

# Flanged Globe Valves 2½" to 6"

## Pressure Compensated G6...C Series

<b>G6...C</b>	<b>Two-way Pressure Compensated</b>
<b>G6...CS</b>	<b>Two-way Pressure Compensated Stainless Steel Trim</b>
<b>G6...LCS</b>	<b>Two-way Pressure Compensated Stainless Steel Trim Linear Characteristic</b>
<b>2½" to 6"</b>	
<b>Service</b>	<b>Chilled/hot water, 60% glycol, steam</b>
<b>C<sub>v</sub> Range</b>	<b>65 – 344</b>
<b>Material</b>	<b>Stainless steel stem, Bronze plug or Stainless plug</b>
<b>Control</b>	<b>On/Off, Floating Point Multi-Function Technology® Electronic Fail-Safe or Non-Spring Return</b>



### FEATURES

- Balanced Plug Design
- Spring Return Solutions for up to 6" Valves
- Bronze or Stainless Trim

### BENEFITS

- Perfect for high close-off requirements
- Fail-safe on larger valves
- Covers wide range of operating temperatures
- Equal percent (G6C) (G6CS) or linear characteristic (G6LCS) for steam applications

**Flanged Globe Valves 2½" to 6"****Installation Instructions**

# Electronic G6...C(S), G7...(S) Series

**G6...C(S)-250** Two-way Flanged  
ANSI 250 Bronze  
or Stainless Trim

**G7...(S)** Three-way Flanged  
Bronze or Stainless Trim

**G7...(S)-250** Three-way Flanged  
ANSI 250 Bronze or  
Stainless Trim

Three-way Valves available in Mixing or Diverting

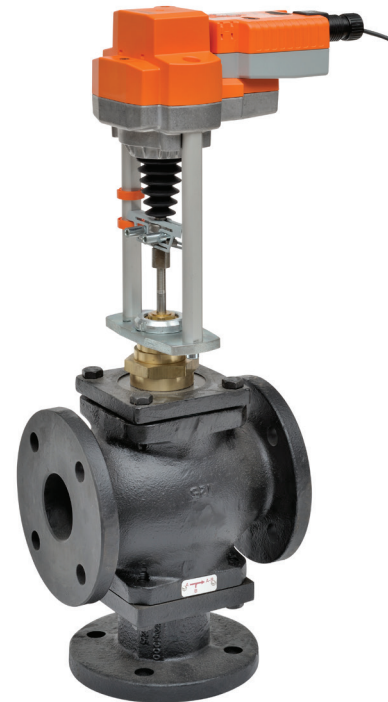
**2½" to 6"**

**Service** Chilled/hot water,  
60% glycol, steam (G6C)

**C<sub>v</sub> Range** 65-344 (Two-way)  
68-340 (Three-way Mixing)  
68-248 (Three-way Diverting)

**Material** Stainless steel stem,  
Bronze plug or  
Stainless plug

**Control** On/Off, Floating Point, 2-10 VDC  
Multi-Function Technology®  
Electronic Fail-Safe or  
Non-Spring Return

**FEATURES**

- Complete flanged product range
- Mixing or diverting options
- Multi-Function Technology®
- ANSI 125/ANSI 250

**BENEFITS**

- Fits wide range of applications
- Capable of any control signal
- Suitable for piping systems

### Warning!

**Valve should not be used for combustible gas applications. Gas leaks and explosions may result. Do not install in systems which exceed the ratings of the valve.**

- Avoid installations where valve may be exposed to excessive moisture, corrosive fumes, vibration, high ambient temperatures, elements, or high traffic areas with potential for mechanical damage.
- Valve assembly location must be within ambient ratings of actuator. If the temperature is below -22°F, a heater is required.
- The valve assembly will require heat shielding, thermal isolation, or cooling at the actuator if combined effect of medium and ambient temperatures (conduction, convection, and radiation) is above 122°F for prolonged time periods.
- Strainers should be installed before coil and valve.
- Visual access must be provided. Assembly must be accessible for routine service. Contractor should provide unions for removal from line and isolation valves.
- Avoid excessive stresses. Mechanical support must be provided where reducers have been used and the piping systems may have less structural integrity than full pipe sizes.
- Vertical pipes with valves and dual actuators may require support for linkage.
- Sufficient upstream and downstream piping runs must be provided to ensure proper valve capacity and flow response. Five diameters in each direction are recommended.
- Life span of the valve stems and packing is dependent on maintaining non-damaging conditions. Poor water treatment or filtration, corrosion, scale or other particulate can result in damage to trim components. A water treatment specialist should be consulted.
  1. Inspect shipping package, valve, linkage, and actuator for physical damage. If shipping damage has occurred, notify appropriate carrier. Do not install.
  2. If this is a replacement, remove the existing valve, linkage, and actuator from the piping system.
  3. If actuator and linkage are removed, they must be reinstalled correctly. The actuator must be rotated so that the valve seats properly for close-off.
  4. Install valve with the proper ports as inlets and outlets. See piping charts on next page. Check that inlet and outlet of 2-way valves are correct; check that the "A", "B", and "AB" ports of 3-way valves are piped correctly. Flow direction arrows must be correct.
  5. Blow out all piping and thoroughly clean below valve installation.
  6. Clean male pipe threads with wire brush and rag. If threads have been damaged or exposed to weather, running a tap or die over the threads may straighten them. Clean pipes, threads, and valve threads before installation. Check for any foreign material that can become lodged in trim components. Strainers should be cleaned after initial startup.
  7. Pipe sealing compound may not be applied to either flange or gasket.

8. Flanged bodies must be used with flanges which are rated for the service. 125 lb. flanges have flat faces and may not be bolted to raised face flanges. Gaskets rated for the medium and temperature-pressure must be used.
9. Valve must be installed with the stem towards the vertical, not below the horizontal.
10. Tighten bolts alternatively and evenly around the flange.
11. 2-way valve Normally Open (NO) or Normally Closed (NC) configurations must be verified by examining both the mechanical drawings and the valve and actuator.
12. 3-way valve Normally Open (NO) or Normally Closed (NC) configurations for the control port and the bypass port must be verified by examining both the mechanical drawings and the valve and actuator.

Check specifications for every application to be sure of ports and designations.

### U, L, and C designations

U is for Upper, the control port.

L is for Lower, the bypass port.

C is for Common.

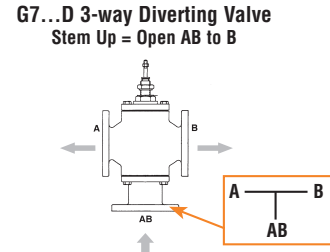
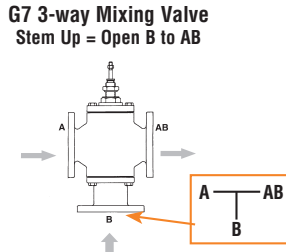
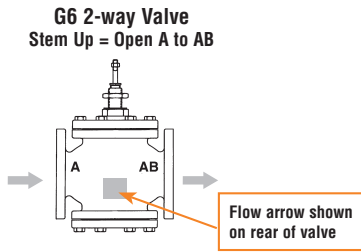
Viewed with the bonnet upwards and the U port on the left, the L port is the bottom port, and the C is the right port. With the stem up, L is open to Common. With the stem down, U is open to Common.

# Flanged Globe Valves 2½” to 6”

## Installation Instructions



### FLOW PATTERN – Flow Pattern is Marked on Valve



### VALVE ASSEMBLY SET-UP - Specify Upon Ordering

#### 2-WAY VALVE

NON-SPRING RETURN STAYS IN LAST POSITION	<b>EV, RV Series</b>	<b>NC:</b> Normally closed A to AB, valve will open upon increase in signal/power. Note: To change valve to A to AB open, reverse the directional switch in actuator.	<b>NO:</b> Normally open A to AB, valve will close upon increase in signal/power. Note: To change valve to A to AB closed, reverse the directional switch in actuator.
SPRING RETURN NOTE FAIL POSITION	<b>AFB, AFX Series</b> On/Off	<b>NO/FO:</b> Normally open A to AB valve will drive closed. Spring Action: Will fail open A to AB upon power loss.	<b>NC/FC:</b> Normally closed A to AB valve will drive open. Spring Action: Will fail closed A to AB upon power loss.
ELECTRONIC FAIL-SAFE	<b>AFB, AFX MFT Series</b>	<b>NC/FO:</b> Normally closed A to AB, valve will open upon increase in signal. Note: To change valve to A to AB open, reverse CW/CCW switch. Spring Action: Will fail open A to AB upon power loss.	<b>NO/FC or NC/FC:</b> Normally Open/Normally Closed: valve can be open or closed, will drive closed or open A to AB (can be chosen with CW/CCW switch). Spring Action: Closed A to AB upon power loss.
			<b>NO/FO:</b> Normally open A to AB. Spring Action: Will fail open A to AB upon power loss. (NO or NC action can be chosen with CW/CCW switch).
ELECTRONIC FAIL-SAFE	<b>AVK, GK Series</b>	<b>NC/FO:</b> Normally closed A to AB, valve will open upon increase in signal. Note: To change valve to A to AB open, reverse CW/CCW switch. Fail Position: Will default fail A to AB open, from the factory. Fail position can be set from 0%-100%, in 10% increments.	<b>NO/FC or NC/FC:</b> Valve: Can be open or closed, will drive closed or open A to AB (can be chosen with CW/CCW switch). Fail Position: Will default fail A to AB open, from the factory. Fail position can be set from 0%-100%, in 10% increments.
			<b>NO/FO:</b> Normally open A to AB. Fail Position: Will default fail A to AB open, from the factory. Fail position can be set from 0%-100%, in 10% increments.

#### 3-WAY MIXING VALVE

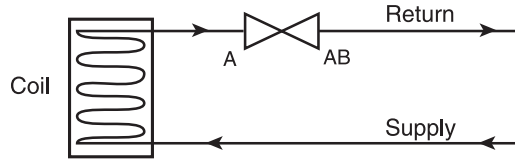
NON-SPRING RETURN STAYS IN LAST POSITION	<b>EV, RV Series</b>	<b>NC:</b> Normally closed A to AB, will open upon increase in signal/power. Note: To change valve to A to AB open, reverse the directional switch in actuator.	<b>NO:</b> Normally open A to AB, will close upon increase in signal/power. Note: To change valve to A to AB closed, reverse the directional switch in actuator.
SPRING RETURN NOTE FAIL POSITION	<b>AFB, AFX Series</b> On/Off	<b>NO/FO</b> Normally open A to AB, valve will drive closed. Spring Action: Will fail open A to AB upon power loss.	<b>NC/FC</b> Normally closed A to AB, valve will drive open. Spring Action: Will fail closed A to AB upon power loss.
ELECTRONIC FAIL-SAFE	<b>AFB, AFX MFT Series</b>	<b>NC/FO</b> Normally closed A to AB, valve will open upon increase in signal. Note: To change valve to A to AB open, reverse CW/CCW switch. Spring Action: Will fail open A to AB upon power loss.	<b>NO/FC or NC/FC</b> Normally Open/Normally Closed: valve be open or closed, will drive closed or open A to AB (can be chosen with CW/CCW switch). Spring Action: Closed A to AB upon power loss.
			<b>NO/FO</b> Normally open A to AB. Spring Action: Will fail open A to AB upon power loss. (NO or NC action can be chosen with CW/CCW switch).
ELECTRONIC FAIL-SAFE	<b>AVK, GK Series</b>	<b>NC/FO</b> Normally closed A to AB, valve will open upon increase in signal. Note: To change valve to A to AB open, reverse CW/CCW switch. Fail Position: Will default fail A to AB open, from the factory. Fail position can be set from 0%-100%, in 10% increments.	<b>NO/FC or NC/FC</b> Valve: Can be open or closed, will drive closed or open A to AB (can be chosen with CW/CCW switch). Fail Position: Will default fail A to AB open, from the factory. Fail position can be set from 0%-100%, in 10% increments.
			<b>NO/FO</b> Normally open A to AB. Fail Position: Will default fail A to AB open, from the factory. Fail position can be set from 0%-100%, in 10% increments.

