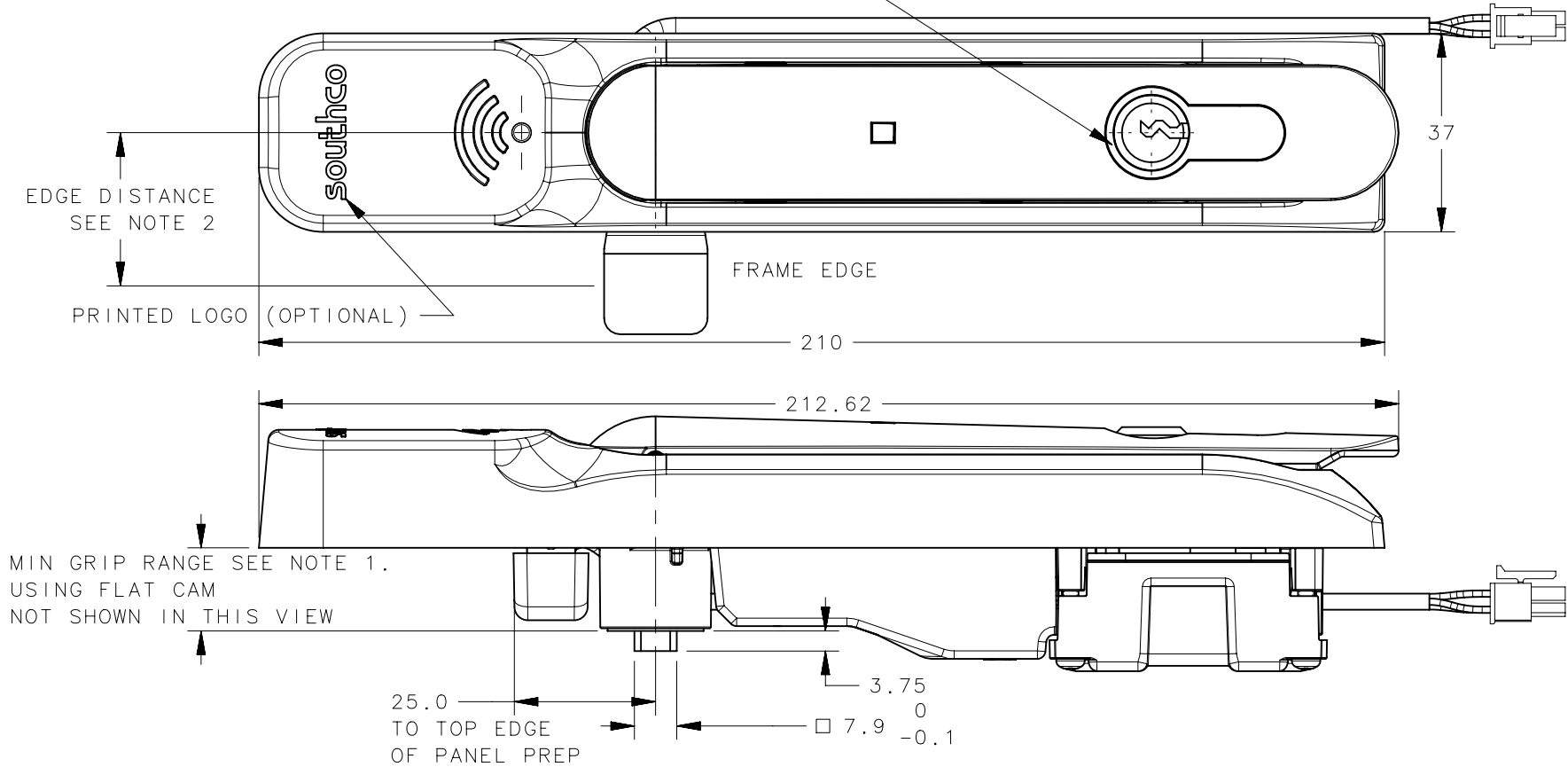


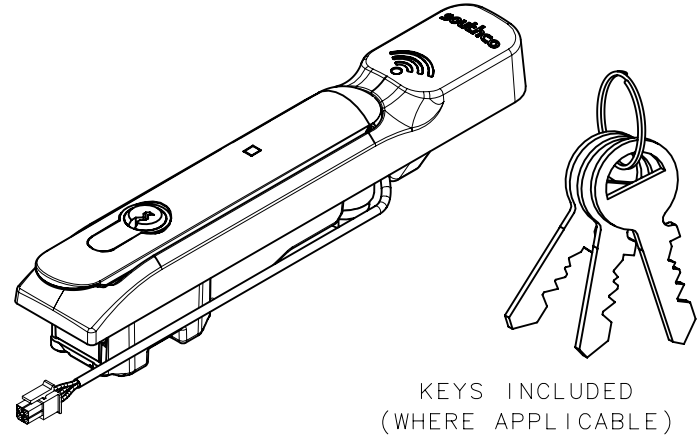
DIN PROFILE LOCKPLUG
SEE LOCK STYLE SELECTION OPTIONS.
*FOR HIGH SECURITY DIN LOCK ONLY - KEY CAN ONLY BE INSERTED/REMOVED IN LOCKED POSITION.
*FOR OTHER LOCK OPTIONS, KEY CAN BE INSERTED/REMOVED IN LOCKED OR UNLOCKED POSITION.

