Product data sheet

Specifications

Green Premium™
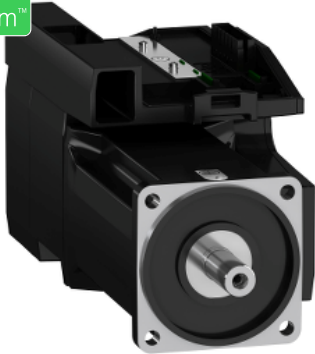
servo motor BMI 3-phase - untapped IP54 multiturn - 32768 p/t x 4096 t - brake

BMI1003P07F

Main

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

Complementary

Maximum mechanical speed	6000 rpm
[Us] rated supply voltage	208...480 V - 15...10 %
Supply voltage limits	208…480 V
Network number of phases	Three phase
Supply frequency	50/60 Hz - 5...5 %
Network frequency limits	47.5…63 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	8.5 N.m at 208...480 V three phase
Peak stall torque	19.2 N.m at 400 V three phase 19.2 N.m at 480 V three phase 19.2 N.m at 208 V three phase
Nominal output power	1000 W at 208 V three phase 2000 W at 400 V three phase 2100 W at 480 V three phase
Nominal torque	7.2 N.m at 208 V three phase 6.8 N.m at 400 V three phase 5.6 N.m at 480 V three phase
Nominal speed	1500 rpm at 208 V three phase 3000 rpm at 400 V three phase 3700 rpm at 480 V three phase
Maximum current Irms	26.7 A at 208 V, three phase 26.7 A at 400 V, three phase 26.7 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	32768 points/turn x 4096 turns
Holding brake	With
Holding torque	9 N.m holding brake
Mounting support	International standard flange
Motor flange size	100 mm
Electrical connection	Printed circuit board connector
Torque constant	1.7 N.m/A at 20 °C
Back emf constant	112 V/krpm at 20 °C
Number of motor poles	10
Rotor inertia	10.3 kg.cm²
Stator resistance	2.31 Ohm at 20 °C
Stator inductance	11.43 mH at 20 °C
Stator electrical time constant	4.95 ms at 20 °C
Maximum radial force Fr	1050 N at 1000 rpm 830 N at 2000 rpm 730 N at 3000 rpm 660 N at 4000 rpm 610 N at 5000 rpm
Maximum axial force Fa	0.2 x Fr
Brake pull-in power	8 W
Type of cooling	Natural convection
Length	338 mm
Number of motor stacks	3
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

IP degree of protection	Shaft: IP54 Housing: IP65

Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	20.0 cm
Package 1 Width	59.0 cm
Package 1 Length	25.8 cm
Package 1 Weight	11.0 kg
Unit Type of Package 2	P06

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Number of Units in Package 2	8
Package 2 Height	77.0 cm
Package 2 Width	80.0 cm
Package 2 Length	60.0 cm
Package 2 Weight	96.5 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) EU RoHS Declaration
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
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

Contractual warranty

Warranty	18 months

External Dimensions

With Standard Braking Resistor

Mounting type A
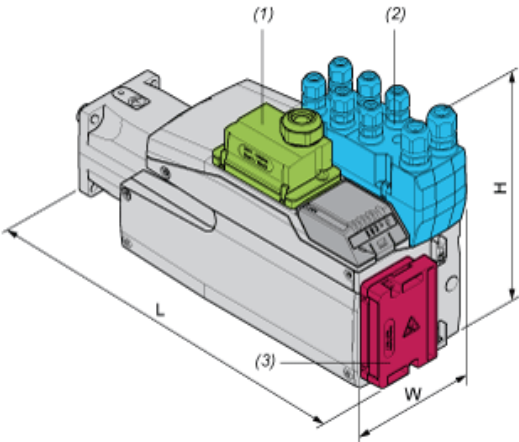
(1)   Module for supply voltage
(2)   I/O module
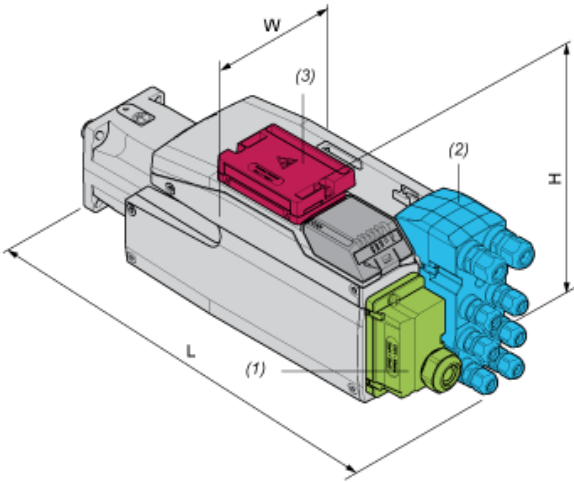**(3)**   Standard braking resistor

Dimensions in mm

W	H	L
132,6	217	367

Dimensions in in.