#### 3-WAY DIVERTING VALVE

NON-SPRING RETURN STAYS IN LAST POSITION	<b>EV, RV Series</b>	<b>NC:</b> Normally closed AB to B, will open upon increase in signal/power. Note: To change valve to AB to B open, reverse the directional switch in actuator.	<b>NO:</b> Normally open AB to B, will close upon increase in signal/power. Note: To change valve to AB to B closed, reverse the directional switch in actuator.
SPRING RETURN NOTE FAIL POSITION	<b>AFB, AFX Series</b> On/Off	<b>NO/FO</b> Normally open AB to B, valve will drive closed. Spring Action: Will fail open AB to B upon power loss.	<b>NC/FC</b> Normally closed AB to B, valve will drive open. Spring Action: Will fail closed AB to B upon power loss.
ELECTRONIC FAIL-SAFE	<b>AFB, AFX MFT Series</b>	<b>NC/FO</b> Normally closed AB to B, valve will open upon increase in signal. Note: To change valve to AB to B open, reverse CW/CCW switch. Spring Action: Will fail open AB to B upon power loss.	<b>NO/FC or NC/FC</b> Normally Open/Normally Closed: valve be open or closed, will drive closed or open AB to B (can be chosen with CW/CCW switch). Spring Action: Closed AB to B upon power loss.
			<b>NO/FO</b> Normally open AB to B. Spring Action: Will fail open AB to B upon power loss. (NO or NC action can be chosen with CW/CCW switch).
ELECTRONIC FAIL-SAFE	<b>AVK, GK Series</b>	<b>NC/FO</b> Normally closed AB to B, valve will open upon increase in signal. Note: To change valve to AB to B open, reverse CW/CCW switch. Fail Position: Will default fail AB to B open, from the factory. Fail position can be set from 0%-100%, in 10% increments.	<b>NO/FC or NC/FC</b> Valve: Can be open or closed, will drive closed or open AB to B (can be chosen with CW/CCW switch). Fail Position: Will default fail AB to B open, from the factory. Fail position can be set from 0%-100%, in 10% increments.
			<b>NO/FO</b> Normally open AB to B. Fail Position: Will default fail AB to B open, from the factory. Fail position can be set from 0%-100%, in 10% increments.

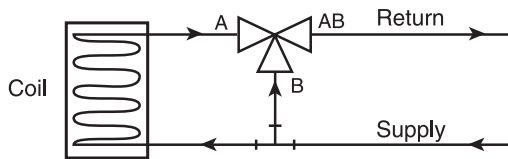
**2-WAY**

**2-way Valve Piping Diagram**  
(1 Input, 1 Output)

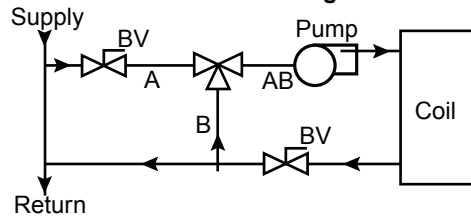


**3-WAY MIXING**

**3-way Mixing Valve Piping Diagram**  
(2 Inputs, 1 Output)

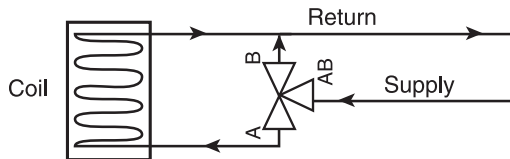


**Mixing with Coil Pump**



**3-WAY DIVERTING**

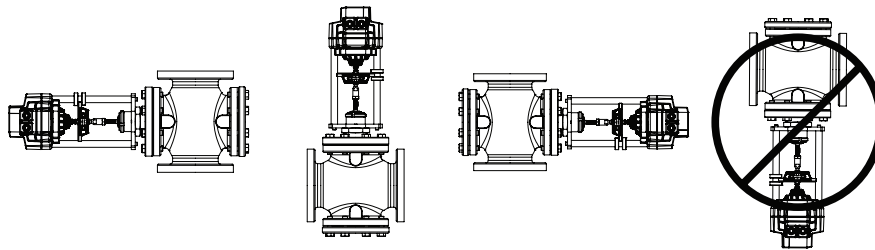
**3-way Diverting Valve Piping Diagram**  
(1 Input, 2 Outputs)



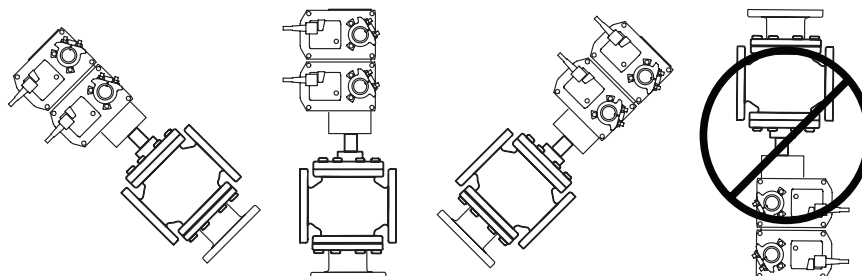
**INSTALLATION**

Valve must be installed in these orientations only.

**Linear Actuators**



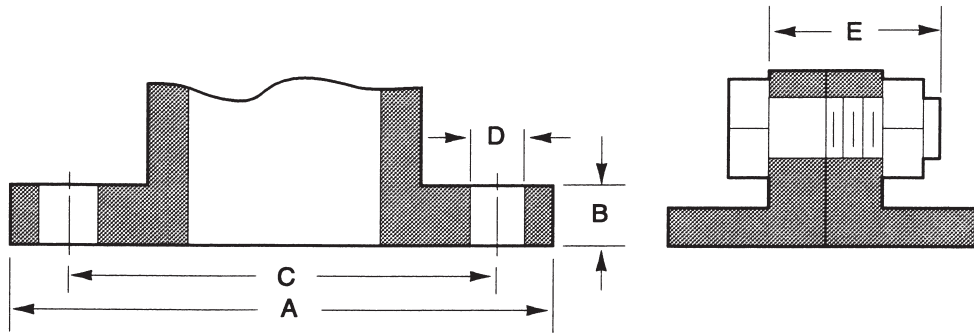
**UGLK Linkage**



ANSI 125

Flange Detail for American Standard 125 lb. Cast Iron Pipe Flanges

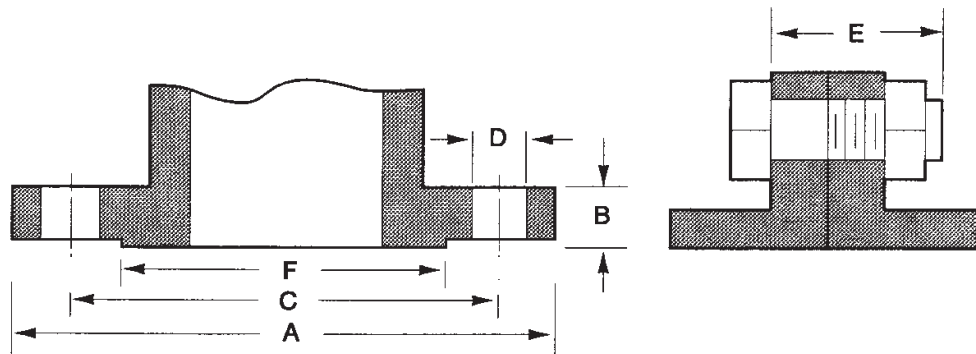
Nominal Pipe Size	FLANGES		DRILLING		BOLTING							
	A	Flange Diameter	B	Flange Thickness	C	Diameter of Bolt Circle	D	Diameter of Bolt Holes	Number of Bolts	Diameter of Bolts	E	Length of Machine Bolts
2½"		7"		1 1/16"		5½"		¾"	4	5/8"		2½"
3"		7½"		¾"		6"		¾"	4	5/8"		2½"
4"		9"		1 5/16"		7½"		¾"	8	5/8"		3"
5"		10"		1 5/16"		8½"		7/8"	8	¾"		3"
6"		11"		1"		9½"		7/8"	8	¾"		3¼"

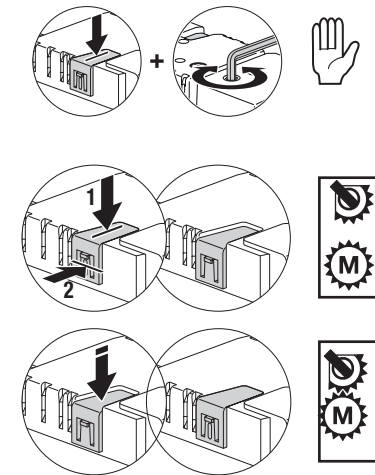
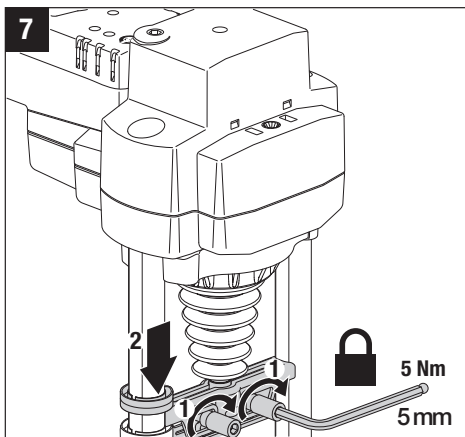
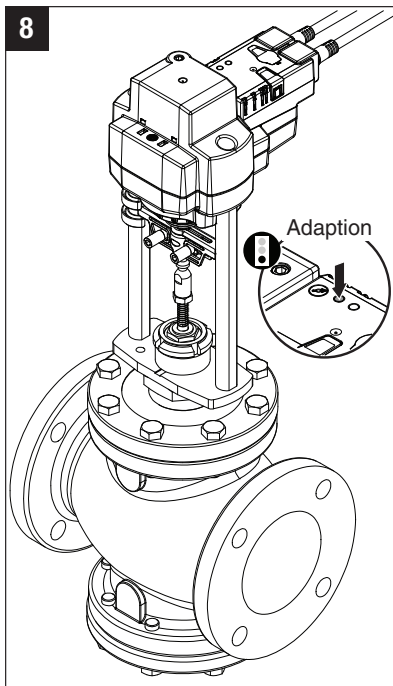
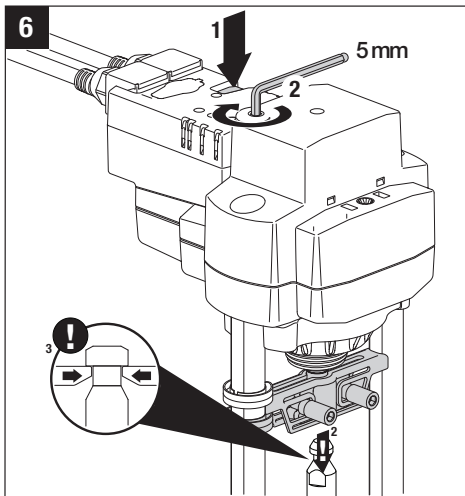
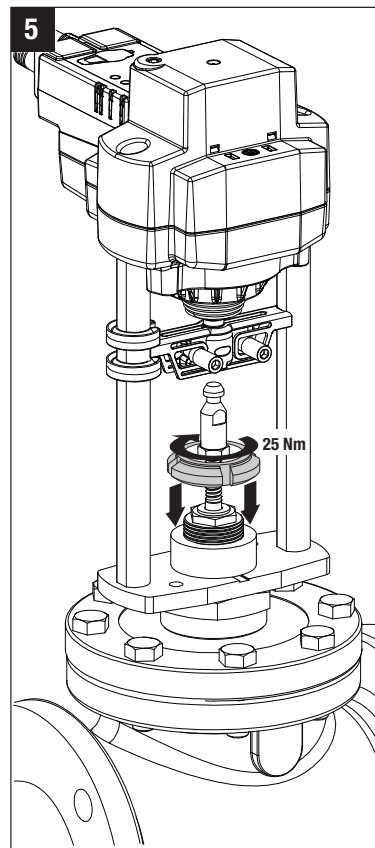
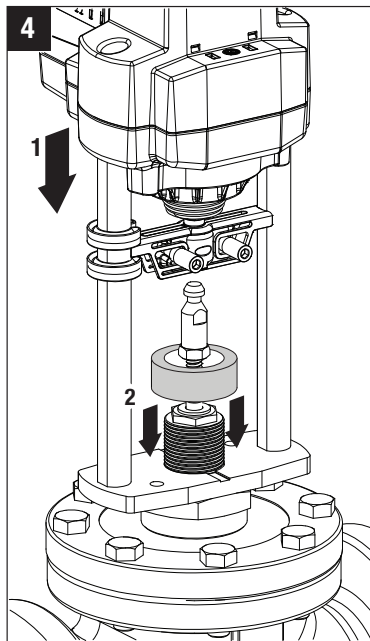
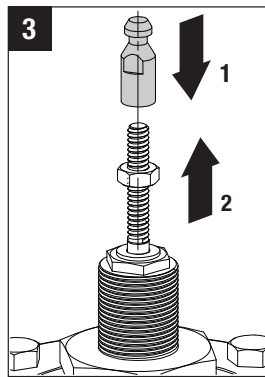
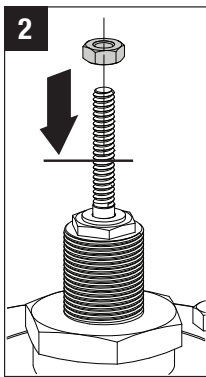
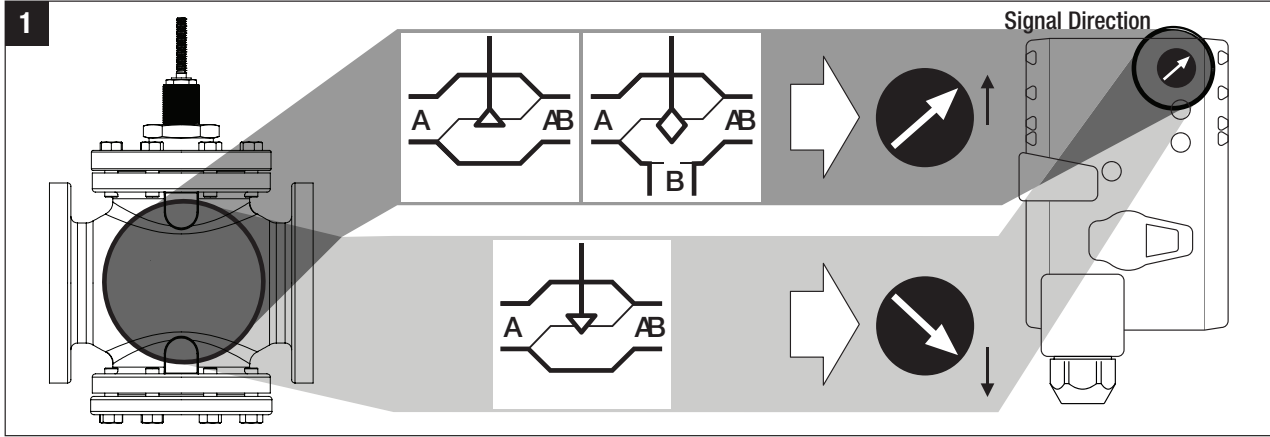


