

SpaceLogic MG900 SR

Installation and Manual Override Instructions

⚠ CAUTION

SPRING TENSION PRESENT
DISCONNECT POWER FOR MANUAL OVERRIDE OPERATION

- During manual override be aware of spring tension and hex key movement with this actuator. If the hex key remains in the hex drive socket it will rotate due to spring tension and/or power re-engaging.
- A pinch-point exists during installation of adapter/valve positioning during the manual override.

Failure to follow this warning may result in equipment damage or personal injury.

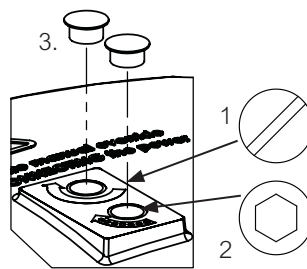
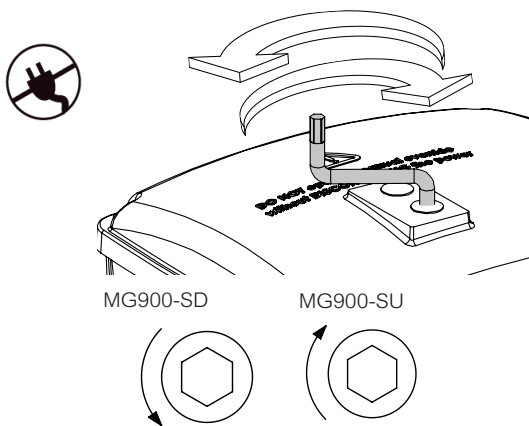
⚠ CAUTION

RISK OF BURNS OR FLYING PARTS

If the valve stem, spindle, or plug has been damaged, it may blow out under pressure while servicing the actuator.

- Isolate and depressurize the valve before servicing.
- Manually check valve stem, spindle, or plug integrity by moving it within the valve. If the part can be removed, replace the valve assembly.

Failure to follow these instructions may result in death or serious injury.



1. Lock (flat screw driver) socket.
2. Hex (5mm Allen Key) manual override drive socket
3. Socket Covers

NOTE: Calibrate the actuator after finalizing the coupling on the valve.

