

Table of Contents

CAV Com Pack® On/Off

OMNI® TYPE-27 BALL VALVE WITH SERIES 19 COM PACK® ON/OFF ELECTRIC ACTUATOR	2
TYPE-21 AND TYPE-23 MULTIPOINT™ BALL VALVE WITH SERIES 19 COM PACK® ON/OFF ELECTRIC ACTUATOR	4

CAV Com Pack® Failsafe

OMNI® TYPE-27 BALL VALVE WITH SERIES 19 COM PACK® FAILSAFE ELECTRIC ACTUATOR	6
TYPE-21 AND TYPE-23 MULTIPOINT™ BALL VALVE WITH SERIES 19 COM PACK® FAILSAFE ELECTRIC ACTUATOR	8

SAV Smart Pack® On/Off

TYPE-21/21a BALL VALVE WITH SERIES 19 SMART ON/OFF ELECTRIC ACTUATOR	10
TYPE-23 MULTIPOINT™ BALL VALVE WITH SERIES 19 SMART ON/OFF ELECTRIC ACTUATOR	12
TYPE-57P BUTTERFLY VALVE WITH SERIES 19 SMART ON/OFF ELECTRIC ACTUATOR	14
SERIES 19 SMART ON/OFF ELECTRIC ACTUATOR	16

SAV Smart Pack® Failsafe

TYPE-21/21a BALL VALVE WITH SMART FAILSAFE ELECTRIC ACTUATOR	18
TYPE-23 MULTIPOINT™ BALL VALVE WITH SMART FAILSAFE ELECTRIC ACTUATOR	20
TYPE-57P BUTTERFLY VALVE WITH SMART FAILSAFE ELECTRIC ACTUATOR	22
SERIES 19 SMART FAILSAFE ELECTRIC ACTUATOR	24

SAV Smart Pack® Modulating

TYPE-21/21a BALL VALVE WITH SERIES 19 SMART MODULATING ELECTRIC ACTUATOR	26
TYPE-21a SST BALL VALVE WITH SERIES 19 SMART MODULATING ELECTRIC ACTUATOR	28
TYPE-23 MULTIPOINT™ BALL VALVE WITH SMART MODULATING ELECTRIC ACTUATOR	30
TYPE-57P BUTTERFLY VALVE WITH SERIES 19 SMART MODULATING ELECTRIC ACTUATOR	32
SERIES 19 SMART MODULATING ELECTRIC ACTUATOR	34

SAV Smart Pack® Modulating Failsafe

TYPE-21/21a BALL VALVE WITH SERIES 19 SMART MODULATING FAILSAFE ELECTRIC ACTUATOR	36
TYPE-23 MULTIPOINT™ BALL VALVE WITH SERIES 19 SMART MODULATING FAILSAFE ELECTRIC ACTUATOR	38
TYPE-57P BUTTERFLY VALVE WITH SERIES 19 SMART MODULATING FAILSAFE ELECTRIC ACTUATOR	40
SERIES 19 SMART MODULATING FAILSAFE ELECTRIC ACTUATOR	42

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

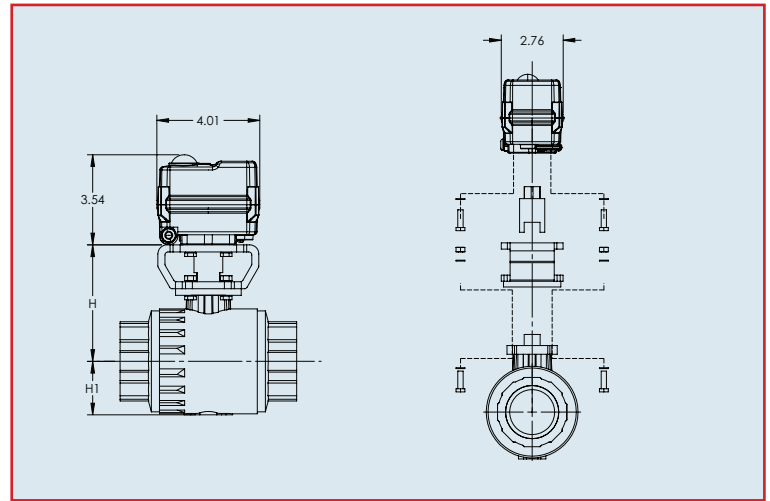


Specifications

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

Standard Features (Sizes 3/8" – 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 PC/PET 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

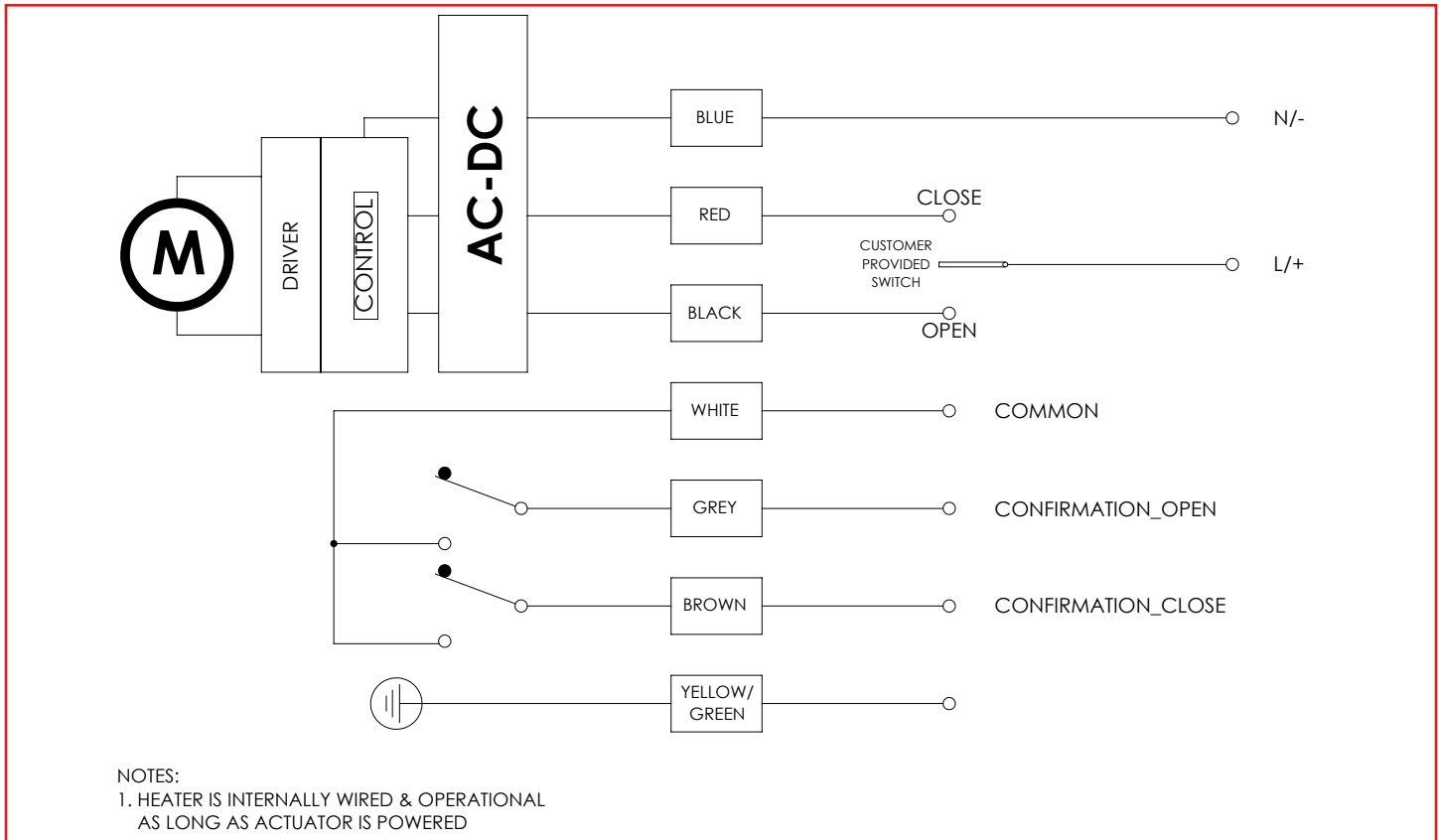
Amp draw is considered locked rotor

*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 PC/PET 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	X		
	2-1/2" - 3"			X	
Type-23 Multiport™ Valves	4"				X
	1/2" - 2"	X	X		
	3"			X	
Type-57P Butterfly Valves	4"				X
	1-1/2" - 2-1/2"		X		
	3" - 4"			X	
	5" - 6"				X



TYPE-21 AND TYPE-23 MULTIPOINT™ BALL VALVE WITH SERIES 19 COM PACK® ON/OFF ELECTRIC ACTUATOR

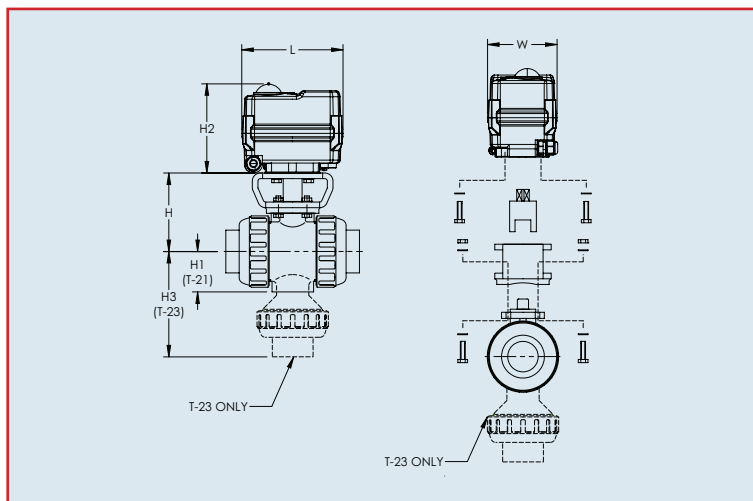


Specifications

Motor Type:	Reversing, brushless DC
Sizes:	C20 for 1/2" – 2" valves
Torque:	177 in-lbs
Voltage:	95 VAC to 265 VAC multi-voltage
Amp Draw:	0.18 Amp
Max Ambient Temp:	150° F
Enclosure:	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 PC/PET 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	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"
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
H3	3.08	3.56	4.32	N/A	5.71	6.66
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
Model	C20	C20	C20	C20	C20	C20

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	
C20	177	0.18	75%	0.96	75%	10

Amp draw is considered locked rotor

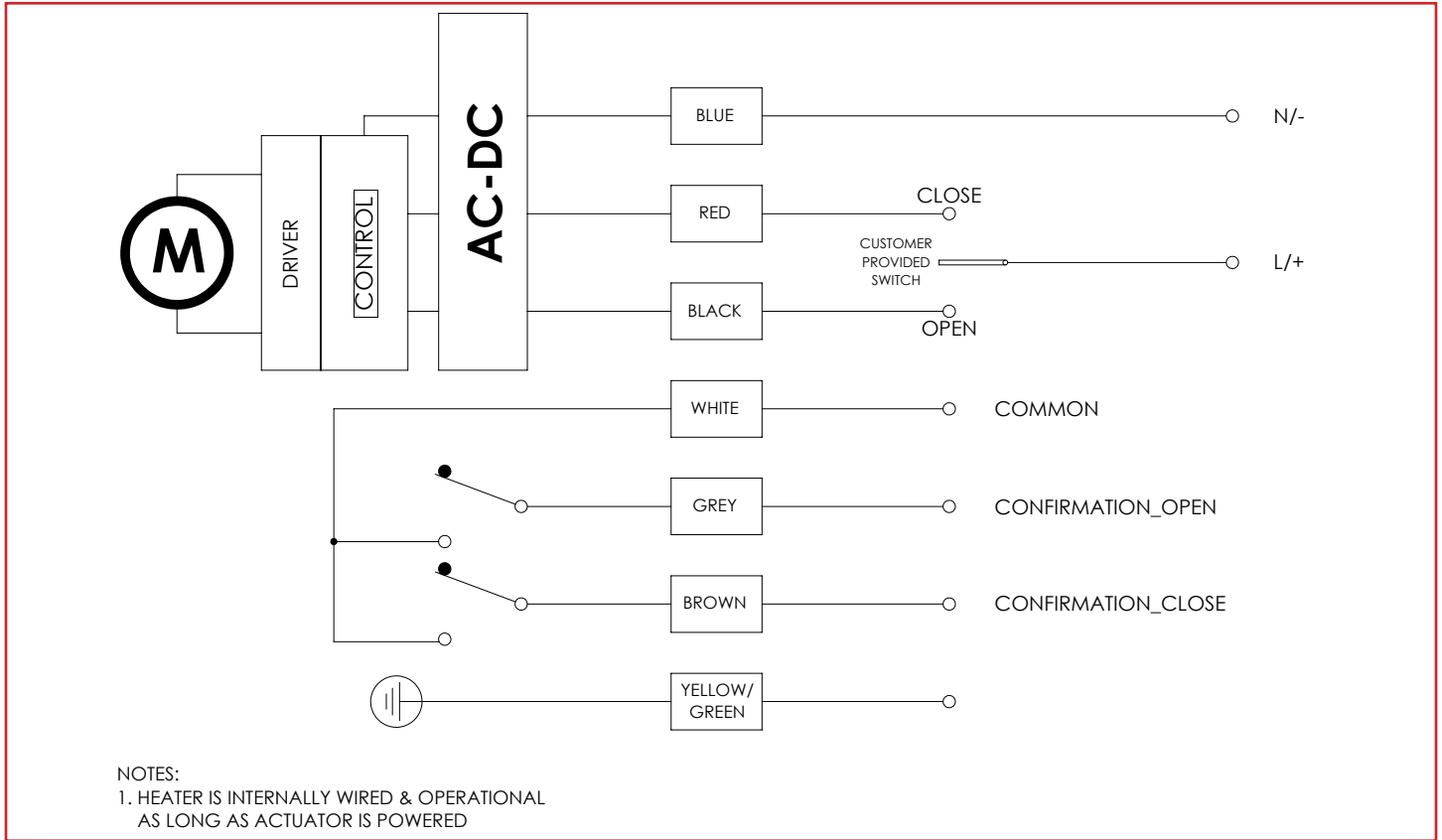
*Cycle times are approximate

Duty cycle shown for ambient temp (73° F)



TYPE-21 AND TYPE-23 MULTIPOINT™ 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 PC/PET 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	X		
	2-1/2" - 3"			X	
Type-23 Multipoint™ Valves	4"				X
	1/2" - 2"	X	X		
	3"			X	
Type-57P Butterfly Valves	4"				X
	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

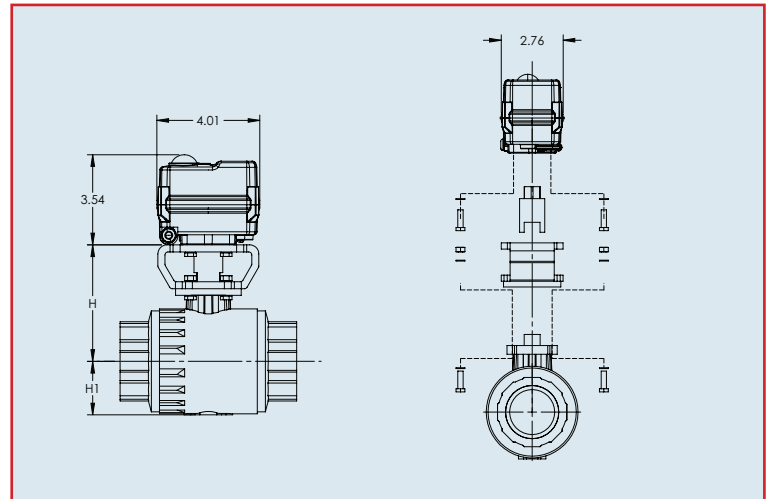


Specifications

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

Standard Features (Sizes 3/8" – 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 PC/PET 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



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

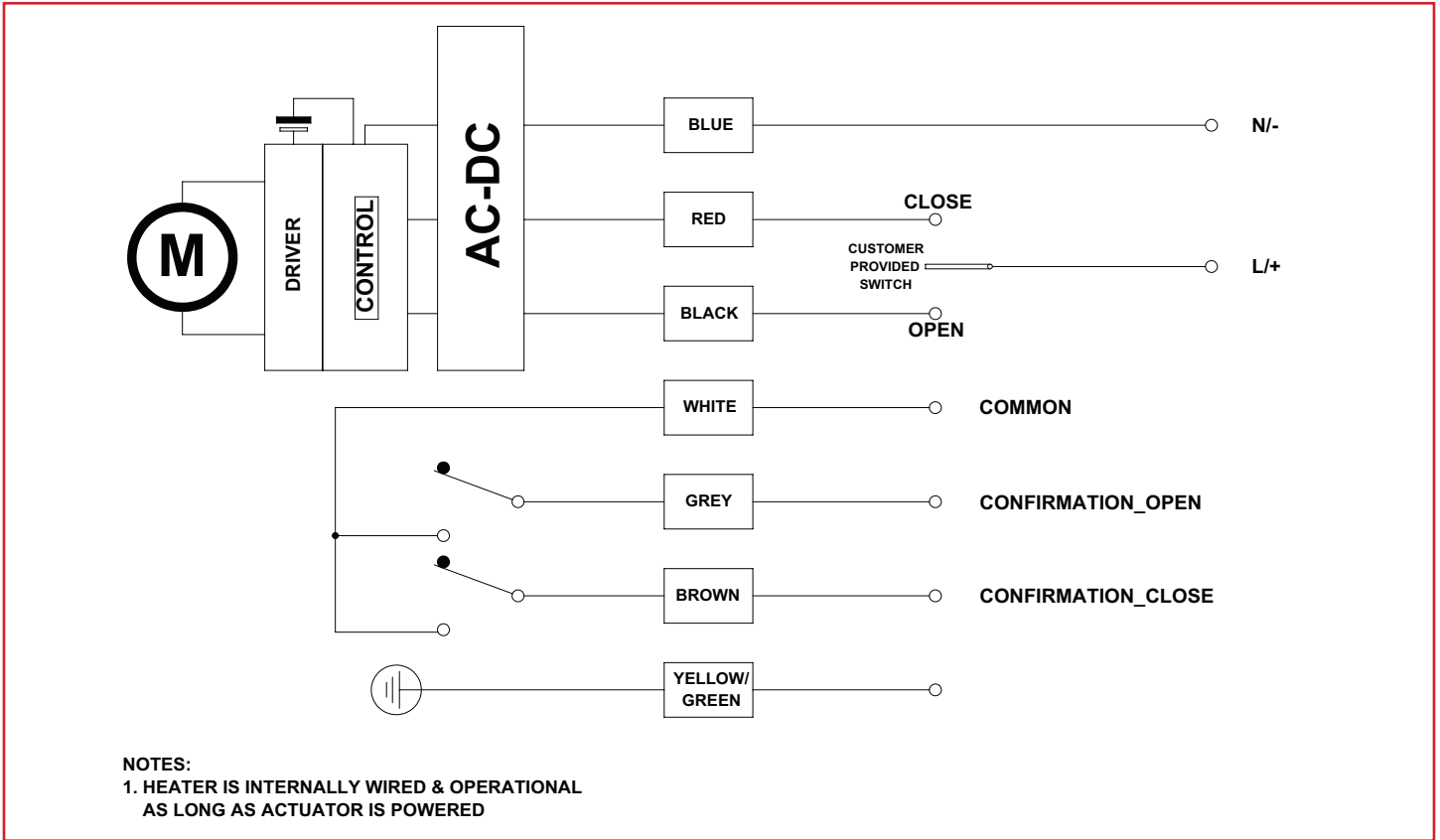
Amp draw is considered locked rotor

*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 PC/PET 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	X		
	2-1/2" - 3"			X	
Type-23 Multiport™ Valves	4"				X
	1/2" - 2"	X	X		
	3"			X	
Type-57P Butterfly Valves	4"				X
	1-1/2" - 2-1/2"		X		
	3" - 4"			X	
	5" - 6"				X



