

# VF Electric Actuators



The VF range of electric valve actuators offer an impressive list of standard features such as:

- Protection against over-torque & condensation
- Corrosion resistant
- Electronic torque limiter preventing damage to actuator if max torque is exceeded
- Ability to change standard On/Off function with easy to install conversion kits
- LED light that provides visual communication between the user and the actuator.



The VF Failsafe electric actuator is the same On-Off VF actuator but with a simple to install, user-friendly Battery Failsafe (BFS) function conversion kit. The BFS actuator can be set to fail Normally Closed or Normally Open.

The Modulating electric actuator has the same on-off operation however this time comes with a Digital Positioning System (DPS) modulating function conversion kit. This Modulating actuator can be controlled by either a 4-20mA or 0-10V control signal and provides feedback as standard.

The LED feedback remains constantly lit if the actuator is able to respond to remote commands - if not a sequence of flashes indicate what the reason maybe for the actuator being unable to respond.

The VF-2 and 2+ series of actuators are available in Low "L" 12 to 24V AC/DC or High "H" 85 to 240V AC/DC power options.

The VF-S Series of actuators are capable of any power option between 24 -240V AC/DC. The 'S' type actuators can also be provided with a conversion kit to restrict the supply voltage to 12V AC/DC.

## Technical Specification

Description	Models					
	VF-0S	VF-05S	VF-1S	VF-15S	VF-2L / VF2H	VF-2+L / VF2+H
Operation Time No Load (90°) +/- 10%	10	10	14	30	34	58
Operating Torque	20	35	55	85	140	300
Maximum Torque	25	38	60	90	170	350
Duty Rating	75					
Ingress Protection Rating IEC 60529	IP67					
Operating Angle	90° (Option 180°—270°)					
Operating Temperature	-20°C +70°C					
Limit Switch	4 SPDT micro (2 x Motor, 2 x Auxiliary)					
Anti-Condensation	3.5 W					
Connectors	DIN 43650 ISO 4400 & C192					
Weight	1.8 kg	1.9 kg	2.4 kg	3 kg	5.2 kg	5.2 kg
Voltage	24 – 240V AC/DC 50/60Hz				"L" 12-24V AC/DC 50/60 Hz "H" 80-240V AC/DC 50/60 Hz	

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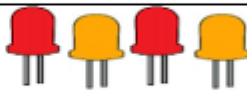
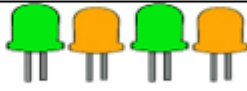
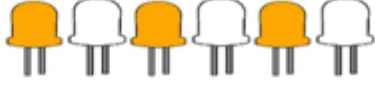


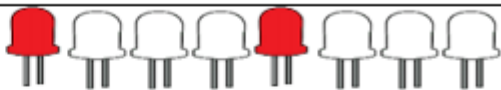
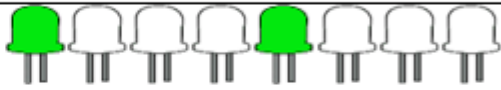
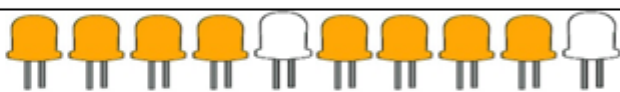
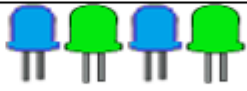
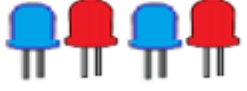

Description	Units	Models						
		Current	VF-0S	VF-05S	VF-1S	VF-15S	VF-2L / VF-2H	VF-2+L / VF-2+H
Consumption At Maximum Torque (+/-5%)	mA / W	24 VAC	1100 / 25.80	1500 / 36.40	1690 / 40.70	1160 / 27.70	2180 / 52.30	2710 / 65.10
		24 VDC	800 / 19.30	1200 / 27.60	1210 / 29.00	880 / 21.70	1780 / 42.80	2090 / 50.20
		110 VAC	300 / 27.60	300 / 37.30	360 / 39.20	260 / 29.00	500 / 55.10	570 / 62.90
		240 VAC	200 / 37.50	200 / 45.90	200 / 47.50	160 / 38.00	300 / 65.60	340 / 75.00

