

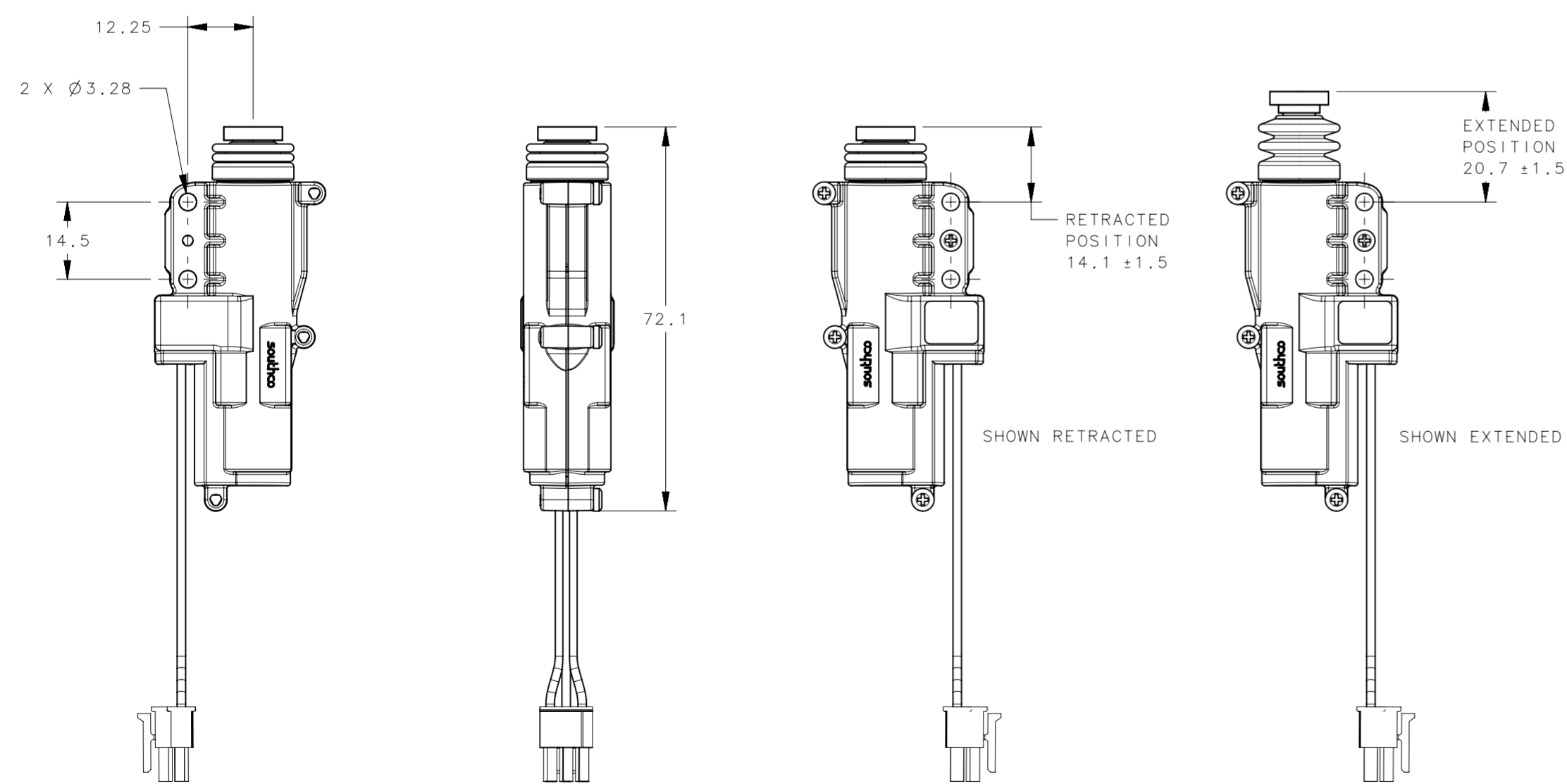
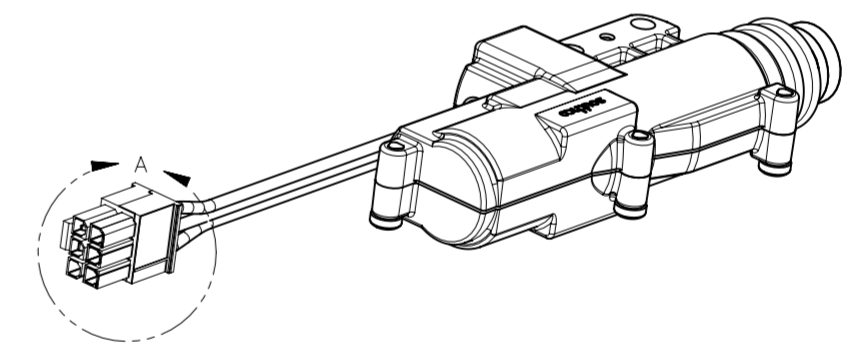
