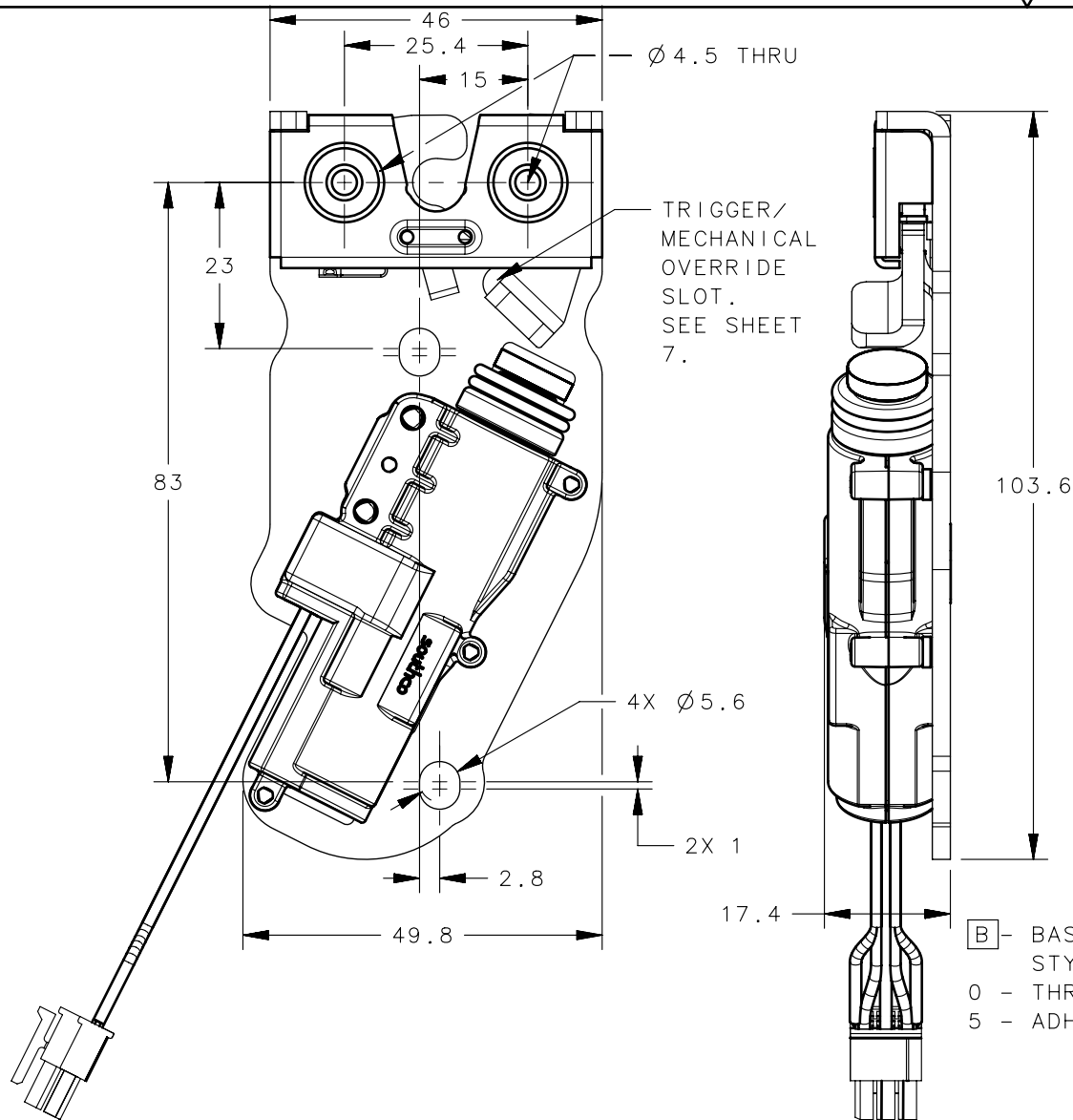
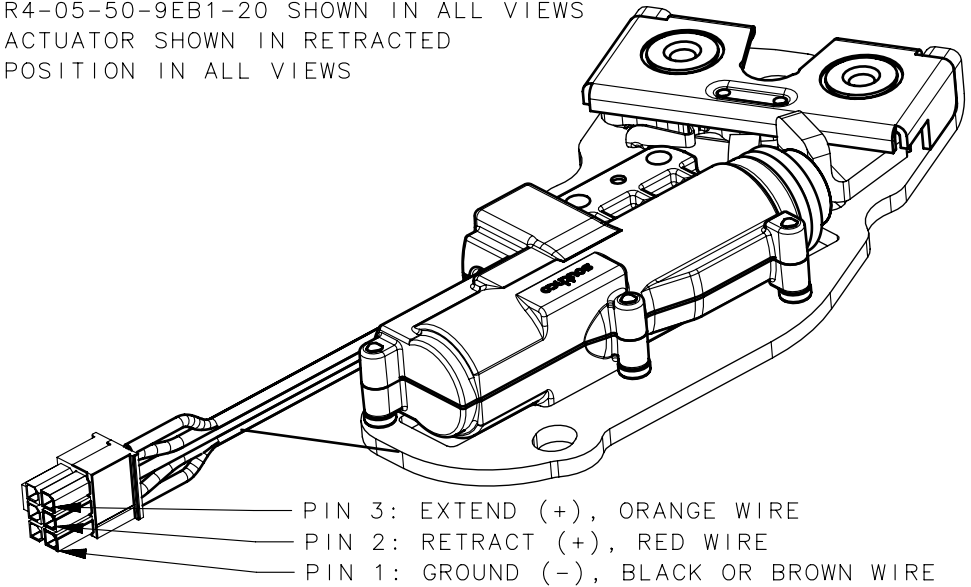


