

NOTES:

**A. SPECIFICATIONS:**

- OPERATING VOLTAGE: 5±0.5 VDC
- OPERATING CURRENT: NO LOAD MAX CURRENT: 200mA, STALL MAX CURRENT: 650mA.
- CAUTION!** NO STALL PROTECTION OR VOLTAGE REGULATION IS PROVIDED IN THE LATCH.
- OPERATING TEMPERATURE RANGE: 0C TO 60C NON-ICING, NON-CONDENSING ENVIRONMENT
- OPERATING HUMIDITY: 85% MAX.

**WARNING!** NOT INTENDED FOR DIRECT EXPOSURE TO OUTDOOR ELEMENTS.

**B. ELECTRICAL CONNECTIONS AND HOOKUP:**

- A BASIC SWITCH CONTROL ELECTRICAL HOOKUP DIAGRAM IS PROVIDED FOR REFERENCE.
- CAUTION!** LATCH CAN BE DAMAGED IF WIRED INCORRECTLY, OR IF IMPROPER VOLTAGE IS APPLIED!

LATCH CONNECTOR PIN ASSIGNMENT:  
 PIN1: GROUND  
 PIN2: (LOCK) +5VDC  
 PIN3: (UNLOCKED) +5VDC  
 PIN4: DETECTION CIRCUIT COMMON  
 PIN5: LATCH BOLT STATUS  
 PIN6: DOOR STATUS, REED SWITCH

- CABLE HARNESS: 24 AWG WIRES. WIRES TWISTED, NOT JACKETED.

**C. ELECTRICAL OPERATION:**

- TO OPERATE LATCH IN 2 POSITION MODE, APPLY VOLTAGE TO PIN 2 OR 3 FOR A MINIMUM OF 600ms WITH PIN 1 CONNECTED TO GROUND TO ALLOW LATCH BOLT TO FULLY EXTEND OR RETRACT. SEE TABLE 2 FOR ELECTRICAL HOOKUP.
- TO OPERATE THE LATCH IN AUTO RE-LOCK MODE, APPLY A START PULSE ON PIN3 FOR AT LEAST 600ms WITH PIN 1 CONNECTED TO GROUND AND PIN 2 CONNECTED TO 5V.
- REFER TO TABLE 3 FOR THE ELECTRICAL HOOKUP

**NOTE:** IF POWER FAILS OR IS REMOVED DURING TRANSIT, THE LATCH MAY BE LEFT IN AN INDETERMINATE STATE

**D. POSITION FEEDBACK SWITCHES:**

- REFER TO TABLE 1 FOR LATCH BOLT AND DOOR STATUS FEEDBACK.
- WARNING!** SWITCH CIRCUIT IS NOT FUSED OR ELECTRICALLY PROTECTED.
- REFER TO TABLE 3 FOR SWITCH FEEDBACK.

**E. LATCH CONNECTOR**

- EXAMPLE OF MATING CONNECTOR: MOLEX P/N: 43020-0601 (NOT SUPPLIED)
- CONNECTOR: RECEPTACLE HOUSING, DUAL ROW, 6 POSITION 3MM : MOLEX P/N 43025-0600
- CONTACTS: FEMALE CRIMP TERMINAL (SOCKET) MOLEX P/N 43030-0007

**F. MECHANICAL OPERATION**

- THE MAXIMUM TRAVEL OF THE LATCH BOLT IS SHOWN ON SHEET 2.
- MAX STATIC LATCH BOLT LOAD (NO DAMAGE TO LATCH): 500 N.
- ULTIMATE LATCH BOLT LOAD (LATCH FAILURE AND RELEASE): 600 N.
- ULTIMATE LATCH BOLT STALL LOAD: 60 N.

**G. MOUNTING:** - ALL MOUNTING SCREWS SOLD SEPARATELY

- MOUNT THE LATCH PERPENDICULAR TO LATCH BOLT MOTION USING TWO M4 BOLTS IN THRU HOLES OR,
- MOUNT THE LATCH PARALLEL TO LATCH BOLT MOTION USING TWO PLAS-TECH 30 M3 FLAT HEAD SCREWS OR,
- LATCH CAN ALSO BE MOUNTED USING SNAP RIB FEATURE. PLEASE CONTACT SOUTHCO FOR DETAILS.

