

# Table of Contents

## CAV Com Pack® On/Off

|  |   |
|--|---|
| OMNI® TYPE-27 BALL VALVE WITH SERIES 19 COM PACK® ON/OFF ELECTRIC ACTUATOR   | 2 |
| OMNI® TYPE-27 BALL VALVE WITH SERIES 19 COM PACK® FAILSAFE ELECTRIC ACTUATOR | 4 |

## SAV Smart Pack® On/Off

|  |    |
|--|----|
| TYPE-21/21a BALL VALVE WITH SERIES 19 SMART ON/OFF ELECTRIC ACTUATOR   | 6  |
| TYPE-23 MULTIPORT® BALL VALVE WITH SERIES 19 SMART                     | 8  |
| TYPE-57P BUTTERFLY VALVE WITH SERIES 19 SMART ON/OFF ELECTRIC ACTUATOR | 10 |
| SERIES 19 SMART ON/OFF ELECTRIC ACTUATOR                               | 12 |

## SAV Smart Pack® Failsafe

|   |    |
|---|----|
| TYPE-21/21a BALL VALVE WITH SMART FAILSAFE ELECTRIC ACTUATOR        | 14 |
| TYPE-23 MULTIPORT® BALL VALVE WITH SMART FAILSAFE ELECTRIC ACTUATOR | 16 |
| TYPE-57P BUTTERFLY VALVE WITH SMART FAILSAFE ELECTRIC ACTUATOR      | 18 |
| SERIES 19 SMART FAILSAFE ELECTRIC ACTUATOR                          | 20 |

## SAV Smart Pack® Modulating

|  |    |
|--|----|
| TYPE-21/21a BALL VALVE WITH SERIES 19 SMART MODULATING ELECTRIC ACTUATOR   | 22 |
| TYPE-21a SST BALL VALVE WITH SERIES 19 SMART MODULATING ELECTRIC ACTUATOR  | 24 |
| TYPE-23 MULTIPORT® BALL VALVE WITH SMART MODULATING ELECTRIC ACTUATOR      | 26 |
| TYPE-57P BUTTERFLY VALVE WITH SERIES 19 SMART MODULATING ELECTRIC ACTUATOR | 28 |
| SERIES 19 SMART MODULATING ELECTRIC ACTUATOR                               | 30 |

## SAV Smart Pack® Modulating Failsafe

|  |    |
|--|----|
| TYPE-21/21a BALL VALVE WITH SERIES 19 SMART MODULATING FAILSAFE ELECTRIC ACTUATOR        | 32 |
| TYPE-23 MULTIPORT® BALL VALVE WITH SERIES 19 SMART MODULATING FAILSAFE ELECTRIC ACTUATOR | 34 |
| TYPE-57P BUTTERFLY VALVE WITH SERIES 19 SMART MODULATING FAILSAFE ELECTRIC ACTUATOR      | 36 |
| SERIES 19 SMART MODULATING FAILSAFE ELECTRIC ACTUATOR                                    | 38 |



# OMNI® TYPE-27 BALL VALVE WITH SERIES 19 COM PACK® ON/OFF ELECTRIC ACTUATOR

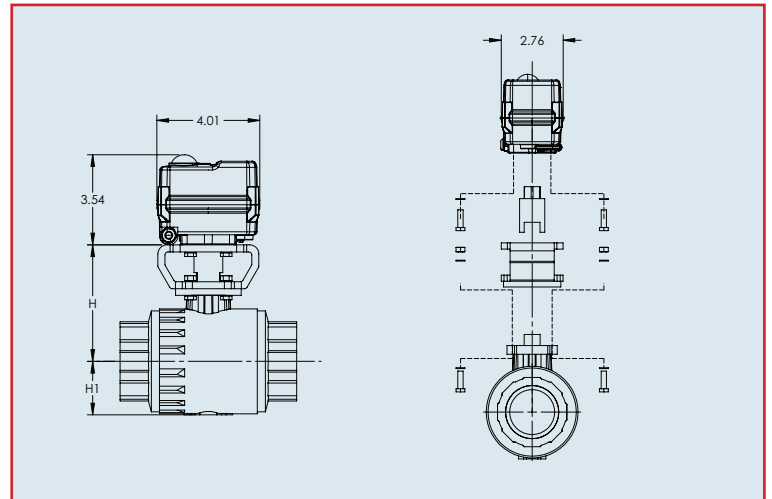


## Specifications

|                          |                                 |
|--------------------------|---------------------------------|
| <b>Motor Type:</b>       | Reversing, brushless DC         |
| <b>Sizes:</b>            | C20 for 3/8" – 2" valves        |
| <b>Torque:</b>           | 177 in-lbs                      |
| <b>Voltage:</b>          | 95 VAC to 265 VAC multi-voltage |
| <b>Amp Draw:</b>         | 0.18 Amp                        |
| <b>Max Ambient Temp:</b> | 150° F                          |
| <b>Enclosure:</b>        | NEMA 4X                         |

## Standard Features (Sizes 1/2" – 2")

- **Compact:** Compact and lightweight actuated valve package that is ideal for OEMs
- **Multi-voltage:** 95 VAC to 265 VAC or 24 VAC/VDC
- **Motor:** Reversing, brushless DC motor
- **Gear Train:** Permanently lubricated solid gears
- **Corrosion Resistant Enclosure:** NEMA 4X ABS enclosure with stainless steel trim
- **ISO mounting configuration**
- **Electrical Connection:** NEMA 4X cable gland with two-meter cable
- **Position Indication:** Highly visible dome position indicator
- **LED Position Indication:** RED closed, GREEN open
- **Manual Override:** Manually cycle valve via electroless nickel-plated hex key
- **Auxiliary Contacts:** Open and closed dry contacts rated 0.1 Amp @ 250 VAC, 0.5 Amp @ 30 VDC
- **Space Heater:** A two-watt heater is internally wired to limit condensation
- **QR Code:** Links to user manual; includes wiring schematic
- **CE Compliant:** All actuators are CE labeled
- **75% Duty Cycle:** Extended duty cycles are ideal for high cycling applications



## Dimensions (inch)

| Size  | 3/8" | 1/2" | 3/4" | 1"   | 1-1/4" | 1-1/2" | 2"   |
|-------|------|------|------|------|--------|--------|------|
| H     | 2.85 | 2.85 | 3.13 | 3.40 | 3.76   | 4.09   | 4.54 |
| H1    | 0.81 | 0.81 | 1.00 | 1.18 | 1.38   | 1.66   | 2.09 |
| Model | C20  | C20  | C20  | C20  | C20    | C20    | C20  |

## Weight (lbs)

| Size   | 3/8" | 1/2" | 3/4" | 1"  | 1-1/4" | 1-1/2" | 2"  |
|--------|------|------|------|-----|--------|--------|-----|
| Weight | 2.5  | 2.5  | 2.6  | 2.7 | 3.2    | 3.8    | 4.9 |

## Engineering Data

| Model | Torque (in-lbs) | 95 - 265 VAC |            | 24 VAC/VDC |            | 12 VDC   |            | Cycle time per 90 degrees (seconds)* |
|-------|-----------------|--------------|------------|------------|------------|----------|------------|--------------------------------------|
|       |                 | Amp Draw     | Duty Cycle | Amp Draw   | Duty Cycle | Amp Draw | Duty Cycle |                                      |
| C20   | 177             | 0.18         | 75%        | 0.96       | 75%        | 1.5      | 75%        | 10                                   |

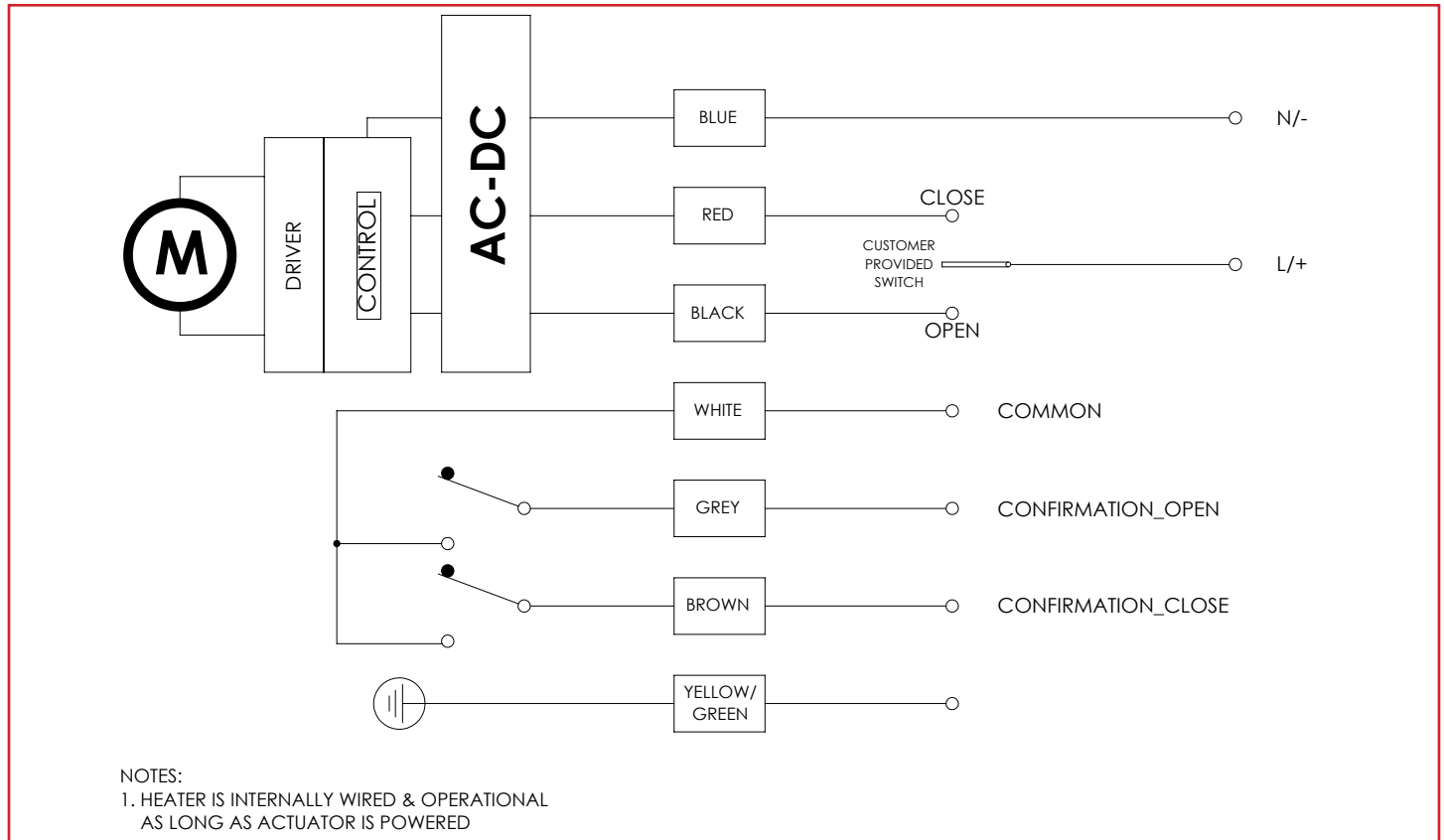
Amp draw is considered locked rotor

\*Cycle times are approximate

Duty cycle shown for ambient temp (73° F)

# OMNI® TYPE-27 BALL VALVE WITH SERIES 19 COM PACK® ON/OFF ELECTRIC ACTUATOR

## Wiring Diagram



## Sample Specifications

All Series 19 CAV on/off electric actuators shall have a brushless DC motor that accepts multiple voltages, permanently lubricated steel gears, NEMA 4X ABS enclosure with stainless steel trim, visual beacon indication, ISO 5211 valve mounting platform, manual override, and be CE compliant. Standard features shall include a heater, one set of dry contacts for PLC confirmation, an LED indicator, and a QR code that links to its user manual and wiring schematic.

## Series 19 Actuator Selection Guide

| Valve                       | Valve Size      | C20 | S20 | S50 | S110 |
|-----------------------------|-----------------|-----|-----|-----|------|
| Omni® Type-27 Ball Valves   | 3/8" - 2"       | X   |     |     |      |
| Type-21/21a SST Ball Valves | 1/2" - 2"       |     | X   |     |      |
|                             | 2-1/2" - 3"     |     |     | X   |      |
|                             | 4"              |     |     |     | X    |
| Type-23 Multiport® Valves   | 1/2" - 2"       |     | X   |     |      |
|                             | 3"              |     |     | X   |      |
|                             | 4"              |     |     |     | X    |
| Type-57P Butterfly Valves   | 1-1/2" - 2-1/2" |     | X   |     |      |
|                             | 3" - 4"         |     |     | X   |      |
|                             | 5" - 6"         |     |     |     | X    |



# OMNI® TYPE-27 BALL VALVE WITH SERIES 19 COM PACK® FAILSAFE ELECTRIC ACTUATOR



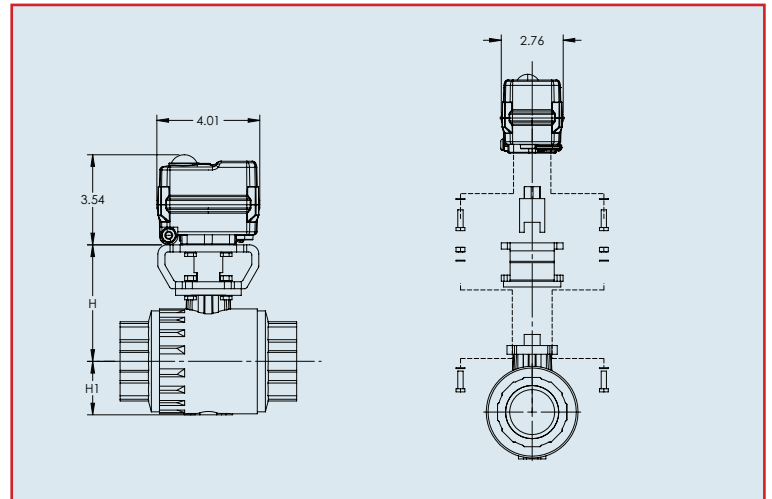
## Standard Features (Sizes 1/2" – 2")

- **Compact:** Perfect for OEM and skid manufacturers with a footprint of 2.75" x 4" up to a 2" ball valve
- **Multi-voltage:** 95 VAC to 265 VAC or 24 VAC/VDC
- **Motor:** Reversing, brushless DC motor
- **Capacitor Discharge System:** A capacitor is used in place of batteries for failsafe mode
- **Fail Position:** Fail close is standard; fail as is, or fail open are options
- **Gear Train:** Permanently lubricated steel gears
- **Corrosion Resistant Enclosure:** NEMA 4X ABS enclosure with stainless steel trim
- **ISO** mounting configuration
- **Electrical Connection:** NEMA 4X cable gland with two-meter cable
- **Position Indication:** Highly visible beacon position indicator
- **LED Position Indication:** RED closed, GREEN open
- **Manual Override:** Manually cycle valve via electroless nickel-plated hex key
- **Auxiliary Contacts:** Open and closed dry contacts rated 0.1 Amp @ 250 VAC, 0.5 Amp @ 30 VDC
- **Space Heater:** Internally wired to limit condensation
- **CE Compliant:** All actuators are CE labeled and compliant
- **75% Duty Cycle:** Extended duty cycle is ideal for high cycling applications
- **QR Code:** Links to user manual; includes wiring schematic
- **Simple Wiring:** Wiring technique is the same for all voltage units



## Specifications

|                          |                                 |
|--------------------------|---------------------------------|
| <b>Motor Type:</b>       | Reversing, brushless DC         |
| <b>Sizes:</b>            | C20 for 3/8" – 2" valves        |
| <b>Torque:</b>           | 177 in-lbs                      |
| <b>Voltage:</b>          | 95 VAC to 265 VAC multi-voltage |
| <b>Amp Draw:</b>         | 0.18 Amp                        |
| <b>Max Ambient Temp:</b> | 150° F                          |
| <b>Enclosure:</b>        | NEMA 4X                         |



## Dimensions (inch)

| Size  | 3/8" | 1/2" | 3/4" | 1"   | 1-1/4" | 1-1/2" | 2"   |
|-------|------|------|------|------|--------|--------|------|
| H     | 2.85 | 2.85 | 3.13 | 3.40 | 3.76   | 4.09   | 4.54 |
| H1    | 0.81 | 0.81 | 1.00 | 1.18 | 1.38   | 1.66   | 2.09 |
| Model | C20  | C20  | C20  | C20  | C20    | C20    | C20  |

## Weight (lbs)

| Size   | 3/8" | 1/2" | 3/4" | 1"  | 1-1/4" | 1-1/2" | 2"  |
|--------|------|------|------|-----|--------|--------|-----|
| Weight | 2.5  | 2.5  | 2.6  | 2.7 | 3.2    | 3.8    | 4.9 |

## Engineering Data

| Model | Torque (in-lbs) | 95 - 265 VAC |            | 24 VAC/VDC |            | 12 VDC   |            | Cycle time per 90 degrees (seconds)* |
|-------|-----------------|--------------|------------|------------|------------|----------|------------|--------------------------------------|
|       |                 | Amp Draw     | Duty Cycle | Amp Draw   | Duty Cycle | Amp Draw | Duty Cycle |                                      |
| C20   | 177             | 0.18         | 75%        | 0.96       | 75%        | 1.5      | 75%        | 10                                   |

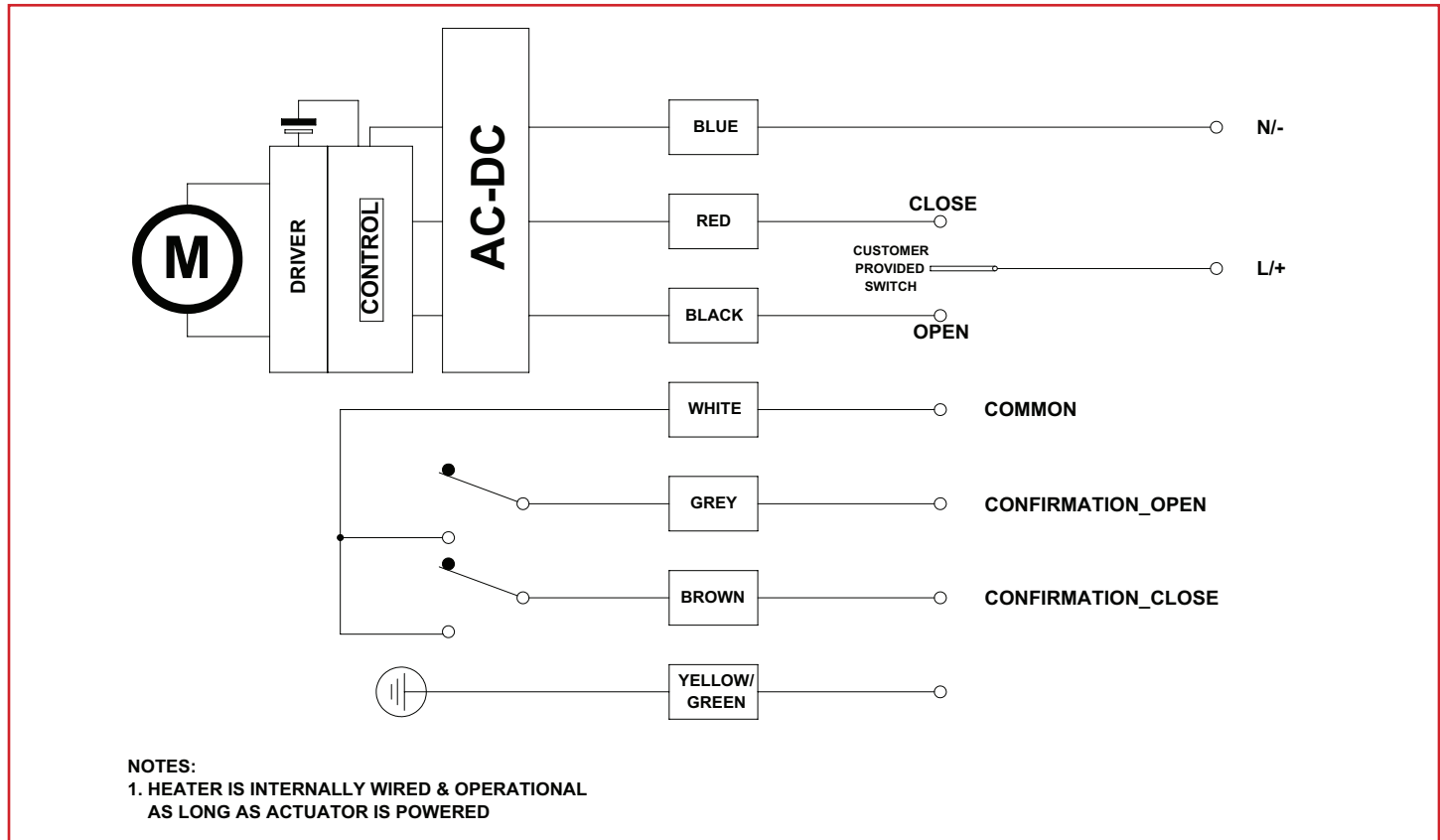
Amp draw is considered locked rotor

\*Cycle times are approximate

Duty cycle shown for ambient temp (73° F)

# OMNI® TYPE-27 BALL VALVE WITH SERIES 19 COM PACK® FAILSAFE ELECTRIC ACTUATOR

## Wiring Diagram



## Sample Specifications

All Series 19 CAV failsafe electric actuators shall have a brushless DC motor that accepts multiple voltages, permanently lubricated steel gears, NEMA 4X ABS enclosure with stainless steel trim, visual beacon indication, ISO 5211 valve mounting platform, manual override, and be CE compliant. Actuator shall be of capacitor discharge design with no batteries, and be standard as fail close upon loss of supply power. Standard features shall include a heater, one set of dry contacts for PLC confirmation, LED position indicator, and a QR code that links to its user manual and wiring schematic.

## Series 19 Actuator Selection Guide

| Valve                       | Valve Size      | C20 | S20 | S50 | S110 |
|-----------------------------|-----------------|-----|-----|-----|------|
| Omni® Type-27 Ball Valves   | 3/8" - 2"       | X   |     |     |      |
| Type-21/21a SST Ball Valves | 1/2" - 2"       |     | X   |     |      |
|                             | 2-1/2" - 3"     |     |     | X   |      |
|                             | 4"              |     |     |     | X    |
| Type-23 Multiport® Valves   | 1/2" - 2"       |     | X   |     |      |
|                             | 3"              |     |     | X   |      |
|                             | 4"              |     |     |     | X    |
| Type-57P Butterfly Valves   | 1-1/2" - 2-1/2" |     | X   |     |      |
|                             | 3" - 4"         |     |     | X   |      |
|                             | 5" - 6"         |     |     |     | X    |





# TYPE-21/21a BALL VALVE WITH SERIES 19 **SMART** ON/OFF ELECTRIC ACTUATOR

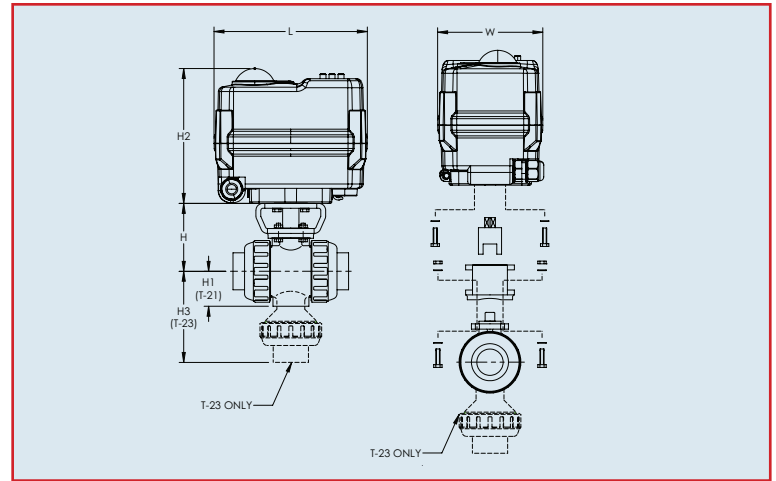


## Specifications

|                          |   |
|--------------------------|---|
| <b>Motor Type:</b>       | Reversing, brushless DC   |
| <b>Sizes:</b>            | S20 for 1/2" – 2" ball valves<br>S50 for 2-1/2" – 3" ball valves<br>S110 for 4" ball valves |
| <b>Torque:</b>           | 177 in-lbs to 973 in-lbs  |
| <b>Voltage:</b>          | 95 VAC to 265 VAC multi-voltage   |
| <b>Amp Draw:</b>         | 0.18 Amp for S20<br>0.24 Amp for S50<br>0.84 Amp for S110                                   |
| <b>Max Ambient Temp:</b> | 150° F  |

## Standard Features (Sizes 1/2" – 4")

- **Compact:** Perfect for OEM and skid manufacturers
- **OLED Screen:** Displays valve position, alarms (such as an over torque condition)
- **Push Buttons:** Used to calibrate/adjust end positions, local controls
- **Multi-voltage:** 95 VAC to 265 VAC or 24 VAC/VDC
- **Motor:** Reversing, brushless DC motor
- **Gear Train:** Permanently lubricated steel gears
- **Corrosion Resistant Enclosure:** NEMA 4X ABS enclosure with stainless steel trim
- **ISO mounting configuration**
- **Electrical Connection:** NEMA 4X cable gland with two-meter cable
- **Position Indication:** Highly visible beacon position indicator
- **LED Position Indication:** **RED** closed, **GREEN** open, **BLUE** fault
- **Manual Override:** Manually cycle valve via electroless nickel-plated hex key
- **Auxiliary Contacts:** Open and closed dry contacts rated 0.1 Amp @ 250 VAC, 0.5 Amp @ 30 VDC
- **Alarm Contacts:** Dry contacts rated 0.1 Amp @ 250 VAC, 0.5 Amp @ 30 VDC for alarm status (over torque, as an example)
- **QR Code:** Links to user manual; includes wiring schematic
- **Space Heater:** Internally wired to limit condensation
- **CE Compliant:** All actuators are CE labeled and compliant
- **75% Duty Cycle:** Extended duty cycle is ideal for high cycling applications
- **Output Torque:** Series 19 electric actuators have an output torque range from 177 in-lbs to 973 in-lbs
- **Simple Wiring:** Wiring technique is the same for all voltage units
- **Local Controls:** Used with OLED and push buttons, a user can locally open or close units via password



