

Specifications

Item	Description
Operation mode (fixed according to model No.)	ON-OFF, position proportioning or open/close override function
Input signal (fixed according to model No.)	Relay contact, 4–20mAdc, potentiometer (nominal 135Ω)
Angular stroke (fixed according to model No.)	90° or 160°
Motor timing (for relay contact, standard model)	39/33s (relay contact, angular stroke 90° motor, no-load, 50/60Hz) 69/58s (relay contact, angular stroke 160° motor, no-load, 50/60Hz)
Output torque	12.5N·m (high-speed motor type: 6N·m)
Power rated voltage (fixed according to model No.)	24Vac/100Vac/200Vac/85–264Vac, 50/60Hz
Power consumption (during operation)	9VA (relay contact, potentiometer, 4–20mA types), 11VA (open/close override, 4–20mA, 24Vac types) 14W (4–20mAAdc, 85–264Vac types), 15W (open/close override, 4–20mA, 85–264Vac types) 14VA (high-speed motor type)

Item	Description
Reference operating conditions	23±2°C, 50±10% RH
Allowable temperature	-20 to +60°C
Allowable humidity	5 to 95% RH (without condensation)
Auxiliary switches (optional)	2 or 4
Auxiliary switch contact rating	250Vac, 5A (resistive load)
Auxiliary switch position at factory setting	Closed : 9°±5° Open : 81°±5°
Auxiliary switch settable range	Within output opening range of 5 to 95%
Open/close override function	Signals: CCW/CW/CONT/S. No-voltage contact. Contact rating: 30Vdc min., 100mA min. Contact resistance: 10Ω (1mAdc)
Protection	Splash-proof structure, IP54 or equivalent
Material	Case: Die-cast aluminum Bracket: Steel Cover: Polycarbonate resin with GF
Mass	Approx. 3kg
Standards compliance	EN55011, EN61000-6-2, UL61010-1, GB30439.8

Model Selection Guide

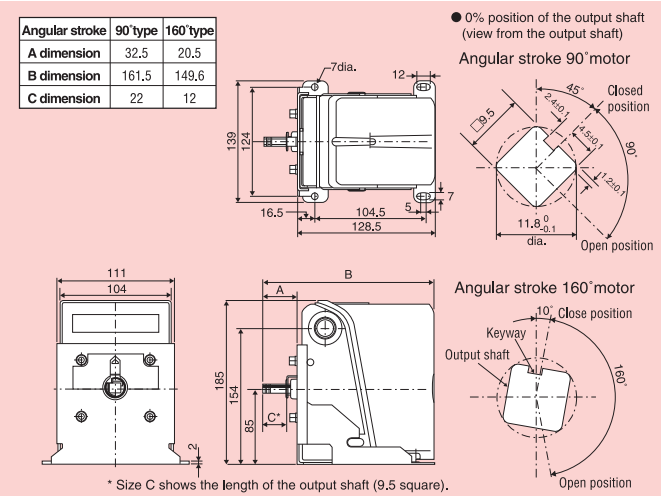
Model No.	Supply power	Input signal	Angle of rotation	Motor timing		Output torque	Notes	UL marking *1	CE marking *1	
				50 Hz	60 Hz					
ECM3000D01__	24 V AC	Relay contact	90 °	39 s	33 s	12.5 N·m	ON/OFF action	✓	✓	
ECM3000D11__	100 V AC							—	—	
ECM3000D21__	200 V AC							—	—	
ECM3000E01__	24 V AC	Potentiometer					Position proportional action	✓	✓	
ECM3000F01__	24 V AC							✓	✓	
ECM3000F11__	100 V AC							—	—	
ECM3000F21__	200 V AC	Relay contact		39 s	6 N·m	Position proportional action (high-speed motor model)		—	✓	
ECM3000G01__*2	24 V AC							✓	✓	
ECM3000G91__*2	85—264 V AC							—	—	
ECM3000F03__	24 V AC	Relay contact	160 °	20 s	16 s	12.5 N·m	ON/OFF action	—	✓	
ECM3000D020__	24 V AC	Relay contact		69 s	58 s			Position proportional action	✓	✓
ECM3000E020__		Potentiometer							✓	✓
ECM3000F020__		Relay contact					✓		✓	
ECM3000F120__	100 V AC						—	—		
ECM3000F220__	200 V AC						—	—		
ECM3000G02__*2	24 V AC	4—20 mA DC				72 s	29 s	6 N·m	Position proportional action (high-speed motor model)	✓
ECM3000G92__*2	85—264 V AC			—	—					
ECM3000F040__	24 V AC			Relay contact	—					✓