**H. MATERIAL AND FINISH:**

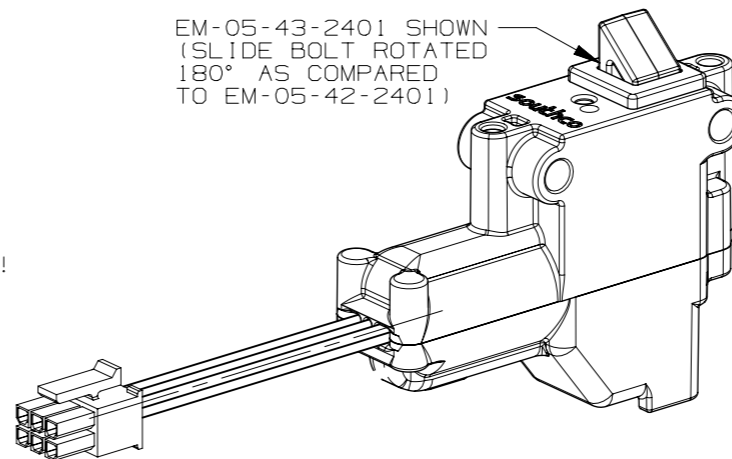
- HOUSINGS - UL94-V0 PA66, BLACK
- DRIVE CAM - POM, BLACK
- LATCH BOLT - POM, BLACK
- SCREWS, LATCH BOLT SPRING - STEEL, ZINC PLATED

**I. -SEE SHEET 2, SECTION A-A FOR OPERATION OF REED SWITCH AND SENSOR LOCATION IN LATCH.**

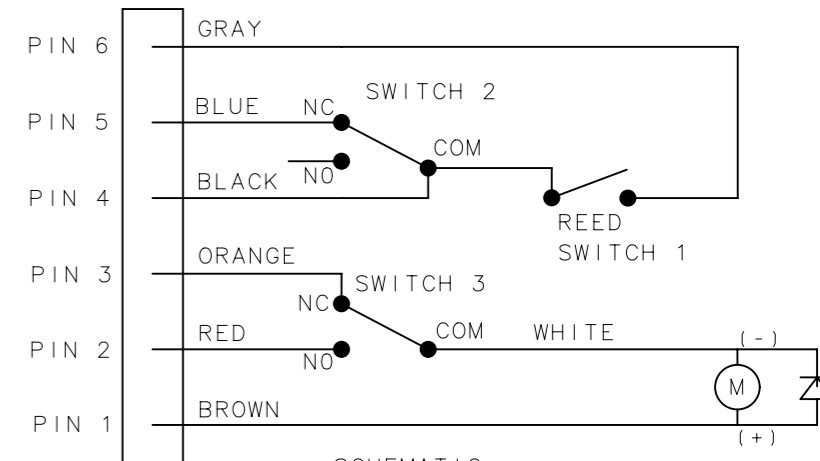
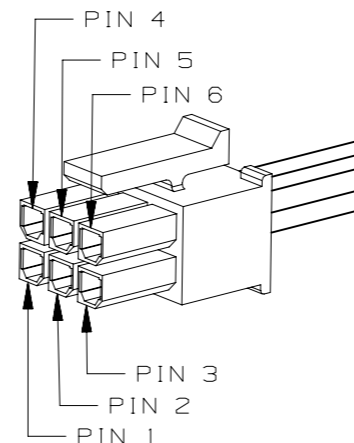
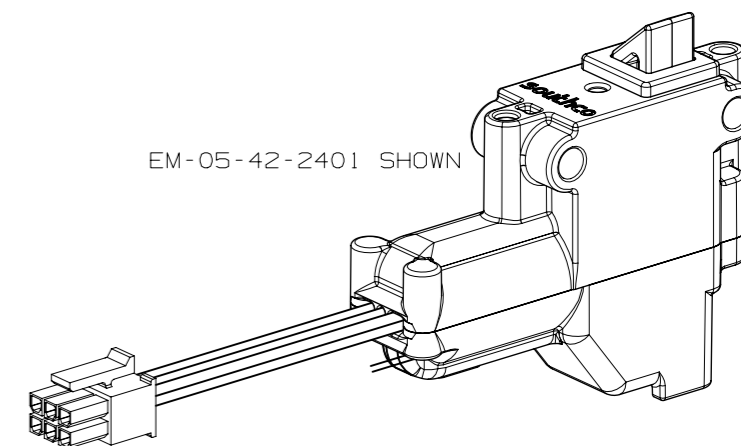
**J. -PACKAGED IN VACUUM FORMED TRAYS, THEN LAYER PACKED IN BOXES.**