TYPE-21 AND TYPE-23 MULTIPOINT™ BALL VALVE WITH SERIES 19 COM PACK® FAILSAFE ELECTRIC ACTUATOR



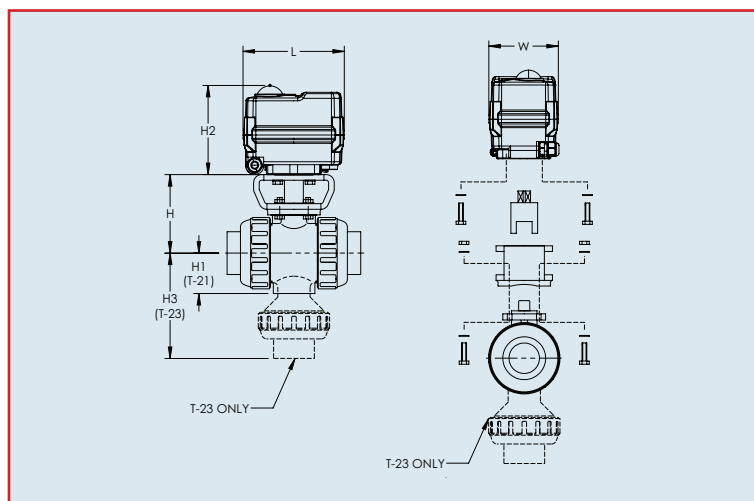
Standard Features (Sizes 1/2" - 2")

- **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
- **Capacitor Discharge System:** A capacitor is used in place of batteries for failsafe mode
- **Fail Position:** Fail close is standard; fail open is an option
- **Gear Train:** Permanently lubricated steel gears
- **Corrosion Resistant Enclosure:** NEMA 4X PC/PET 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

Motor Type:	Reversing, brushless DC
Sizes:	C20 for 1/2" - 2" valves
Torque:	177 in-lbs
Voltage:	95 VAC to 265 VAC multi-voltage
Amp Draw:	0.18 Amp
Max Ambient Temp:	150° F
Enclosure:	NEMA 4X



Dimensions (inch)

Size	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"
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
H3	3.08	3.56	4.32	N/A	5.71	6.66
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
Model	C20	C20	C20	C20	C20	C20

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	
C20	177	0.18	75%	0.96	75%	10

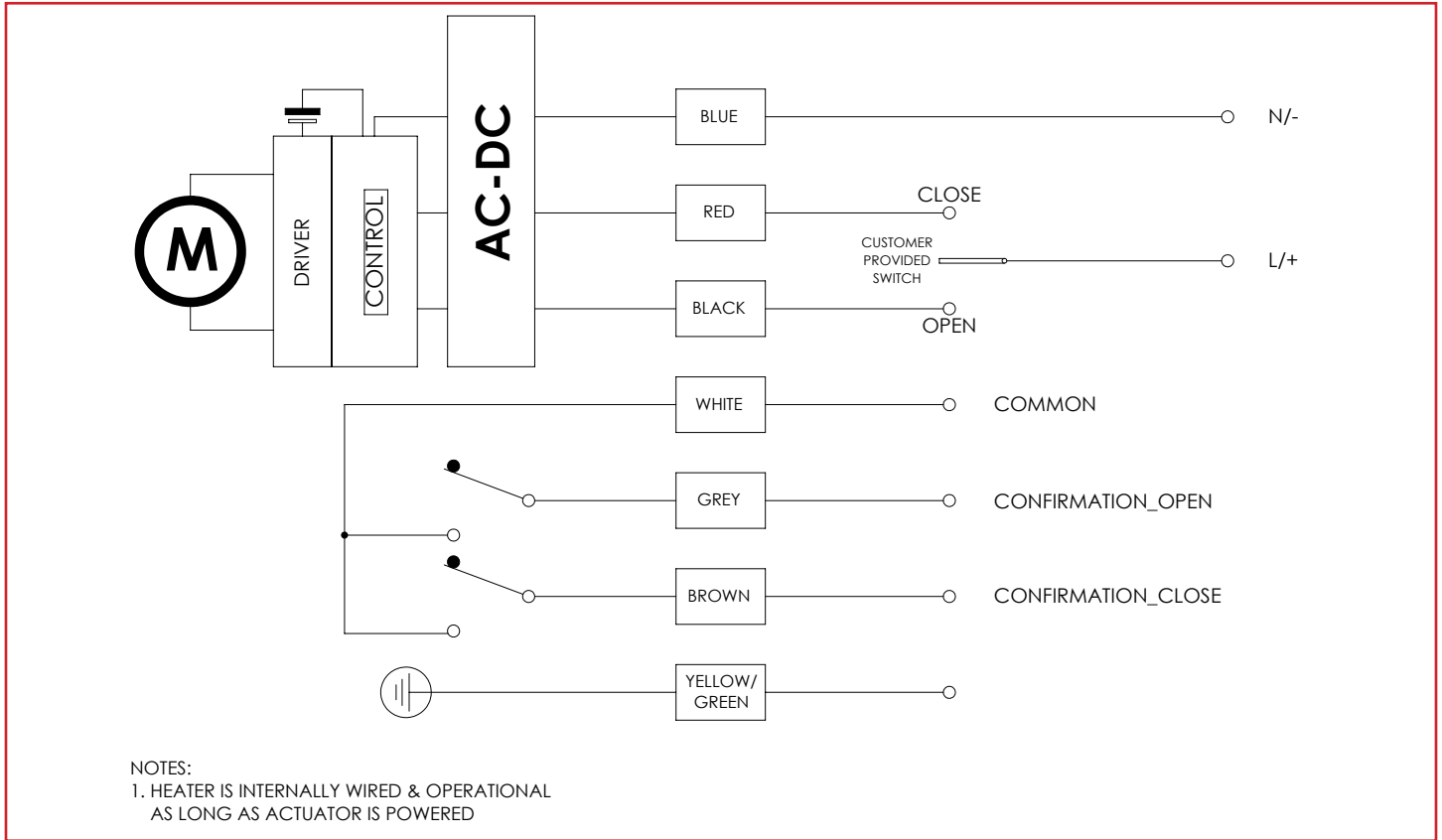
Amp draw is considered locked rotor

*Cycle times are approximate

Duty cycle shown for ambient temp [73° F]

TYPE-21 AND TYPE-23 MULTIPOINT™ 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 PC/PET 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	X		
	2-1/2" - 3"			X	
Type-23 Multipoint™ Valves	4"				X
	1/2" - 2"	X	X		
	3"			X	
Type-57P Butterfly Valves	4"				X
	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

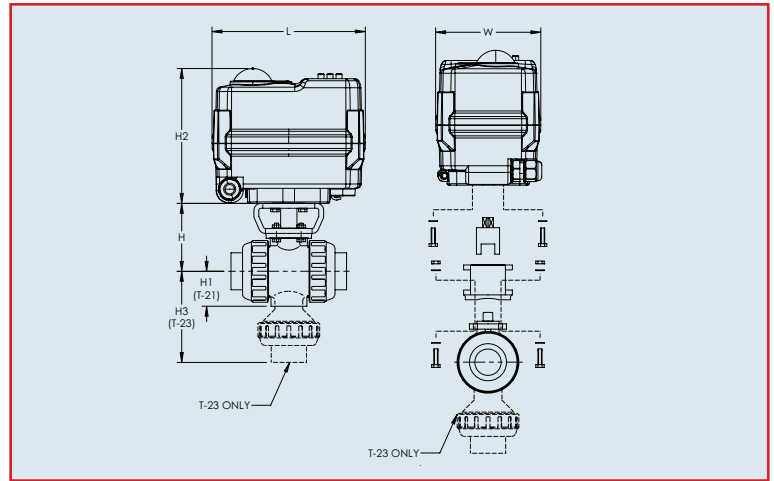


Specifications

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

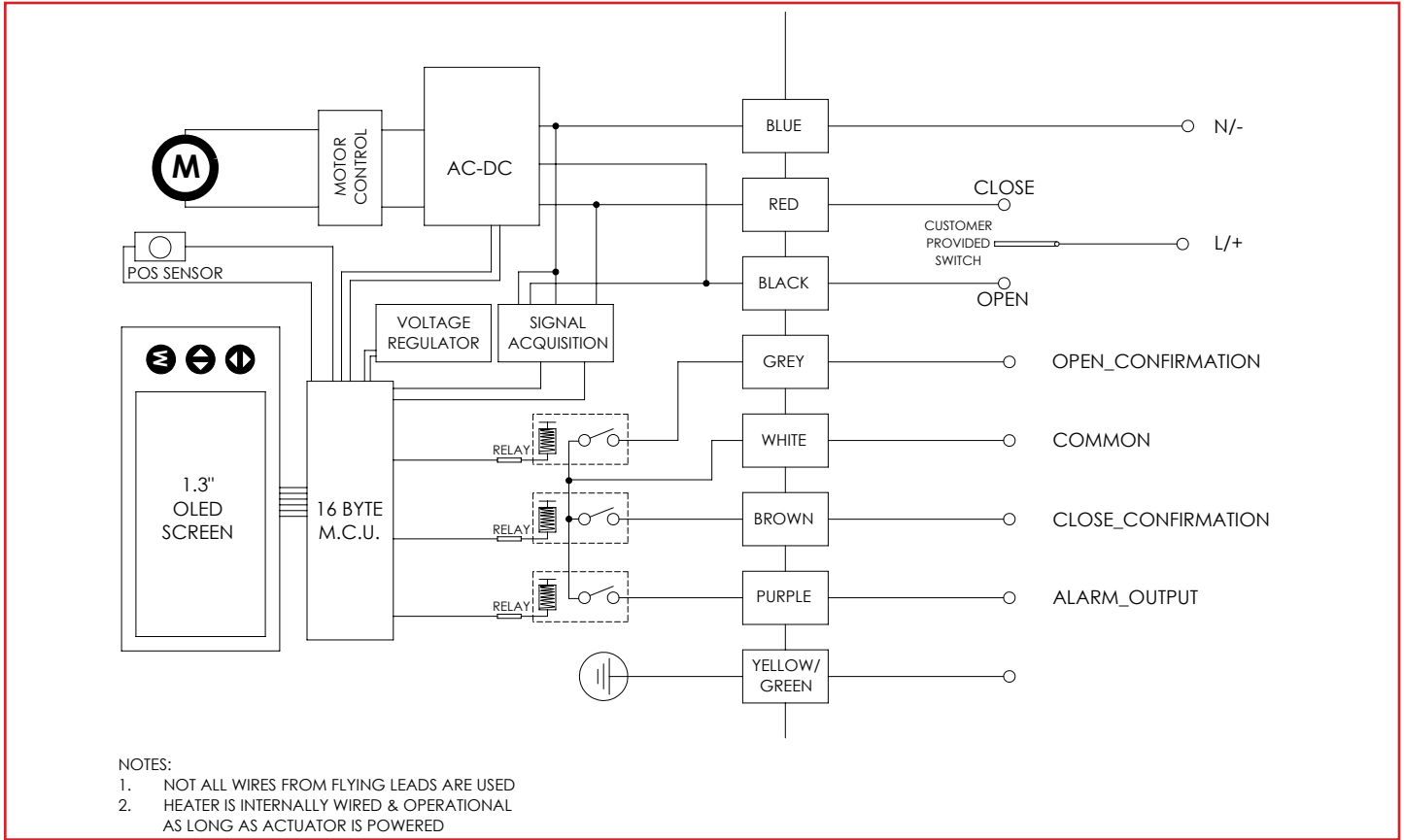
Amp draw is considered locked rotor

*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 PC/PET 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	X		
	2-1/2" - 3"			X	
Type-23 Multiport™ Valves	4"				X
	1/2" - 2"	X	X		
	3"			X	
Type-57P Butterfly Valves	4"				X
	1-1/2" - 2-1/2"		X		
	3" - 4"			X	
	5" - 6"				X



TYPE-23 MULTIPOINT™ BALL VALVE WITH SERIES 19 **SMART** ON/OFF ELECTRIC ACTUATOR

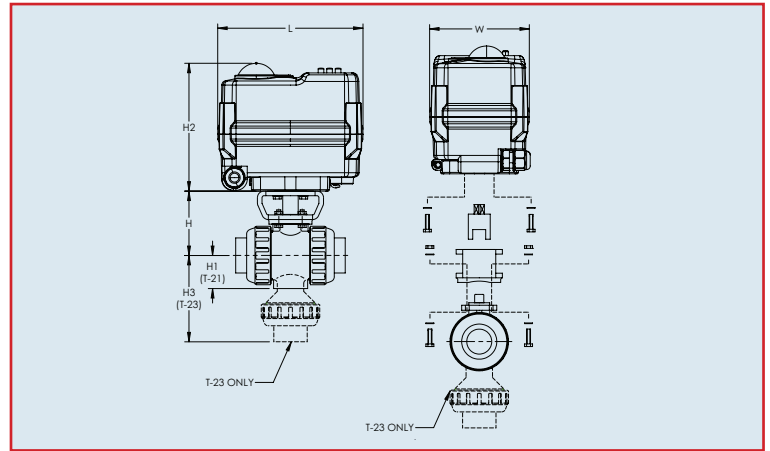


Standard Features (1/2" – 4")

- **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 motor
- **Gear Train:** Permanently lubricated steel gears
- **Corrosion Resistant Enclosure:** NEMA 4X PC/PET 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

Motor Type:	Reversing, brushless DC
Sizes:	S20 for 1/2" – 2" 3-way ball valves S50 for 3" three-way ball valves S110 for 4" three-way ball valves
Torque:	177 in-lbs to 973 in-lbs
Voltage:	95 VAC to 265 VAC multi-voltage
Amp Draw:	0.18 Amp for S20 0.24 Amp for S50 0.84 Amp for S110
Max Ambient Temp:	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%	20
S50	442	0.24	75%	1.20	75%	20
S110	973	0.84	75%	4.80	75%	20

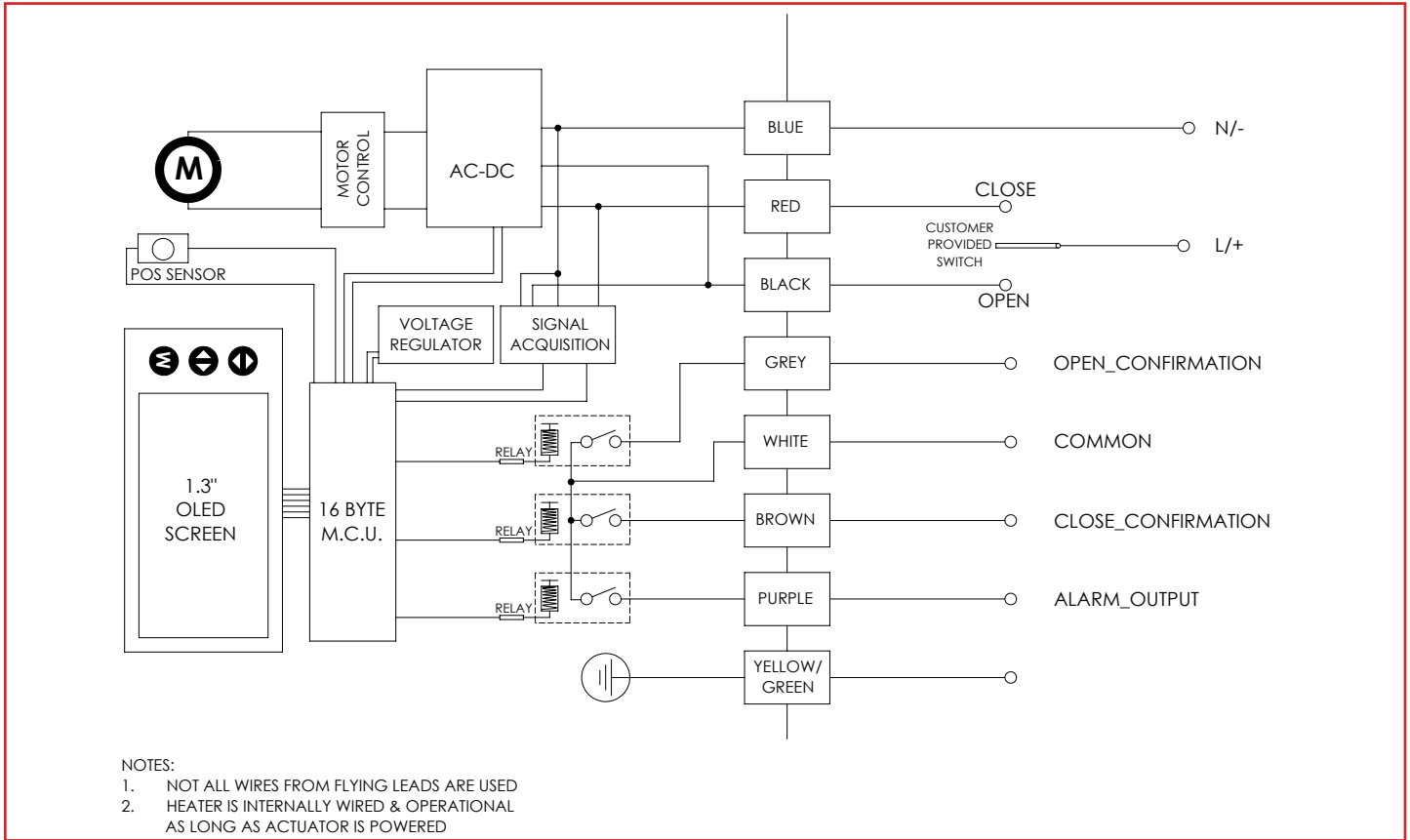
Amp draw is considered locked rotor

*Cycle times are approximate

Duty cycle shown for ambient temp (73° F)