## Main Features

<b>IP67 Weatherproof, UV Protected, Corrosion Resistant, Polyamide Housing</b>	IP67 allows the VF electric actuator to be fully waterproof according to the international standard IEC60529.
<b>Over-Torque &amp; Anti-Condensation</b>	The actuator is constantly measuring the current being drawn in from the power source and compares this data with the pre-set parameters. If the current is exceeding the pre-sets then the actuator automatically cuts the power to prevent any mechanical damage. Also included is a thermostatic heater, powered by the power supplied to the DIN connector, ensuring that the actuators internal temperature remains between 20°C to 30°C.
<b>Multi-Voltage Capable, Automatically Sensed</b>	The VF-2 and 2+ range of actuators automatically sense the external power being applied and can accept any external voltage between: "L" 12V and 24V AC or DC "H" 85V and 220V AC or DC.  The VF- (0, 05, 1, 15) S range of actuators are capable of working with any voltage between 24-240V AC/DC.
<b>Easy To Install</b>	Actuators have an ISO 5211 mount with a star drive for various mounting options. DIN plugs are external therefore eliminating the need to remove the actuator cover to make an electrical connection.
<b>Failsafe &amp; Modulating Function</b>	The VF electric actuator can have its standard On-Off operation changed by installing conversion kits.

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## Standard ON/OFF RGB LED Visual Indication

No power being supplied	No colour displayed:	
Power being supplied to actuator	Fully open, solid:	
	Fully closed, solid:	
Actuator moving between open and closed	Open to close, flashing:	
	Close to open, flashing:	
Actuator in manual mode	Flashing:	
Torque limiter activated	If closing, flashing:	
	If opening, flashing:	
BSR Failsafe System activated	If fail close, flashing:	
	If fail open, flashing:	
BSR battery needs charging warning	Flashing:	
Actuator with DPS positioner	Opening, flashing:	
	Closing, flashing:	
	Stationary, solid:	

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## Actuator Materials

Cover	Polyamide A6
Body	Polyamide A6
Internal Cams	Polyamide A6
Main External Shaft	Stainless Steel
Gears	Steel & Polyamide
Position Indicator	Glass Filled + Polyamide
Fastening	Stainless Steel

## Options

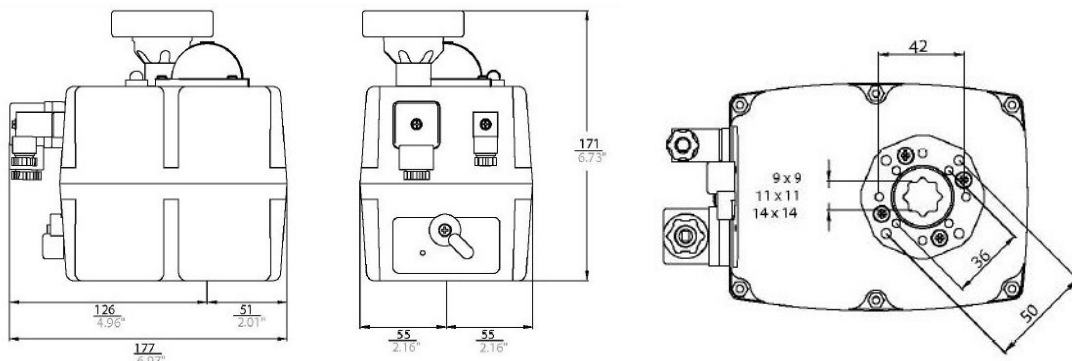
- Battery Failsafe (BFS)
- Digital Positioning System (DPS) 2000 for 4-20mA , 0-10V
- 180° and 270° Operation

## Mounts & Connectors

Model	ISO 5211	DIN 3337
VF-0	F03 / F04 / F05	Double Square 14mm
VF-05	F03 / F04 / F05	Double Square 14mm
VF-1	F05 / F07	Double Square 17mm
VF-15	F05 / F07	Double Square 17mm
VF-2	F07 / F10	Double Square 22mm
VF-2+	F07 / F10	Double Square 22mm