**K. -PACKAGE IN INDIVIDUAL POLY BAGS. PRINT WHEELED BIN MARK ON EACH BAG. USE BULK PACKAGING FOR ASSEMBLIES ORDERED WITH A -1 SUFFIX. EXAMPLE: EM-05-42-2401 INDIVIDUAL PACKAGING EM-05-42-2401-1 BULK PACKAGING**

EM-05-43-2401 SHOWN (SLIDE BOLT ROTATED 180° AS COMPARED TO EM-05-42-2401)



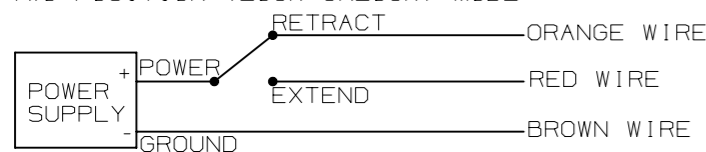
EM-05-42-2401 SHOWN



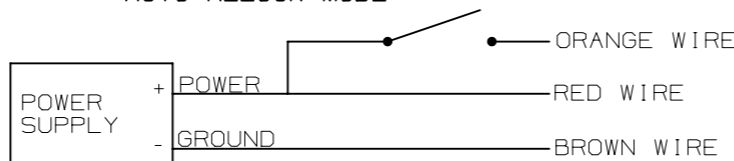
SCHEMATIC SHOWN WITH DOOR OPEN, LATCH BOLT EXTENDED

REVISION HISTORY			
REV	DATE	BY	DESCRIPTION
G	23DEC2022	CRM/DMS	PRN: P2022-2220

**TWO POSITION (LOCK-UNLOCK) MODE**



**AUTO-RELOCK MODE**



	DOOR CLOSED, LATCH BOLT EXTENDED	DOOR CLOSED, LATCH BOLT RETRACTED	DOOR OPEN, LATCH BOLT EXTENDED	DOOR OPEN, LATCH BOLT RETRACTED
PIN 4 & 5 (LATCH)	CLOSED CIRCUIT	OPEN CIRCUIT	CLOSED CIRCUIT	OPEN CIRCUIT
PIN 4 & 6 (DOOR)	CLOSED CIRCUIT	CLOSED CIRCUIT	OPEN CIRCUIT	OPEN CIRCUIT
PIN 5 & 6 (LATCH + DOOR)	CLOSED CIRCUIT	OPEN CIRCUIT	OPEN CIRCUIT	OPEN CIRCUIT
STATUS	SECURED	UNSECURED	UNSECURED	UNSECURED