MG900	SD	SU
Spring Return Direction	↓	↑
Manual Override Direction	↑	↓

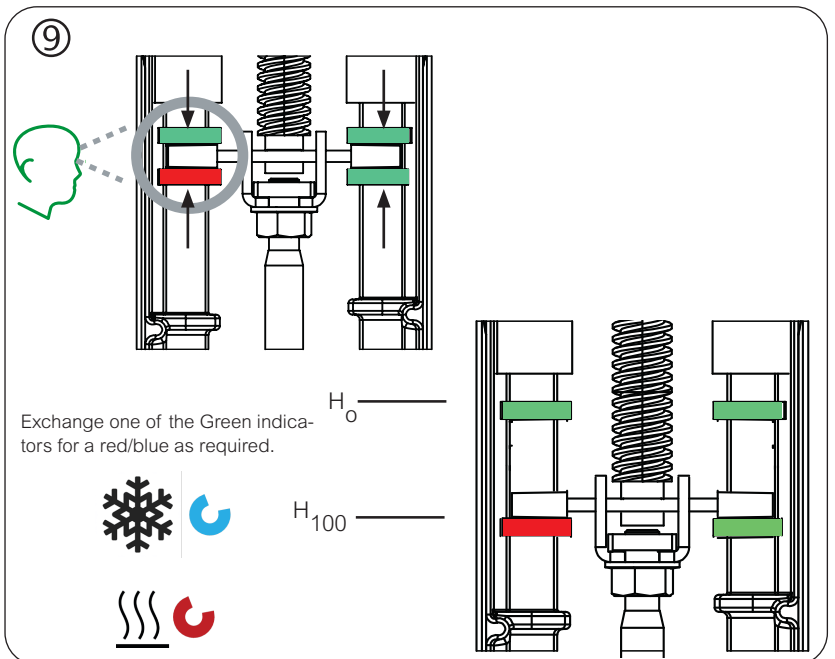
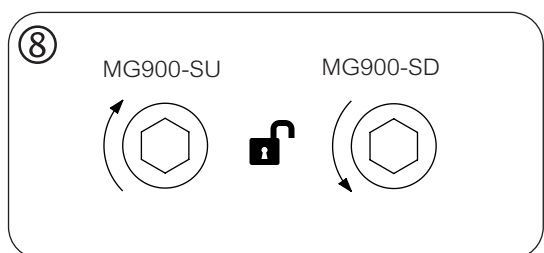
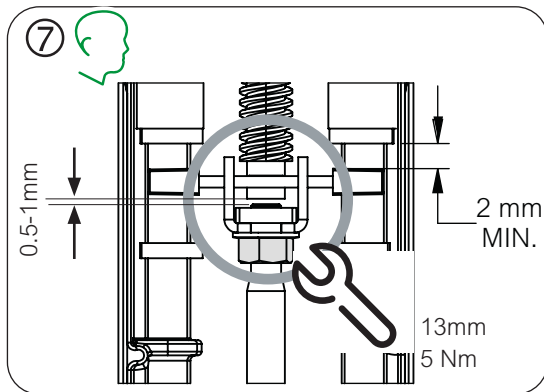
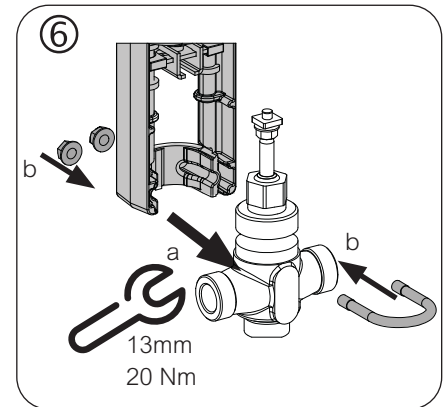
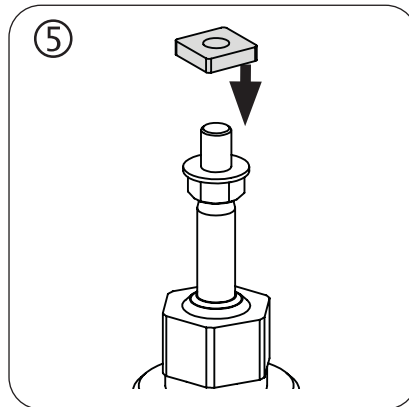
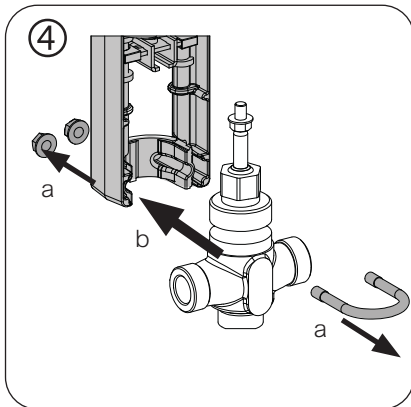
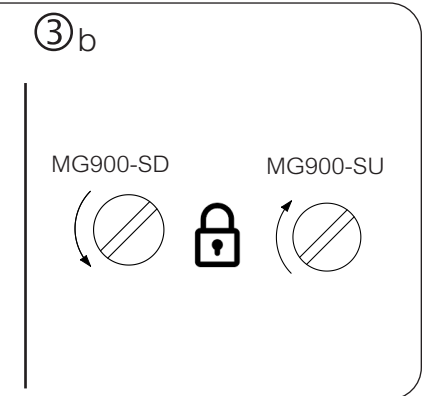
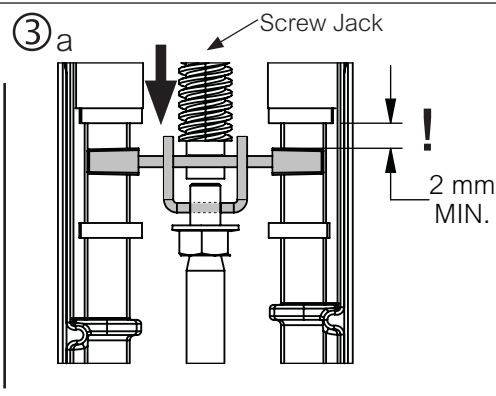
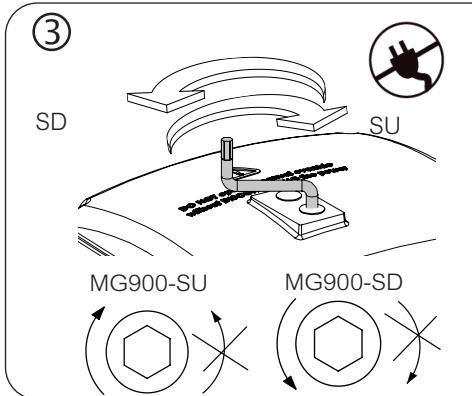
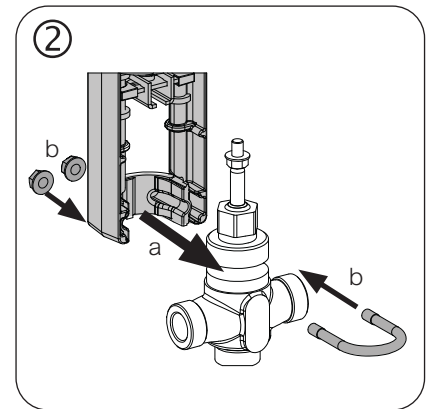
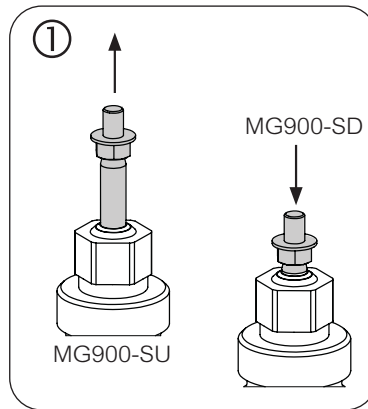
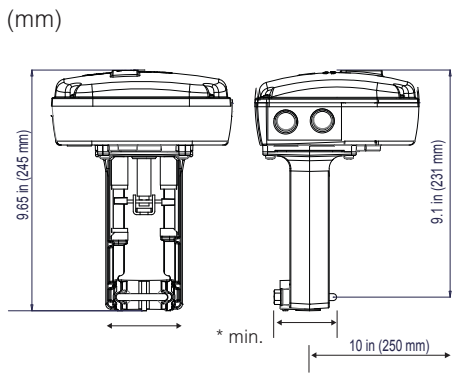
Do not operate manual override with power tools.