## Dimensions (inch)

| Size  | 1/2" | 3/4" | 1"   | 1-1/4" | 1-1/2" | 2"   | 2-1/2" | 3"   | 4"   |
|-------|------|------|------|--------|--------|------|--------|------|------|
| L     | 4.01 | 4.01 | 4.01 | 4.01   | 4.01   | 4.01 | 5.12   | 5.12 | 6.69 |
| W     | 2.76 | 2.76 | 2.76 | 2.76   | 2.76   | 2.76 | 4.33   | 4.33 | 4.52 |
| H     | 2.76 | 3.01 | 3.29 | 3.64   | 3.98   | 4.43 | 5.12   | 5.47 | 6.97 |
| H1    | 1.14 | 1.38 | 1.54 | 1.85   | 2.17   | 2.60 | 2.83   | 3.35 | 4.33 |
| H2    | 3.54 | 3.54 | 3.54 | 3.54   | 3.54   | 3.54 | 4.72   | 4.72 | 4.80 |
| Model | S20  | S20  | S20  | S20    | S20    | S20  | S50    | S50  | S110 |

## Weight (lbs)

| Size   | 1/2" | 3/4" | 1"  | 1-1/4" | 1-1/2" | 2"  | 2-1/2" | 3"   | 4"   |
|--------|------|------|-----|--------|--------|-----|--------|------|------|
| Weight | 2.7  | 2.9  | 3.4 | 3.8    | 4.9    | 6.7 | 10.2   | 13.7 | 29.6 |

## Engineering Data

| Model | Torque (in-lbs) | 95-265 VAC |            | 24 VAC/VDC |            | Cycle time per 90 degrees (seconds)* |
|-------|-----------------|------------|------------|------------|------------|--------------------------------------|
|       |                 | Amp Draw   | Duty Cycle | Amp Draw   | Duty Cycle |                                      |
| S20   | 177             | 0.18       | 75%        | 0.96       | 75%        | 10                                   |
| S50   | 442             | 0.24       | 75%        | 1.20       | 75%        | 10                                   |
| S110  | 973             | 0.84       | 75%        | 4.80       | 75%        | 10                                   |

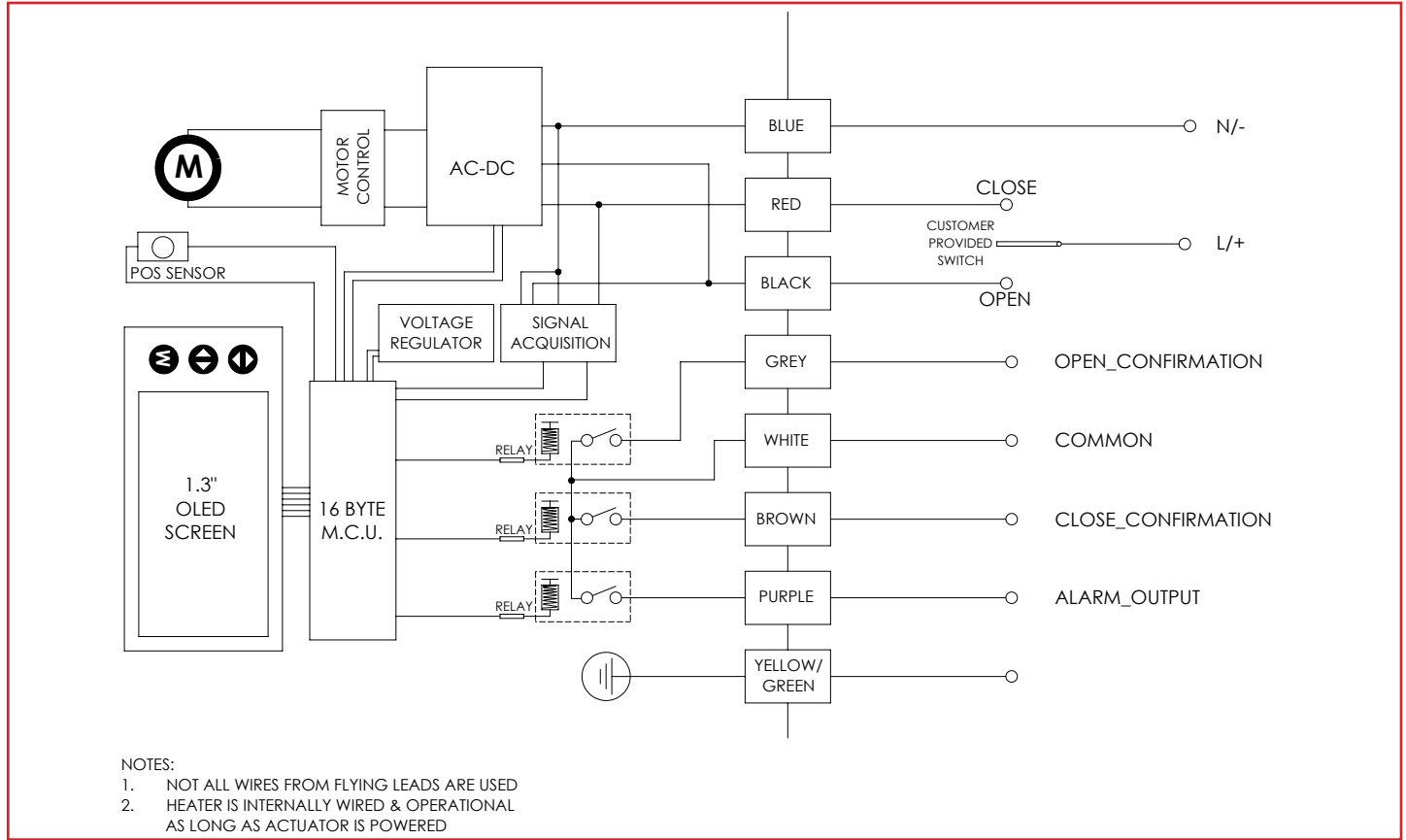
Amp draw is considered locked rotor

\*Cycle times are approximate

Duty cycle shown for ambient temp [73° F]

# TYPE-21/21a BALL VALVE WITH SERIES 19 **SMART** ON/OFF ELECTRIC ACTUATOR

## Wiring Diagram



## Sample Specifications

All Series 19 SAV smart on/off electric actuators shall have a brushless DC motor that accepts multiple voltages, permanently lubricated steel gears, NEMA 4X ABS enclosure with stainless steel trim, visual beacon indication, ISO 5211 valve mounting platform, manual override, and be CE compliant. Standard features shall include a heater, one set of dry contacts for PLC confirmation, one set of dry contacts for alarm reporting, LED indicator for position and alarm conditions, an OLED screen with push buttons, local controls, and a QR code that links to its user manual and wiring schematic.

## Series 19 Actuator Selection Guide

| Valve                       | Valve Size      | C20 | S20 | S50 | S110 |
|-----------------------------|-----------------|-----|-----|-----|------|
| Omni® Type-27 Ball Valves   | 3/8" - 2"       | X   |     |     |      |
| Type-21/21a SST Ball Valves | 1/2" - 2"       |     | X   |     |      |
|                             | 2-1/2" - 3"     |     |     | X   |      |
|                             | 4"              |     |     |     | X    |
| Type-23 Multiport® Valves   | 1/2" - 2"       |     | X   |     |      |
|                             | 3"              |     |     | X   |      |
|                             | 4"              |     |     |     | X    |
| Type-57P Butterfly Valves   | 1-1/2" - 2-1/2" |     | X   |     |      |
|                             | 3" - 4"         |     |     | X   |      |
|                             | 5" - 6"         |     |     |     | X    |



# TYPE-23 MULTIPORT® BALL VALVE WITH SERIES 19 **SMART** ON/OFF ELECTRIC ACTUATOR

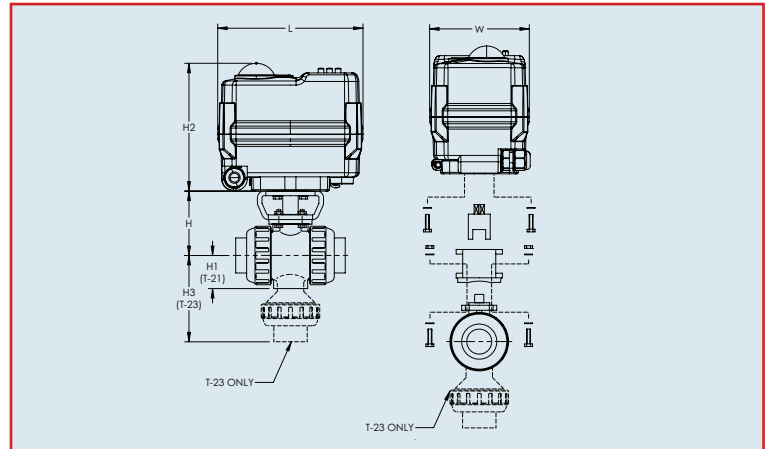


## Standard Features (1/2" – 4")

- **Compact:** Perfect for OEM and skid manufacturers
- **OLED Screen:** Displays valve position, alarms (such as an over torque condition)
- **Push Buttons:** Used to calibrate/adjust end positions, local controls
- **Multi-voltage:** 95 VAC to 265 VAC or 24 VAC/VDC
- **Motor:** Reversing, brushless DC
- **Gear Train:** Permanently lubricated steel gears
- **Corrosion Resistant Enclosure:** NEMA 4X ABS enclosure with stainless steel trim
- **ISO mounting configuration**
- **Electrical Connection:** NEMA 4X cable gland with two-meter cable
- **Position Indication:** Highly visible beacon position indicator
- **LED Position Indication:** **RED** closed, **GREEN** open, **BLUE** fault
- **Manual Override:** Manually cycle valve via electroless nickel-plated hex key
- **Auxiliary Contacts:** Open and closed dry contacts rated 0.1 Amp @ 250 VAC, 0.5 Amp @ 30 VDC
- **Alarm Contacts:** Dry contacts rated 0.1 Amp @ 250 VAC, 0.5 Amp @ 30 VDC for alarm status (over torque, as an example)
- **Space Heater:** Internally wired to limit condensation
- **CE Compliant:** All actuators are CE labeled and compliant
- **75% Duty Cycle:** Extended duty cycle is ideal for high cycling applications
- **Output Torque:** Series 19 electric actuators have an output torque range from 177 in-lbs to 973 in-lbs
- **QR Code:** Links to user manual; includes wiring schematic
- **Simple Wiring:** Wiring technique is the same for all voltage units
- **Local Controls:** Used with OLED and push buttons, a user can locally open or close units via password

## Specifications

|                          |  |
|--------------------------|--|
| <b>Motor Type:</b>       | Reversing, brushless DC  |
| <b>Sizes:</b>            | S20 for 1/2" – 2" 3-way ball valves<br>S50 for 3" three-way ball valves<br>S110 for 4" three-way ball valves |
| <b>Torque:</b>           | 177 in-lbs to 973 in-lbs   |
| <b>Voltage:</b>          | 95 VAC to 265 VAC multi-voltage  |
| <b>Amp Draw:</b>         | 0.18 Amp for S20<br>0.24 Amp for S50<br>0.84 Amp for S110  |
| <b>Max Ambient Temp:</b> | 150° F   |



## Dimensions (inch)

| Size  | 1/2" | 3/4" | 1"   | 1-1/2" | 2"   | 3"   | 4"   |
|-------|------|------|------|--------|------|------|------|
| L     | 4.01 | 4.01 | 4.01 | 4.01   | 4.01 | 5.12 | 6.69 |
| W     | 2.76 | 2.76 | 2.76 | 2.76   | 2.76 | 4.33 | 4.52 |
| H     | 2.76 | 3.01 | 3.29 | 3.98   | 4.43 | 5.47 | 6.97 |
| H1    | 1.14 | 1.38 | 1.54 | 2.17   | 2.60 | 3.35 | 4.33 |
| H2    | 3.54 | 3.54 | 3.54 | 3.54   | 3.54 | 4.72 | 4.80 |
| Model | S20  | S20  | S20  | S20    | S20  | S50  | S110 |

## Weight (lbs)

| Size   | 1/2" | 3/4" | 1"  | 1-1/2" | 2"  | 3"   | 4"   |
|--------|------|------|-----|--------|-----|------|------|
| Weight | 2.9  | 3.4  | 4.1 | 6.48   | 8.1 | 19.4 | 40.9 |

## Engineering Data

| Model | Torque<br>(in-lbs) | 95-265 VAC  |               | 24 VAC/VDC  |               | Cycle time<br>per 180<br>degrees<br>(seconds) * |
|-------|--------------------|-------------|---------------|-------------|---------------|---|
|       |                    | Amp<br>Draw | Duty<br>Cycle | Amp<br>Draw | Duty<br>Cycle |   |
| S20   | 177                | 0.18        | 75%           | 0.96        | 75%           | 20  |
| S50   | 442                | 0.24        | 75%           | 1.20        | 75%           | 20  |
| S110  | 973                | 0.84        | 75%           | 4.80        | 75%           | 20  |

Amp draw is considered locked rotor

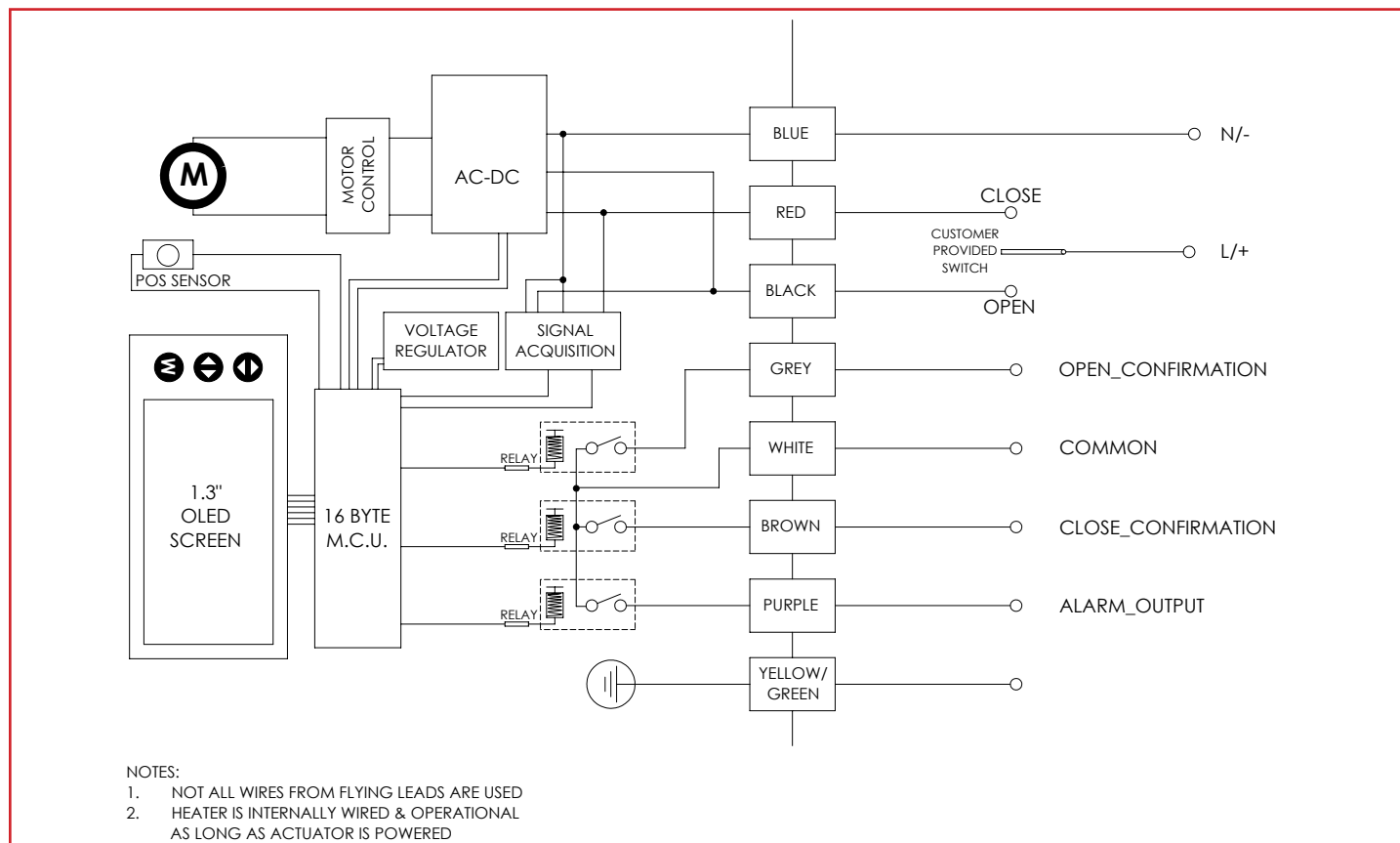
\*Cycle times are approximate

Duty cycle shown for ambient temp (73° F)



# TYPE-23 MULTIPORT® BALL VALVE WITH SERIES 19 SMART ON/OFF ELECTRIC ACTUATOR

## Wiring Diagram



## Sample Specifications

All Series 19 SAV smart on/off electric actuators shall have a brushless DC motor that accepts multiple voltages, permanently lubricated steel gears, NEMA 4X ABS enclosure with stainless steel trim, visual beacon indication, ISO 5211 valve mounting platform, manual override, and be CE compliant. Standard features shall include a heater, one set of dry contacts for PLC confirmation, one set of dry contacts for alarm reporting, LED indicator for position and alarm conditions, an OLED screen with push buttons, local controls, and a QR code that links to its user manual and wiring schematic.

## Series 19 Actuator Selection Guide

| Valve                       | Valve Size      | C20 | S20 | S50 | S110 |
|-----------------------------|-----------------|-----|-----|-----|------|
| Omni® Type-27 Ball Valves   | 3/8" - 2"       | X   |     |     |      |
| Type-21/21a SST Ball Valves | 1/2" - 2"       |     | X   |     |      |
|                             | 2-1/2" - 3"     |     |     | X   |      |
|                             | 4"              |     |     |     | X    |
| Type-23 Multiport® Valves   | 1/2" - 2"       |     | X   |     |      |
|                             | 3"              |     |     | X   |      |
|                             | 4"              |     |     |     | X    |
| Type-57P Butterfly Valves   | 1-1/2" - 2-1/2" |     | X   |     |      |
|                             | 3" - 4"         |     |     | X   |      |
|                             | 5" - 6"         |     |     |     | X    |



# TYPE-57P BUTTERFLY VALVE WITH SERIES 19 **SMART** ON/OFF ELECTRIC ACTUATOR

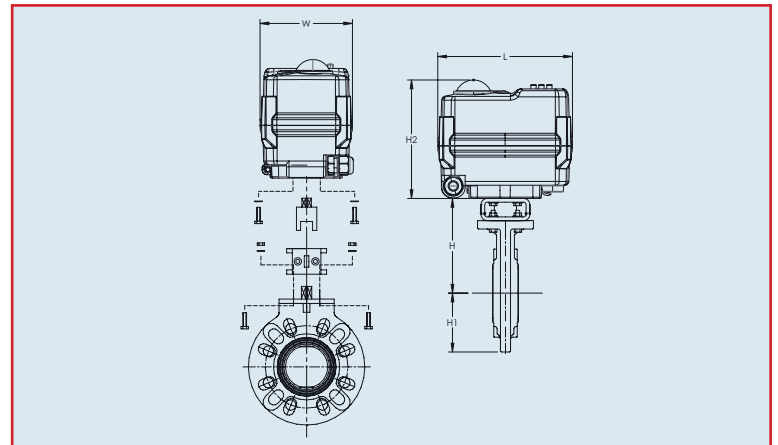


## Standard Features (Sizes 1-1/2" – 6")

- **Compact:** Perfect for OEM and skid manufacturers
- **OLED Screen:** Displays valve position, alarms (such as an over torque condition)
- **Push Buttons:** Used to calibrate/adjust end positions, local controls
- **Multi-voltage:** 95 VAC to 265 VAC or 24 VAC/VDC
- **Motor:** Reversing, brushless DC motor
- **Gear Train:** Permanently lubricated steel gears
- **Corrosion Resistant Enclosure:** NEMA 4X ABS enclosure with stainless steel trim
- **ISO** mounting configuration
- **Electrical Connection:** NEMA 4X cable gland with two-meter cable
- **Position Indication:** Highly visible beacon position indicator
- **LED Position Indication:** **RED** closed, **GREEN** open, **BLUE** fault
- **Manual Override:** Manually cycle valve via electroless nickel-plated hex key
- **Auxiliary Contacts:** Open and closed dry contacts rated 0.1 Amp @ 250 VAC, 0.5 Amp @ 30 VDC
- **Alarm Contacts:** Dry contacts rated 0.1 Amp @ 250 VAC, 0.5 Amp @ 30 VDC for alarm status (over torque, as an example)
- **Space Heater:** Internally wired to limit condensation
- **CE Compliant:** All actuators are CE labeled and compliant
- **75% Duty Cycle:** Extended duty cycle is ideal for high cycling applications
- **Output Torque:** Series 19 electric actuators have an output torque range from 177 in-lbs to 973 in-lbs
- **QR Code:** Links to user manual; includes wiring schematic
- **Simple Wiring:** Wiring technique is the same for all voltage units
- **Local Controls:** Used with OLED and push buttons, a user can locally open or close units via password

## Specifications

|                          |   |
|--------------------------|---|
| <b>Motor Type:</b>       | Reversing, brushless DC   |
| <b>Sizes:</b>            | S20 for 1-1/2" – 2-1/2" butterfly valves<br>S50 for 3" – 4" butterfly valves<br>S110 for 5" – 6" butterfly valves |
| <b>Torque:</b>           | 177 in-lbs to 973 in-lbs  |
| <b>Voltage:</b>          | 95 VAC to 265 VAC multi-voltage   |
| <b>Amp Draw:</b>         | 0.18 Amp for S20<br>0.24 Amp for S50<br>0.84 Amp for S110   |
| <b>Max Ambient Temp:</b> | 150° F  |



## Dimensions (inch)

| Size  | 1-1/2" | 2"   | 2-1/2" | 3"   | 4"   | 5"   | 6"   |
|-------|--------|------|--------|------|------|------|------|
| H     | 5.51   | 5.75 | 6.18   | 6.46 | 7.16 | 8.46 | 8.97 |
| H1    | 2.95   | 3.27 | 3.66   | 3.94 | 4.53 | 5.00 | 5.63 |
| H2    | 3.54   | 3.54 | 3.54   | 4.72 | 4.72 | 4.80 | 4.80 |
| L     | 4.01   | 4.01 | 4.01   | 5.12 | 5.12 | 6.69 | 6.69 |
| W     | 2.76   | 2.76 | 2.76   | 4.33 | 4.33 | 4.52 | 4.52 |
| Model | S20    | S20  | S20    | S50  | S50  | S110 | S110 |

## Weight (lbs)

| Size   | 1-1/2" | 2"  | 2-1/2" | 3"  | 4"  | 5"   | 6"   |
|--------|--------|-----|--------|-----|-----|------|------|
| Weight | 5.2    | 5.6 | 6.1    | 8.2 | 9.5 | 15.9 | 17.9 |

## Engineering Data

| Model | Torque (in-lbs) | 95-265 VAC |            | 24 VAC/VDC |            | Cycle time per 90 degrees [seconds]* |
|-------|-----------------|------------|------------|------------|------------|--------------------------------------|
|       |                 | Amp Draw   | Duty Cycle | Amp Draw   | Duty Cycle |                                      |
| S20   | 177             | 0.18       | 75%        | 0.96       | 75%        | 10                                   |
| S50   | 442             | 0.24       | 75%        | 1.20       | 75%        | 10                                   |
| S110  | 973             | 0.84       | 75%        | 4.80       | 75%        | 10                                   |

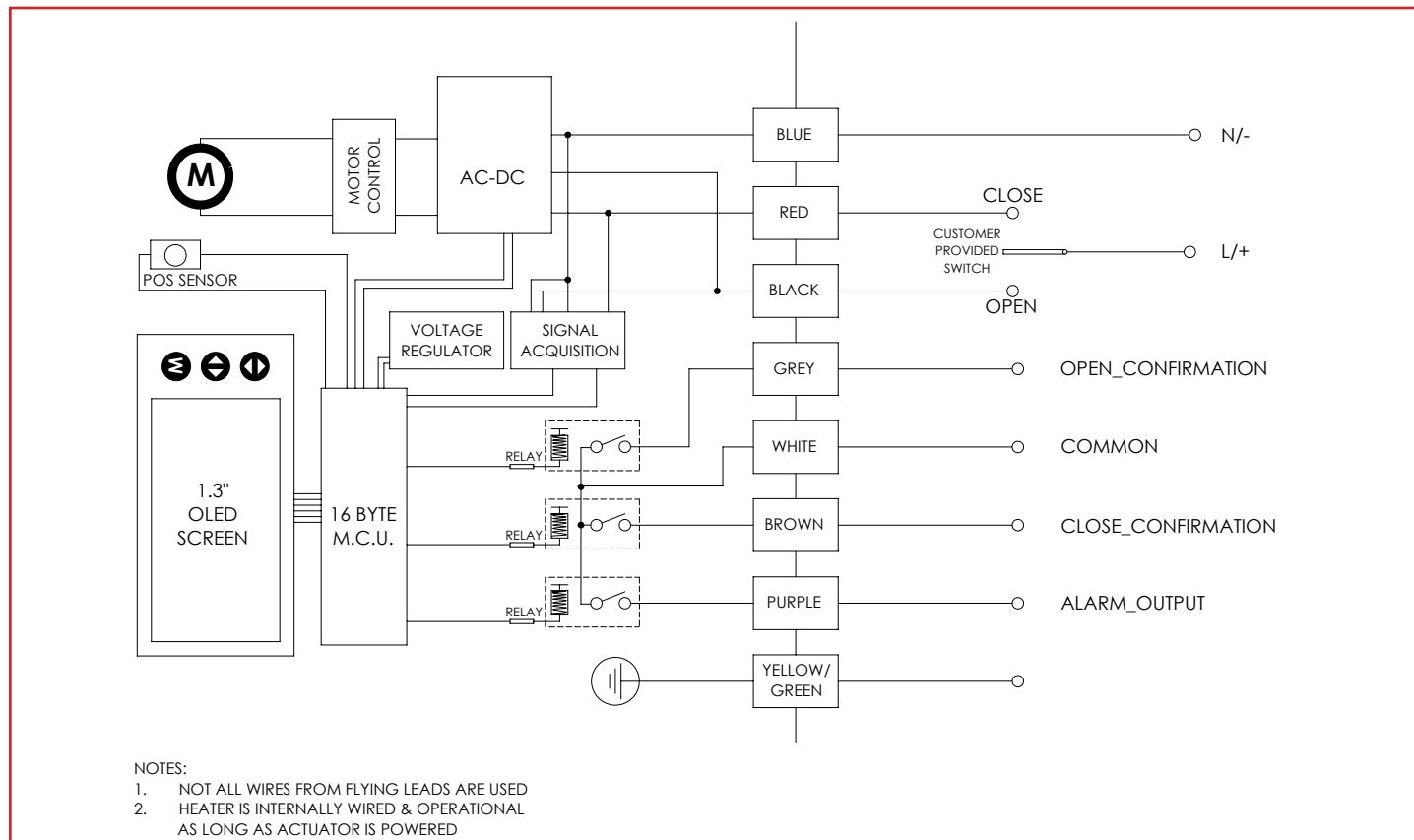
Amp draw is considered locked rotor

\*Cycle times are approximate

Duty cycle shown for ambient temp (73° F)

# TYPE-57P BUTTERFLY VALVE WITH SERIES 19 **SMART** ON/OFF ELECTRIC ACTUATOR

## Wiring Diagram



## Sample Specification

All Series 19 SAV smart on/off electric actuators shall have a brushless DC motor that accepts multiple voltages, permanently lubricated steel gears, NEMA 4X ABS enclosure with stainless steel trim, visual beacon indication, ISO 5211 valve mounting platform, manual override, and be CE compliant. Standard features shall include a heater, one set of dry contacts for PLC confirmation, one set of dry contacts for alarm reporting, LED indicator for position and alarm conditions, an OLED screen with push buttons, local controls, and a QR code that links to its user manual and wiring schematic.

