

Stepper Motors Equipped with Battery-Free Absolute Sensor

AZ Series

With WPLE Gearhead

AZ Series with WPLE Gearhead provides solutions for a compact machine mechanism.

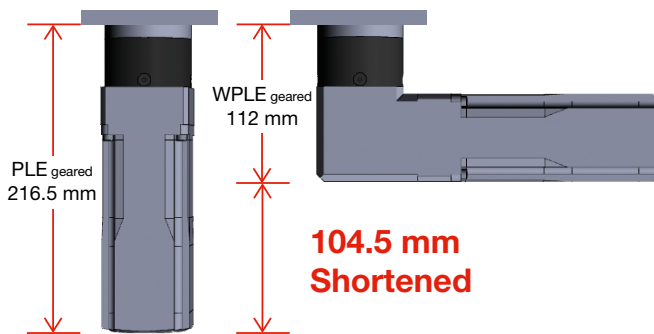


Features

Space Saving

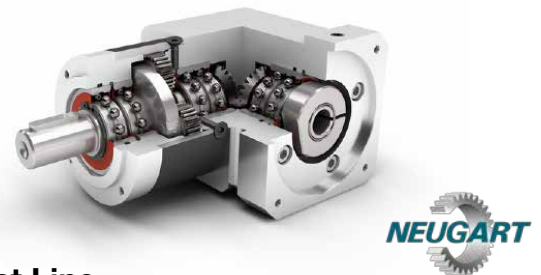
The axial length is reduced by right angle gear

- In case of AZM69MC/AZM69MK (Motor Frame Size 60mm)



WPLE

- Right angle planetary gear with output shaft
- Low-backlash : from 13 to 18 arcmin offers high positioning accuracy, particularly in reversing operation.
- High output torque: Max. 140Nm with AZ motor



Product Number Code

AZM 6 9 A C - WPLE 60-10-D

①	②	③	④	⑤	⑥	⑦	⑧	⑨
①	Series Name	AZM: AZ Series Motor						
②	Motor Frame Size	6: □ 60 mm 9: □ 85 mm						
③	Motor Case Length							
④	Motor Type	A: Standard (Single Shaft) M: Electromagnetic Brake Type* ¹						
⑤	Power Supply Voltage	C: AC Power Supply Input K: DC Power Supply Input* ²						
⑥	Gear Series Name	WPLE: WPLE Series						
⑦	Gear Size	60: WPLE60 80: WPLE80						
⑧	Gear Ratio	5, 10, 20, 40						
⑨	Cable Direction* ³	D: Down, U: Up, R: Right, L: Left						

*¹ Only for the motor size of 69. See product line.

*² Only for the motor size of 69. See product line.

*³ See diagram (Cable direction) on the right.

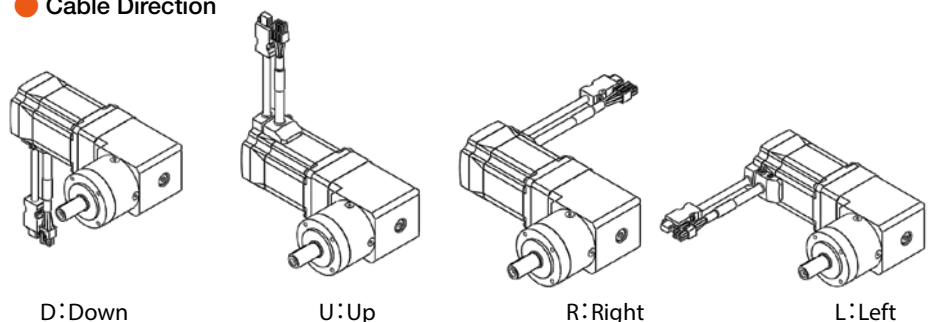
Product Line

Product Name	Ratio	List Price
AZM69AC-WPLE60 -□-◇	5,10 20,40	680 € 731 €
AZM69MC-WPLE60 -□-◇	5,10 20,40	837 € 888 €
AZM69AK-WPLE60 -□-◇	5,10 20,40	680 € 731 €
AZM69MK-WPLE60 -□-◇	5,10 20,40	837 € 888 €
AZM911AC-WPLE80 -□-◇	5,10 20,40	778 € 866 €

● A number indicating the gear ratio is entered where the box □ is located in the product name.

● Cable direction is entered where the box ◇ is located in the product name.