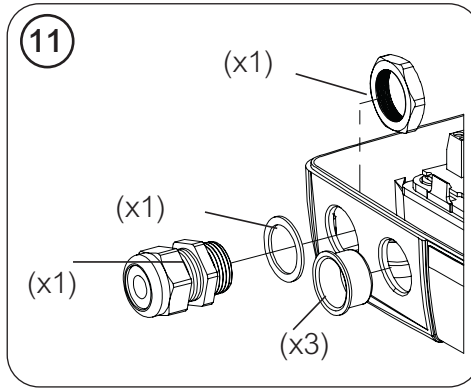
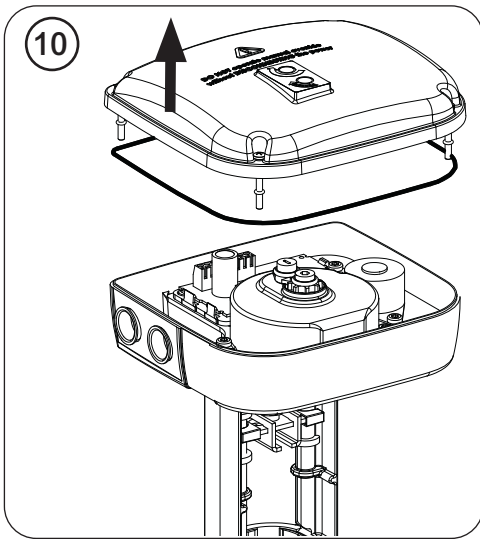
NOTE: Remove Allen Key wrench before resuming normal operation. Only operate the manual override and the lock screw in the direction shown by the arrows on the actuator labels or this instruction manual. Upon re-connecting power to the actuator, the actuator will momentarily drive against the spring to ensure disengagement of the lock screw and return the actuator to automatic control. For ease of operating the manual override, it is recommend to use a L shaped hex (Allen) key longer than 80 mm in length.

