

SERIES 19 SMART MODULATING FAILSAFE ELECTRIC ACTUATOR

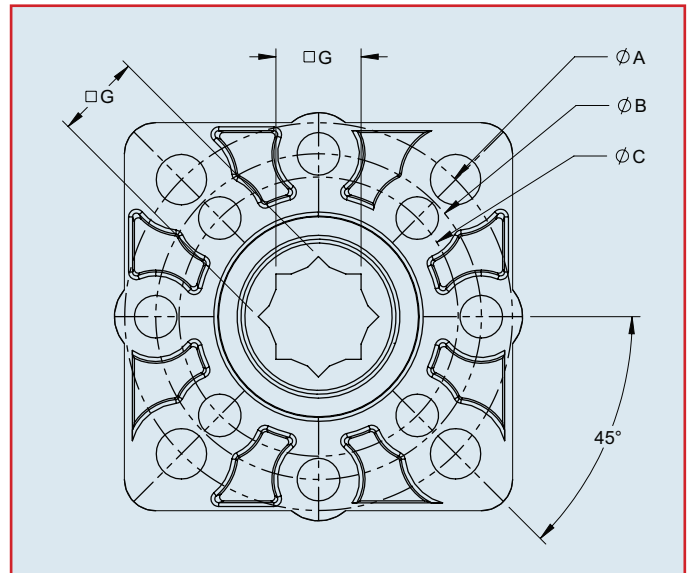


Standard Features (All Sizes)

- **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

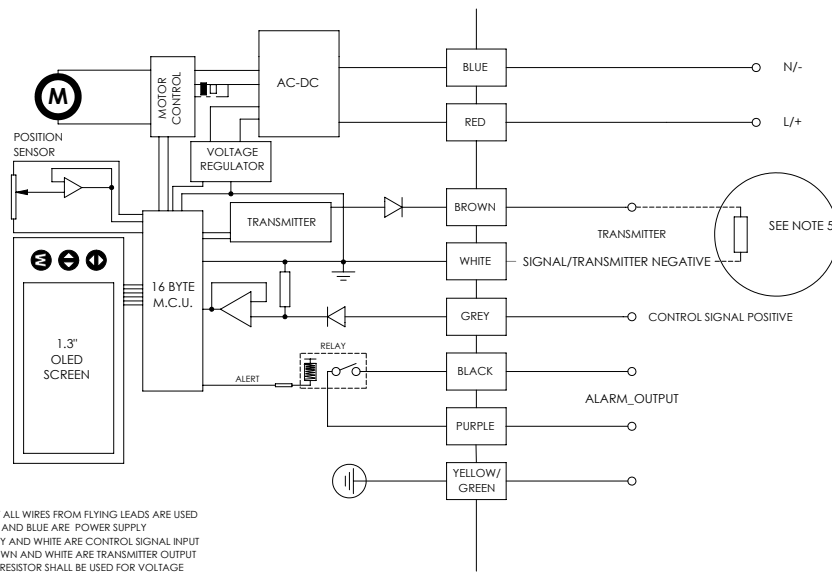
*Cycle times are approximate

Duty cycle shown for ambient temp (73° F)

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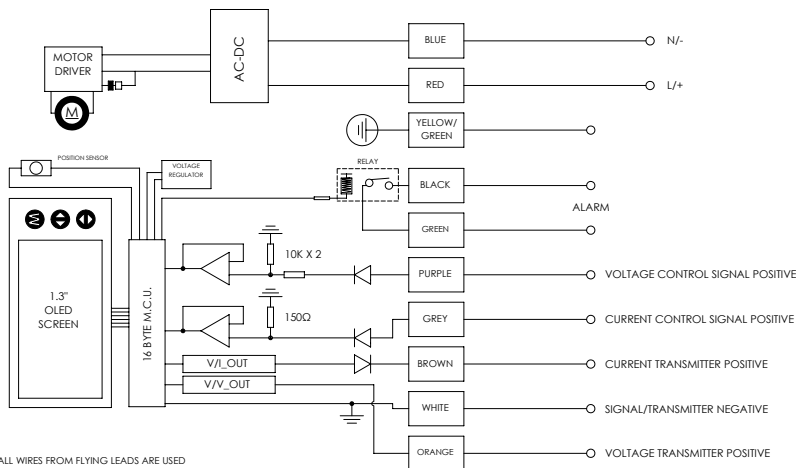
Wiring Diagrams

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.