## General Dimensions (mm / Inch)

### VF-0 / VF-05

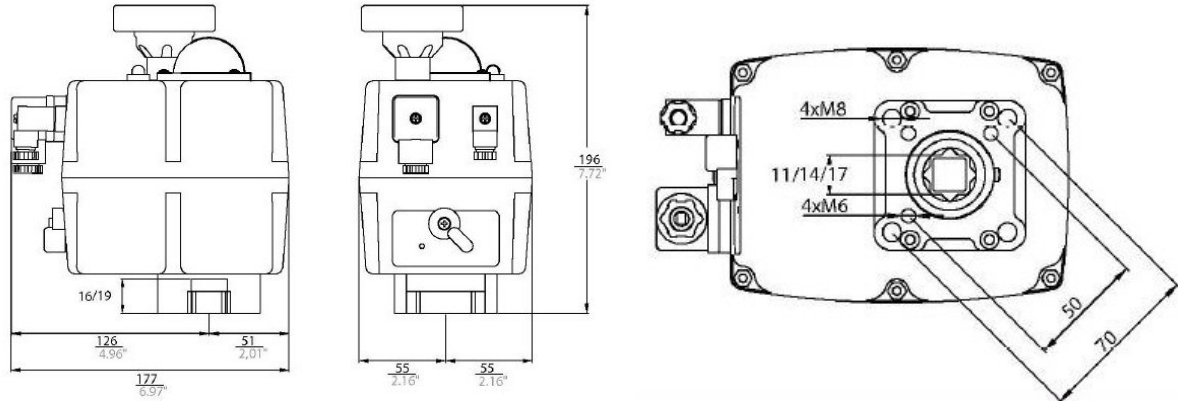


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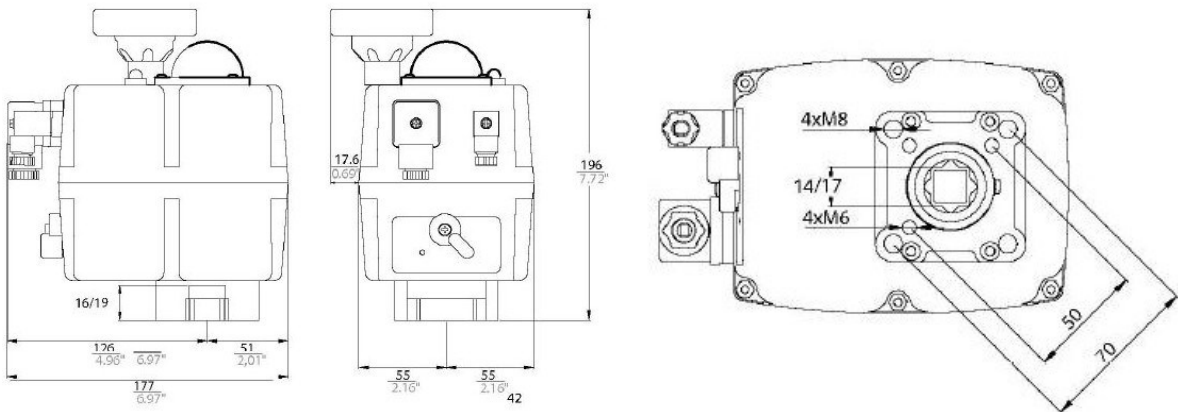
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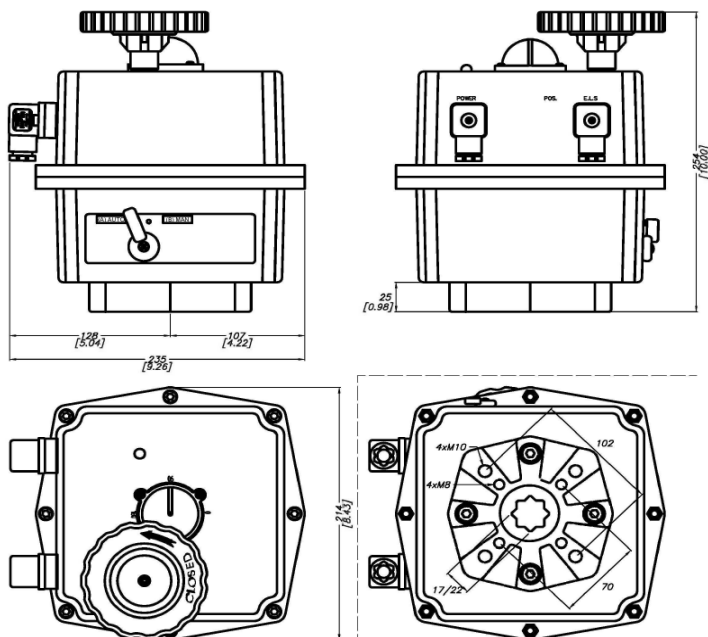
## VF-1