Mounting and Installation

To ensure tight shut off on a valve and spring return actuator assembly, during the installation process it is important to correctly position the actuator spindle up against the desired end stroke of the valve using the manual override and lock functions of the actuator.

1. Position valve spindle at desired spring return position.
2. Slide actuator onto valve, secure with U-bolt brace.
3. Operate manual override to adjust position of actuator screw jack against top of valve spindle and lock manual override (a,b,c)
4. Remove actuator from valve.
5. Screw the square nut supplied with the actuator flush onto the valve spindle.
6. Remount valve onto Actuator, sliding the square nut into the actuator bracket. Secure U-bolt brace.
7. Tighten lower hex locking nut on valve spindle against actuator bracket.
8. Operate manual override to release lock then check spring return rest position of valve and actuator assembly.
9. Anti-rotation guide should not touch bumper stop. Re-position coloured valve end stop guides to end stops of valve stroke.
10. With Phillips screw driver loosen screws and with flat edge screw driver or other tool pry up cover.
11. Mount the cable sleeves with the gasket supplied, wire as directed then replace cover.

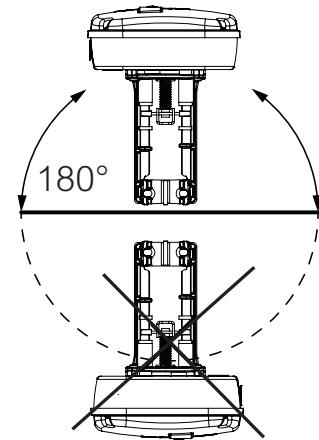




Mounting Orientation

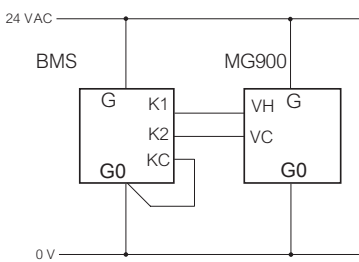
The actuator can be mounted in any orientation other than upside down. Maximum actuator ambient temperature is 50° C (122° F) for chilled water media. Maximum actuator ambient temperature is 46° C (115° F) when media temperature is 120° C (248° F).

- NOTE:** Lock the cable sleeve checking the correct positioning of the gasket.
- NOTE:** Mount the cover again locking properly the 4 screws and checking the correct positioning of the gaskets placed under the cover.



Wiring

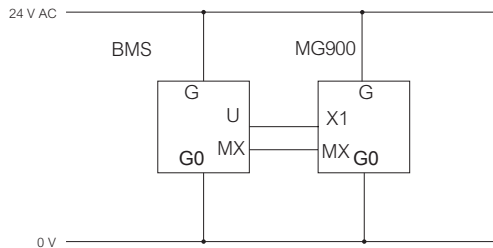
Increase/Decrease (Floating)



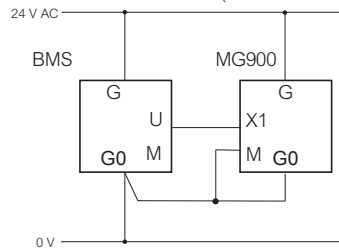
50VA transformer required per actuator.