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R4-05-50-9EB1-20 SHOWN IN ALL VIEWS
ACTUATOR SHOWN IN RETRACTED
POSITION IN ALL VIEWS



PIN 3: EXTEND (+), ORANGE WIRE
PIN 2: RETRACT (+), RED WIRE
PIN 1: GROUND (-), BLACK OR BROWN WIRE

ASSEMBLY PART NUMBERS

R4-05-5 **B** -9**E** **C** 1-**MM** (SINGLE STAGE,
DIRECT ACTUATION, PULL TO OPEN)

B - BASE MOUNTING STYLE	C - CONNECTOR OPTIONS	MM - MATERIAL/FINISH
0 - THRU HOLES	B - 12V WITH CONNECTOR	10 - STEEL
5 - ADHESIVE BACKING	F - 5V WITH CONNECTOR	15 - STEEL, BLACK
	K - 12V NO CONNECTOR	20 - STAINLESS
	P - 5V NO CONNECTOR	77 - STEEL, ZINC NICKEL

CPB NUMBER 2020-0061	THIRD ANGLE PROJECTION	southco [®] CONNECT • CREATE • INNOVATE	
	MILLIMETERS [IN]		
SURFACE AREA	TOLERANCES UNLESS OTHERWISE NOTED	DESCRIPTION R4-05 ELECTROMECHANICAL LATCH, EXTEND AND HOLD, PULL TO OPEN	
VOLUME	ALL DIMENSIONS WITHOUT TOLERANCES ARE FOR REFERENCE ONLY.	SIZE A4	SYSTEM 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-R4-05-5B-9EC1	
		DRAWN BY IR	DATE 30APR2020
		SCALE NONE	SHEET 1 OF 7

NOTES:

- ALL MATERIALS AND FINISHES ARE RoHS COMPLIANT.
 HOUSINGS: IF MM IS 20, STAINLESS STEEL, PASSIVATED.
 IF MM IS 10 OR 15, STEEL, ZINC PLATED.
 PAWL AND TRIGGER: STAINLESS STEEL, PASSIVATED
 SPRINGS: STAINLESS STEEL, PASSIVATED
 SCREWS: MATCHES HOUSING MATERIAL AND FINISH
- SEE J-A5-95-101 AND J-A5-95-102 FOR THE OPTIONAL FLAT AND ROUND ROD STRIKER ASSEMBLIES.
- COSMETIC SPECIFICATION:
 ALL SURFACES, UNLESS OTHERWISE NOTED, ARE TO CONFORM TO A CLASS "D" DESIGNATION AS DESCRIBED IN SOUTHCO COSMETIC SPECIFICATIONS: S-121-02 FOR ZINC PLATING, S-121-04 FOR PLASTIC PARTS, AND S-121-05 FOR STAINLESS STEEL PARTS
- LATCH CAN BE INSTALLED USING THE TWO Ø5.6 ID SLOTS. FOR THE 'B'=5 ASSEMBLY PART NUMBERS (ADHESIVE TAPE MOUNTING OPTION), PLEASE CLEAN AND DEGREASE THE MOUNTING SURFACE THOROUGHLY WITH A 50/50 MIX OF WATER AND ISOPROPYL ALCOHOL BEFORE INSTALLING BLOCKER ASSEMBLY. FULL ADHESION BOND STRENGTH IS ACHIEVED AFTER 72 HOURS. SEE 3M DOCUMENT VHB-TAPE-SPECIALTY-TAPES.PDF FOR ADDITIONAL INFORMATION.
- 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.
 - TRIGGER COMMAND: ACTUATOR WILL FULLY EXTEND WHEN POWER IS HELD ON THE ORANGE WIRE. IT WILL HOLD IN THE EXTENDED POSITION UNTIL POWER IS MOVED TO THE RED WIRE. RETRACTION WILL START WHEN POWER IS HELD ON THE RED WIRE. RETRACTION WILL STOP WHEN THE INTERNAL SWITCH IS TRIPPED ONCE FULLY RETRACTED.
 - IF THE CONTROL SIGNAL PULSE IS LESS THAN THE MINIMUM PULSE TIME THE ACTUATOR WILL NOT START ITS CYCLE.
 - THE ACTUATOR WILL EXTEND AND PUSH A MECHANICAL LOAD (SEE THE TRIGGER COMMAND ABOVE). 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:
 OPERATING TEMPERATURE RANGE: -40°C TO 80°C NON-ICING, NON-CONDENSING ENVIRONMENT
 OPERATING HUMIDITY: 85% MAX.
 SEALED TO IP67, CLASS 1, DIV 2.

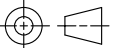

- ELECTRICAL CONNECTIONS AND HOOKUP:
 A BASIC SWITCH CONTROL ELECTRICAL HOOKUP DIAGRAM IS PROVIDED FOR REFERENCE.
 CONSULT WITH A SOUTHCO REPRESENTATIVE FOR ADDITIONAL ELECTRICAL HOOKUP INFORMATION.
 - CONNECT POWER, GROUND AND CONTROL SIGNAL WIRES TO AN APPROPRIATE DC POWER SUPPLY
 - A DC POWER SUPPLY 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: RETRACT(+)
- PIN3: ORANGE WIRE: EXTEND(+)

NO CONNECTOR, STRIPPED & TINNED HARNESS
 LENGTH: 430+5/-0

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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>	THIRD ANGLE PROJECTION 	 CONNECT • CREATE • INNOVATE			
	MILLIMETERS [IN]				
	TOLERANCES UNLESS OTHERWISE NOTED	DESCRIPTION	SIZE	SYSTEM	DWG NO.
	ALL DIMENSIONS WITHOUT TOLERANCES ARE FOR REFERENCE ONLY.	R4-05 ELECTROMECHANICAL LATCH, EXTEND AND HOLD, PULL TO OPEN	A4	NX	J-R4-05-5B-9EC1
PER ASME Y14.5M-1994	DRAWN BY	DATE	SCALE	SHEET	
	IR	30APR2020	NONE	2 OF 7	

REVISION HISTORY			
REV	DATE	BY	DESCRIPTION
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NOTES:

8. OPTIONAL CONNECTOR:

6 PIN CONNECTOR:

- MANUFACTURER: MOLEX, SERIES: MICROFIT 3.0 OR SBU ENGINEERING APPROVED EQUIVALENT.
- CONNECTOR RECEPTICAL 6 POSITION 3mm VERTICAL DUAL, MOLEX P/N: 430250600 OR SBU ENGINEERING APPROVED EQUIVALENT.
- CONTACTS: FEMALE CRIMP TERMINAL (SOCKET) MOLEX P/N: 430300010 OR SBU ENGINEERING APPROVED EQUIVALENT.
- WIRE: 22 AWG STYLE AWM 1569