Cable Direction



Specifications

Type	WPLE60 ⁽¹⁾				WPLE80 ⁽¹⁾			
	1		2		1		2	
Stage	5		10		20		40	
Reduction ratio	5	10	20	40	5	10	20	40
Backlash [arcmin]	16		18		13		15	
Nominal output torque [Nm] ⁽²⁾⁽³⁾	24	15	44	40	67	38	120	110
Max. output torque [Nm] ⁽²⁾⁽³⁾⁽⁴⁾	38	24	70	64	107	61	192	176
Emergency stop torque [Nm] ⁽⁵⁾	80	70	88	80	220	170	240	220
Max. input speed [r/min] ⁽⁶⁾	13000				7000			
Running noise [dB (A)] ⁽⁷⁾	70				73			
Permitted radial load for 30000h (Fa=0) [N] ⁽²⁾⁽⁸⁾	340				650			
Permitted axial load for 30000h (Fr=0) [N] ⁽²⁾⁽⁹⁾	450				900			
Permitted radial load for 20000h (Fa=0) [N] ⁽²⁾⁽⁸⁾	400				750			
Permitted axial load for 20000h (Fr=0) [N] ⁽²⁾⁽⁹⁾	500				1000			
Degree of protection	IP40							
Lifetime [h]	20000							
Lifetime at Nominal output torque x 0.88 [h]	30000							

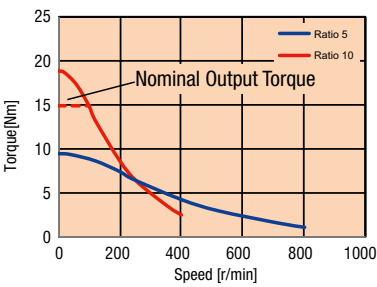
- (1) These values are mentioned about only WPLE gearbox. Actual value may be changed depends on the combination of motor.
- (2) These values refer to a speed of the output shaft of n2=100r/min on duty cycle KA=1 and S1-mode for electrical machines and T=30°C
- (3) With key, at tumescent load
- (4) Allowable for 30.000 revolutions at the output shaft.
- (5) Allowed 1.000times
- (6) Allowed operating temperature must be kept; other input speeds on inquiry
- (7) Sound pressure level; distance 1m; measured on idle running with an input speed of n1=3.000r/min, ratio=5
- (8) Half way along the output shaft
- (9) With respect to center of output shaft

Speed – Torque Characteristics

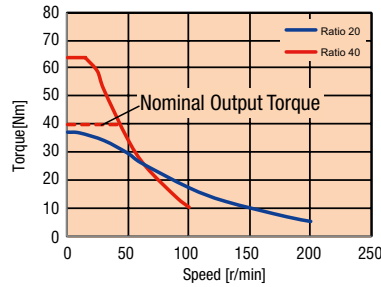
Single-Phase 200-240VAC

◇ AZM69AC-WPLE60 /AZM69MC-WPLE60 (Reference value)

AZM69 Gear Ratio 5
Gear Ratio 10

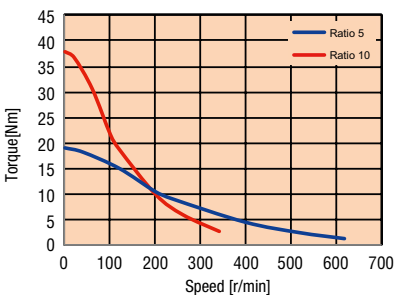


AZM69 Gear Ratio 20
Gear Ratio 40

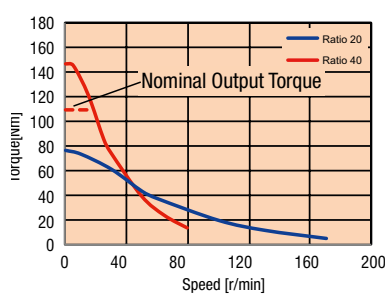


◇ AZM911AC-WPLE80 (Reference value)

AZM911 Gear Ratio 5
Gear Ratio 10



AZM911 Gear Ratio 20
Gear Ratio 40



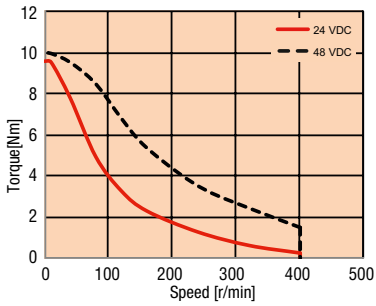
Note

- There is condition for using nominal output torque or max. output torque (see specification of WPLE gearhead)
- Speed torque characteristics vary depending on conditions.