## VF-15

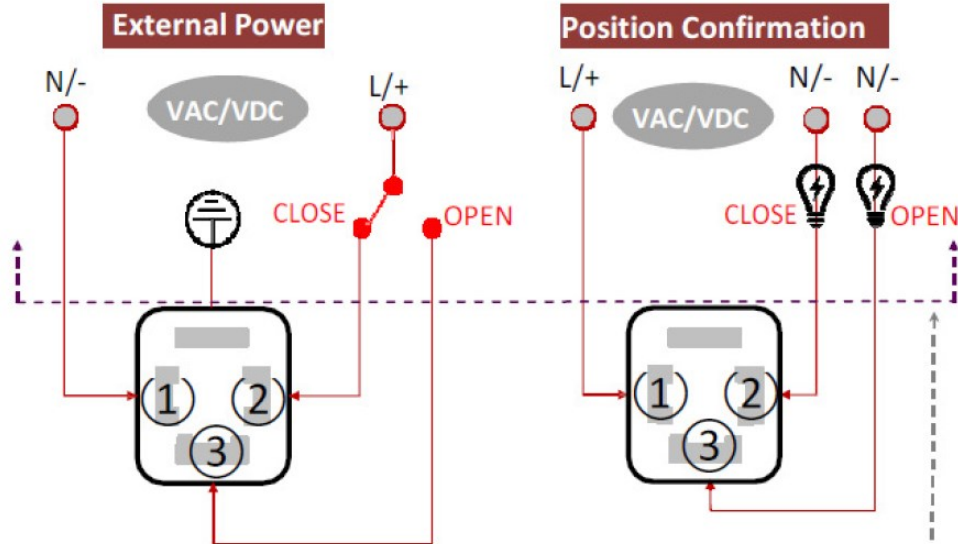


## VF-2 / VF-2+



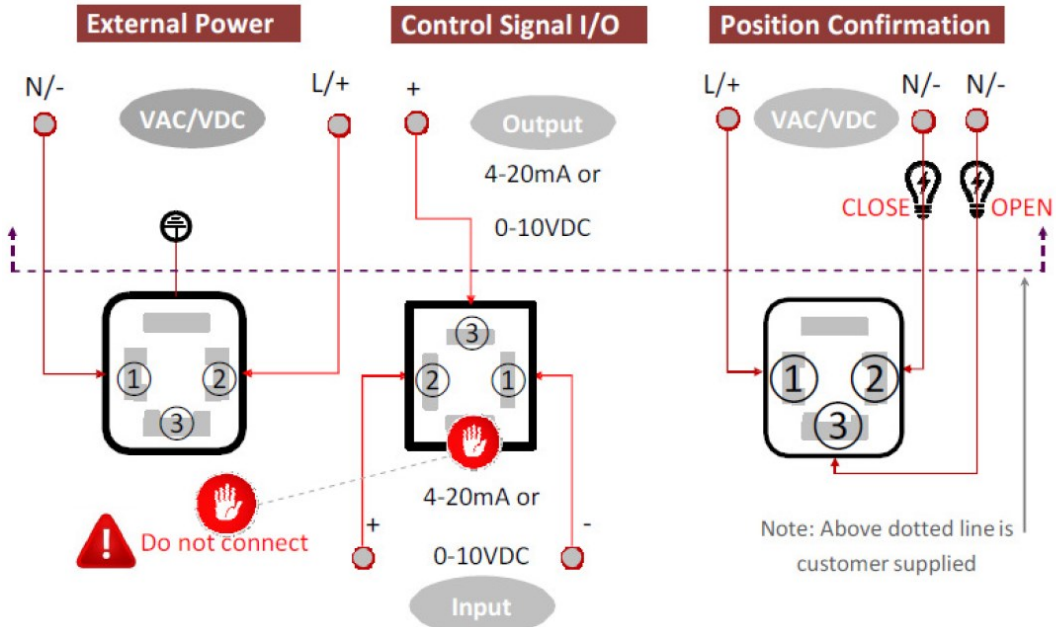
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## ON/OFF or Failsafe Wiring (same connection for both)



Note: Above line above is customer supplied

## Modulating Wiring



Note: Above dotted line is customer supplied

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