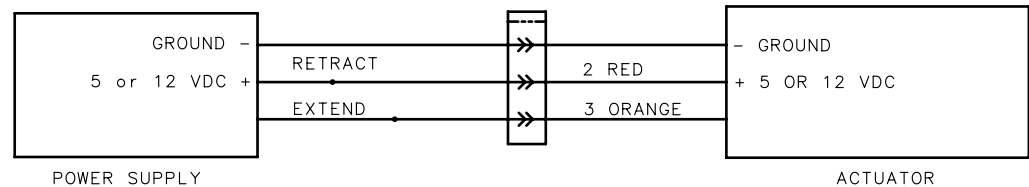
MATE FOR CONNECTOR (NOT SUPPLIED)

- MANUFACTURER: MOLEX, SERIES: MICROFIT 3.0 OR SBU ENGINEERING APPROVED EQUIVALENT.
- CONNECTOR PLUG 6 POSITION 3 mm VERTICAL DUAL, MOLEX P/N: 430200601 OR SBU ENGINEERING APPROVED EQUIVALENT.
- RECOMMENDED CONTACTS: MOLEX, MALE CRIMP TERMINAL (PIN), MOLEX P/N: 430310010 OR SBU ENGINEERING APPROVED EQUIVALENT.
- RECOMMENDED WIRE GAGE: 22 AWG

9. LATCH ASSEMBLY WILL BE SHIPPED WITH ACTUATOR IN THE EXTENDED POSITION.

10. ACTUATOR APPROVED UNDER UL-508.

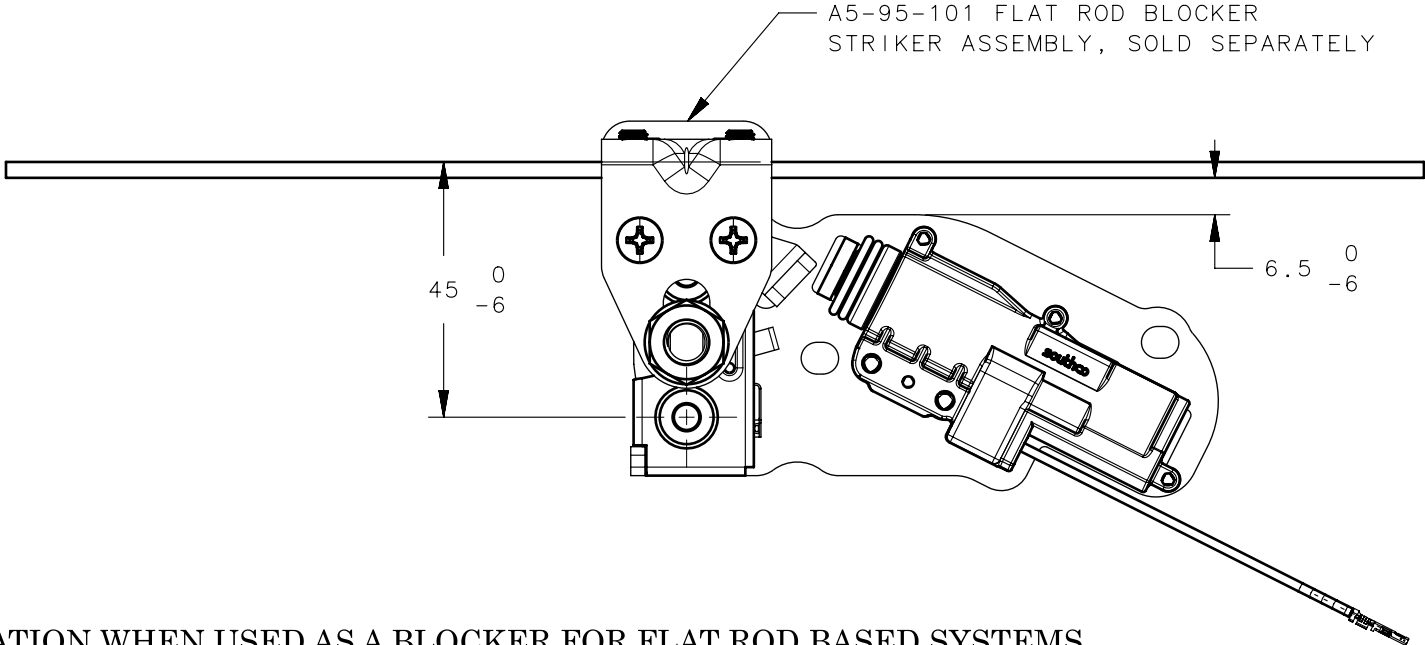
PARAMETER	UNITS	12V	5V
OPERATING VOLTAGE	VDC	12±10%	5±10%
PEAK STALL CURRENT	A	0.6 AT 12VDC	0.52 AT 5VDC
TOTAL STANDBY CURRENT - RETRACTED	A	-	-
TOTAL STANDBY CURRENT - EXTENDED	A	-	-
CONTROL SIGNAL PULSE VOLTAGE REQUIRED FOR TRIGGER COMMAND	V	12±10%	5±10%
CONTROL SIGNAL PULSE CURRENT REQUIRED FOR TRIGGER COMMAND	A	0.6 AT 12VDC	0.52 AT 5VDC
CONTROL PULSE OR COMMAND DURATION	ms	1000	1600
TYPICAL ACTUATOR TRANSIT TIME	ms	700-1000	1350-1600



