

**PHYSICAL AND MECHANICAL NOTES:**

A. PRODUCT DESCRIPTION: MAGNETICALLY OPERATED SINGLE-POLE DOUBLE-THROW PROXIMITY SWITCH WITH INTEGRATED LEDS.

B. MATERIAL

- HOUSING: POLYCARBONATE, CLEAR, UL94 V-0 RATED
- BASE PLATE: PC/ABS, BLACK, UL94 V-0 RATED
- PRESSURE SENSITIVE ADHESIVE: ACRYLIC ADHESIVE WITH FOAM CORE
- WIRE: UL 1007, 26AWG (7/32), PVC INSULATION

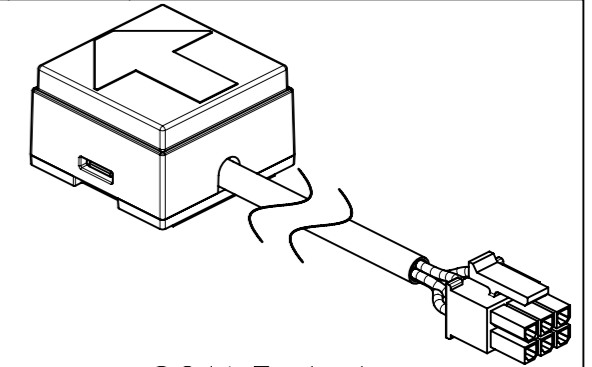
C. CONNECTOR TYPE

- CONNECTOR: DUAL ROW, 6 POSITION, 3mm: MOLEX P/N: 43025-0600 OR APPROVED ALTERNATE
- CONTACT: FEMALE CRIMP TERMINAL (SOCKET) MOLEX P/N: 43030-0004 OR APPROVED ALTERNATE
- MATING CONNECTOR NOT SUPPLIED
- MATING CONNECTOR: MOLEX P/N: 43020-0601
- MATING CONTACT: MOLEX P/N: 46235-0001

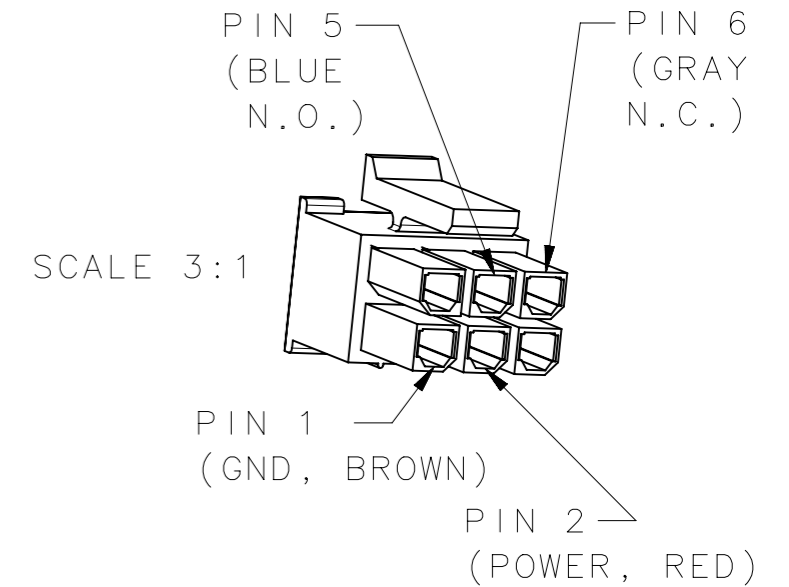
D. ENVIRONMENTAL

- ALL ITEMS COMPLY WITH RoHS DIRECTIVE AND REACH REGULATION
- IP67 RATED (NOT INCLUDING CONNECTOR)