W	H	L
5,22	8,54	14,45

Mounting type B

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

Dimensions in mm

W	H	L
132,6	168	416

Dimensions in in.

W	H	L
5,22	6,61	16,38

With External Braking Resistor

Mounting type C
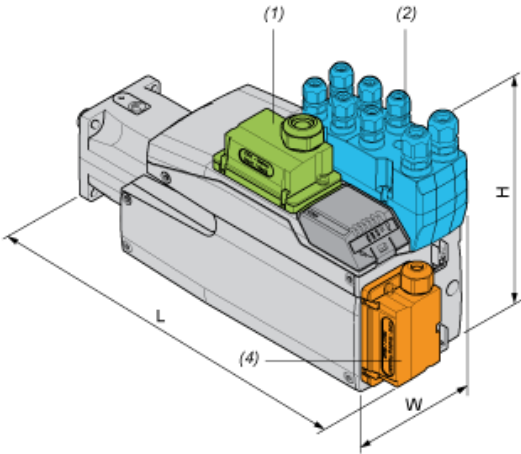
(1)   Module for supply voltage
(2)   I/O module
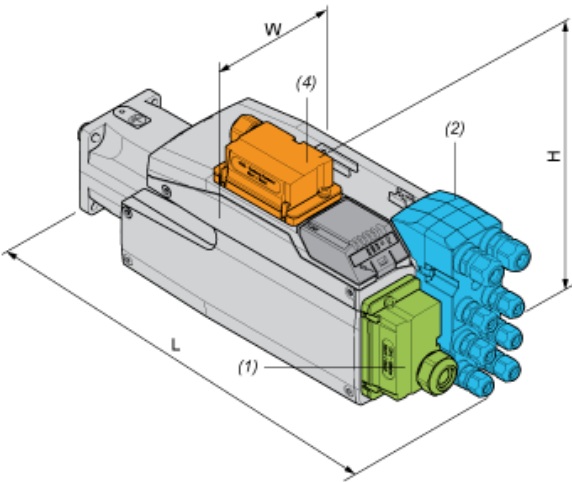**(4)**   External braking resistor

Dimensions in mm

W	H	L
132,6	217	379

Dimensions in in.

W	H	L
5,22	8,54	14,92

Mounting type D

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

Dimensions in mm

W	H	L
132,6	180	416

Dimensions in in.

W	H	L
5,22	7,09	16,38

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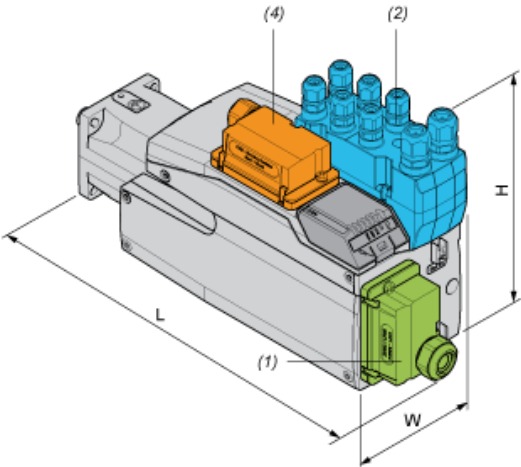
(1)   Module for supply voltage
(2)   I/O module
(4)   External braking resistor

Dimensions in mm

W	H	L
132,6	217	406

Dimensions in in.

W	H	L
5,22	8,54	15,98

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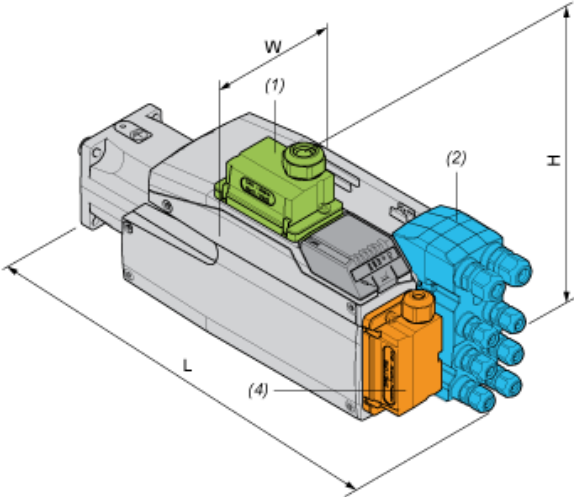
(1)   Module for supply voltage
(2)   I/O module
(4)   External braking resistor

Dimensions in mm

W	H	L
132,6	206,5	416

Dimensions in in.