TYPE-23 MULTIPOINT™ 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 PC/PET 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	X		
	2-1/2" - 3"			X	
Type-23 Multipoint™ Valves	4"				X
	1/2" - 2"	X	X		
	3"			X	
Type-57P Butterfly Valves	4"				X
	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

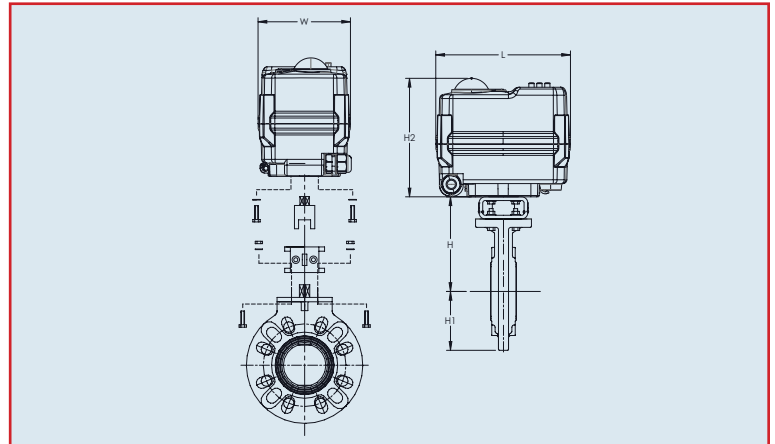


Standard Features (Sizes 1-1/2" – 10")

- **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 PC/PET 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 3540 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

Motor Type:	Reversing, brushless DC
Sizes:	S20 for 1-1/2" – 2-1/2" butterfly valves S50 for 3" – 4" butterfly valves S110 for 5" – 6" butterfly valves S400 for 8" – 10" butterfly valves
Torque:	177 in-lbs to 3540 in-lbs
Voltage:	95 VAC to 265 VAC multi-voltage 24 VAC/VDC
Amp Draw:	0.34 Amp for S20 0.39 Amp for S50 1.24 Amp for S110 1.83 Amp for S400
Max Ambient Temp:	150° F



Dimensions (inch)

Size	1-1/2"	2"	2-1/2"	3"	4"	5"	6"	8"	10"
H	5.51	5.75	6.18	6.46	7.16	8.46	8.97	10.11	11.49
H1	2.95	3.27	3.66	3.94	4.53	5.00	5.63	6.69	8.07
H2	3.54	3.54	3.54	4.72	4.72	4.80	4.80	6.72	6.72
L	4.01	4.01	4.01	5.12	5.12	6.69	6.69	8.78	8.78
W	2.76	2.76	2.76	4.33	4.33	4.52	4.52	1.72	1.72
Model	S20	S20	S20	S50	S50	S110	S110	S400	S400

Weight (lbs)

Size	1-1/2"	2"	2-1/2"	3"	4"	5"	6"	8"	10"
Weight	5.2	5.6	6.1	8.2	9.5	15.9	17.9	32	34.2

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	0.34	75%	0.78	75%	10
S50	442	0.39	75%	0.84	75%	10
S110	973	1.24	75%	2.89	75%	10
S400	3540	1.83	75%	4.80	75%	25

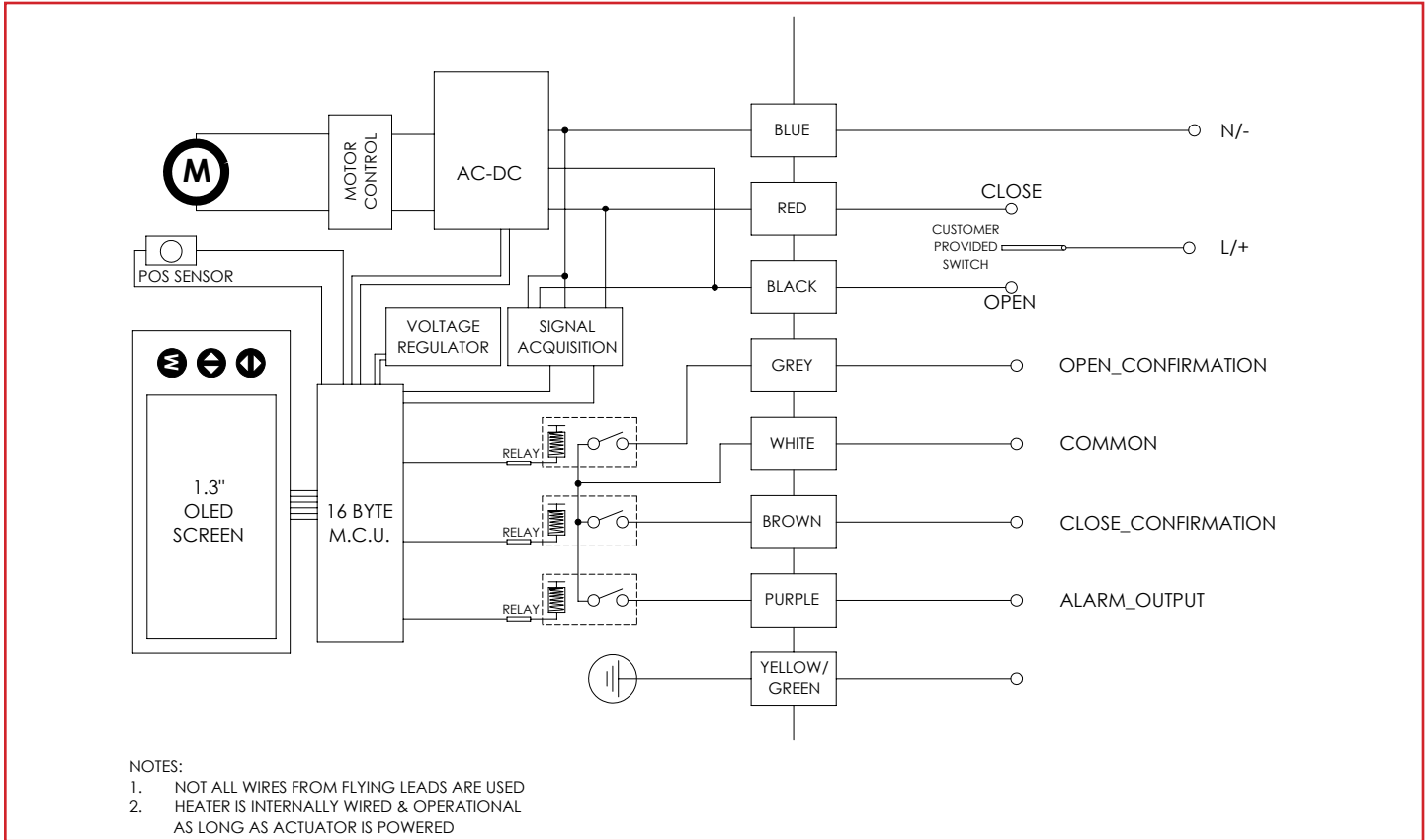
Amp draw is considered locked rotor

*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 PC/PET 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	S400
Omni® Type-27 Ball Valves	3/8" - 2"	X				
Type-21/21a SST Ball Valves	1/2" - 2"	X	X			
	2-1/2" - 3"			X		
Type-23 Multiport™ Valves	4"				X	
	1/2" - 2"	X	X			
	3"			X		
Type-57P Butterfly Valves	4"				X	
	1-1/2" - 2-1/2"		X			
	3" - 4"			X		
	5" - 6"				X	
	8" - 10"					X



SERIES 19 SMART ON/OFF ELECTRIC ACTUATOR

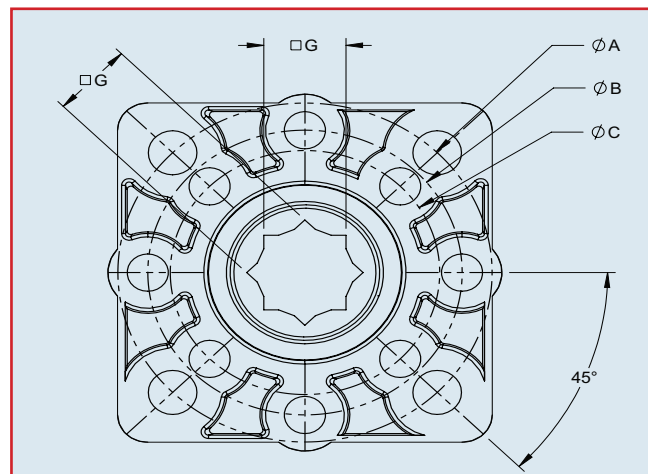


Specifications

Sizes:	S20, S50, S110, S400
Torque:	177 in-lbs to 3540 in-lbs
Voltage:	95 VAC to 265 VAC 1 Ph 50/60 Hz 24 VAC/VDC
Amp Draw:	0.34 Amp for S20 0.39 Amp for S50 1.24 Amp for S110 1.83 Amp for S400
Electrical Connection:	NEMA 4X cable gland with two-meter color-coded cable
Max Ambient Temp:	150° F
Cycle Time:	Per 90 degrees: 10 seconds
Enclosure:	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 PC/PET 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
S400	F10 (M10)	F07 (M8)	N/A	22MM

Weight (lbs)

Size	S20	S50	S110	S400
Weight	1.7	3.5	4.8	13.23

Engineering Data

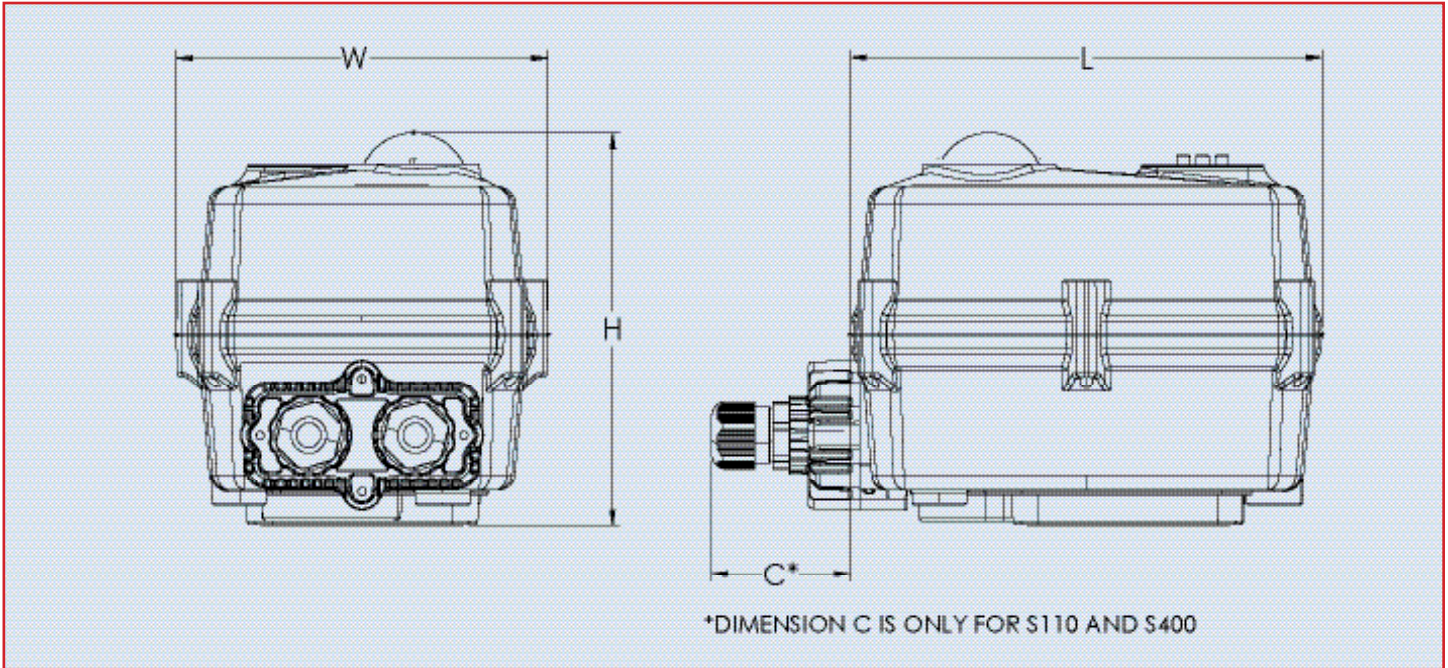
Model	Torque (in-lbs)	95-265 VAC		24 VAC/VDC		Cycle time per 90 degrees (seconds) *
		Amp Draw	Duty Cycle	Amp Draw	Duty Cycle	
S20FS	177	0.34	75%	0.78	75%	10
S50FS	442	0.39	75%	0.84	75%	10
S110FS	973	1.24	75%	2.89	75%	10
S400FS	3540	1.83	75%	4.80	75%	25

Amp draw is considered locked rotor

*Cycle times are approximate

Duty cycle shown for ambient temp [73° F]

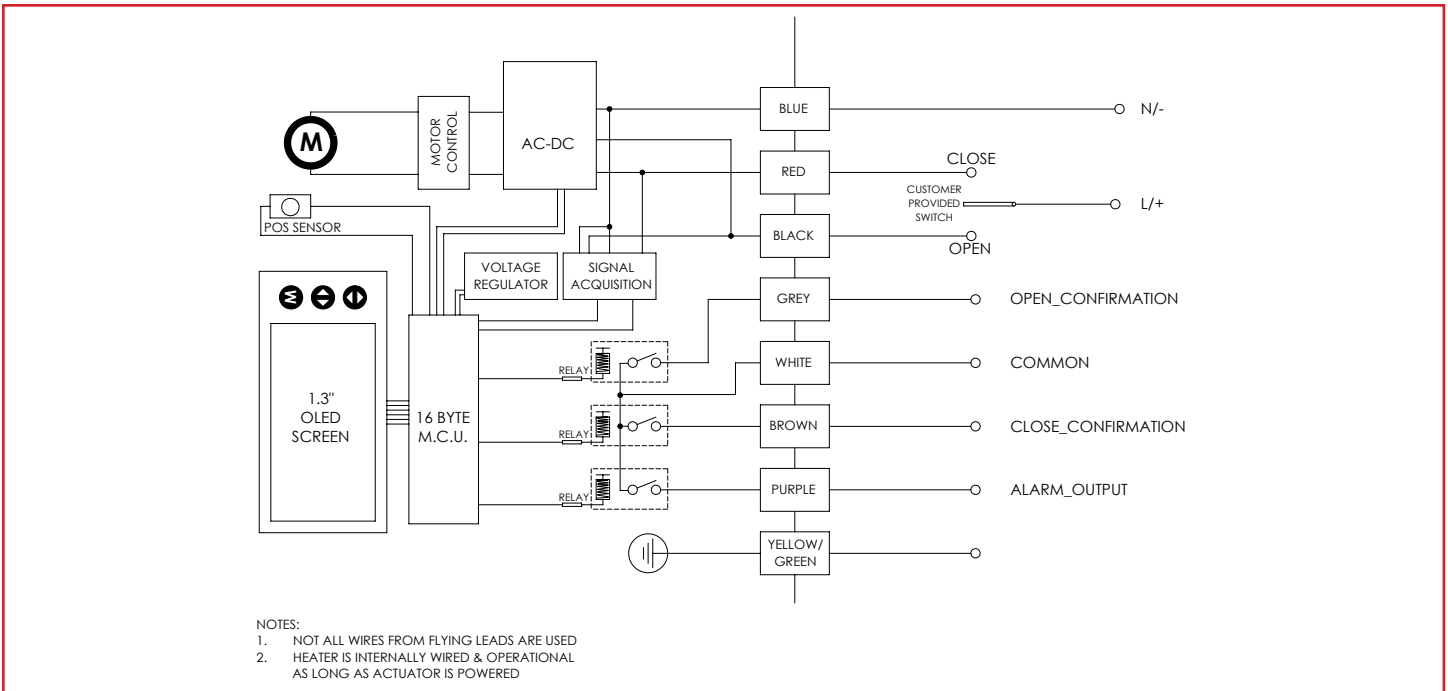
SERIES 19 SMART ON/OFF ELECTRIC ACTUATOR



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
S400	8.78	6.28	6.72	1.72

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 PC/PET 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

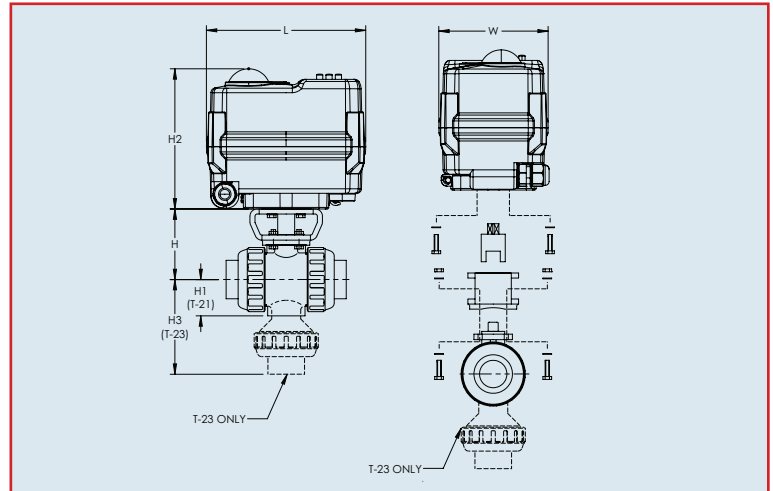


Specifications

Motor Type:	Reversing, brushless DC
Sizes:	S20 for 1/2" - 2" ball valves S50 for 2-1/2" - 3" ball valves S110 for 4" ball valves
Torque:	177 in-lbs to 973 in-lbs
Voltage:	95 VAC to 265 VAC multi-voltage
Amp Draw:	0.18 Amp for S20 0.24 Amp for S50 0.90 Amp for S110
Max Ambient Temp:	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 close is standard; fail as is or fail open are options
- **Corrosion Resistant Enclosure:** NEMA 4X PC/PET 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"	1-1/4"	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	0.90	75%	4.80	75%	10