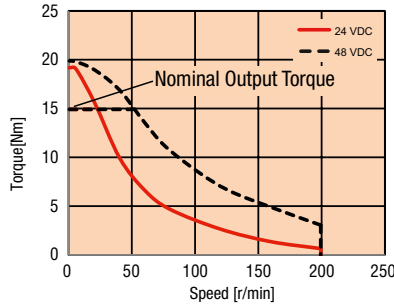
● 24/48 VDC

◇ AZM69AK-WPLE60 /AZM69MK-WPLE60 (Reference value)

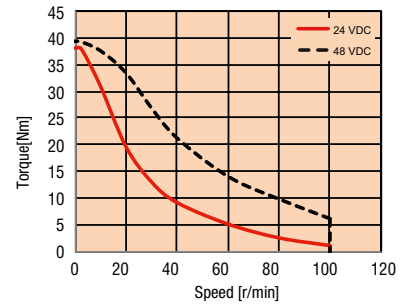
AZM69 Gear Ratio 5



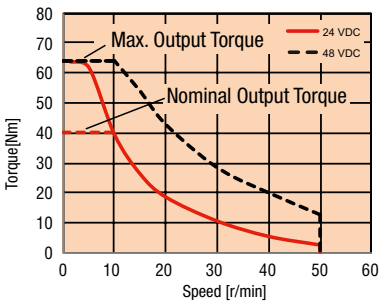
AZM69 Gear Ratio 10



AZM69 Gear Ratio 20



AZM69 Gear Ratio 40



Note

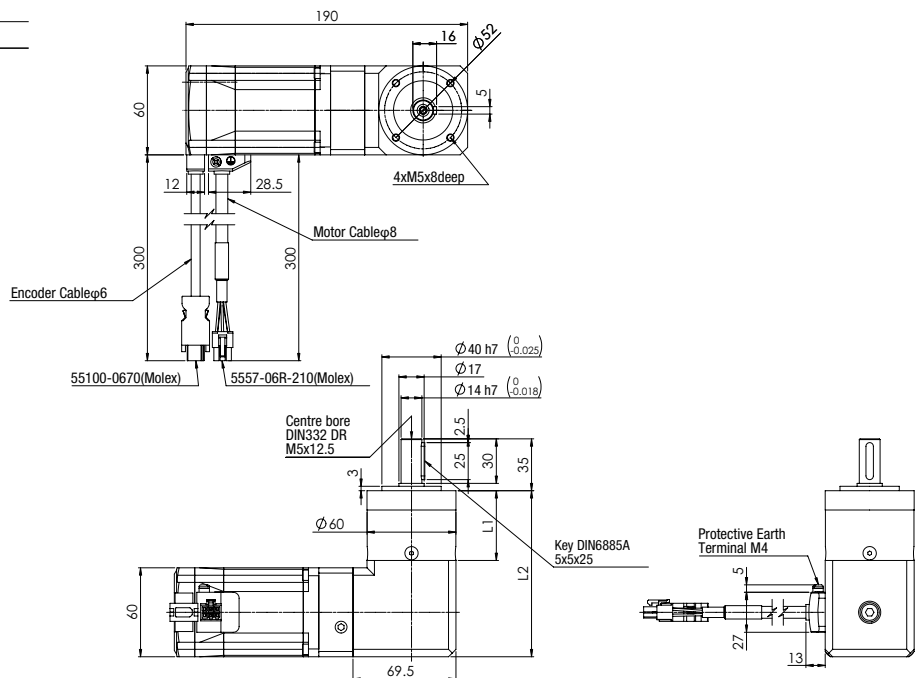
- There is condition for using nominal output torque or max. output torque (see specification of WPLE gearhead)
- Speed torque characteristics vary depending on conditions.

Dimensions (Unit = mm)

◇ AZM69AC-WPLE60
AZM69AK-WPLE60

3D CAD

Ratio	L1	L2	Mass kg
5,10	47	112	3,1
20,40	59,5	124,5	3,3



Note

- This Dimension shows cable direction "-D (Down)"

