Series 19 SMART On/Off Multiturn Electric Actuator User Manual

Description

The Series 19 SMART on/off multiturn electric actuator features a reversing motor with multi-voltage capabilities; 95vac-265vac (50/60Hz) or 24 Vac/Vdc, an OLED Screen, an internal heater, auxiliary contacts, alarm/fault contacts, a NEMA Type 4X enclosure, manual override, visual flat disc position indication, LED Indicator (Open/Close/Alarm), ISO mounting, and 2M flying leads. The auxiliary contacts and alarm/fault contacts are SPST and rated for 0.1A @250 Vac/0.5A@30 Vdc, and are factory calibrated.

Cover removal is NOT required for installation, and will void warranty!!

Additional options are NOT available for this model

Electrical Requirement

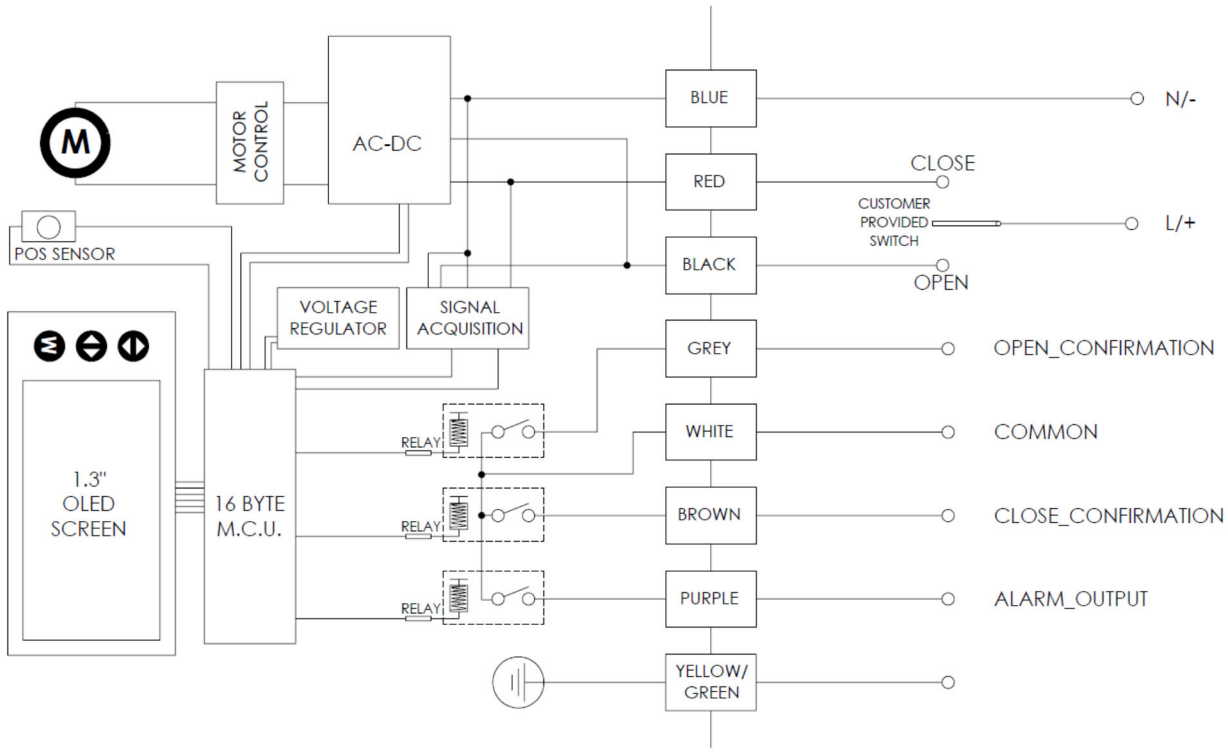
WARNING: Do not open actuator cover as warranty will be void!!

Model Number	Torque (in/lbs)	95 - 265 Vac		24 Vac/24 Vdc		Cycle Time per Revolution(Seconds)	Weight (Pounds)
		Amp Draw	Duty Cycle	Amp Draw	Duty Cycle		
S20MTHM2W	177	N/A	N/A	0.96	70%	4 seconds	1.7
S50MTHM2W	442	0.24	70%	1.2	70%	16 seconds	3.5

NOTE: Amp rating is considered running.
Duty cycles are for ambient temperature (73°F)

The Series 19 electric actuator has a sealed cable gland with 2M flying leads. The electrician is required to make field connections as per the wiring schematic shown in this manual for model numbers and voltages listed above. The electrician is responsible for following all and any, local and/or Agency wiring practices.

