

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

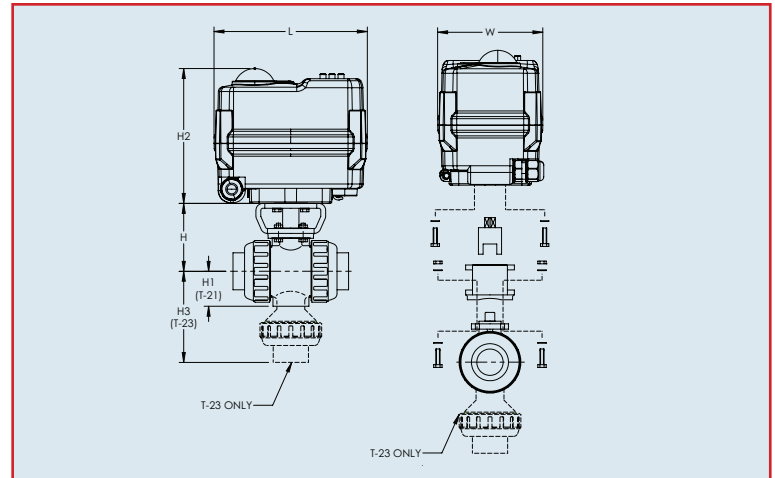


## Specifications

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

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

- **Compact:** Perfect for OEM and skid manufacturers with a footprint of 2.75" x 4" up to a 2" ball valve
- **OLED Screen:** Displays valve position, alarms (such as an over torque condition)
- **Push Buttons:** Used to calibrate/adjust end positions, local controls
- **Multi-voltage:** 95 VAC to 265 VAC or 24 VAC/VDC
- **Motor:** Reversing, brushless DC motor
- **Gear Train:** Permanently lubricated steel gears
- **Corrosion Resistant Enclosure:** NEMA 4X ABS enclosure with stainless steel trim
- **ISO mounting configuration**
- **Electrical Connection:** NEMA 4X cable gland with two-meter cable
- **Position Indication:** Highly visible beacon position indicator
- **LED Position Indication:** **RED** closed, **GREEN** open, **BLUE** fault
- **Manual Override:** Manually cycle valve via electroless nickel-plated hex key
- **Auxiliary Contacts:** Open and closed dry contacts rated 0.1 Amp @ 250 VAC, 0.5 Amp @ 30 VDC
- **Alarm Contacts:** Dry contacts rated 0.1 Amp @ 250 VAC, 0.5 Amp @ 30 VDC for alarm status (over torque, as an example)
- **QR Code:** Links to user manual; includes wiring schematic
- **Space Heater:** Internally wired to limit condensation
- **CE Compliant:** All actuators are CE labeled and compliant
- **75% Duty Cycle:** Extended duty cycle is ideal for high cycling applications
- **Output Torque:** Series 19 electric actuators have an output torque range from 177 in-lbs to 973 in-lbs
- **Simple Wiring:** Wiring technique is the same for all voltage units
- **Local Controls:** Used with OLED and push buttons, a user can locally open or close units via password



## Dimensions (inch)

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

## Weight (lbs)

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

## Engineering Data

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

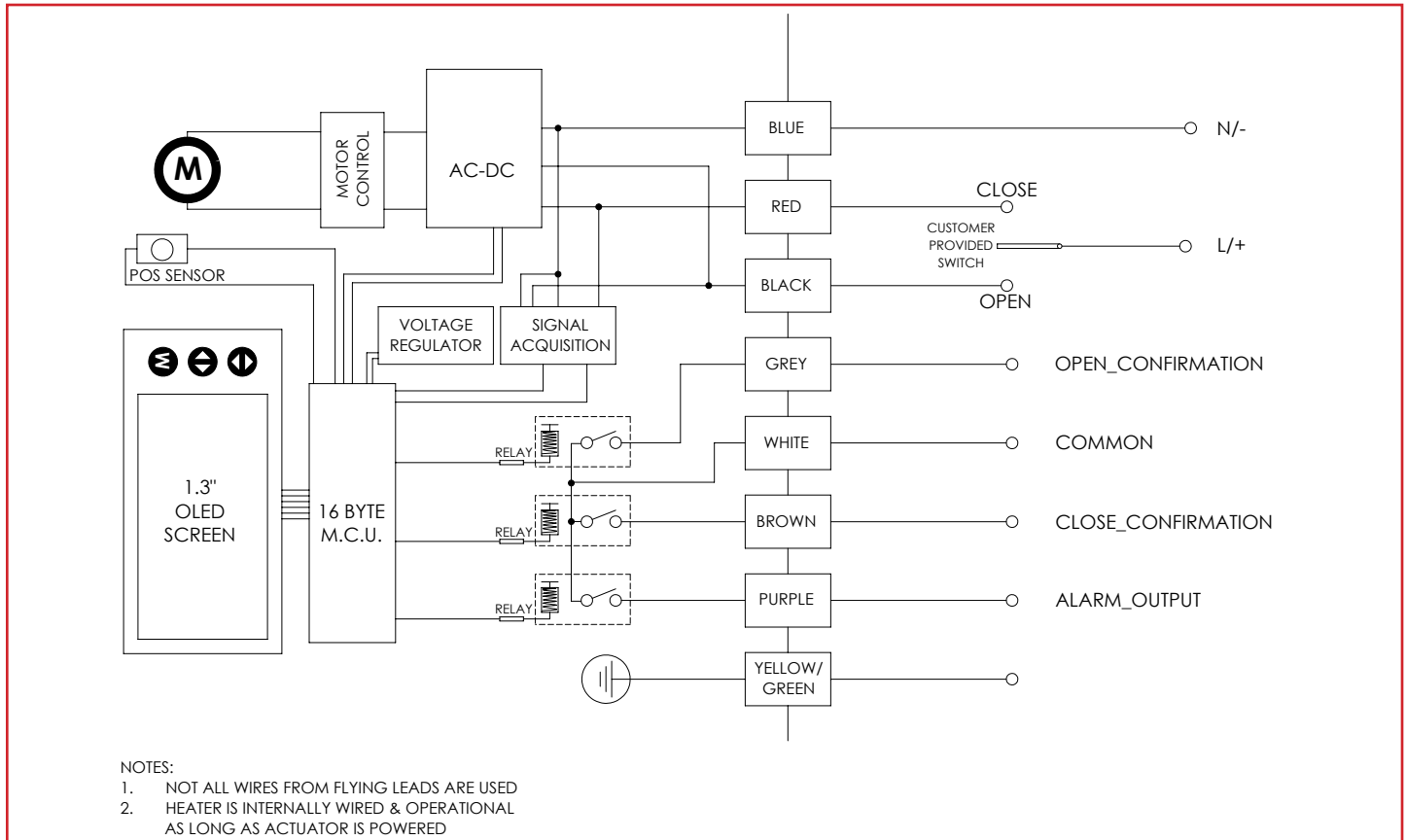
Amp draw is considered locked rotor

\*Cycle times are approximate

Duty cycle shown for ambient temp [73° F]

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## Wiring Diagram



## Sample Specifications

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

## Series 19 Actuator Selection Guide

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