ANSI 250

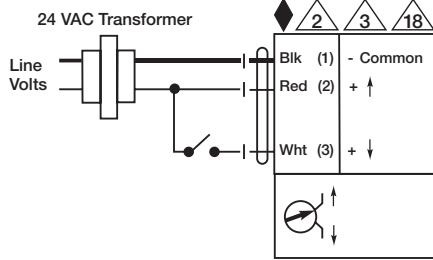
Flange Detail for American Standard 250 lb. Cast Iron Pipe Flanges

Nominal Pipe Size	FLANGES			DRILLING		BOLTING								
	A	Flange Diameter	B	Flange Thickness	F	Diameter of Raised Face	C	Diameter of Bolt Circle	D	Diameter of Bolt Holes	Number of Bolts	Diameter of Bolts	E	Length of Machine Bolts
2½"		7½"		1"		4 15/16"		5 7/8"		7/8"	8	¾"		3¼"
3"		8¼"		1 1/8"		5 11/16"		6 5/8"		7/8"	8	¾"		3¼"
4"		10"		1 1/4"		6 15/16"		7 7/8"		7/8"	8	¾"		3¾"
5"		11"		1 3/8"		8 5/16"		9 1/4"		7/8"	8	¾"		4"
6"		12½"		1 7/16"		9 11/16"		10 5/8"		7/8"	12	¾"		4"



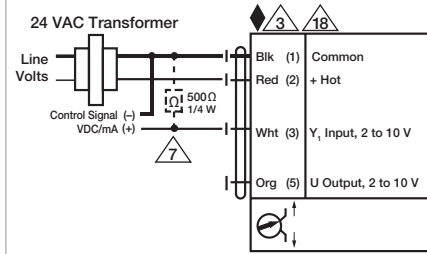


### Non-Spring Return Actuator with -3



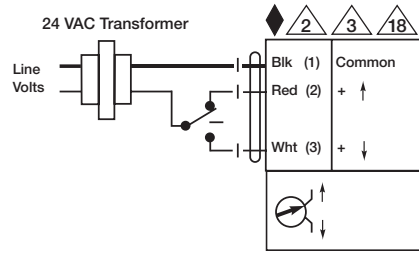
On/Off

### Non-Spring Return Actuator with -SR

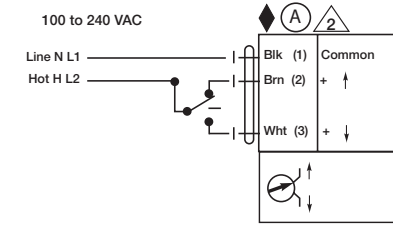


VDC / 4 to 20 mA

Floating Point



Floating Point



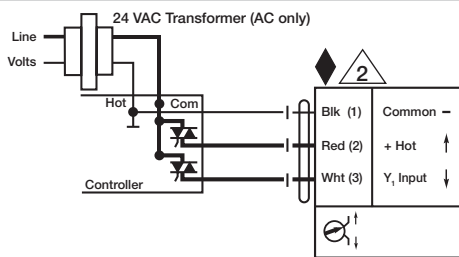
On/Off

VDC / 4 to 20 mA

Signal Direction

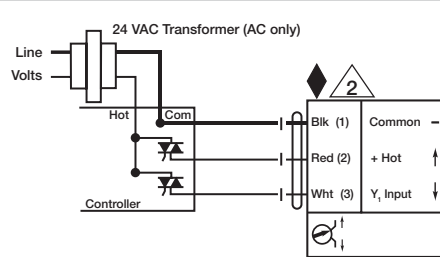


Selector Switches

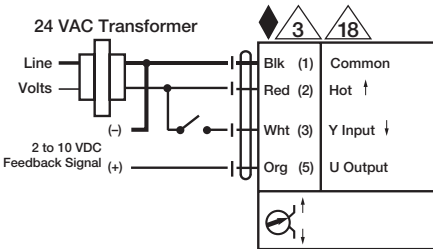


Triac Sink

Triac Source

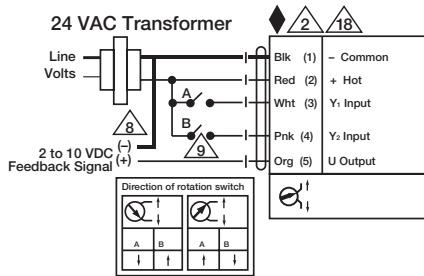


### Non-Spring Return Actuator with MFT

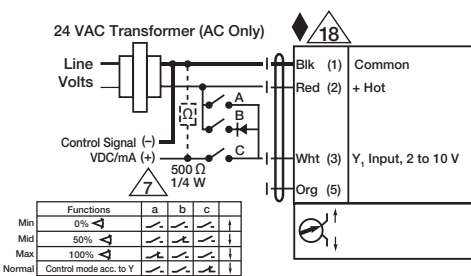


On/Off

Floating Point



Override Control Min, Mid, Max Positions



### Notes:

- ◆ Meets cULus requirements without the need of an electrical ground connection.
- Ⓐ Actuators with appliance cables are numbered.
- ② Actuators may be connected in parallel. Power consumption and input impedance must be observed.
- ③ Actuators may also be powered by 24 VDC.
- ⑤ Only connect common to neg. (-) leg of control circuits.
- ⑦ A 500 Ω resistor converts the 4 to 20 mA control signal to 2 to 10 VDC.
- ⑧ Control signal may be pulsed from either the Hot (Source) or Common (Sink) 24 VAC line.
- ⑨ Contact closures A & B also can be triacs. A & B should both be closed for the triac source and open for triac sink.
- ⑩ For triac sink the Common connection from the actuator must be connected to the Hot connection of the controller. Position feedback cannot be used with a triac sink controller. The actuator internal common reference is not compatible.
- ⑫ IN4004 or IN4007 diode. (IN4007 supplied, Belimo Part number 40155).
- ⑬ Actuators with plenum rated cable do not have numbers on wires; use color codes instead.

VDC / 4 to 20 mA

BRN  
Brown  
Marron  
Brun  
Marron

BLU  
Blue  
Azul  
Bleu  
Azul

ORG  
Orange  
Anaranjado  
Orange  
Alaranjado

PNK  
Pink  
Rosado  
Rosa  
Cor-de ros

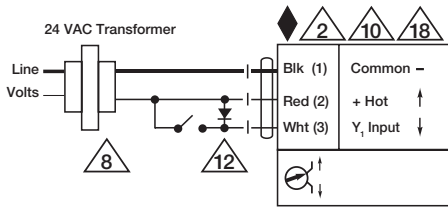
WHT  
White  
Blanco  
Blanc  
Branco

RED  
Red  
Rojo  
Rouge  
Vermelho

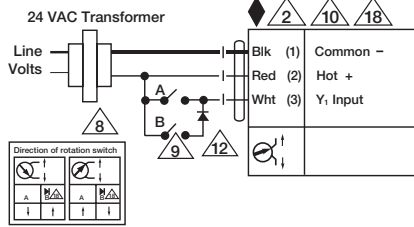
BLK  
Black  
Negro  
Noir  
Preto



**Non-Spring Return Actuator with -3**



**On/Off**



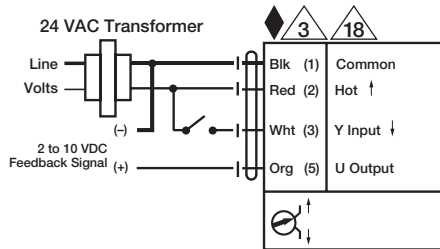
**Floating Point**

**Signal Direction**

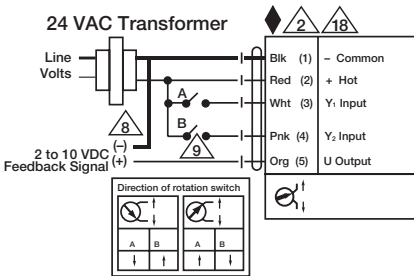


**Selector Switches**

**Non-Spring Return Actuator with MFT**



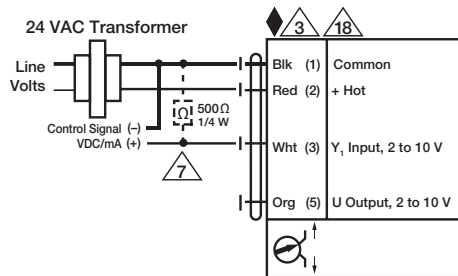
**On/Off**



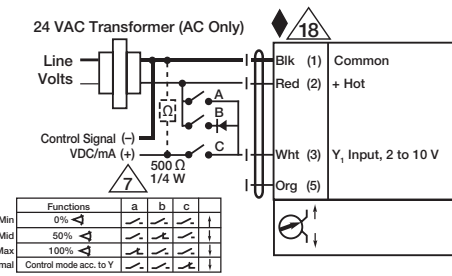
**Floating Point**

**Notes:**

- ◆ Meets cULus requirements without the need of an electrical ground connection.
- Ⓐ Actuators with appliance cables are numbered.
- ⚠️ Actuators may be connected in parallel. Power consumption and input impedance must be observed.
- ⚠️ Actuators may also be powered by 24 VDC.
- ⚠️ Only connect common to neg. (-) leg of control circuits.
- ⚠️ A 500 Ω resistor converts the 4 to 20 mA control signal to 2 to 10 VDC.
- ⚠️ Control signal may be pulsed from either the Hot (Source) or Common (Sink) 24 VAC line.
- ⚠️ Contact closures A & B also can be triacs. A & B should both be closed for the triac source and open for triac sink.
- ⚠️ For triac sink the Common connection from the actuator must be connected to the Hot connection of the controller. Position feedback cannot be used with a triac sink controller. The actuator internal common reference is not compatible.
- ⚠️ IN4004 or IN4007 diode. (IN4007 supplied, Belimo Part number 40155).
- ⚠️ Actuators with plenum rated cable do not have numbers on wires; use color codes instead.