## Series 19 Actuator Selection Guide

| Valve                       | Valve Size      | C20 | S20 | S50 | S110 |
|-----------------------------|-----------------|-----|-----|-----|------|
| Omni® Type-27 Ball Valves   | 3/8" - 2"       | X   |     |     |      |
| Type-21/21a SST Ball Valves | 1/2" - 2"       |     | X   |     |      |
|                             | 2-1/2" - 3"     |     |     | X   |      |
|                             | 4"              |     |     |     | X    |
| Type-23 Multiport® Valves   | 1/2" - 2"       |     | X   |     |      |
|                             | 3"              |     |     | X   |      |
|                             | 4"              |     |     |     | X    |
| Type-57P Butterfly Valves   | 1-1/2" - 2-1/2" |     | X   |     |      |
|                             | 3" - 4"         |     |     | X   |      |
|                             | 5" - 6"         |     |     |     | X    |



# SERIES 19 **SMART** ON/OFF ELECTRIC ACTUATOR

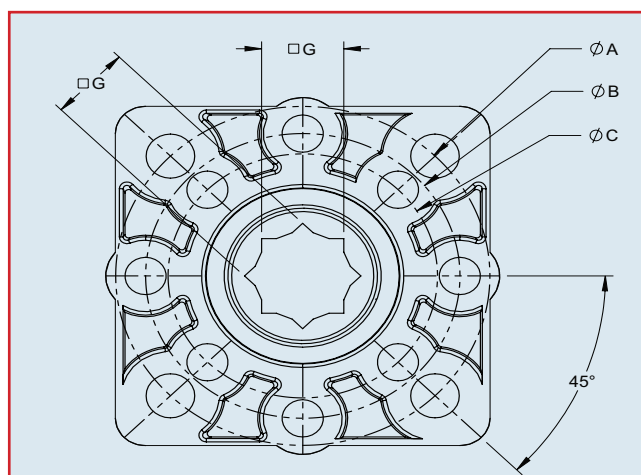


## Specifications

|                               |   |
|-------------------------------|---|
| <b>Sizes:</b>                 | S20, S50, S110  |
| <b>Torque:</b>                | 177 in-lbs to 973 in-lbs                                  |
| <b>Voltage:</b>               | 95 VAC to 265 VAC<br>1 Ph 50/60 Hz                        |
| <b>Amp Draw:</b>              | 0.18 Amp for S20<br>0.24 Amp for S50<br>0.84 Amp for S110 |
| <b>Electrical Connection:</b> | NEMA 4X cable gland with two-meter color-coded cable      |
| <b>Max Ambient Temp:</b>      | 150° F  |
| <b>Cycle Time:</b>            | Per 90 degrees: 10 seconds                                |
| <b>Enclosure:</b>             | NEMA 4X   |

## Standard Features (All Sizes)

- **Compact:** Perfect for OEM and skid manufacturers
- **OLED Screen:** Displays valve position, alarms (such as an over torque condition)
- **Push Buttons:** Used to calibrate/adjust end positions, local controls
- **Multi-voltage:** 95 VAC to 265 VAC or 24 VAC/VDC
- **Motor:** Reversing, brushless DC motor
- **Gear Train:** Permanently lubricated steel gears
- **Corrosion Resistant Enclosure:** NEMA 4X ABS enclosure with stainless steel trim
- **ISO mounting configuration**
- **Electrical Connection:** NEMA 4X cable gland with two-meter cable
- **Position Indication:** Highly visible beacon position indicator
- **LED Position Indication:** **RED** closed, **GREEN** open, **BLUE** fault
- **Manual Override:** Manually cycle valve via electroless nickel-plated hex key
- **Auxiliary Contacts:** Open and closed dry contacts rated 0.1Amp @ 250 VAC, 0.5 Amp @ 30 VDC
- **Alarm Contacts:** Dry contacts rated 0.1 Amp @ 250 VAC, 0.5 Amp @ 30 VDC for alarm status (over torque, as an example)
- **Space Heater:** Internally wired to limit condensation
- **CE Compliant:** All actuators are CE labeled and compliant
- **75% Duty Cycle:** Extended duty cycle is ideal for high cycling applications
- **Output Torque:** Series 19 electric actuators have an output torque range from 177 in-lbs to 973 in-lbs
- **QR Code:** Links to user manual; includes wiring schematic
- **Simple Wiring:** Wiring technique is the same for all voltage units
- **Local Controls:** Used with OLED and push buttons, a user can locally open or close units via password



## Output Dimensions

| Size | A        | B        | C        | G    |
|------|----------|----------|----------|------|
| S20  | F05 (M6) | F04 (M5) | F03 (M5) | 14MM |
| S50  | F07 (M8) | F05 (M6) | N/A      | 14MM |
| S110 | F07 (M8) | F05 (M6) | N/A      | 17MM |

## Weight (lbs)

| Size   | S20 | S50 | S110 |
|--------|-----|-----|------|
| Weight | 1.7 | 1.7 | 4.8  |

## Engineering Data

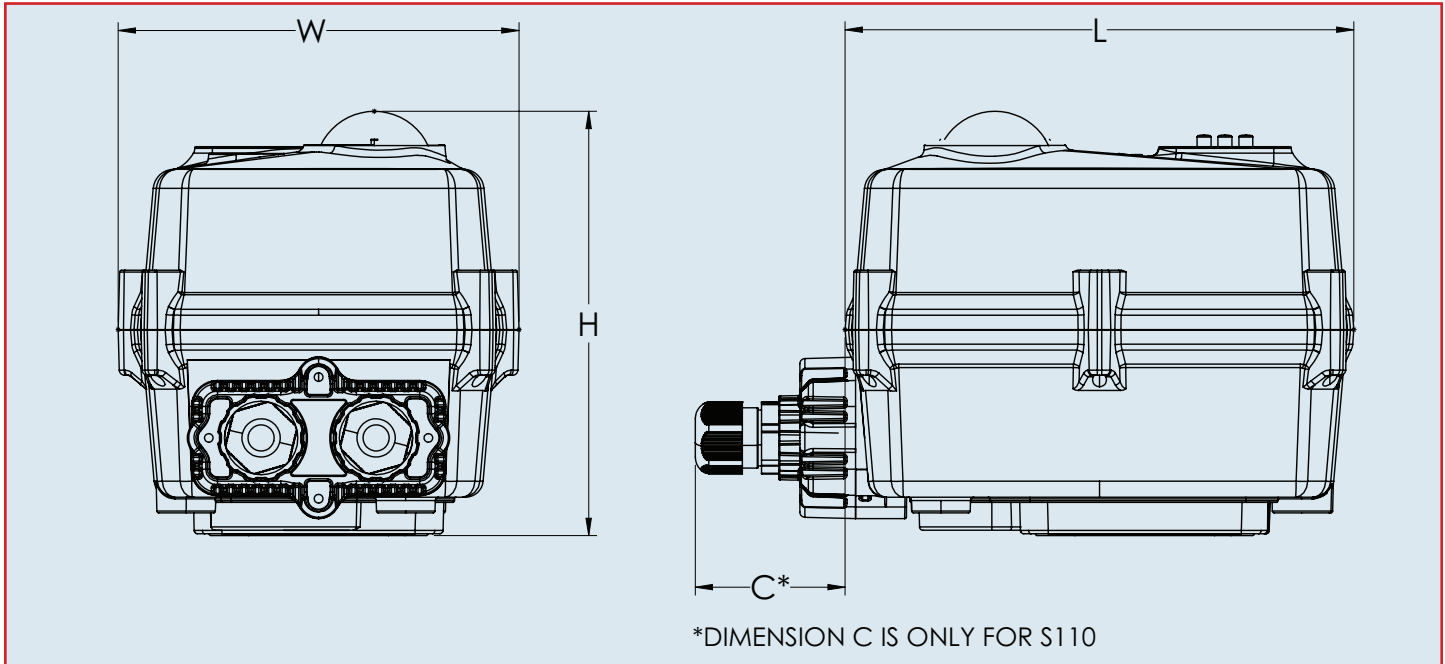
| Model | Torque (in-lbs) | 95-265 VAC |            | 24 VAC/VDC |            | Cycle time per 90 degrees [seconds]* |
|-------|-----------------|------------|------------|------------|------------|--------------------------------------|
|       |                 | Amp Draw   | Duty Cycle | Amp Draw   | Duty Cycle |                                      |
| S20   | 177             | 0.18       | 75%        | 0.96       | 75%        | 10                                   |
| S50   | 442             | 0.24       | 75%        | 1.20       | 75%        | 10                                   |
| S110  | 973             | 0.84       | 75%        | 4.80       | 75%        | 10                                   |

Amp draw is considered locked rotor

\*Cycle times are approximate

Duty cycle shown for ambient temp [73° F]

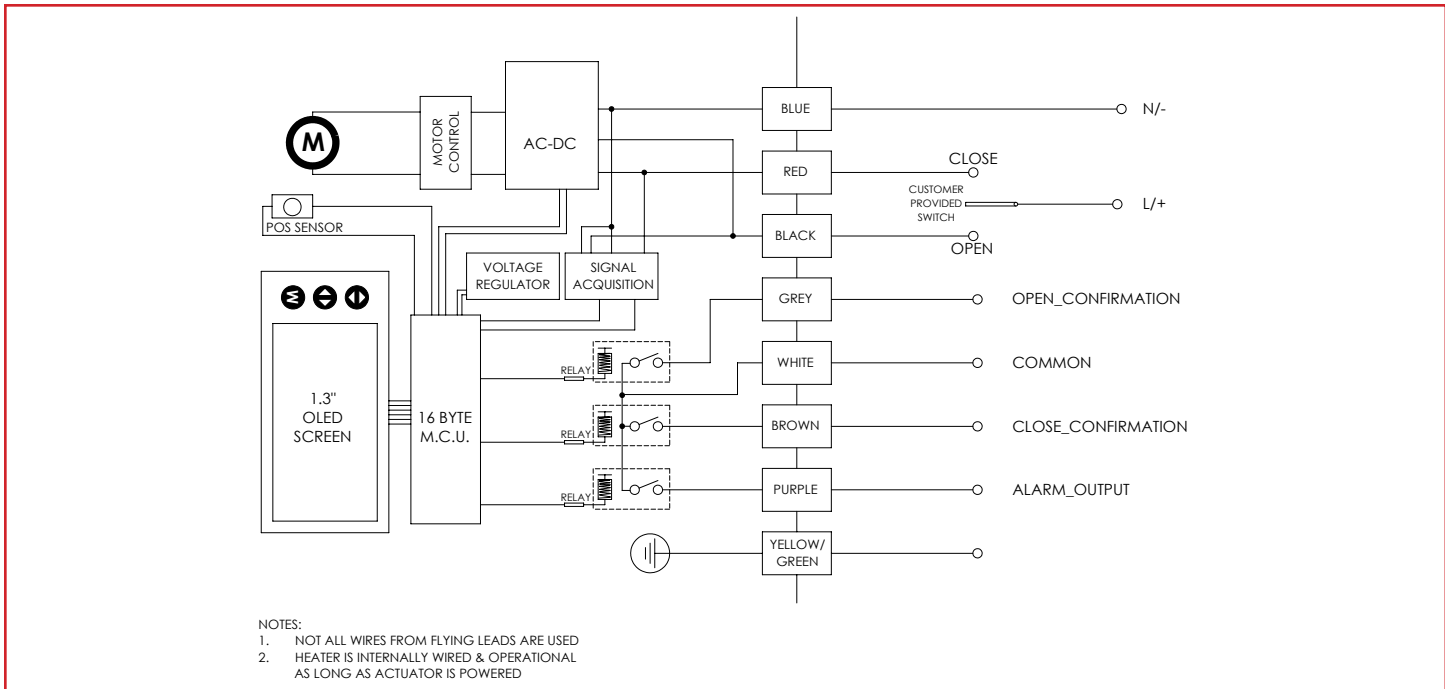
# SERIES 19 **SMART** ON/OFF ELECTRIC ACTUATOR



## Dimensions (inch)

| Size | L    | W    | H    | C    |
|------|------|------|------|------|
| S20  | 4.01 | 2.76 | 3.54 | N/A  |
| S50  | 5.13 | 4.33 | 4.72 | N/A  |
| S110 | 5.75 | 4.53 | 4.80 | 1.69 |

## Wiring Diagram



## Sample Specification

All Series 19 SAV smart on/off electric actuators shall have a brushless DC motor that accepts multiple voltages, permanently lubricated steel gears, NEMA 4X ABS enclosure with stainless steel trim, visual beacon indication, ISO 5211 valve mounting platform, manual override, and be CE compliant. Standard features shall include a heater, one set of dry contacts for PLC confirmation, one set of dry contacts for alarm reporting, LED indicator for position and alarm conditions, an OLED screen with push buttons, local controls, and a QR code that links to its user manual and wiring schematic.



# TYPE-21/21a BALL VALVE WITH **SMART** FAILSAFE ELECTRIC ACTUATOR

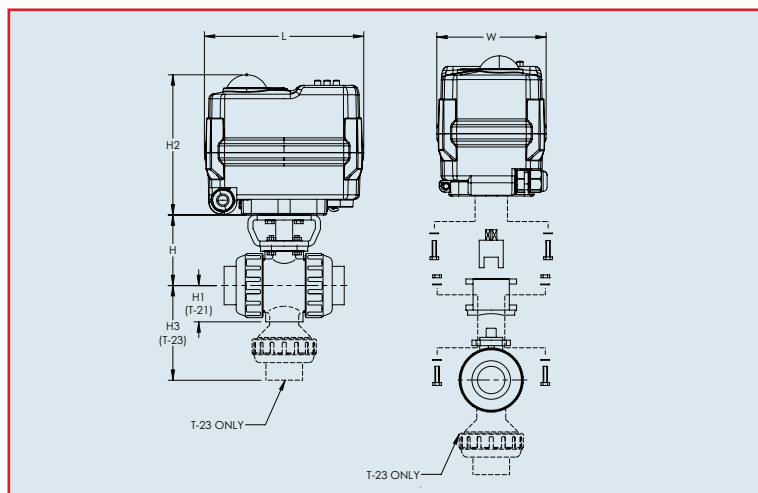


## Standard Features (1/2" - 4")

- **Compact:** Perfect for OEM and skid manufacturers
- **OLED Screen:** Displays valve position, alarms
- **Push Buttons:** Used to calibrate/adjust end positions, local controls
- **Multi-voltage:** 95 VAC to 265 VAC or 24 VAC/VDC
- **Motor:** Reversing, brushless DC motor
- **Capacitor Discharge System:** A capacitor is used in place of batteries for failsafe mode
- **Selectable Fail Position:** Fail close is standard; fail as is or fail open are options
- **Corrosion Resistant Enclosure:** NEMA 4X ABS enclosure with stainless steel trim
- **Electrical Connection:** NEMA 4X cable gland with two-meter cable
- **LED Position Indication:** **RED** closed, **GREEN** open, **BLUE** fault
- **Manual Override:** Manually cycle valve via electroless nickel-plated hex key
- **Auxiliary Contacts:** Open and closed dry contacts rated 0.1 Amp @ 250 VAC, 0.5 Amp @ 30 VDC
- **Alarm Contacts:** Dry contacts rated 0.1 Amp @ 250 VAC, 0.5 Amp @ 30 VDC for alarm status (over torque, as an example)
- **Space Heater:** Internally wired to limit condensation
- **CE Compliant:** All actuators are CE labeled and compliant
- **75% Duty Cycle:** Ideal for high cycling applications
- **Output Torque:** Series 19 electric actuators have an output torque range from 177 in-lbs to 442 in-lbs
- **QR Code:** Links to user manual; includes wiring schematic
- **Simple Wiring:** Wiring technique is the same for all voltage units
- **Local Controls:** Used with OLED and push buttons, a user can locally open or close units via password

## Specifications

|                          |   |
|--------------------------|---|
| <b>Motor Type:</b>       | Reversing, brushless DC   |
| <b>Sizes:</b>            | S20 for 1/2" - 2" ball valves<br>S50 for 2-1/2" - 3" ball valves<br>S110 for 4" ball valves |
| <b>Torque:</b>           | 177 in-lbs to 973 in-lbs  |
| <b>Voltage:</b>          | 95 VAC to 265 VAC multi-voltage   |
| <b>Amp Draw:</b>         | 0.18 Amp for S20<br>0.24 Amp for S50<br>0.84 Amp for S110                                   |
| <b>Max Ambient Temp:</b> | 150° F  |



## Dimensions (inch)

| Size  | 1/2" | 3/4" | 1"   | 1-1/4" | 1-1/2" | 2"   | 2-1/2" | 3"   | 4"   |
|-------|------|------|------|--------|--------|------|--------|------|------|
| L     | 4.01 | 4.01 | 4.01 | 4.01   | 4.01   | 4.01 | 5.12   | 5.12 | 6.69 |
| W     | 2.76 | 2.76 | 2.76 | 2.76   | 2.76   | 2.76 | 4.33   | 4.33 | 4.52 |
| H     | 2.76 | 3.01 | 3.29 | 3.64   | 3.98   | 4.43 | 5.12   | 5.47 | 6.97 |
| H1    | 1.14 | 1.38 | 1.54 | 1.85   | 2.17   | 2.60 | 2.83   | 3.35 | 4.33 |
| H2    | 3.54 | 3.54 | 3.54 | 3.54   | 3.54   | 3.54 | 4.72   | 4.72 | 4.80 |
| Model | S20  | S20  | S20  | S20    | S20    | S20  | S50    | S50  | S110 |

## Weight (lbs)

| Size   | 1/2" | 3/4" | 1"  | 1-1/4" | 1-1/2" | 2"  | 2-1/2" | 3"   | 4"   |
|--------|------|------|-----|--------|--------|-----|--------|------|------|
| Weight | 2.7  | 2.9  | 3.4 | 3.8    | 4.9    | 6.7 | 10.2   | 13.7 | 29.6 |

## Engineering Data

| Model | Torque (in-lbs) | 95-265 VAC |            | 24 VAC/VDC |            | Cycle time per 90 degrees (seconds) * |
|-------|-----------------|------------|------------|------------|------------|---------------------------------------|
|       |                 | Amp Draw   | Duty Cycle | Amp Draw   | Duty Cycle |                                       |
| S20   | 177             | 0.18       | 75%        | 0.96       | 75%        | 10                                    |
| S50   | 442             | 0.24       | 75%        | 1.20       | 75%        | 10                                    |
| S110  | 973             | 0.84       | 75%        | 4.8        | 75%        | 10                                    |

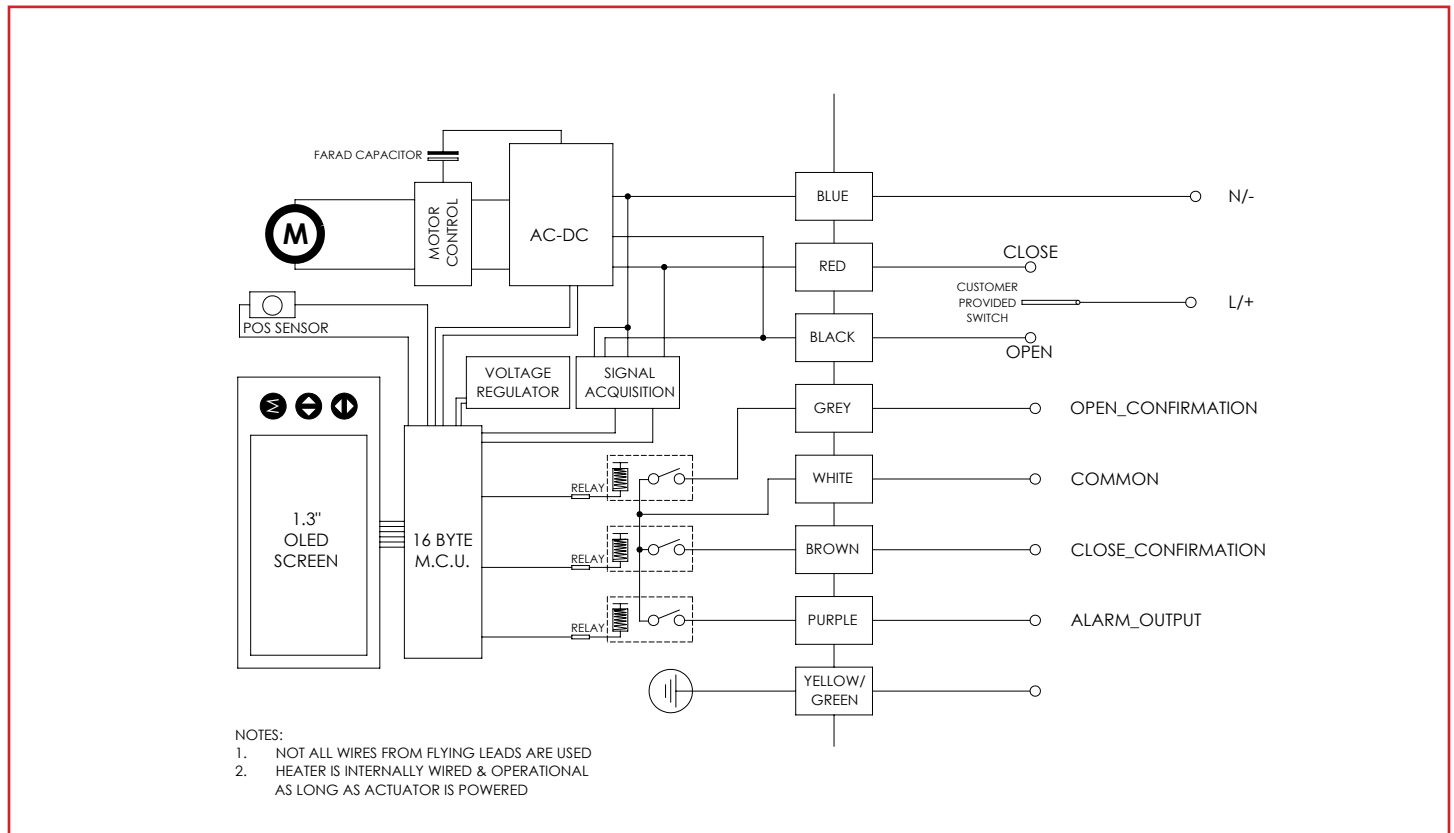
Amp draw is considered locked rotor

\*Cycle times are approximate

Duty cycle shown for ambient temp (73° F)

# TYPE-21/21a BALL VALVE WITH **SMART** FAILSAFE ELECTRIC ACTUATOR

## Wiring Diagram



## Sample Specification

All Series 19 SAV smart failsafe electric actuators shall have a brushless DC motor that accepts multiple voltages, permanently lubricated steel gears, NEMA 4X ABS enclosure with stainless steel trim, visual beacon indication, ISO 5211 valve mounting platform, manual override, and be CE compliant. Actuator shall be of capacitor discharge design with no batteries, and be selectable as fail as is, fail open, or fail close upon loss of supply power. Standard features shall include a heater, one set of dry contacts for PLC confirmation, field selection of fail position, one set of dry contacts for alarm reporting, LED indicator for position and alarm conditions, an OLED screen with push buttons, local controls, and a QR code that links to its user manual and wiring schematic.

