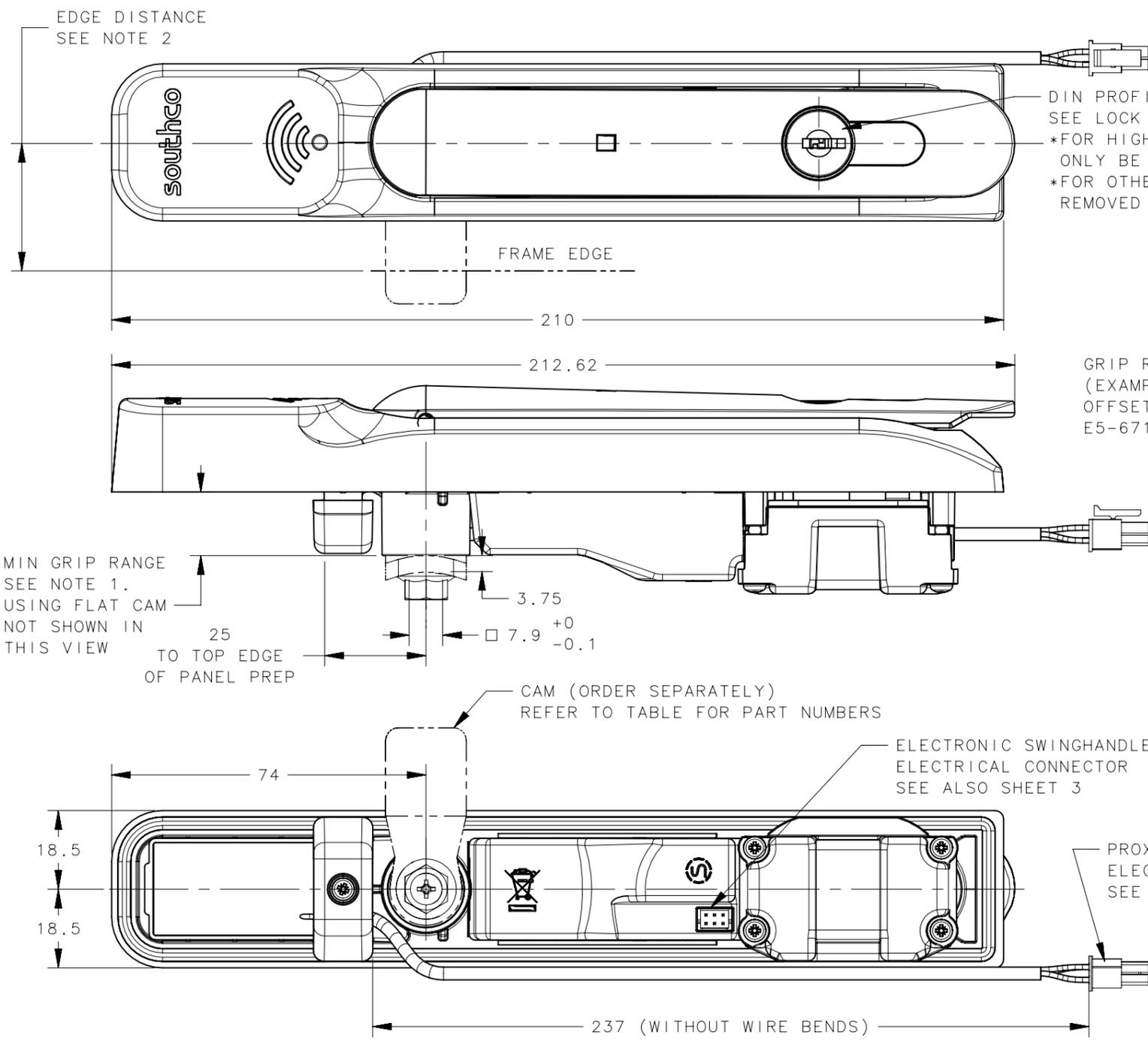
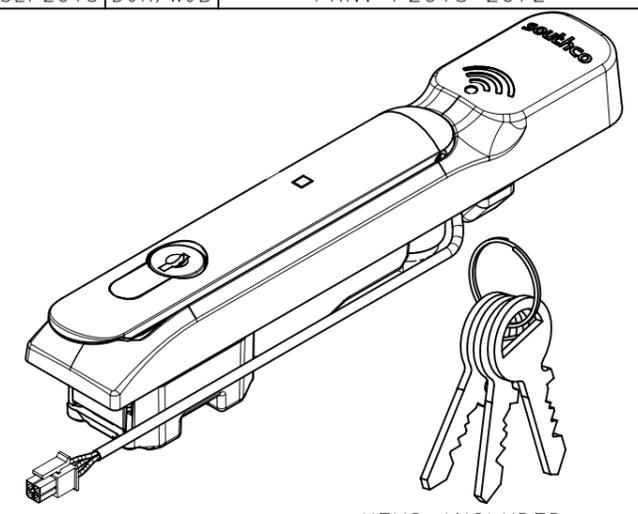


REVISION HISTORY			
REV	DATE	BY	DESCRIPTION
D	04SEP2018	DJK/WJB	PRN: P2018-2072



DIN PROFILE LOCKPLUG
SEE LOCK STYLE SELECTION OPTIONS.
*FOR HIGH SECURITY DIN LOCK ONLY - KEY CAN ONLY BE INSERTED/REMOVED IN LOCKED POSITION.
*FOR OTHER LOCK OPTIONS, KEY CAN BE INSERTED/REMOVED IN LOCKED OR UNLOCKED POSITION.

GRIP RANGE
(EXAMPLE USING
OFFSET CAM P/N
E5-6711)



KEYS INCLUDED
(WHERE APPLICABLE)
SCALE: NONE

NOTES:

- MIN GRIP RANGE WITH FLAT CAM 15.5mm
EXAMPLE SHOWN: 2mm OFFSET CAM - GRIP RANGE 17.5mm
- FOR CAM LENGTH 38mm -EDGE DISTANCE 30mm.
FOR CAM LENGTH 45mm. -EDGE DISTANCE 37mm
- SELECT CAM PART NUMBERS ACCORDING TO TABLE TO PROVIDE GRIP REQUIRED.