Example: ECM3000D01\_\_

0 (zero) : not GB-compliant, C: GB-compliant  
0 (zero) : Without options \*3  
3 : 4 built-in auxiliary switches (contact current is 100 mA to 5 A for standard model) \*5  
4 : 2 built-in auxiliary switches (contact current is 100 mA to 5 A for standard model), with forced opening/closing function \*4  
5 : 4 built-in auxiliary switches (contact current is 1 to 100 mA for low-current model) \*5  
6 : 2 built-in auxiliary switches (contact current is 1 to 100 mA for low-current model), with forced opening/closing function \*4

\*1. GB-compliant models are not compliant with UL or CE standards.  
\*2. Direct/reverse operation can be switched and zero point, span, and deadband can be adjusted.  
\*3. An extension unit can be mounted.  
\*4. Selectable only for model ECM3000G01\_\_, ECM3000G91\_\_, ECM3000G02\_\_, and ECM3000G92\_\_.  
\*5. Selectable only for 90° stroke models.

Dimensions



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Azbil Corporation  
Advanced Automation Company

Yamatake Corporation changed its name to Azbil Corporation on April 1, 2012.

1-12-2 Kawana, Fujisawa  
Kanagawa 251-8522 Japan  
URL: <https://www.azbil.com>

1st Edition: Issued in Jun. 2004-BR  
5th Edition: Issued in Feb. 2020-AZ

Optional parts

Part No.	Name	
N-3128	Crank arm	
J-26026G-ARM	Damper arm	
Q455C, D	Valve linkage	
Q605A, D, E	Damper linkage	
83165292-001	Bracket for V51E	
83174065-__	Extension unit *1	Auxiliary switches (4 switches built-in) *2
83165272-001		Auxiliary potentiometer for 90° type
83165272-002		Auxiliary potentiometer for 160° type

\*1. Only one type of extension unit can be mounted on a model without internal auxiliary switch.  
\*2. For details, contact the azbil Group.

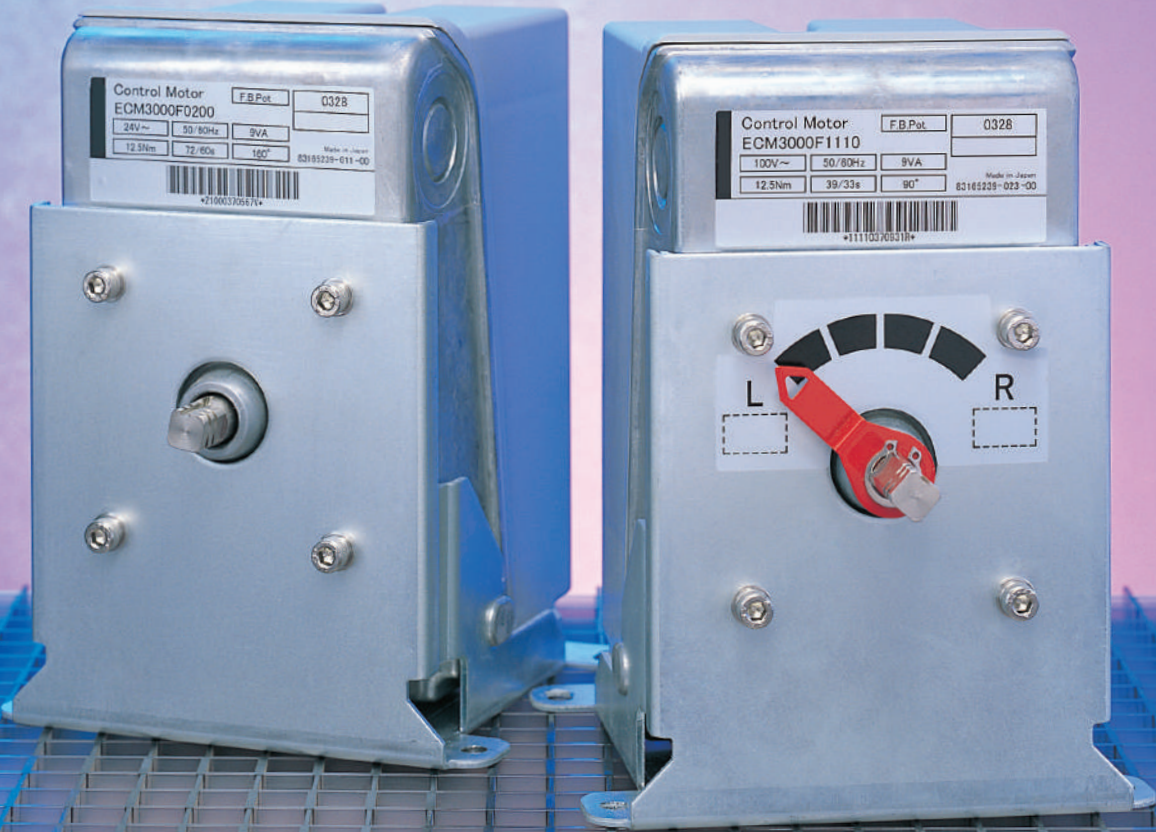
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Electric Control Motor  
Model ECM3000

