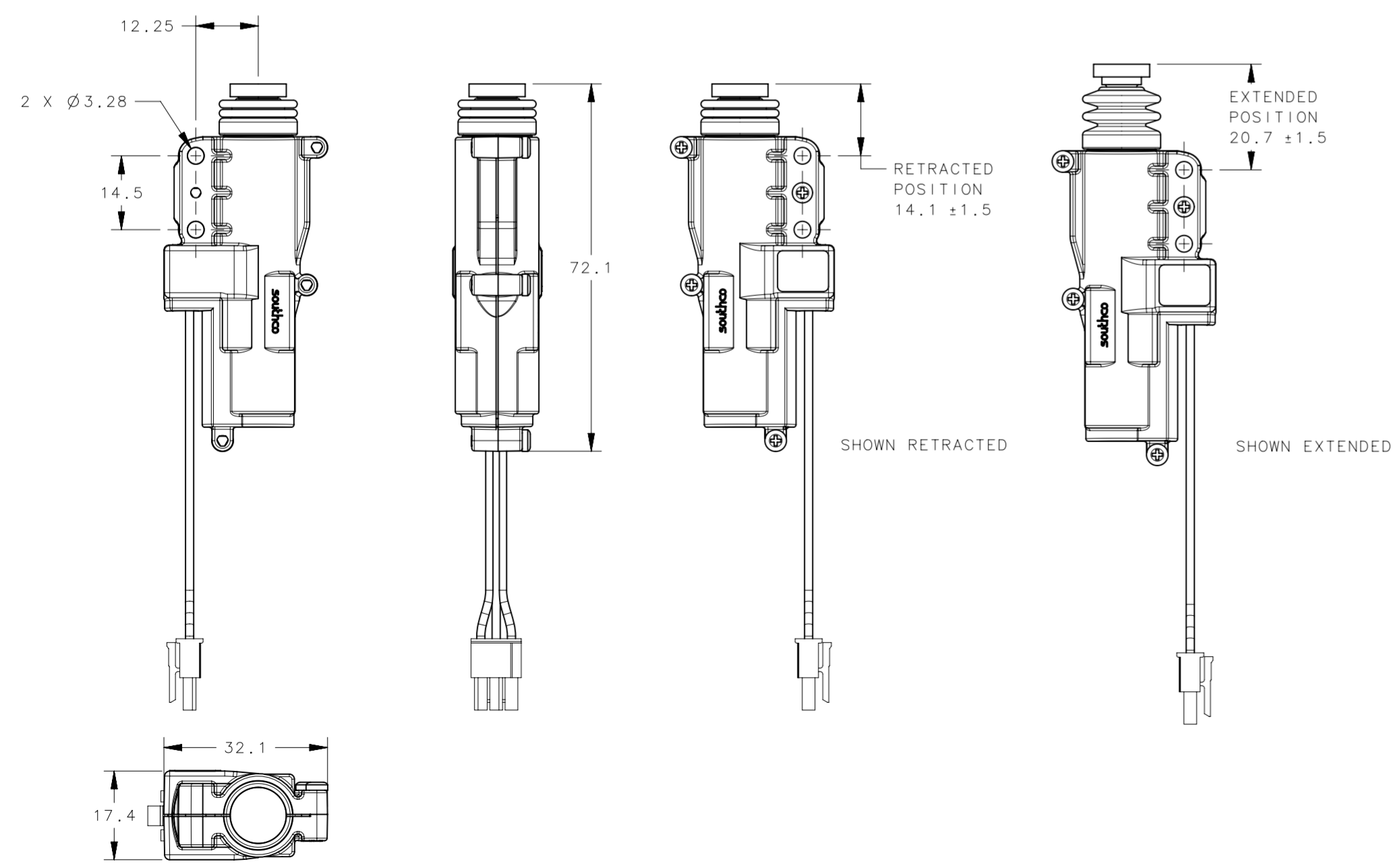
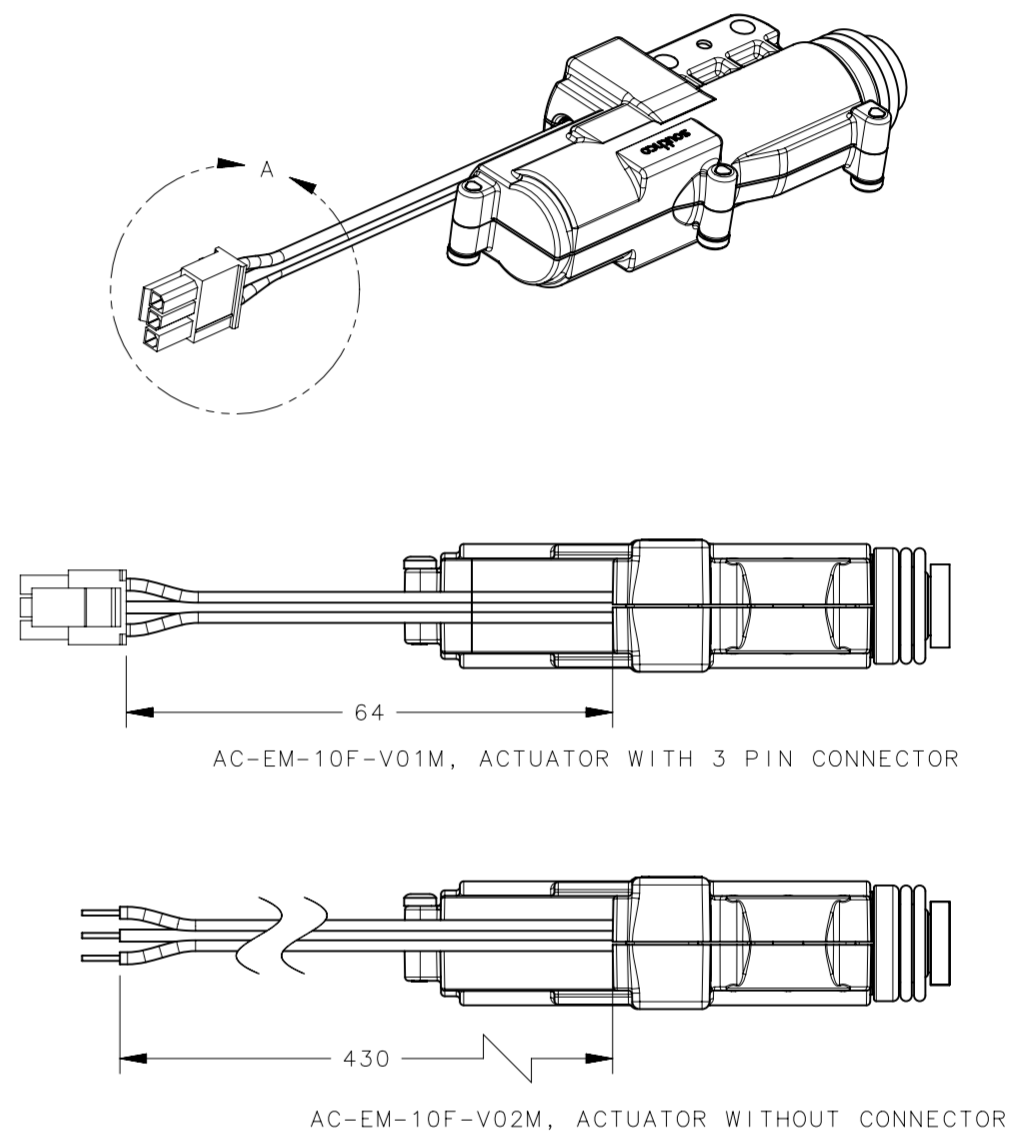