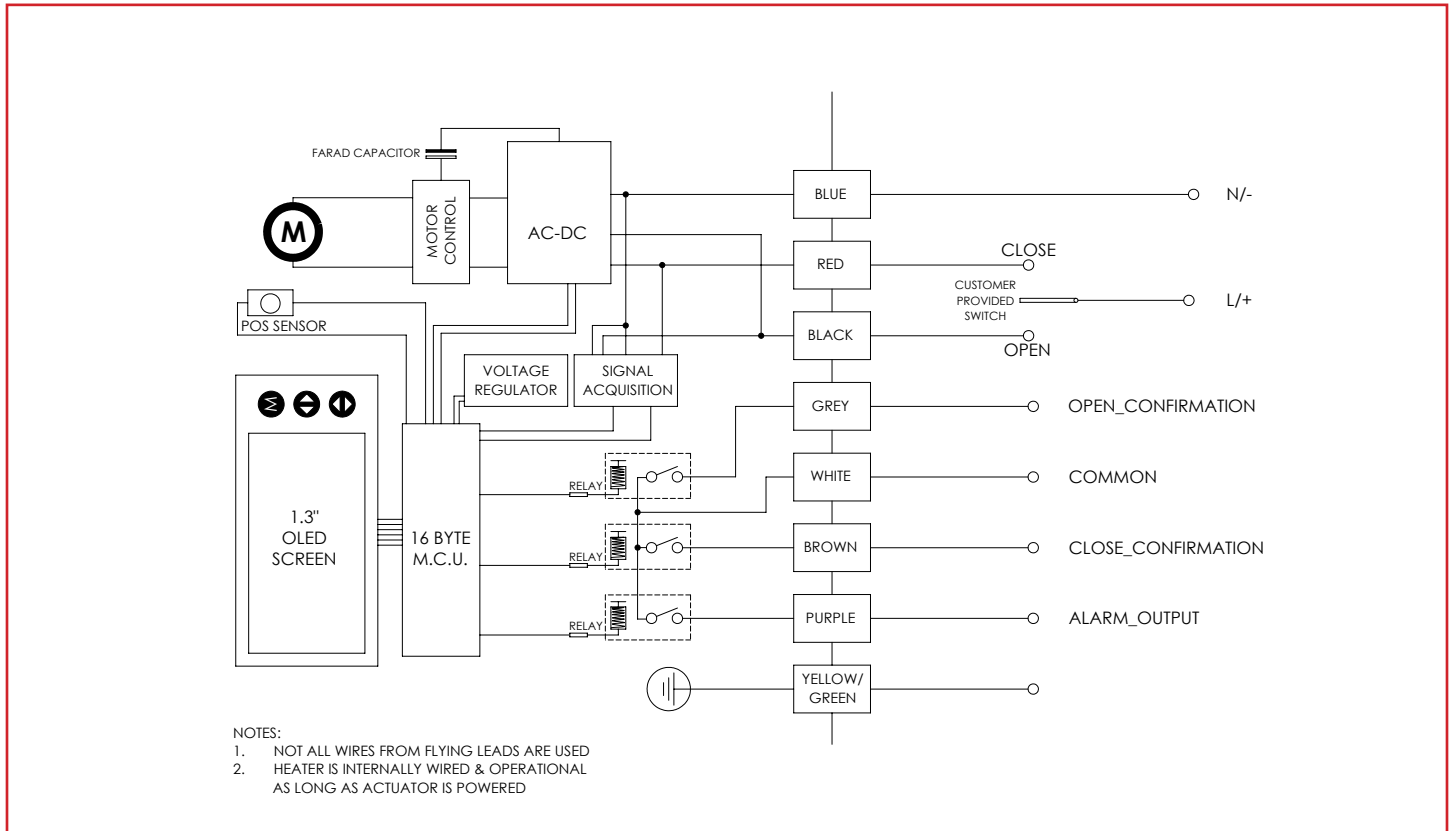
Amp draw is considered locked rotor

*Cycle times are approximate

Duty cycle shown for ambient temp (73° F)

TYPE-21/21a BALL VALVE WITH 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 PC/PET 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	X		
	2-1/2" - 3"			X	
Type-23 Multiport™ Valves	4"				X
	1/2" - 2"	X	X		
	3"			X	
Type-57P Butterfly Valves	4"				X
	1-1/2" - 2-1/2"		X		
	3" - 4"			X	
	5" - 6"				X



TYPE-23 MULTIPOINT™ BALL VALVE WITH SMART FAILSAFE ELECTRIC ACTUATOR

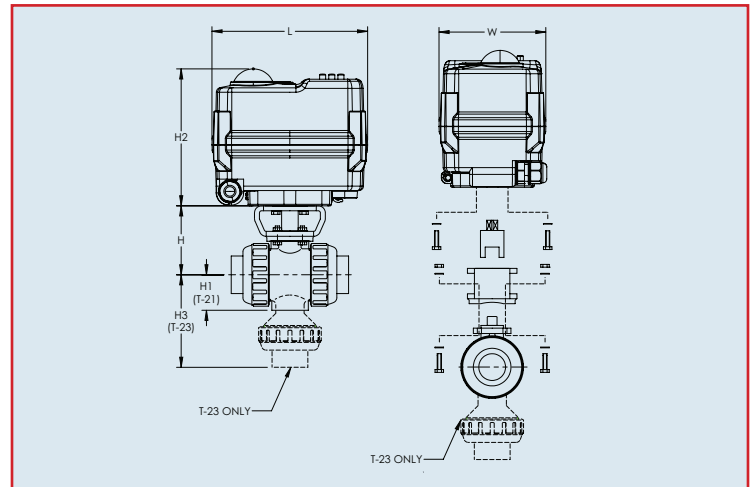


Specifications

Motor Type:	Reversing, brushless DC
Sizes:	S20 for 1/2" - 2" three-way ball valves S50 for 3" three-way ball valves S110 for 4" three-way ball valves
Torque:	177 in-lbs to 973 in-lbs
Voltage:	95 VAC to 265 VAC multi-voltage
Amp Draw:	0.18 Amp for S20 0.24 Amp for S50 0.90 Amp for S110
Max Ambient Temp:	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 PC/PET 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	0.90	75%	4.80	75%	10

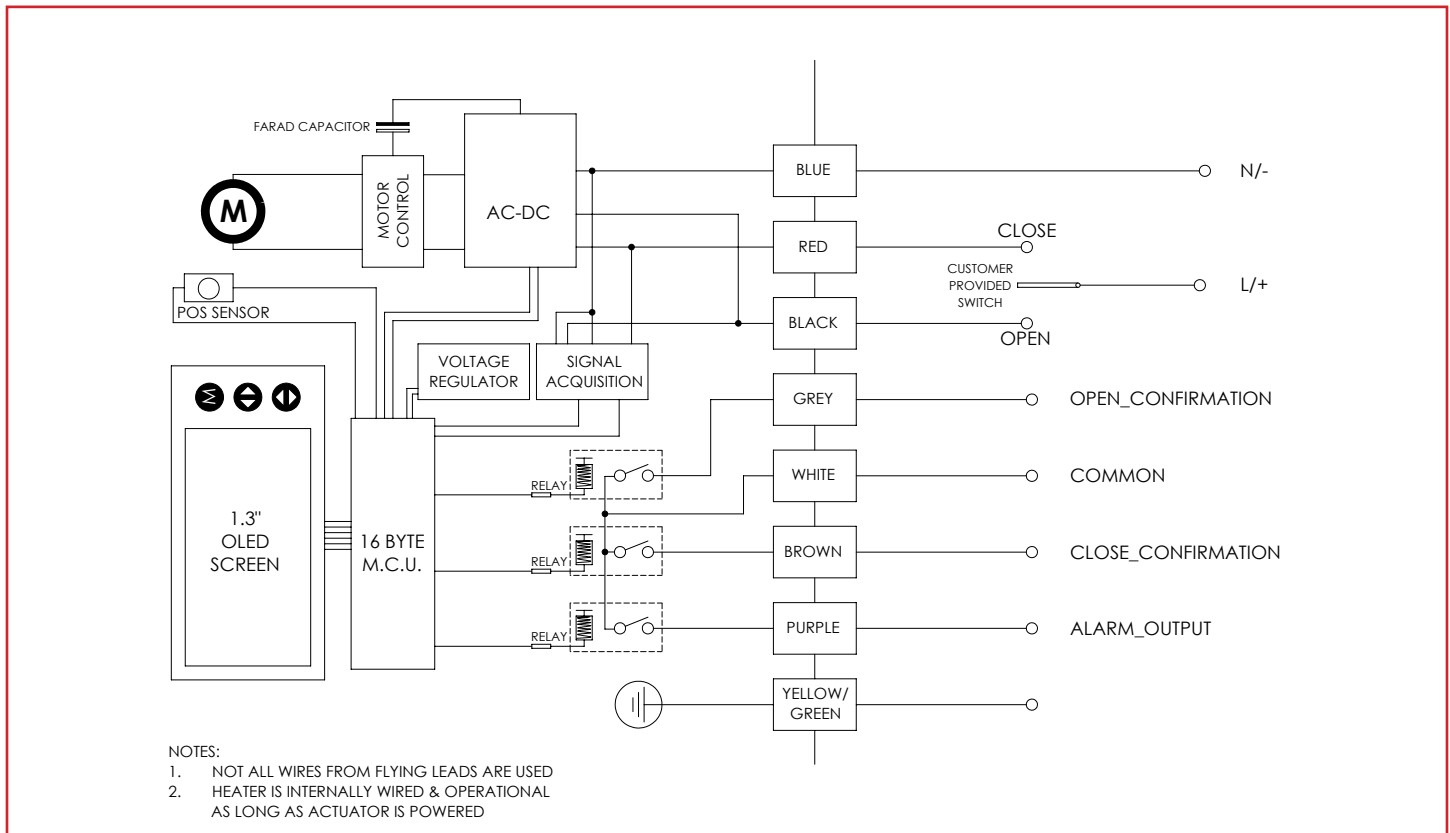
Amp draw is considered locked rotor

*Cycle times are approximate

Duty cycle shown for ambient temp (73° F)

TYPE-23 MULTIPOINT™ BALL VALVE WITH 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 PC/PET 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	X		
	2-1/2" - 3"			X	
	4"				X
Type-23 Multiport™ Valves	1/2" - 2"	X	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

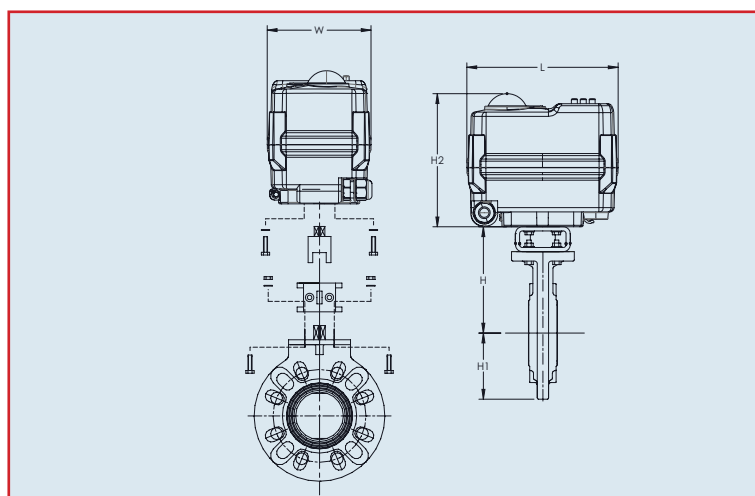


Specifications

Motor Type:	Reversing, brushless DC
Sizes:	S20 for 1-1/2" – 2-1/2" butterfly valves S50 for 3" – 4" butterfly valves S110 for 5" – 6" butterfly valves S400 for 8" – 10" butterfly valves
Torque:	177 in-lbs to 3540 in-lbs
Voltage:	95 VAC to 265 VAC multi-voltage 24 VAC/VDC
Amp Draw:	0.34 Amp for S20 0.39 Amp for S50 1.24 Amp for S110 1.83 Amp for S400
Max Ambient Temp:	150° F

Standard Features (1-1/2" - 10")

- **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 PC/PET 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 3540 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	1-1/2"	2"	2-1/2"	3"	4"	5"	6"	8"	10"
H	5.51	5.75	6.18	6.46	7.16	8.46	8.97	10.11	11.49
H1	2.95	3.27	3.66	3.94	4.53	5.00	5.63	6.69	8.07
H2	3.54	3.54	3.54	4.72	4.72	4.80	4.80	6.72	6.72
L	4.01	4.01	4.01	5.12	5.12	6.69	6.69	8.78	8.78
W	2.76	2.76	2.76	4.33	4.33	4.52	4.52	1.72	1.72
Model	S20	S20	S20	S50	S50	S110	S110	S400	S400

Weight (lbs)

Size	1-1/2"	2"	2-1/2"	3"	4"	5"	6"	8"	10"
Weight	5.2	5.6	6.1	8.2	9.5	15.9	17.9	32	34.2

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	0.34	75%	0.78	75%	10
S50	442	0.39	75%	0.84	75%	10
S110	973	1.24	75%	2.89	75%	10
S400	3540	1.83	75%	4.80	75%	25

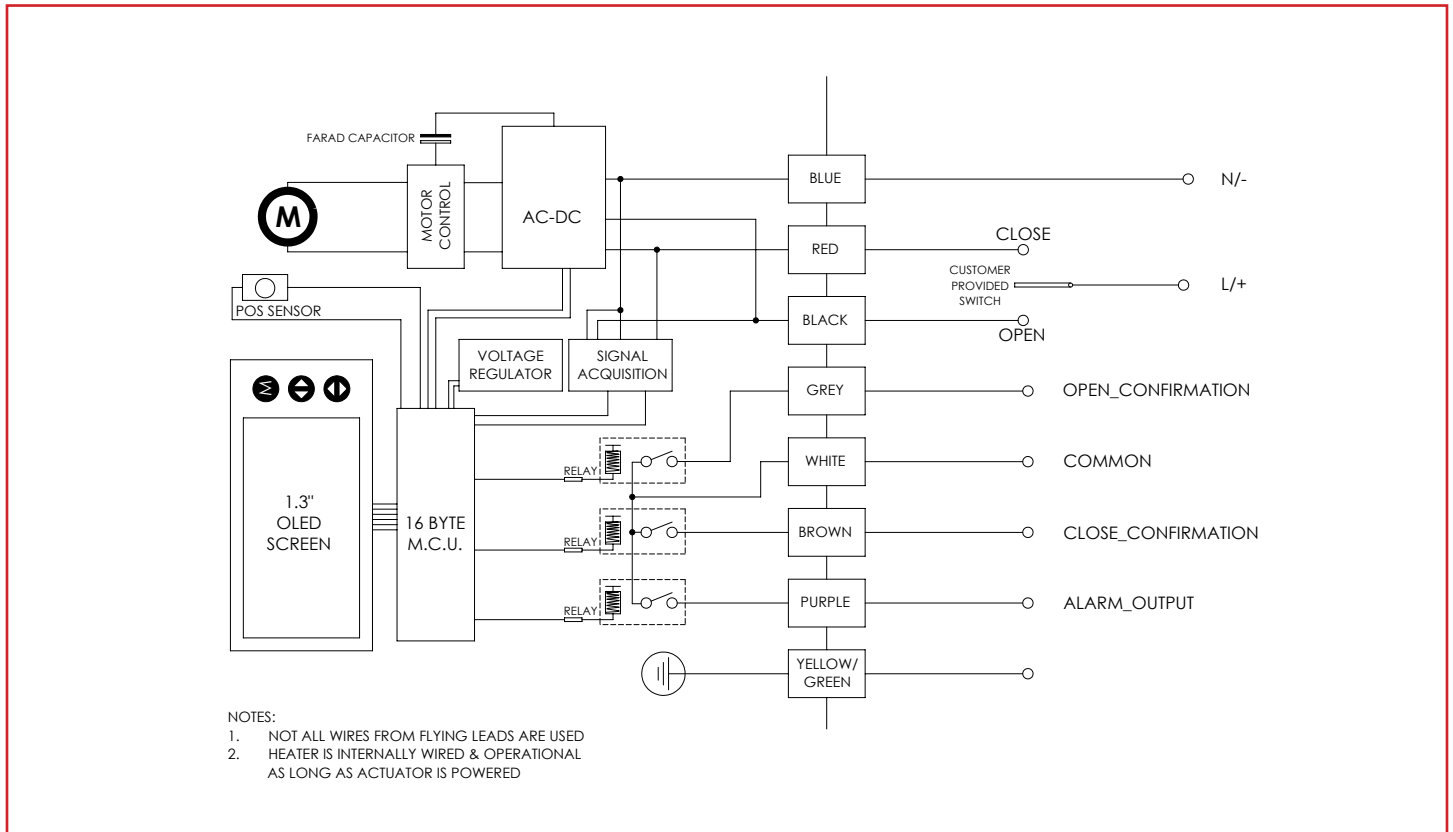
Amp draw is considered locked rotor

*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 PC/PET 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	S400
Omni® Type-27 Ball Valves	3/8" - 2"	X				
Type-21/21a SST Ball Valves	1/2" - 2"	X	X			
	2-1/2" - 3"			X		
Type-23 Multiport™ Valves	4"				X	
	1/2" - 2"	X	X			
	3"			X		
Type-57P Butterfly Valves	4"				X	
	1-1/2" - 2-1/2"		X			
	3" - 4"			X		
	5" - 6"				X	
	8" - 10"					X



SERIES 19 SMART FAILSAFE ELECTRIC ACTUATOR

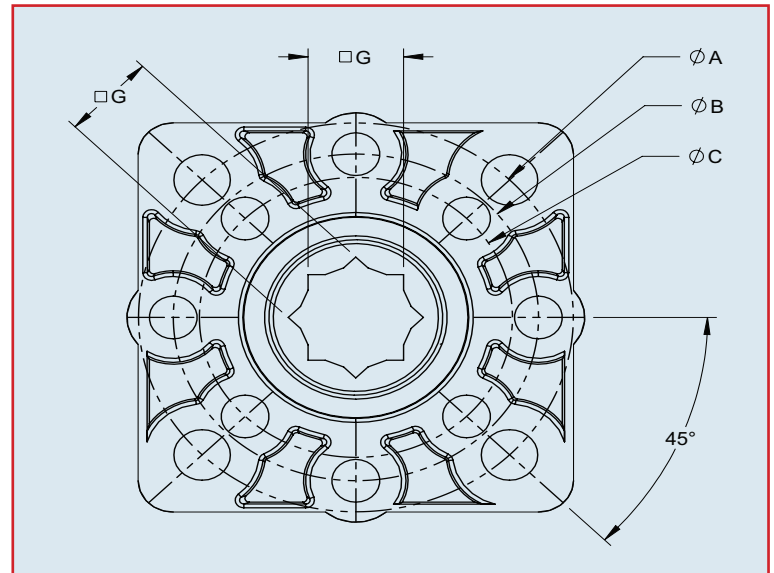


Standard Features (All Sizes)

