# BMI0702P02F

servo motor BMI 3-phase - untapped IP54 multiturn - 131072 p/t x 4096 t - brake





#### 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	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 Drive control unit LXM32i EtherCAT
Shaft end	Untapped
Second shaft	Without second shaft end
Shaft diameter	11 mm
Shaft length	23 mm
Feedback type	Absolute multiturn SinCos Hiperface
Speed feedback resolution	131072 points/turn x 4096 turns
Holding brake	With
Holding torque	3 N.m holding brake

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	1.24 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
Brake pull-in power	5 W
Type of cooling	Natural convection
Length	306 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	Shaft: IP54
	Housing: IP65

## Packing Units

HAT (D.)	DOE.	
Unit Type of Package 1	PCE	
Number of Units in Package 1	1	
Package 1 Height	26.0 cm	
Package 1 Width	20.0 cm	
Package 1 Length	59.0 cm	
Package 1 Weight	5.4 kg	

## 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

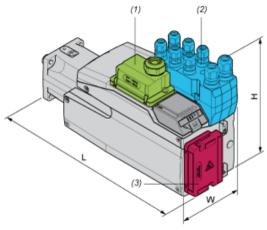
Warranty	18 months

# BMI0702P02F

#### **External Dimensions**

#### With Standard Braking Resistor

Mounting type A



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

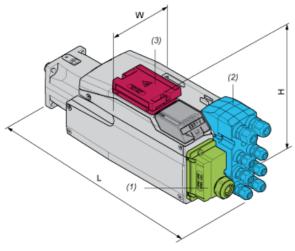
#### Dimensions in mm

W	Н	L
99	187	327

#### Dimensions in in.

W	Н	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

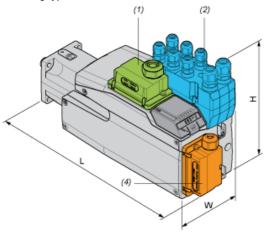
W	н	L
99	138,5	376

Dimensions in in.

W	н	L
3,90	5,45	14,8

## With External Braking Resistor

Mounting type C



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

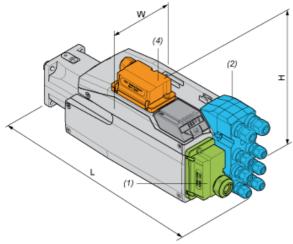
Dimensions in mm

W	Н	L
99	187	339

Dimensions in in.

W	Н	L
3,90	7,36	13,35

Mounting type D



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

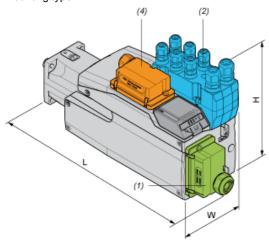
Dimensions in mm

W	Н	L
99	160	376

Dimensions in in.

W	Н	L
3,90	6,3	14,8

#### Mounting type E



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

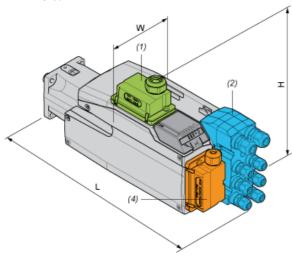
#### Dimensions in mm

<u></u>				
99	187	366		
W	Н	L		

#### Dimensions in in.

W	н	L
3,90	7,36	14,41

#### Mounting type F



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

#### Dimensions in mm

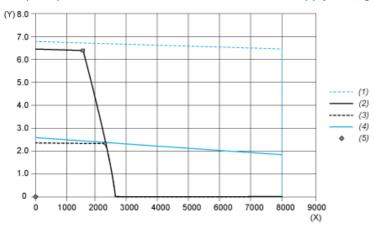
W	Н	L
99	180	376

#### Dimensions in in.

W	Н	L
3,90	7,09	14,8

#### **Performance Curves**

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

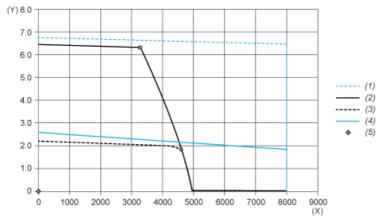


- Speed (rpm)
- (Y) Torque (N.m)
- (1) Motor peak Drive peak
- (2) (3) Drive cont
- (4) Motor cont
- Operating point

		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



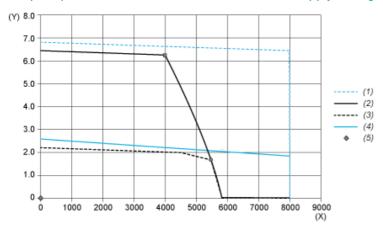
- Speed (rpm)
- (Y) Torque (N.m)
- Motor peak (1) Drive peak
- (2) Drive peak (3) Drive cont
- (4) Motor cont
- Operating point

		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