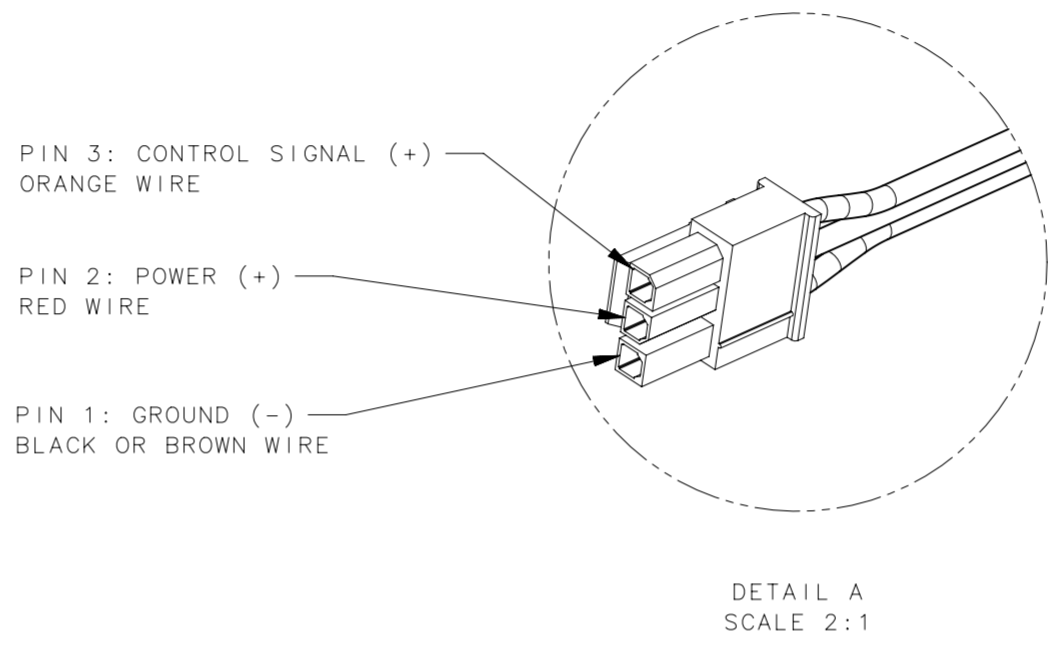