- **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 PC/PET 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 3540 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

Sizes:	S20FS, S50FS, S110FS, S400FS
Torque:	177 in-lbs to 3540 in-lbs
Voltage:	95 VAC to 265 VAC 1 Ph 50/60 Hz 24 VAC/VDC
Amp Draw:	0.34 Amp for S20 0.39 Amp for S50 1.24 Amp for S110 1.83 Amp for S400
Electrical Connection:	NEMA 4X cable gland with two-meter color coded-cable
Max Ambient Temp:	150° F
Cycle Time per:	Per 90 degrees: 10 seconds
Enclosure:	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
S400	F10 (M10)	F07 (M8)	N/A	22MM

Weight (lbs)

Size	S20	S50	S110	S400
Weight	1.7	3.5	4.8	13.23

Engineering Data

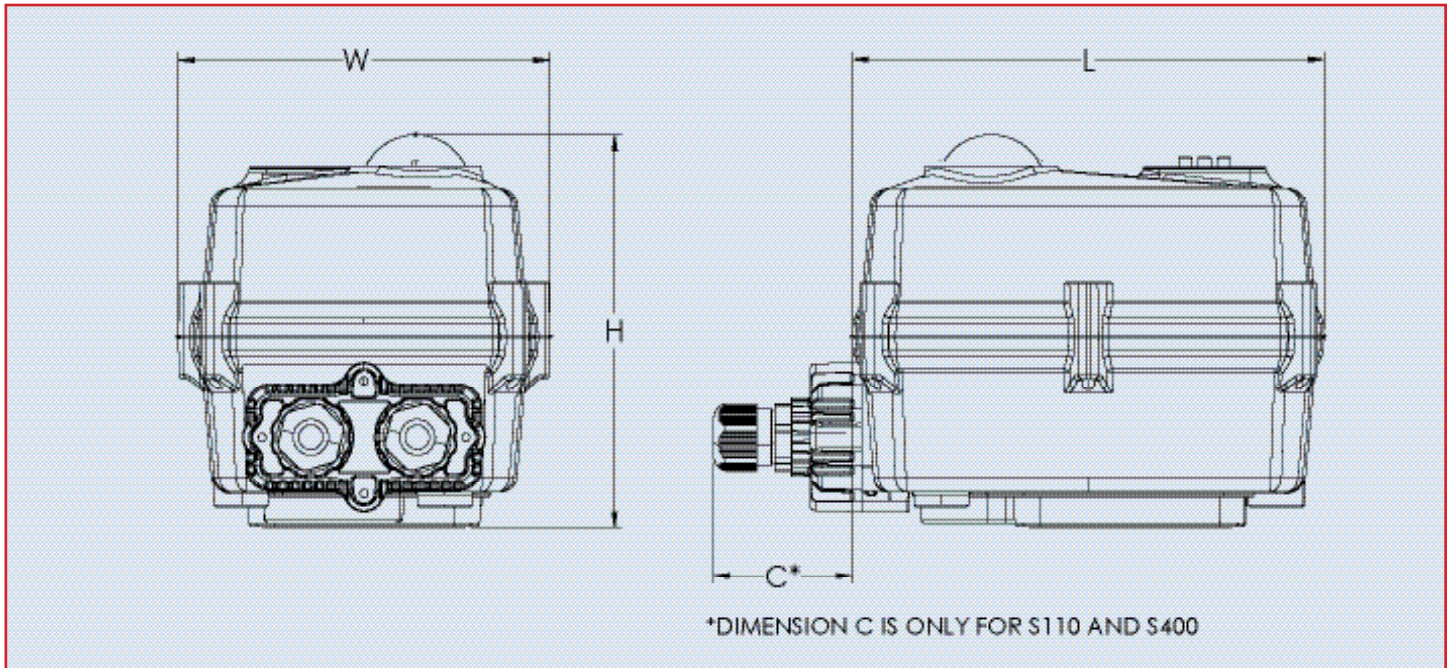
Model	Torque (in-lbs)	95-265 VAC		24 VAC/VDC		Cycle time per 90 degrees [seconds]*
		Amp Draw	Duty Cycle	Amp Draw	Duty Cycle	
S20FS	177	0.34	75%	0.78	75%	10
S50FS	442	0.39	75%	0.84	75%	10
S110FS	973	1.24	75%	2.89	75%	10
S400FS	3540	1.83	75%	4.80	75%	25

Amp draw is considered locked rotor

*Cycle times are approximate

Duty cycle shown for ambient temp (73° F)

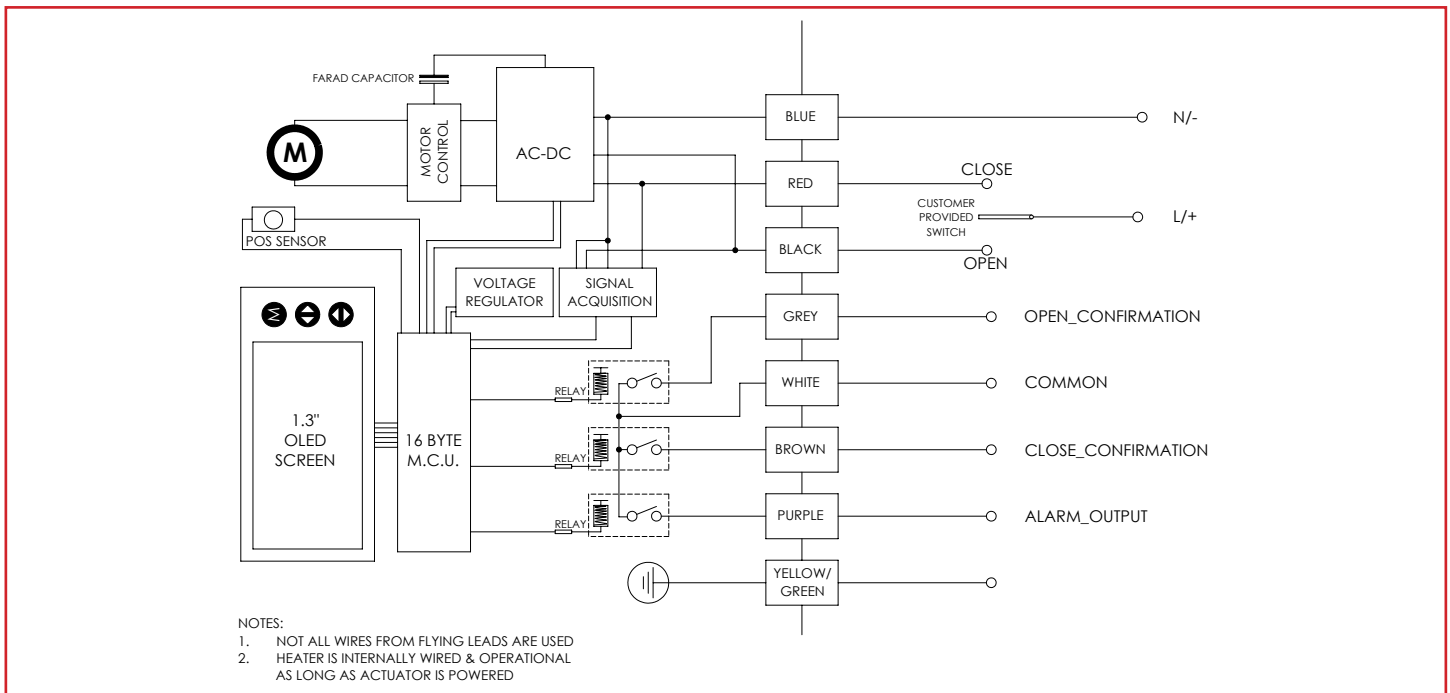
SERIES 19 SMART FAILSAFE ELECTRIC ACTUATOR



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
S400	8.78	6.28	6.72	1.72

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 PC/PET 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

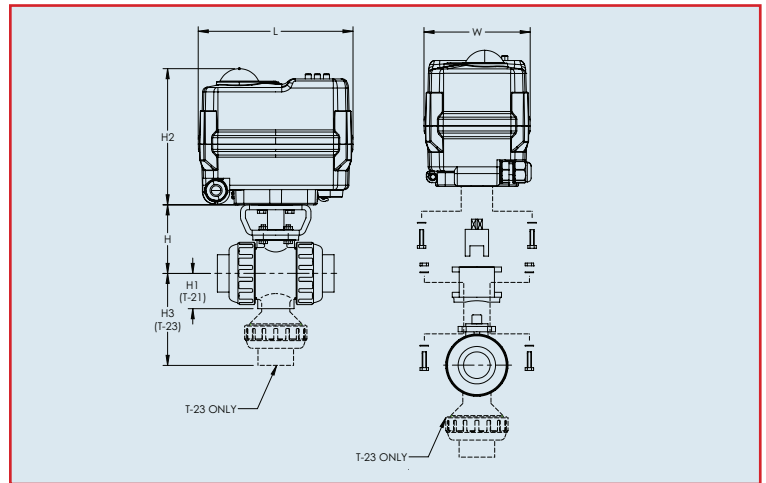


Standard Features (1/2" - 4")

- **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 PC/PET 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:** RED closed, GREEN open, 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

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

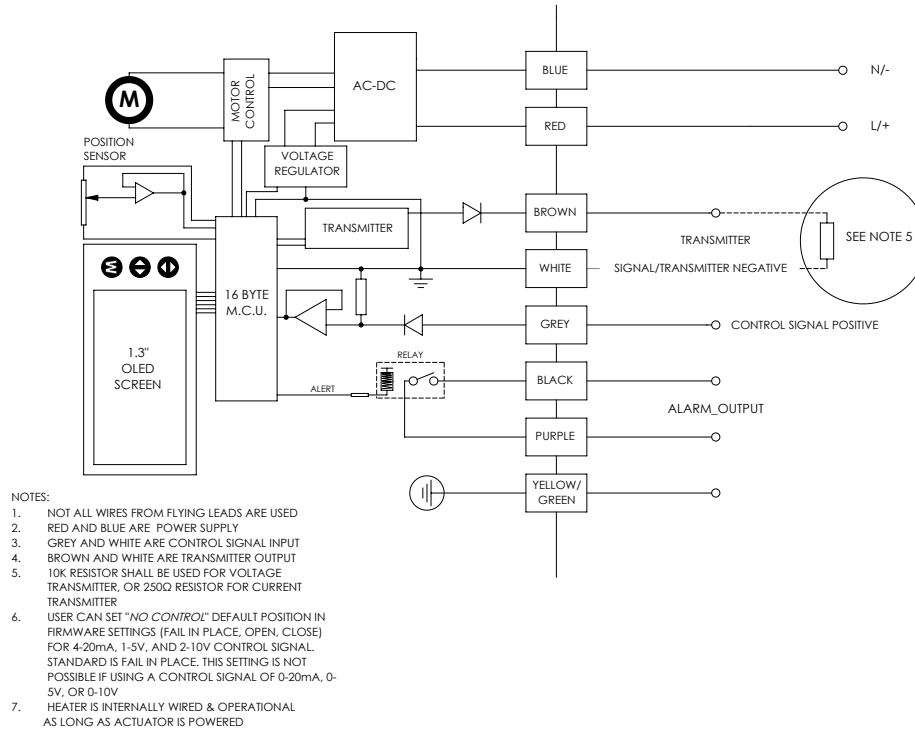
*Cycle times are approximate

Duty cycle shown for ambient temp [73° F]

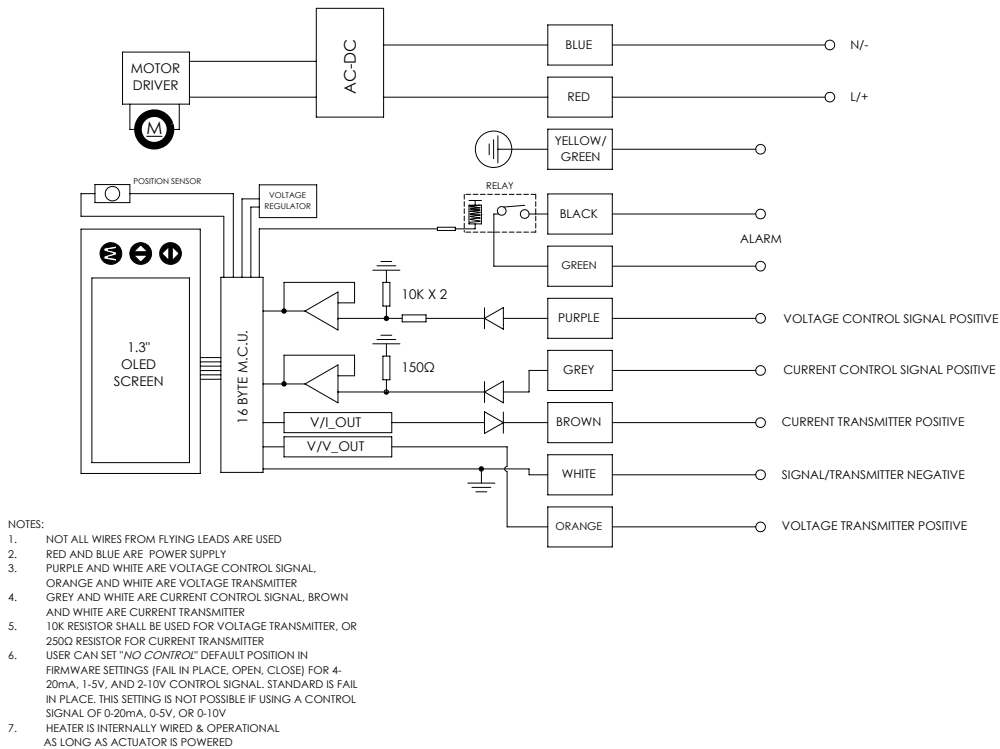
TYPE-21/21a BALL VALVE WITH SERIES 19 SMART MODULATING ELECTRIC ACTUATOR

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 PC/PET 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

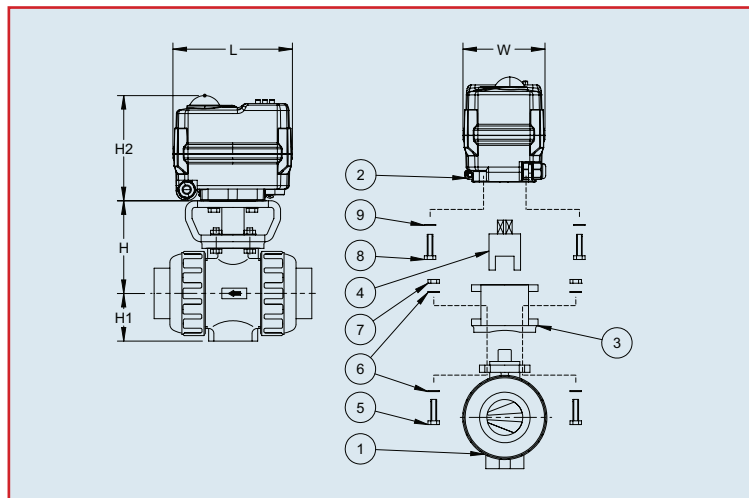


Specifications

Motor Type:	Reversing, brushless DC
Size:	S20 for 1/2" - 2" ball valves
Torque:	177 in-lbs
Voltage:	95 VAC to 265 VAC multi-voltage
Amp Draw:	0.18 Amp
Max Ambient Temp:	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 PC/PET 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:** RED closed, GREEN open, 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

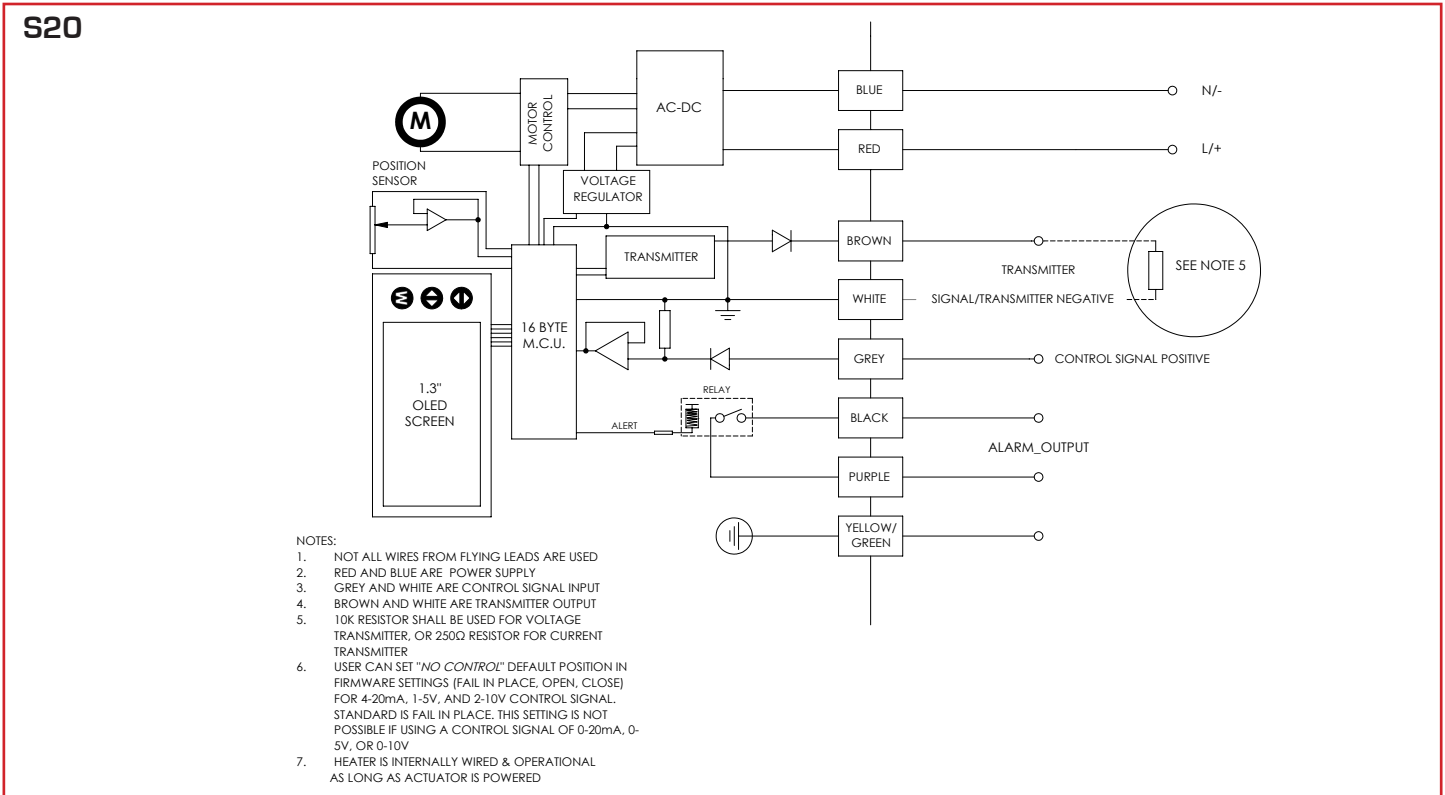
Amp draw is considered locked rotor

*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 PC/PET 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	X		
	2-1/2" - 3"			X	
	4"				X
Type-23 Multiport™ Valves	1/2" - 2"	X	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