W	H	L
5,22	8,13	16,38

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Performance Curves

Torque/Speed Curves with 208 V Three Phases Supply Voltage
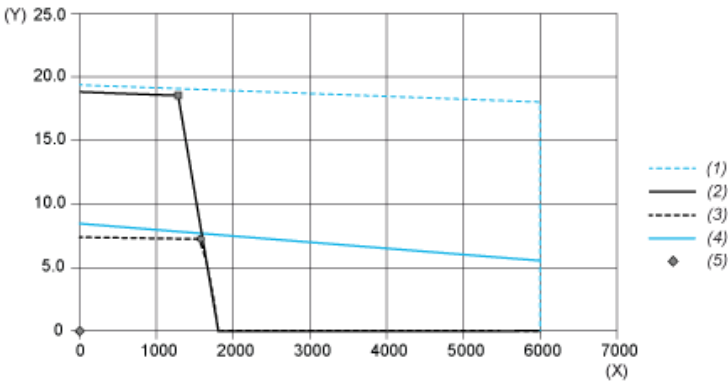
(X)	Speed (rpm)
(Y)	Torque (N.m)
(1)	Motor peak
(2)	Drive peak
(3)	Drive cont
(4)	Motor cont
(5)	Operating point

		Power	At Speed	With Torque
max. Peak Power		2675 W	1380 rpm	18.51 N.m
max Cont. Power (Drive)		1223 W	1620 rpm	7.21 N.m

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Performance Curves

Torque/Speed Curves with 400 V Three Phases Supply Voltage
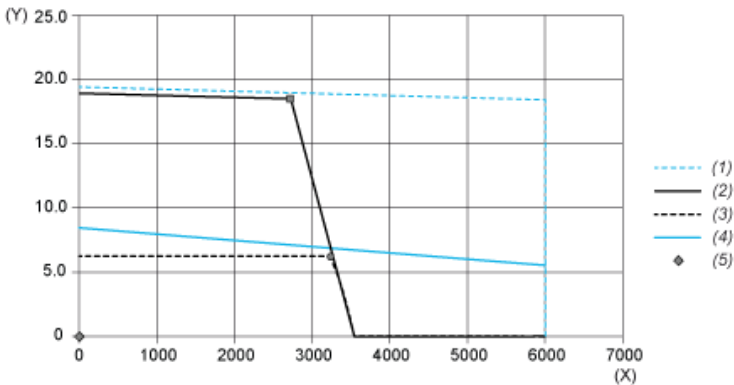
(X)	Speed (rpm)
(Y)	Torque (N.m)
(1)	Motor peak
(2)	Drive peak
(3)	Drive cont
(4)	Motor cont
(5)	Operating point

		Power	At Speed	With Torque
max. Peak Power		5328 W	2760 rpm	18.44 N.m
max Cont. Power (Drive)		2096 W	3240 rpm	6.18 N.m

Performance Curves

Torque/Speed Curves with 480 V Three Phases Supply Voltage
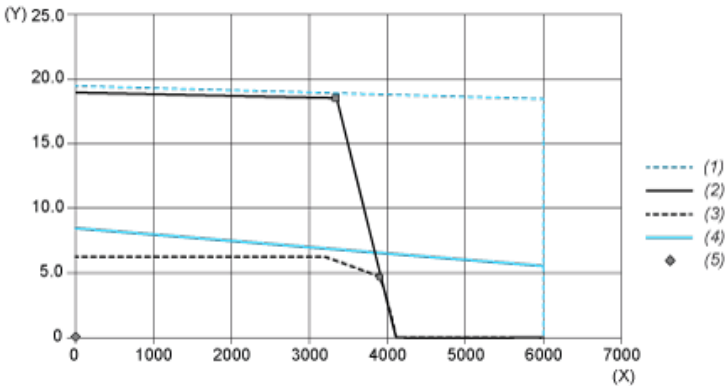
(X)	Speed (rpm)
(Y)	Torque (N.m)
(1)	Motor peak
(2)	Drive peak
(3)	Drive cont
(4)	Motor cont
(5)	Operating point

		Power	At Speed	With Torque
max. Peak Power		6454 W	3360 rpm	18.34 N.m
max Cont. Power (Drive)		1994 W	3960 rpm	4.81 N.m

Recommended replacement(s)