PROXIMITY CARD (ORDER SEPARATELY)
PART NUMBER SELECTION
EA-C3-101-9 PROXIMITY CARD WITH SLOT (SHOWN BELOW)
EA-C3-101 PROXIMITY CARD WITH SLOT (NO LOGO)
EA-C3-100-9 PROXIMITY CARD WITHOUT SLOT
EA-C3-100 PROXIMITY CARD WITHOUT SLOT, WITHOUT LOGO

REVISION HISTORY			
REV	DATE	BY	DESCRIPTION
D	13NOV2017	CB1/VK	PRN: P2017-3023

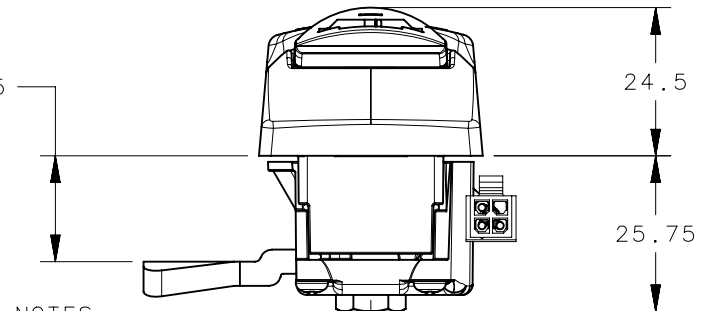


SCALE 1:3
SEE J-EA-C3
FOR MORE PROX CARD
INFORMATION



KEYS INCLUDED
(WHERE APPLICABLE)

GRIP RANGE 17.5
(EXAMPLE USING
OFFSET CAM P/N
E5-6711)



NOTES:

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

CAM PART NUMBER (ORDER SEPARATELY)		
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:

- (1) SEE SOUTHCO DRAWINGS J-E5-67-A & J-E5-67-B
- (2) SEE SOUTHCO DRAWINGS J-E5-61-A

4. THE H3-EM-66-000 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.
5. READS THE FOLLOWING CARDS (UID ONLY): MIFARE® Classic, MIFARE Plus®, MIFARE® DESFire®, and HID® iCLASS®
6. MIFARE AND MIFARE Classic are trademarks of NXP B.V. HID iCLASS is a registered trademark of HID Global

ELECTRONIC SWINGHANDLE PART NUMBER SELECTION
H3-EM-66-LLL-XX

LLL LOCK STYLE
000 NO LOCK OR KEYS
001 BLANK LOCKPLUG: BRIGHT CHROME

XX LOGO STYLE
NONE NO LOGO
10 SOUTHCO LOGO

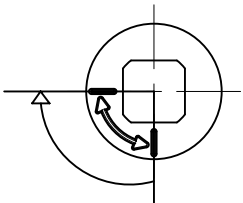
100 HIGH SECURITY DIN LOCK (3 KEYS)
200 KEY CODE CH-751 (2 KEYS INCLUDED)
3LL KEY CODE RS001 (2 KEYS INCLUDED)
LL = 00 FOR KEY CODE RS001
CONTACT SOUTHCO FOR OTHER AVAILABLE KEY CODES)

THIRD ANGLE PROJECTION	MILLIMETERS [IN]	DESCRIPTION H3-EM ELECTRONIC SWINGHANDLE WITH RFID READER WITH WIEGAND DATA OUTPUT, iCLASS UID	
TOLERANCES UNLESS OTHERWISE NOTED	ALL DIMENSIONS WITHOUT TOLERANCES ARE FOR REFERENCE ONLY.	SIZE A3	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	DRAWN BY NAM/WB	DATE 09SEP2014
SCALE NTS	SHEET 1 OF 4	J-H3-EM-66-100	DWG NO.