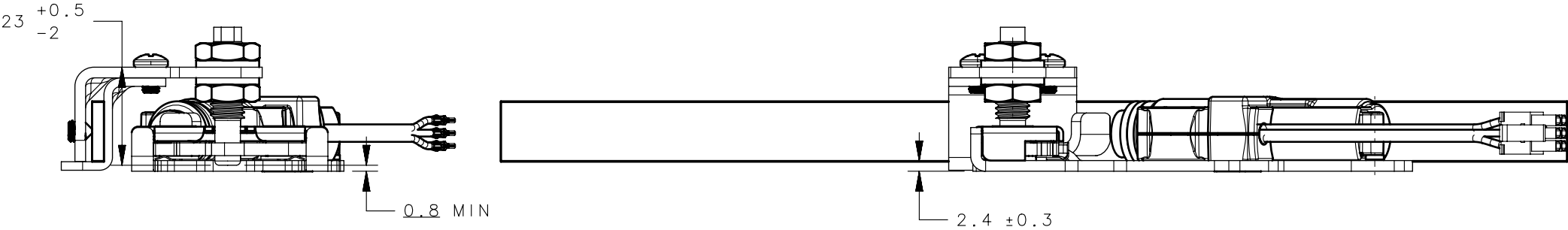
ELECTRICAL HOOKUP (TWO POSITION)


CPB NUMBER 2020-0061	THIRD ANGLE PROJECTION	 CONNECT • CREATE • INNOVATE	
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VOLUME		DWG NO. J-R4-05-5B-9EC1	
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		SCALE NONE	SHEET 3 OF 7

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TYPICAL INSTALLATION WHEN USED AS A BLOCKER FOR FLAT ROD BASED SYSTEMS



CPB NUMBER 2020-0061	THIRD ANGLE PROJECTION				
	MILLIMETERS [IN]				
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A5-95-102 ROUND ROD
BLOCKER STRIKER ASSEMBLY,
SOLD SEPARATELY