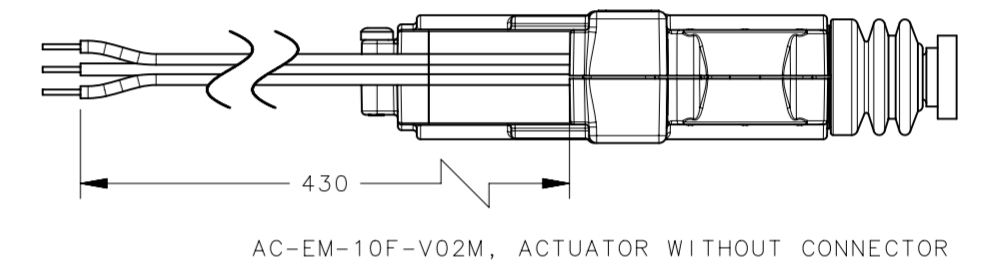
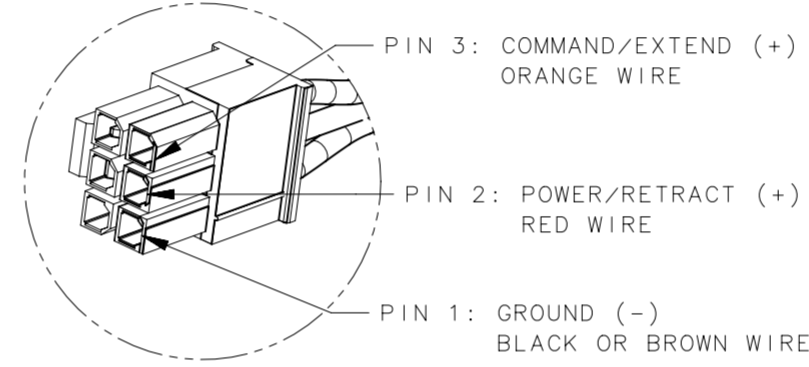
NOTES:

- MATERIAL AND FINISH:**
ELECTRIC ACTUATOR: PLASTIC (NYLON AND ACETAL), SILICONE BELLOWS, AND METAL COMPONENTS
- ELECTRICAL SPECIFICATIONS: SEE TABLE 1 - ELECTRICAL SPECIFICATIONS**
- POWER MUST BE AVAILABLE TO OPERATE THE ACTUATOR AND MUST REMAIN AVAILABLE DURING THE FULL TRANSIT TIME OF THE ACTUATOR DURING EXTENDING OR RETRACTING.
- THE ACTUATOR WILL PUSH A MECHANICAL LOAD. THE ACTUATOR WILL NOT PULL A LOAD.
- SEE TD-AC-EM-10-1-J SHEET 2 FOR SUPPLEMENTAL AC-EM-10F-VOCM OPERATING RANGE DETAIL.
CAUTION! TO PREVENT LONG TERM DAMAGE TO THE ELECTRICAL COMPONENTS IT IS IMPORTANT TO NOT BLOCK (STALL) THE ACTUATOR DURING ELECTRICAL OPERATION.
- THE ACTUATOR CANNOT REVERSE A CYCLE.
- THE ACTUATOR MUST BE ALLOWED TO REACH ITS FULL EXTENDED TRAVEL TO COMPLETE A CYCLE.
CAUTION! NO STALL PROTECTION IS PROVIDED IN ACTUATOR. USE APPROPRIATE CIRCUIT PROTECTION.
- ENVIRONMENTAL SPECIFICATIONS: SEE TABLE 1 - ELECTRICAL SPECIFICATIONS**
OPERATING HUMIDITY: 85% MAX.
NOT INTENDED FOR DIRECT EXPOSURE TO OUTDOOR ELEMENTS.
- ELECTRICAL CONNECTIONS AND HOOKUP:**
A BASIC SWITCH CONTROL ELECTRICAL HOOKUP DIAGRAM IS PROVIDED FOR REFERENCE.
CONSULT WITH A SOUTHCO REPRESENTATIVE FOR ADDITIONAL ELECTRICAL HOOKUP INFORMATION.
- CONNECT POWER, GROUND AND CONTROL SIGNAL WIRES TO AN APPROPRIATE DC POWER SUPPLY
- A DC POWER SUPPLY CAPABLE OF SUPPLYING 5 OR 12 VDC AT 1 AMP MINIMUM PER ACTUATOR IS RECOMMENDED
CAUTION! ACTUATOR CAN BE DAMAGED IF WIRED INCORRECTLY, OR IF IMPROPER VOLTAGE IS APPLIED!
WIRE COLOR CODE / CONNECTOR PIN ASSIGNMENT: SEE CONNECTOR PINOUT LOCATION DETAILS
- PIN1: BLACK OR BROWN WIRE: GROUND(-)
- PIN2: RED WIRE: POWER OR RETRACT(+)
- PIN3: ORANGE WIRE: CONTROL PULSE OR EXTEND(+)
- PIN4: N/A
- PIN5: N/A
- PIN6: N/A
- OPTIONAL CONNECTOR:**
6 PIN CONNECTOR:
- MANUFACTURER: MOLEX, SERIES: MICROFIT 3.0 OR EQUIVALENT
- CONNECTOR RECEPTICAL 6 POSITION 3mm VERTICAL DUAL, MOLEX P/N: 430250600
- CONTACTS: FEMALE CRIMP TERMINAL (SOCKET) MOLEX P/N: 430300010
- WIRE: 22 AWG STYLE J-1128, 3 COLOR
MATE FOR CONNECTOR (NOT SUPPLIED)
- MANUFACTURER: MOLEX, SERIES: MICROFIT 3.0 OR EQUIVALENT
- CONNECTOR PLUG 6 POSITION 3 mm VERTICAL DUAL, MOLEX P/N: 430200601
- RECOMMENDED CONTACTS: MOLEX, MALE CRIMP TERMINAL (PIN), MOLEX P/N: 430310010
- RECOMMENDED WIRE GAGE: 22 AWG
- MOUNTING:**
- TWO Ø3.28MM THROUGH HOLES ARE PROVIDED FOR THROUGH HOLE MOUNTING WITH M3 OR 4-40 BOLTS, OR FOR USE WITH M4 THREAD FORMING SCREWS FOR PLASTICS COMPATIBLE WITH A Ø3.28 MM PILOT HOLE.
- MAXIMUM ALLOWABLE INSTALL TORQUE FOR THREAD FORMING SCREWS, 226 N-cm [20 in-lbs].
- OPTIONAL ACCESSORIES**
- PAIR WITH AC-EM-059-1 R4-10 MOUNTING KIT AND APPLICABLE R4-10, SEE J-AC-EM-059-1 FOR DETAILS.