Modulating 0-10 Vdc / 2-10 Vdc [+ 0-5 / 2-6 / 5-10 / 6-10 Vdc] (Proportional)

Normal installation (4 wires to the actuator)

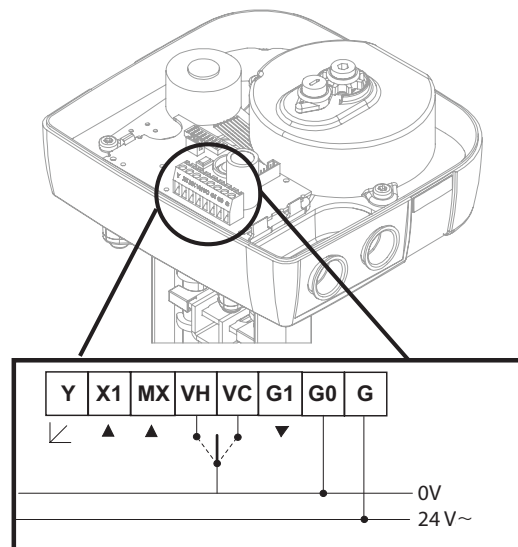


Short cable installation (3 wires to the actuator)



Electrical Connections

Terminal	Function	Description
G	24 Vac	Power
G0	⏏	
X1	Proportional (MOD)	Modulating (Proportional) Control signal input
MX	Neutral, proportional (MOD)	
VH	Increase, 3-point (Floating)	Increase / decrease (3 Point floating) control signal input (Direction switching on 0V / GND)
VC	Decrease, 3-point (Floating)	
G1	16 Vdc	External supply, 25 mA max.
Y	0...100% (2-10 Vdc / 0-5 Vdc)	Feedback signal

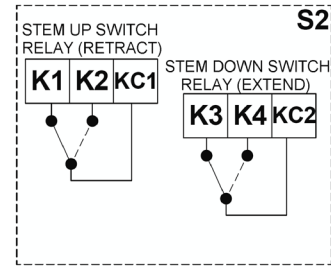


Cable Lengths

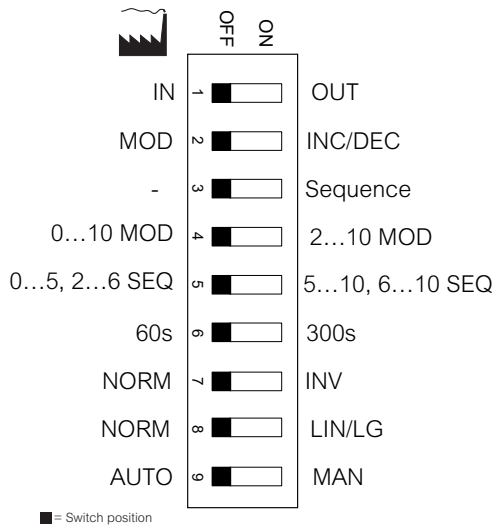
G, G0 = Max 100m (328 ft.): 1.5 mm² (AWG 15)
 X1, MX, Y, VH, VC = Max. 200m (656 ft.): 0.5mm² (AWG 20)

Auxiliary Switch Block Relay

(accessory Part No.: 8800104000)