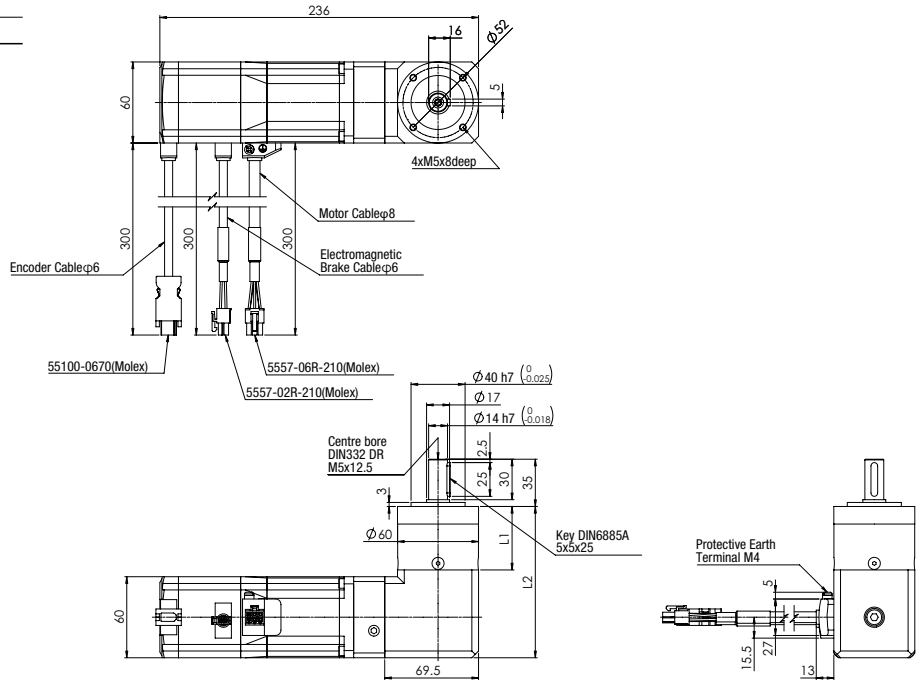
3D CAD

3D data available in any cable direction on the website: <http://www.orientalmotor.eu>
Or please ask the OM Customer Center: info@orientalmotor.de

◇ AZM69MC-WPLE60
AZM69MK-WPLE60

3D CAD

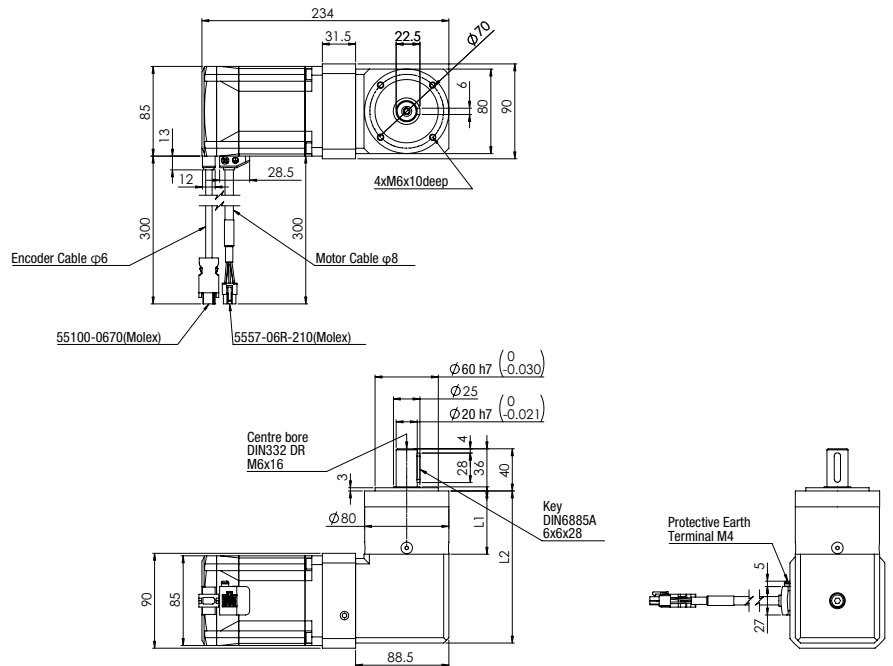
Ratio	L1	L2	Mass kg
5,10	47	112	3,5
20,40	59,5	124,5	3,7



◇ AZM911AC-WPLE80

3D CAD

Ratio	L1	L2	Mass kg
5,10	60	144	7
20,40	77,5	161,5	7,5



Note

● This Dimension shows cable direction "-D (Down)"

3D CAD

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Orientalmotor

Specifications are subject to change without notice. Published in March 2017.

Germany Tel: 0211-520 670 0 www.orientalmotor.de
UK Tel: 01256-347 090 www.orientalmotor.co.uk
France Tel: 01-478 697 50 www.orientalmotor.fr
Italy Tel: 02-939 063 46 www.orientalmotor.it
CH Tel: 056-560 5045 www.orientalmotor.ch

Customer Service Center (Support in German & English)
Free Hotline 00800-22 55 66 22 info@orientalmotor.de

Oriental Motor (Europa) GmbH
www.orientalmotor.eu