## Series 19 Actuator Selection Guide

| Valve                       | Valve Size      | C20 | S20 | S50 | S110 |
|-----------------------------|-----------------|-----|-----|-----|------|
| Omni® Type-27 Ball Valves   | 3/8" - 2"       | X   |     |     |      |
| Type-21/21a SST Ball Valves | 1/2" - 2"       |     | X   |     |      |
|                             | 2-1/2" - 3"     |     |     | X   |      |
|                             | 4"              |     |     |     | X    |
| Type-23 Multiport® Valves   | 1/2" - 2"       |     | X   |     |      |
|                             | 3"              |     |     | X   |      |
|                             | 4"              |     |     |     | X    |
| Type-57P Butterfly Valves   | 1-1/2" - 2-1/2" |     | X   |     |      |
|                             | 3" - 4"         |     |     | X   |      |
|                             | 5" - 6"         |     |     |     | X    |



# TYPE-23 MULTIPORT® BALL VALVE WITH **SMART** FAILSAFE ELECTRIC ACTUATOR

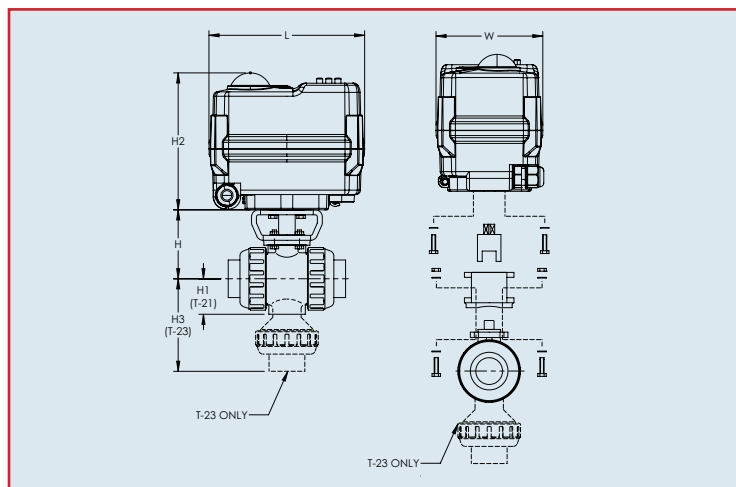


## Specifications

|                          |  |
|--------------------------|--|
| <b>Motor Type:</b>       | Reversing, brushless DC  |
| <b>Sizes:</b>            | S20 for 1/2" - 2" three-way ball valves<br>S50 for 3" three-way ball valves<br>S110 for 4" three-way ball valves |
| <b>Torque:</b>           | 177 in-lbs to 973 in-lbs   |
| <b>Voltage:</b>          | 95 VAC to 265 VAC multi-voltage  |
| <b>Amp Draw:</b>         | 0.18 Amp for S20<br>0.24 Amp for S50<br>0.84 Amp for S110  |
| <b>Max Ambient Temp:</b> | 150° F   |

## Standard Features (1/2" - 4")

- **Compact:** Perfect for OEM and skid manufacturers
- **OLED Screen:** Displays valve position, alarms
- **Push Buttons:** Used to calibrate/adjust end positions, local controls
- **Multi-voltage:** 95 VAC to 265 VAC or 24 VAC/VDC
- **Motor:** Reversing, brushless DC motor
- **Capacitor Discharge System:** A capacitor is used in place of batteries for failsafe mode
- **Selectable Fail Position:** Fail left is standard; fail as is or fail right are options
- **Corrosion Resistant Enclosure:** NEMA 4X ABS enclosure with stainless steel trim
- **Electrical Connection:** NEMA 4X cable gland with two-meter cable
- **LED Position Indication:** **RED** closed, **GREEN** open, **BLUE** fault
- **Manual Override:** Manually cycle valve via electroless nickel-plated hex key
- **Auxiliary Contacts:** Open and closed dry contacts rated 0.1 Amp @ 250 VAC, 0.5 Amp @ 30 VDC
- **Alarm Contacts:** Dry contacts rated 0.1 Amp @ 250 VAC, 0.5 Amp @ 30 VDC for alarm status (over torque, as an example)
- **Space Heater:** Internally wired to limit condensation
- **CE Compliant:** All actuators are CE labeled and compliant
- **75% Duty Cycle:** Ideal for high cycling applications
- **Output Torque:** Series 19 electric actuators have an output torque range from 177 in-lbs to 442 in-lbs
- **QR Code:** Links to user manual; includes wiring schematic
- **Simple Wiring:** Wiring technique is the same for all voltage units
- **Local Controls:** Used with OLED and push buttons, a user can locally open or close units via password



## Dimensions (inch)

| Size  | 1/2" | 3/4" | 1"   | 1-1/2" | 2"   | 3"   | 4"   |
|-------|------|------|------|--------|------|------|------|
| L     | 4.01 | 4.01 | 4.01 | 4.01   | 4.01 | 5.12 | 6.69 |
| W     | 2.76 | 2.76 | 2.76 | 2.76   | 2.76 | 4.33 | 4.52 |
| H     | 2.76 | 3.01 | 3.29 | 3.98   | 4.43 | 5.47 | 6.97 |
| H1    | 1.14 | 1.38 | 1.54 | 2.17   | 2.60 | 3.35 | 4.33 |
| H2    | 3.54 | 3.54 | 3.54 | 3.54   | 3.54 | 4.72 | 4.80 |
| Model | S20  | S20  | S20  | S20    | S20  | S50  | S110 |

## Weight (lbs)

| Size   | 1/2" | 3/4" | 1"  | 1-1/2" | 2"  | 3"   | 4"   |
|--------|------|------|-----|--------|-----|------|------|
| Weight | 2.9  | 3.4  | 4.1 | 6.48   | 8.1 | 19.4 | 40.9 |

## Engineering Data

| Model | Torque (in-lbs) | 95-265 VAC |            | 24 VAC/VDC |            | Cycle time per 90 degrees (seconds)* |
|-------|-----------------|------------|------------|------------|------------|--------------------------------------|
|       |                 | Amp Draw   | Duty Cycle | Amp Draw   | Duty Cycle |                                      |
| S20   | 177             | 0.18       | 75%        | 0.96       | 75%        | 10                                   |
| S50   | 442             | 0.24       | 75%        | 1.20       | 75%        | 10                                   |
| S110  | 973             | 0.84       | 75%        | 4.80       | 75%        | 10                                   |

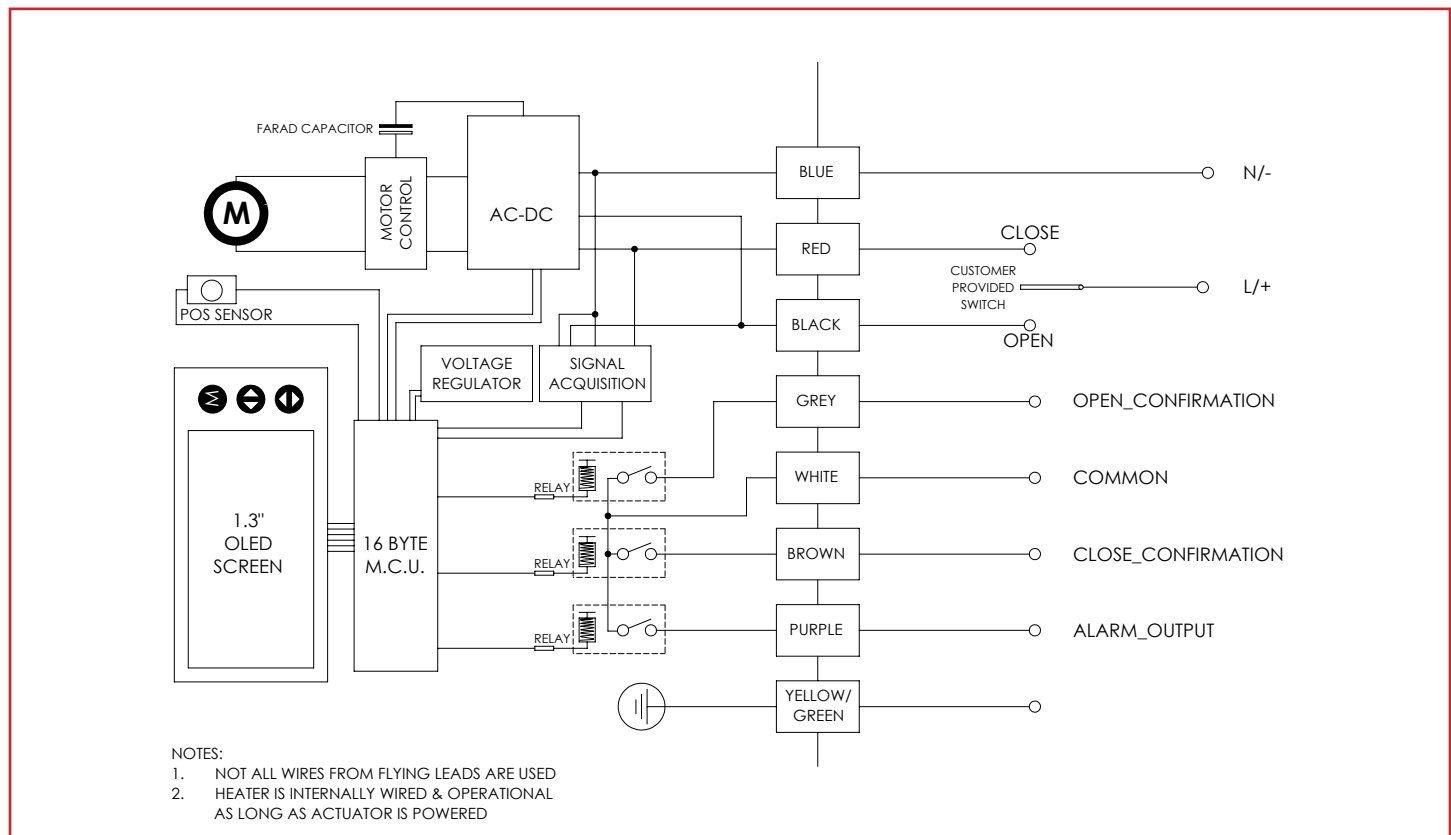
Amp draw is considered locked rotor

\*Cycle times are approximate

Duty cycle shown for ambient temp (73° F)

# TYPE-23 MULTIPORT® BALL VALVE WITH SMART FAILSAFE ELECTRIC ACTUATOR

## Wiring Diagram



## Sample Specification

All Series 19 SAV smart failsafe electric actuators shall have a brushless DC motor that accepts multiple voltages, permanently lubricated steel gears, NEMA 4X ABS enclosure with stainless steel trim, visual beacon indication, ISO 5211 valve mounting platform, manual override, and be CE compliant. Actuator shall be of capacitor discharge design with no batteries, and be selectable as fail as is, fail open, or fail close upon loss of supply power. Standard features shall include a heater, one set of dry contacts for PLC confirmation, field selection of fail position, one set of dry contacts for alarm reporting, LED indicator for position and alarm conditions, an OLED screen with push buttons, local controls, and a QR code that links to its user manual and wiring schematic.

## Series 19 Actuator Selection Guide

| Valve                       | Valve Size      | C20 | S20 | S50 | S110 |
|-----------------------------|-----------------|-----|-----|-----|------|
| Omni® Type-27 Ball Valves   | 3/8" - 2"       | X   |     |     |      |
| Type-21/21a SST Ball Valves | 1/2" - 2"       |     | X   |     |      |
|                             | 2-1/2" - 3"     |     |     | X   |      |
|                             | 4"              |     |     |     | X    |
| Type-23 Multiport® Valves   | 1/2" - 2"       |     | X   |     |      |
|                             | 3"              |     |     | X   |      |
|                             | 4"              |     |     |     | X    |
| Type-57P Butterfly Valves   | 1-1/2" - 2-1/2" |     | X   |     |      |
|                             | 3" - 4"         |     |     | X   |      |
|                             | 5" - 6"         |     |     |     | X    |



# TYPE-57P BUTTERFLY VALVE WITH **SMART** FAILSAFE ELECTRIC ACTUATOR

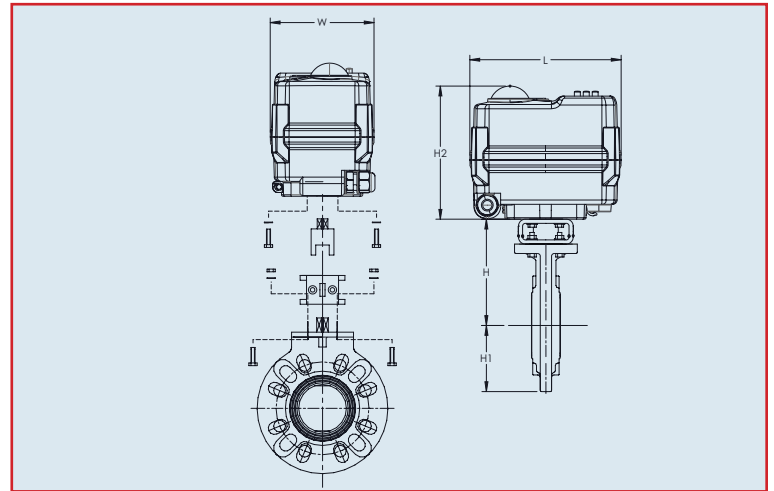


## Standard Features (1-1/2" - 6")

- **Compact:** Perfect for OEM and skid manufacturers
- **OLED Screen:** Displays valve position, alarms
- **Push Buttons:** Used to calibrate/adjust end positions, local controls
- **Multi-voltage:** 95 VAC to 265 VAC or 24 VAC/VDC
- **Motor:** Reversing, brushless DC motor
- **Capacitor Discharge System:** A capacitor is used in place of batteries for failsafe mode
- **Selectable Fail Position:** Fail close is standard; fail as is or fail open are options
- **Corrosion Resistant Enclosure:** NEMA 4X ABS enclosure with stainless steel trim
- **Electrical Connection:** NEMA 4X cable gland with two-meter cable
- **LED Position Indication:** **RED** closed, **GREEN** open, **BLUE** fault
- **Manual Override:** Manually cycle valve via electroless nickel-plated hex key
- **Auxiliary Contacts:** Open and closed dry contacts rated 0.1 Amp @ 250 VAC, 0.5 Amp @ 30 VDC
- **Alarm Contacts:** Dry contacts rated 0.1 Amp @ 250 VAC, 0.5 Amp @ 30 VDC for alarm status (over torque, as an example)
- **Space Heater:** Internally wired to limit condensation
- **CE Compliant:** All actuators are CE labeled and compliant
- **75% Duty Cycle:** Ideal for high cycling applications
- **Output Torque:** Series 19 electric actuators have an output torque range from 177 in-lbs to 442 in-lbs
- **QR Code:** Links to user manual; includes wiring schematic
- **Simple Wiring:** Wiring technique is the same for all voltage units
- **Local Controls:** Used with OLED and push buttons, a user can locally open or close units via password

## Specifications

|                          |  |
|--------------------------|--|
| <b>Motor Type:</b>       | Reversing, brushless DC  |
| <b>Sizes:</b>            | S20 for 1-1/2" - 2-1/2" butterfly valves<br>S50 for 3" - 4" butterfly valves<br>S110 for 6" butterfly valves |
| <b>Torque:</b>           | 177 in-lbs to 973 in-lbs   |
| <b>Voltage:</b>          | 95 VAC to 265 VAC multi-voltage  |
| <b>Amp Draw:</b>         | 0.18 Amp for S20<br>0.24 Amp for S50<br>0.84 Amp for S110  |
| <b>Max Ambient Temp:</b> | 150° F   |



## Dimensions (inch)

| Size  | 1-1/2" | 2"   | 2-1/2" | 3"   | 4"   | 5"   | 6"   |
|-------|--------|------|--------|------|------|------|------|
| H     | 5.51   | 5.75 | 6.18   | 6.46 | 7.16 | 8.46 | 8.97 |
| H1    | 2.95   | 3.27 | 3.66   | 3.94 | 4.53 | 5.00 | 5.63 |
| H2    | 3.54   | 3.54 | 3.54   | 4.72 | 4.72 | 4.80 | 4.80 |
| L     | 4.01   | 4.01 | 4.01   | 5.12 | 5.12 | 6.69 | 6.69 |
| W     | 2.76   | 2.76 | 2.76   | 4.33 | 4.33 | 4.52 | 4.52 |
| Model | S20    | S20  | S20    | S50  | S50  | S110 | S110 |

## Weight (lbs)

| Size   | 1-1/2" | 2"  | 2-1/2" | 3"  | 4"  | 5"   | 6"   |
|--------|--------|-----|--------|-----|-----|------|------|
| Weight | 5.2    | 5.6 | 6.1    | 8.2 | 9.5 | 15.9 | 17.9 |

## Engineering Data

| Model | Torque (in-lbs) | 95-265 VAC |            | 24 VAC/VDC |            | Cycle time per 90 degrees (seconds)* |
|-------|-----------------|------------|------------|------------|------------|--------------------------------------|
|       |                 | Amp Draw   | Duty Cycle | Amp Draw   | Duty Cycle |                                      |
| S20   | 177             | 0.18       | 75%        | 0.96       | 75%        | 10                                   |
| S50   | 442             | 0.24       | 75%        | 1.20       | 75%        | 10                                   |
| S110  | 973             | 0.84       | 75%        | 4.80       | 75%        | 10                                   |

Amp draw is considered locked rotor

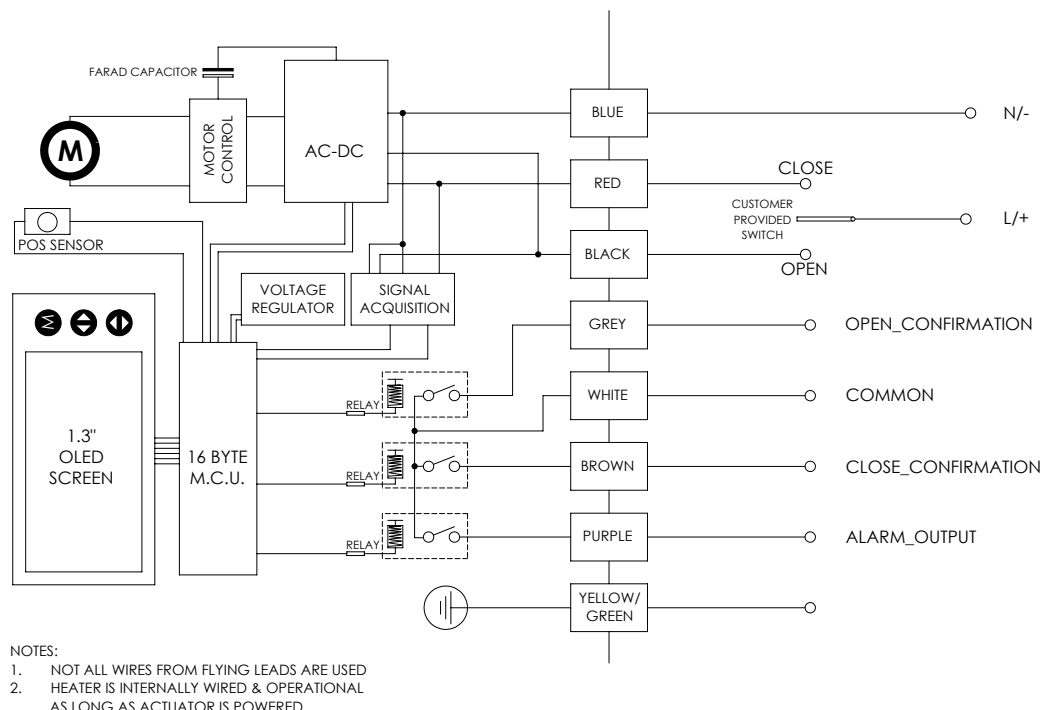
\*Cycle times are approximate

Duty cycle shown for ambient temp (73° F)



# TYPE-57P BUTTERFLY VALVE WITH **SMART** FAILSAFE ELECTRIC ACTUATOR

## Wiring Diagram



## Sample Specification

All Series 19 SAV smart failsafe electric actuators shall have a brushless DC motor that accepts multiple voltages, permanently lubricated steel gears, NEMA 4X ABS enclosure with stainless steel trim, visual beacon indication, ISO 5211 valve mounting platform, manual override, and be CE compliant. Actuator shall be of capacitor discharge design with no batteries, and be selectable as fail as is, fail open, or fail close upon loss of supply power. Standard features shall include a heater, one set of dry contacts for PLC confirmation, field selection of fail position, one set of dry contacts for alarm reporting, LED indicator for position and alarm conditions, an OLED screen with push buttons, local controls, and a QR code that links to its user manual and wiring schematic.

## Series 19 Actuator Selection Guide

| Valve                       | Valve Size      | C20 | S20 | S50 | S110 |
|-----------------------------|-----------------|-----|-----|-----|------|
| Omni® Type-27 Ball Valves   | 3/8" - 2"       | X   |     |     |      |
| Type-21/21a SST Ball Valves | 1/2" - 2"       |     | X   |     |      |
|                             | 2-1/2" - 3"     |     |     | X   |      |
|                             | 4"              |     |     |     | X    |
| Type-23 Multiport® Valves   | 1/2" - 2"       |     | X   |     |      |
|                             | 3"              |     |     | X   |      |
|                             | 4"              |     |     |     | X    |
| Type-57P Butterfly Valves   | 1-1/2" - 2-1/2" |     | X   |     |      |
|                             | 3" - 4"         |     |     | X   |      |
|                             | 5" - 6"         |     |     |     | X    |



# SERIES 19 **SMART** FAILSAFE ELECTRIC ACTUATOR

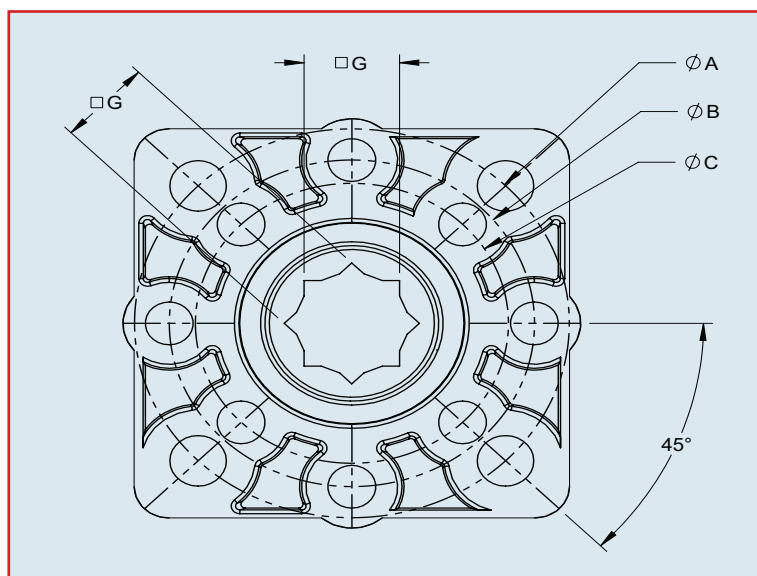


## Specifications

|                               |   |
|-------------------------------|---|
| <b>Sizes:</b>                 | S20FS, S50FS, S110FS                                      |
| <b>Torque:</b>                | 177 in-lbs to 973 in-lbs                                  |
| <b>Voltage:</b>               | 95 VAC to 265 VAC 1 Ph 50/60 Hz                           |
| <b>Amp Draw:</b>              | 0.18 Amp for S20<br>0.24 Amp for S50<br>0.84 Amp for S110 |
| <b>Electrical Connection:</b> | NEMA 4X cable gland with two-meter color coded-cable      |
| <b>Max Ambient Temp:</b>      | 150° F  |
| <b>Cycle Time per:</b>        | Per 90 degrees: 10 seconds                                |
| <b>Enclosure:</b>             | NEMA 4X   |

## Standard Features (All Sizes)

- **Compact:** Perfect for OEM and skid manufacturers
- **OLED Screen:** Displays valve position, alarms (such as an over torque condition)
- **Push Buttons:** Used to calibrate/adjust end positions, local controls
- **Multi-voltage:** 95 VAC to 265 VAC or 24 VAC/VDC
- **Motor:** Reversing, brushless DC motor
- **Capacitor Discharge System:** A capacitor is used in place of batteries for failsafe mode
- **Selectable Fail Position:** Fail close is standard; fail as is or fail open are options
- **Gear Train:** Permanently lubricated steel gears
- **Corrosion Resistant Enclosure:** NEMA 4X ABS enclosure with stainless steel trim
- **ISO** mounting configuration
- **Electrical Connection:** NEMA 4X cable gland with two-meter cable
- **Position Indication:** Highly visible beacon position indicator
- **LED Position Indication:** **RED** closed, **GREEN** open, **BLUE** fault
- **Manual Override:** Manually cycle valve via electroless nickel-plated hex key
- **Auxiliary Contacts:** Open and closed dry contacts rated 0.1 Amp @ 250 VAC, 0.5 Amp @ 30 VDC
- **Alarm Contacts:** Dry contacts rated 0.1 Amp @ 250 VAC, 0.5 Amp @ 30 VDC for alarm status (over torque, as an example)
- **Space Heater:** Internally wired to limit condensation
- **CE Compliant:** All actuators are CE labeled and compliant
- **75% Duty Cycle:** Extended duty cycle is ideal for high cycling applications
- **Output Torque:** Series 19 electric actuators have an output torque range from 177 in-lbs to 442 in-lbs
- **QR Code:** Links to user manual; includes wiring schematic
- **Simple Wiring:** Wiring technique is the same for all voltage units
- **Local Controls:** Used with OLED and push buttons, a user can locally open or close units via password