CAM PART NUMBER (ORDER SEPERATELY)		
GRIP	CAM LENGTH (1) 38 MM	CAM LENGTH (2) 45 MM
15.5	E5-6710	-
17.5	E5-6711	-
19.5	E5-6712	E5-6112
21.5	E5-6713	E5-6113
23.5	E5-6714	E5-6114

OTHER ADDITIONAL OFFSETS:

- SEE SOUTHCO DRAWINGS J-E5-67-A & J-E5-67-B
- SEE SOUTHCO DRAWINGS J-E5-61-A

- THE H3-EM-62-000 IS SHIPPED WITHOUT A LOCKPLUG. THIS PRODUCT MUST BE PAIRED WITH A SOUTHCO APPROVED LOCK TO FUNCTION PROPERLY. USE WITH AN UNAPPROVED LOCK PLUG VOIDS THE PRODUCT WARRANTY.
- RFID READS IS COMPATIBLE WITH MULTIPLE CARDS. REFER TO OPERATIONAL INSTRUCTION J-H3-EM-62-100-M FOR DEFAULT COMPATIBLE CARDS
- WIRE HARNESS (NOT INCLUDED)
SOUTHCO P/N: EA-W01-23-507 (FROM PROXIMITY MODULE AND ACTUATOR TO STRIPPED AND TINNED
*CONTACT SOUTHCO FOR OTHER LENGTHS AND CONNECTOR OPTIONS

ELECTRONIC SWINGHANDLE PART NUMBER SELECTION

H3-EM-62-LLL-XX

- LLL LOCK STYLE
000 NO LOCK OR KEYS
001 BLANK LOCKPLUG: BRIGHT CHROME
002 BLANK LOCKPLUG: RESERVED
003 BLANK LOCKPLUG: RESERVED
100 HIGH SECURITY DIN LOCK (3 KEYS)
200 KEY CODE CH-751 (2 KEYS INCLUDED)
3LL KEY CODE RS001 (2 KEYS INCLUDED)
LL = 00 FOR KEY CODE RS001
CONTACT SOUTHCO FOR OTHER AVAILABLE KEY CODES)

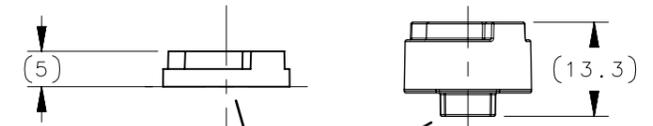
- XX LOGO STYLE
NONE = NO LOGO
10 = SOUTHCO LOGO

THIRD ANGLE PROJECTION	MILLIMETERS [IN]		DESCRIPTION H3-EM ELECTRONIC SWINGHANDLE WITH 125kHz AND 13.56MHz RFID READER	
TOLERANCES UNLESS OTHERWISE NOTED		DRAWN BY DJK/KAM		DATE 28APR2017
ALL DIMENSIONS WITHOUT TOLERANCES ARE FOR REFERENCE ONLY.		SCALE 1:1		SHEET 1 OF 4
PER ASME Y14.5M-1994		DRAWN BY DJK/KAM		DATE 28APR2017

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.

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REV	DATE	BY	DESCRIPTION
D	04SEP2018	DJK/WJB	PRN: P2018-2072

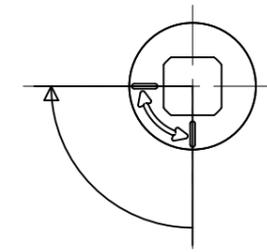
1. USE ONLY MOUNTING HARDWARE SUPPLIED.
2. MAXIMUM TIGHTENING TORQUE FOR MOUNTING SCREWS 0.5Nm.
3. CAM SCREW INSTALLATION TORQUE 3Nm - 5Nm.
4. USE #1 POZIDRIV DRIVER WHEN INSTALLING MOUNTING SCREWS.



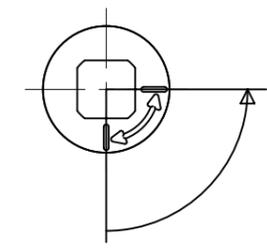
ROTATION LIMITER: (LEFT HAND MOUNTING SHOWN)
 SELECT THIN ROTATION LIMITER FOR STANDARD APPLICATIONS
 USE THICK ROTATION LIMITER FOR ADDITIONAL CLEARANCE AS
 REQUIRED ON MULTI POINT SYSTEMS
 ORIENTATION ACCORDING TO REQUIRED HANDLE OPERATION
 (LEFT OR RIGHT HANDED MOUNTING)

OPTION 1 FOR INSTALLATION
 OF ROTATION LIMITER
 - VIEWED FROM BACK -

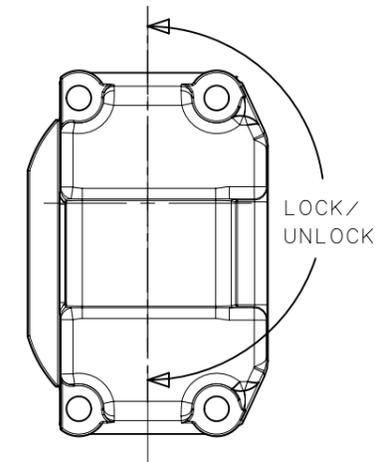
OPTION 2 FOR INSTALLATION
 OF ROTATION LIMITER
 - VIEWED FROM BACK -



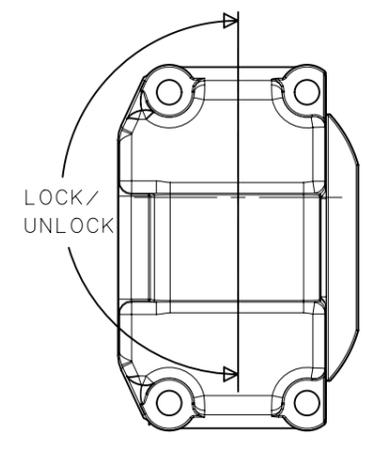
LEFT HAND MOUNTING
 TO OPEN: TURN HANDLE 90°
 COUNTER CLOCKWISE IF VIEWED
 FROM FRONT