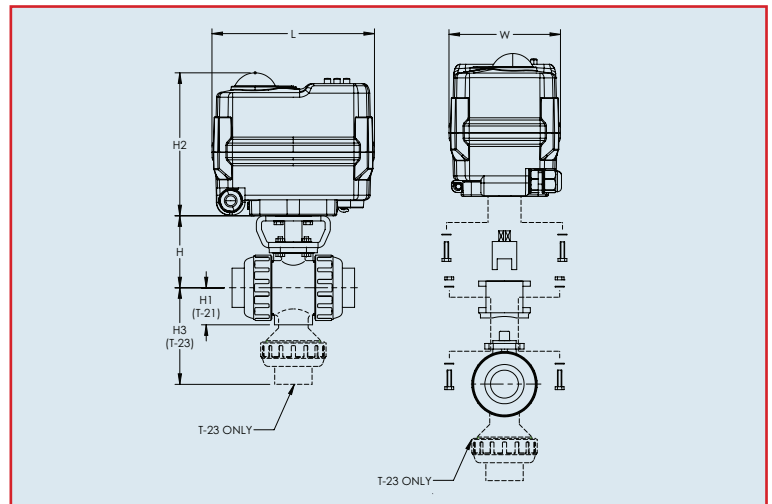


Standard Features (1/2" - 4")

- **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 PC/PET 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:** RED closed, GREEN open, 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

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

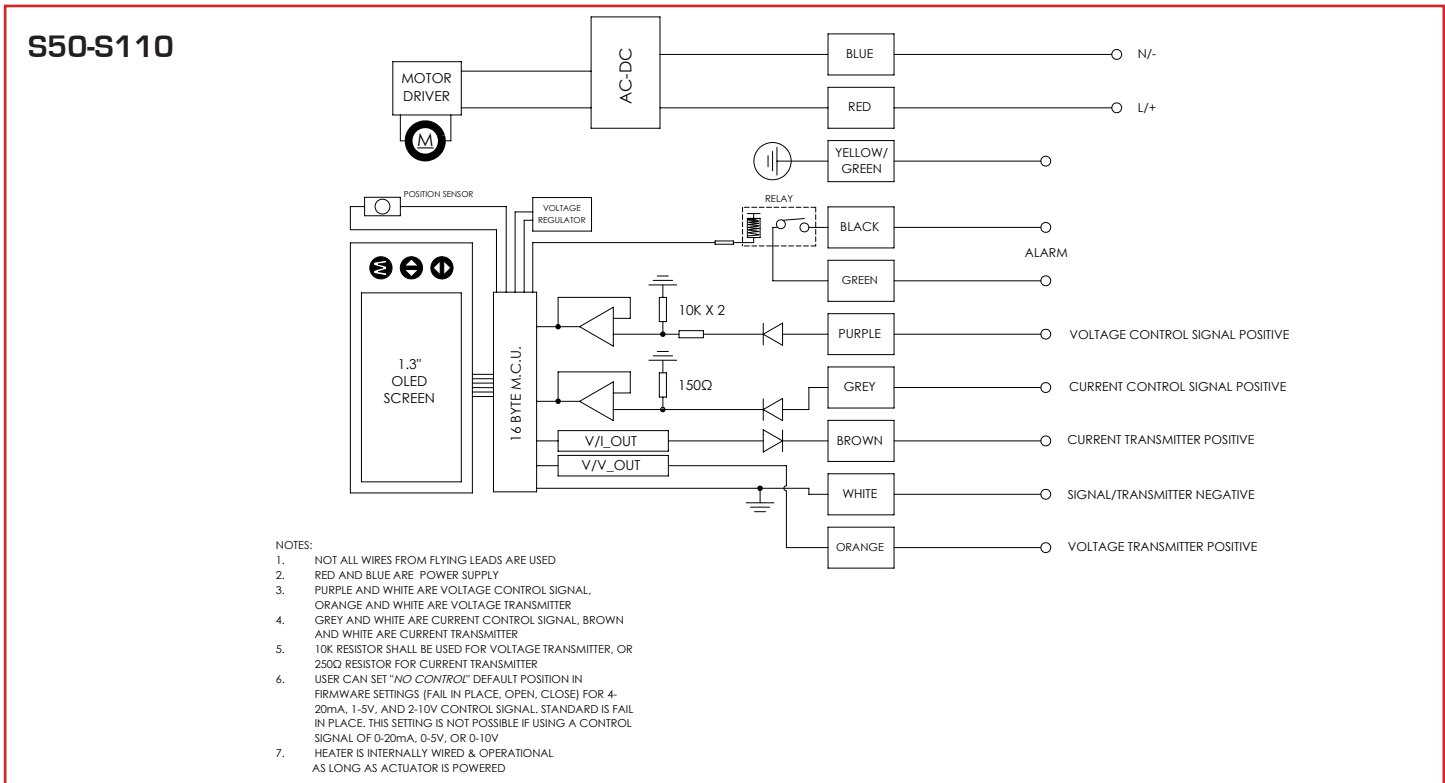
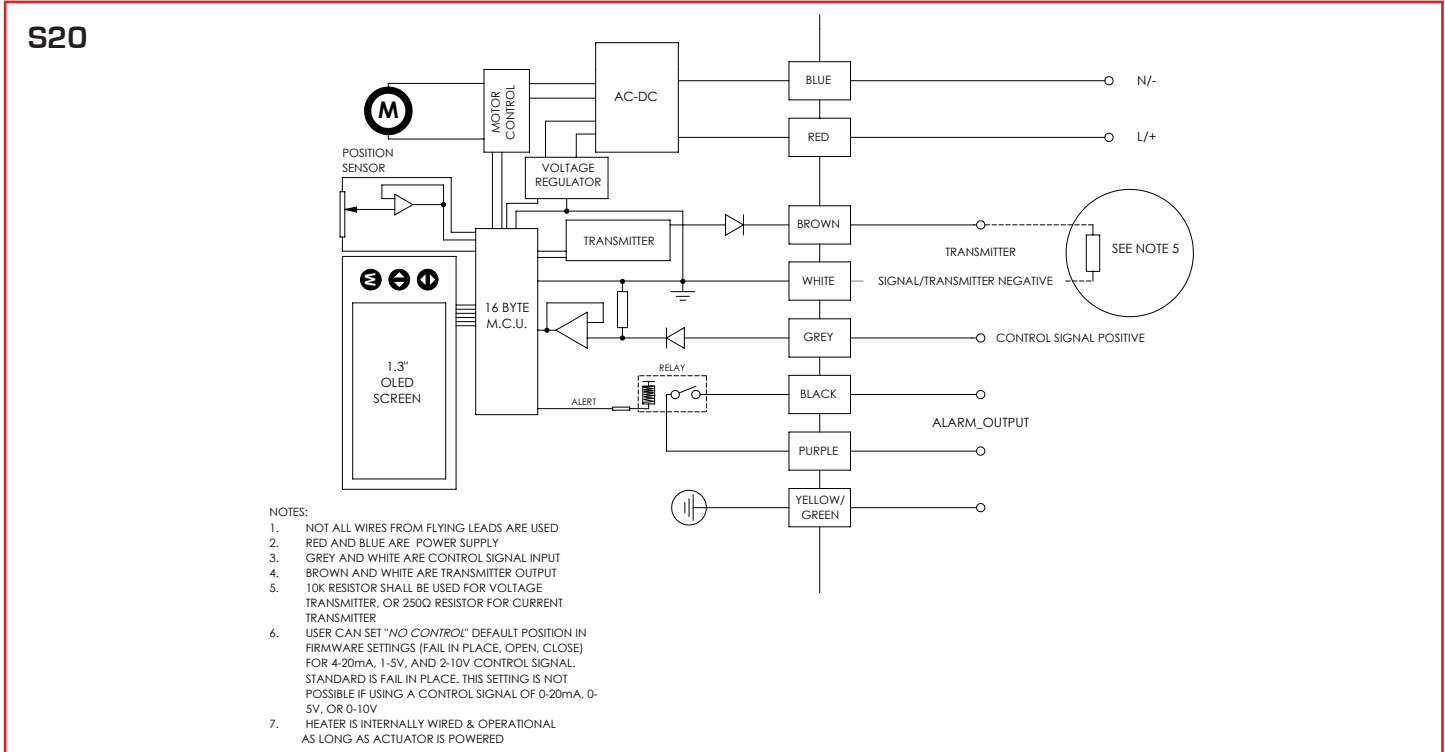
Amp draw is considered locked rotor

*Cycle times are approximate

Duty cycle shown for ambient temp [73° F]

TYPE-23 MULTIPORT™ BALL VALVE WITH SMART MODULATING ELECTRIC ACTUATOR

Wiring Diagrams



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 PC/PET 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

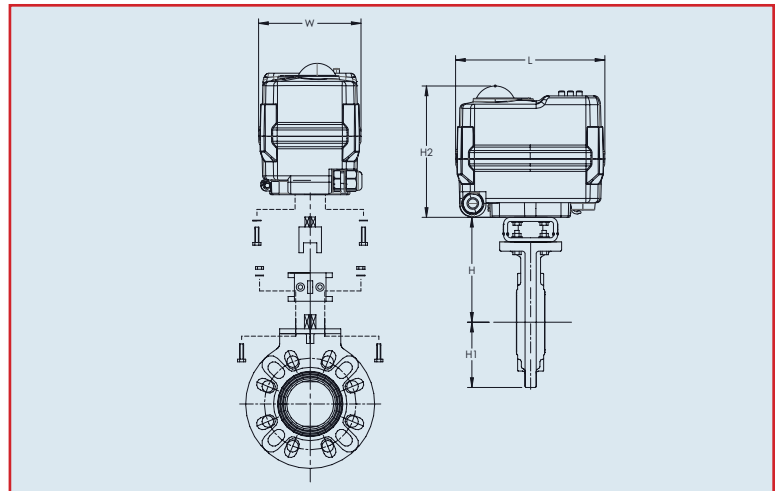


Standard Features (Sizes 1-1/2" – 10")

- **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 PC/PET 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:** RED closed, GREEN open, 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 3540 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

Motor Type:	Reversing, brushless DC
Sizes:	S20 for 1-1/2" – 2-1/2" butterfly valves S50 for 3" – 4" butterfly valves S110 for 5" – 6" butterfly valves S400 for 8" – 10" butterfly valves
Torque:	177 in-lbs to 3540 in-lbs
Voltage:	95 VAC to 265 VAC multi-voltage 24 VAC/VDC
Amp Draw:	0.34 Amp for S20 0.39 Amp for S50 1.24 Amp for S110 1.83 Amp for S400
Max Ambient Temp:	150° F



Dimensions (inch)

Size	1-1/2"	2"	2-1/2"	3"	4"	5"	6"	8"	10"
H	5.51	5.75	6.18	6.46	7.16	8.46	8.97	10.11	11.49
H1	2.95	3.27	3.66	3.94	4.53	5.00	5.63	6.69	8.07
H2	3.54	3.54	3.54	4.72	4.72	4.80	4.80	6.72	6.72
L	4.01	4.01	4.01	5.12	5.12	6.69	6.69	8.78	8.78
W	2.76	2.76	2.76	4.33	4.33	4.52	4.52	1.72	1.72
Model	S20	S20	S20	S50	S50	S110	S110	S400	S400

Weight (lbs)

Size	1-1/2"	2"	2-1/2"	3"	4"	5"	6"	8"	10"
Weight	5.2	5.6	6.1	8.2	9.5	15.9	17.9	32	34.2

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	0.34	75%	0.78	75%	10
S50	442	0.39	75%	0.84	75%	10
S110	973	1.24	75%	2.89	75%	10
S400	3540	1.83	75%	4.80	75%	25

Amp draw is considered locked rotor

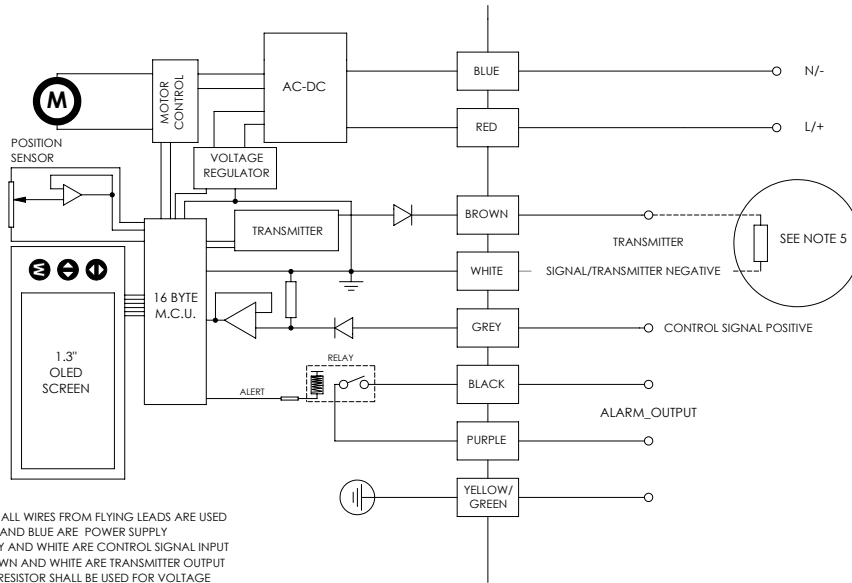
*Cycle times are approximate

Duty cycle shown for ambient temp [73° F]

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

Wiring Diagrams

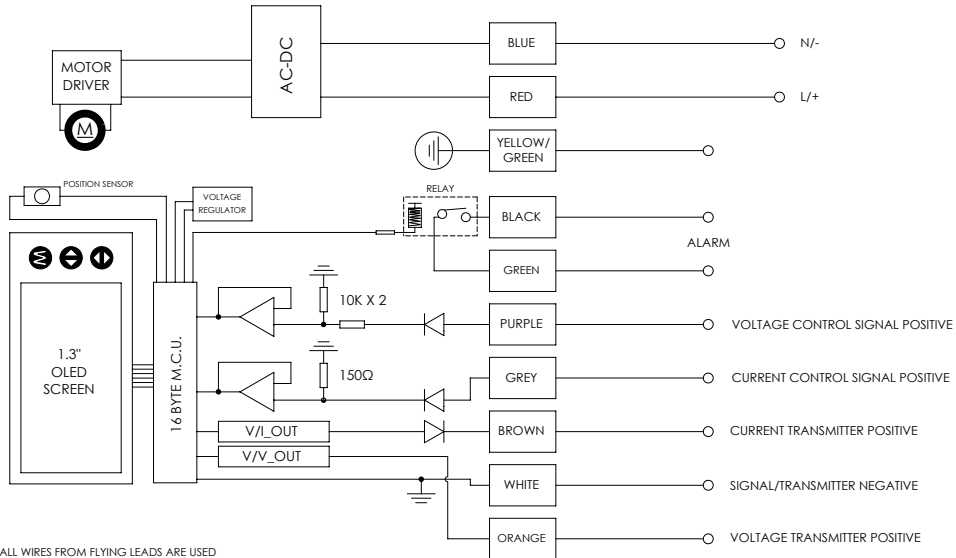
S20



NOTES:

1. NOT ALL WIRES FROM FLYING LEADS ARE USED
2. RED AND BLUE ARE POWER SUPPLY
3. GREY AND WHITE ARE CONTROL SIGNAL INPUT
4. BROWN AND WHITE ARE TRANSMITTER OUTPUT
5. 10K RESISTOR SHALL BE USED FOR VOLTAGE TRANSMITTER, OR 250Ω RESISTOR FOR CURRENT TRANSMITTER
6. USER CAN SET "NO CONTROL" DEFAULT POSITION IN FIRMWARE SETTINGS (FAIL IN PLACE, OPEN, CLOSE) FOR 4-20mA, 1-5V, AND 2-10V CONTROL SIGNAL. STANDARD IS FAIL IN PLACE. THIS SETTING IS NOT POSSIBLE IF USING A CONTROL SIGNAL OF 0-20mA, 0-5V, OR 0-10V
7. HEATER IS INTERNALLY WIRED & OPERATIONAL AS LONG AS ACTUATOR IS POWERED

S50-S400



NOTES:

1. NOT ALL WIRES FROM FLYING LEADS ARE USED
2. RED AND BLUE ARE POWER SUPPLY
3. PURPLE AND WHITE ARE VOLTAGE CONTROL SIGNAL, ORANGE AND WHITE ARE VOLTAGE TRANSMITTER
4. GREY AND WHITE ARE CURRENT CONTROL SIGNAL, BROWN AND WHITE ARE CURRENT TRANSMITTER
5. 10K RESISTOR SHALL BE USED FOR VOLTAGE TRANSMITTER, OR 250Ω RESISTOR FOR CURRENT TRANSMITTER
6. USER CAN SET "NO CONTROL" DEFAULT POSITION IN FIRMWARE SETTINGS (FAIL IN PLACE, OPEN, CLOSE) FOR 4-20mA, 1-5V, AND 2-10V CONTROL SIGNAL. STANDARD IS FAIL IN PLACE. THIS SETTING IS NOT POSSIBLE IF USING A CONTROL SIGNAL OF 0-20mA, 0-5V, OR 0-10V
7. HEATER IS INTERNALLY WIRED & OPERATIONAL AS LONG AS ACTUATOR IS POWERED

