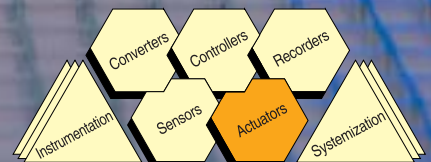


Control Motor
ECM3000
Electric Control Motor

Multiple Functionality for a Wide Variety of Industrial Applications



The Motor that Provides Powerful and Superior Control

ECM3000

Electric Control Motor



ECM3000



Advantages

Multiple functions can respond to a variety of application needs.

Wide variety of models

The ECM3000 Series provides a wide variety of models to meet the different requirements of input signals, power supply voltages, angular strokes, and many other application needs.



Can easily replace Yamatake's previous models

By applying the bracket provided as an accessory, the ECM3000 can easily replace Yamatake's previous motors.



Long life design

Long life parts are adopted for various internal component units of the motor. This ensures long life of service and reliable use.

LONG LIFE!!



Reliable design superior for environment resistance

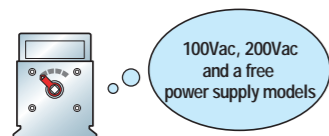
The protective structure of the ECM3000 is IP54 or equivalent. It can endure environmental conditions containing water splashes.



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

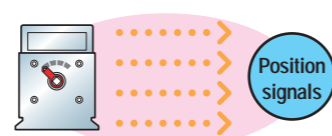
100Vac, 200Vac and a free power supply models available

The ECM3000 supports 100Vac and 200Vac power supply voltages. A free power supply type is also available for the 4 to 20mA type.



Model with optional auxiliary switches (4 points)

Models with optional auxiliary switches are available for the 90° angular stroke motor model. The position signal of the valve opening can be retransmitted.



Selection Guide

A wide range of lineups available to respond to 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	24Vac	●	●	●	●	
	100Vac	●	—	●	—	
	200Vac	●	—	●	—	
	85 to 264Vac	—	—	—	●	
Output torque	12.5N·m	12.5N·m	12.5N·m/6N·m ^{*1}	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		
	20s/16s ^{*2}	35s/29s ^{*2}	39s ^{*4}	72s ^{*4}		
Auxiliary switch ^{*3} (4 points)	●	—	●	—	●	—

^{*1} Confirm with the model selection guide table on the next page.
^{*2} The torque of the high-speed motor type is 6N·m.
^{*3} Auxiliary switches (4 points) are optional.
^{*4} For the 85 to 264Vac power supply type.

Specifications

Item	Description
Operation mode (fixed according to model No.)	ON-OFF or position proportioning
Input signal (fixed according to model No.)	Relay contact, 4 to 20mA dc, potentiometer (nominal 135Ω)
Angular stroke (fixed according to model No.)	90° or 160°
Motor timing (in case of 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 supply voltage (fixed according to model No.)	24Vac, 100Vac, 200Vac, 85 to 264Vac 50/60Hz

Item	Description
Power consumption (during operation)	9VA (relay contact, potentiometer type), 14W (4 to 20mA dc, 85 to 264Vac type). However, 14VA for high-speed motor type.
Reference operating conditions	23±2°C, 50±10%RH
Allowable temperature	-20 to +60°C
Allowable humidity	5 to 95%RH (no condensation allowed)
Auxiliary switch (option)	4 points (90° type only)
Auxiliary switch contact rating	250Vac, 5A (resistive load)
Auxiliary switch position at factory setting	Close side: Position of 9°±5° Open side: Position of 81°±5°
Auxiliary switch settable range	Within output opening range of 5 to 95%
Protection	Splash-proof structure IP54 or equivalent
Material	Case: Die-cast aluminum Bracket: Steel Cover: Polycarbonate resin with GF
Mass (weight)	Approx. 3kg