## Output Dimensions

| Size | A        | B        | C        | G    |
|------|----------|----------|----------|------|
| S20  | F05 (M6) | F04 (M5) | F03 (M5) | 14MM |
| S50  | F07 (M8) | F05 (M6) | N/A      | 14MM |
| S110 | F07 (M8) | F05 (M6) | N/A      | 17MM |

## Weight (lbs)

| Size   | S20 | S50 | S110 |
|--------|-----|-----|------|
| Weight | 1.7 | 1.7 | 4.8  |

## Engineering Data

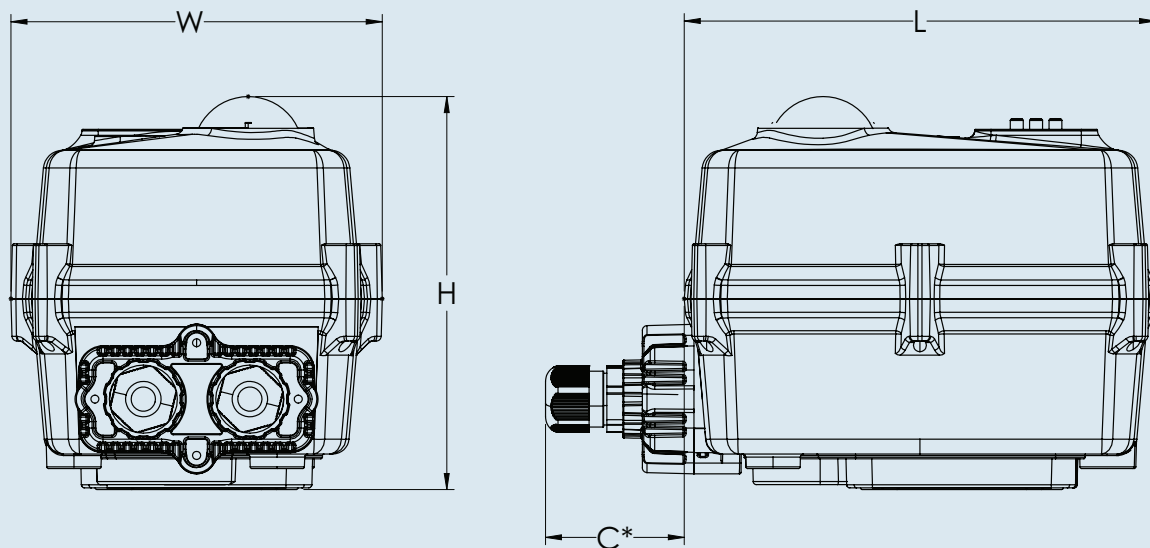
| Model  | Torque (in-lbs) | 95-265 VAC |            | 24 VAC/VDC |            | Cycle time per 90 degrees (seconds) * |
|--------|-----------------|------------|------------|------------|------------|---------------------------------------|
|        |                 | Amp Draw   | Duty Cycle | Amp Draw   | Duty Cycle |                                       |
| S20FS  | 177             | 0.18       | 75%        | 0.96       | 75%        | 10                                    |
| S50FS  | 442             | 0.24       | 75%        | 1.20       | 75%        | 10                                    |
| S110FS | 973             | 0.84       | 75%        | 4.80       | 75%        | 10                                    |

Amp draw is considered locked rotor

\*Cycle times are approximate

Duty cycle shown for ambient temp [73° F]

# SERIES 19 **SMART** FAILSAFE ELECTRIC ACTUATOR

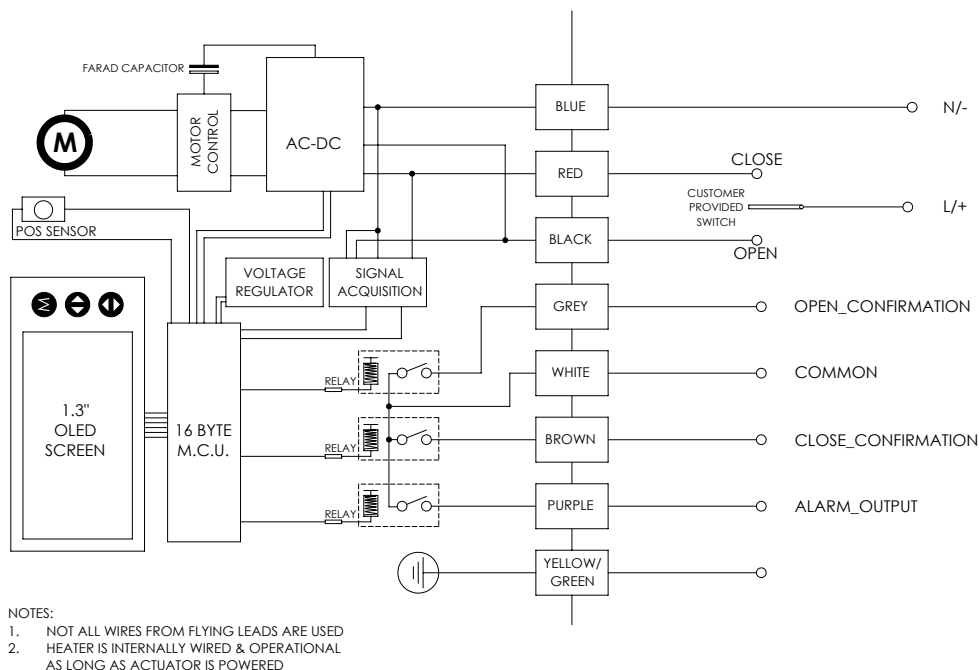


\*DIMENSION C IS ONLY FOR S110

## Dimensions (inch)

| Size | L    | W    | H    | C    |
|------|------|------|------|------|
| S20  | 4.01 | 2.76 | 3.54 | N/A  |
| S50  | 5.13 | 4.33 | 4.72 | N/A  |
| S110 | 5.75 | 4.53 | 4.80 | 1.69 |

## Wiring Diagram



## Sample Specification

All Series 19 SAV smart failsafe electric actuators shall have a brushless DC motor that accepts multiple voltages, permanently lubricated steel gears, NEMA 4X ABS enclosure with stainless steel trim, visual beacon indication, ISO 5211 valve mounting platform, manual override, and be CE compliant. Actuator shall be of capacitor discharge design with no batteries, and be selectable as fail as is, fail open, or fail close upon loss of supply power. Standard features shall include a heater, one set of dry contacts for PLC confirmation, field selection of fail position, one set of dry contacts for alarm reporting, LED indicator for position and alarm conditions, an OLED screen with push buttons, local controls, and a QR code that links to its user manual and wiring schematic.

# TYPE-21/21a BALL VALVE WITH SERIES 19 **SMART** MODULATING ELECTRIC ACTUATOR

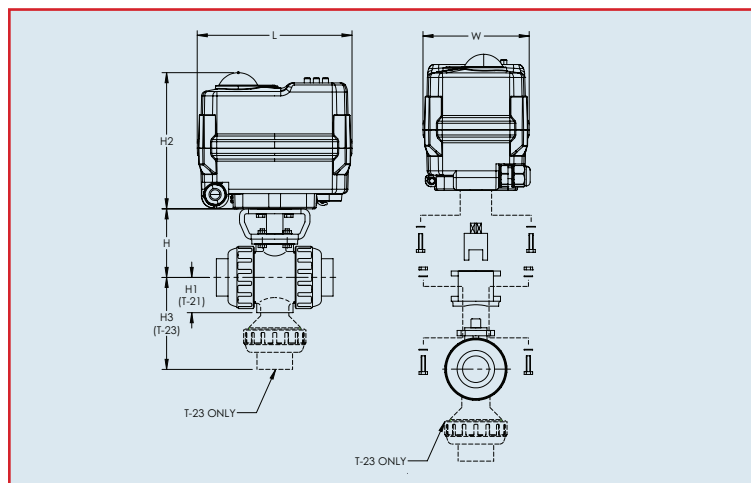


## Standard Features (1/2" – 4")

- **Compact:** Perfect for OEM and skid manufacturers
- **OLED Screen:** Displays input command, position status, alert conditions
- **Push Buttons:** Used to calibrate/adjust end positions, local controls
- **Multi-voltage:** 95 VAC to 265 VAC or 24 VAC/VDC
- **Motor:** Reversing, brushless DC motor
- **Gear Train:** Permanently lubricated steel gears
- **Corrosion Resistant Enclosure:** NEMA 4X ABS enclosure with stainless steel trim
- **ISO mounting configuration**
- **Electrical Connection:** NEMA 4X cable gland with two-meter cable
- **Position Indication:** Highly visible beacon position indicator
- **LED Alarm Indication:** BLUE fault
- **Manual Override:** Manually cycle valve via electroless nickel-plated hex key
- **Selectable Control Signal:** User can select 4-20 mA, 0-20 mA, 0-10 VDC, 2-10 VDC, or 1-5 VDC (size 20 is specifically a current control signal or a voltage control signal)
- **Reverse Acting:** User can select standard operation or reverse acting
- **Selectable Fail Position:** If control signal is lost, the unit can be calibrated to fail as is, fail open, or fail close
- **Transmitter:** Current or voltage transmitter (matching the control signal) is standard equipment
- **Alarm Contacts:** Dry contacts rated 0.1 Amp @ 250 VAC, 0.5 Amp @ 30 VDC for alarm status (over torque, as an example)
- **Space Heater:** Internally wired to limit condensation
- **CE Compliant:** All actuators are CE labeled and compliant
- **75% Duty Cycle:** Extended duty cycle is ideal for high cycling/modulating applications
- **Output Torque:** Series 19 electric actuators have an output torque range from 177 in-lbs to 973 in-lbs
- **QR Code:** Links to user manual; includes wiring schematic
- **Simple Wiring:** Wiring technique is the same for all voltage units
- **Local Controls:** Used with OLED and push buttons, a user can locally open or close units via password

## Specifications

|                          |   |
|--------------------------|---|
| <b>Motor Type:</b>       | Reversing, brushless DC   |
| <b>Sizes:</b>            | S20 for 1/2" – 2" ball valves<br>S50 for 2-1/2" – 3" ball valves<br>S110 for 4" ball valves |
| <b>Torque:</b>           | 177 in-lbs to 973 in-lbs  |
| <b>Voltage:</b>          | 95 VAC to 265 VAC multi-voltage   |
| <b>Amp Draw:</b>         | 0.18 Amp for S20<br>0.24 Amp for S50<br>0.84 Amp for S110                                   |
| <b>Max Ambient Temp:</b> | 150° F  |



## Dimensions (inch)

| Size  | 1/2" | 3/4" | 1"   | 1-1/4" | 1-1/2" | 2"   | 2-1/2" | 3"   | 4"   |
|-------|------|------|------|--------|--------|------|--------|------|------|
| L     | 4.01 | 4.01 | 4.01 | 4.01   | 4.01   | 4.01 | 5.12   | 5.12 | 6.69 |
| W     | 2.76 | 2.76 | 2.76 | 2.76   | 2.76   | 2.76 | 4.33   | 4.33 | 4.52 |
| H     | 2.76 | 3.01 | 3.29 | 3.64   | 3.98   | 4.43 | 5.12   | 5.47 | 6.97 |
| H1    | 1.14 | 1.38 | 1.54 | 1.85   | 2.17   | 2.60 | 2.83   | 3.35 | 4.33 |
| H2    | 3.54 | 3.54 | 3.54 | 3.54   | 3.54   | 3.54 | 4.72   | 4.72 | 4.80 |
| Model | S20  | S20  | S20  | S20    | S20    | S20  | S50    | S50  | S110 |

## Weight (lbs)

| Size   | 1/2" | 3/4" | 1"  | 1-1/4" | 1-1/2" | 2"  | 2-1/2" | 3"   | 4"   |
|--------|------|------|-----|--------|--------|-----|--------|------|------|
| Weight | 2.7  | 2.9  | 3.4 | 3.8    | 4.9    | 6.7 | 10.2   | 13.7 | 29.6 |

## Engineering Data

| Model | Torque (in-lbs) | 95-265 VAC |            | 24 VAC/VDC |            | Cycle time per 90 degrees (seconds) * |
|-------|-----------------|------------|------------|------------|------------|---------------------------------------|
|       |                 | Amp Draw   | Duty Cycle | Amp Draw   | Duty Cycle |                                       |
| S20   | 177             | 0.18       | 75%        | 0.96       | 75%        | 10                                    |
| S50   | 442             | 0.24       | 75%        | 1.20       | 75%        | 10                                    |
| S110  | 973             | 0.84       | 75%        | 4.80       | 75%        | 10                                    |

Amp draw is considered locked rotor

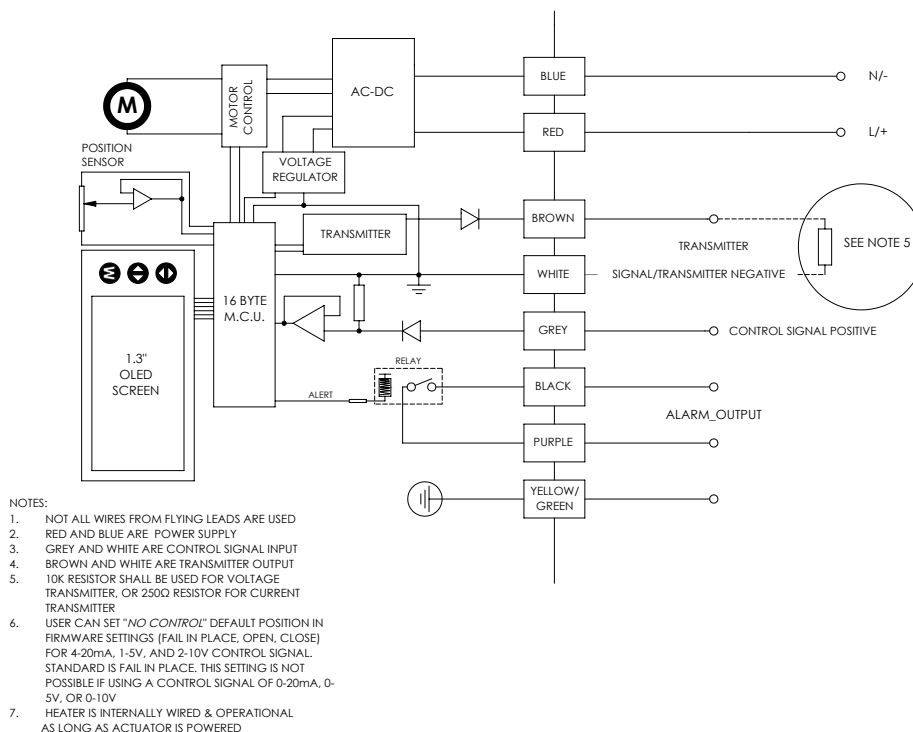
\* Cycle times are approximate

Duty cycle shown for ambient temp (73° F)

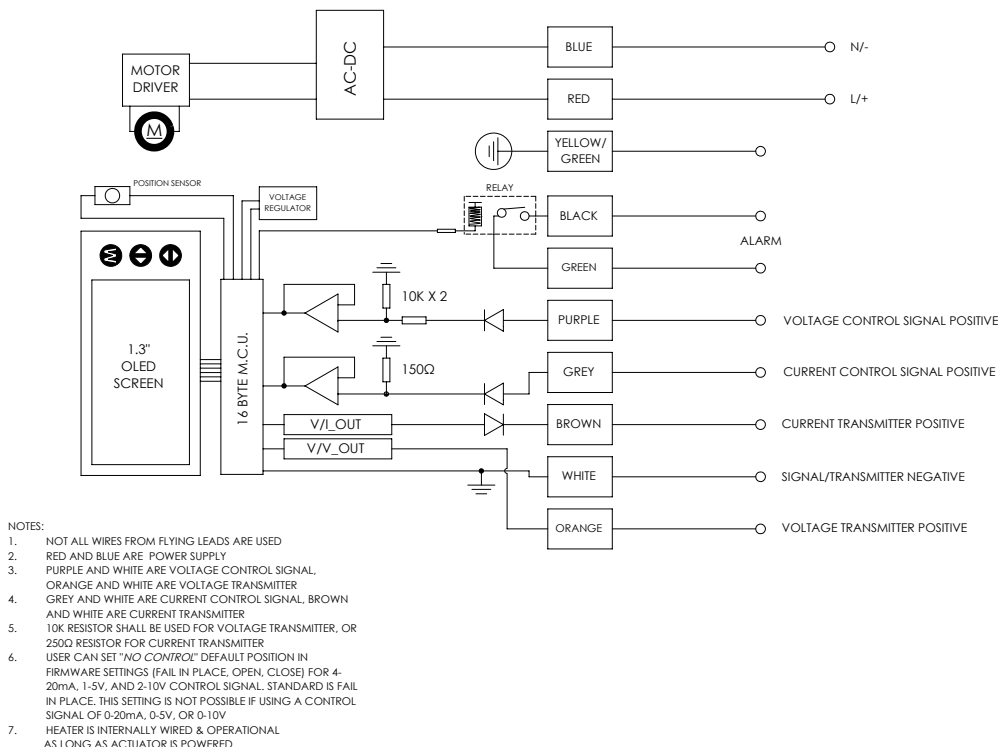
# TYPE-21/21a BALL VALVE WITH SERIES 19 **SMART** MODULATING ELECTRIC ACTUATOR

## Wiring Diagrams

### S20



### S50-S110



## Sample Specification

All Series 19 SAV smart modulating electric actuators shall have a brushless DC motor that accepts multiple voltages, permanently lubricated steel gears, NEMA 4X ABS enclosure with stainless steel trim, visual beacon indication, ISO 5211 valve mounting platform, manual override, and be CE compliant. Standard features shall include a heater, transmitter, field selection of various control signals, field selection of fail position [upon loss of command signal], one set of dry contacts for alarm reporting, LED indicator for alarm conditions, an OLED screen with push buttons, local controls, and a QR code that links to its user manual and wiring schematic.



# TYPE-21a SST BALL VALVE WITH SERIES 19 **SMART** MODULATING ELECTRIC ACTUATOR

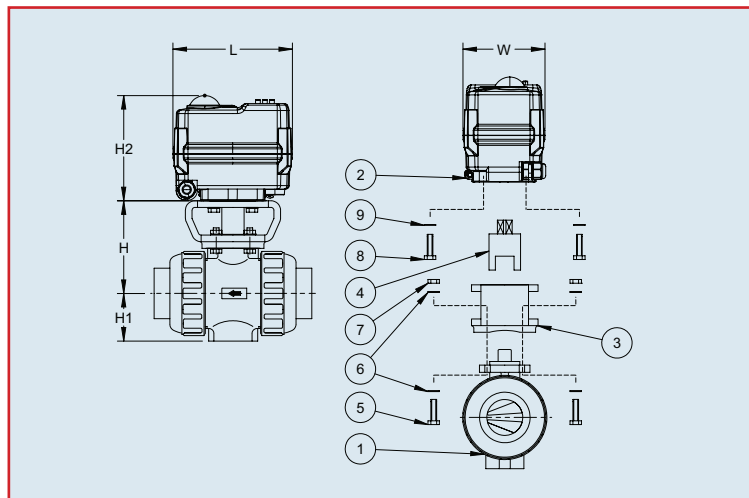


## Specifications

|                          |                                 |
|--------------------------|---------------------------------|
| <b>Motor Type:</b>       | Reversing, brushless DC         |
| <b>Size:</b>             | S20 for 1/2" - 2" ball valves   |
| <b>Torque:</b>           | 177 in-lbs                      |
| <b>Voltage:</b>          | 95 VAC to 265 VAC multi-voltage |
| <b>Amp Draw:</b>         | 0.18 Amp                        |
| <b>Max Ambient Temp:</b> | 150° F                          |

## Standard Features (Sizes 1/2" - 2")

- **Compact:** Perfect for OEM and skid manufacturers
- **OLED Screen:** Displays input command, position status, alert conditions
- **Push Buttons:** Used to calibrate/adjust end positions, local controls
- **Multi-voltage:** 95 VAC to 265 VAC or 24 VAC/VDC
- **Motor:** Reversing, brushless DC motor
- **Gear Train:** Permanently lubricated steel gears
- **Corrosion Resistant Enclosure:** NEMA 4X ABS enclosure with stainless steel trim
- **ISO mounting configuration**
- **Electrical Connection:** NEMA 4X cable gland with two-meter cable
- **Position Indication:** Highly visible beacon position indicator
- **LED Alarm Indication:** **BLUE** fault
- **Manual Override:** Manually cycle valve via electroless nickel-plated hex key
- **Control Signal:** Size 20 is specifically a current control signal or a voltage control signal and must be specified at the time of order
- **Reverse Acting:** User can select standard operation or reverse acting
- **Selectable Fail Position:** If control signal is lost, the unit can be calibrated to fail as is, fail open, or fail close
- **Transmitter:** Current or voltage transmitter (matching the control signal) is standard equipment
- **Alarm Contacts:** Dry contacts rated 0.1 Amp @ 250 VAC, 0.5 Amp @ 30 VDC for alarm status (over torque, as an example)
- **Space Heater:** Internally wired to limit condensation
- **CE Compliant:** All actuators are CE labeled and compliant
- **75% Duty Cycle:** Extended duty cycle is ideal for high cycling/modulating applications
- **Output Torque:** Series 19 electric actuators have an output torque range from 177 in-lbs to 973 in-lbs
- **QR Code:** Links to user manual; includes wiring schematic
- **Simple Wiring:** Wiring technique is the same for all voltage units
- **Local Controls:** Used with OLED and push buttons, a user can locally open or close units via password



## Dimensions (inch)

| Size  | 1/2" | 3/4" | 1"   | 1-1/4" | 1-1/2" | 2"   |
|-------|------|------|------|--------|--------|------|
| L     | 4.01 | 4.01 | 4.01 | 4.01   | 4.01   | 4.01 |
| W     | 2.76 | 2.76 | 2.76 | 2.76   | 2.76   | 2.76 |
| H     | 2.76 | 3.01 | 3.29 | 3.64   | 3.98   | 4.43 |
| H1    | 1.14 | 1.38 | 1.54 | 1.85   | 2.17   | 2.60 |
| H2    | 3.54 | 3.54 | 3.54 | 3.54   | 3.54   | 3.54 |
| Model | S20  | S20  | S20  | S20    | S20    | S20  |

## Weight (lbs)

| Size   | 1/2" | 3/4" | 1"  | 1-1/4" | 1-1/2" | 2"  |
|--------|------|------|-----|--------|--------|-----|
| Weight | 2.7  | 2.9  | 3.4 | 3.8    | 4.9    | 6.7 |

## Engineering Data

| Model | Torque (in-lbs) | 95-265 VAC |            | 24 VAC/VDC |            | Cycle time per 90 degrees [seconds] * |
|-------|-----------------|------------|------------|------------|------------|---------------------------------------|
|       |                 | Amp Draw   | Duty Cycle | Amp Draw   | Duty Cycle |                                       |
| S20   | 177             | 0.18       | 75%        | 0.96       | 75%        | 10                                    |

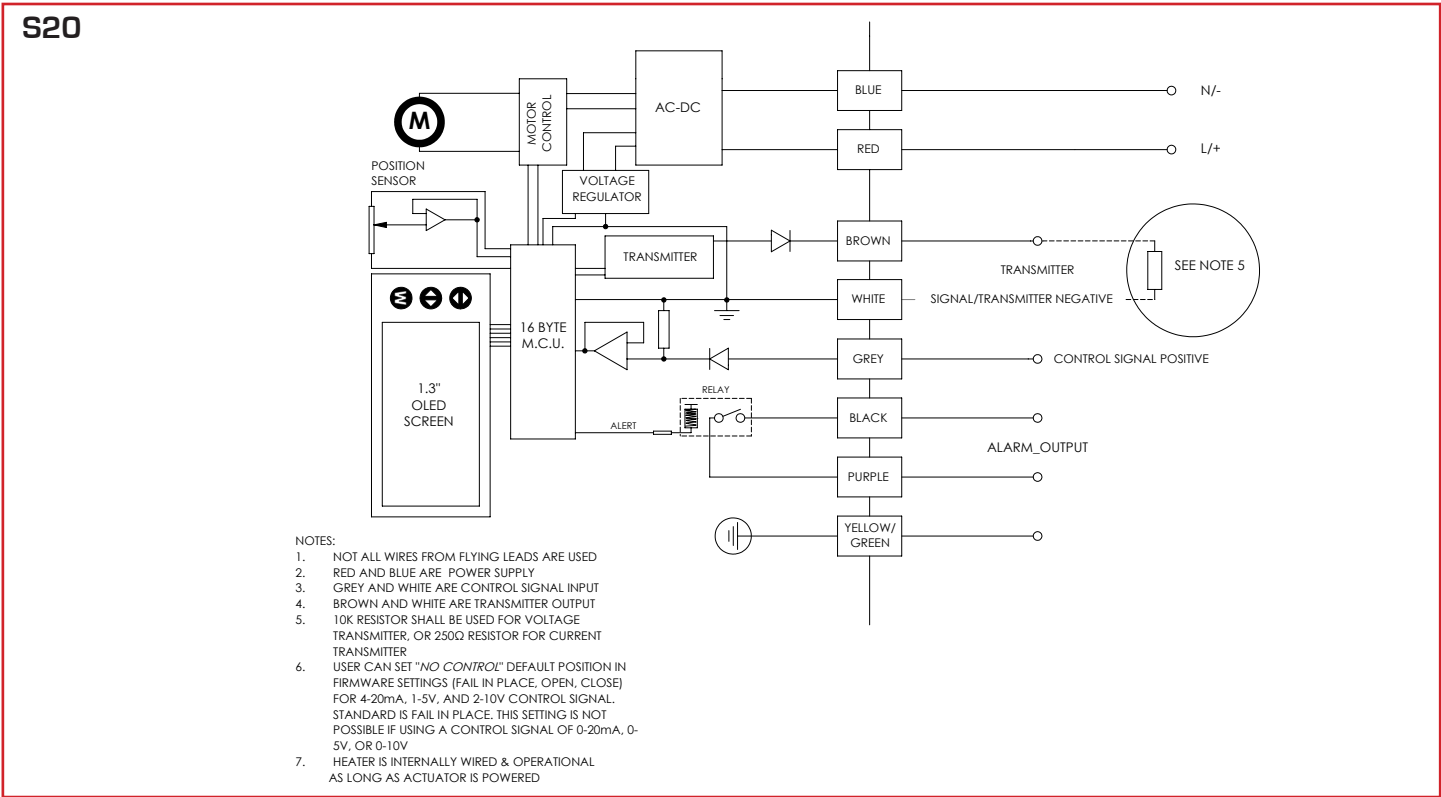
Amp draw is considered locked rotor

\*Cycle times are approximate

Duty cycle shown for ambient temp [73° F]

# TYPE-21a SST BALL VALVE WITH SERIES 19 **SMART** MODULATING ELECTRIC ACTUATOR

## Wiring Diagrams



## Sample Specification

All Series 19 SAV smart modulating electric actuators shall have a brushless DC motor that accepts multiple voltages, permanently lubricated steel gears, NEMA 4X ABS enclosure with stainless steel trim, visual beacon indication, ISO 5211 valve mounting platform, manual override, and be CE compliant. Standard features shall include a heater, transmitter, field selection of fail position (upon loss of command signal), one set of dry contacts for alarm reporting, LED indicator for alarm conditions, an OLED screen with push buttons, local controls, and a QR code that links to its user manual and wiring schematic.