TABLE 2

	EXTEND LATCH BOLT (LOCK)	RETRACT LATCH BOLT (UNLOCK)
PIN 1: BROWN	GND	GND
PIN 2: RED	5VDC	OPEN
PIN 3: ORANGE	OPEN	5VDC

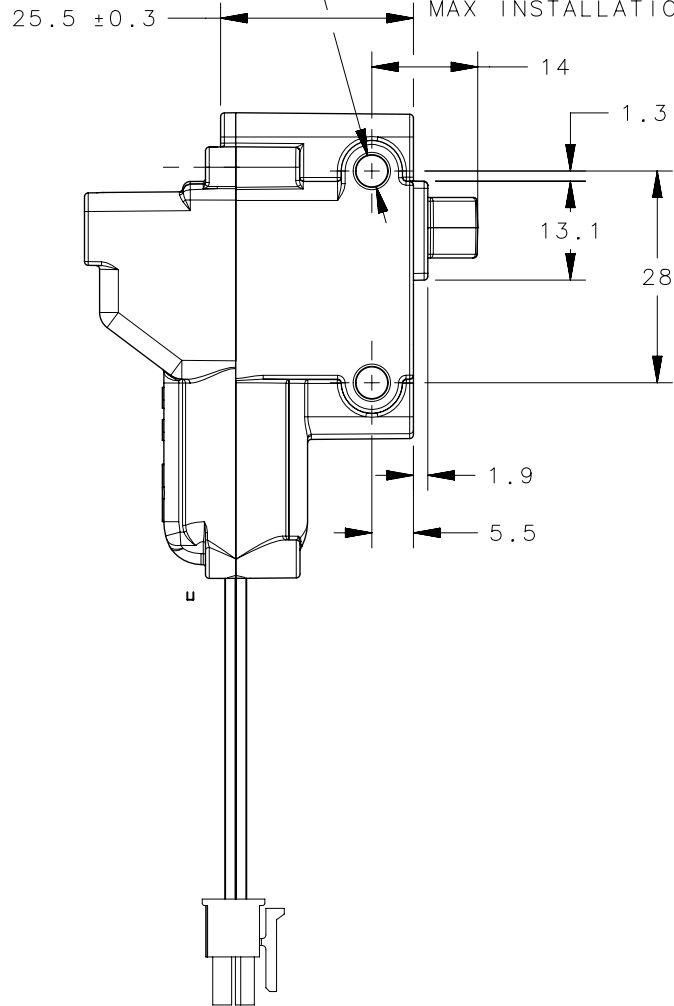
TABLE 3

	EXTEND LATCH BOLT (LOCK)	RETRACT LATCH BOLT (UNLOCK)
PIN 1: BROWN	GND	GND
PIN 2: RED	5VDC	5VDC
PIN 3: ORANGE	OPEN	5VDC

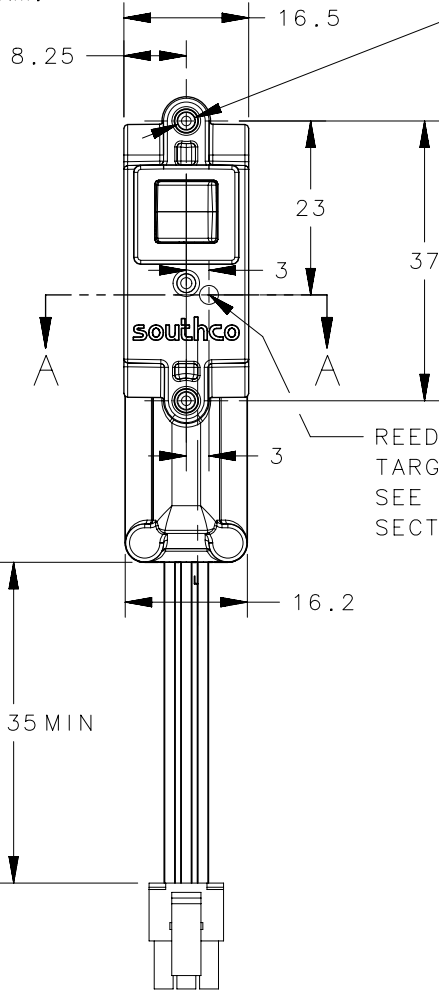
EM-05-42-2401	LATCH BOLT, OFF CENTER BOLT, 5V, NO OVERRIDE		
PART NUMBER	TYPE OF COMPONENT		
CPB NUMBER	THIRD ANGLE PROJECTION		
2016-1062	MILLIMETERS [IN]		
SURFACE AREA	TOLERANCES UNLESS OTHERWISE NOTED	DESCRIPTION	
mm <sup>2</sup>	ALL DIMENSIONS WITHOUT TOLERANCES ARE FOR REFERENCE ONLY	EM-05 4 SERIES ELECTRONIC SLIDE BOLT	
VOLUME		SIZE	SYSTEM
mm <sup>3</sup>	A3	NX	DWG NO.
PROPRIETARY ITEM	PER ASME Y14.5M-1994	DRAWN BY	J-EM-05-42-2401
EXCEPT FOR USES EXPRESSLY GRANTED IN WRITING, INFORMATION DISCLOSED HEREON IS CONFIDENTIAL AND ALL RIGHTS, PATENT AND OTHERWISE, ARE RESERVED BY SOUTHCO, INC.		DATE	08AUG2017
		SCALE	DNS
		SHEET	1 OF 3



