

MF68...2050 Butterfly Valve Actuators

MF68, MF200, MF550, MF700, MF1450, MF2050



Product Description

The MF68...2050 is a heavy duty series of electric actuators for use with the VF209W and VF299W butterfly valves.

The series comprise 6 key actuator models between 68 Nm and 2050 Nm of torque to efficiently and reliably drive the valve between fully open and tightly closed.

Actuators are available for 2 position (On/Off), 3 point floating and modulating control signals.

Two position and floating is provided from the same base actuator and available in either 24 Vac or 230 Vac models.

Modulating models offer precise position of the butterfly disc for good proportional media control. All modulating models have position feedback.

Features

- Hand wheel for manual operation as standard
- Adjustable start/end point switch
- 2 additional auxiliary switches as standard
- Terminal connection
- Direct fit without any linkage kits
- Optical position display
- Suitable for outdoor and industrial environments (IP65)
- Very low maintenance
- Self-regulating heater to prevent condensation buildup within the actuator
- Adjustable positioning speed, 60 sec...360 sec (modulating models)
- Control signal sensitivity adjustment (modulation models)
- 0...10V Position Feedback (modulating models)

Specifications

Control: Input voltage	
2 Point, 3 Point (230 Vac models)	230 Vac \pm 10 %
0...10 V Modulating (24 Vac models)	24 Vac \pm 20 %
Frequency	50/60 Hz
Protection class	IP65
Environment	
Ambient operating temperature	-29° C...65° C
Ambient storage temperature	-40° C...65° C
Humidity	95%, No condensation
Noise level	max.70 dB(A)
Control Signal Input	
2 Point, 3 Point (230 Vac models)	Nominal voltage
0...10 V Modulating (24 Vac models)	0(2)...10 Vdc, 0...5 Vdc, 4...20 mA
Position Feedback	
0...10 V Modulating (24 Vac models)	0(2)...10 Vdc, 0...5 Vdc, 4...20 mA
Minimum Response time	
2 Point, 3 Point (230 Vac models)	200 ms
Positioning	
0...10 V Modulating (24 Vac models)	Up to 200 possible positions
Impedance	
0...10 V Modulating (24 Vac models)	0(2)...10 Vdc, 0...5 Vdc, >10 MOhm, 4...20 mA, 200 Ohm

Duty Cycle	
2 Point, 3 Point (230 Vac models)	S2 25%
0...10 V Modulating (24 Vac models)	100%
Manual operation	Standard
Conformity and approvals	
Machine directive	2006/42/EC and 98/37/EC
EMC directive	2004/108/EC
Low voltage directive	2006/95/EC
	EN 60204-1:2006
	EN 61010-1:2011-7
	EN 6100-6-1...4
	EN 60730-1
	EN 60730-2-14
Heating	Yes
Power (Heating)	5W
Auxiliary switches	2 SPDT standard; 10A at 250 Vac; 0,5A at 24 Vdc
Electrical connections	
2 Point, 3 Point (230 Vac models)	Screw terminals 0.35...4 mm ²
0...10 V Modulating (24 Vac models)	Screw terminals 0.35...4 mm ² for Nominal voltage supply 0.25...2.5 mm ² for control
Servicing	No servicing required