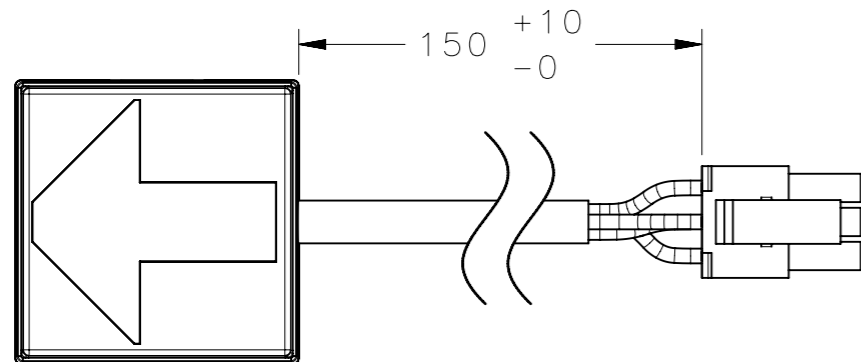
REVISION HISTORY			
REV	DATE	BY	DESCRIPTION
D	04NOV2022	ZAM/MLL	PRN: P2022-1621



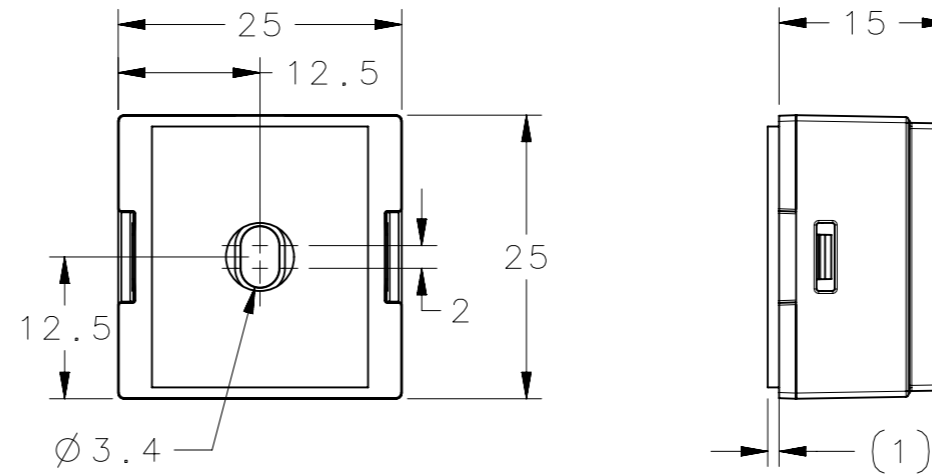
SCALE 1:1



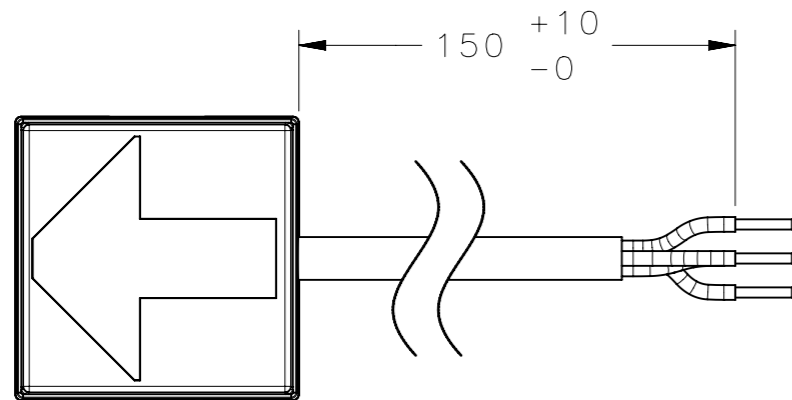
SCALE 3:1



ES-01-0121 SHOWN



(1) PRESSURE SENSITIVE ADHESIVE



ES-01-0100 SHOWN

AVAILABLE PART NUMBERS				
PART NUMBER	CONNECTOR TYPE			
ES-01-0100	STRIPPED AND TINNED			
ES-01-0121	MOLEX MICROFIT 3.0 SERIES 6 PIN			
CPB NUMBER 2019-1118	THIRD ANGLE PROJECTION			
SURFACE AREA	MILLIMETERS [IN]			
VOLUME	TOLERANCES UNLESS OTHERWISE NOTED	DESCRIPTION ELECTRONIC ACCESS SOLUTION UNIVERSAL LATCH SENSOR SINGLE POLE DOUBLE THROW WITH ILLUMINATION		
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.	ALL DIMENSIONS WITHOUT TOLERANCES ARE FOR REFERENCE ONLY.	SIZE A3	SYSTEM NX	DWG NO. J-ES-01-1
	PER ASME Y14.5M-1994	DRAWN BY ZAM	DATE 20APR2021	SCALE 1.5:1
				SHEET 1 OF 4

**ELECTRICAL NOTES AND SPECIFICATIONS:**

**CAUTION:** SWITCH HAS NO INHERENT PROTECTION. SUFFICIENT CIRCUIT PROTECTION MUST BE PROVIDED TO PREVENT DAMAGE TO PRODUCT.