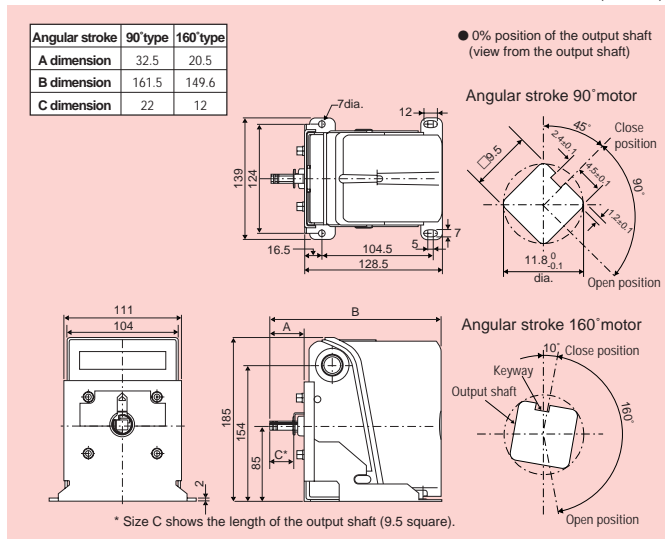
Model Selection Guide

Model No.	Power supply voltage (50/60Hz)	Input signal	Angular stroke	Motor timing		Output torque	Remarks	Auxiliary switch (option)	
				50Hz	60Hz				
ECM3000D01□0*	24Vac	Relay contact	90°	39s	33s	12.5N·m	ON/OFF control action	4 points (factory option)	
ECM3000D11□0*	100Vac	Relay contact							
ECM3000D21□0*	200Vac	Relay contact							
ECM3000E01□0*	24Vac	Potentiometer		160°	69s	58s	12.5N·m		Feedback potentiometer built-in
ECM3000F01□0*	24Vac	Relay contact							
ECM3000F11□0*	100Vac	Relay contact							
ECM3000F21□0*	200Vac	Relay contact			72s	6N·m	Hi-speed motor type, Feedback potentiometer built-in		
ECM3000G01□0*	24Vac	4 to 20mA dc							
ECM3000G91□0*	85 to 264Vac	4 to 20mA dc							
ECM3000F03□0*	24Vac	Relay contact	160°		35s	29s	6N·m	Hi-speed motor type, Feedback potentiometer built-in	
ECM3000D0200	24Vac	Relay contact							
ECM3000E0200	24Vac	Potentiometer							
ECM3000F0200	24Vac	Relay contact		72s	6N·m	Hi-speed motor type, Feedback potentiometer built-in			
ECM3000F1200	100Vac	Relay contact							
ECM3000F2200	200Vac	Relay contact							
ECM3000G0200	24Vac	4 to 20mA dc		72s	6N·m	Hi-speed motor type, Feedback potentiometer built-in			
ECM3000G9200	85 to 264Vac	4 to 20mA dc							
ECM3000F0400	24Vac	Relay contact							

Note: * An auxiliary switch (4 pieces) can be built into the 90° stroke motor by specifying a model No. Meaning of □ in model No. 0: Auxiliary switch is not built-in.
1: 4 auxiliary switches built-in type.

Dimensions

(Unit:mm)



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
83165271-004	Extension unit* Auxiliary switches (4 units built-in)
83165272-001	Auxiliary potentiometer for 90° type
83165272-002	Auxiliary potentiometer for 160° type

* Only one type of extension unit can be mounted on the model without internal auxiliary switch.

⚠ RESTRICTIONS ON USE

This product has been designed, developed and manufactured for general-purpose application in machinery and equipment. Accordingly, when used in applications outlined below, special care should be taken to implement a fail-safe and/or redundant design concept as well as a periodic maintenance program.

- Safety devices for plant worker protection
- Start/stop control devices for transportation and material handling machines
- Aeronautical/aerospace machines
- Control devices for nuclear reactors

Never use this product in applications where human safety may be put at risk.

YAMATAKE

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(02)

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