REVISION HISTORY			
REV	DATE	BY	DESCRIPTION
M	01NOV2022	ZAM/MLL	PRN: P2022-1808

ASSEMBLY PART NUMBER
AC-EM-10F-VOCM-P

- *F* DESIGNATES FUNCTION:
0 = EXTEND AND RELEASE, NO SPRING, PUSH BACK
2 = EXTEND AND HOLD, NO SPRING, PUSH BACK
- *V* DESIGNATES VOLTAGE:
1 = 12 VOLT
5 = 5 VOLT
- *C* DESIGNATES CONNECTOR:
2 = STRIPPED AND TINNED
4 = 6 PIN MOLEX
- *P* DESIGNATES PACKAGING:
BLANK = INDIVIDUAL
1 = BULK
- *M* DESIGNATES SEALING LEVEL:
2 = IP67, TESTED TO CLASS 1 DIV 2

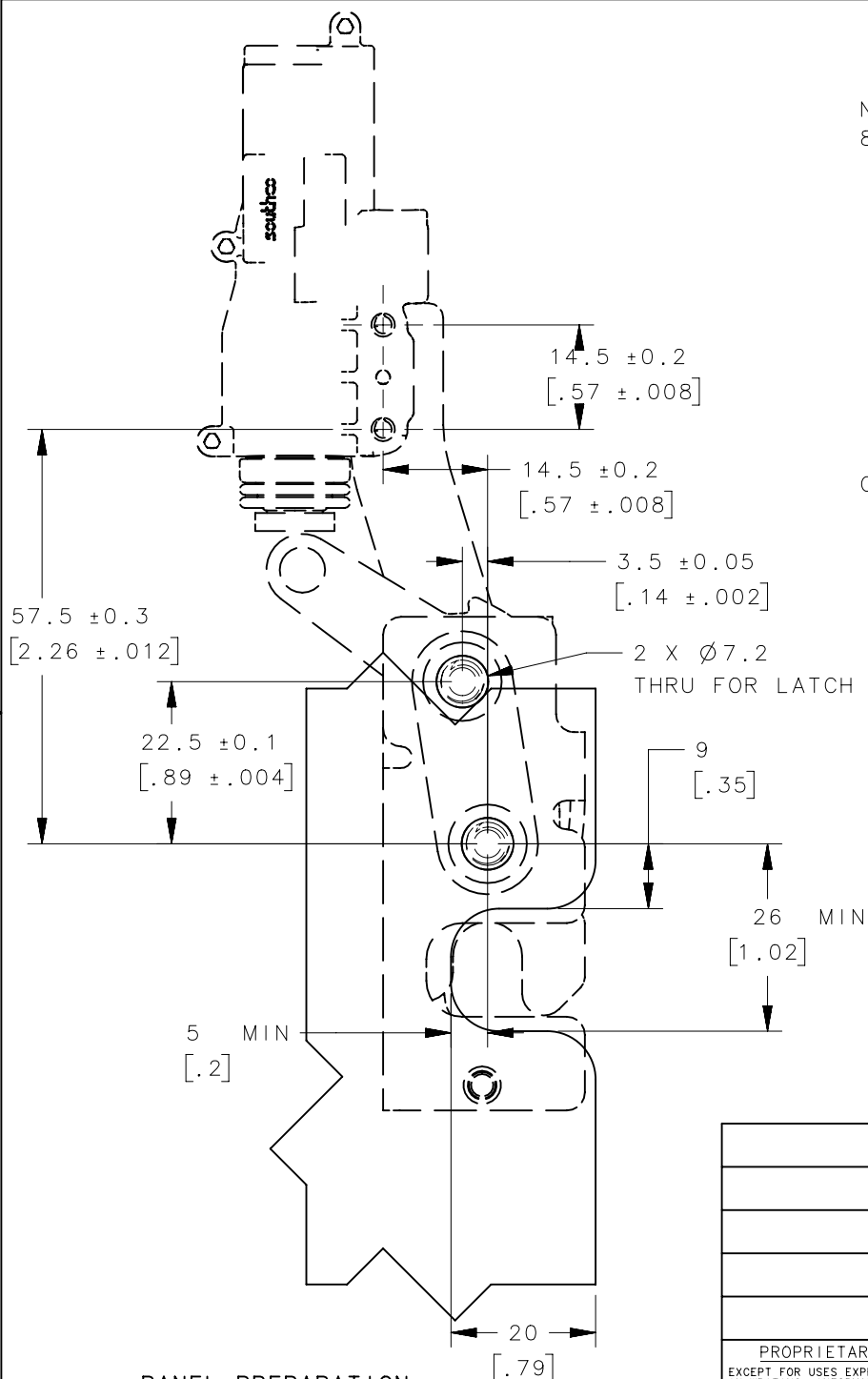


THIRD ANGLE PROJECTION		southco CONNECT · CREATE · INNOVATE
MILLIMETERS [IN]		
TOLERANCES UNLESS OTHERWISE NOTED		DESCRIPTION ELECTRONIC ACCESS SOLUTION ELECTRO-MECHANICAL ACTUATOR
ALL DIMENSIONS WITHOUT TOLERANCES ARE FOR REFERENCE ONLY.		SIZE SYSTEM A2 NX
PROPRIETARY ITEM EXCEPT FOR USES EXPRESSLY GRANTED IN WRITING, INFORMATION DISCLOSED HEREON IS CONFIDENTIAL AND ALL RIGHTS, PATENT AND OTHERWISE, ARE RESERVED BY SOUTHCO, INC.	PER ASME Y14.5M-1994	DWG NO. J-AC-EM-10-2
		DRAWN BY DJG/MLL
		DATE 18JUN2021
		SCALE 1:1
		SHEET 1 OF 3