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 PC/PET 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

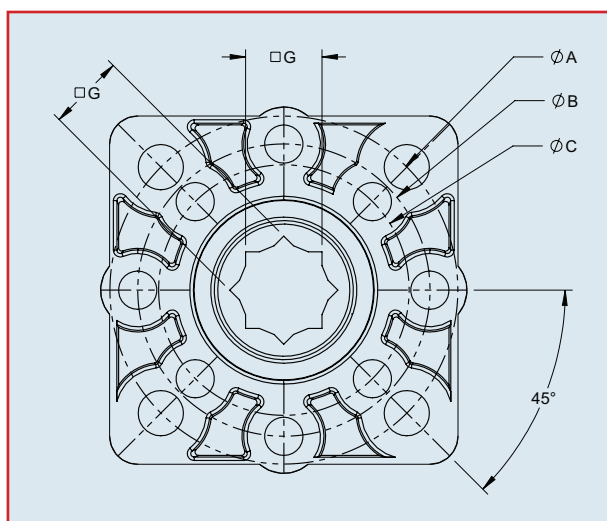


Standard Features (All Sizes)

- **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 PC/PET 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:** RED closed, GREEN open, 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 3540 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

Sizes:	S20, S50, S110, S400
Torque:	177 in-lbs to 3540 in-lbs
Voltage:	95 VAC to 265 VAC 1Ph 50/60 Hz 24 VAC/VDC
Amp Draw:	0.34 Amp for S20 0.39 Amp for S50 1.24 Amp for S110 1.83 Amp for S400
Electrical Connection:	NEMA 4X cable gland with two-meter color-coded cable
Max Ambient Temp:	150° F
Cycle Time:	Per 90 degrees: 10 seconds
Enclosure:	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
S400	F10 (M10)	F07 (M8)	N/A	22MM

Weight (lbs)

Size	S20	S50	S110	S400
Weight	1.7	3.5	4.8	13.23

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	0.34	75%	0.78	75%	10
S50FS	442	0.39	75%	0.84	75%	10
S110FS	973	1.24	75%	2.89	75%	10
S400FS	3540	1.83	75%	4.80	75%	25

Amp draw is considered locked rotor

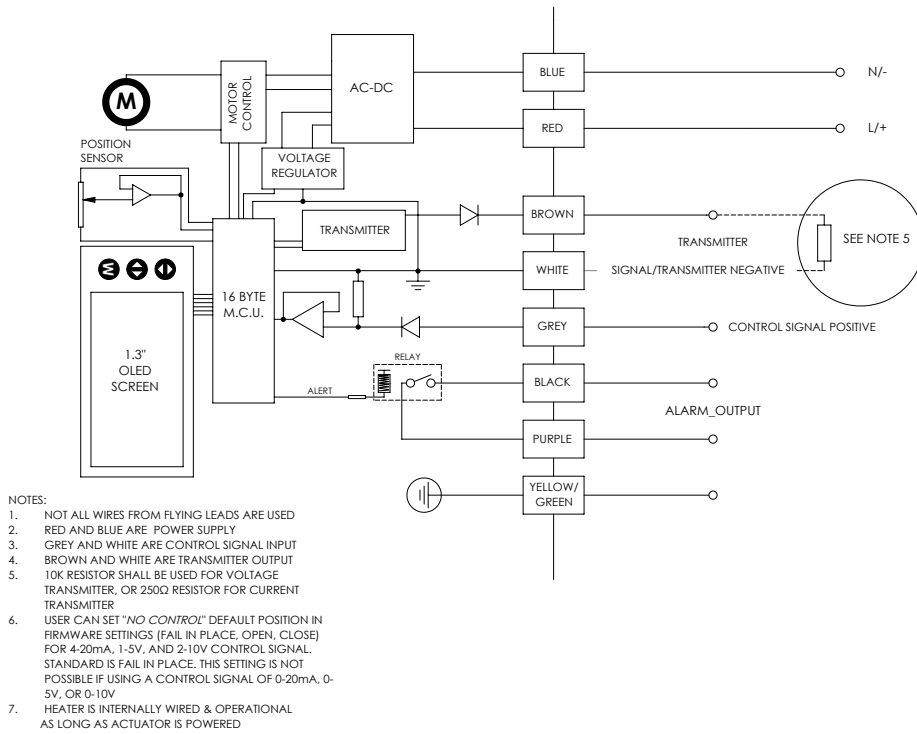
*Cycle times are approximate

Duty cycle shown for ambient temp (73° F)

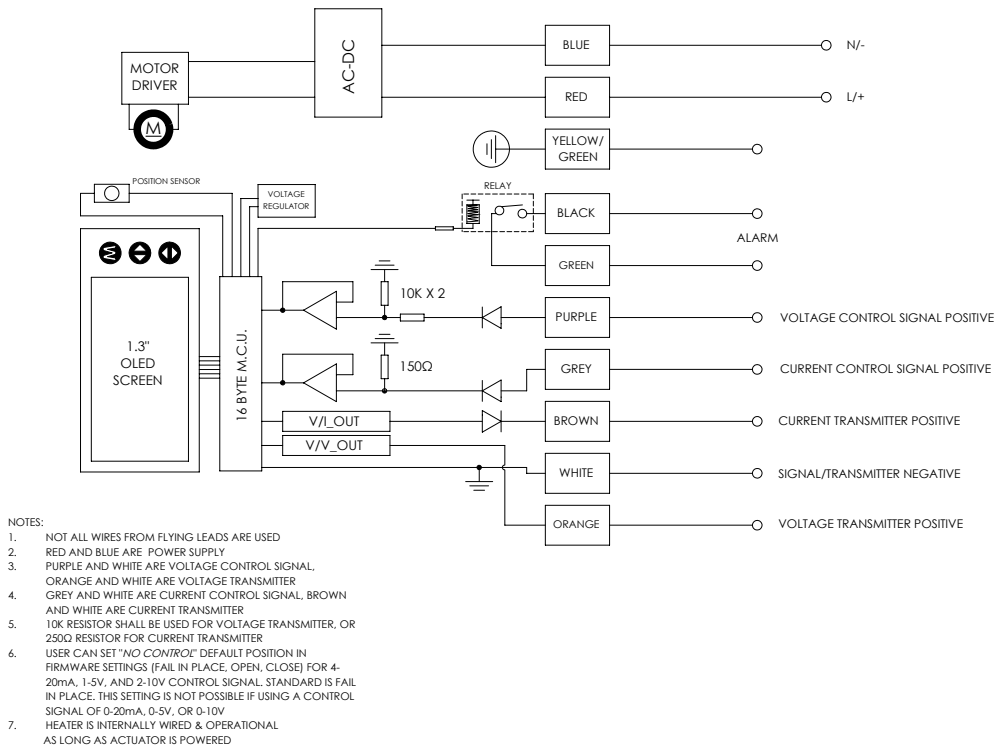
SERIES 19 SMART MODULATING ELECTRIC ACTUATOR

Wiring Diagrams

S20



S50-S400



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 PC/PET 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

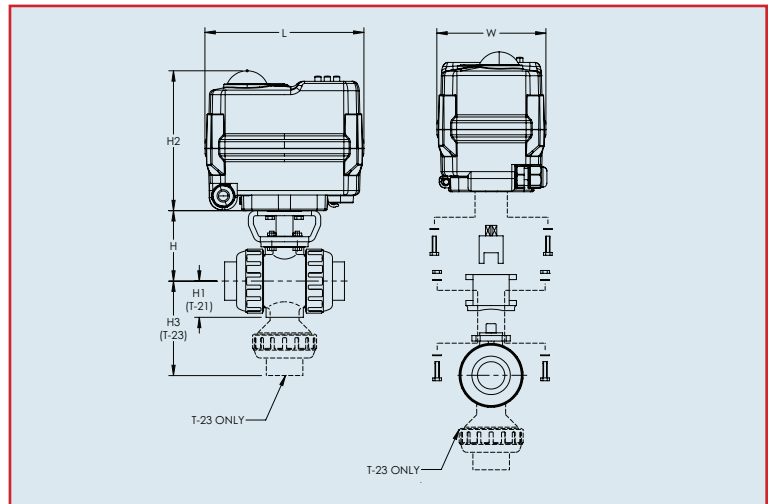


Standard Features (1/2" - 4")

- **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 PC/PET 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:** RED closed, GREEN open, 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

Motor Type:	Reversing, brushless DC
Sizes:	S20 for 1/2" - 2" ball valves S50 for 2-1/2" - 3" ball valves S110 for 4" ball valves
Torque:	177 in-lbs to 973 in-lbs
Voltage:	95 VAC to 265 VAC multi-voltage
Amp Draw:	0.18 Amp for S20 0.24 Amp for S50 0.90 Amp for S110
Max Ambient Temp:	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 (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	0.90	75%	4.80	75%	10

Amp draw is considered locked rotor

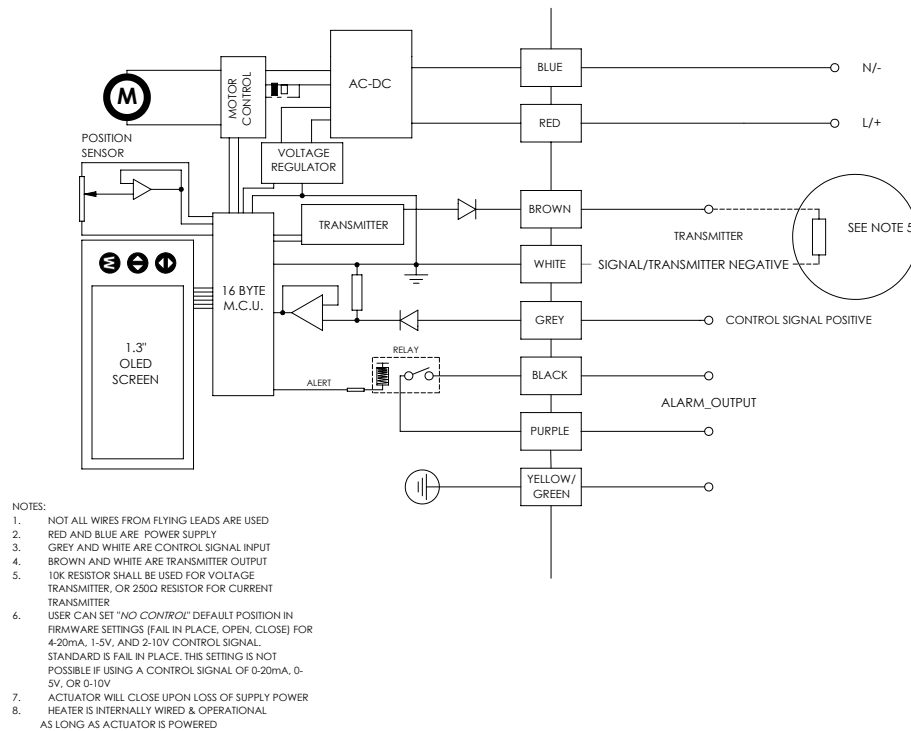
*Cycle times are approximate

Duty cycle shown for ambient temp (73° F)

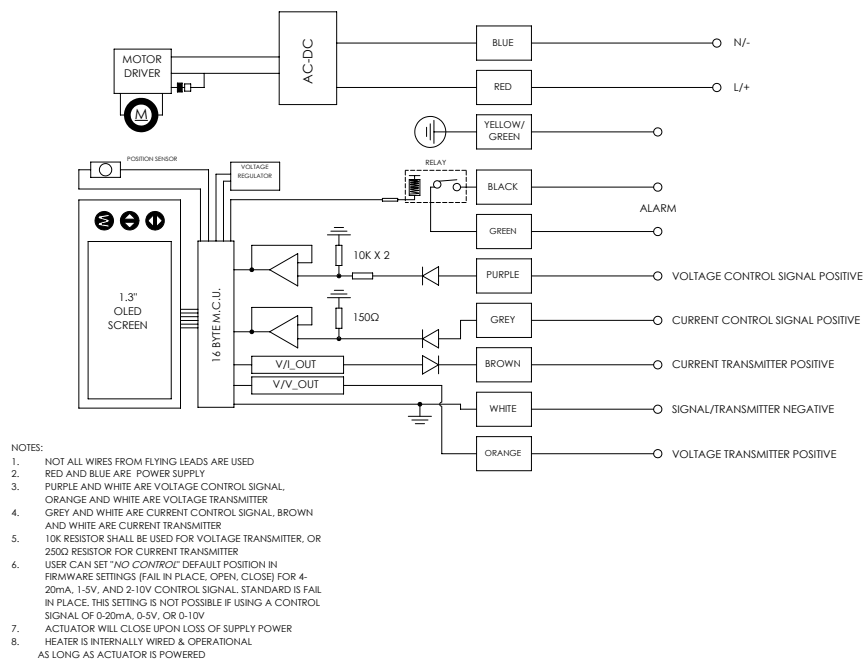
TYPE-21/21a BALL VALVE WITH SERIES 19 **SMART** MODULATING FAILSAFE ELECTRIC ACTUATOR

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 PC/PET 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 MULTIPOINT™ BALL VALVE WITH SERIES 19 SMART MODULATING FAILSAFE ELECTRIC ACTUATOR

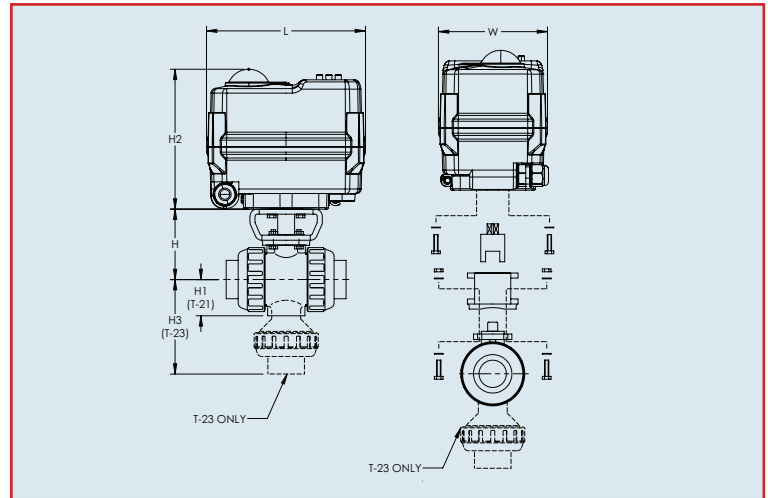


Standard Features (1/2" - 4")

- **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 PC/PET 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:** RED closed, GREEN open, 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

Motor Type:	Reversing, brushless DC
Sizes:	S20 for 1/2" - 2" three-way ball valves S50 for 3" three-way ball valves S110 for 4" three-way ball valves
Torque:	177 in-lbs to 973 in-lbs
Voltage:	95 VAC to 265 VAC multi-voltage
Amp Draw:	0.18 Amp for S20 0.24 Amp for S50 0.90 Amp for S110
Max Ambient Temp:	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	0.90	75%	4.80	75%	10

Amp draw is considered locked rotor

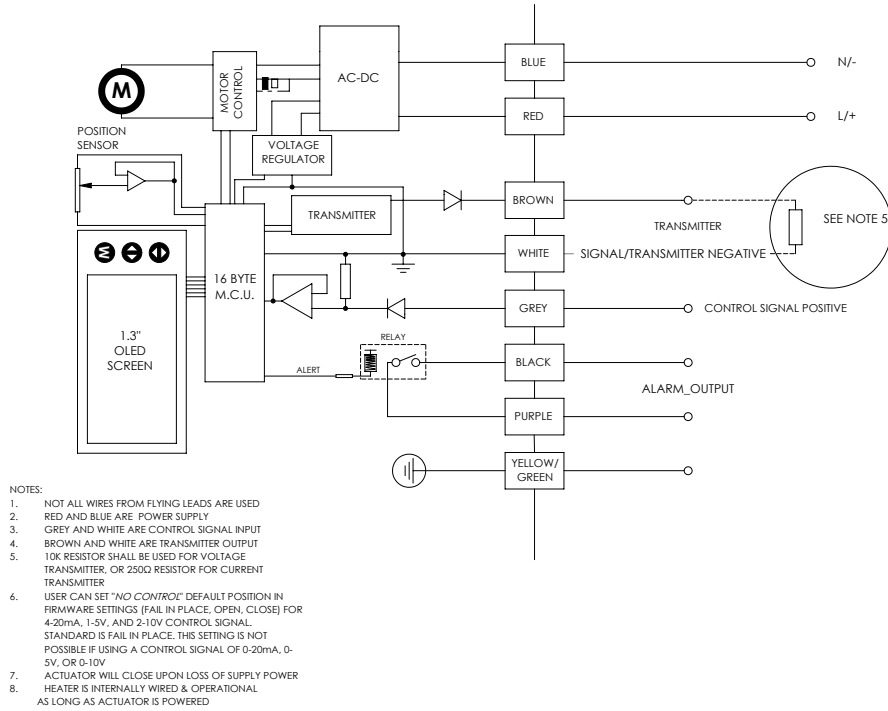
*Cycle times are approximate

Duty cycle shown for ambient temp [73° F]

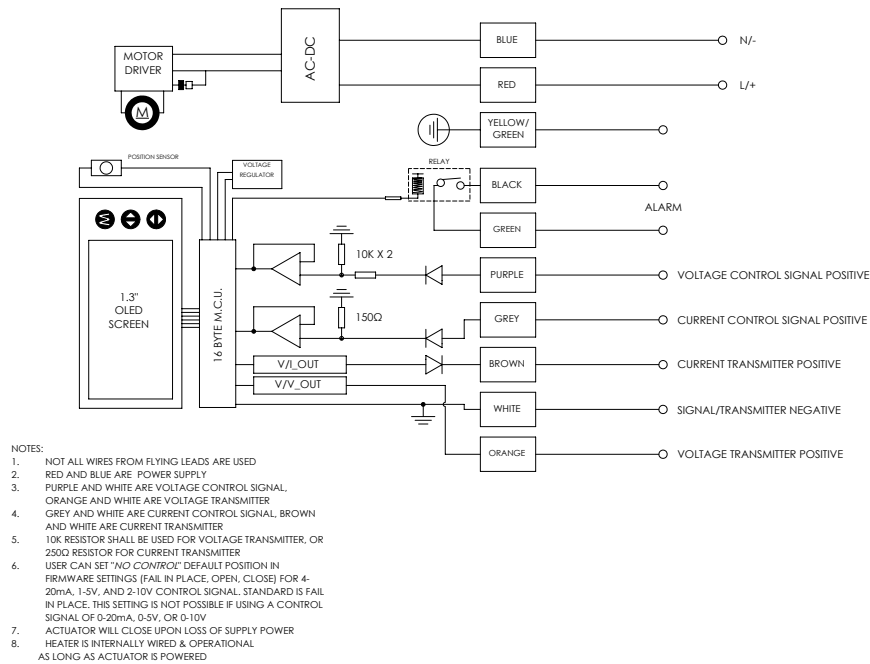
TYPE-23 MULTIPORT™ BALL VALVE WITH SERIES 19 SMART MODULATING FAILSAFE ELECTRIC ACTUATOR