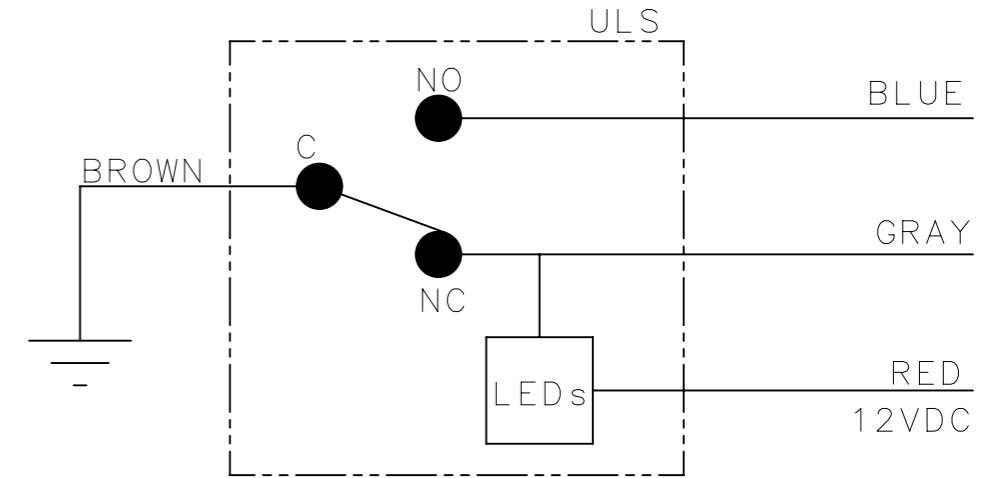
**CAUTION:** LOAD OR CIRCUIT PROTECTION REQUIRED ON NORMALLY OPEN AND NORMALLY CLOSED LEGS OR UNIT WILL SHORT TO GROUND

**CAUTION:** UNIT HAS NO REVERSE POLARITY PROTECTION, ENSURE CORRECT POLARITY.

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PARAMETER	UNITS	MIN	NOM	MAX
SWITCHED VOLTAGE	VDC	9.6	12	14.4
SWITCHED CURRENT	A	-	-	0.400
LED CURRENT DRAW @ 12VDC		0.010	0.015	0.020

PIN NUMBER	WIRE COLOR	FUNCTION
1	BROWN	GROUND (-)
2	RED	POWER (+)
3	-	-
4	-	-
5	BLUE	NORMALLY OPEN
6	GRAY	NORMALLY CLOSED



	GRAY (NC) TO GND	BLUE (NO) TO GND	LATCH POSITION	INTEGRATED LED STATUS
MAGNET IN RANGE*	OPEN CIRCUIT	CLOSED CIRCUIT	LATCHED	OFF
MAGNET OUT OF RANGE*	CLOSED CIRCUIT	OPEN CIRCUIT	UNLATCHED	ON

\* - SEE NOTE BELOW

PARAMETER	UNITS	MIN	NOM	MAX
OPERATING TEMPERATURE	C	-40	-	80

**NOTE:**

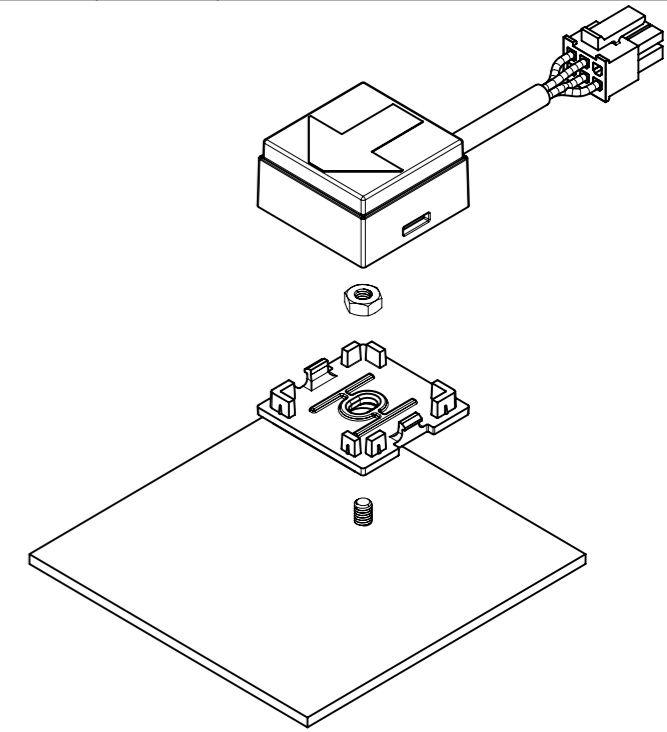
- MAGNET IN RANGE REFERS TO THE MAGNET BEING WITHIN THE ACTIVATION RANGE OF THE SWITCH.
- MAGNET OUT OF RANGE REFERS TO THE MAGNET BEING OUTSIDE OF THE ACTIVATION RANGE OF THE SWITCH.
- ALL DATA COLLECTED AT AMBIENT TEMPERATURES UNLESS OTHERWISE NOTED.
- ACTIVATION RANGE SHOWN REPRESENTS INSTALLATION ON STEEL SURFACE.