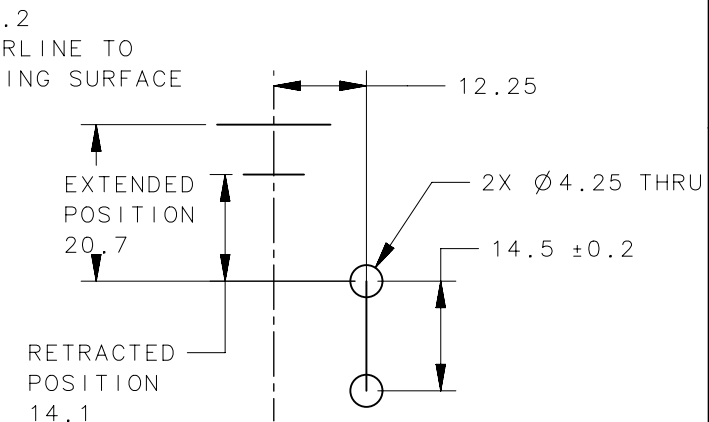
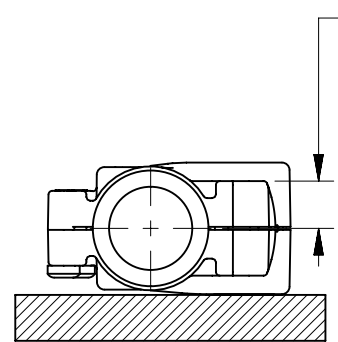
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M	01NOV2022	ZAM/MLL	PRN: P2022-1808

NOTES

8. THE AC-EM-10 ACTUATOR IS COMPATIBLE WITH BOTTOM ACTUATED R4-10 ROTARY LATCHES
- PART NUMBERS: R4-10-1X-501-XX AND R4-10-2X-501-XX. SEE J-R4-10-10-501, J-R4-10-20-501 FOR LATCH INFORMATION.
- R4-10 LATCH AND NECESSARY MOUNTING HARDWARE SOLD SEPARATELY.
 - AN OPTIONAL MOUNTING KIT INCLUDING A MOUNTING PLATE AND SCREWS IS AVAILABLE FOR USE WITH SOUTHCO R4-10 SERIES ROTARY LATCH SEE J-AC-EM-059-1 FOR PART NUMBERS AND MORE INFORMATION.
 - MAXIMUM ALLOWABLE TORQUE WITH ACTUATOR M4 THREAD FORMING SCREWS IS 226 N.cm [20 in.lbs]
 - MAXIMUM ALLOWABLE TORQUE WITH R4-10 LATCH 550 N.cm [48 in.lbs]
 - CONTACT SOUTHCO FOR RECOMMENDED ACCESSORIES.
- CAUTION! IT IS IMPORTANT TO NOT OBSTRUCT THE MOTION OF THE LATCH TRIGGER DURING ELECTRICAL OPERATION TO PREVENT LONG TERM DAMAGE TO THE ELECTRICAL COMPONENTS IN THE ACTUATOR.



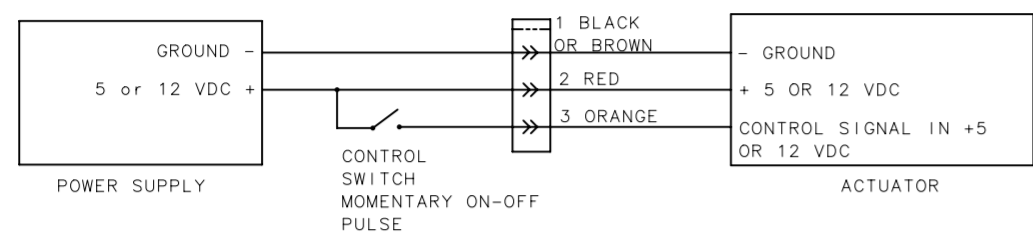
PANEL PREPARATION ACTUATOR WITH R4-10 ROTARY LATCH