**VDC / 4 to 20 mA**



**Override Control Min, Mid, Max Positions**

**BRN**  
Brown  
Marron  
Brun  
Marron

**BLU**  
Blue  
Azul  
Bleu  
Azul

**ORG**  
Orange  
Anaranjado  
Orange  
Alaranjado

**PWK**  
Pink  
Rosado  
Rosa  
Cor-de-ros

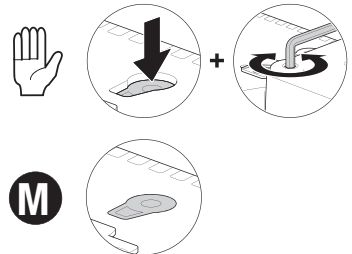
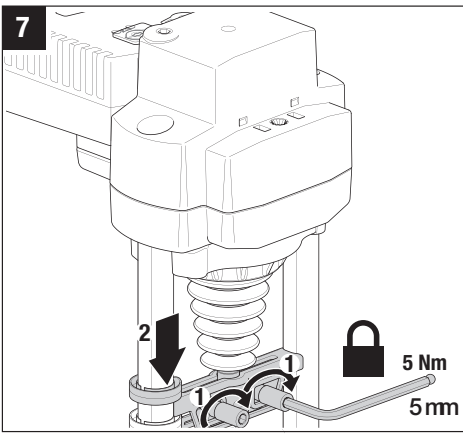
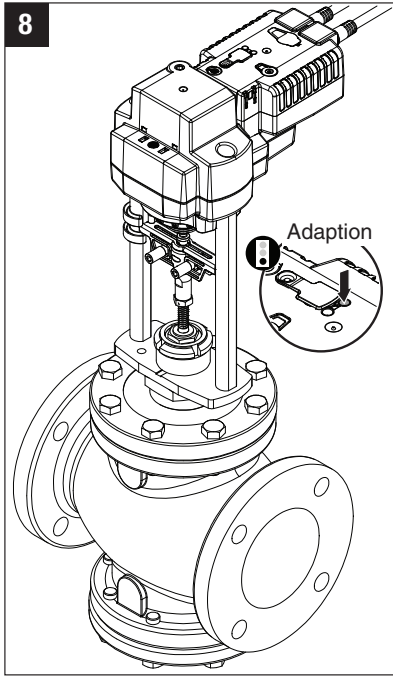
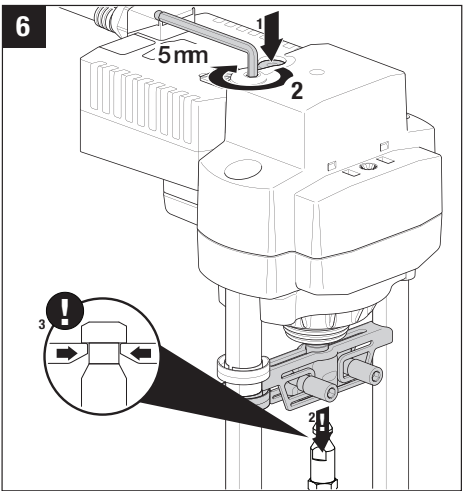
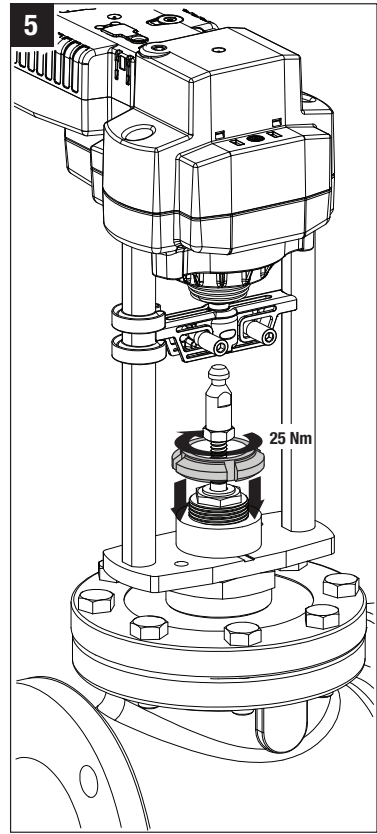
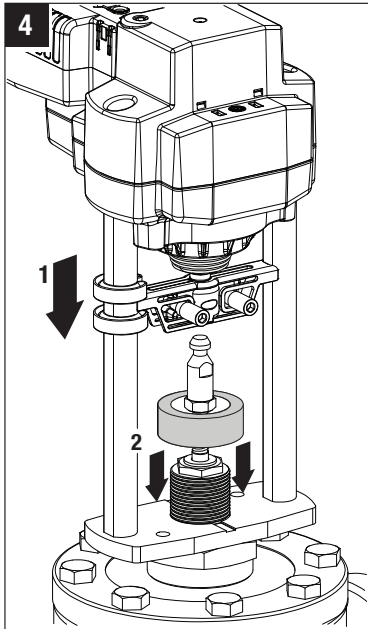
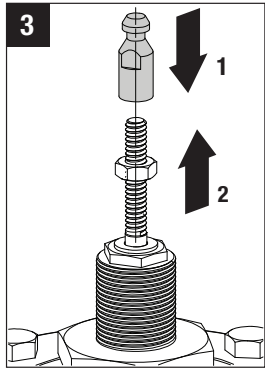
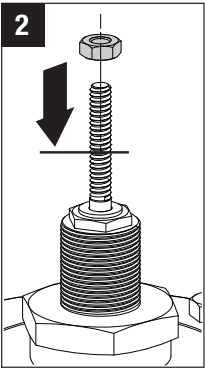
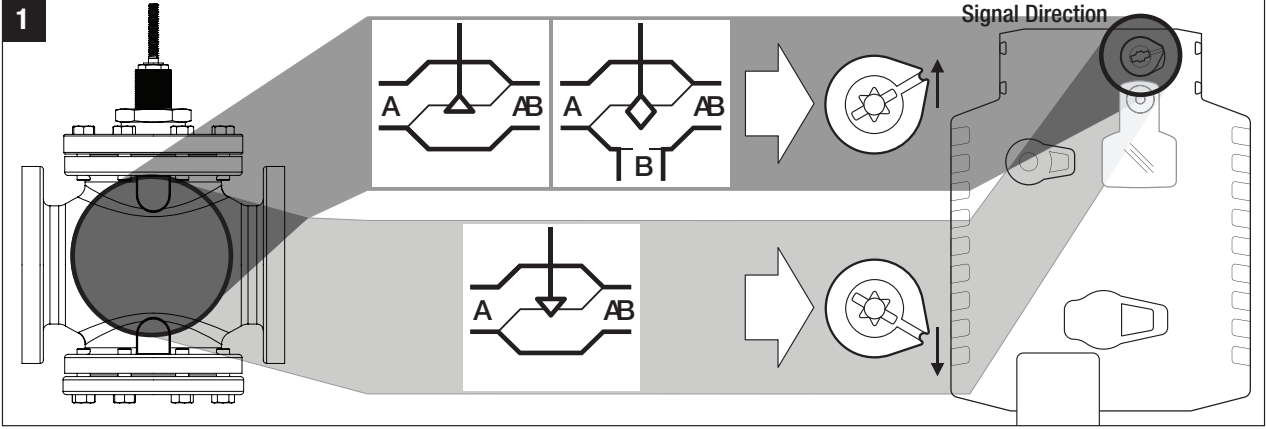
**WHT**  
White  
Bianco  
Blanc  
Branco

**RED**  
Red  
Rojo  
Rouge  
Vermelho

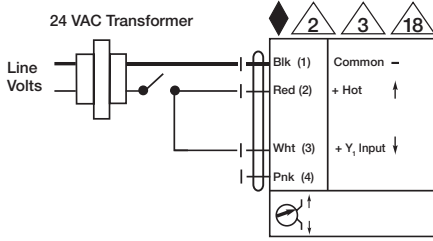
**BLK**  
Black  
Negro  
Noir  
Preto

# WGVL/G6/G7 Linkage with AVK Series Actuators

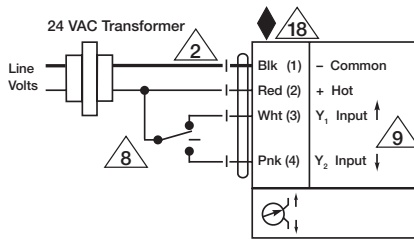
## Installation Instructions



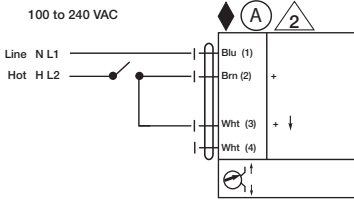
**Electronic Fail-Safe Actuator with -3**



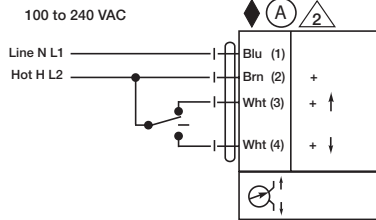
**On/Off**



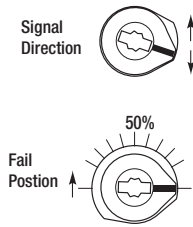
**Floating Point**



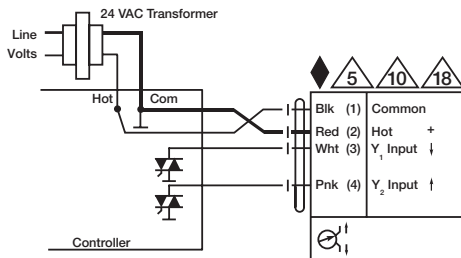
**On/Off**



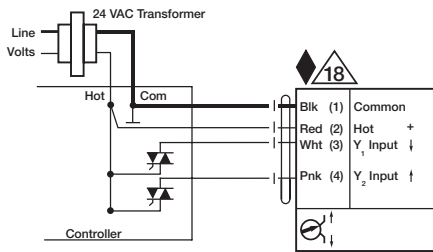
**Floating Point**



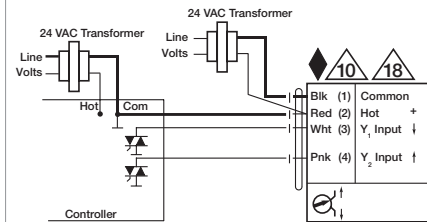
**Selector Switches**



**Triac Sink**

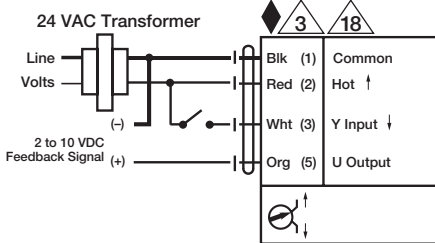


**Triac Source**

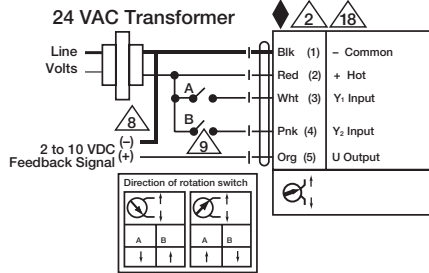


**Triac Sink with Separate Transformer**

**Electronic Fail-Safe Actuator with MFT**



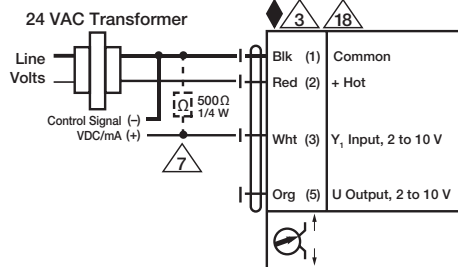
**On/Off**



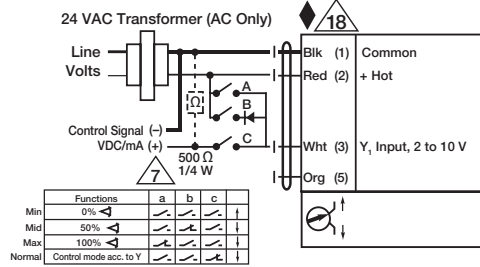
**Floating Point**

**Notes:**

- ◆ Meets cULus requirements without the need of an electrical ground connection.
- Ⓐ Actuators with appliance cables are numbered.
- Ⓐ Actuators may be connected in parallel. Power consumption and input impedance must be observed.
- Ⓐ Actuators may also be powered by 24 VDC.
- Ⓐ Only connect common to neg. (-) leg of control circuits.
- Ⓐ A 500 Ω resistor converts the 4 to 20 mA control signal to 2 to 10 VDC.
- Ⓐ Control signal may be pulsed from either the Hot (Source) or Common (Sink) 24 VAC line.
- Ⓐ Contact closures A & B also can be triacs. A & B should both be closed for the triac source and open for triac sink.
- Ⓐ For triac sink the Common connection from the actuator must be connected to the Hot connection of the controller. Position feedback cannot be used with a triac sink controller. The actuator internal common reference is not compatible.
- Ⓐ IN4004 or IN4007 diode. (IN4007 supplied, Belimo Part number 40155).
- Ⓐ Actuators with plenum rated cable do not have numbers on wires; use color codes instead.