RIGHT HAND MOUNTING
 TO OPEN: TURN HANDLE 90°
 CLOCKWISE IF VIEWED
 FROM FRONT

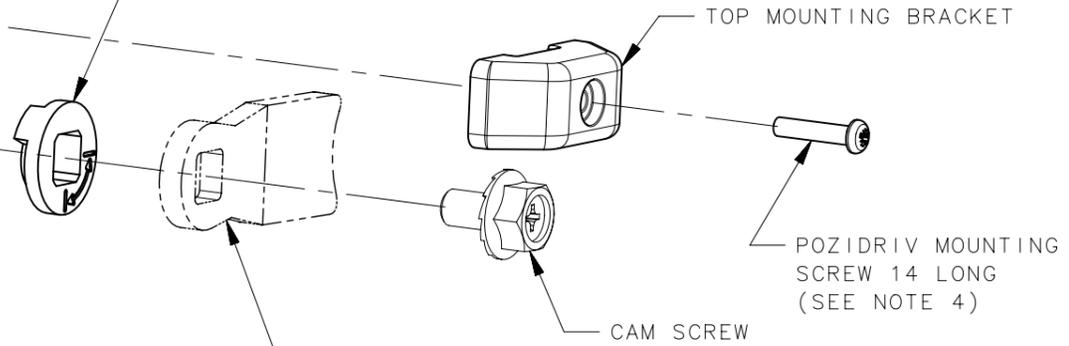
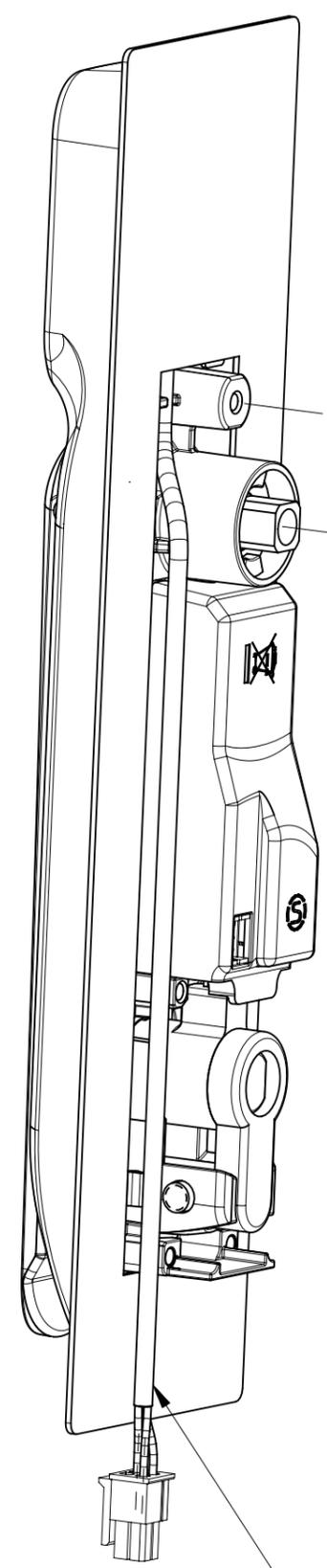


LEFT HAND MOUNT
 WHEN H3-61-55-33
 MULTI POINT SYSTEM
 IS USED.

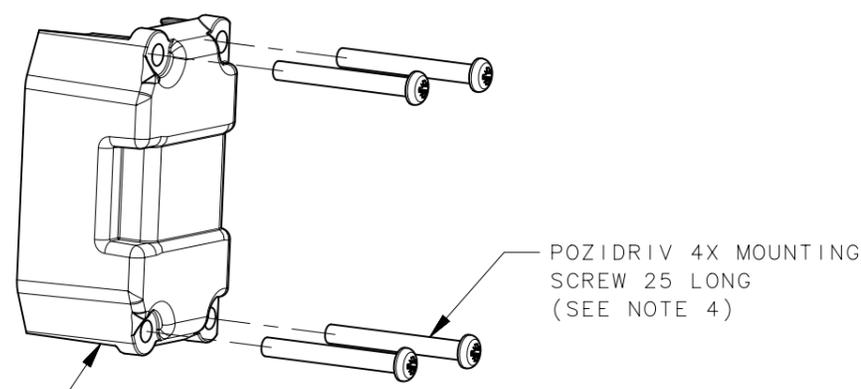


RIGHT HAND MOUNT
 WHEN H3-61-55-33
 MULTI POINT SYSTEM
 IS USED.

INSTALLATION OF BOTTOM MOUNTING BRACKET
 OPERATION OF LOCK PLUG CORRESPONDS WITH
 ORIENTATION OF BOTTOM MOUNTING BRACKET



PAWL (ORDERED SEPARATELY):
 ORIENTATION ACCORDING TO
 REQUIRED HANDLE OPERATION
 (LEFT OR RIGHT HANDED MOUNTING)
 (LEFT HAND MOUNTING SHOWN)



BOTTOM MOUNTING BRACKET:
 ORIENTATION ACCORDING TO
 REQUIRED LOCK PLUG OPERATION
 (LEFT OR RIGHT HANDED MOUNTING)

CAUTION: SECURE WIRES SUCH THAT THEY DO NOT
 INTERFERE WITH LATCH CAM AND LOCK PLUG
 CHECK THAT THE WIRES ARE NOT PINCHED
 BETWEEN THE LATCH HOUSING AND PANEL

THIRD ANGLE PROJECTION				southco [®] CONNECT • CREATE • INNOVATE		
TOLERANCES UNLESS OTHERWISE NOTED		DESCRIPTION				
ALL DIMENSIONS WITHOUT TOLERANCES ARE FOR REFERENCE ONLY.		H3-EM ELECTRONIC SWINGHANDLE WITH 125kHz AND 13.56MHz RFID READER				
PROPRIETARY ITEM	SIZE	SYSTEM	DWG NO.			
EXCEPT FOR USES EXPRESSLY GRANTED IN WRITING, INFORMATION DISCLOSED HEREON IS CONFIDENTIAL AND ALL RIGHTS, PATENT AND OTHERWISE, ARE RESERVED BY SOUTHCO, INC.	A3	NX	J-H3-EM-62-100			
PER ASME Y14.5M-1994	DRAWN BY	DATE	SCALE	SHEET		
	DJK/KAM	28APR2017	1:1	2 OF 4		

REVISION HISTORY			
REV	DATE	BY	DESCRIPTION
D	04SEP2018	DJK/WJB	PRN: P2018-2072

ACTUATOR MODULE
ELECTRICAL SPECIFICATION:

- A. POWER: 12VDC +/-10%
 - OPERATING CURRENT: LESS THAN 200mA
 WITH NO EXTERNAL MECHANICAL LOAD APPLIED TO HANDLE.
 - MAX CURRENT WITH STALLED ACTUATOR: 1A MAX
 (STALL LIMITED TO 2 SECONDS)
 - STANDBY CURRENT: 25mA TYPICAL.
- B. CONTROL INPUT:
 - TO UNLOCK: APPLY 12VDC SIGNAL FOR A MINIMUM OF 100
 MILLISECONDS THE LATCH WILL REMAIN UNLOCKED FOR AS
 LONG AS THE SIGNAL IS PRESENT OR A MINIMUM OF 3 SECONDS.
- C. STATUS OUTPUTS:
 - OPEN COLLECTOR OUTPUT. 100mA MAX
 - CAUTION! TO PREVENT DAMAGE TO THE
 PRODUCT DO NOT EXCEED MAXIMUM LOADS
 STATED AND FOLLOW WIRING DIRECTIVES.
 - FOR OUTPUT SIGNAL DETAILS AND LED
 SEQUENCE SEE LATCH STATUS DEFINITION
 TABLE ON SHEET 4.
- D. CONNECTION:
 - SIX POSITION CONNECTOR
 - HIROSE ELECTRIC CO LTD. PART NUMBER
 DF11-6DP-2DSA.
 - SEE PIN-OUT TABLE.

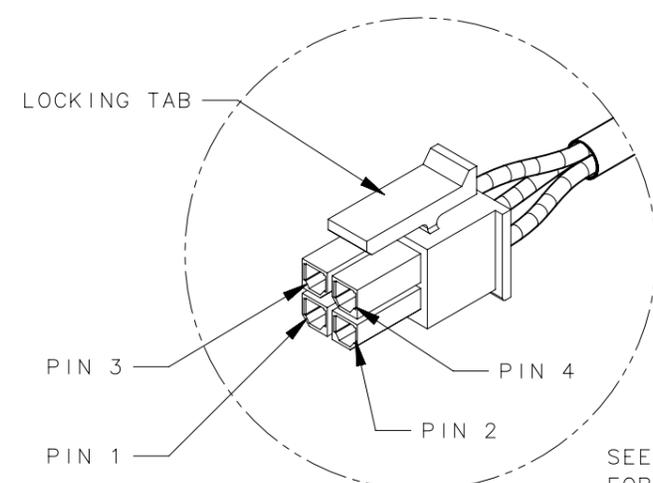
PROXIMITY READER MODULE
ELECTRICAL SPECIFICATION:

- E. - SUPPLY VOLTAGE (VCC): 12VDC +/-10%
 - OPERATING CURRENT: 125mA MAXIMUM (NO EXTERNAL DEVICES ATTACHED)
 - TRANSMIT FREQUENCY: 13.56MHz/125kHz FSK
 - DATA SIGNAL VOLTAGE: 5VDC
 - DATA PULSE INTERVAL TIME: 40 MICRO-SECONDS
 - DATA SIGNAL DELAY: 2ms
- F. PROX READER CONNECTIONS:
 - 4 POSITION CONNECTIONS:
 - MOLEX, 3mm PITCH MICRO-FIT 3.0
 RECEPTACLE HOUSING, DUAL ROW 4
 CIRCUITS. MOLEX P/N: 43025-0400
 - MICROFIT 3.0 CRIMP TERMINAL,
 FEMALE. MOLEX P/N: 43030-0004
 - SEE PIN-OUT TABLE.

PIN	WIRE COLOR	DESCRIPTION	NOTE
1	BLACK	GND	GROUND
2	RED	VCC	12VDC POWER SUPPLY INPUT (MAY BE CONNECTED TO ACTUATOR MODULE VSUPPLY INPUT)
3	GREEN	DATA0	DATA0 OUTPUT
4	WHITE	DATA1	DATA1 OUTPUT

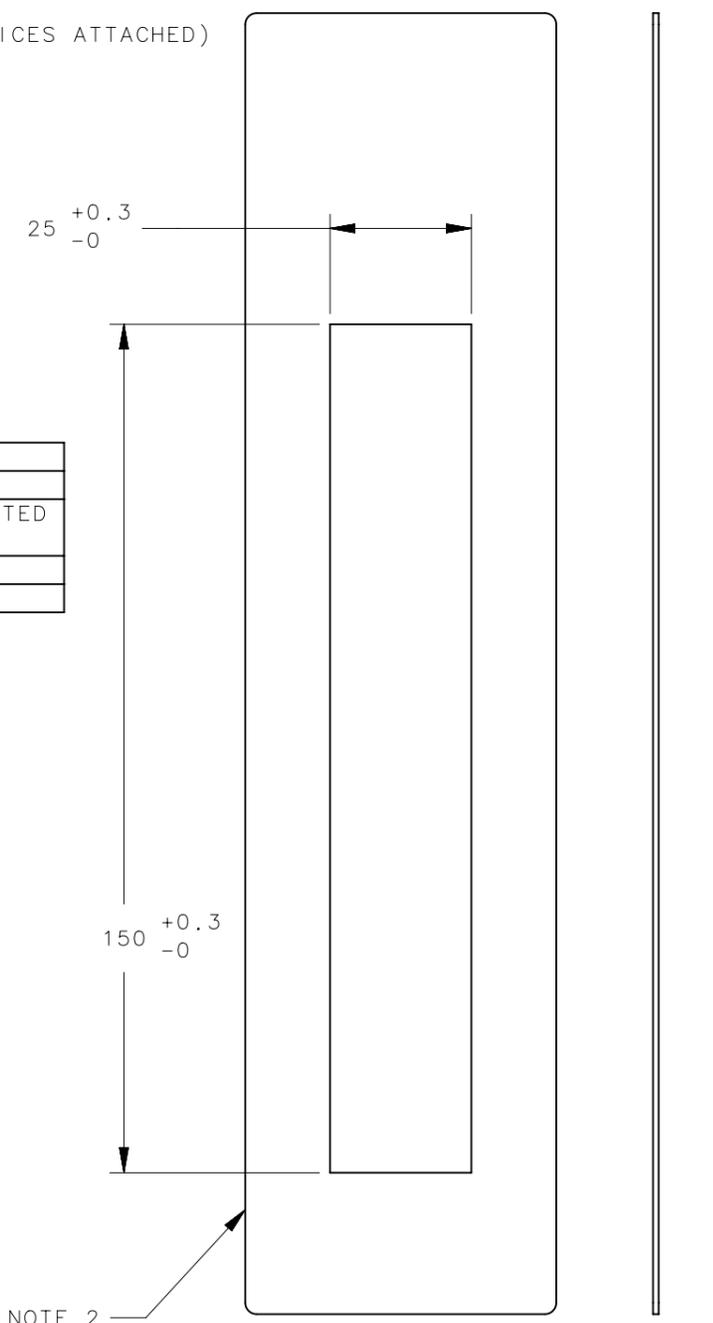
- G. SEE J-H3-EM-62-100-M ELECTRONIC SWINGHANDLE OPERATING INSTRUCTIONS FOR MORE INFORMATION.
 J. OPERATING TEMPERATURE: 0 TO 45°C