REVISION HISTORY			
REV	DATE	BY	DESCRIPTION
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- NOTES:
- MATERIAL AND FINISH:**
ELECTRIC ACTUATOR: PLASTIC (NYLON AND ACETAL), SILICONE BELLOWS, AND METAL COMPONENTS
 - ELECTRICAL SPECIFICATIONS: SEE TABLE 1 - ELECTRICAL SPECIFICATIONS**
 - POWER MUST 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 EXTEND AND 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-V0CM 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 TEMPERATURE RANGE: -20C TO 60C NON-ICING, NON-CONDENSING ENVIRONMENT
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(+)
 - PIN3: ORANGE WIRE: CONTROL PULSE(+)
 - OPTIONAL CONNECTOR:**
 - 3 PIN CONNECTOR
 - MANUFACTURER: MOLEX, SERIES: MICROFIT 3.0 OR EQUIVALENT
 - CONNECTOR RECEPTACLE, SINGLE ROW, 3 CIRCUITS, 3mm, MOLEX P/N: 436450300
 - 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 3 CIRCUITS 3 mm, MOLEX P/N: 436400301
 - 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.



PART NUMBER	FUNCTION	VOLTAGE	CONNECTOR	SEALANT RATING	PACKAGING
AC-EM-100-5011	EXTEND AND RELEASE	5	3 PIN MOLEX	IP55	INDIVIDUAL
AC-EM-100-5011-1	EXTEND AND RELEASE	5	3 PIN MOLEX	IP55	BULK
AC-EM-100-5021	EXTEND AND RELEASE	5	STRIPPED AND TINNED	IP55	INDIVIDUAL
AC-EM-100-5021-1	EXTEND AND RELEASE	5	STRIPPED AND TINNED	IP55	BULK
AC-EM-100-1011	EXTEND AND RELEASE	12	3 PIN MOLEX	IP55	INDIVIDUAL
AC-EM-100-1011-1	EXTEND AND RELEASE	12	3 PIN MOLEX	IP55	BULK
AC-EM-100-1021	EXTEND AND RELEASE	12	STRIPPED AND TINNED	IP55	INDIVIDUAL
AC-EM-100-1021-1	EXTEND AND RELEASE	12	STRIPPED AND TINNED	IP55	BULK

THIRD ANGLE PROJECTION

MILLIMETERS [IN]

TOLERANCES UNLESS OTHERWISE NOTED

ALL DIMENSIONS WITHOUT TOLERANCES ARE FOR REFERENCE ONLY.