**VDC / 4 to 20 mA**



**Override Control Min, Mid, Max Positions**

**BRN**  
Brown  
Marron  
Brun  
Marrom

**BLU**  
Blue  
Azul  
Bleu  
Azul

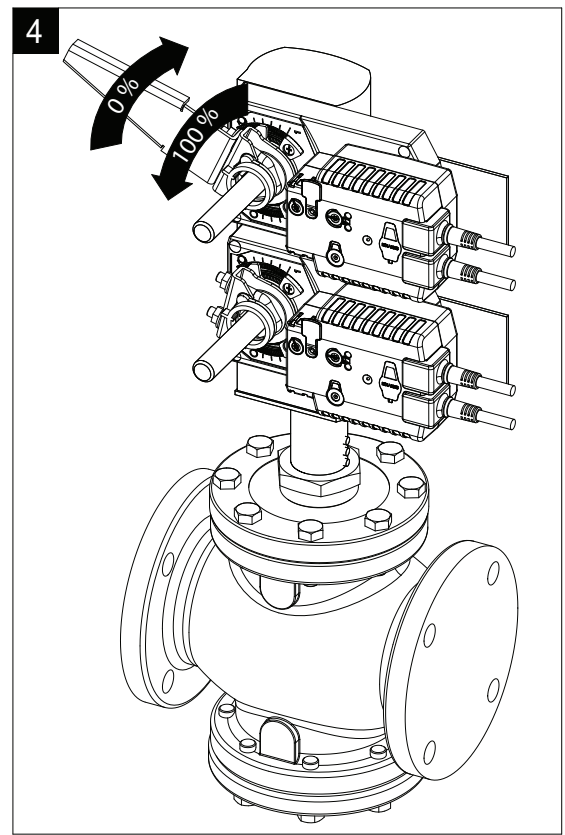
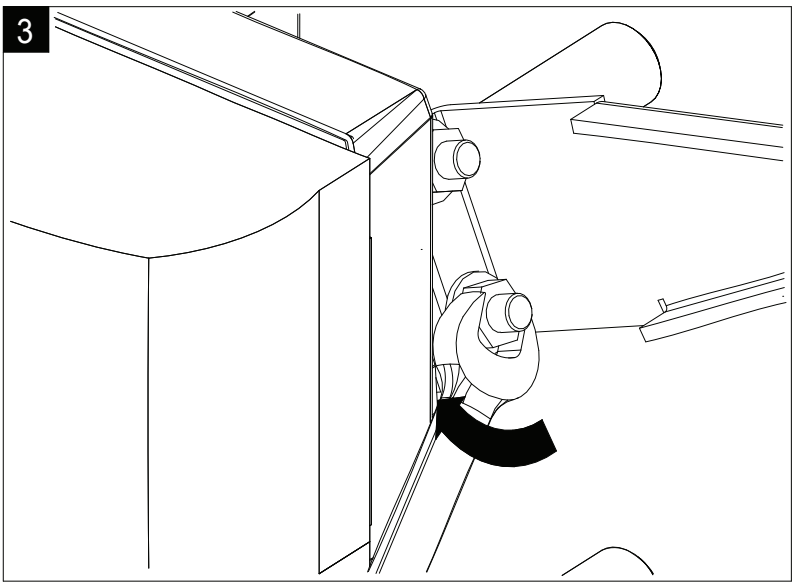
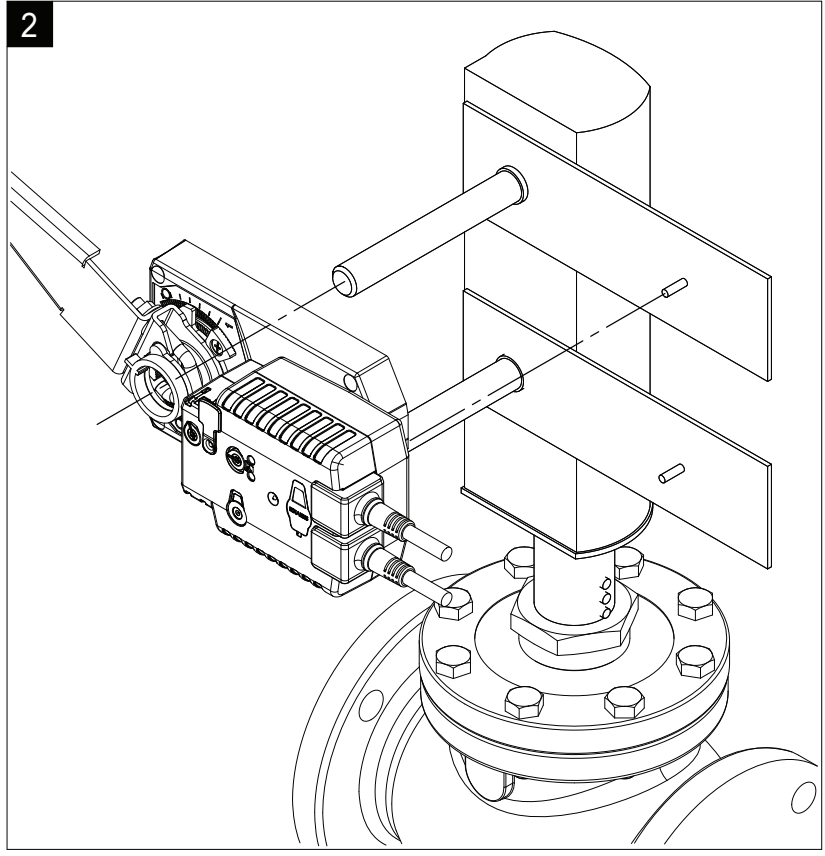
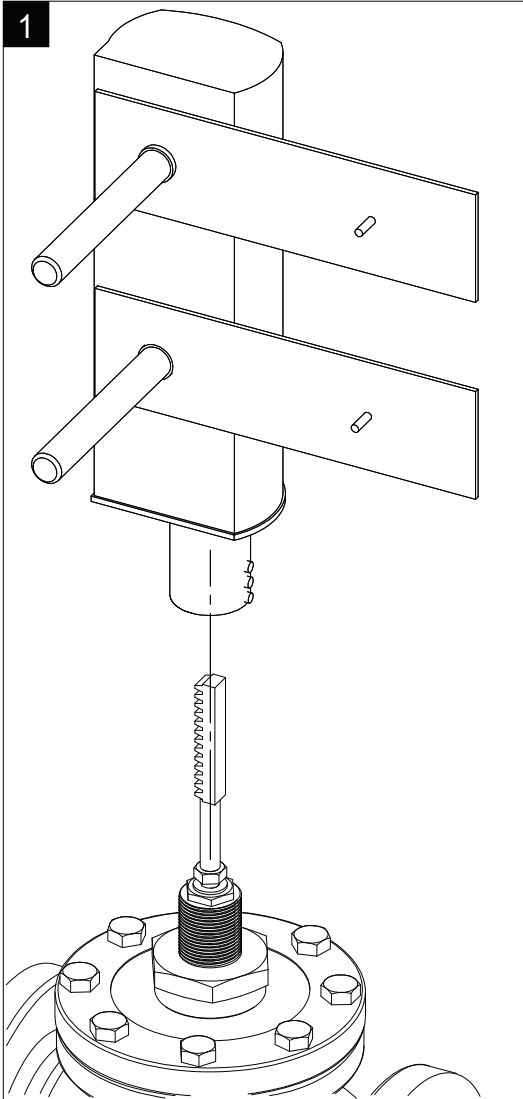
**ORG**  
Orange  
Anaranjado  
Orange  
Amaranjado

**PNK**  
Pink  
Rosado  
Rosa  
Cor-de ros

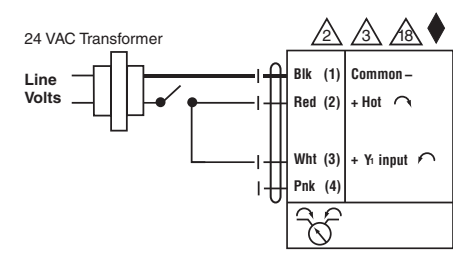
**WHT**  
White  
Blanco  
Blanc  
Branco

**RED**  
Red  
Rojo  
Rouge  
Vermelho

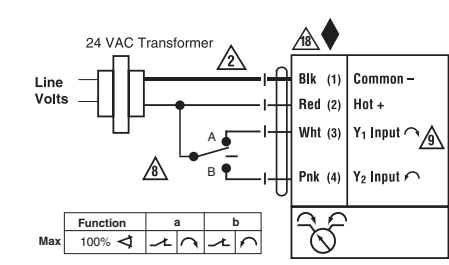
**BLK**  
Black  
Negro  
Noir  
Preto



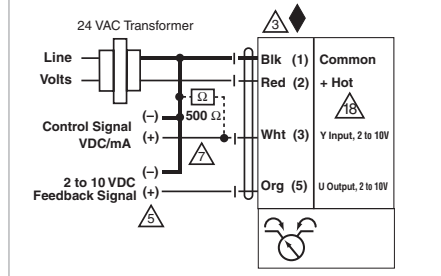
**Electronic Fail-Safe Actuator with -3 and -SR**



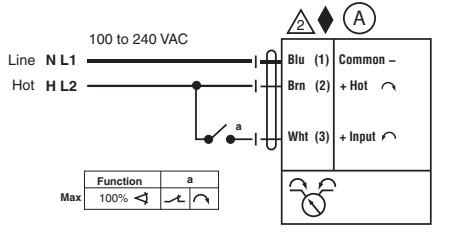
**On/Off**



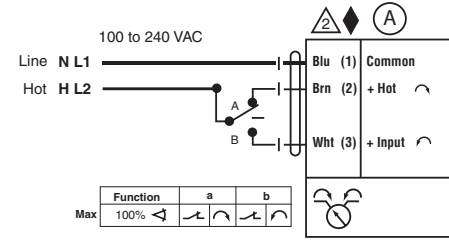
**Floating Point**



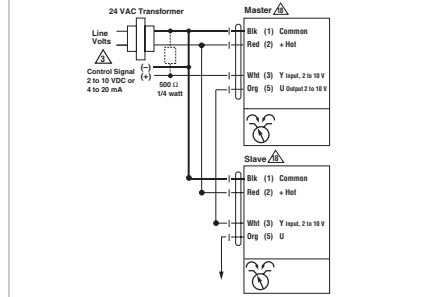
**VDC / 4 to 20 mA**



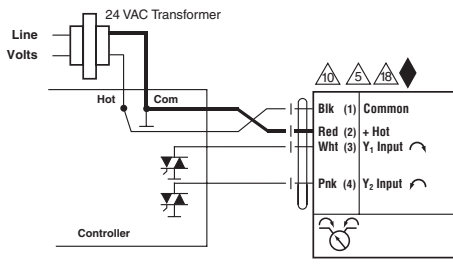
**On/Off**



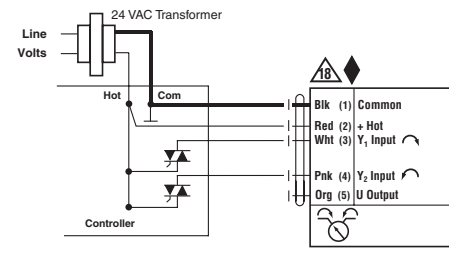
**Floating Point**



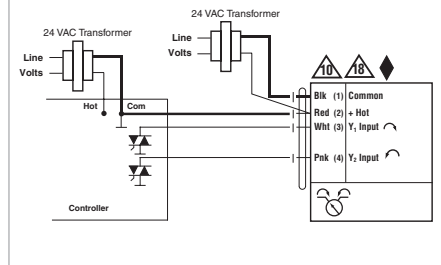
**VDC / 4 to 20 mA (Master Slave)**



**Triac Sink**

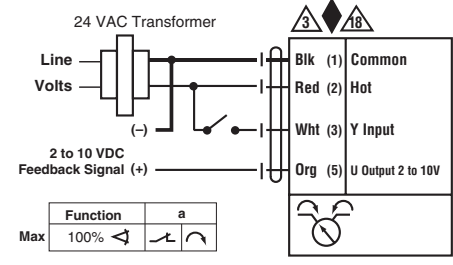


**Triac Source**

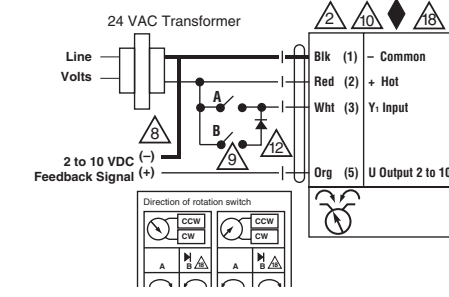


**Triac Sink with Separate Transformer**

**Electronic Fail-Safe Actuator with MFT**

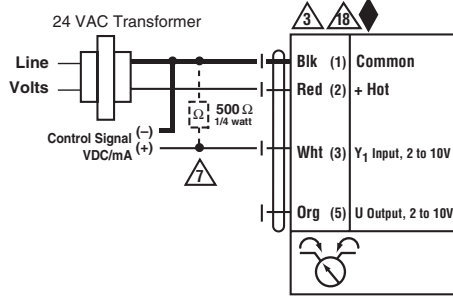


**On/Off**

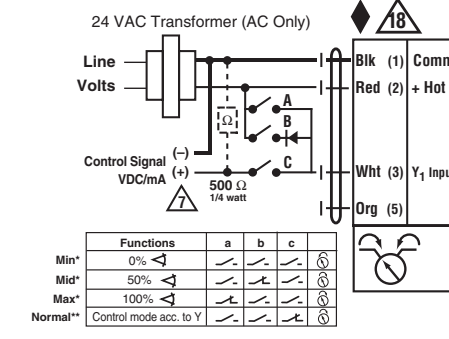


**Floating Point**

- Notes:**
- ◆ Meets cULus requirements without the need of an electrical ground connection.
  - Ⓐ Actuators with appliance cables are numbered.
  - 2 Actuators may be connected in parallel. Power consumption and input impedance must be observed.
  - 3 Actuators may also be powered by 24 VDC.
  - 5 Only connect common to neg. (-) leg of control circuits.
  - 7 A 500 Ω resistor converts the 4 to 20 mA control signal to 2 to 10 VDC.
  - 8 Control signal may be pulsed from either the Hot (Source) or Common (Sink) 24 VAC line.
  - 9 Contact closures A & B also can be triacs. A & B should both be closed for the triac source and open for triac sink.
  - 10 For triac sink the Common connection from the actuator must be connected to the Hot connection of the controller. Position feedback cannot be used with a triac sink controller. The actuator internal common reference is not compatible.
  - 12 IN4004 or IN4007 diode. (IN4007 supplied, Belimo Part number 40155).
  - 18 Actuators with plenum rated cable do not have numbers on wires; use color codes instead.