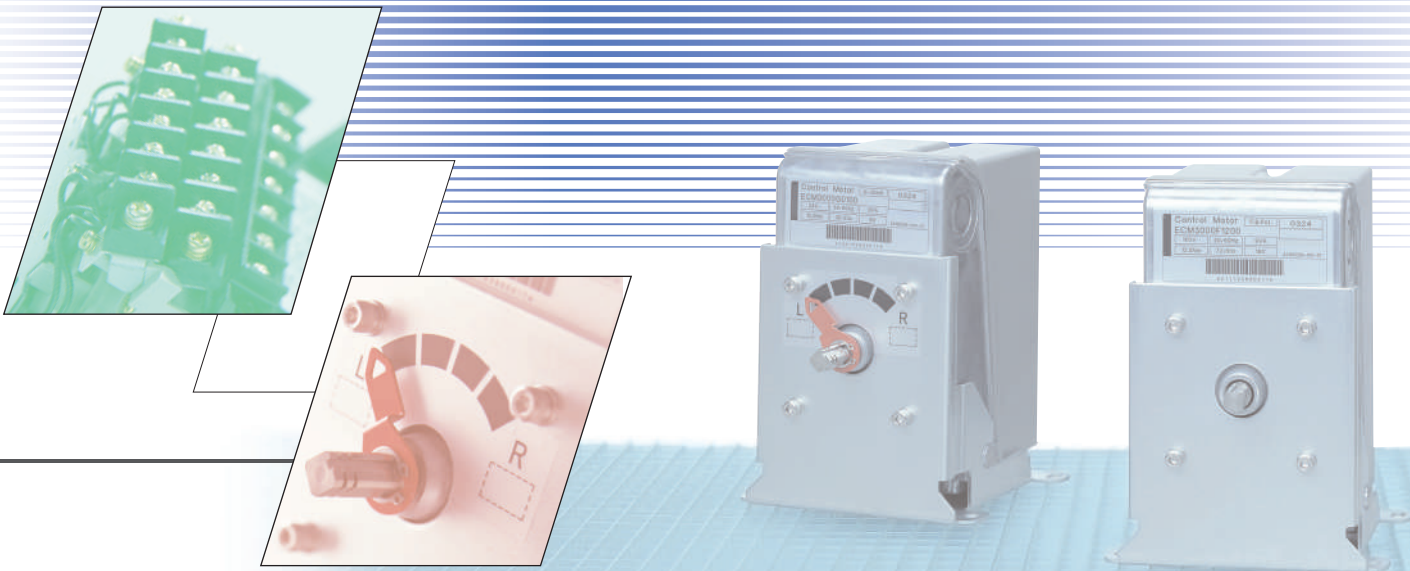
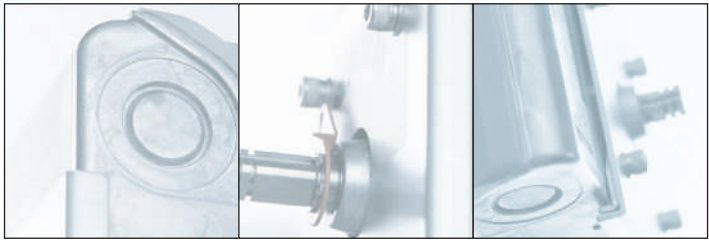
Versatile Functionality for a Wide Variety of  
Industrial Applications