LATCH ROTATION
CENTERLINE

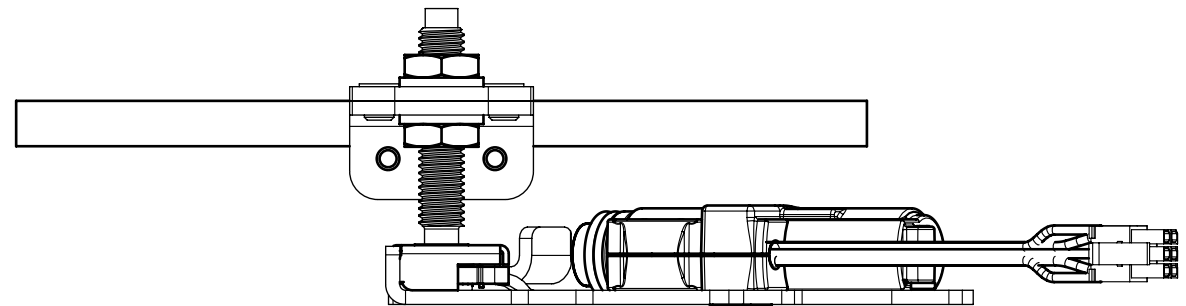
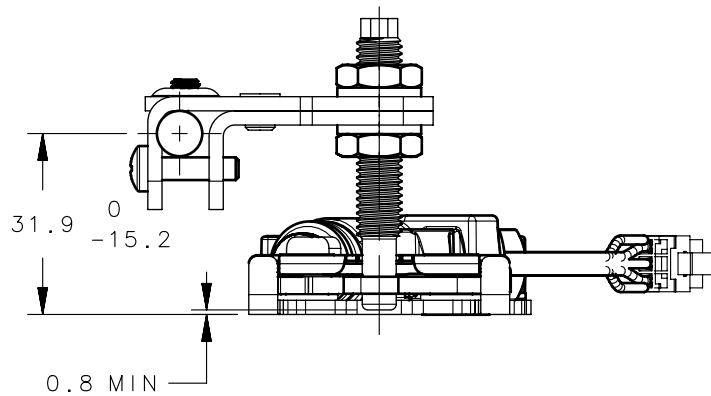
WHEN MOTION OF RODS IS NON LINEAR, E.G.,
WHEN USING AN ACTUATOR PLATE TO MOVE
THE RODS, THE MINIMUM DISTANCE OF THE
STRIKER CENTERLINE TO LATCH ROTATION
CENTERLINE IS SHOWN ABOVE.

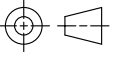
47.9 ⁺⁰
₋₁₉

350 MIN

64 ⁺⁵
₀
SEE SHEET2,
NOTE 7

TYPICAL INSTALLATION WHEN USED AS A BLOCKER FOR ROUND ROD BASED SYSTEMS



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2X 1.5 MAX

Ø 6 STRIKER
(R4-90-0521-20
SOLD SEPARATELY)

