


Manual override operation






Disconnect power supply before operating manual override .




- 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.

1. Hex (Allen) Key  
2. Manual override hex drive socket  
3. Lock screw.  
Flat screwdriver slot

**SRU**

-  Manual override operation
-  Lock operation
-  Unlock operation.  
Twist manual override 10°

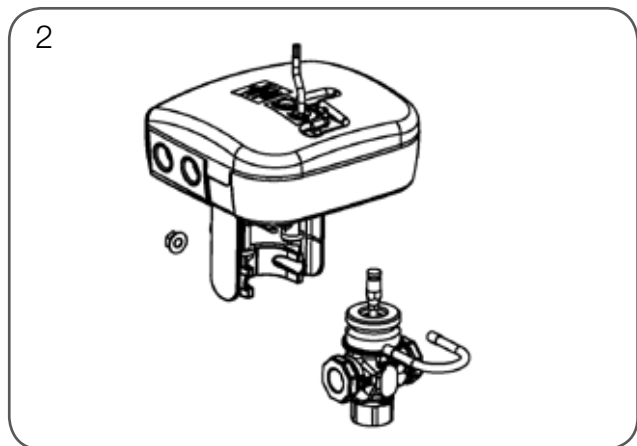
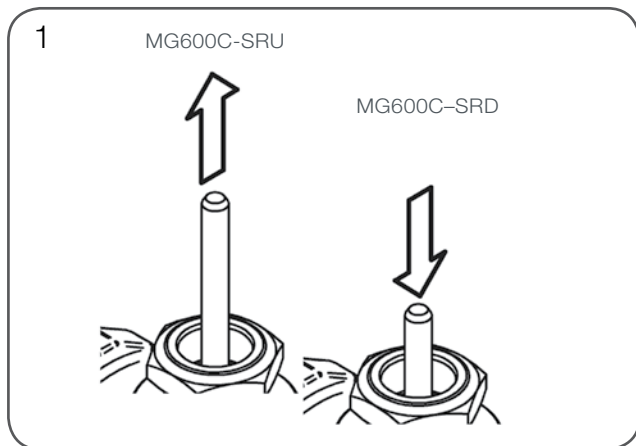
**SRD**

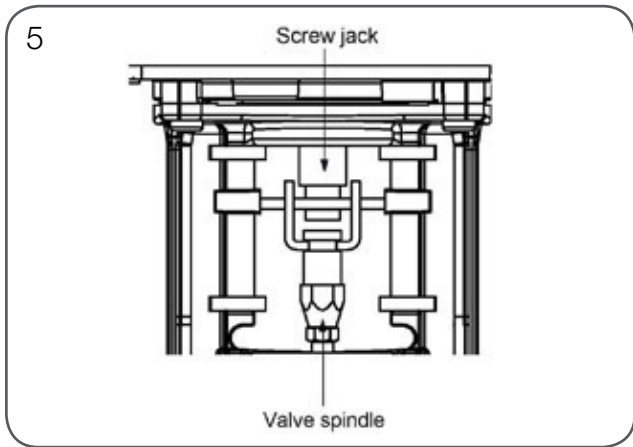
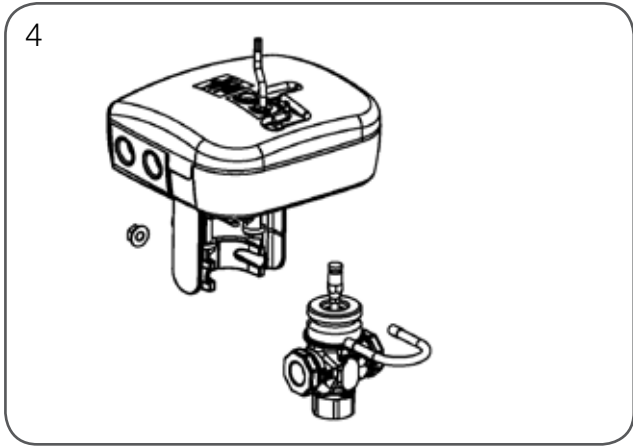
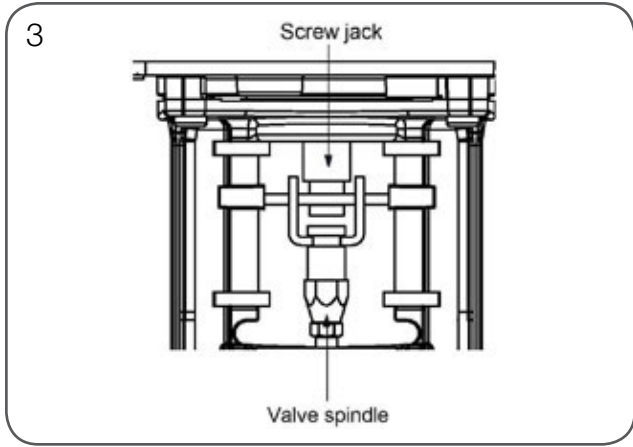
-  Manual override operation
-  Lock operation
-  Unlock operation.  
Twist manual override 10°

