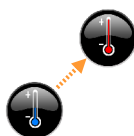
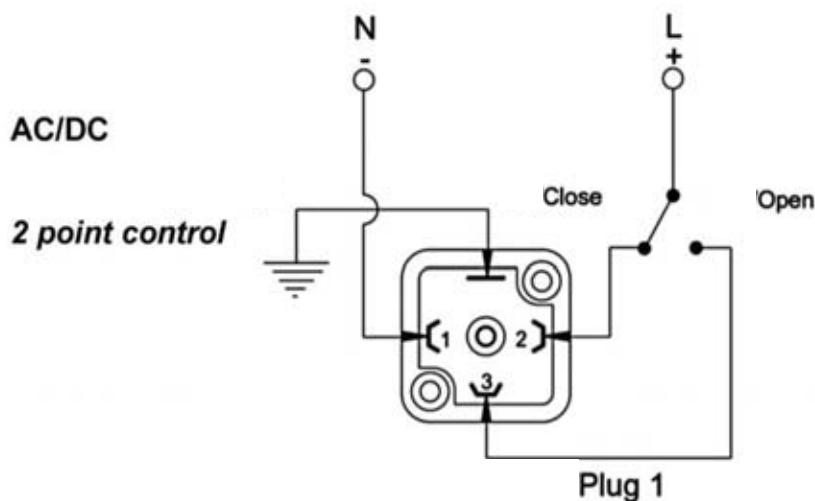




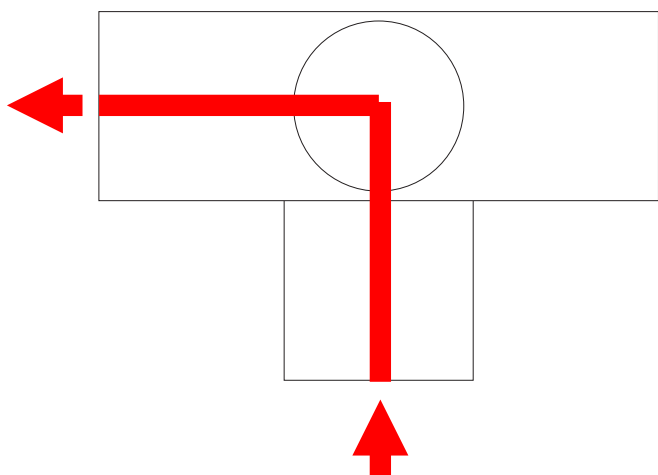
## Installation Instructions



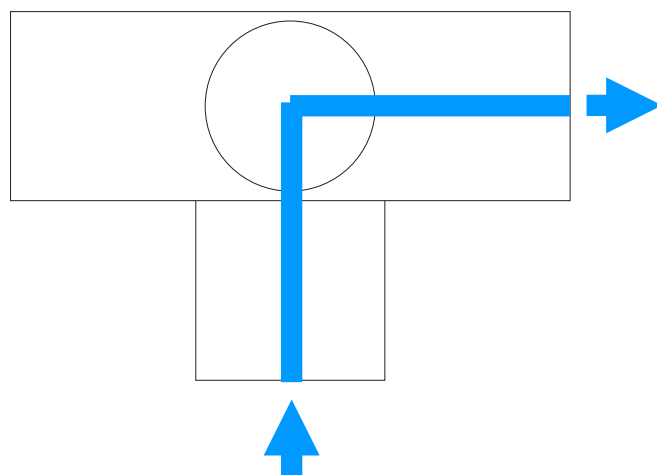


Ventil terminal 1 to controller terminal N  
 Ventil terminal 2 to controller terminal R2  
 Ventil terminal 3 to controller terminal R2I

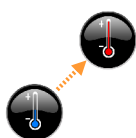
**Controller terminal R2 is active during solar operation or ext. heating operation,**  
**Controller terminal R2I is active with pure filter operation.**  
 Depending on the installation direction and "incorrect valve control", please re-  
 place the valve terminals 2 and 3 (or replace the controller terminals R2 and R2I).



**2 (R2)**



**3 (R2I)**



**READ THESE INSTRUCTIONS BEFORE CONNECTING THE ACTUATOR  
DAMAGE CAUSED BY NON COMPLIANCE TO THESE INSTRUCTIONS  
NOT COVERED BY OUR WARRANTY.**

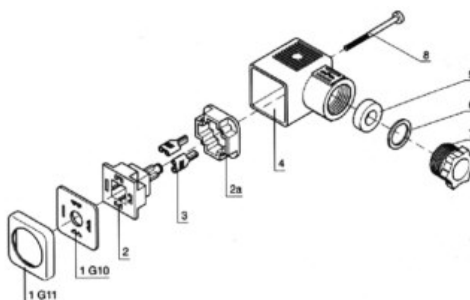
Electric actuators operate with the use of live electricity. It is recommended that only qualified electrical engineers be allowed to connect or adjust these actuators. Always ensure that all electrical supplies are disconnect prior to removing the top cover. It is strongly recommended that each actuator has its own independent fuse system to protect it from the electrical influence of other electrical devices (EG: pumps).

**1.- ELECTRICAL CONNECTORS:**

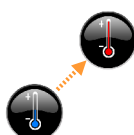


**Warning:** Before connecting ensure that the voltage to be applied to the actuator is within of the range shown on the identification label. J3 electric actuators are multi-voltage capable with automatic sensing of the incoming power supply.