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

THIRD ANGLE PROJECTION

southco
CONNECT · CREATE · INNOVATE

DESCRIPTION: ELECTRONIC ACCESS SOLUTION ELECTRO-MECHANICAL ACTUATOR

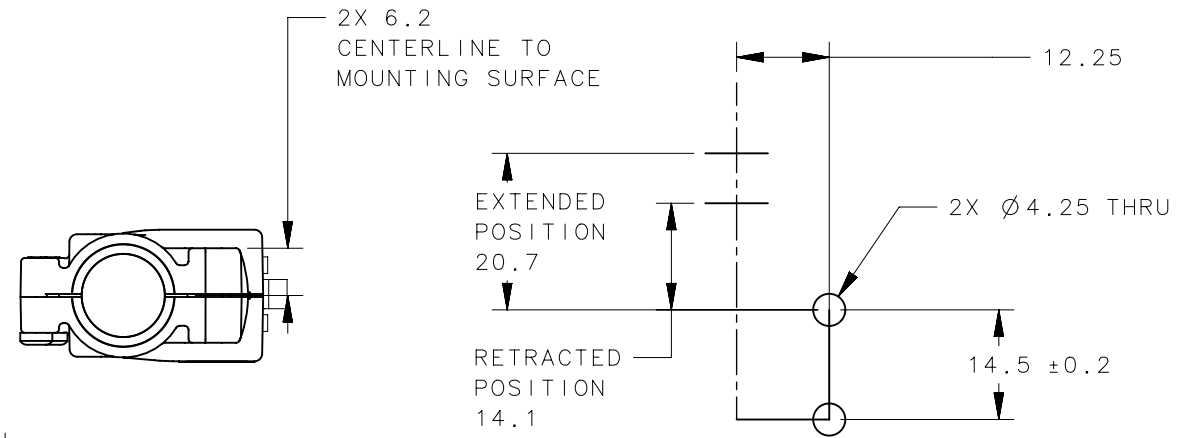
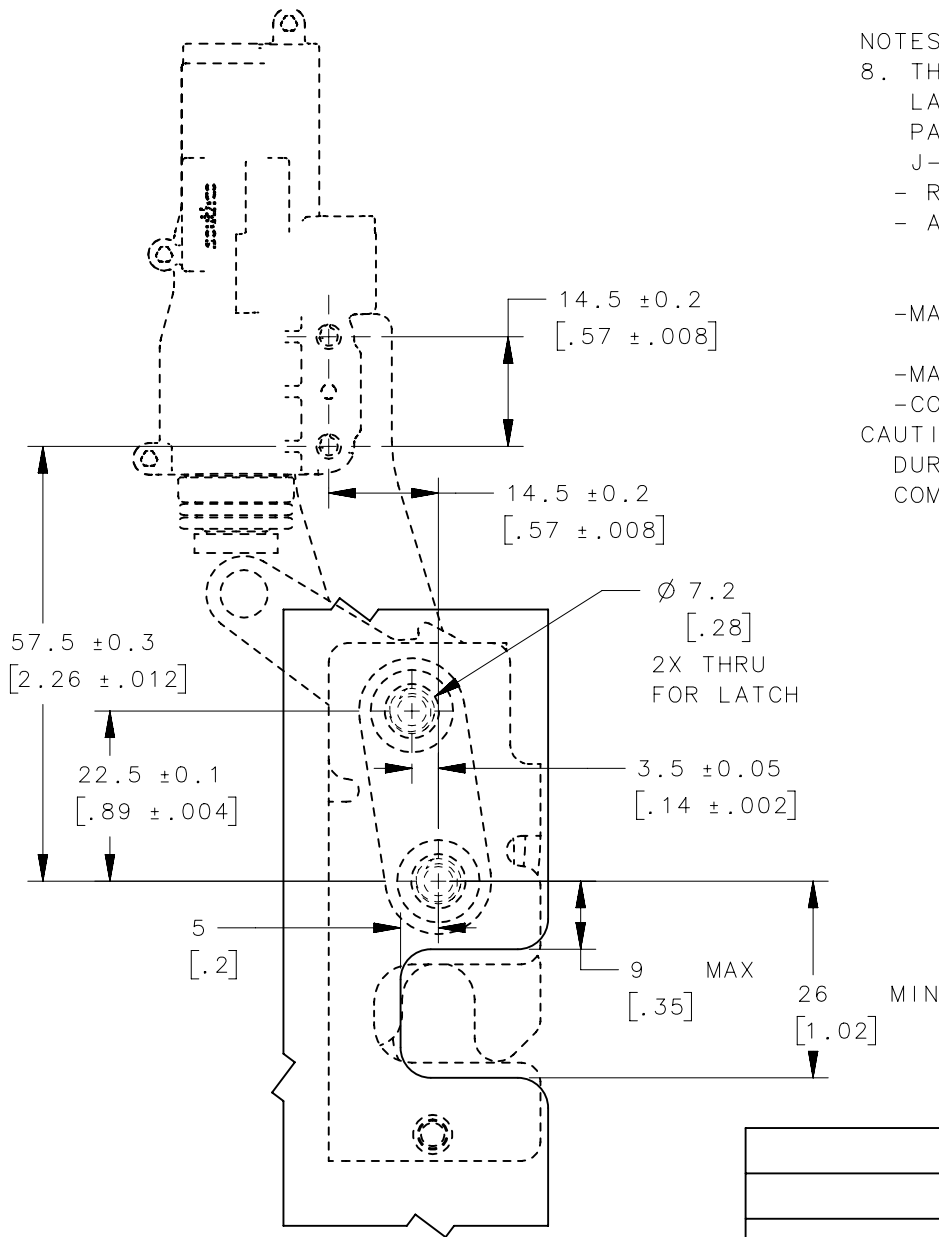
SIZE SYSTEM: A2 NX DWG NO.: J-AC-EM-10-1