## Series 19 Actuator Selection Guide

| Valve                       | Valve Size      | C20 | S20 | S50 | S110 |
|-----------------------------|-----------------|-----|-----|-----|------|
| Omni® Type-27 Ball Valves   | 3/8" - 2"       | X   |     |     |      |
| Type-21/21a SST Ball Valves | 1/2" - 2"       |     | X   |     |      |
|                             | 2-1/2" - 3"     |     |     | X   |      |
|                             | 4"              |     |     |     | X    |
| Type-23 Multiport® Valves   | 1/2" - 2"       |     | X   |     |      |
|                             | 3"              |     |     | X   |      |
|                             | 4"              |     |     |     | X    |
| Type-57P Butterfly Valves   | 1-1/2" - 2-1/2" |     | X   |     |      |
|                             | 3" - 4"         |     |     | X   |      |
|                             | 5" - 6"         |     |     |     | X    |



# TYPE-23 MULTIPORT® BALL VALVE WITH **SMART** MODULATING ELECTRIC ACTUATOR

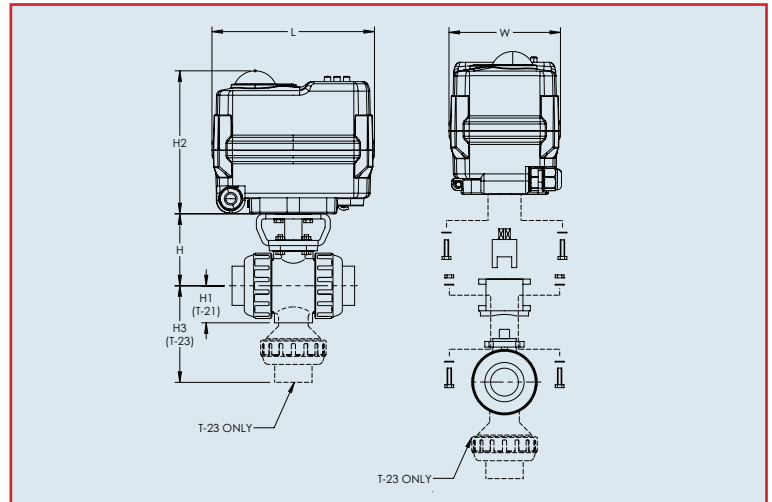


## Standard Features (1/2" – 4")

- **Compact:** Perfect for OEM and skid manufacturers
- **OLED Screen:** Displays input command, position status, alert conditions
- **Push Buttons:** Used to calibrate/adjust end positions, local controls
- **Multi-voltage:** 95 VAC to 265 VAC or 24 VAC/VDC
- **Motor:** Reversing, brushless DC motor
- **Gear Train:** Permanently lubricated steel gears
- **Corrosion Resistant Enclosure:** NEMA 4X ABS enclosure with stainless steel trim
- **ISO mounting configuration**
- **Electrical Connection:** NEMA 4X cable gland with two-meter cable
- **Position Indication:** Highly visible beacon position indicator
- **LED Alarm Indication:** **BLUE** fault
- **Manual Override:** Manually cycle valve via electroless nickel-plated hex key
- **Selectable Control Signal:** User can select 4-20 mA, 0-20 mA, 0-10 VDC, 2-10 VDC, or 1-5 VDC (size 20 is specifically a current control signal or a voltage control signal)
- **Reverse Acting:** User can select standard operation or reverse acting
- **Selectable Fail Position:** If control signal is lost, the unit can be calibrated to fail as is, fail left, or fail right
- **Transmitter:** Current or voltage transmitter (matching the control signal) is standard equipment
- **Alarm Contacts:** Dry contacts rated 0.1 Amp @ 250 VAC, 0.5 Amp @ 30 VDC for alarm status (over torque, as an example)
- **Space Heater:** Internally wired to limit condensation
- **CE Compliant:** All actuators are CE labeled and compliant
- **75% Duty Cycle:** Extended duty cycle is ideal for high cycling/modulating applications
- **Output Torque:** Series 19 electric actuators have an output torque range from 177 in-lbs to 973 in-lbs
- **QR Code:** Links to user manual; includes wiring schematic
- **Simple Wiring:** Wiring technique is the same for all voltage units
- **Local Controls:** Used with OLED and push buttons, a user can locally open or close units via password

## Specifications

|                          |  |
|--------------------------|--|
| <b>Motor Type:</b>       | Reversing, brushless DC  |
| <b>Sizes:</b>            | S20 for 1/2" – 2" three-way ball valves<br>S50 for 3" three-way ball valves<br>S110 for 4" three-way ball valves |
| <b>Torque:</b>           | 177 in-lbs to 973 in-lbs   |
| <b>Voltage:</b>          | 95 VAC to 265 VAC multi-voltage  |
| <b>Amp Draw:</b>         | 0.18 Amp for S20<br>0.24 Amp for S50<br>0.84 Amp for S110  |
| <b>Max Ambient Temp:</b> | 150° F   |



## Dimensions (inch)

| Size  | 1/2" | 3/4" | 1"   | 1-1/2" | 2"   | 3"   | 4"   |
|-------|------|------|------|--------|------|------|------|
| L     | 4.01 | 4.01 | 4.01 | 4.01   | 4.01 | 5.12 | 6.69 |
| W     | 2.76 | 2.76 | 2.76 | 2.76   | 2.76 | 4.33 | 4.52 |
| H     | 2.76 | 3.01 | 3.29 | 3.98   | 4.43 | 5.47 | 6.97 |
| H1    | 1.14 | 1.38 | 1.54 | 2.17   | 2.60 | 3.35 | 4.33 |
| H2    | 3.54 | 3.54 | 3.54 | 3.54   | 3.54 | 4.72 | 4.80 |
| Model | S20  | S20  | S20  | S20    | S20  | S50  | S110 |

## Weight (lbs)

| Size   | 1/2" | 3/4" | 1"  | 1-1/2" | 2"  | 3"   | 4"   |
|--------|------|------|-----|--------|-----|------|------|
| Weight | 2.9  | 3.4  | 4.1 | 6.48   | 8.1 | 19.4 | 40.9 |

## Engineering Data

| Model | Torque (in-lbs) | 95-265 VAC |            | 24 VAC/VDC |            | Cycle time per 180 degrees (seconds)* |
|-------|-----------------|------------|------------|------------|------------|---------------------------------------|
|       |                 | Amp Draw   | Duty Cycle | Amp Draw   | Duty Cycle |                                       |
| S20   | 177             | 0.18       | 75%        | 0.96       | 75%        | 10                                    |
| S50   | 442             | 0.24       | 75%        | 1.20       | 75%        | 10                                    |
| S110  | 973             | 0.84       | 75%        | 4.80       | 75%        | 10                                    |

Amp draw is considered locked rotor

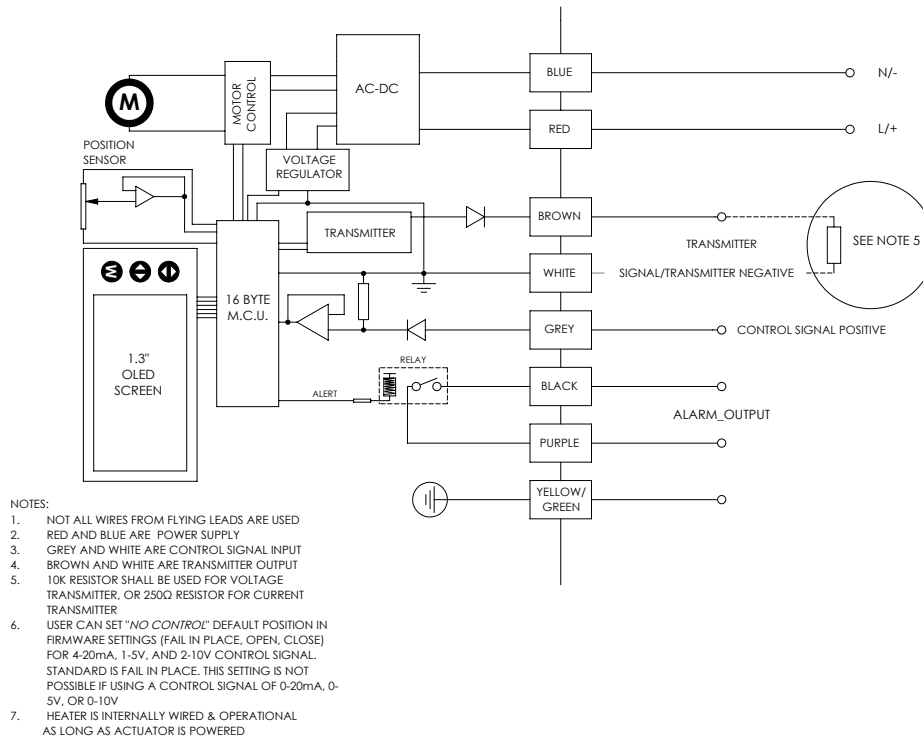
\*Cycle times are approximate

Duty cycle shown for ambient temp [73° F]

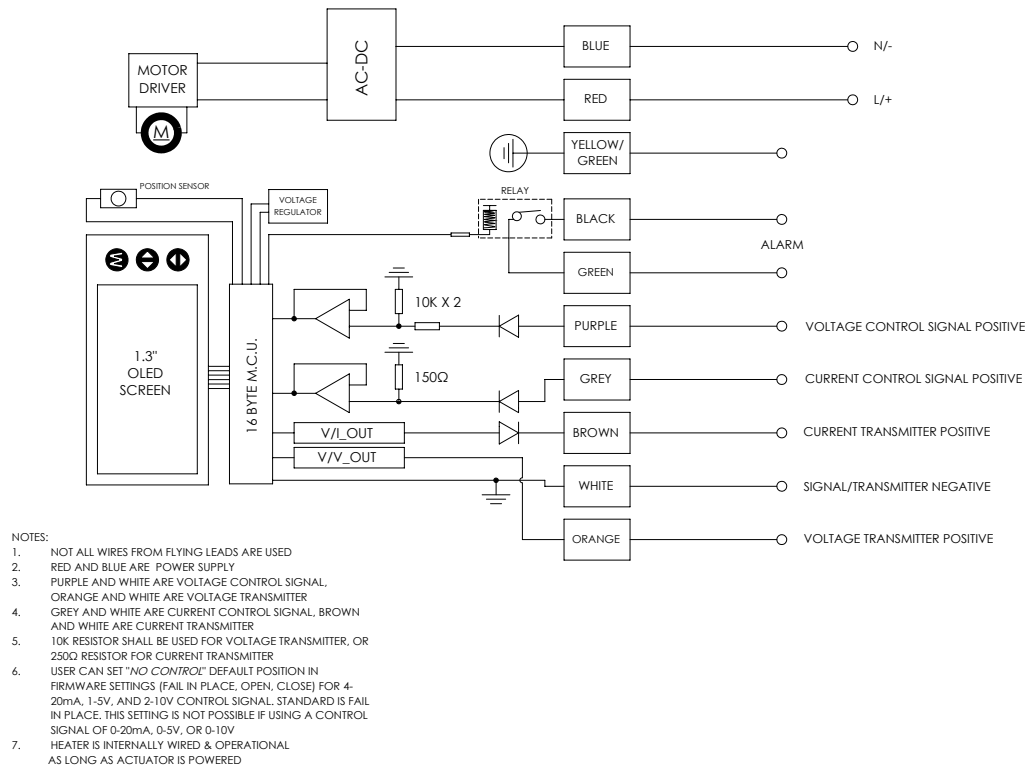
# TYPE-23 MULTIPORT® BALL VALVE WITH **SMART** MODULATING ELECTRIC ACTUATOR

## Wiring Diagrams

### S20



### S50-S110



## Sample Specification

All Series 19 SAV smart modulating electric actuators shall have a brushless DC motor that accepts multiple voltages, permanently lubricated steel gears, NEMA 4X ABS enclosure with stainless steel trim, visual beacon indication, ISO 5211 valve mounting platform, manual override, and be CE compliant. Standard features shall include a heater, transmitter, field selection of various control signals, field selection of fail position (upon loss of command signal), one set of dry contacts for alarm reporting, LED indicator for alarm conditions, an OLED screen with push buttons, local controls, and a QR code that links to its user manual and wiring schematic.

# TYPE-57P BUTTERFLY VALVE WITH SERIES 19 **SMART** MODULATING ELECTRIC ACTUATOR

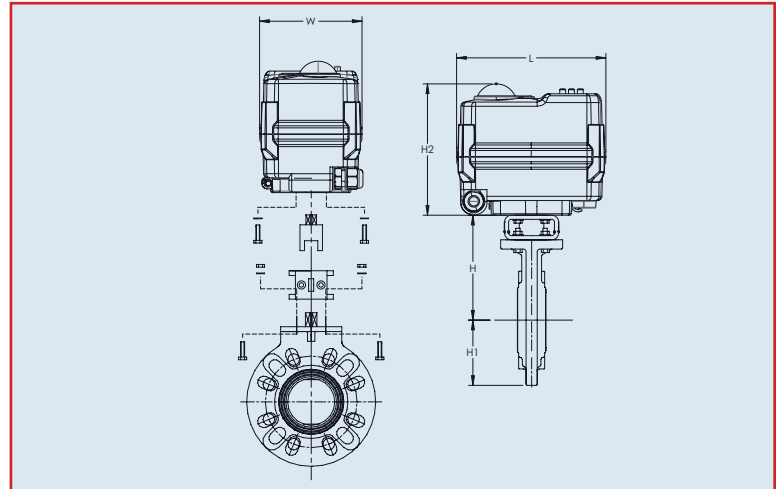


## Standard Features (Sizes 1-1/2" – 6")

- **Compact:** Perfect for OEM and skid manufacturers
- **OLED Screen:** Displays input command, position status, alert conditions
- **Push Buttons:** Used to calibrate/adjust end positions, local controls
- **Multi-voltage:** 95 VAC to 265 VAC or 24 VAC/VDC
- **Motor:** Reversing, brushless DC motor
- **Gear Train:** Permanently lubricated steel gears
- **Corrosion Resistant Enclosure:** NEMA 4X ABS enclosure with stainless steel trim
- **ISO** mounting configuration
- **Electrical Connection:** NEMA 4X cable gland with two-meter cable
- **Position Indication:** Highly visible beacon position indicator
- **LED Alarm Indication:** BLUE fault
- **Manual Override:** Manually cycle valve via electroless nickel-plated hex key
- **Selectable Control Signal:** User can select 4-20 mA, 0-20 mA, 0-10 VDC, 2-10 VDC, or 1-5 VDC (size 20 is specifically a current control signal or a voltage control signal)
- **Reverse Acting:** User can select standard operation or reverse acting
- **Selectable Fail Position:** If control signal is lost, the unit can be calibrated to fail as is, fail open, or fail close
- **Transmitter:** Current or voltage transmitter (matching the control signal) is standard equipment
- **Alarm Contacts:** Dry contacts rated 0.1 Amp @ 250 VAC, 0.5 Amp @ 30 VDC for alarm status (over torque, as an example)
- **Space Heater:** Internally wired to limit condensation
- **CE Compliant:** All actuators are CE labeled and compliant
- **75% Duty Cycle:** Extended duty cycle is ideal for high cycling/modulating applications
- **Output Torque:** Series 19 electric actuators have an output torque range from 177 in-lbs to 973 in-lbs
- **QR Code:** Links to user manual; includes wiring schematic
- **Simple Wiring:** Wiring technique is the same for all voltage units
- **Local Controls:** Used with OLED and push buttons, a user can locally open or close units via password

## Specifications

|                          |   |
|--------------------------|---|
| <b>Motor Type:</b>       | Reversing, brushless DC   |
| <b>Sizes:</b>            | S20 for 1-1/2" – 2-1/2" butterfly valves<br>S50 for 3" – 4" butterfly valves<br>S110 for 5" – 6" butterfly valves |
| <b>Torque:</b>           | 177 in-lbs to 973 in-lbs  |
| <b>Voltage:</b>          | 95 VAC to 265 VAC multi-voltage   |
| <b>Amp Draw:</b>         | 0.18 Amp for S20<br>0.24 Amp for S50<br>0.84 Amp for S110   |
| <b>Max Ambient Temp:</b> | 150° F  |



## Dimensions (inch)

| Size  | 1-1/2" | 2"   | 2-1/2" | 3"   | 4"   | 5"   | 6"   |
|-------|--------|------|--------|------|------|------|------|
| H     | 5.51   | 5.75 | 6.18   | 6.46 | 7.16 | 8.46 | 8.97 |
| H1    | 2.95   | 3.27 | 3.66   | 3.94 | 4.53 | 5.00 | 5.63 |
| H2    | 3.54   | 3.54 | 3.54   | 4.72 | 4.72 | 4.80 | 4.80 |
| L     | 4.01   | 4.01 | 4.01   | 5.12 | 5.12 | 6.69 | 6.69 |
| W     | 2.76   | 2.76 | 2.76   | 4.33 | 4.33 | 4.52 | 4.52 |
| Model | S20    | S20  | S20    | S50  | S50  | S110 | S110 |

## Weight (lbs)

| Size   | 1-1/2" | 2"  | 2-1/2" | 3"  | 4"  | 5"   | 6"   |
|--------|--------|-----|--------|-----|-----|------|------|
| Weight | 5.2    | 5.6 | 6.1    | 8.2 | 9.5 | 15.9 | 17.9 |

## Engineering Data

| Model | Torque (in-lbs) | 95-265 VAC |            | 24 VAC/VDC |            | Cycle time per 90 degrees (seconds) * |
|-------|-----------------|------------|------------|------------|------------|---------------------------------------|
|       |                 | Amp Draw   | Duty Cycle | Amp Draw   | Duty Cycle |                                       |
| S20   | 177             | 0.18       | 75%        | 0.96       | 75%        | 10                                    |
| S50   | 442             | 0.24       | 75%        | 1.20       | 75%        | 10                                    |
| S110  | 973             | 0.84       | 75%        | 4.80       | 75%        | 10                                    |

Amp draw is considered locked rotor

\*Cycle times are approximate

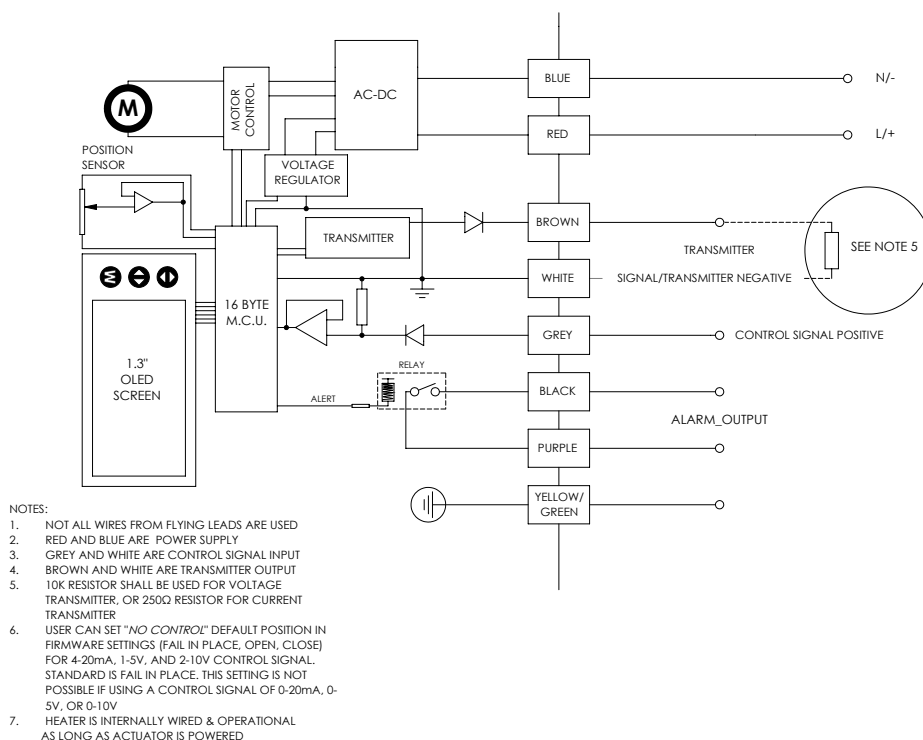
Duty cycle shown for ambient temp [73° F]



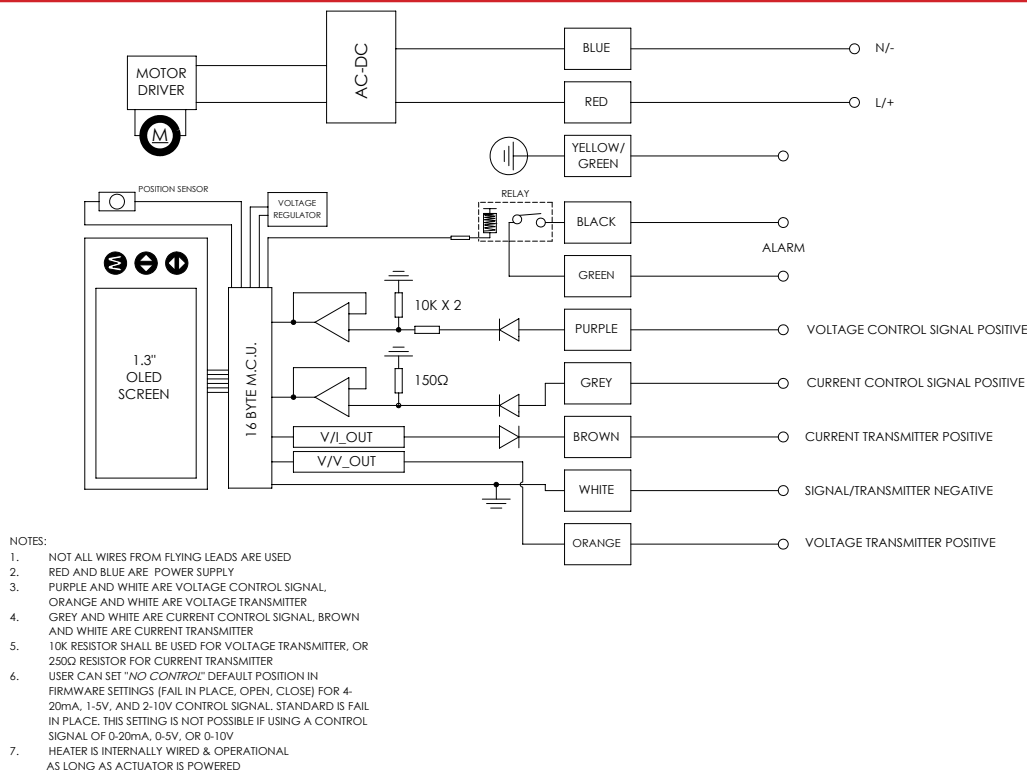
# TYPE-57P BUTTERFLY VALVE WITH SERIES 19 **SMART** MODULATING ELECTRIC ACTUATOR

## Wiring Diagrams

### S20



### S50-S110



## Sample Specification

All Series 19 SAV smart modulating electric actuators shall have a brushless DC motor that accepts multiple voltages, permanently lubricated steel gears, NEMA 4X ABS enclosure with stainless steel trim, visual beacon indication, ISO 5211 valve mounting platform, manual override, and be CE compliant. Standard features shall include a heater, transmitter, field selection of various control signals, field selection of fail position (upon loss of command signal), one set of dry contacts for alarm reporting, LED indicator for alarm conditions, an OLED screen with push buttons, local controls, and a QR code that links to its user manual and wiring schematic.