Note: *Not all wires provided will be used.*



NOTES:
1. NOT ALL WIRES FROM FLYING LEADS ARE USED
2. HEATER IS INTERNALLY WIRED & OPERATIONAL AS LONG AS ACTUATOR IS POWERED

Blue is negative/neutral
Black is hot to open
Red is hot to close
White is common for confirmation and alarm
Grey is relay contact for open confirmation
Brown is relay contact for close confirmation
Purple is relay contact for alarm

Heater is internally wired and operational as long as actuator is powered.

LED visual indicator is green for open, red for closed, or blue for alarm condition. Alarm condition could be a motor fault, valve jam, etc.

Manual Override Operation

Remove manual override Hex Key from storage position located on the bottom of actuator, which is secured by SS clips. To operate the manual override, insert hex key into hex socket located on top of actuator and rotate to manually cycle valve (CCW to open, CW to close). **Manual override operation should always end with the valve in the closed position**. When finished using the manual override it is imperative to remove the hex key and place it back into storage on actuator base, making sure that it “clicks” into the locking position.

CAUTION: The manual override should only be used when there is no power applied to actuator. When power is restored the actuator will automatically resume normal operation. **Do not exceed the number of 360° turns specified from close to open as this will exceed the calibration range and unit will not operate properly.**

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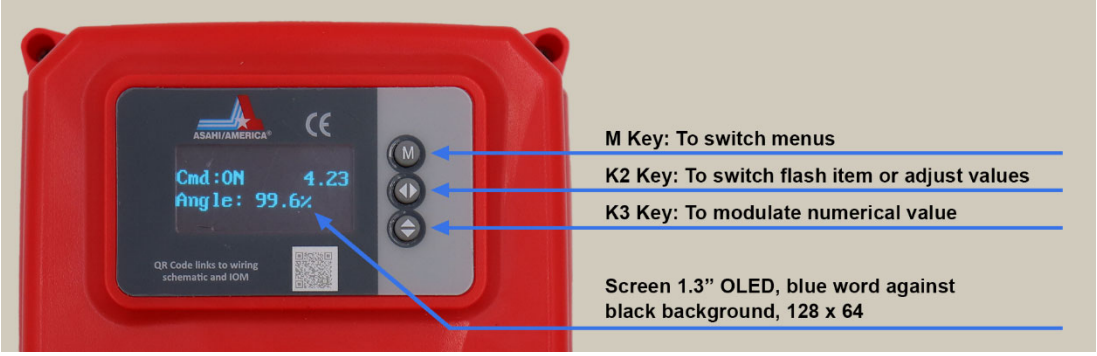
Turns from Close to Open

Valve Size	Valve Type	Amount of Turns		Valve Type	Amount of Turns
½"	T-14 Diaphragm	3.25		Gate	N/A
¾"	T-14 Diaphragm	3.25		Gate	N/A
1"	T-14 Diaphragm	3.25		Gate	N/A
1 ¼"	T-14 Diaphragm	3.25		Gate	N/A
1 ½"	T-14 Diaphragm	4.25		Gate	5.25
2"	T-14 Diaphragm	5.25		Gate	5.25
2 ½"	T-14 Diaphragm	6.25		Gate	N/A
3"	T-14 Diaphragm	6.25		Gate	6.25
4"	T-14 Diaphragm	6.25		Gate	6.25

Local Controls Operation

The actuator can be locally controlled and driven to the open or closed position via OLED screen and push buttons. This simple procedure is detailed below.

Press and hold the "↕" button for 3 seconds. "K3" will flash in the top right hand corner and the unit will ask for a password. At this time, the password of "111" can be entered with "↕" selecting numbers and "↔" selecting the field. Once password is entered, press the "M" button to enter manual mode. The actuator can now be opened and closed via the push buttons. Press the "↕" button to OPEN the actuator. Press the "↔" button to CLOSE the actuator. To exit manual mode, press the M button or wait approximately 120 seconds and the manual mode will time out and exit. The actuator will not respond to control signals from the PLC until taken out of manual mode.



Troubleshooting

Actuator does not respond

Power not connected	Connect power
Voltage below level or incorrect	Confirm correct voltage
Torque limiter tripped	Power unit in opposite direction, then power to original position to confirm a tripped torque limiter
Loose/poor termination	Confirm proper termination