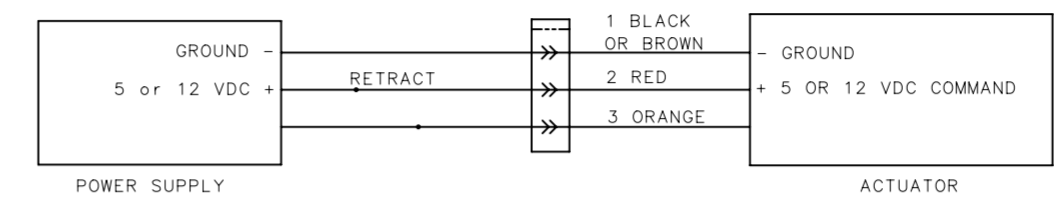
PANEL PREPARATION ACTUATOR ONLY SEE NOTE G

THIRD ANGLE PROJECTION		 CONNECT • CREATE • INNOVATE	
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PROPRIETARY ITEM <small>EXCEPT FOR USES EXPRESSLY GRANTED IN WRITING, INFORMATION DISCLOSED HEREON IS CONFIDENTIAL AND ALL RIGHTS, PATENT AND OTHERWISE, ARE RESERVED BY SOUTHCO, INC.</small>	PER ASME Y14.5M-1994	SIZE A4	SYSTEM NX
		DWG NO. J-AC-EM-10-2	
		DRAWN BY DJG/MLL	DATE 18JUN2021
		SCALE 1:1	SHEET 2 OF 3

REVISION HISTORY			
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ELECTRICAL HOOKUP (EXTEND AND RELEASE)



ELECTRICAL HOOKUP (EXTEND AND HOLD)

TABLE 1 - ELECTRICAL SPECIFICATIONS

PARAMETER	UNITS	EXTEND AND RELEASE		EXTEND AND HOLD	
		AC-EM-100-50CM	AC-EM-100-10CM	AC-EM-102-50CM	AC-EM-102-10CM
OPERATING TEMPERATURE RANGE (NOTE 1)	°C	-20 TO +60	-20 TO +60	-20 TO +60	-40 TO +60
OPERATING VOLTAGE	VDC	5 +/- 10%	12 +/- 25%	5 +/- 10%	12 +/- 10%
PEAK STALL CURRENT	A	0.52 AT 5VDC	0.6 AT 12VDC	0.52 AT 5VDC	0.6 AT 12VDC
TOTAL STANDBY CURRENT - RETRACTED	A	-	-	-	-
TOTAL STANDBY CURRENT - EXTENDED	A	N/A	N/A	-	-
CONTROL SIGNAL OR COMMAND VOLTAGE REQUIRED	V	5 +/- 10%	12 +/- 25%	5 +/- 10%	12 +/- 10%
CONTROL SIGNAL OR COMMAND CURRENT REQUIRED	A	0.52 AT 5VDC	0.6 AT 12VDC	0.52 AT 5VDC	0.6 AT 12VDC
CONTROL PULSE OR COMMAND DURATION (NOTE 2)	ms	1000	475	1600	1000
TYPICAL ACTUATOR TRANSIT TIME	ms	1350-1600	700-1000	1350-1600	700-1000

NOTE 1 - NON-ICING, NON-CONDENSING ENVIRONMENT
 NOTE 2 - CONTROL SIGNAL PULSE DURATION REQUIRED FOR TRIGGER COMMAND AND TRANSIT TIMES ARE DEPENDENT ON ACTUAL APPLICATION CONDITIONS INCLUDING VOLTAGE, LOAD, AND TEMPERATURE. USERS MUST TEST POTENTIAL PRODUCT SOLUTIONS UNDER THE ACTUAL APPLICATION CONDITIONS AND ENVIRONMENT TO DETERMINE THE SUITABILITY OF THE PRODUCT. PULSE DURATION AT THE GIVEN VOLTAGES ASSUME AMBIENT TEMPERATURES AND 44.5 N (10lbf) TENSILE FORCE (DIRECTION 1) ON R4-10-11-501-10

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		DRAWN BY DJG/MLL DATE 18JUN2021 SCALE 1:1 SHEET 3 OF 3