# SERIES 19 SMART MODULATING ELECTRIC ACTUATOR

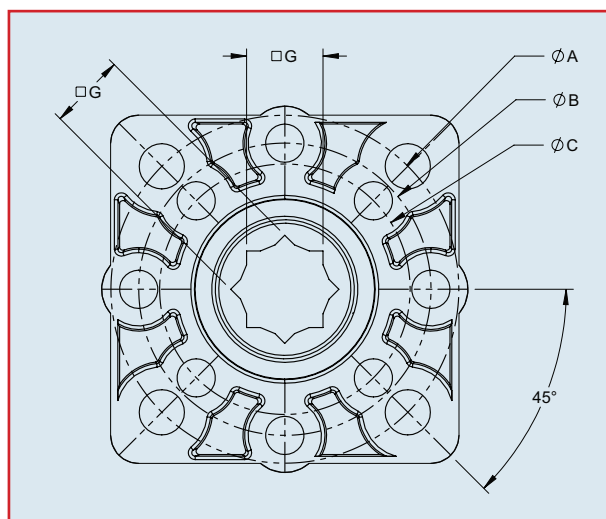


## Standard Features (All Sizes)

- **Compact:** Perfect for OEM and skid manufacturers
- **OLED Screen:** Displays input command, position status, alert conditions
- **Push Buttons:** Used to calibrate/adjust end positions, local controls
- **Multi-voltage:** 95 VAC to 265 VAC or 24 VAC/VDC
- **Motor:** Reversing, brushless DC motor
- **Gear Train:** Permanently lubricated steel gears
- **Corrosion Resistant Enclosure:** NEMA 4X ABS enclosure with stainless steel trim
- **ISO mounting configuration**
- **Electrical Connection:** NEMA 4X cable gland with two-meter cable
- **Position Indication:** Highly visible beacon position indicator
- **LED Fault:** BLUE
- **Manual Override:** Manually cycle valve via electroless nickel-plated hex key
- **Selectable Control Signal:** User can select 4-20 mA, 0-20 mA, 0-10 VDC, 2-10 VDC, or 1-5 VDC (size 20 is specifically a current control signal or a voltage control signal)
- **Reverse Acting:** User can select standard operation or reverse acting
- **Selectable Fail Position:** If control signal is lost, the unit can be calibrated to fail as is, fail open, or fail close
- **Transmitter:** Current or voltage transmitter (matching the control signal) is standard equipment
- **Alarm Contacts:** Dry contacts rated 0.1 Amp @ 250 VAC, 0.5 Amp @ 30 VDC for alarm status (over torque, as an example)
- **Space Heater:** Internally wired to limit condensation
- **CE Compliant:** All actuators are CE labeled and compliant
- **75% Duty Cycle:** Extended duty cycle is ideal for high cycling/modulating applications
- **Output Torque:** Series 19 electric actuators have an output torque range from 177 in-lbs to 973 in-lbs
- **QR Code:** Links to user manual; includes wiring schematic
- **Simple Wiring:** Wiring technique is the same for all voltage units
- **Local Controls:** Used with OLED and push buttons, a user can locally open or close units via password

## Specifications

|                               |   |
|-------------------------------|---|
| <b>Sizes:</b>                 | S20, S50, S110  |
| <b>Torque:</b>                | 177 in-lbs to 973 in-lbs                                  |
| <b>Voltage:</b>               | 95 VAC to 265 VAC 1Ph 50/60 Hz                            |
| <b>Amp Draw:</b>              | 0.18 Amp for S20<br>0.24 Amp for S50<br>0.84 Amp for S110 |
| <b>Electrical Connection:</b> | NEMA 4X cable gland with two-meter color-coded cable      |
| <b>Max Ambient Temp:</b>      | 150° F  |
| <b>Cycle Time:</b>            | Per 90 degrees: 10 seconds                                |
| <b>Enclosure:</b>             | NEMA 4X   |



## Output Dimensions

| Size | A        | B        | C        | G    |
|------|----------|----------|----------|------|
| S20  | F05 (M6) | F04 (M5) | F03 (M5) | 14MM |
| S50  | F07 (M8) | F05 (M6) | N/A      | 14MM |
| S110 | F07 (M8) | F05 (M6) | N/A      | 17MM |

## Weight (lbs)

| Model  | S20 | S50 | S110 |
|--------|-----|-----|------|
| Weight | 1.7 | 1.7 | 4.8  |

## Engineering Data

| Model | Torque (in-lbs) | 95-265 VAC |            | 24 VAC/VDC |            | Cycle time per 90 degrees [seconds]* |
|-------|-----------------|------------|------------|------------|------------|--------------------------------------|
|       |                 | Amp Draw   | Duty Cycle | Amp Draw   | Duty Cycle |                                      |
| S20   | 177             | 0.18       | 75%        | 0.96       | 75%        | 10                                   |
| S50   | 442             | 0.24       | 75%        | 1.20       | 75%        | 10                                   |
| S110  | 973             | 0.84       | 75%        | 4.80       | 75%        | 10                                   |

Amp draw is considered locked rotor

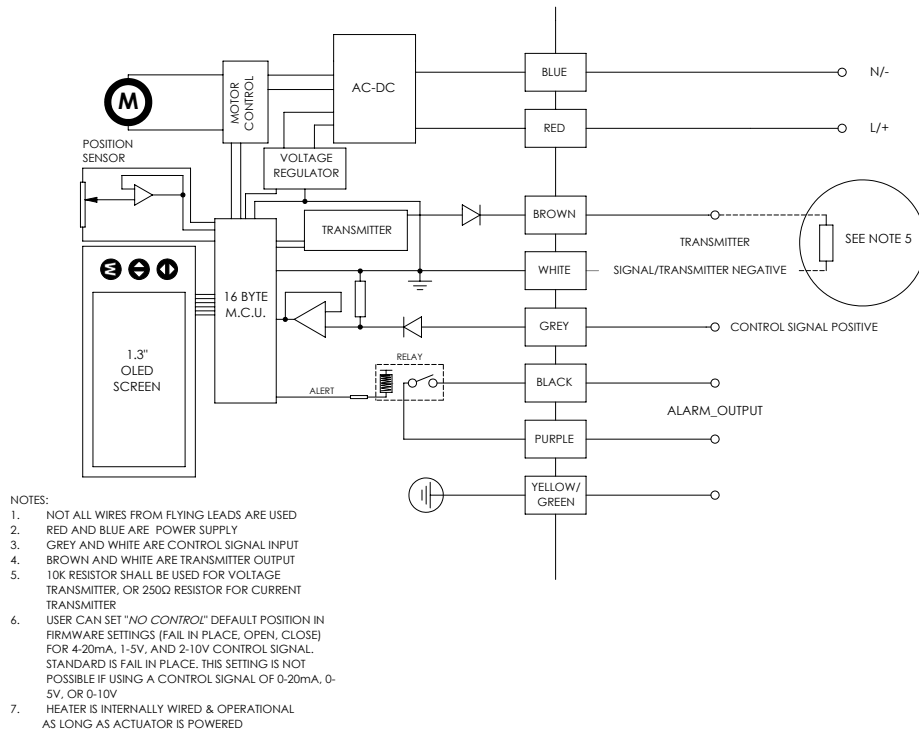
\*Cycle times are approximate

Duty cycle shown for ambient temp (73° F)

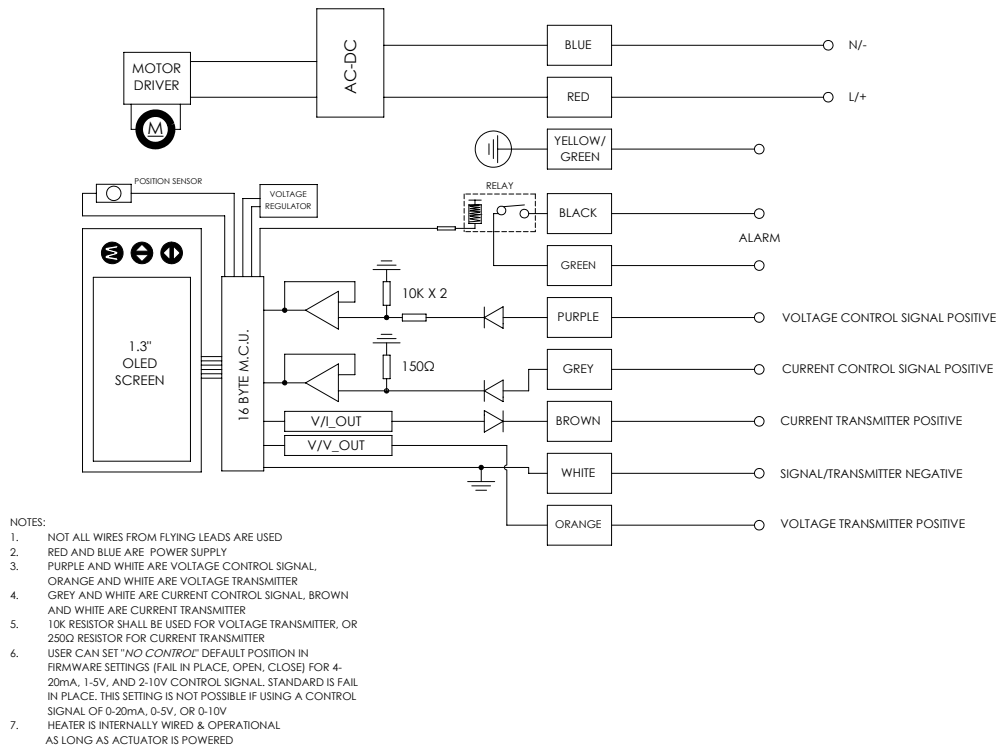
# SERIES 19 **SMART** MODULATING ELECTRIC ACTUATOR

## Wiring Diagrams

### S20



### S50-S110



## Sample Specification

All Series 19 SAV smart modulating electric actuators shall have a brushless DC motor that accepts multiple voltages, permanently lubricated steel gears, NEMA 4X ABS enclosure with stainless steel trim, visual beacon indication, ISO 5211 valve mounting platform, manual override, and be CE compliant. Standard features shall include a heater, transmitter, field selection of various control signals, field selection of fail position [upon loss of command signal], one set of dry contacts for alarm reporting, LED indicator for alarm conditions, an OLED screen with push buttons, local controls, and a QR code that links to its user manual and wiring schematic.

# TYPE-21/21a BALL VALVE WITH SERIES 19 **SMART** MODULATING FAILSAFE ELECTRIC ACTUATOR

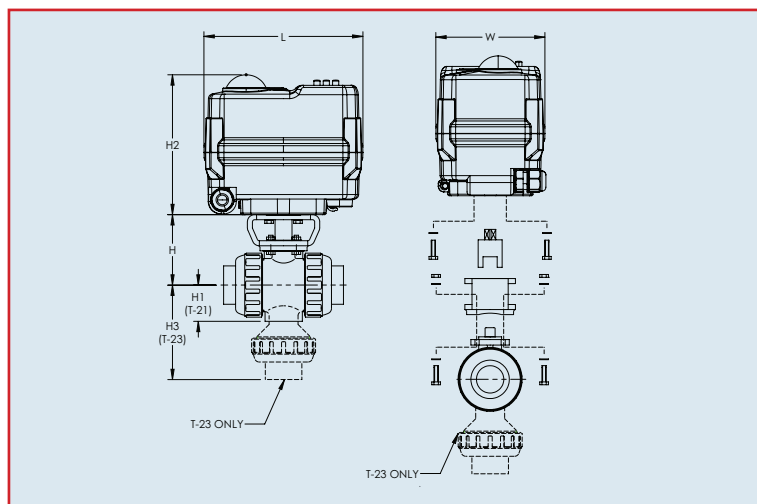


## Standard Features (1/2" – 4")

- **Compact:** Perfect for OEM and skid manufacturers
- **OLED Screen:** Displays input command, position status, alert conditions
- **Push Buttons:** Used to calibrate/adjust end positions, local controls
- **Multi-voltage:** 95 VAC to 265 VAC or 24 VAC/VDC
- **Motor:** Reversing, brushless DC motor
- **Gear Train:** Permanently lubricated steel gears
- **Corrosion Resistant Enclosure:** NEMA 4X ABS enclosure with stainless steel trim
- **ISO mounting configuration**
- **Electrical Connection:** NEMA 4X cable gland with two-meter cable
- **Position Indication:** Highly visible beacon position indicator
- **LED Alarm Indication:** **BLUE** fault
- **Manual Override:** Manually cycle valve via electroless nickel-plated hex key
- **Selectable Control Signal:** User can select 4-20 mA, 0-20 mA, 0-10 VDC, 2-10 VDC, or 1-5 VDC (size 20 is specifically a current control signal or a voltage control signal)
- **Reverse Acting:** User can select standard operation or reverse acting
- **Selectable Fail Position:** If control signal is lost, the unit can be calibrated to fail as is, fail open, or fail close
- **Transmitter:** Current or voltage transmitter (matching the control signal) is standard equipment
- **Space Heater:** Internally wired to limit condensation
- **CE Compliant:** All actuators are CE labeled and compliant
- **75% Duty Cycle:** Extended duty cycle is ideal for high cycling/modulating applications
- **Output Torque:** Series 19 electric actuators have an output torque range from 177 in-lbs to 442 in-lbs
- **QR Code:** Links to user manual; includes wiring schematic
- **Simple Wiring:** Wiring technique is the same for all voltage units
- **Local Controls:** Used with OLED and push buttons, a user can locally open or close units via password

## Specifications

|                          |   |
|--------------------------|---|
| <b>Motor Type:</b>       | Reversing, brushless DC   |
| <b>Sizes:</b>            | S20 for 1/2" – 2" ball valves<br>S50 for 2-1/2" – 3" ball valves<br>S110 for 4" ball valves |
| <b>Torque:</b>           | 177 in-lbs to 973 in-lbs  |
| <b>Voltage:</b>          | 95 VAC to 265 VAC multi-voltage   |
| <b>Amp Draw:</b>         | 0.18 Amp for S20<br>0.24 Amp for S50<br>0.84 Amp for S110                                   |
| <b>Max Ambient Temp:</b> | 150° F  |



## Dimensions (inch)

| Size  | 1/2" | 3/4" | 1"   | 1-1/4" | 1-1/2" | 2"   | 2-1/2" | 3"   | 4"   |
|-------|------|------|------|--------|--------|------|--------|------|------|
| L     | 4.01 | 4.01 | 4.01 | 4.01   | 4.01   | 4.01 | 5.12   | 5.12 | 6.69 |
| W     | 2.76 | 2.76 | 2.76 | 2.76   | 2.76   | 2.76 | 4.33   | 4.33 | 4.52 |
| H     | 2.76 | 3.01 | 3.29 | 3.64   | 3.98   | 4.43 | 5.12   | 5.47 | 6.97 |
| H1    | 1.14 | 1.38 | 1.54 | 1.85   | 2.17   | 2.60 | 2.83   | 3.35 | 4.33 |
| H2    | 3.54 | 3.54 | 3.54 | 3.54   | 3.54   | 3.54 | 4.72   | 4.72 | 4.80 |
| Model | S20  | S20  | S20  | S20    | S20    | S20  | S50    | S50  | S110 |

## Weight (lbs)

| Size   | 1/2" | 3/4" | 1"  | 1-1/4" | 1-1/2" | 2"  | 2-1/2" | 3"   | 4"   |
|--------|------|------|-----|--------|--------|-----|--------|------|------|
| Weight | 2.7  | 2.9  | 3.4 | 3.8    | 4.9    | 6.7 | 10.2   | 13.7 | 40.9 |

## Engineering Data

| Model | Torque<br>(in-lbs) | 95-265 VAC  |               | 24 VAC/VDC  |               | Cycle time<br>per 90<br>degrees<br>(seconds)* |
|-------|--------------------|-------------|---------------|-------------|---------------|---|
|       |                    | Amp<br>Draw | Duty<br>Cycle | Amp<br>Draw | Duty<br>Cycle |   |
| S20   | 177                | 0.18        | 75%           | 0.96        | 75%           | 10  |
| S50   | 442                | 0.24        | 75%           | 1.20        | 75%           | 10  |
| S110  | 973                | 0.84        | 75%           | 4.80        | 75%           | 10  |

Amp draw is considered locked rotor

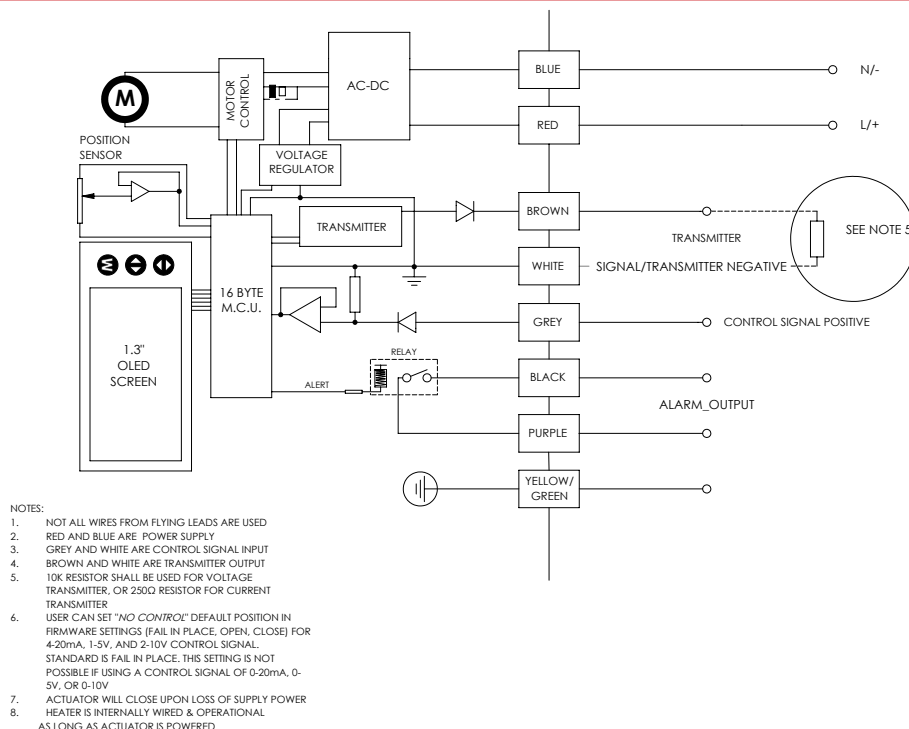
\* Cycle times are approximate

Duty cycle shown for ambient temp (73° F)

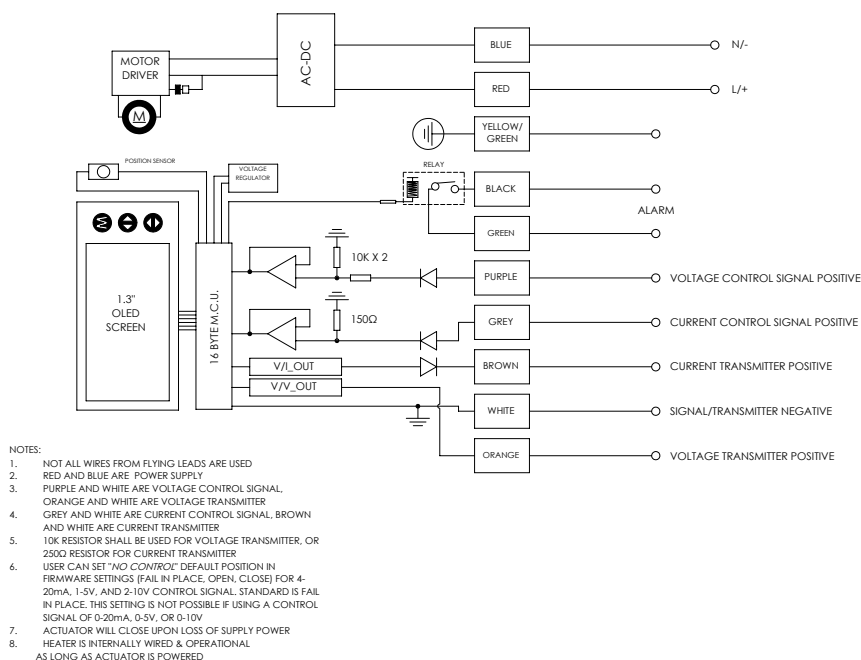
# TYPE-21/21a BALL VALVE WITH SERIES 19 **SMART** MODULATING FAILSAFE ELECTRIC ACTUATOR

## Wiring Diagrams

### S20



### S50



## Sample Specification

All Series 19 SAV smart modulating failsafe electric actuators shall have a brushless DC motor that accepts multiple voltages, permanently lubricated steel gears, NEMA 4X ABS enclosure with stainless steel trim, visual beacon indication, ISO 5211 valve mounting platform, manual override, and be CE compliant. Actuator shall be of capacitor discharge design with no batteries, and be selectable as fail as is, fail open, or fail close upon loss of supply power. Standard features shall include a heater, transmitter, field selection of various control signals, field selection of fail position (upon loss of command signal), one set of dry contacts for alarm reporting, LED indicator for alarm conditions, an OLED screen with push buttons, local controls, and a QR code that links to its user manual and wiring schematic.



# TYPE-23 MULTIPORT® BALL VALVE WITH SERIES 19 **SMART** MODULATING FAILSAFE ELECTRIC ACTUATOR

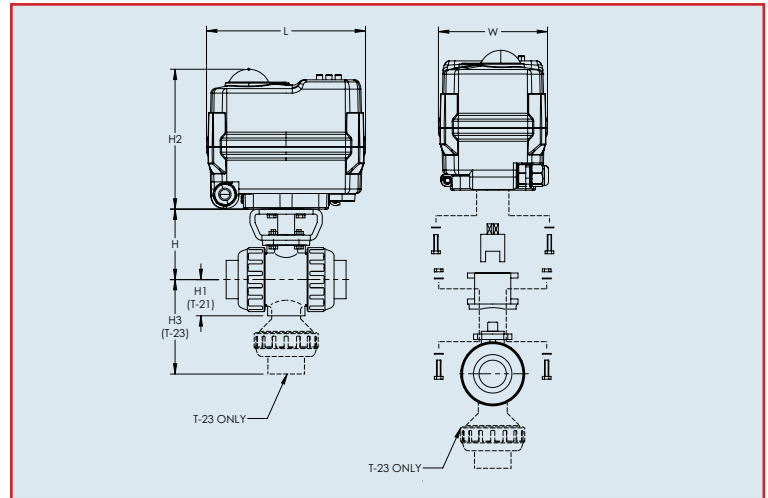


## Standard Features (1/2" – 4")

- **Compact:** Perfect for OEM and skid manufacturers
- **OLED Screen:** Displays input command, position status, alert conditions
- **Push Buttons:** Used to calibrate/adjust end positions, local controls
- **Multi-voltage:** 95 VAC to 265 VAC or 24 VAC/VDC
- **Motor:** Reversing, brushless DC motor
- **Gear Train:** Permanently lubricated steel gears
- **Corrosion Resistant Enclosure:** NEMA 4X ABS enclosure with stainless steel trim
- **ISO mounting configuration**
- **Electrical Connection:** NEMA 4X cable gland with two-meter cable
- **Position Indication:** Highly visible beacon position indicator
- **LED Alarm Indication:** **BLUE** fault
- **Manual Override:** Manually cycle valve via electroless nickel-plated hex key
- **Selectable Control Signal:** User can select 4-20 mA, 0-20 mA, 0-10 VDC, 2-10 VDC, or 1-5 VDC (size 20 is specifically a current control signal or a voltage control signal)
- **Reverse Acting:** User can select standard operation or reverse acting
- **Selectable Fail Position:** If control signal is lost, the unit can be calibrated to fail as is, fail open, or fail close
- **Transmitter:** Current or voltage transmitter (matching the control signal) is standard equipment
- **Space Heater:** Internally wired to limit condensation
- **CE Compliant:** All actuators are CE labeled and compliant
- **75% Duty Cycle:** Extended duty cycle is ideal for high cycling/modulating applications
- **Output Torque:** Series 19 electric actuators have an output torque range from 177 in-lbs to 442 in-lbs
- **QR Code:** Links to user manual; includes wiring schematic
- **Simple Wiring:** Wiring technique is the same for all voltage units
- **Local Controls:** Used with OLED and push buttons, a user can locally open or close units via password

## Specifications

|                          |  |
|--------------------------|--|
| <b>Motor Type:</b>       | Reversing, brushless DC  |
| <b>Sizes:</b>            | S20 for 1/2" – 2" three-way ball valves<br>S50 for 3" three-way ball valves<br>S110 for 4" three-way ball valves |
| <b>Torque:</b>           | 177 in-lbs to 973 in-lbs   |
| <b>Voltage:</b>          | 95 VAC to 265 VAC multi-voltage  |
| <b>Amp Draw:</b>         | 0.18 Amp for S20<br>0.24 Amp for S50<br>0.84 Amp for S110  |
| <b>Max Ambient Temp:</b> | 150° F   |



## Dimensions (inch)

| Size  | 1/2" | 3/4" | 1"   | 1-1/2" | 2"   | 3"   | 4"   |
|-------|------|------|------|--------|------|------|------|
| L     | 4.01 | 4.01 | 4.01 | 4.01   | 4.01 | 5.12 | 6.69 |
| W     | 2.76 | 2.76 | 2.76 | 2.76   | 2.76 | 4.33 | 4.52 |
| H     | 2.76 | 3.01 | 3.29 | 3.98   | 4.43 | 5.47 | 6.97 |
| H1    | 1.14 | 1.38 | 1.54 | 2.17   | 2.60 | 3.35 | 4.33 |
| H2    | 3.54 | 3.54 | 3.54 | 3.54   | 3.54 | 4.72 | 4.80 |
| Model | S20  | S20  | S20  | S20    | S20  | S50  | S110 |

## Weight (lbs)

| Size   | 1/2" | 3/4" | 1"  | 1-1/2" | 2"  | 3"   | 4"   |
|--------|------|------|-----|--------|-----|------|------|
| Weight | 2.9  | 3.4  | 4.1 | 6.48   | 8.1 | 19.4 | 40.9 |