PIN	DESCRIPTION	NOTE
1	VGND	GROUND
2	VSUPPLY	12VDC POWER SUPPLY INPUT (MAY BE CONNECTED TO PROX READER VCC INPUT)
3	N/C	NO CONNECT
4	CONTROL SIGNAL	COMMAND INPUT (12VDC, 100 MILLISECONDS MINIMUM)
5	ELECTRONIC LOCK STATUS	OPEN COLLECTOR OUTPUT (100mA MAX. LOAD)
6	MECHANICAL LOCK STATUS	OPEN COLLECTOR OUTPUT (100mA MAX. LOAD)

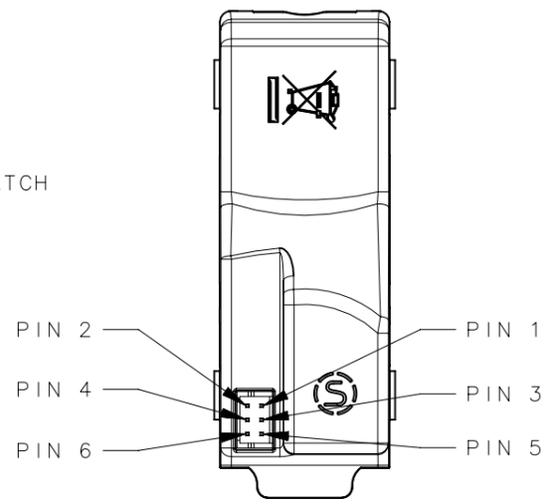
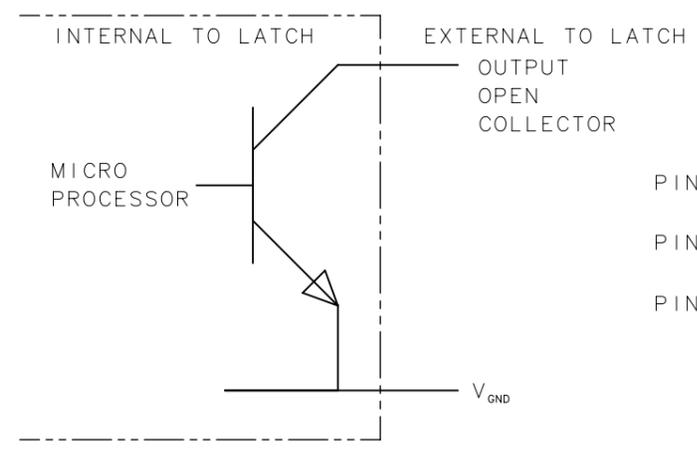


DETAIL B
SCALE 2:1

SEE SHEET 1, NOTE 2 FOR FRAME EDGE DISTANCE.



PANEL PREPARATION



ACTUATOR
PIN-OUT DIAGRAM
(SEE NOTE D)

THIRD ANGLE PROJECTION	MILLIMETERS [IN]	DESCRIPTION	
		H3-EM ELECTRONIC SWINGHANDLE WITH 125kHz AND 13.56MHz RFID READER	
TOLERANCES UNLESS OTHERWISE NOTED	ALL DIMENSIONS WITHOUT TOLERANCES ARE FOR REFERENCE ONLY.	SIZE	SYSTEM
PROPRIETARY ITEM	PER ASME Y14.5M-1994	A3	NX
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-H3-EM-62-100
		DRAWN BY	DATE
		DJK/KAM	28APR2017
		SCALE	SHEET
		NTS	3 OF 4

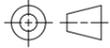


REVISION HISTORY			
REV	DATE	BY	DESCRIPTION
D	04SEP2018	DJK/WJB	PRN: P2018-2072

LATCH STATUS DEFINITION

LATCH STATUS	LATCH LED	PIN 6 OUTPUT HANDLE LOCK	PIN 5 OUTPUT ELECTRONIC LOCK	PIN 4 CONTROL INPUT	NOTE
SECURED	BLUE	OPEN COLLECTOR	OPEN COLLECTOR	GND	ENCLOSURE SECURED - ACCESS DENIED
ELECTRONICALLY RELEASED	BLUE / MAGENTA FLASHING	OPEN COLLECTOR	LOW	V* _{SS}	ENCLOSURE READY FOR ACCESS
MECHANICALLY RELEASED	BLUE FLASHING LOW	LOW	LOW	V* _{SS}	ACCESS GAINED - HANDLE LIFTED OR MECHANICALLY UNLOCKED
		LOW	OPEN COLLECTOR	GND	ACCESS GAINED - HANDLE LIFTED - ELECTRONIC LOCK CLOSED
HANDLE NOT FULLY CLOSED	BLUE / RED FLASHING	OPEN COLLECTOR	LOW	GND	INTERIM STATES ONLY DURING CLOSING OF HANDLE
		LOW	LOW	GND	