# Powerful, Superior Control

## Electric Control Motor Model ECM3000

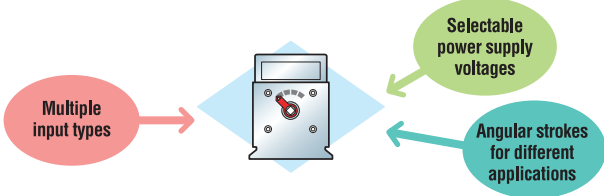


### Advantages

Multiple functions for multiple applications.

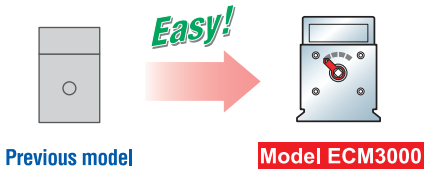
#### Wide variety of models

The model ECM3000 provides a wide variety of models for different input signals, power supply voltages, angular strokes, and many other application needs.



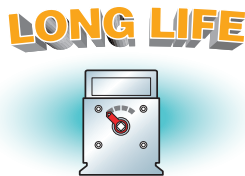
#### Easy replacement of Azbil Corporation's previous models

Using the provided bracket, replacement of Azbil Corporation's previous motors with the model ECM3000 is easy.



#### Long-life design

Long-life parts are adopted for various internal components of the motor. This ensures long service and dependability.



#### Rugged design is superior for tough environments

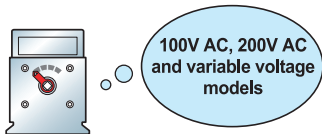
The protective structure of the model ECM3000 is IP54 or equivalent. It can endure difficult environmental conditions, even splashing water.



When installing the model ECM3000 outdoors, an appropriate protective cover should be installed.

#### Models that run on 100V AC, 200V AC and variable voltage are available

The model ECM3000 supports 100V AC and 200V AC power supply voltages. A variable voltage model is also available for the 4–20mA DC type.





#### Model with 4 optional auxiliary switches

Models with 4 auxiliary switches are available for the 90° angular stroke motor model. The valve position signal can be output to an external device. Additionally, for the 4–20mA input type, models with open/close override function plus 2 auxiliary switches are available.



### Selection Guide

A variety of models to meet your application needs.

Appearance		 90° type  160° type							
Model No.		ECM3000D		ECM3000E		ECM3000F		ECM3000G	
Input signal		Relay contact		Potentiometer		Relay contact		4 to 20mA DC	
Operation mode		ON-OFF		Position proportioning		Position proportioning		Position proportioning	
Power supply	24V AC	●		●		●		●	
	100V AC	●		—		●		—	
	200V AC	●		—		●		—	
	85 to 264V AC	—		—		—		●	
Output torque		12.5N·m		12.5N·m		12.5N·m or 6N·m <sup>*1</sup>		12.5N·m	
Angular stroke		90°	160°	90°	160°	90°	160°	90°	160°
Stroke timing (50/60Hz)		39s/33s	69s/58s	39s/33s	69s/58s	39s/33s	69s/58s	39s/33s	69s/58s
		20s/16s <sup>*2</sup>	35s/29s <sup>*2</sup>	20s/16s <sup>*2</sup>	35s/29s <sup>*2</sup>	20s/16s <sup>*2</sup>	35s/29s <sup>*2</sup>	20s/16s <sup>*2</sup>	35s/29s <sup>*2</sup>
Auxiliary switches (4) <sup>*3</sup>		●	—	●	—	●	—	● <sup>*5</sup>	—

<sup>\*1</sup> See the model selection guide table on the next page.  
<sup>\*2</sup> The torque of the high-speed motor type is 6N·m.  
<sup>\*3</sup> Auxiliary switches (4) are optional.  
<sup>\*4</sup> For the 85 to 264Vac power supply type.  
<sup>\*5</sup> On models with the open/close override function there are 2 auxiliary switches.