DRAWN BY: DJG/KAM DATE: 16AUG2018 SCALE: 1:1 SHEET: 1 OF 3

REVISION HISTORY			
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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.

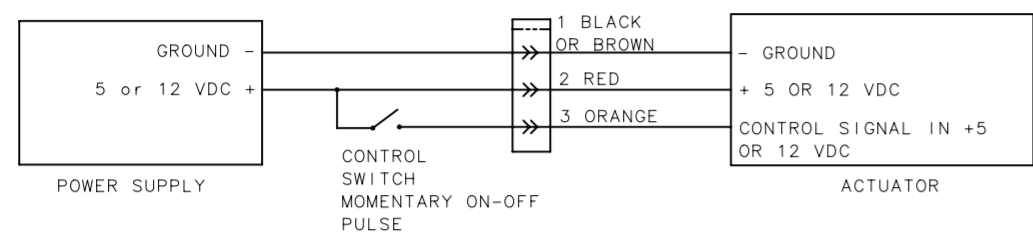


PANEL PREPARATION
 ACTUATOR ONLY
 SEE NOTE G

PANEL PREPARATION
 ACTUATOR WITH R4-10 ROTARY LATCH

	THIRD ANGLE PROJECTION				 CONNECT • CREATE • INNOVATE		
	MILLIMETERS [IN]						
	TOLERANCES UNLESS OTHERWISE NOTED	DESCRIPTION			ELECTRONIC ACCESS SOLUTION		
	ALL DIMENSIONS WITHOUT TOLERANCES ARE FOR REFERENCE ONLY.	ELECTRO-MECHANICAL ACTUATOR			SIZE	SYSTEM	DWG NO.
	PROPRIETARY ITEM	PER ASME Y14.5M-1994			A4	NX	J-AC-EM-10-1
	EXCEPT FOR USES EXPRESSLY GRANTED IN WRITING, INFORMATION DISCLOSED HEREON IS CONFIDENTIAL AND ALL RIGHTS, PATENT AND OTHERWISE, ARE RESERVED BY SOUTHCO, INC.	DRAWN BY	DATE	SCALE	SHEET		
		DJG/KAM	16AUG2018	1:1	2 OF 3		

REVISION HISTORY			
REV	DATE	BY	DESCRIPTION
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ELECTRICAL HOOKUP (EXTEND AND RELEASE)

TABLE 1 - ELECTRICAL SPECIFICATIONS

PARAMETER	UNITS	EXTEND AND RELEASE	
		AC-EM-100-50CM	AC-EM-100-10CM
OPERATING VOLTAGE	VDC	5 +/- 10%	9-15
PEAK STALL CURRENT	A	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%	9-15
CONTROL SIGNAL OR COMMAND CURRENT REQUIRED	A	0.52 AT 5VDC	0.6 AT 12VDC
CONTROL PULSE OR COMMAND DURATION	ms	1000	475
TYPICAL ACTUATOR TRANSIT TIME	ms	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

CPB NUMBER 2016-0827	THIRD ANGLE PROJECTION	southco CONNECT · CREATE · INNOVATE
	MILLIMETERS [IN]	
SURFACE AREA	TOLERANCES UNLESS OTHERWISE NOTED	DESCRIPTION ELECTRONIC ACCESS SOLUTION
VOLUME	UP TO 0.5 ±0.05 OVER 0.5 UP TO 6 ±0.1 OVER 6 UP TO 30 ±0.2 OVER 30 ±0.3	SIZE SYSTEM A2 NX
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>	ANGLES ±1°	DWG NO. J-AC-EM-10-1
	PER ASME Y14.5M-1994	DRAWN BY DJG
		DATE 14JAN2020
		SCALE 1:1
		SHEET 3 OF 3