H3-EM-62-LLL			
COMPONENT	MATERIAL	FINISH	NOTE
CIRCUIT BOARD	DETAILS ON REQUEST	DETAILS ON REQUEST	
MOTOR	DETAILS ON REQUEST	DETAILS ON REQUEST	
GEAR SHAFT	STAINLESS STEEL	NATURAL	
WORM GEAR	PA66 1300S	NATURAL	
PINION GEAR	POM M90-44	BLACK	
SPUR GEAR	POM M90-44	BLACK	
GEAR RETAINER	PC (LEXAN V0)	CLEAR	
MOTOR COVER	PC ABS (UL94- V0)	BLACK	
LATCH BODY	25% GF NYLON (UL94- V0)	BLACK (A&B SURFACES VD136)	
HANDLE MOULDING	25% GF NYLON (UL94- V0)	BLACK (A&B SURFACES VD136)	
LIGHT PIPE	PC (LEXAN V0)	CLEAR	
BOTTOM MOUNTING BRACKET	25% GF NYLON (UL94- V0)	BLACK	
SLIDE	25% GF NYLON (UL94- V0)	NATURAL	
HANDLE SHAFT	DIE CAST ZINC	ZINC PLATE BRIGHT CHROMATE	
ROTATION LIMITER	DIE CAST ZINC	ZINC PLATE BRIGHT CHROMATE	2 SIZE OPTIONS SUPPLIED
TOP MOUNTING BRACKET	25% GF NYLON (UL94- V0)	BLACK	
MOUNTING SCREW 25 LONG	STEEL	ZINC PLATE + BRIGHT CHROMATE	INSTALL WITH #1 POZIDRIV DRIVER
MOUNTING SCREW 14 LONG	STEEL	ZINC PLATE + BRIGHT CHROMATE	INSTALL WITH #1 POZIDRIV DRIVER
OUTPUT GEAR MOULDING	POM M90-44	BLACK	
REFLECTOR	POM M90-44	OPAQUE WHITE	
CONNECTING LEAD	DETAILS ON REQUEST	DETAILS ON REQUEST	ORDER SEPERATELY
DIN LOCKPLUG	DETAILS ON REQUEST	DETAILS ON REQUEST	OPTIONAL WITHOUT LOCKPLUG
LOCK PLUG RETAINING SCREW	STEEL	ZINC PLATE + BRIGHT CHROMATE + SEALER	
SHAFT PIN	SAE 30302/30304	PLAIN, OILED	
O-RING	BLACK NBR RUBBER	GREASED	
PAWL SCREW	STEEL	ZINC PLATE + BRIGHT CHROMATE	
PAWL	STEEL	ZINC PLATE + BRIGHT CHROMATE	ORDER SEPERATELY
PROXIMITY READER MODULE	DETAILS ON REQUEST	DETAILS ON REQUEST	
BLANK PLUG	DIE CAST ZINC	CHROME PLATE	OPTIONAL

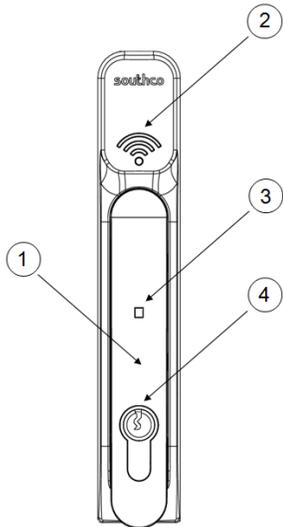
 THIRD ANGLE PROJECTION	 CONNECT • CREATE • INNOVATE			
			MILLIMETERS [IN]	
	TOLERANCES UNLESS OTHERWISE NOTED		DESCRIPTION H3-EM ELECTRONIC SWINGHANDLE WITH 125kHz AND 13.56MHz RFID READER	
	ALL DIMENSIONS WITHOUT TOLERANCES ARE FOR REFERENCE ONLY.			
PROPRIETARY ITEM <small>EXCEPT FOR USES EXPRESSLY 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 A3	SYSTEM NX	DWG NO. J-H3-EM-62-100
DRAWN BY DJK/KAM		DATE 28APR2017	SCALE 1:1	SHEET 4 OF 4

H3-EM-62-100 Electronic Swinghandle Operating Instructions

Package Contents

- H3-EM-62-100 Electronic Swinghandle with RFID Reader (qty1)
- EM-0-45827 M3x25 POZIDRIV® Mounting Screws (qty 4)
- EM-0-47151 M3x14 POZIDRIV® Mounting Screw (qty 1)
- EM-0-45825 Rotation Limiter (qty 1)
- EM-0-58124 Rotation Limiter (qty 1) 1)
- E5-C-04 Pawl Screw (qty 1)
- M3-0-24943-11 Lock Plug Screw (qty 1) (optional)
- EM-0-45826 Top Mounting Bracket (qty 1)
- EM-0-45822 Bottom Mounting Bracket (qty 1)
- Operating Instructions (qty 1)

H3-EM-62-100 Electronic Swinghandle with RFID Reader



1. Handle
2. RFID Reader
3. Tri-Color Status LED
4. Lock Plug

Features

- Installed 13.56MHz / 125kHz RFID reader module with Wiegand data output
- Compatible with 13.56MHz RFID cards with 4, 7, or 8byte Unique Identifiers (UID) and 125kHz prox cards
- Remote lock and unlock capability
- Single or multi-point lock actuation
- Momentary or continuous lock actuation
- Tri-color LED (blue/magenta/red) to indicate lock and handle status
- Manual lock override
- Accommodates both left and right doors
- For indoor use only

WARNING: The H3-EM-62-000 is shipped without a lockplug. This product must be paired with a Southco-approved lock to function properly. **Use with an unapproved lockplug voids the product warranty.** Contact Southco for additional support.

Specifications

Actuator Module

Supply Voltage (V_{SUPPLY}): 12VDC ($\pm 10\%$)
 Standby Current: 50mA maximum at 12VDC
 Operating Current: 200mA maximum at 12VDC (with no external mechanical load applied to handle
 1A maximum (at 12VDC, limited to 2 seconds)
 Stall Current: 1 second maximum (**NOTE:** Power must be present during transit times. If power is removed while the lock slide is in transit, it will complete it's cycle when power is restored.)
 Operating Transit Time: 3 seconds minimum
 Electronic Unlock Time: 3 seconds minimum
 Open Collector Outputs: Rated for V_{SUPPLY} , maximum load

RFID Reader Module

Supply Voltage (V_{CC}): 12VDC ($\pm 10\%$)
 Operating Current: 125mA maximum (no external devices attached)
 Transmit Frequency: 13.56MHz / 125kHz
 DATA Signal Voltage: 5VDC
 DATA Pulse Interval Time: 40 μ s
 DATA Signal Delay: 2ms
 Output Format: Reverse Byte Order (13.56MHz cards)
 Most Significant Bit First (125kHz cards)
 Upper and Lower Parity Bits Included

Mounting and Installation

Please refer to Southco trade drawing J-H3-EM-62-100 for mounting and installation details.