**VDC / 4 to 20 mA**



**Override Control Min, Mid, Max Positions**

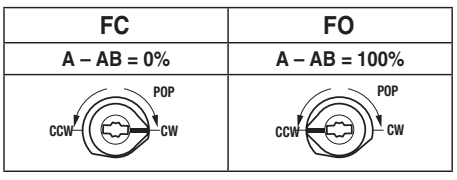
- BRN** Brown
- Marron** Marron
- Brun** Brun
- Marron** Marron
- BLU** Blue
- Azul** Azul
- Bleu** Bleu
- Azul** Azul
- ORG** Orange
- Anaranjado** Anaranjado
- Orange** Orange
- Alaranjado** Alaranjado
- PNK** Pink
- Rosado** Rosado
- Rosa** Rosa
- Cor-de ros** Cor-de ros
- WHT** White
- Bianco** Bianco
- Blanc** Blanc
- Bianco** Bianco
- RED** Red
- Rojo** Rojo
- Rouge** Rouge
- Vermelho** Vermelho
- BLK** Black
- Negro** Negro
- Noir** Noir
- Preto** Preto

# G6/G7 Globe Valves with Dual Mount GK-X1 Actuators

## Wiring Diagrams

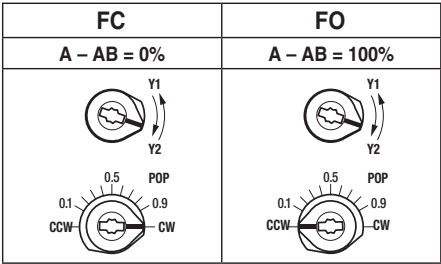


### Power-Off Position



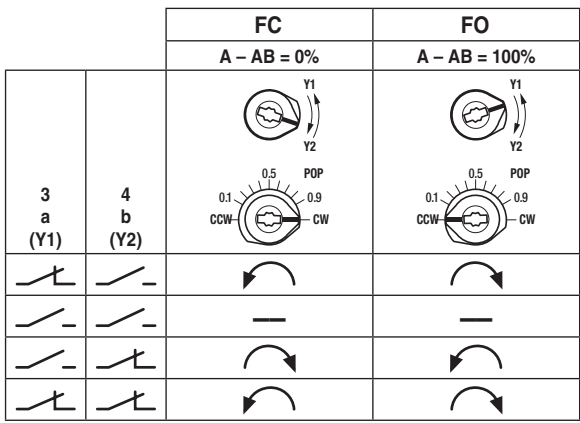
On/Off

24V AC/DC



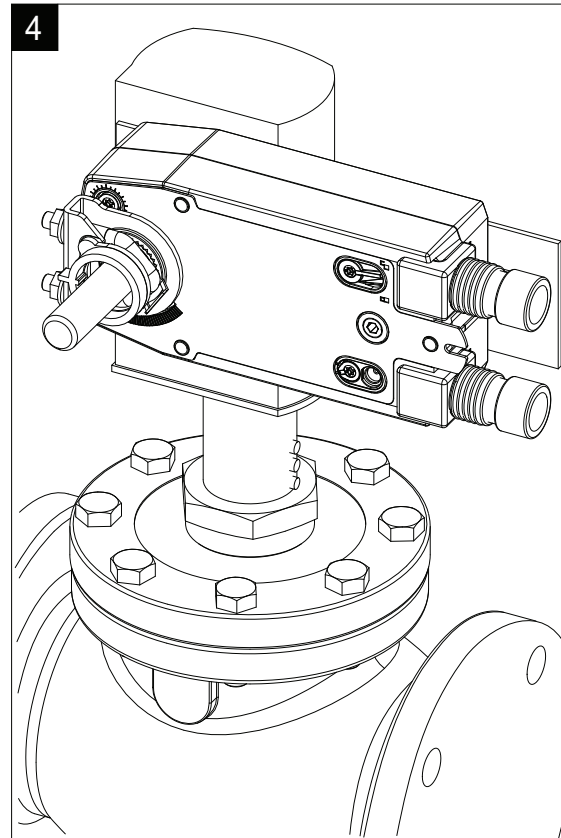
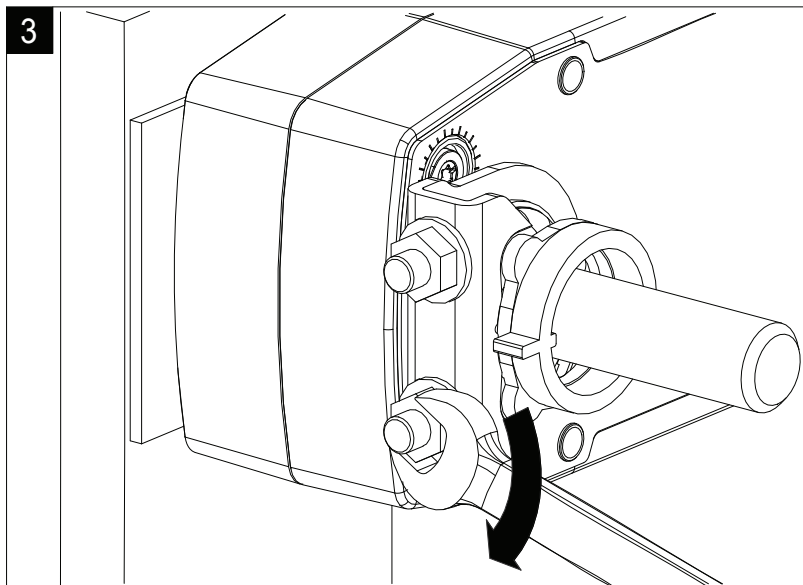
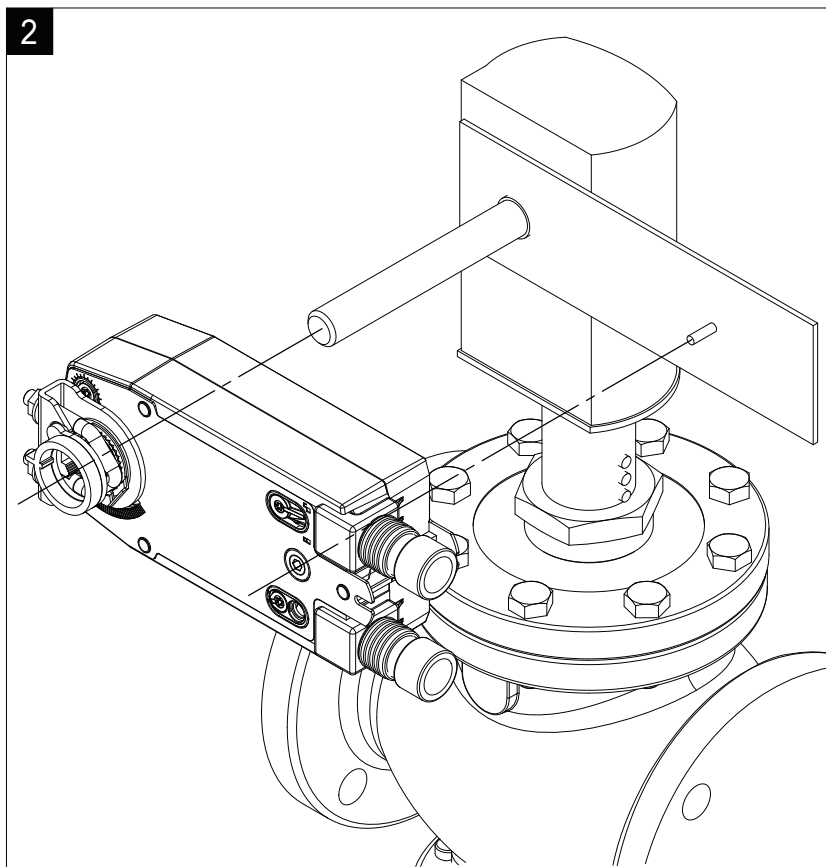
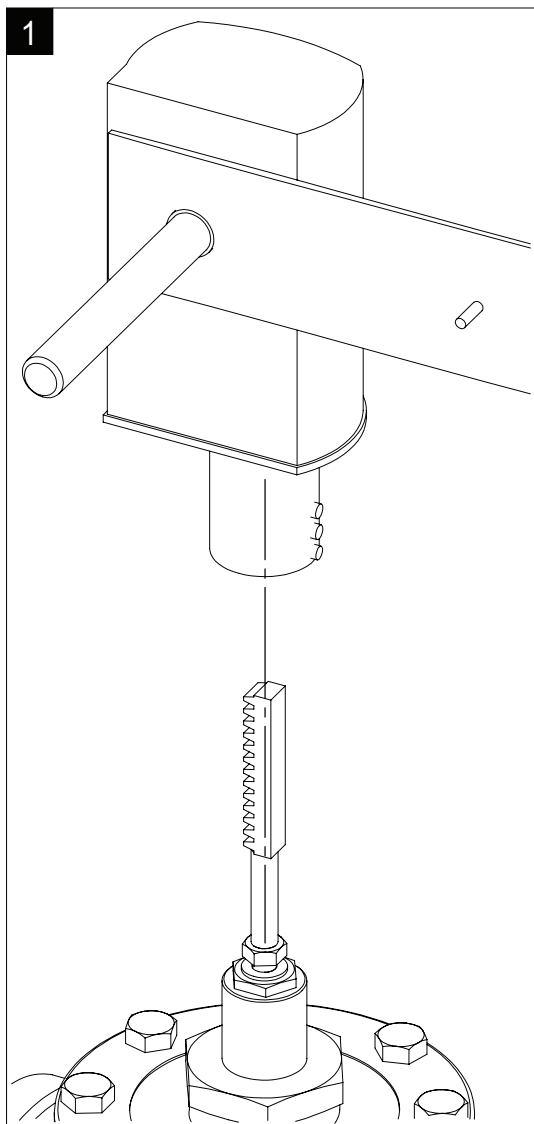
-SR/-MFT