CPB NUMBER 2019-1118	THIRD ANGLE PROJECTION	<b>southco</b> <sup>®</sup> CONNECT • CREATE • INNOVATE
	MILLIMETERS [IN]	
SURFACE AREA	TOLERANCES UNLESS OTHERWISE NOTED	DESCRIPTION ELECTRONIC ACCESS SOLUTION UNIVERSAL LATCH SENSOR SINGLE POLE DOUBLE THROW WITH ILLUMINATION
VOLUME	ALL DIMENSIONS WITHOUT TOLERANCES ARE FOR REFERENCE ONLY.	
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		DRAWN BY ZAM DATE 20APR2021 SCALE 1:1 SHEET 2 OF 4

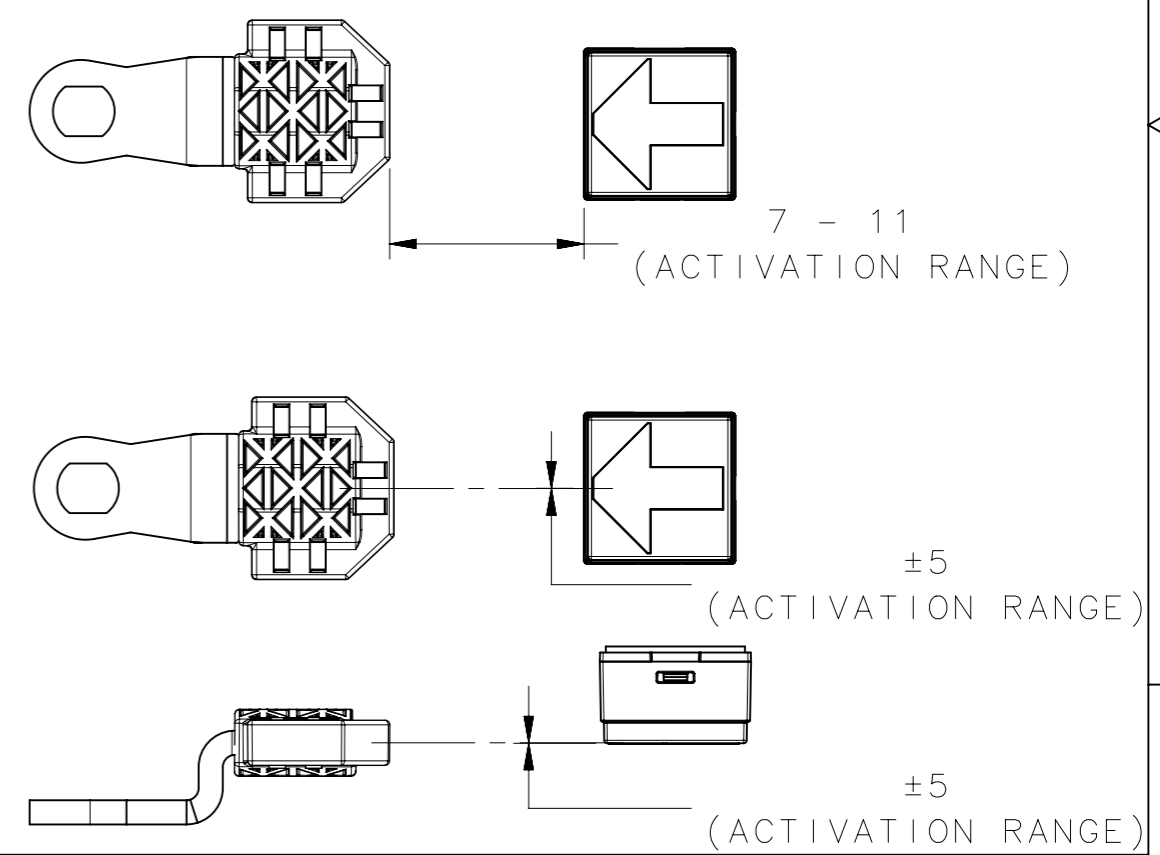
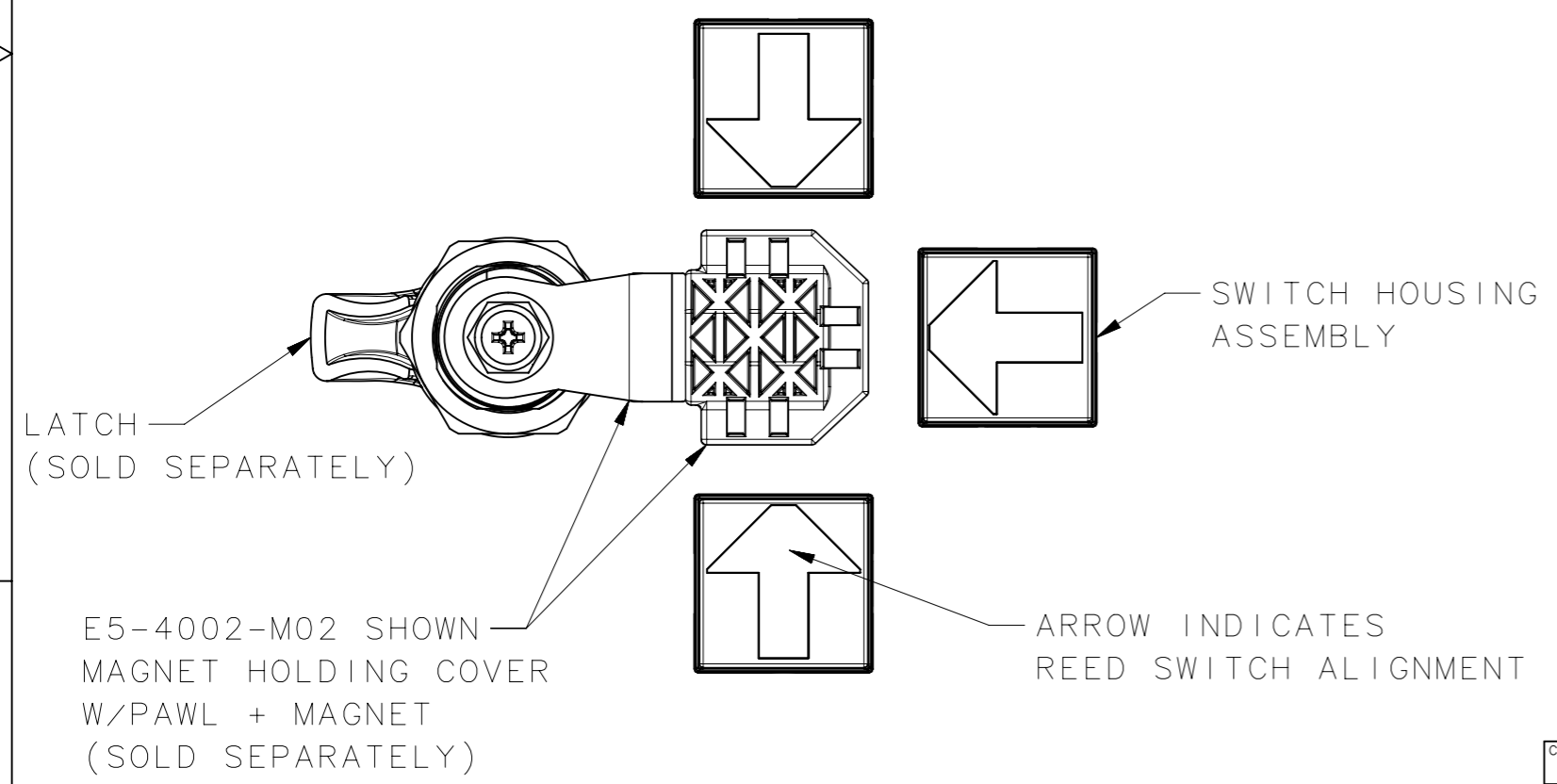
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**ASSEMBLY NOTES AND INSTRUCTIONS:**