- 1 Gasket
- 2 Terminal strip
- 3 Cable fixing screws
- 4 Housing
- 5 Grommet
- 6 Washer
- 7 Gland - nut
- 8 Fixing screw



Model	<del>SMALL CONNECTOR</del>		BIG CONNECTOR	
	min. diameter	max. diameter	min. diameter	max. diameter
	<del>5 mm</del>	<del>5 mm</del>	8 mm	10,5 mm

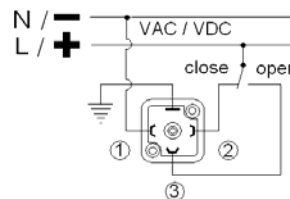


**Electrical connection:**

**All models**

The power supply is connected to the large grey DIN plug. Connect as follows:

Pin 1: Neutral (N/-), Pin 2: live/ phase = Close (L/+)  
 Pin 1: Neutral (N/-), Pin 3 :live/ phase = Open (L/+)  
 The top flat pin is the earth/ ground connection.



The actuator's movement is then controlled by switching the live/ phase between pins 2 & 3. The switch is NOT supplied and must be provided by the user/ installer.

The above wiring covers a 3 wire AC or DC system. When operating with a DC power supply, a 2 wire system can be used. Ask your distributor for this wiring diagram.

**Anti-condensation protection::**

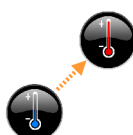
The actuator has an integral thermostatically controlled anti-condensation heater that is automatically activated whilst mains power is applied. The heater does not require a separate supply.

**2.- LOCAL VISUAL POSITION INDICATOR**

All actuators are supplied with a local visual position indicator comprising of a black base with a yellow insert that shows both the position and direction of rotation.

The open and closed positions have the following logos moulded in to the top cover OPEN CLOSED

Opening = counter clockwise   
 Close = clockwise



### 3.- EMERGENCY MANUAL OVERRIDE FACILITY:



All actuators are supplied with a declutchable manual override to allow operation should power not be available.

The actuator has 2 operating modes, automatic and manual, the required mode is selected using a lever on the lower half of the actuator housing. The 2 positions are marked:

AUTO = Automatic operation  
MAN = Manual operation

**Warning:** Do not remove the selector lever securing cross head screw as this will allow its internal mechanism to become loose and will cause irreparable damage to the actuator's gearbox. Removing this screw will invalidate the warranty.

When "MAN" function is selected:

- 1 The electronic system cuts the power to the motor.
- 2 The motor to output shaft drive is disconnected.
- 3 The desired position can be achieved using the manual override lever or hand Wheel.

Remember to select "AUTO" following use in "MAN" function as the actuator only responds to electrical open and close commands when in "AUTO".

the manual override lever/hand wheel rotates when the actuator is being powered. Do not obstruct or restrict this rotation.

### 4 -MOUNTING TO COMPONENT BEING ACTUATED (Eg: 1/4 turn valve)

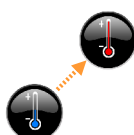
It is vital that the mounting kit used to connect the electric actuator to the component being actuated (eg: valve) is correctly manufactured and assembled. The mounting bracket's holes must be drilled to ensure that the centerline of the actuator's drive is perfectly in line with the component's drive centerline, and that the drive coupling/ adaptor rotates around this centerline.

The mounting holes of the actuator conform to ISO 5211, and the female output drive conforms to DIN 3337.

We strongly recommend that valves/ components to be actuated that have ISO 5211 compliant topworks are used wherever possible as this greatly assists in ensuring the concentricity of mounting the actuator to the valve.

The male square end of the drive coupling MUST NOT be longer than the maximum depth of the actuator female output drive when the assembly is bolted together.

Failure to comply with these instructions will cause uneven wear and dramatically reduce the working life of the valve and actuator.



## 5.- External LED Status Light



The LED status light provides visual communication between the actuator and the user

The current operational status of the actuator is shown by either solidly lit, or different flashing sequences of the LED light:

Time: 200 msec x each digit of the configuration.

Configuration: digit 1 = LED on, digit 0 = LED off.

The configuration is a repetitive sequence of 4 columns of 4 digits.

ACTUATOR OPERATIONAL STATUS	TIME	CONFIGURATION
Actuator without power being supplied	100%	0000 0000 0000 0000
Actuator with power being supplied	100%	1111 1111 1111 1111
Actuator with torque limiter activated	200 msec	1010 1010 1010 1010
Actuator in MANUAL mode	200 msec	0111 1011 1100 0000
Actuator in MANUAL but with an internal cam operating an internal micro-switch	200 msec	0111 0111 1111 1111
Actuator without power and working with the BSR system. Max. 3 minutes	200 msec	1000 0000 0000 0000
Battery protection. Danger - the battery needs recharging. BSR disabled	200 msec	1010 1000 0000 0000

## 6.- Mains supply failure and the BSR Option

In the on/off version, upon mains failure the actuator will stop in the position at the moment of the mains failure. On resumption of power, it will revert to the situation/ electrical command immediately prior to the interruption, or a new command if the command was changed during the power interruption.

If the actuator is fitted with the BSR (Battery 'Spring Return') plug-in failsafe system upon electrical failure the actuator will go to the predetermined position: NO normally open or NC normally closed.

## 7. Nameplate/ ID Label & external wiring diagrams.

We provide a lot of information about the actuator on the ID label affixed to the actuator. Ensure compatibility of working conditions (supply voltage, ambient conditions) with the provided information BEFORE connecting the actuator. Removing this label instantly invalidates any warranty.

Wiring diagrams are affixed externally. With the motor open and closed positions factory set at 0-90° (or as per your order), in most cases there is no need to remove the cover to connect the actuator. Should you have reason to adjust the cams, we recommend contacting your distributor BEFORE removing the actuator's cover to confirm the procedure, as damage resulting from incorrectly reassembled actuators will not be covered under warranty.

**Support email:** [support@solarripp.com](mailto:support@solarripp.com)