24V AC/DC



Floating Point

24V AC/DC

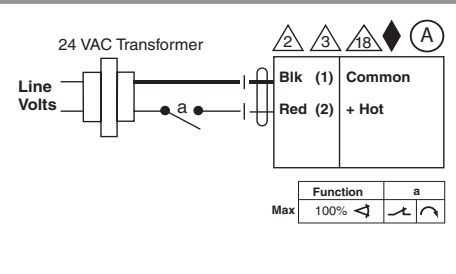


# G6/G7 Globe Valves with Single Mount AFX Actuators

## Wiring Diagrams

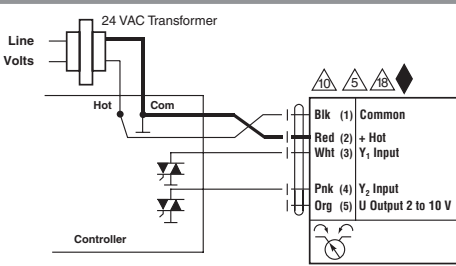


### Spring Return Actuator with On/Off, Floating Point and -SR

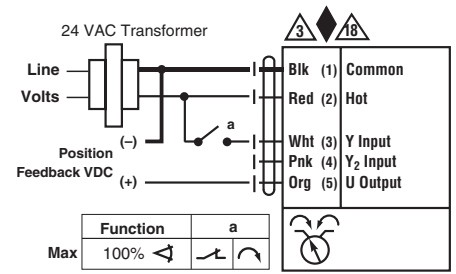


#### On/Off

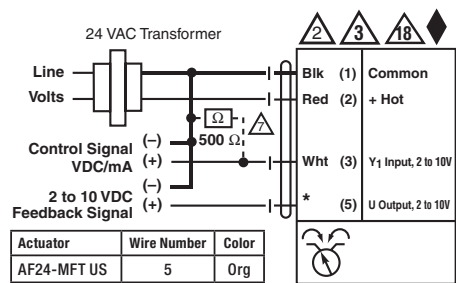
### Spring Return Actuator with MFT



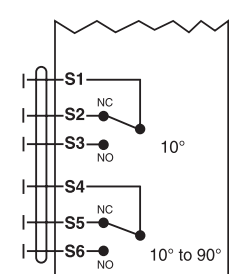
#### Triac Sink



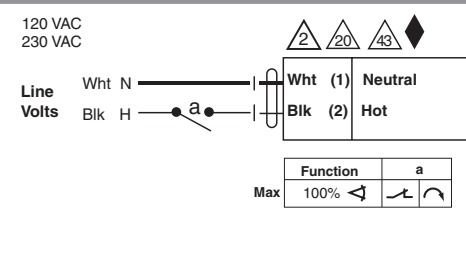
#### On/Off



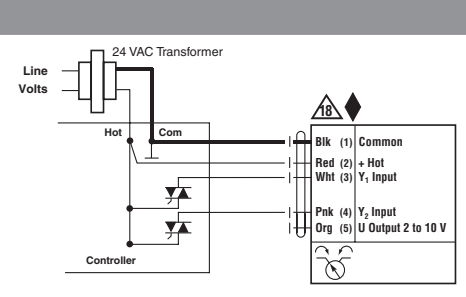
#### VDC / 4 to 20 mA



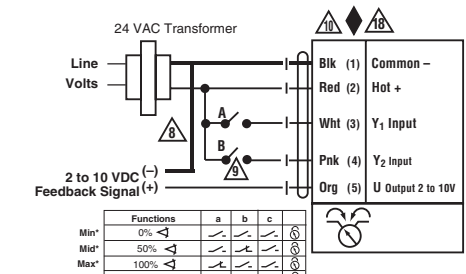
#### Auxiliary Switches



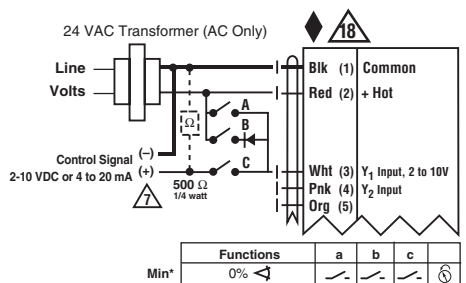
#### 24 VAC up to 240 VAC



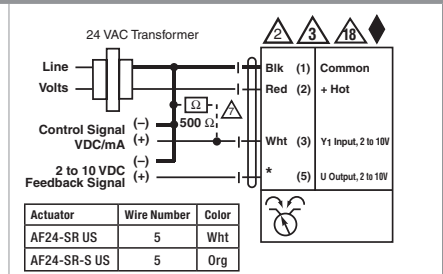
#### Triac Source



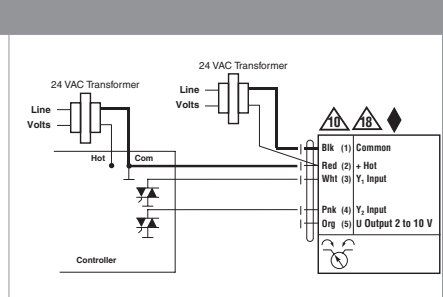
#### Floating Point



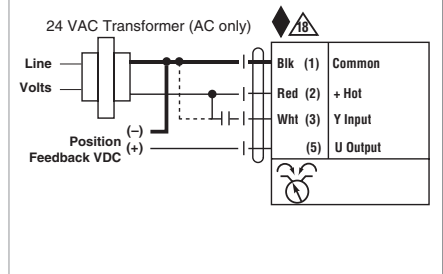
#### Override Control Min, Mid, Max Positions



#### VDC / 4 to 20 mA



#### Triac Sink with Separate Transformer



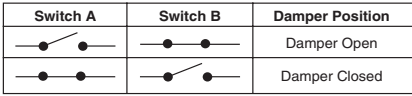
#### PWM

- Notes:**
- ◆ Meets cULus requirements without the need of an electrical ground connection.
  - Ⓐ Actuators with appliance cables are numbered.
  - ② Actuators may be connected in parallel. Power consumption and input impedance must be observed.
  - ③ Actuators may also be powered by 24 VDC.
  - ⑤ Only connect common to neg. (-) leg of control circuits.
  - ⚠ A 500 Ω resistor converts the 4 to 20 mA control signal to 2 to 10 VDC.
  - ⚠ Control signal may be pulsed from either the Hot (Source) or Common (Sink) 24 VAC line.
  - ⚠ Contact closures A & B also can be triacs. A & B should both be closed for the triac source and open for triac sink.
  - ⚠ For triac sink the Common connection from the actuator must be connected to the Hot connection of the controller. Position feedback cannot be used with a triac sink controller. The actuator internal common reference is not compatible.
  - ⚠ Actuators may be connected in parallel if not mechanically mounted to the same shaft. Power consumption and input impedance must be observed.
  - ⚠ Actuators with plenum rated cable do not have numbers on wires; use color codes instead.
  - ⚠ All 120 VAC, 230 VAC, and UP actuators use appliance rated cables.
  - ⚠ UP models use "L" instead of "H" on #2 wire.

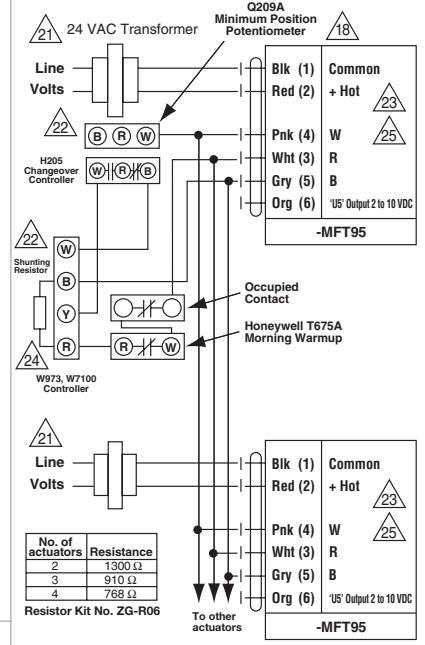
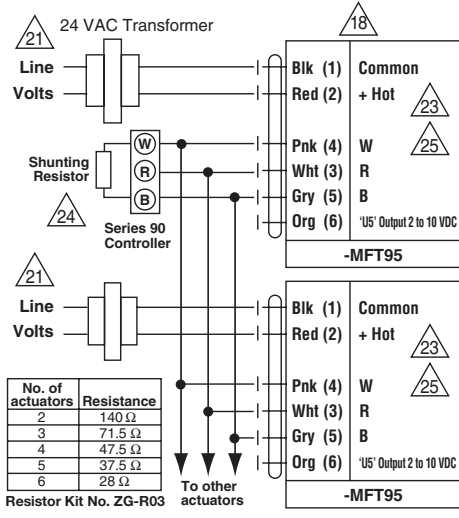
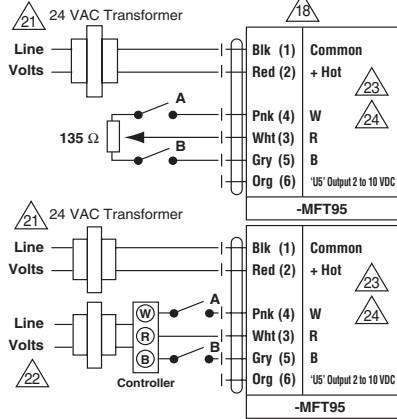
<b>GRN</b>	Green
<b>VER</b>	Verde
<b>ORG</b>	Orange
<b>ORJ</b>	Anaranjado
<b>ORG</b>	Orange
<b>ALR</b>	Alaranjado
<b>PNK</b>	Pink
<b>RSO</b>	Rosado
<b>ROA</b>	Rosa
<b>CRD</b>	Cor-de-ros
<b>WHT</b>	White
<b>BLA</b>	Bianco
<b>BLC</b>	Blanc
<b>BRN</b>	Branco
<b>RED</b>	Red
<b>ROJ</b>	Rojo
<b>ROU</b>	Rouge
<b>VER</b>	Vermelho
<b>BLK</b>	Black
<b>NEG</b>	Negro
<b>NOI</b>	Noir
<b>PRE</b>	Preto



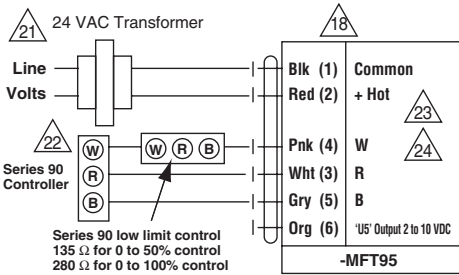
### MFT95



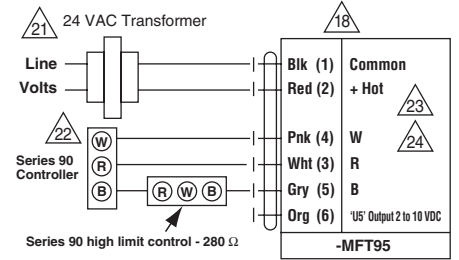
The direction of rotation switch is set so that the fail safe position and the position of the damper is closed with no signal at wire R.