- E. PERFORMANCE MAY VARY WITH APPLICATION CONDITIONS.
- F. INSTALLATION IN PROXIMITY TO EXTERNAL MAGNETIC FIELDS OR MATERIALS WITH DIFFERING MAGNETIC PERMEABILITY WILL AFFECT PERFORMANCE AND ACTUATION RANGE.
- G. PRESSURE SENSITIVE ADHESIVE IS PRE-INSTALLED FOR MOUNTING.
- H. THE MOUNTING SLOT CAN BE USED WITH AN M3 OR #4-40 SCREW OR STUD.  
A TRUSS, ROUND, OR PAN HEAD SCREW IS PREFERRED. AN M3 OR #4-40 THIN NUT CAN BE USED TO SECURE SCREW/STUD TO MOUNTING PLATE. MOUNTING SCREW, STUD, AND NUT ARE NOT INCLUDED. MAXIMUM ALLOWABLE INSTALL TORQUE, 22.5N-cm [2 in-lbs].
- I. ENSURE MOUNTING SURFACE IS CLEAN BEFORE SECURING TAPE.
- J. ENSURE SENSOR IS PROPERLY POSITIONED AND ALIGNED WITH MAGNET BEFORE SECURING TAPE.  
ARROW ON UNIT HOUSING POINTS TO LOCATION OF INTERNAL REED SWITCH.
- K. REMOVE BACKING FROM TAPE TO EXPOSE ADHESIVE SURFACE.  
LOCATE AND ATTACH BACK PLATE IN DESIRED LOCATION.
- L. PRESS BACK PLATE AND TAPE INTO POSITION TO ACTIVATE ADHESIVE.
- M. OPTIONALLY SECURE IN PLACE WITH SCREW OR NUT.
- N. ALIGN TOP HOUSING WITH BACK PLATE AND PUSH ON UNTIL FULLY SEATED.