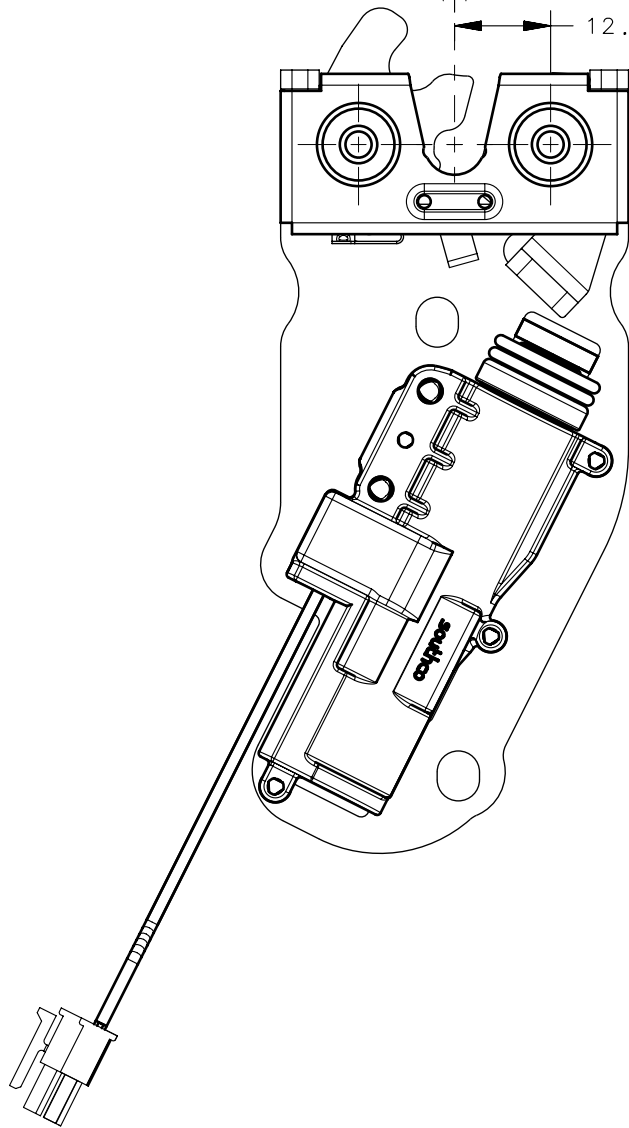
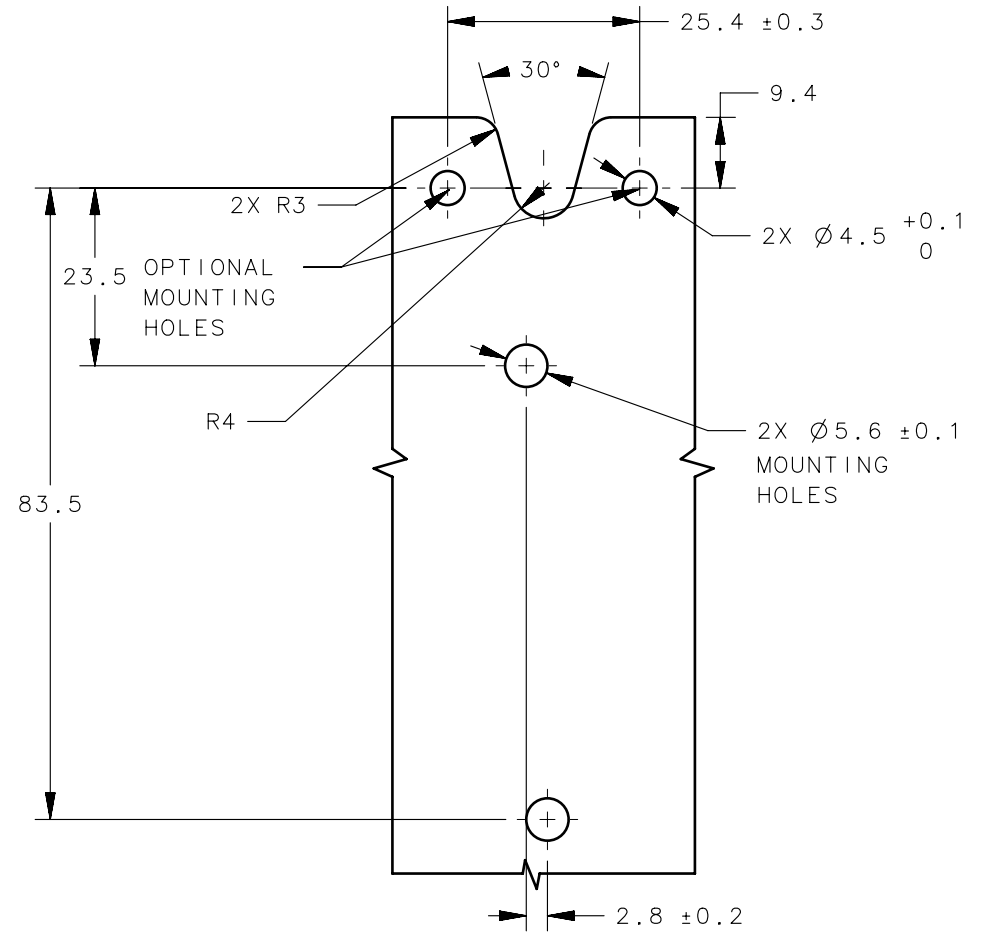
12.7

0.7 MIN

5.5 MAX

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NON ROD BLOCKER PANEL PREPARATION