## Engineering Data

| Model | Torque (in-lbs) | 95-265 VAC |            | 24 VAC/VDC |            | Cycle time per 90 degrees (seconds)* |
|-------|-----------------|------------|------------|------------|------------|--------------------------------------|
|       |                 | Amp Draw   | Duty Cycle | Amp Draw   | Duty Cycle |                                      |
| S20   | 177             | 0.18       | 75%        | 0.96       | 75%        | 10                                   |
| S50   | 442             | 0.24       | 75%        | 1.20       | 75%        | 10                                   |
| S110  | 973             | 0.84       | 75%        | 4.80       | 75%        | 10                                   |

Amp draw is considered locked rotor

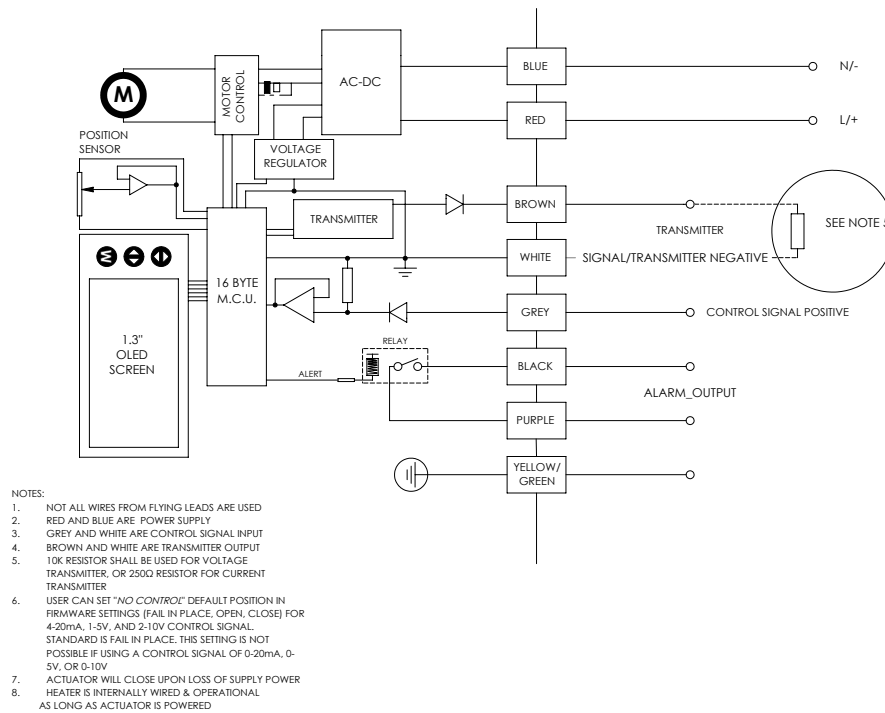
\*Cycle times are approximate

Duty cycle shown for ambient temp [73° F]

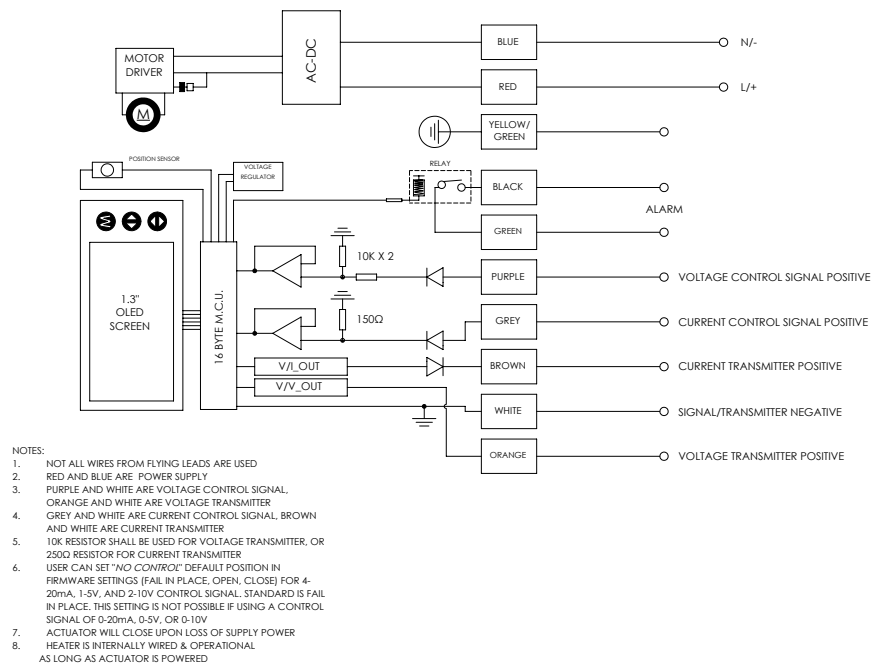
# TYPE-23 MULTIPOINT® BALL VALVE WITH SERIES 19 SMART MODULATING FAILSAFE ELECTRIC ACTUATOR

## Wiring Diagrams

### S20



### S50



## Sample Specification

All Series 19 SAV smart modulating failsafe electric actuators shall have a brushless DC motor that accepts multiple voltages, permanently lubricated steel gears, NEMA 4X ABS enclosure with stainless steel trim, visual beacon indication, ISO 5211 valve mounting platform, manual override, and be CE compliant. Actuator shall be of capacitor discharge design with no batteries, and be selectable as fail as is, fail open, or fail close upon loss of supply power. Standard features shall include a heater, transmitter, field selection of various control signals, field selection of fail position (upon loss of command signal), one set of dry contacts for alarm reporting, LED indicator for alarm conditions, an OLED screen with push buttons, local controls, and a QR code that links to its user manual and wiring schematic.

# TYPE-57P BUTTERFLY VALVE WITH SERIES 19 **SMART** MODULATING FAILSAFE ELECTRIC ACTUATOR

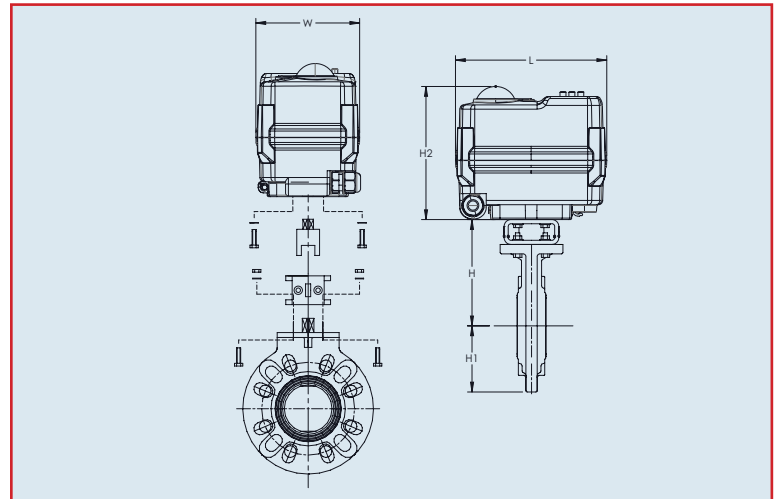


## Standard Features (1-1/2" – 6")

- **Compact:** Perfect for OEM and skid manufacturers
- **OLED Screen:** Displays input command, position status, alert conditions
- **Push Buttons:** Used to calibrate/adjust end positions, local controls
- **Multi-voltage:** 95 VAC to 265 VAC or 24 VAC/VDC
- **Motor:** Reversing, brushless DC motor
- **Gear Train:** Permanently lubricated steel gears
- **Corrosion Resistant Enclosure:** NEMA 4X ABS enclosure with stainless steel trim
- **ISO mounting configuration**
- **Electrical Connection:** NEMA 4X cable gland with two-meter cable
- **Position Indication:** Highly visible beacon position indicator
- **LED Alarm Indication:** BLUE fault
- **Manual Override:** Manually cycle valve via electroless nickel-plated hex key
- **Selectable Control Signal:** User can select 4-20 mA, 0-20 mA, 0-10 VDC, 2-10 VDC, or 1-5 VDC (size 20 is specifically a current control signal or a voltage control signal)
- **Reverse Acting:** User can select standard operation or reverse acting
- **Selectable Fail Position:** If control signal is lost, the unit can be calibrated to fail as is, fail open, or fail close
- **Transmitter:** Current or voltage transmitter (matching the control signal) is standard equipment
- **Space Heater:** Internally wired to limit condensation
- **CE Compliant:** All actuators are CE labeled and compliant
- **75% Duty Cycle:** Extended duty cycle is ideal for high cycling/modulating applications
- **Output Torque:** Series 19 electric actuators have an output torque range from 177 in-lbs to 973 in-lbs
- **QR Code:** Links to user manual; includes wiring schematic
- **Simple Wiring:** Wiring technique is the same for all voltage units
- **Local Controls:** Used with OLED and push buttons, a user can locally open or close units via password

## Specifications

|                          |  |
|--------------------------|--|
| <b>Motor Type:</b>       | Reversing, brushless DC  |
| <b>Sizes:</b>            | S20 for 1-1/2" – 2-1/2" butterfly valves<br>S50 for 3" – 4" butterfly valves<br>S110 for 6" butterfly valves |
| <b>Torque:</b>           | 177 in-lbs to 973 in-lbs   |
| <b>Voltage:</b>          | 95 VAC to 265 VAC multi-voltage  |
| <b>Amp Draw:</b>         | 0.18 Amp for S20<br>0.24 Amp for S50<br>0.84 Amp for S110  |
| <b>Max Ambient Temp:</b> | 150° F   |



## Dimensions (inch)

| Size  | 1-1/2" | 2"   | 2-1/2" | 3"   | 4"   | 5"   | 6"   |
|-------|--------|------|--------|------|------|------|------|
| H     | 5.51   | 5.75 | 6.18   | 6.46 | 7.16 | 8.46 | 8.97 |
| H1    | 2.95   | 3.27 | 3.66   | 3.94 | 4.53 | 5.00 | 5.63 |
| H2    | 3.54   | 3.54 | 3.54   | 4.72 | 4.72 | 4.80 | 4.80 |
| L     | 4.01   | 4.01 | 4.01   | 5.12 | 5.12 | 6.69 | 6.69 |
| W     | 2.76   | 2.76 | 2.76   | 4.33 | 4.33 | 4.52 | 4.52 |
| Model | S20    | S20  | S20    | S50  | S50  | S110 | S110 |

## Weight (lbs)

| Size   | 1-1/2" | 2"  | 2-1/2" | 3"  | 4"  | 5"   | 6"   |
|--------|--------|-----|--------|-----|-----|------|------|
| Weight | 5.2    | 5.6 | 6.1    | 8.2 | 9.5 | 15.9 | 17.9 |

## Engineering Data

| Model | Torque (in-lbs) | 95-265 VAC |            | 24 VAC/VDC |            | Cycle time per 90 degrees (seconds)* |
|-------|-----------------|------------|------------|------------|------------|--------------------------------------|
|       |                 | Amp Draw   | Duty Cycle | Amp Draw   | Duty Cycle |                                      |
| S20   | 177             | 0.18       | 75%        | 0.96       | 75%        | 10                                   |
| S50   | 442             | 0.24       | 75%        | 1.20       | 75%        | 10                                   |
| S110  | 973             | 0.84       | 75%        | 4.80       | 75%        | 10                                   |

Amp draw is considered locked rotor

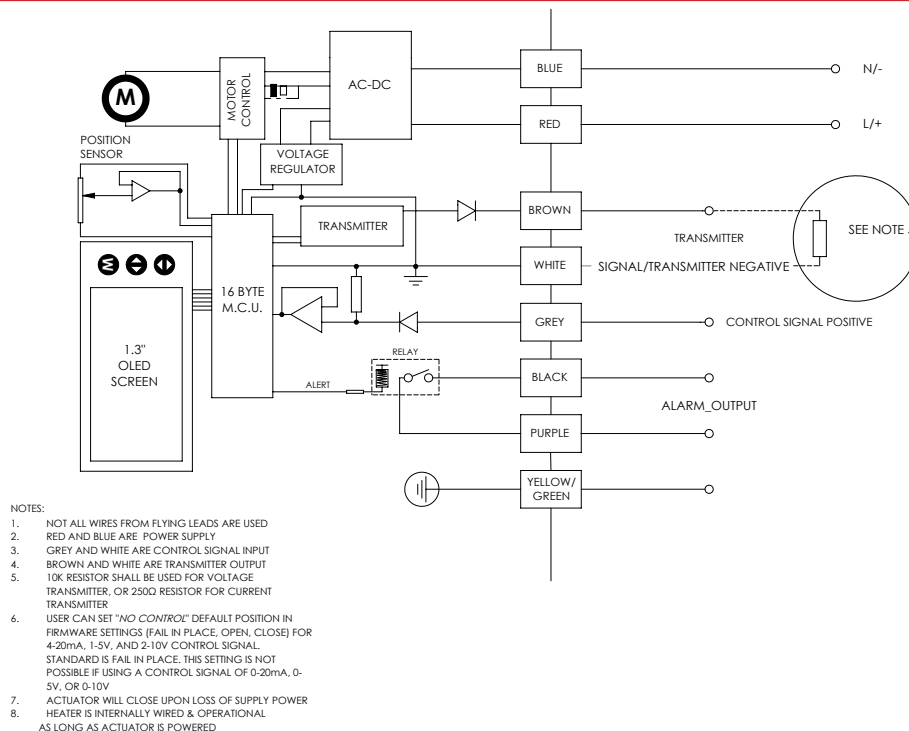
\*Cycle times are approximate

Duty cycle shown for ambient temp [73° F]

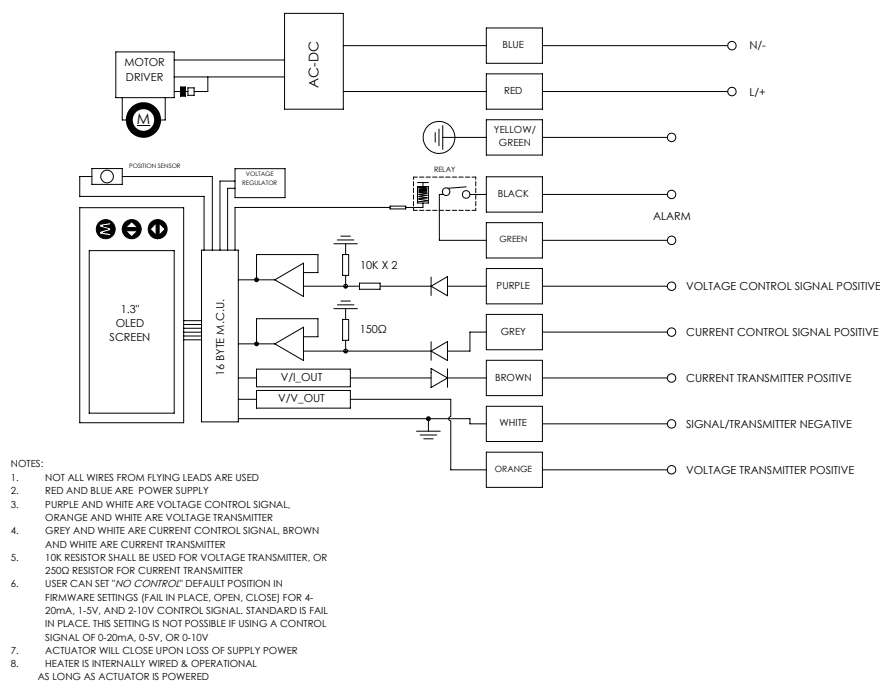
# TYPE-57P BUTTERFLY VALVE WITH SERIES 19 **SMART** MODULATING FAILSAFE ELECTRIC ACTUATOR

## Wiring Diagrams

### S20



### S50



## Sample Specification

All Series 19 SAV smart modulating failsafe electric actuators shall have a brushless DC motor that accepts multiple voltages, permanently lubricated steel gears, NEMA 4X ABS enclosure with stainless steel trim, visual beacon indication, ISO 5211 valve mounting platform, manual override, and be CE compliant. Actuator shall be of capacitor discharge design with no batteries, and be selectable as fail as is, fail open, or fail close upon loss of supply power. Standard features shall include a heater, transmitter, field selection of various control signals, field selection of fail position (upon loss of command signal), one set of dry contacts for alarm reporting, LED indicator for alarm conditions, an OLED screen with push buttons, local controls, and a QR code that links to its user manual and wiring schematic.

# SERIES 19 SMART MODULATING FAILSAFE ELECTRIC ACTUATOR

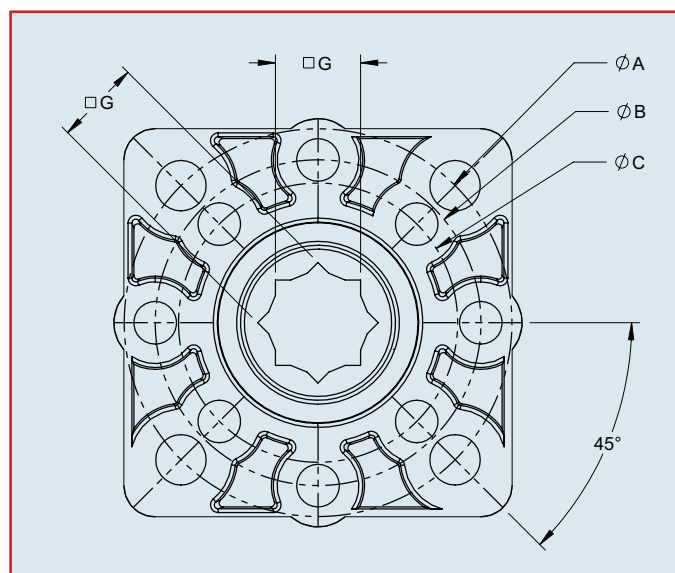


## Standard Features (All Sizes)

- **Compact:** Perfect for OEM and skid manufacturers
- **OLED Screen:** Displays input command, position status, alert conditions
- **Push Buttons:** Used to calibrate/ adjust end positions, local controls
- **Multi-voltage:** 95 VAC to 265 VAC or 24 VAC/VDC
- **Motor:** Reversing, brushless DC motor
- **Gear Train:** Permanently lubricated, steel gears
- **Corrosion Resistant Enclosure:** NEMA 4X ABS enclosure with stainless steel trim
- **ISO mounting configuration**
- **Electrical Connection:** NEMA 4X cable gland with two-meter cable
- **Position Indication:** Highly visible beacon position indicator
- **LED Fault:** BLUE
- **Manual Override:** Manually cycle valve via electroless nickel-plated hex key
- **Selectable Control Signal:** User can select 4-20 mA, 0-20 mA, 0-10 VDC, 2-10 VDC, or 1-5 VDC (size 20 is specifically a current control signal or a voltage control signal)
- **Reverse Acting:** User can select standard operation or reverse acting
- **Selectable Fail Position:** If control signal is lost, the unit can be calibrated to fail as is, fail open, or fail close
- **Transmitter:** Current or voltage transmitter (matching the control signal) is standard equipment
- **Space Heater:** Internally wired to limit condensation
- **CE Compliant:** All actuators are CE labeled and compliant
- **75% Duty Cycle:** Extended duty cycle is ideal for high cycling/modulating applications
- **Output Torque:** Series 19 electric actuators have an output torque range from 177 in-lbs to 442 in-lbs
- **QR Code:** Links to user manual; includes wiring schematic
- **Simple Wiring:** Wiring technique is the same for all voltage units
- **Local Controls:** Used with OLED and push buttons, a user can locally open or close units via password
- **Capacitor Discharge System:** A capacitor is used in place of batteries for failsafe mode

## Specifications

|                               |   |
|-------------------------------|---|
| <b>Sizes:</b>                 | S20, S50, S110  |
| <b>Torque:</b>                | 177 in-lbs to 973 in-lbs                                  |
| <b>Voltage:</b>               | 95 VAC to 265 VAC 1Ph 50/60 Hz                            |
| <b>Amp Draw:</b>              | 0.18 Amp for S20<br>0.24 Amp for S50<br>0.84 Amp for S110 |
| <b>Electrical Connection:</b> | NEMA 4X cable gland with two-meter color-coded cable      |
| <b>Max Ambient Temp:</b>      | 150° F  |
| <b>Cycle:</b>                 | Per 90 degrees: 10 seconds                                |
| <b>Enclosure:</b>             | NEMA 4X   |



## Output Dimensions

| Size | A        | B        | C        | G    |
|------|----------|----------|----------|------|
| S20  | F05 (M6) | F04 (M5) | F03 (M5) | 14MM |
| S50  | F07 (M8) | F05 (M6) | N/A      | 14MM |
| S110 | F07 (M8) | F05 (M6) | N/A      | 17MM |

## Weight (lbs)

| Model  | S20 | S50 | S110 |
|--------|-----|-----|------|
| Weight | 1.7 | 1.7 | 4.8  |

## Engineering Data

| Model | Torque (in-lbs) | 95-265 VAC |            | 24 VAC/VDC |            | Cycle time per 90 degrees [seconds] * |
|-------|-----------------|------------|------------|------------|------------|---------------------------------------|
|       |                 | Amp Draw   | Duty Cycle | Amp Draw   | Duty Cycle |                                       |
| S20   | 177             | 0.18       | 75%        | 0.96       | 75%        | 10                                    |
| S50   | 442             | 0.24       | 75%        | 1.20       | 75%        | 10                                    |
| S110  | 973             | 0.84       | 75%        | 4.80       | 75%        | 10                                    |

Amp draw is considered locked rotor

\* Cycle times are approximate

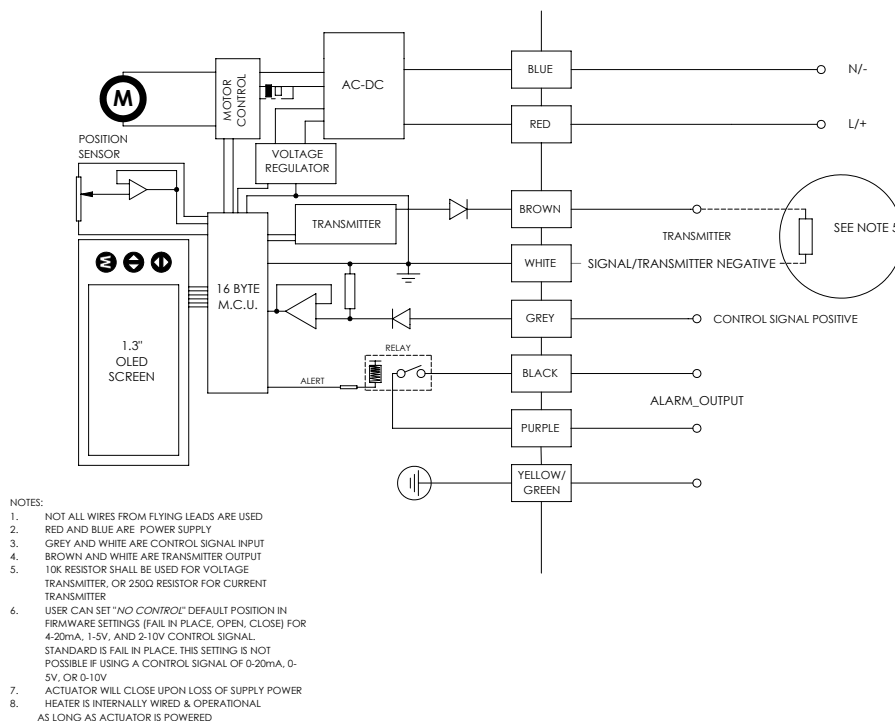
Duty cycle shown for ambient temp (73° F)



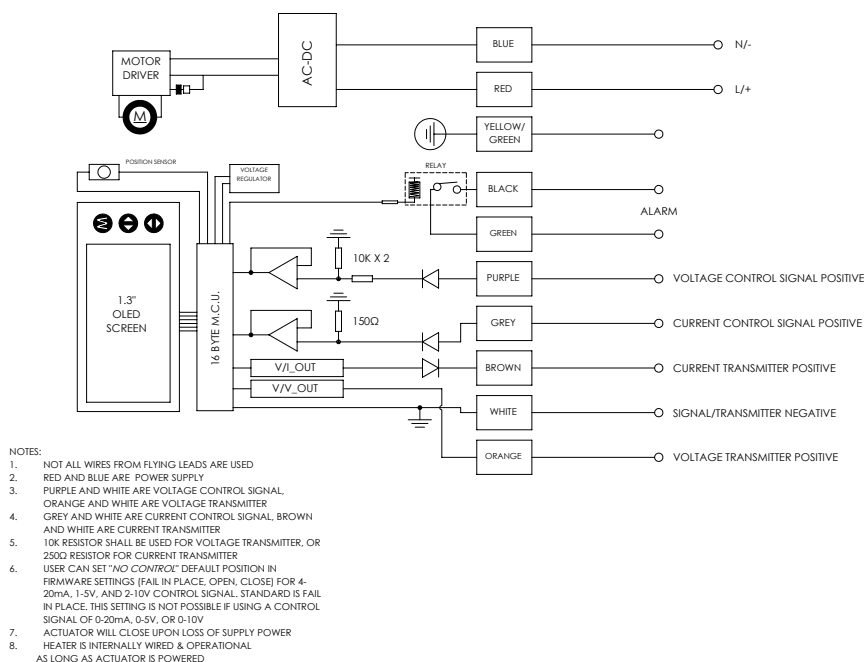
# SERIES 19 SMART MODULATING FAILSAFE ELECTRIC ACTUATOR

## Wiring Diagrams

### S20



### S50



## Sample Specification

All Series 19 SAV smart modulating failsafe electric actuators shall have a brushless DC motor that accepts multiple voltages, permanently lubricated steel gears, NEMA 4X ABS enclosure with stainless steel trim, visual beacon indication, ISO 5211 valve mounting platform, manual override, and be CE compliant. Actuator shall be of capacitor discharge design with no batteries, and be selectable as fail as is, fail open, or fail close upon loss of supply power. Standard features shall include a heater, transmitter, field selection of various control signals, field selection of fail position (upon loss of command signal), one set of dry contacts for alarm reporting, LED indicator for alarm conditions, an OLED screen with push buttons, local controls, and a QR code that links to its user manual and wiring schematic.