**POSSIBLE INSTALLATION ORIENTATIONS**



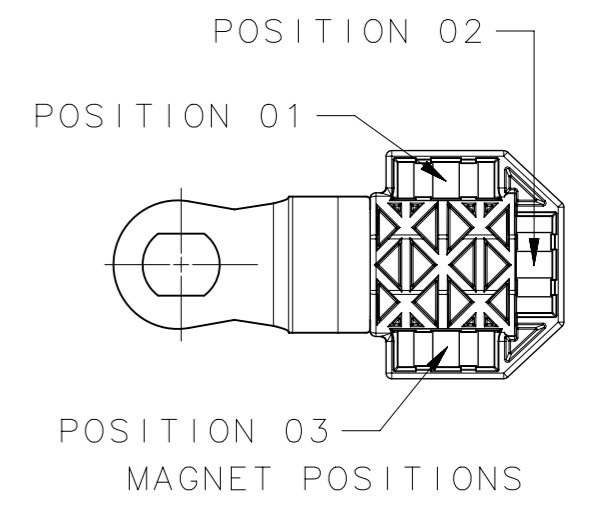
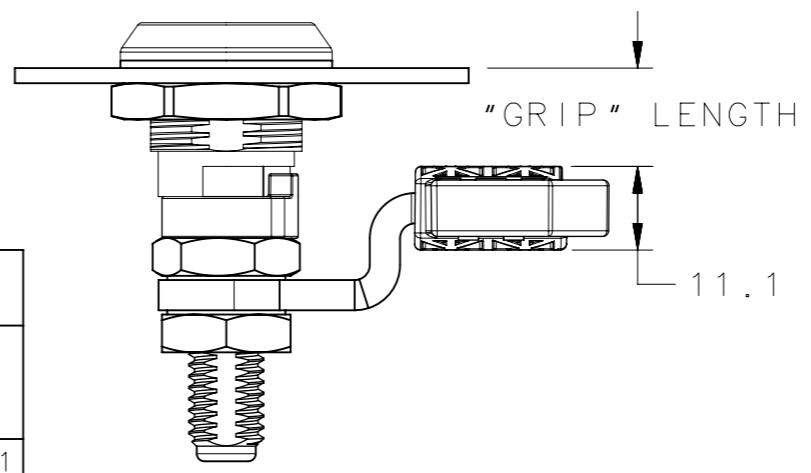
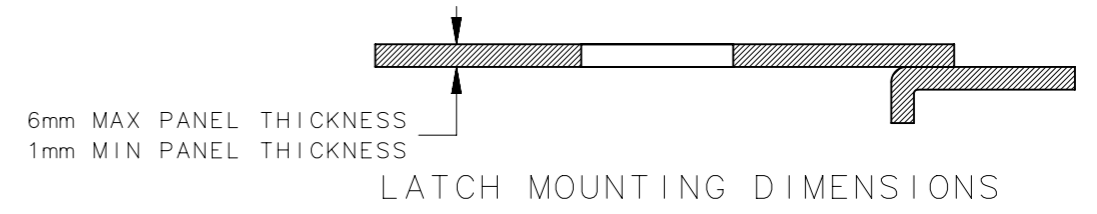