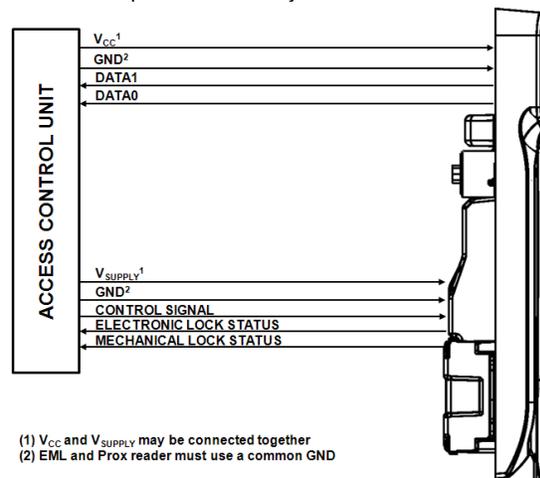
NOTE: Use a #1 POZIDRIV® driver when installing the mounting screws. See Southco trade drawing J-H3-EM-62-100 for additional details.

Read range distance may vary depending on card type, mounting conditions, or environmental conditions. In some cases, the card may need to make contact with, or be moved across, the RFID reader.

Wiring Diagrams

The H3-EM-62-100 contains two separate functional modules: the actuator module and RFID reader module. The actuator module controls and monitors the locking function of the swinghandle. The RFID module reads the contents of a compatible RFID card and converts it to Wiegand format.

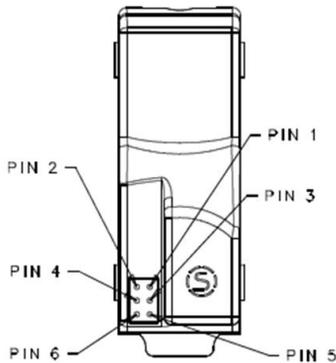
These two modules operate independently of each other and require connection to an access control unit (**not provided**), as illustrated below, for the entire product to be fully functional.



(1) V_{CC} and V_{SUPPLY} may be connected together
 (2) EML and Prox reader must use a common GND

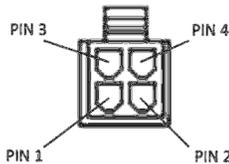
H3-EM-62-100 Electronic Swinghandle Operating Instructions

The actuator module of the swinghandle is accessed with a six-position connector on the rear of the unit, shown below.



Pin	Description	Note
1	V _{GND}	ground
2	V _{SUPPLY}	12VDC power supply input (may be connected to prox reader V _{CC} input)
3	N/C	no connect
4	Control Signal	command input (12VDC, 100 milliseconds minimum)
5	Electronic Lock Status	open collector output (100mA max. load)
6	Mechanical Lock Status	open collector output (100mA max. load)

The RFID reader module of the swinghandle is accessed with a four-position connector attached to a harness connected to the module's circuit board. The module's connector pinout is:



Pin	Wire Color	Description	Note
1	Black	GND	ground
2	Red	VCC	12VDC power supply input (may be connected to EML V _{SUPPLY} input)
3	Green	DATA0	DATA0 output
4	White	DATA1	DATA1 output

NOTE: The mating connectors/harnesses are not provided with the H3-EM-62-100. Refer to Southco trade drawing J-H3-EM-62-100 for mating connector/harness requirements.

Compatible Card Types

The H3-EM-62-100 is compatible with multiple card types. Please refer to the following table for a list of cards that can be read by the H3-EM-62-100.

card type	Southco part number	output format (includes upper/lower parity)
HID Prox	EA-C2-021-9	MSB first
MIFARE Classic 1K	EA-C3-101-9	reverse byte order
MIFARE Classic 4K	n/a	reverse byte order
MIFARE DESFire 8K	n/a	reverse byte order
iClass SE	n/a	reverse byte order
iClass SR	n/a	reverse byte order

Wiegand Data Output

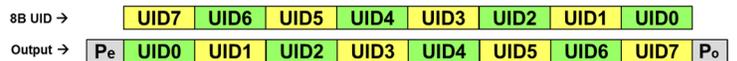
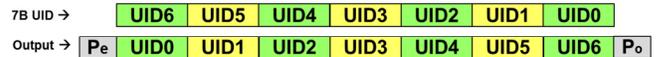
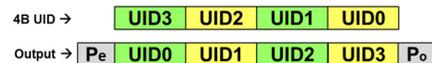
125kHz Prox Cards

The RFID module will read the site and user codes from a compatible prox card, and convert to Wiegand data format, including upper even parity (Pe) and lower odd parity (Po) bits, as shown below.



13.56MHz RFID Cards

The RFID module will read the 4, 7, or 8 byte UID from a compatible RFID card, and convert to Wiegand data format in reverse byte order, including upper even parity (Pe) and lower odd parity (Po) bits, as shown below.



Control Input Signal

This signal is used to control the electronic lock slide position.

- for UNLOCKED position: Supply 9VDC minimum (do not exceed supply voltage) for at least 100 milliseconds. The lock will remain unlocked for as long as the signal is present, or a minimum of 3 seconds. Signal timing can typically be adjusted at the access control device. The control signal current draw is less than 10mA.
- for LOCKED position: Supply an open contact or 0VDC (0 to 0.5V)

Electronic Lock Status Output and Mechanical Lock Status Output Signals

Electronic Lock Status Output Signal

This output will be LOW (GND) when the lock slide is electromechanically moved to the unlocked position. It will be in the open collector state (high-impedance) when in the locked position.

H3-EM-62-100 Electronic Swinghandle Operating Instructions

Mechanical Lock Status Output Signal

This output will be LOW (GND) when the handle is in the open position or when the keylock in the actuator is manually unlocked. It will be in the open collector state (high-impedance) when in the secured position.

⚠ NOTE: These outputs are open collector outputs rated for V_{SUPPLY} with a maximum load of 100mA. To avoid damage to the H3-EM, do not exceed voltage and current ratings.

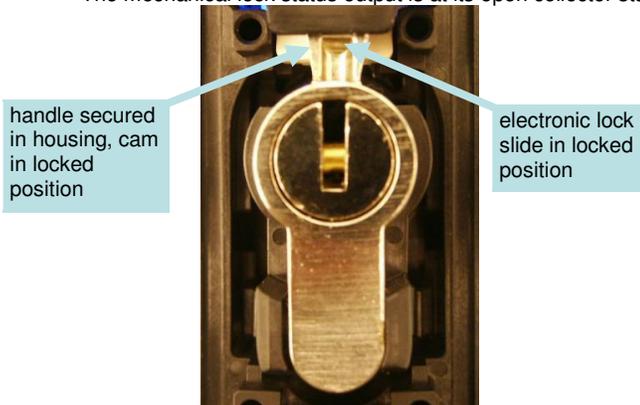
Status LED and Output Signals

The latch is equipped with a tri-color (blue/magenta/red) LED visible from the front of the latch. This LED provides a visible notification of the latch status. The different latch states are described below. Please refer to the **Control Input Signal**, **Electronic Lock Status Output Signal**, and **Mechanical Lock Status Output Signal** sections for further details on these signals.