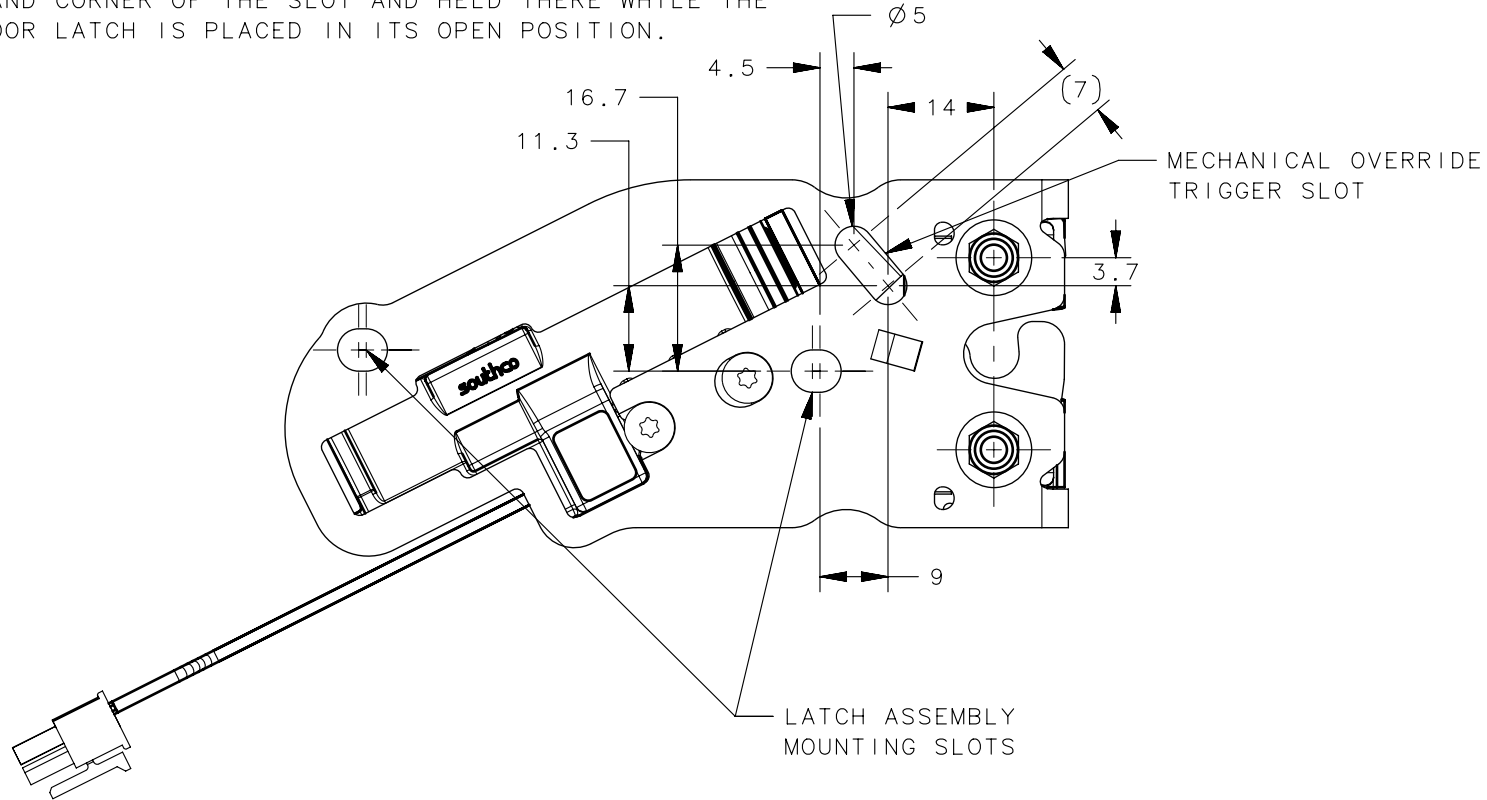
CPB NUMBER 2020-0061	THIRD ANGLE PROJECTION			
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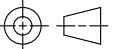

OPTIONAL MECHANICAL OVERRIDE PROCEDURE

IN THE EVENT WHERE MECHANICALLY OVERRIDING THE LATCH OPEN IS NEEDED, A SLOT MUST BE CREATED IN THE DOOR PANEL. THE SLOT WILL ENABLE ACCESS TO THE MECHANICAL OVERRIDE TRIGGER. SEE DIMENSIONAL INFORMATION BELOW.

ONCE THE SLOT IS CREATED, A SMALL SCREW DRIVER CAN BE USED TO MOVE THE TRIGGER TOWARDS THE UPPER LEFT HAND CORNER OF THE SLOT AND HELD THERE WHILE THE DOOR LATCH IS PLACED IN ITS OPEN POSITION.

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		IR/	30APR2020	NONE	7 OF 7		