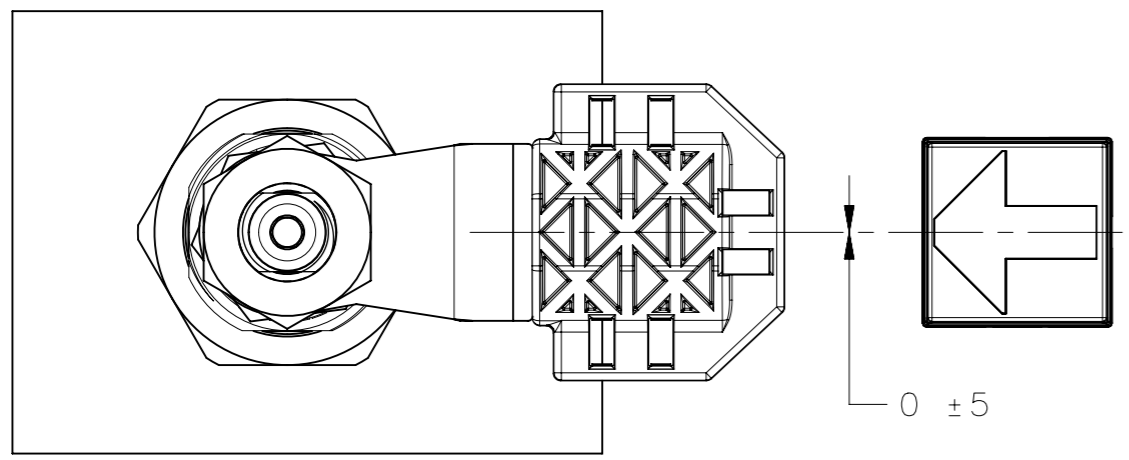
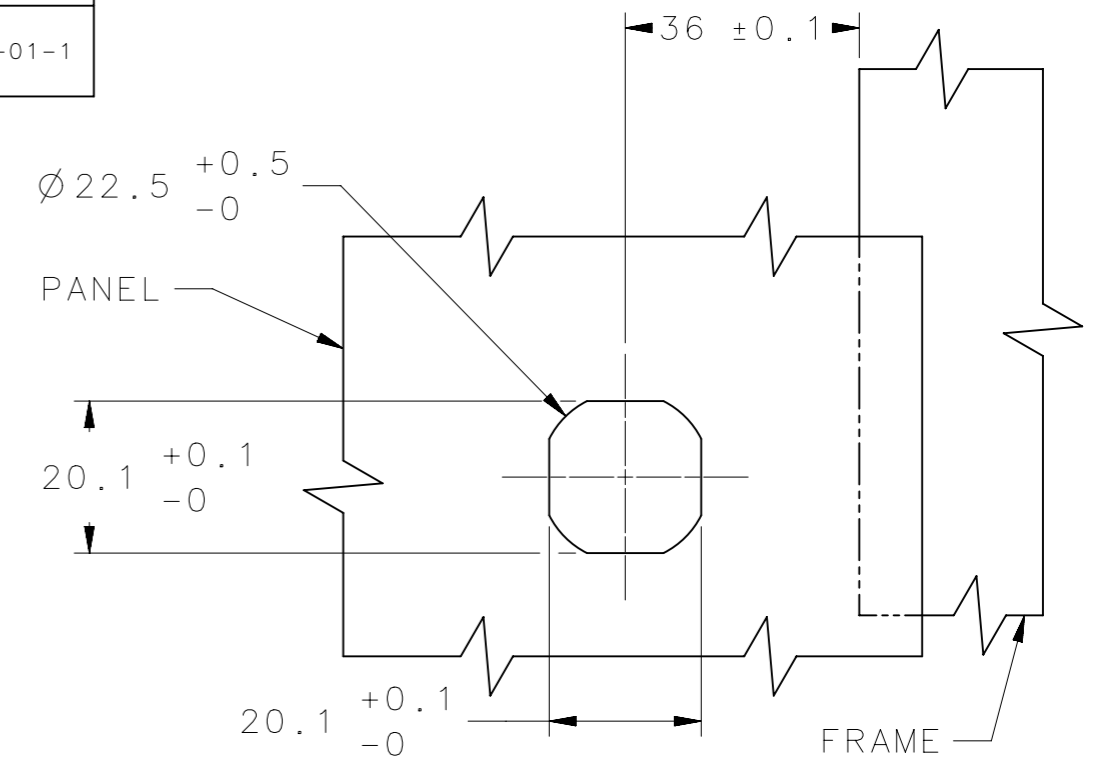
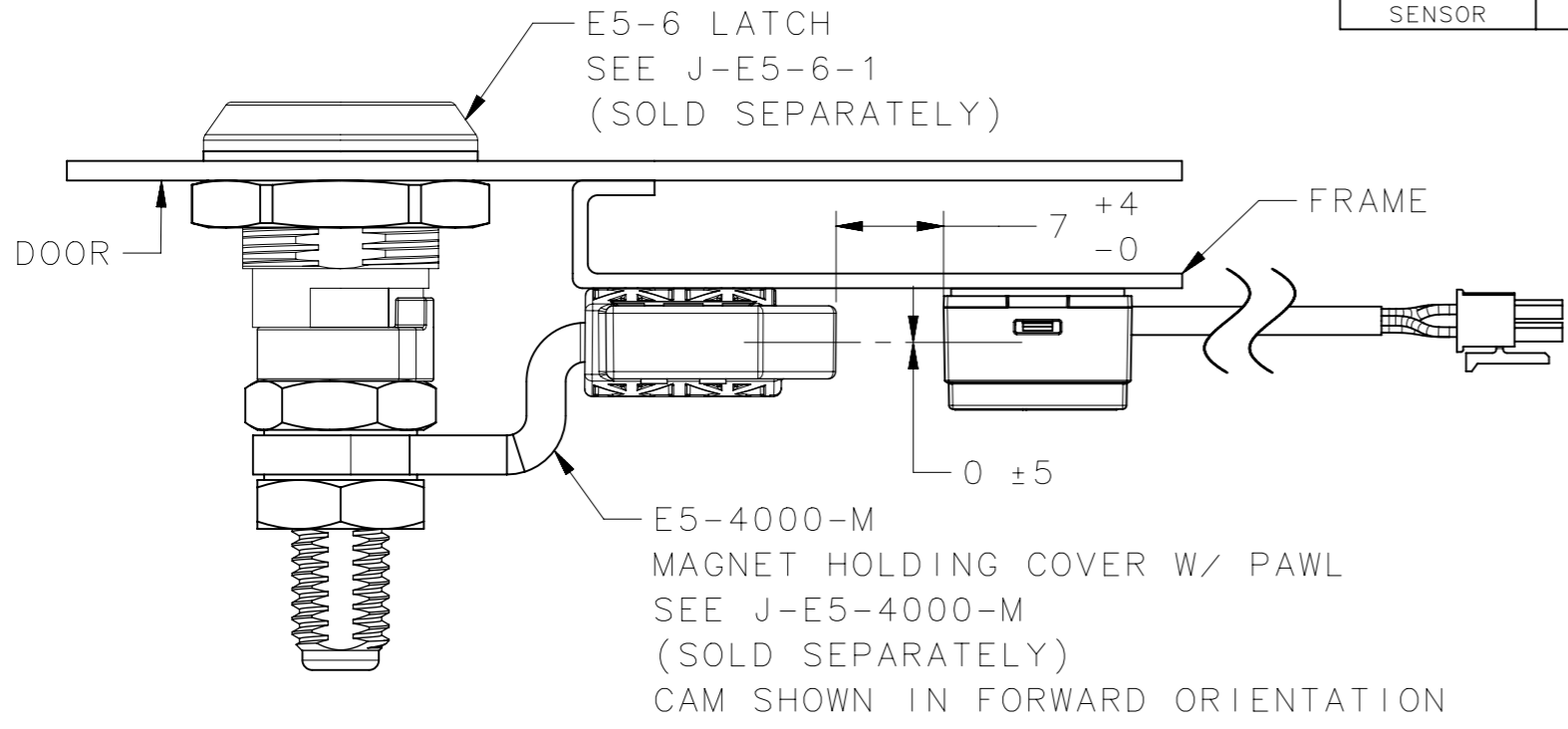
NOTE: MAGNET SPECIFICATIONS  
 - GRADE: N42  
 - SIZE: 12.7 X 4.76 X 4.76mm