Secured

The latch is securely closed, prohibiting access.

- The Status LED will be solid blue.
- The electronic lock status output is at its open collector state.
- The mechanical lock status output is at its open collector state.

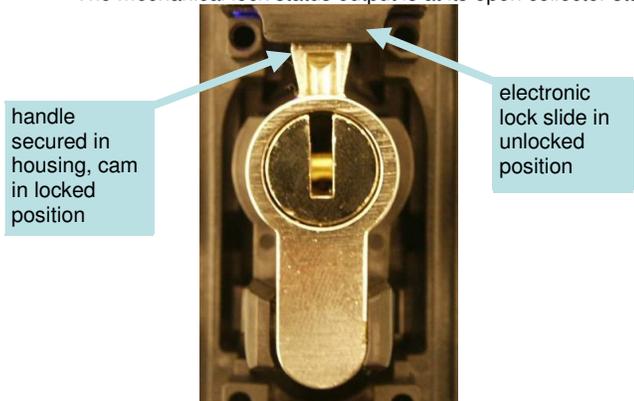


“Secured” State

Electronically Released

The electronic lock slide is in the unlocked position and the handle can be pulled open.

- The Status LED will alternate flashing blue/magenta.
- The electronic lock status output is 0V while the lock slide is in the unlocked position.
- The mechanical lock status output is at its open collector state.



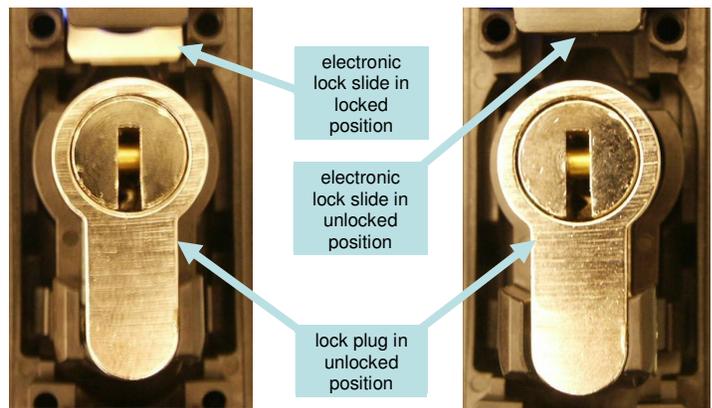
“Electronically Released” State

Mechanically Released

The latch is released by opening the handle or moving the cam from its lock position.

- The Status LED will flash blue.
- The electronic lock status output will be at its open collector state if the electronic lock slide is in the locked position. It will be 0V if the lock slide is in the unlocked position.
- The mechanical lock status output is 0V.

⚠ NOTE: The lock sensor is an optical device that senses the presence of the lock pawl. Reflectivity of the lock pawl material can affect sensing. Use only Southco-supplied locks.

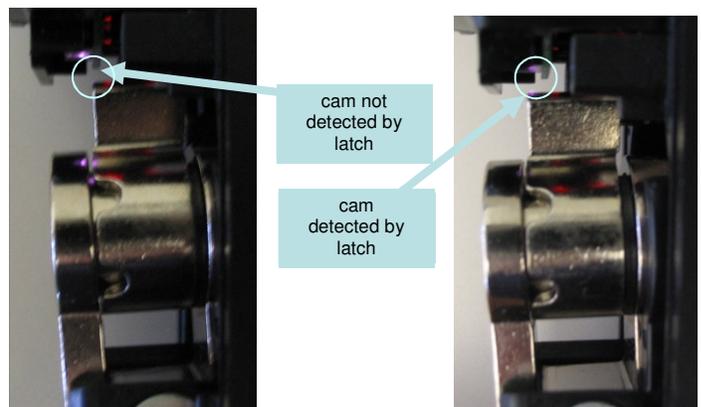


“Mechanically Released” State

Handle not Fully Closed

This is an interim state and may occur while closing the handle when the cam is not secured by the electronic lock slide. The latch is not fully secured during this state.

- The Status LED will alternate flashing blue/red if the cam is not detected. It will flash blue/red/red if the cam is detected, but the lock plate is not in the right position. This could be due to mechanical failure or tampering.
- The electronic lock status output is 0V if the lock slide is in the unlocked position. It will be at its open collector state if it is in the lock position.
- The mechanical lock status output is 0V if the cam is not detected. It will be at its open collector state if it is detected.



“Handle not Fully Closed” State

Electronic Lock Slide Error

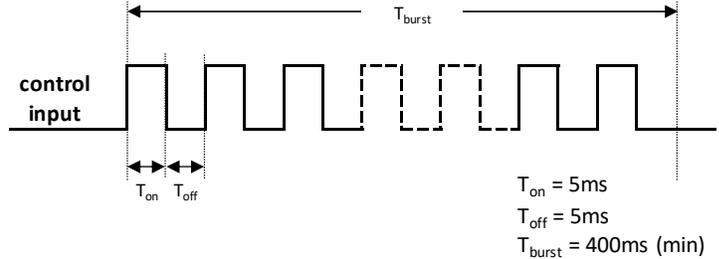
The electronic lock slide does not respond to the command input signal.

- The Status LED will flash magenta if the latch is secured. It will alternate flashing red/magenta if the latch is mechanically released.
- The electronic lock status output is at its open collector state.
- The mechanical lock status output will be at its open collector state if the cam is in its lock position. It will be 0V if the mechanical key is moved from its lock position.

Error Input Command Sequence

The H3-EM can accept an input command from an external controller to flash the status LED red three times. This feature can be used to indicate that an error event has occurred (e.g. unauthorized access attempt).

The control input signal needs to meet the timing requirements shown below to flash the status LED red.



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FCC Compliance Statement

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- 1) This device may not cause harmful interference, and
- 2) This device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Caution: To assure continued compliance, any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment. (Example - use only shielded interface cables when connecting to computer or peripheral devices).

Industry Canada Compliance Statement

This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions:

- 1) this device may not cause interference, and
- 2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes:

- 1) l'appareil ne doit pas produire de brouillage, et
- 2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