Installation

The MG600C-SR actuator is designed for to be installed on the VG210 and VG310 globe valves. The VG210 and VG310 valves are supplied with a grooved stem adapter which directly connects into the actuator claw below the screwjack.

The actuator must be manually positioned and locked into its mid position before assembly onto the valve. This ensures the actuator yoke and the valve bonnet are aligned properly during the tightening of the U bolt brace.





Electrical connections

Terminal	Function	Description
G	24 V AC	Supply voltage
G0	Ground	
X1	Input, proportional	Control signal
MX	Input, neutral, porportional	
VH	Increase, 3-point	VH, VC connected to G0
VC	Decrease, 3-point	
G1	16 V DC	External supply, 25 mA max.
Y	0-100%	Feedback signal

Auxiliary switch block (accessory)

G, G0= Max 100 m (328 ft.) ..... 1.5 mm<sup>2</sup> (AWG 15)  
 X1, MX, Y, VH, VC = Max 200 m (656 ft.) ..... 0.5 mm<sup>2</sup> (AWG 20)

N.B.! When installed with 3 conductors, where the control signal reference is connected to G0, the motor current of the actuator will cause varying voltage loss in the cable and thus in the reference level. Forta, which has a highly sensitive control signal input, will detect the varying signal and follow it, which makes it difficult for the actuator to find a stable position.

This variation may be accepted in simplified installations on the following conditions: the cables between the controller and actuator are shorter than 100 m (328 ft.), the cross-sectional area is larger than 1.5 mm<sup>2</sup> (AWG 16) and the cables are only connected to one actuator.

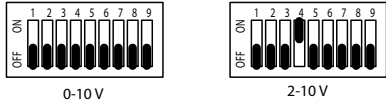
Please refer to the figures labelled "Wiring Examples" for wiring instructions.

Cable lengths

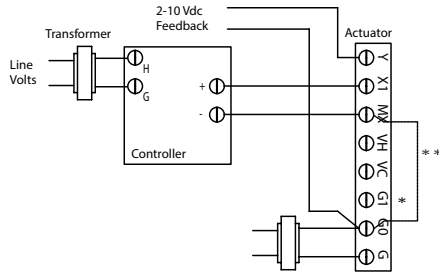
The cables to G, G0 and G1 should be max. 100 m (328 ft.) and have a cross-sectional area of min. 1.5 mm<sup>2</sup> (AWG 16). Other cables should be max. 200 m (656 ft.) and have a cross-sectional area of min. 0.5 mm<sup>2</sup> (AWG 20).

Wiring examples

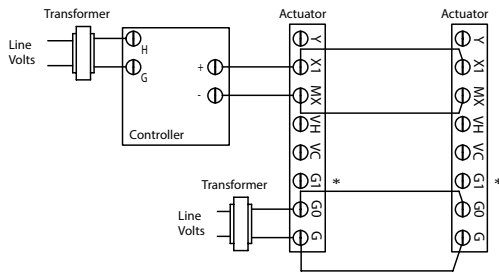
PROPORTIONAL



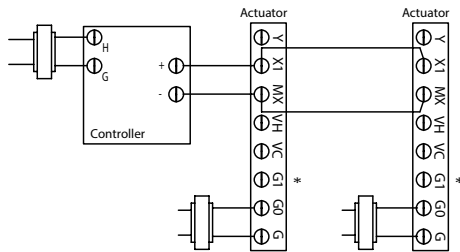
50 VA transformer required per actuator



0-10/2-10 Vdc Proportional Application  
 \* Provides 16 Vdc, 25mA output source  
 \*\* Optional Ground connection



