

ECM3000

Control Motor

The ECM3000 is a control motor designed to control various equipment in industrial applications. Two kinds of models are available: one has a 90° angular stroke motor for burner control and the other has a 160° angular stroke motor for valve control of hot and cold water and steam.



Specifications

Operation mode	ON/OFF, position proportioning or forced opening/closing function (according to the model No.)	Ambient temperature	-20 to +60°C
Input signal	Relay contact, 4 to 20mA _{dc} , or potentiometer (nominal 135Ω) (according to the model No.)	Ambient humidity	5 to 95% RH (no condensation allowed)
Angular stroke	90° or 160° (according to the model No.)	Auxiliary switch (option)	2 units or 4 units
Motor timing	39/33s (relay contact, 90° stroke motor, no-load, 50/60Hz) 69/58s (relay contact, 160° stroke motor, no-load, 50/60Hz)	Contact rating of auxiliary switch	250Vac, 5A (resistive load)
Output torque	12.5N·m (high-speed motor type: 6N·m)	Auxiliary switch position at factory setting	• Closed side: 9° ± 5° position • Open side: 81° ± 5° position
Power	24Vac, 100Vac, 200Vac, or 85 to 264Vac (50/60Hz) (according to the model No.)	Auxiliary switch setting range	Within 5 to 95% of output opening
Power consumption (During operation)	9VA (relay contact/potentiometer/4–20mA type) 11VA (forced opening or closing function/4–20mA/24Vac type) 14W (4 to 20mA _{dc} /85 to 264Vac type) 15W (forced opening or closing function/4–20mA/85 to 264Vac type) 14VA (high-speed motor type)	Forced opening-closing function signal	• Signal name: CCW/CW/CONT/S • Contact rating: 30V _{dc} min., 100mA min. • Contact resistance: 10Ω (1mA _{dc}) • No-voltage contact
		Sealing	Splash-proof structure IP54 or equivalent Waterproof cable gland must be used.
		Materials	Case: Aluminum die-cast Cover: Polycarbonate resin with GF Bracket: Steel plate
		Mass	Approx. 3kg

Selection Guide

Model No.	Product specifications						Auxiliary switch (Optional)				
	Power (50/60Hz)	Input signal	Angular stroke	Motor timing		Output torque		Remarks			
				50Hz	60Hz						
ECM3000D01 □ 0*	24Vac	Relay contact	90°	39s	33s	12.5N·m	ON/OFF operation	4 units can be built in.			
ECM3000D11 □ 0*	100Vac	Relay contact					Feedback potentiometer built in				
ECM3000D21 □ 0*	200Vac	Relay contact									
ECM3000E01 □ 0*	24Vac	Potentiometer									
ECM3000F01 □ 0*	24Vac	Relay contact									
ECM3000F11 □ 0*	100Vac	Relay contact									
ECM3000F21 □ 0*	200Vac	Relay contact									
ECM3000G01 □ 0*	85 to 264Vac	4 to 20mA _{dc}							39s		
ECM3000G0120**											
ECM3000G91 □ 0*											
ECM3000G9120**							**				
							4 units can be built in.				
							**				
ECM3000F03 □ 0*	24Vac	Relay contact	160°	20s	16s	6N·m	Hi-speed motor type Feedback potentiometer built in	4 units can be built in.			
ECM3000D0200	24Vac	Relay contact		69s	58s	12.5N·m	ON/OFF operation	None			
ECM3000E0200	24Vac	Potentiometer					Feedback potentiometer built in				
ECM3000F0200	24Vac	Relay contact									
ECM3000F1200	100Vac	Relay contact									
ECM3000F2200	200Vac	Relay contact									
ECM3000G0200	24Vac	4 to 20mA _{dc}							72s		
ECM3000G0220**											
ECM3000G9200											
ECM3000G9220**	85 to 264Vac	4 to 20mA _{dc}									
											None
							**				
ECM3000F0400	24Vac	Relay contact	35s	29s	6N·m	Hi-speed motor type Feedback potentiometer built in	None				

* An auxiliary switch (4 units) can be built into the 90° stroke motor by specifying a model No.

Code for □ in model No. 0: Auxiliary switch is not built in.

1: Type with 4 auxiliary switches built in

** 2 auxiliary switches + forced opening/closing function

Accessories (sold separately)

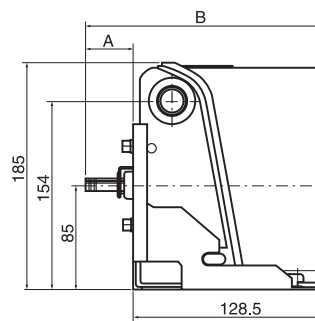
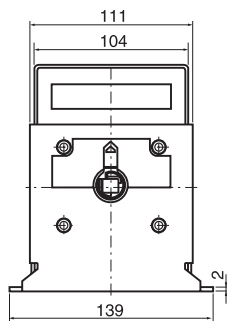
Model No.	Description
N-3128	Crank arm
J-26026G-ARM	Damper arm
Q455C/D	Valve linkage
Q605A/D/E	Damper linkage

Model No.	Description	Extension unit*
83165292-001	Bracket for V51	
83165271-004	Auxiliary switch (4 units built in)	
83165272-001	Auxiliary potentiometer for 90° stroke motor	
83165272-002	Auxiliary potentiometer for 160° stroke motor	

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

Dimensions

(Unit: mm)



Angular stroke	A	B
90°	32.5	161.6
160°	20.5	149.6