2x Ø4.2  
PERPENDICULAR MOUNTING HOLES,  
FOR USE WITH M4 MACHINE SCREWS  
MAX INSTALLATION TORQUE: 1.0 Nm.



REVISION HISTORY			
REV	DATE	BY	DESCRIPTION
G	23DEC2022	CRM/DMS	PRN: P2022-2220



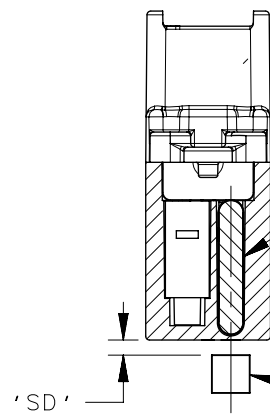
2x Ø2.4  
∇12  
INLINE MOUNTING HOLES,  
FOR USE WITH PLAS-TECH 30,  
M3 FLAT HEAD SELF TAPPING SCREWS,  
MINIMUM THREAD ENGAGEMENT 6mm,  
MAX INSTALLATION TORQUE: 0.2 Nm

REED SWITCH  
TARGET  
SEE NOTE 1,  
SECTION A-A

APPROXIMATE LOCATIONS FOR  
SWITCHING DISTANCE BASED ON TWO  
SAMPLE MAGNETS GIVEN. A PRECISE  
LOCATION MUST BE VERIFIED  
FOR EACH APPLICATION.  
'SD' - SWITCHING DISTANCE