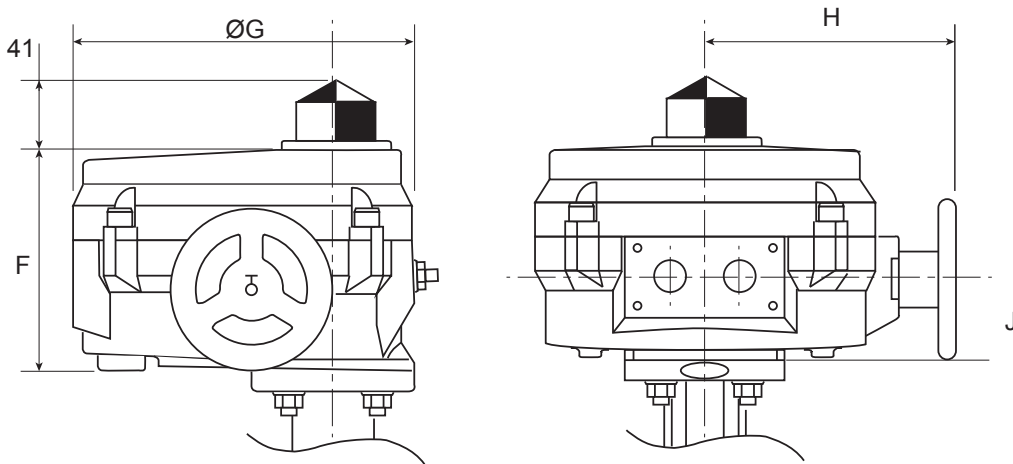
Product Selection

Control	Part Number	Torque	Supply Voltage	Power Consumption			Operating Time 90°	Suitable VF209W Valve Sizes	Suitable VF299W Valve Sizes
				Rest	Operation	Wire Sizing			
Floating & On/Off	MF68-24F	68 Nm	24 Vac	5 W	43	48 VA	60 sec	DN50-150	-
	MF200-24F	226 Nm			48	53 VA		DN200	DN250
	MF550-24F	565 Nm			69	77 VA		DN250-300	DN300-450
0(2)...10 Vdc Modulating	MF68-24M	68 Nm		7 W	45	50 VA		DN50-150	-
	MF200-24M	226 Nm			50	55 VA		DN200	DN250
	MF550-24M	565 Nm			71	79 VA		DN250-300	DN300-450
Floating & On/Off	MF68-230F	68 Nm	230 Vac	5 W	140	155 VA	36 sec	DN50-150	-
	MF200-230F	226 Nm			108	120 VA		DN200	DN250
	MF700-230F	735 Nm			232	258 VA		DN250-350	DN300-500
	MF1450-230F	1470 Nm			132 sec	275	305 VA	DN400-450	-
	MF2050-230F	2034 Nm				315	350 VA	DN500	-

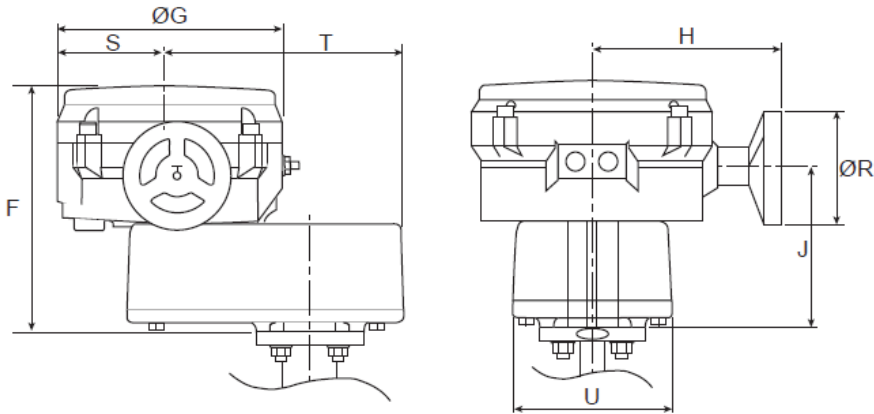
Valve/Actuator Connection Details

Part Number	Torque	Flange	Actuator Drive socket	Cable Entry	Weight	Stem Sleeve Adapter
MF68-xxx	68 Nm	F07	Ø 19 mm H 13 mm	2 x M20 * 1.5	6 kg	DN50-80 = S70MA1 DN100 = S70MB1 DN125+150 = Direct
MF200-xxx	226 Nm	F07, F12	Ø 30 mm H 22 mm	2 x M25 * 1.5	13 kg	DN200 = S70MD1 DN250 = Direct
MF550-xxx	565 Nm	F12, F16	Ø 50 mm 12 x 10	2 x M25 * 1.5	22 kg	DN250+300 = S70ME2 DN350-450 = S70MF1
MF700-xxx	735 Nm	F12, F16	Ø 50 mm 12 x 10	2 x M25 * 1.5	22 kg	DN250+300 = S70ME2 DN350-500 = S70MF1
MF1450-xxx	1470 Nm	F12, F16	Ø 50 mm 12 x 10	2 x M25 * 1.5	54 kg	DN400 = S70MF1 DN450 = Direct
MF2050-xxx	2034 Nm	F12, F16	Ø 50 mm 12 x 10	2 x M25 * 1.5	54 kg	DN500 = direct

MF Actuator Dimensions (MF68, MF220, MF550, MF700)



MF Actuator Dimensions (MF1450, MF2050)

