensions in in.

W	Н	L
5,22	8,13	13,5

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#### **Performance Curves**

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



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

	Power	At Speed	With Torque
max. Peak Power	2499 W	1740 rpm	13.72 N.m

2160 rpm

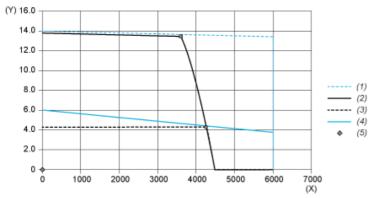
4.90 N.m

1109

#### **Performance Curves**

max Cont. Power (Drive)

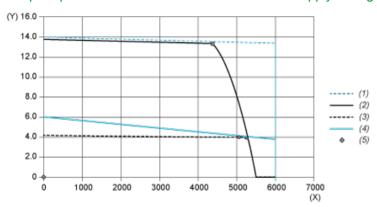
#### Torque/Speed Curves with 400 V Three Phases Supply Voltage



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

		Power	At Speed	With Torque
max. Peak Power		5090 W	3600 rpm	13.50 N.m
max Cont. Power (Drive)	•	1954 W	4320 rpm	4.32 N.m

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



- (X) (Y) Speed (rpm) Torque (N.m)

- Horque (N.III)
   Motor peak
   Drive peak
   Drive cont
   Motor cont
   Operating point

		Power	At Speed	With Torque
max. Peak Power		6117 W	4380 rpm	13.34 N.m
max Cont. Power (Drive)	•	2080 W	5040 rpm	3.94 N.m