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 PC/PET 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

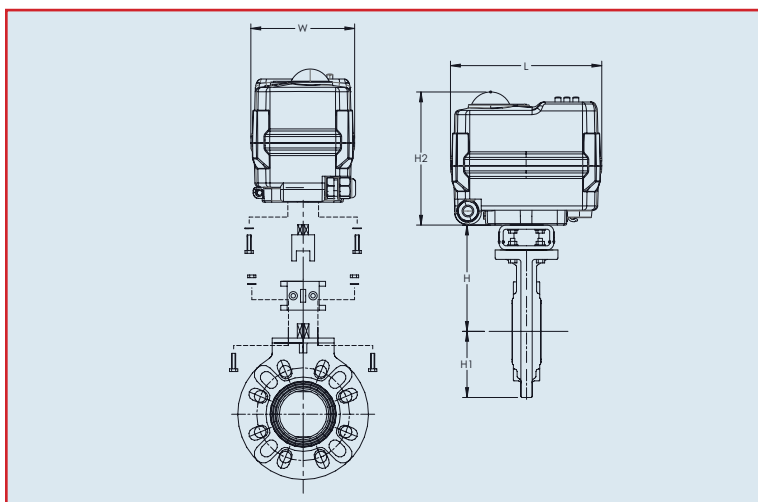


Standard Features (1-1/2" - 10")

- **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 PC/PET 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:** RED closed, GREEN open, 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 3540 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

Motor Type:	Reversing, brushless DC
Sizes:	S20 for 1-1/2" - 2-1/2" butterfly valves S50 for 3" - 4" butterfly valves S110 for 5" - 6" butterfly valves S400 for 8" - 10" butterfly valves
Torque:	177 in-lbs to 3540 in-lbs
Voltage:	95 VAC to 265 VAC multi-voltage 24 VAC/VDC
Amp Draw:	0.34 Amp for S20 0.39 Amp for S50 1.24 Amp for S110 1.83 Amp for S400
Max Ambient Temp:	150° F



Dimensions (inch)

Size	1-1/2"	2"	2-1/2"	3"	4"	5"	6"	8"	10"
H	5.51	5.75	6.18	6.46	7.16	8.46	8.97	10.11	11.49
H1	2.95	3.27	3.66	3.94	4.53	5.00	5.63	6.69	8.07
H2	3.54	3.54	3.54	4.72	4.72	4.80	4.80	6.72	6.72
L	4.01	4.01	4.01	5.12	5.12	6.69	6.69	8.78	8.78
W	2.76	2.76	2.76	4.33	4.33	4.52	4.52	1.72	1.72
Model	S20	S20	S20	S50	S50	S110	S110	S400	S400

Weight (lbs)

Size	1-1/2"	2"	2-1/2"	3"	4"	5"	6"	8"	10"
Weight	5.2	5.6	6.1	8.2	9.5	15.9	17.9	32	34.2

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	0.34	75%	0.78	75%	10
S50	442	0.39	75%	0.84	75%	10
S110	973	1.24	75%	2.89	75%	10
S400	3540	1.83	75%	4.80	75%	25

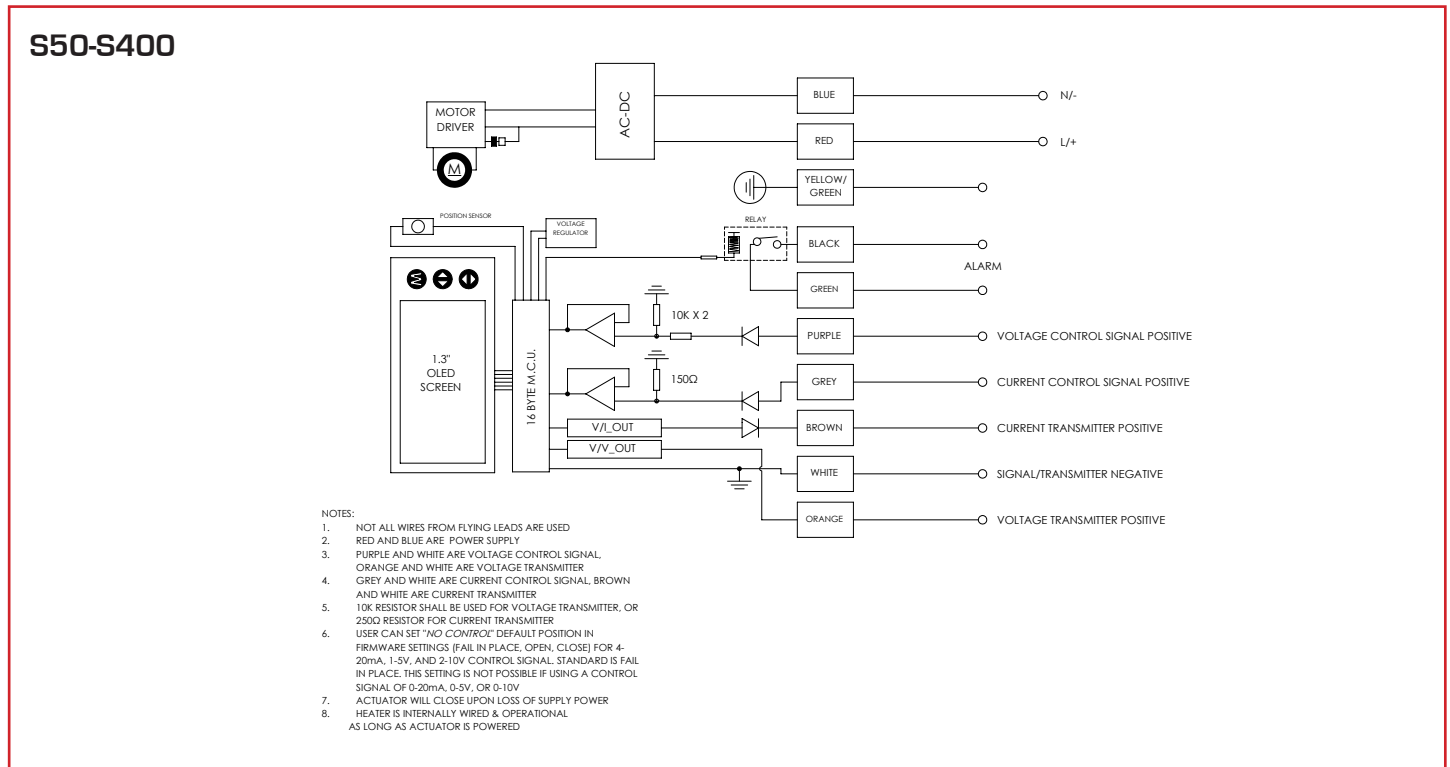
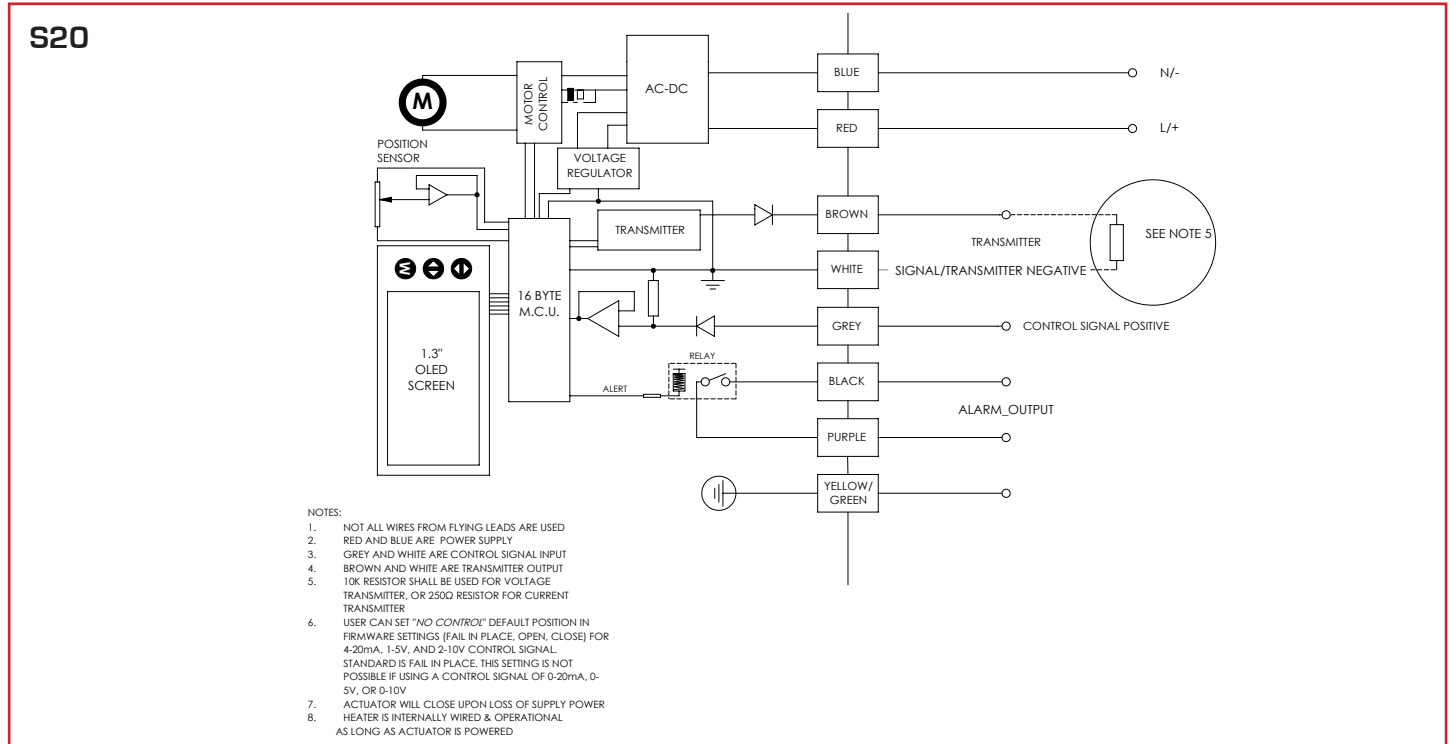
Amp draw is considered locked rotor

* 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



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 PC/PET 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

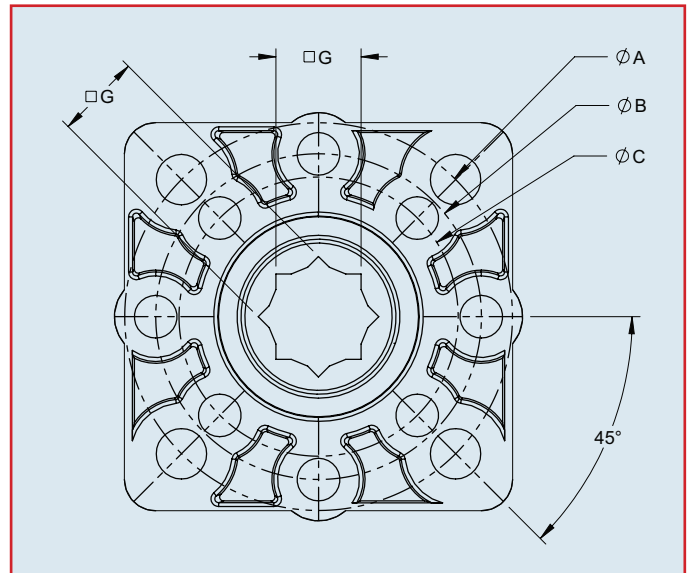


Standard Features (All Sizes)

- **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 PC/PET 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:** RED closed, GREEN open, 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 3540 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

Sizes:	S20, S50, S110, S400
Torque:	177 in-lbs to 3540 in-lbs
Voltage:	95 VAC to 265 VAC 1Ph 50/60 Hz 24 VAC/VDC
Amp Draw:	0.34 Amp for S20 0.39 Amp for S50 1.24 Amp for S110 1.83 Amp for S400
Electrical Connection:	NEMA 4X cable gland with two-meter color-coded cable
Max Ambient Temp:	150° F
Cycle:	Per 90 degrees: 10 seconds
Enclosure:	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
S400	F10 (M10)	F07 (M8)	N/A	22MM

Weight (lbs)

Size	S20	S50	S110	S400
Weight	1.7	3.5	4.8	13.23

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	0.34	75%	0.78	75%	10
S50FS	442	0.39	75%	0.84	75%	10
S110FS	973	1.24	75%	2.89	75%	10
S400FS	3540	1.83	75%	4.80	75%	25

Amp draw is considered locked rotor

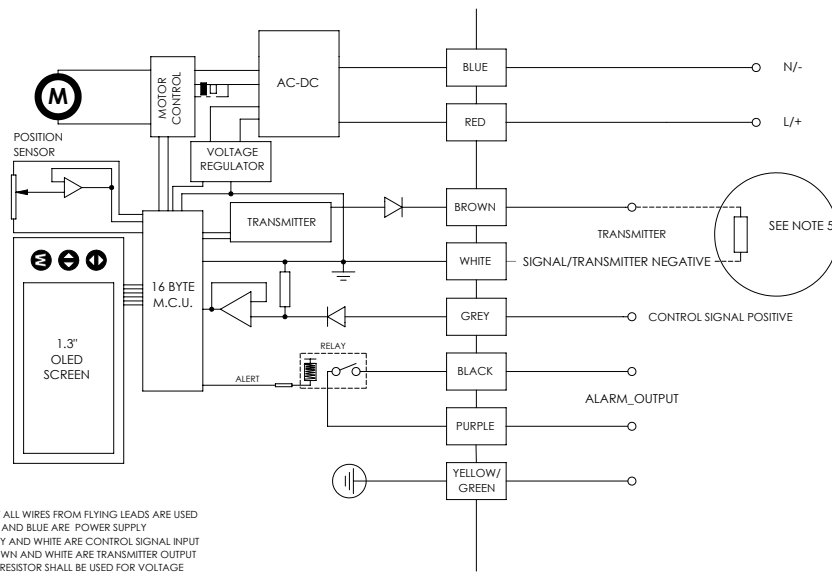
*Cycle times are approximate

Duty cycle shown for ambient temp (73° F)

SERIES 19 SMART MODULATING FAILSAFE ELECTRIC ACTUATOR

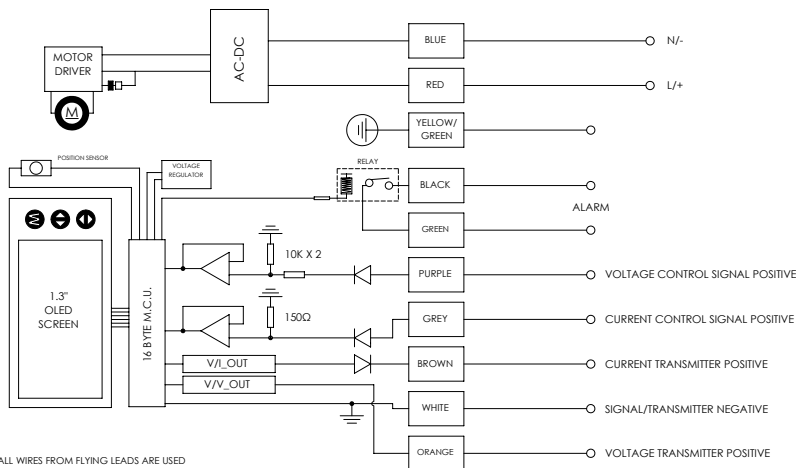
Wiring Diagrams

S20



- NOTES:
1. NOT ALL WIRES FROM FLYING LEADS ARE USED
 2. RED AND BLUE ARE POWER SUPPLY
 3. GREY AND WHITE ARE CONTROL SIGNAL INPUT
 4. BROWN AND WHITE ARE TRANSMITTER OUTPUT
 5. 10K RESISTOR SHALL BE USED FOR VOLTAGE TRANSMITTER, OR 250Ω RESISTOR FOR CURRENT TRANSMITTER
 6. USER CAN SET "NO CONTROL" DEFAULT POSITION IN FIRMWARE SETTINGS (FAIL IN PLACE, OPEN, CLOSE) FOR 4-20mA, 1-5V, AND 2-10V CONTROL SIGNAL. STANDARD IS FAIL IN PLACE. THIS SETTING IS NOT POSSIBLE IF USING A CONTROL SIGNAL OF 0-20mA, 0-5V, OR 0-10V
 7. ACTUATOR WILL CLOSE UPON LOSS OF SUPPLY POWER
 8. HEATER IS INTERNALLY WIRED & OPERATIONAL AS LONG AS ACTUATOR IS POWERED

S50-S400



- NOTES:
1. NOT ALL WIRES FROM FLYING LEADS ARE USED
 2. RED AND BLUE ARE POWER SUPPLY
 3. PURPLE AND WHITE ARE VOLTAGE CONTROL SIGNAL, ORANGE AND WHITE ARE VOLTAGE TRANSMITTER
 4. GREY AND WHITE ARE CURRENT CONTROL SIGNAL, BROWN AND WHITE ARE CURRENT TRANSMITTER
 5. 10K RESISTOR SHALL BE USED FOR VOLTAGE TRANSMITTER, OR 250Ω RESISTOR FOR CURRENT TRANSMITTER
 6. USER CAN SET "NO CONTROL" DEFAULT POSITION IN FIRMWARE SETTINGS (FAIL IN PLACE, OPEN, CLOSE) FOR 4-20mA, 1-5V, AND 2-10V CONTROL SIGNAL. STANDARD IS FAIL IN PLACE. THIS SETTING IS NOT POSSIBLE IF USING A CONTROL SIGNAL OF 0-20mA, 0-5V, OR 0-10V
 7. ACTUATOR WILL CLOSE UPON LOSS OF SUPPLY POWER
 8. HEATER IS INTERNALLY WIRED & OPERATIONAL AS LONG AS ACTUATOR IS POWERED

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 PC/PET 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.