Dip Switch Settings



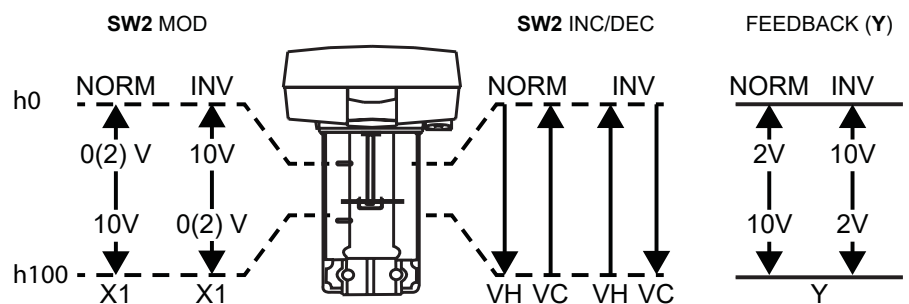
Sw	Description	Off Position	On Position
1	Feedback signal	2...10 Vdc	0...5 Vdc
2	Control mode	Modulating (Proportional)	Increase / decrease (3P floating)
3	Sequence operation	Normal operation (no sequence)	Sequence Control (Modulating only) Refine sequential control signal using Sw. 4 and Sw.5
4	Input voltage range (Modulating)	0...10 Vdc	2...10 Vdc
5	Working sequential control signal	0...5 Vdc (or 2...6 Vdc) (with Sw. 4 ON)	5...10 Vdc (or 6...10 Vdc) (with Sw. 4 ON)
6	Running time (floating control only)	60 sec.	300 sec.
7	Direction of movement	Normal (direct) movement to input signal	Inverse / reverse direction of operation to control signal
8	Flow Curve Linearization	Normal (no electronic flow curve adaptation)	Electronically adapts the the flow rate in an EQ valve to a linear characterized flow
9	Normal Operation / Stroke Calibration	Normal	Stroke Calibration, momentary flip sw. 9 ON and then OFF to adjust actuator control signal to valve stroke limits

Calibrate the actuator with Sw 9 after carrying out the first coupling and everytime some component and/or the coupling parts are changed on the valve.

- 1) Units are shipped with switches in a default "off" position.
- 2) Switch 3 must be in the off position if sequence control is not used.
- 3) Switch 5 is only active if switch 2 is off and switch 3 is on.


NOTE: For the actuator to register new settings of the switches, the supply voltage must be removed by removing power to the actuator, then change any of switches 1 through 8 as required and then restore power to the actuator.

Control direction according to Switch 7 (Normal / Inverse)



Actuator Spring Return Direction and Valve Function

	MG900-SU (Stem up)	MG900-SD (Stem down)
V241, V211T, V212T, V211, V212, VG222 (DN65 only), V231, V232, V341, V311T, V311, VG311 (up to DN65)	Valve closes	Valve opens
VG211 (up to DN65)	Valve opens	Valve closes

Commercial Reference	Range Name		Product Description				
880XXXXXXX MXXX(X)A(X)(X)(-S2)(-VB) MGXXX(-S(R)X)(-W) MPXXX(-SRX)(-W)	SPACELOGIC VALVES & ACTUATORS		SPACELOGIC 800 SERIES GLOBE VALVE ACTUATOR SR/NSR SPACELOGIC M SERIES GLOBE VALVE ACTUATOR SR/NSR SPACELOGIC MG SERIES GLOBE VALVE ACTUATOR SR/NSR SPACELOGIC MP SERIES PIBCV ACTUATOR SR/NSR				
有害物质 - Hazardous Substances							
部件名称 Part Name	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr(VI))	多溴联苯 (PBB)	多溴二苯醚 (PBDE)	
属部件 Metal Parts	X	O	O	O	O	O	
塑料部件 Plastic Parts	O	O	O	O	O	O	
电子件 Electronic	X	O	O	O	O	O	
触点 Contacts	O	O	O	O	O	O	
线缆和线缆附件 Cable & Cabling Accessories	O	O	O	O	O	O	
<p>本表格依据 SJ/T11364 的规定编制。 O: 表示该有害物质在该部件所有均质材料中的含量均在 GB/T 26572 规定的限量要求以下。 X: 表示该有害物质至少在该部件的某一均质材料中的含量超出 GB/T 26572 规定的限量要求。 (企业可在此处, 根据实际情况对上表中打 "X" 的技术原因进行进一步说明。)</p> <p>This table is made according to SJ/T 11364. O: indicates that the concentration of hazardous substance in all of the homogeneous materials for this part is below the limit as stipulated in GB/T 26572. X: indicates that concentration of hazardous substance in at least one of the homogeneous materials used for this part is above the limit as stipulated in GB/T 26572</p>							