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	MILLIMETERS [IN]			
SURFACE AREA	TOLERANCES UNLESS OTHERWISE NOTED	DESCRIPTION ELECTRONIC ACCESS SOLUTION		
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		DRAWN BY ZAM	DATE 20APR2021	SCALE NONE
				SHEET 3 OF 4

NOTES:  
 O. SEE ADDITIONAL DRAWINGS FOR FURTHER INFORMATION.  
 - LATCH: J-E5-6-1  
 - MAGNET CAM: J-E5-4000-M

PARTS REQUIRED		
PART	PART NUMBER	REFERENCE DRAWING
LATCH	E5-6-HF-01	J-E5-6-1
CAM	E5-4000-M	J-E5-4000-M
UNIVERSAL LATCH SENSOR	ES-01-01XX	J-ES-01-1

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CAM FOR USE WITH ES UNIVERSAL LATCH SENSOR - PART NUMBER TABLE (ORDER SEPARATELY FROM LATCH)

MINIMUM GRIP +2(0.08)/-0	MAXIMUM GRIP +2(0.08)/-0	OFFSET	CAM TYPE	MAGNET POSITION	PART NUMBER
3.5 (0.14)	15 (0.59)	DEEP OFFSET CAM	FORWARD	POSITION 1	E5-4001-M01
49.5 (1.95)	61 (2.40)		REVERSED	POSITION 2	E5-4001-M02
15 (0.59)	26.5 (1.04)		FORWARD	POSITION 3	E5-4001-M03
38 (1.50)	49.5 (1.95)	OFFSET CAM	FORWARD	POSITION 1	E5-4002-M01
26.5 (1.04)	38 (1.50)		REVERSED	POSITION 2	E5-4002-M02
			REVERSED	POSITION 3	E5-4002-M03
26.5 (1.04)	38 (1.50)	STRAIGHT CAM	-	POSITION 1	E5-4003-M01
				POSITION 2	E5-4003-M02
				POSITION 3	E5-4003-M03

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PER ASME Y14.5M-1994	DRAWN BY ZAM	DATE 06OCT2021	DWG NO. J-ES-01-1
		SCALE NONE	SHEET 4 OF 4