### Override

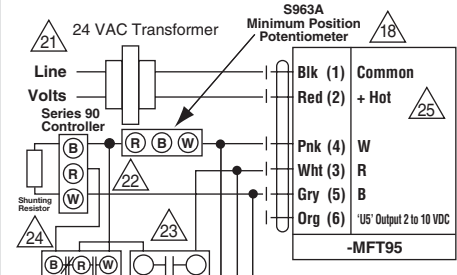


### Low Limit Control



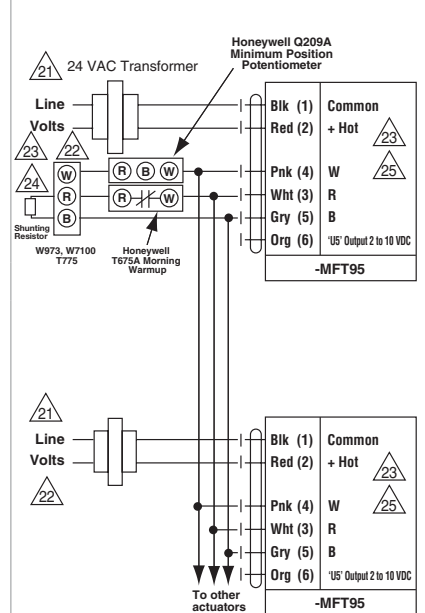
### High Limit Control

### Wiring multiple actuators to a Series 90 Controller



### Wiring Multiple Actuators to a Series 90 Controller using Minimum Position Potentiometer

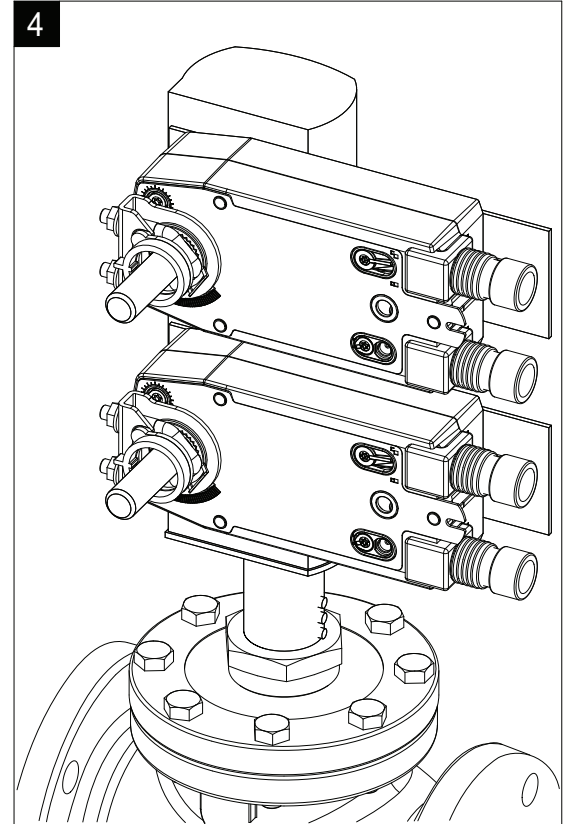
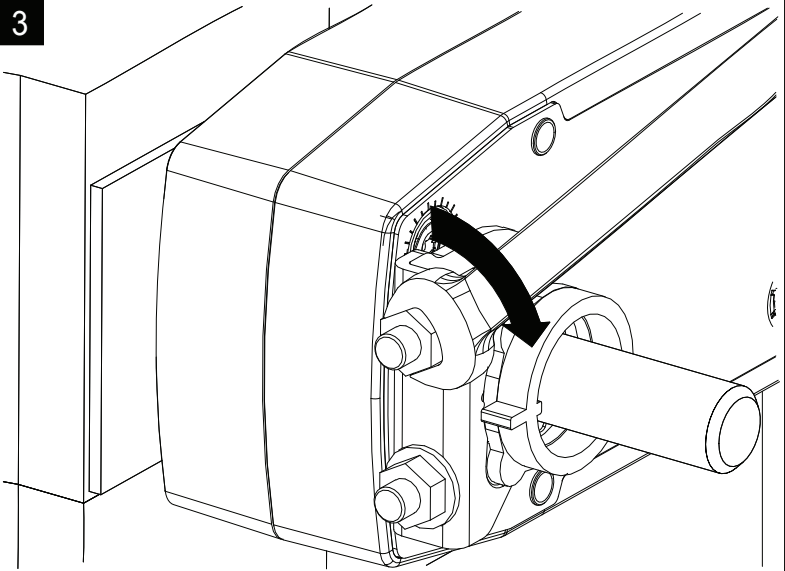
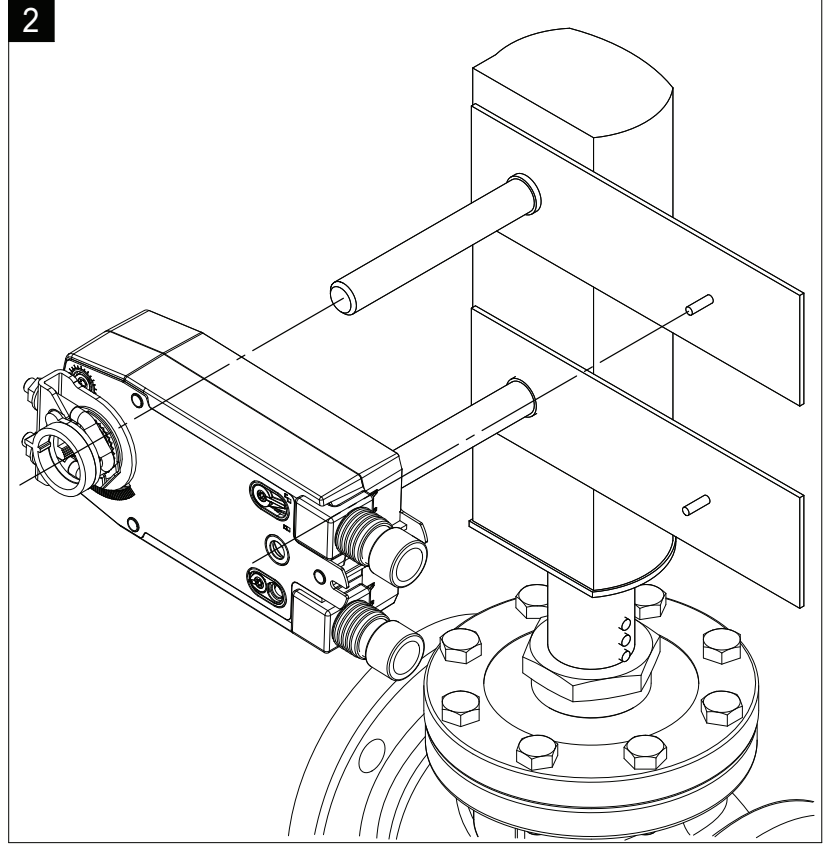
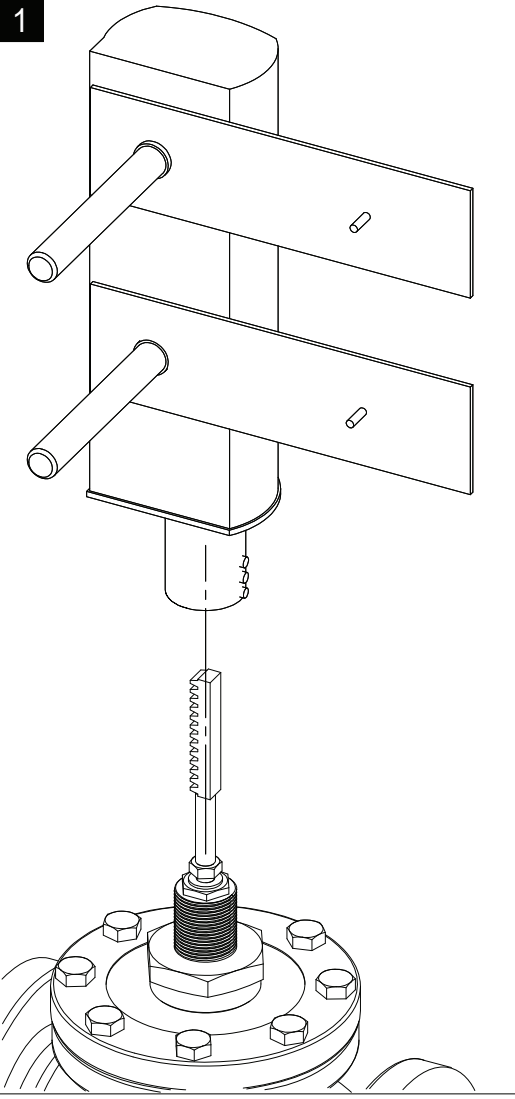
### Used with the W973 and W7100 controllers



### Notes:

- Actuators with plenum rated cable do not have numbers on wires; use color codes instead.
- Provide overload protection and disconnect as required.
- Actuators and controller must have separate transformers.
- Consult controller instruction data for more detailed information.
- Resistor value depend on the type of controller and the number of actuators. No resistor required for one actuator. Honeywell® resistor kits may be used.
- To reverse control rotation, use the reversing switch.

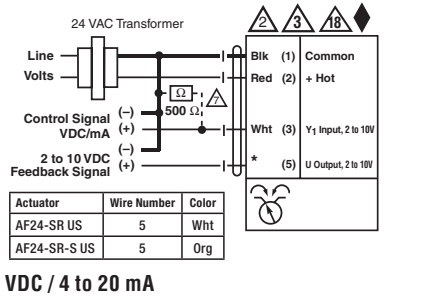
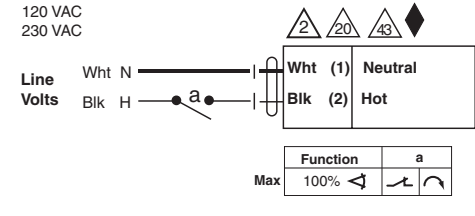
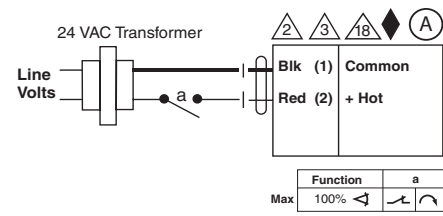
Slave	Slave	Esclavo	Esclavo	Esclavo
Master	Master	Amo	Maitre	Mestre
BRN	Brown	Marron	Brun	Marrom
BLU	Blue	Azul	Bleu	Azul
GRY	Gray	Gris	Gris	Cinzeno
ORG	Orange	Anaranjado	Orange	Alaranjado
PNK	Pink	Rosado	Rosa	Cor-de-ros
WHT	White	Bianco	Blanc	Branco
RED	Red	Rojo	Rouge	Vermelho



# G6/G7 Globe Valves with Dual Mount AFX Actuators

## Wiring Diagrams

### Spring Return Actuator with On/Off, Floating Point and -SR

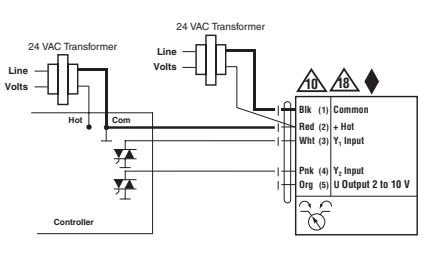
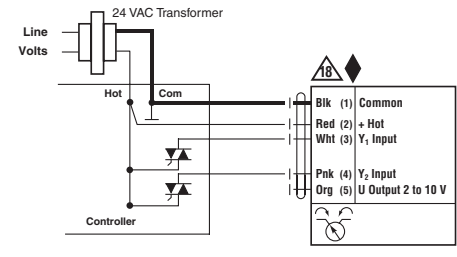
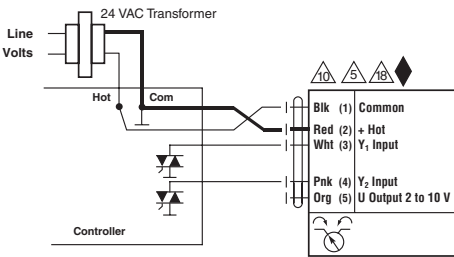


On/Off

24 VAC up to 240 VAC

VDC / 4 to 20 mA

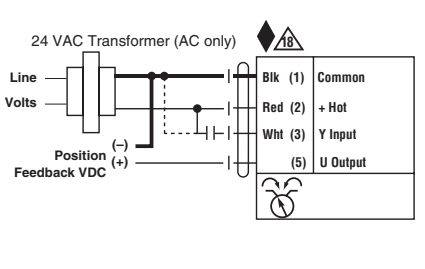
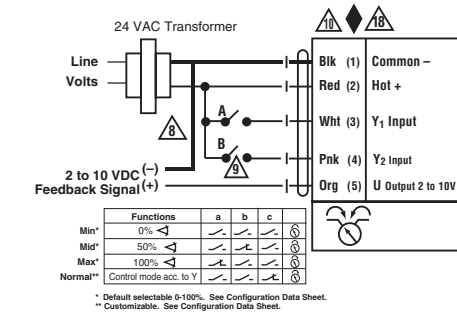
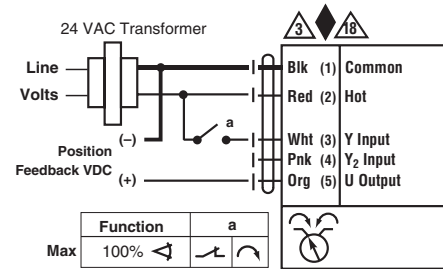
### Spring Return Actuator with MFT



Triac Sink

Triac Source

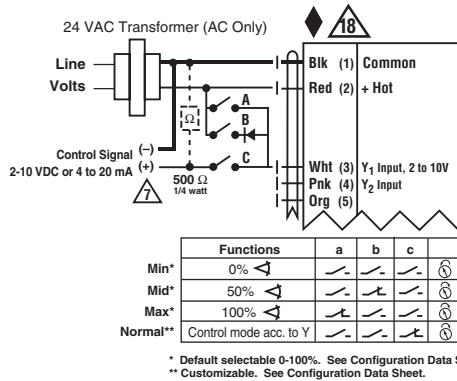
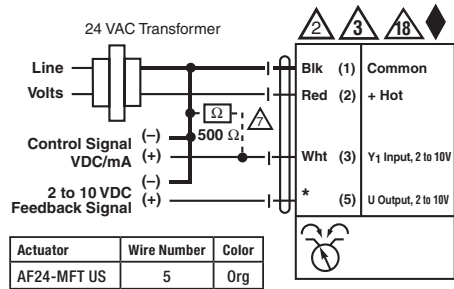
Triac Sink with Separate Transformer



On/Off

Floating Point

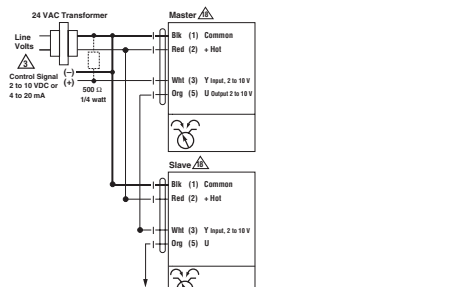
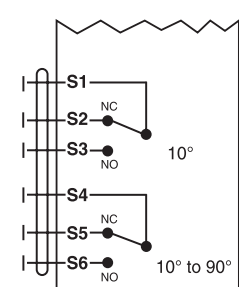
PWM



- Notes:**
- ◆ Meets cULus requirements without the need of an electrical ground connection.
  - Ⓐ Actuators with appliance cables are numbered.
  - Ⓐ Actuators may be connected in parallel. Power consumption and input impedance must be observed.
  - Ⓐ Actuators may also be powered by 24 VDC.
  - Ⓐ Only connect common to neg. (-) leg of control circuits.
  - Ⓐ A 500 Ω resistor converts the 4 to 20 mA control signal to 2 to 10 VDC.
  - Ⓐ Control signal may be pulsed from either the Hot (Source) or Common (Sink) 24 VAC line.
  - Ⓐ Contact closures A & B also can be triacs. A & B should both be closed for the triac source and open for triac sink.

VDC / 4 to 20 mA

Override Control Min, Mid, Max Positions



Auxiliary Switches

VDC / 4 to 20 mA (Master/Slave)

- Ⓐ For triac sink the Common connection from the actuator must be connected to the Hot connection of the controller. Position feedback cannot be used with a triac sink controller. The actuator internal common reference is not compatible.
- Ⓐ Actuators with plenum rated cable do not have numbers on wires; use color codes instead.
- Ⓐ All 120 VAC, 230 VAC, and UP actuators use appliance rated cables.
- Ⓐ UP models use "L" instead of "H" on #2 wire.

- GRN Green
- Verde Vert
- Verde Verde
- ORG Orange
- Anaranjado Orange
- ORNG Orange
- Alaranjado Alaranjado
- PNK Pink
- Rosado Rosa
- Cor-de ros Cor-de ros
- WHT White
- Blanco Blanc
- Branco Branco
- RED Red
- Rojo Rouge
- Vermelho Vermelho
- BLK Black
- Negro Noir
- Preto Preto

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