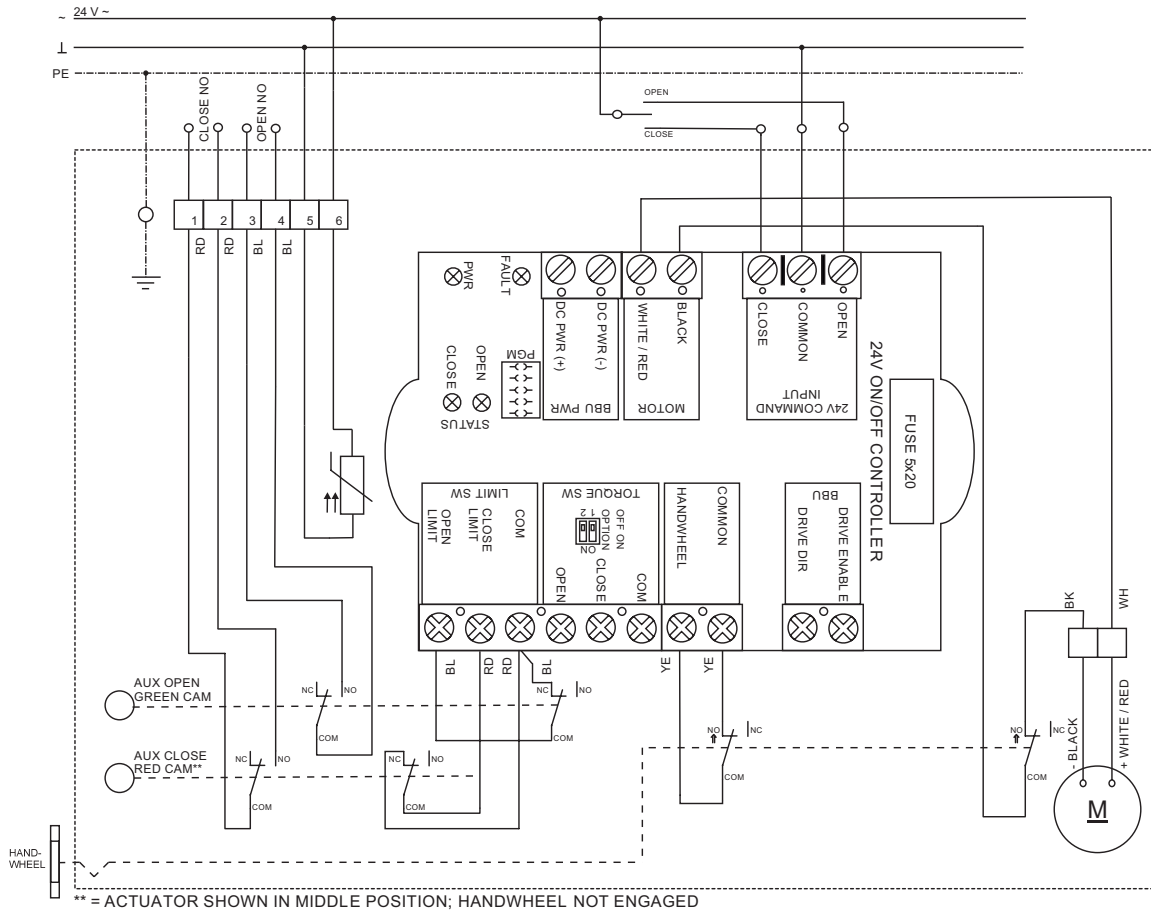


Model	F	G	H	J	S	T	R	U	Mounting Flange
	(mm)								
MF68	130	191	142	48	-	-	89	-	F07
MF200	165	257	198	64	-	-	203	-	F07/F12
MF550	183	307	241	74	-	-	305	-	F12/F16
MF700									
MF1450	317	307	241	206	155	323	305	203	F12/F16
MF2050									

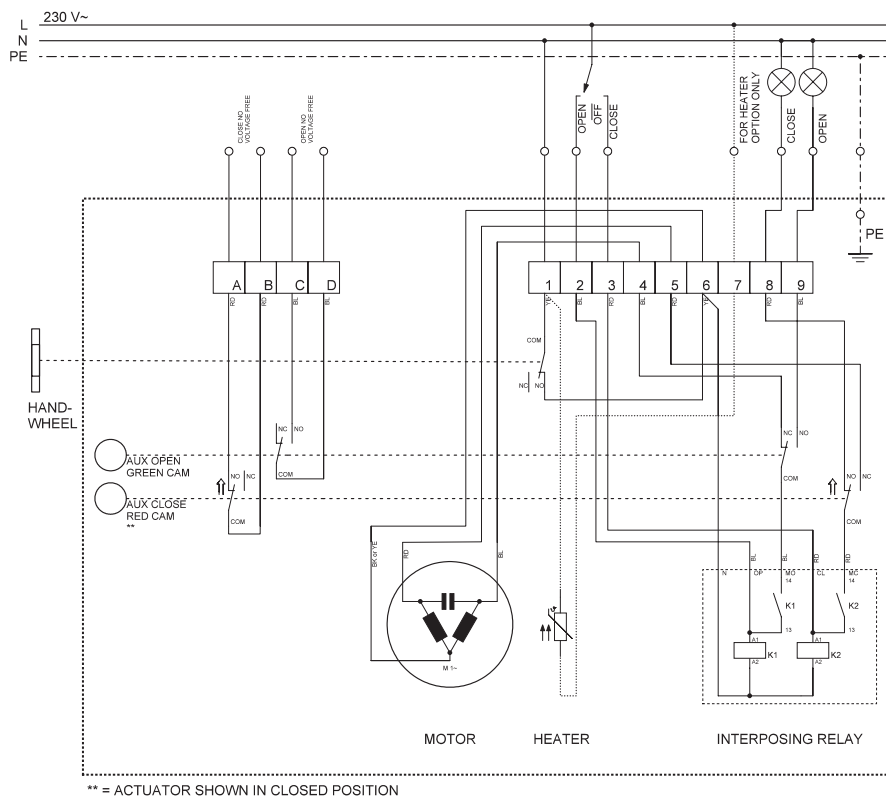
NOTE: Verify there is adequate room for the valve package assembly to be fitted, operated and maintained in its pipe/system orientation and application.