0-10/2-10Vdc Proportional Multiple  
 Actuators powered from single source.  
 \* Provides 16 Vdc, 25mA output source



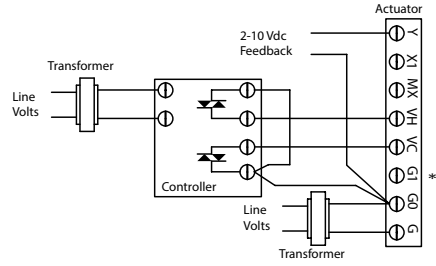
0-10/2-10Vdc Proportional Multiple  
 Actuators powered from separate sources.  
 \* Provides 16 Vdc, 25mA output

Caution: this product contains a half-wave rectifier power supply and must not be powered off transformers used to power other devices utilizing non-isolated full-wave rectifier power supplies.

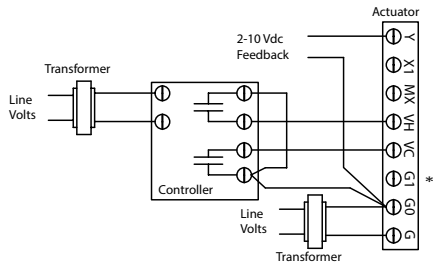
FLOATING



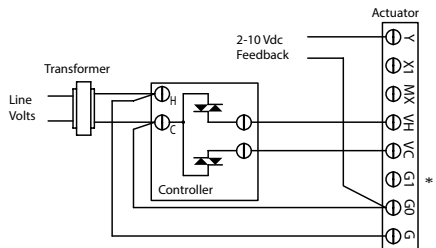
50 VA transformer required per actuator



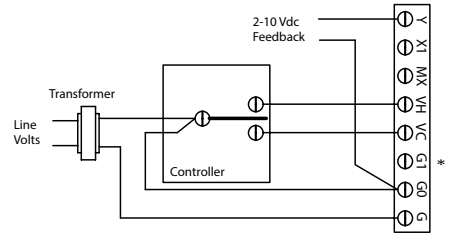
TRIAC SINK Application  
 Two power sources  
 \* Provides 16 Vdc, 25mA output source



RELAY SINK Application  
 Two power sources  
 \* Provides 16 Vdc, 25mA output source



TRIAC SINK Application  
 One power source  
 \* Provides 16 Vdc, 25mA output source



RELAY SINK Application  
 One power source  
 \* Provides 16 Vdc, 25mA output source

IN		OUT
Feedback 2-10v		Feedback 0-5v
0-10		Sequence
0-5, 2-6		2-10
60 sec.		5-10, 6-10
Normal		300 sec.
Normal		Inverse
OP		LIN/LG
		ADJ
	OFF	ON

Switch Setting	Description	Off Position (1)	On Position
1	Feedback signal	2-10 Vdc	0-5 Vdc
2	Control mode	Proportional signal	Floating signal
3	Sequence control (Proportional mode only)	Off (Normal Operation)	Sequence ON
4	Input voltage range	0 to 10 Vdc	2 to 10 Vdc
5	Working Sequence Range (2) (Dependant on switch 4)	0 to 5 Vdc or 2 to 6 Vdc	5 to 10 Vdc or 6 to 10 Vdc
6	"Running time (floating control only)"	60 sec.	300 sec.
7	Direction of movement	Normal (Direct) actuator position to control signal	Inverse (Reverse) actuator position to control signal.
8	Linearization	Normal	Electronic Flow curve adjustment EQ% Valve to LINEAR control or LINEAR to Quick Open.
9	Operation / Stroke Calibration	Normal Operation	Initiate valve stroke calibration Note: Switch 9 must be in the off position for normal operation.

- 1) Units are shipped with all nine switches in a default "off" position.
- 2) 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 cutting power to the actuator, then change any of switches one through eight as required and then restore power to the actuator.

### Actuator spring return direction vs valve function

	MG600C-SRU (Stem up)	MG600C-SRD (Stem down)
VG210	Normally closed	Normally open
VG310	Normally closed	Normally open