SD = 12.0 FOR AN  
N35 Ø5x5 MAGNET

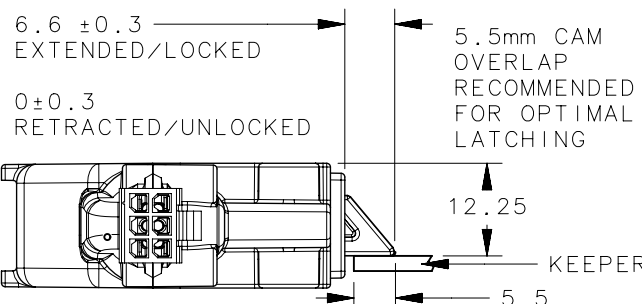
SD = 3.0 FOR AN  
N42 Ø6.4x0.8 MAGNET



SECTION A - A

REED  
SWITCH  
SEE NOTE 1

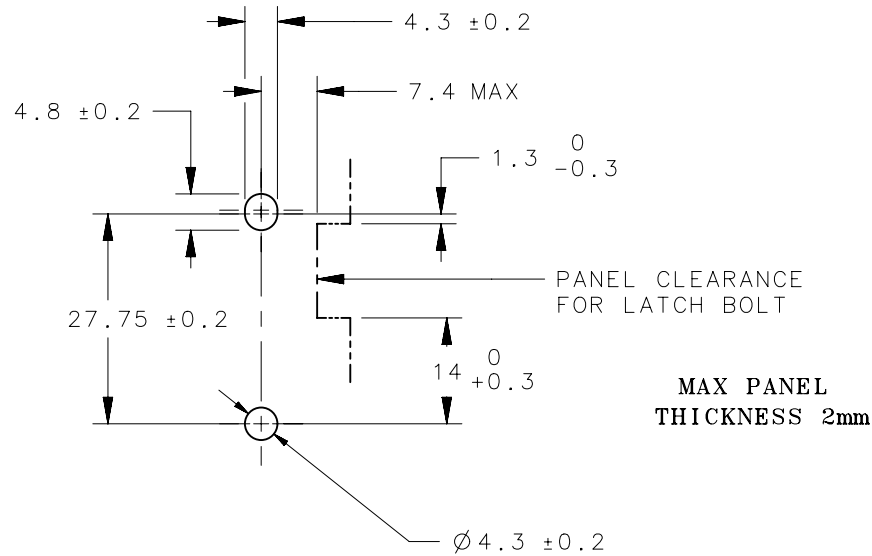
CLYNDRICAL MAGNET  
AXIALLY ALIGNED TO  
SENSOR CENTER LINE



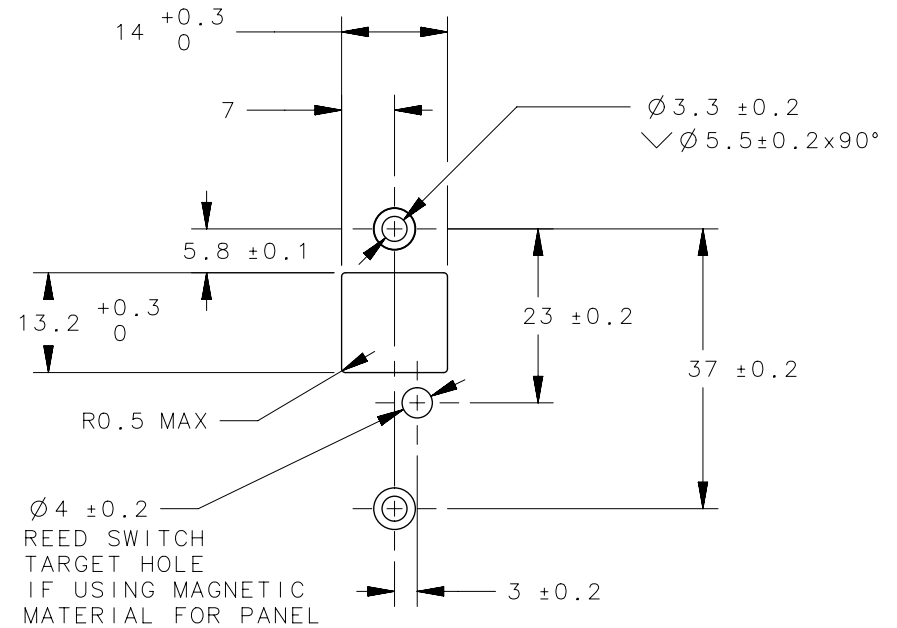
	THIRD ANGLE PROJECTION	
	MILLIMETERS [IN]	
CPB NUMBER	2016-1062	
SURFACE AREA	mm <sup>2</sup>	
VOLUME	mm <sup>3</sup>	
PROPRIETARY ITEM		
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PER ASME Y14.5M-1994		

<b>southco</b> <sup>®</sup>			
CONNECT • CREATE • INNOVATE			
DESCRIPTION			
EM-05 4 SERIES ELECTRONIC SLIDE BOLT			
SIZE	SYSTEM	DWG NO.	
A4	NX	J-EM-05-42-2401	
DRAWN BY	DATE	SCALE	SHEET
IR/	08AUG2017	DNS	2 OF 3

REVISION HISTORY			
REV	DATE	BY	DESCRIPTION
G	23DEC2022	CRM/DMS	PRN: P2022-2220



PERPENDICULAR MOUNTING  
PANEL PREPARATION



INLINE MOUNTING  
PANEL PREPARATION

	THIRD ANGLE PROJECTION	 CONNECT • CREATE • INNOVATE	
CPB NUMBER 2016-1062	MILLIMETERS [IN]		
SURFACE AREA mm <sup>2</sup>	TOLERANCES UNLESS OTHERWISE NOTED	DESCRIPTION EM-05 4 SERIES ELECTRONIC SLIDE BOLT	
VOLUME mm <sup>3</sup>	UP TO 0.5 ± 0.1 OVER 0.5 UP TO 6 ± 0.2 OVER 6 UP TO 30 ± 0.4 OVER 30 ± 0.6 ANGLES ± 5°	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-EM-05-42-2401	DATE 08AUG2017
		DRAWN BY IR/	SCALE DNS
			SHEET 3 OF 3