Wiring

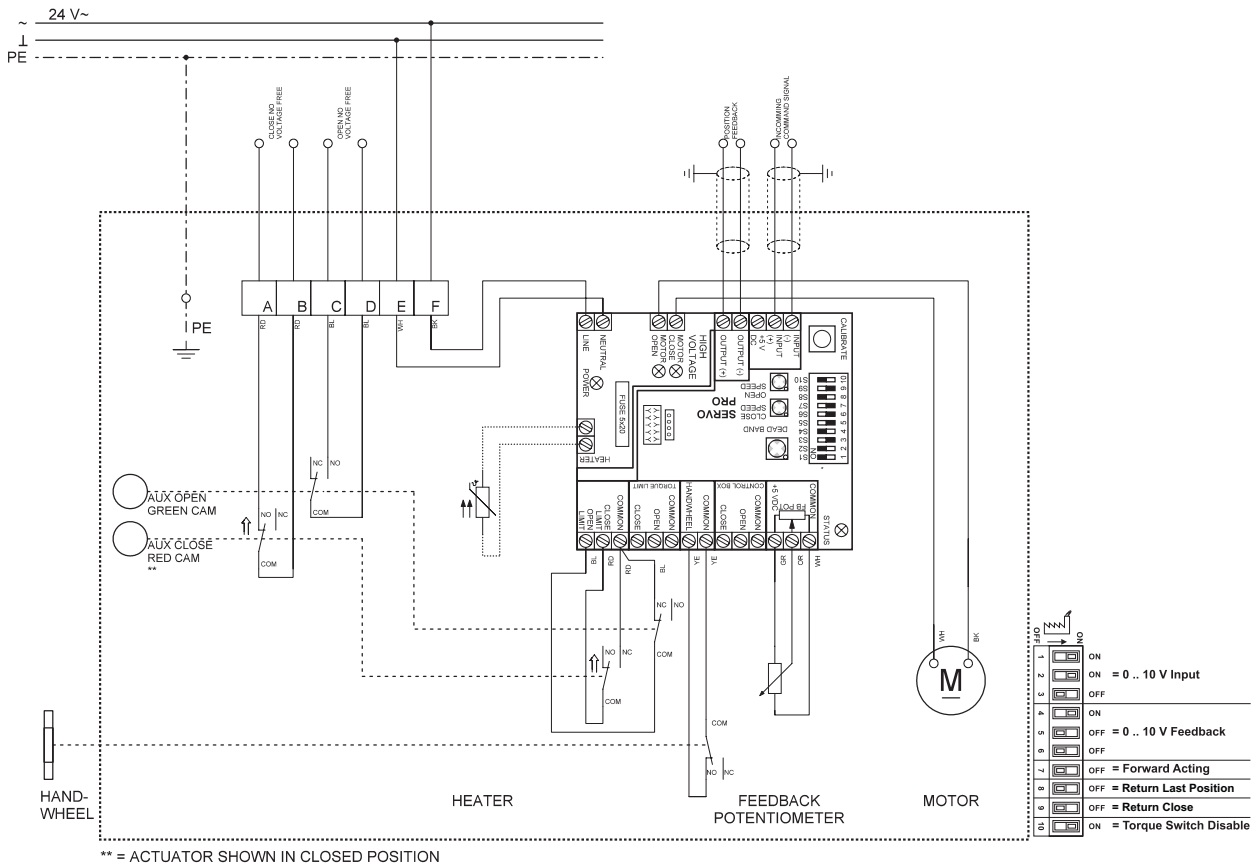
24 V On/Off Floating



230 V On/Off Floating



24 V Modulating



DIP Settings