REVISION HISTORY			
REV	DATE	BY	DESCRIPTION
D	13NOV2017	CB1/VK	PRN: P2017-3023

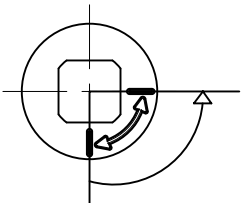
1. USE ONLY MOUNTING HARDWARE SUPPLIED.
2. MAXIMUM TIGHTENING TORQUE FOR MOUNTING SCREWS 0.5 Nm.
3. PAWL SCREW INSTALLATION TORQUE 4 Nm MIN.
4. USE #1 POZIDRIV DRIVER WHEN INSTALLING MOUNTING SCREWS.

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



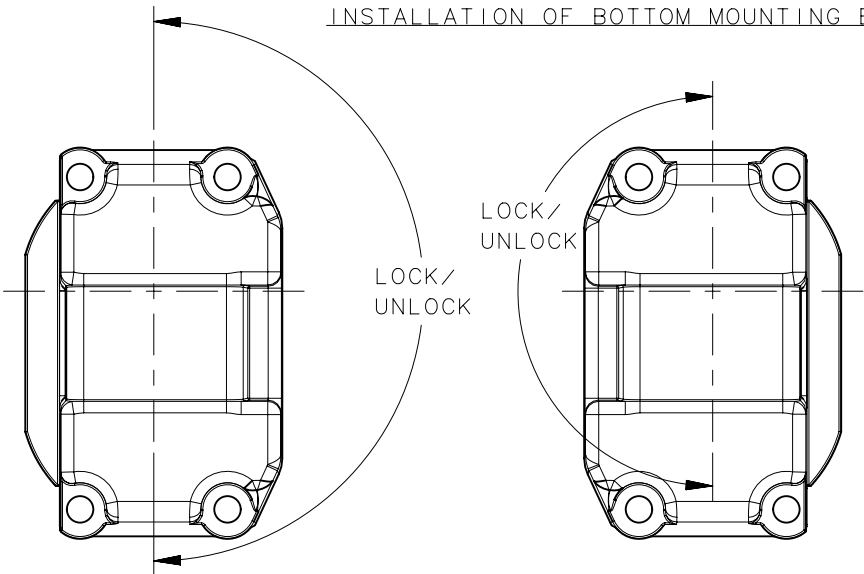
LEFT HAND MOUNTING
TO OPEN: TURN HANDLE 90°
COUNTER CLOCKWISE IF VIEWED
FROM FRONT

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



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

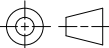
INSTALLATION OF BOTTOM MOUNTING BRACKET



OPERATION OF LOCK PLUG CORRESPONDS WITH
ORIENTATION OF BOTTOM MOUNTING BRACKET

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

RIGHT HAND MOUNT
WHEN H3-61-56-33
MULTI POINT SYSTEM
IS USED.

	THIRD ANGLE PROJECTION		southco® CONNECT • CREATE • INNOVATE							
	MILLIMETERS [IN]									
	TOLERANCES UNLESS OTHERWISE NOTED		DESCRIPTION							
	ALL DIMENSIONS WITHOUT TOLERANCES ARE FOR REFERENCE ONLY.		H3-EM ELECTRONIC SWINGHANDLE WITH RFID READER WITH WIEGAND DATA OUTPUT, iCLASS UID							
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.			SIZE	SYSTEM	DWG NO.					
			A3	NX	J-H3-EM-66-100					
	PER ASME Y14.5M-1994		DRAWN BY	NAM/WB	DATE	09SEP2014	SCALE	1:1	SHEET	2 OF 4

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)

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

TOP MOUNTING BRACKET

PAWL SCREW

POZIDRIV MOUNTING SCREW 14 LONG
(SEE NOTE 4)

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

POZIDRIV 4X MOUNTING
SCREW 25 LONG
(SEE NOTE 4)

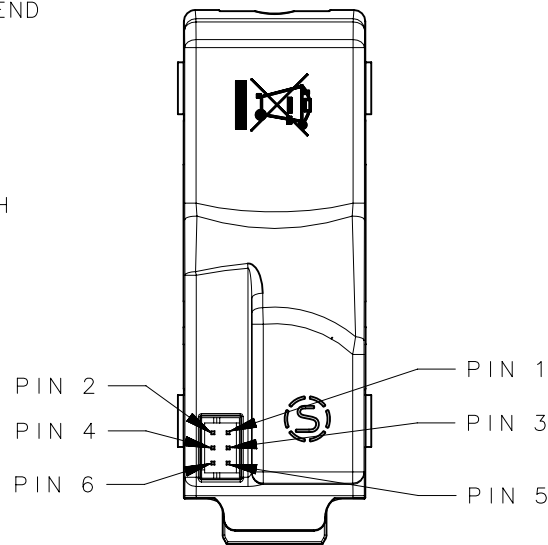
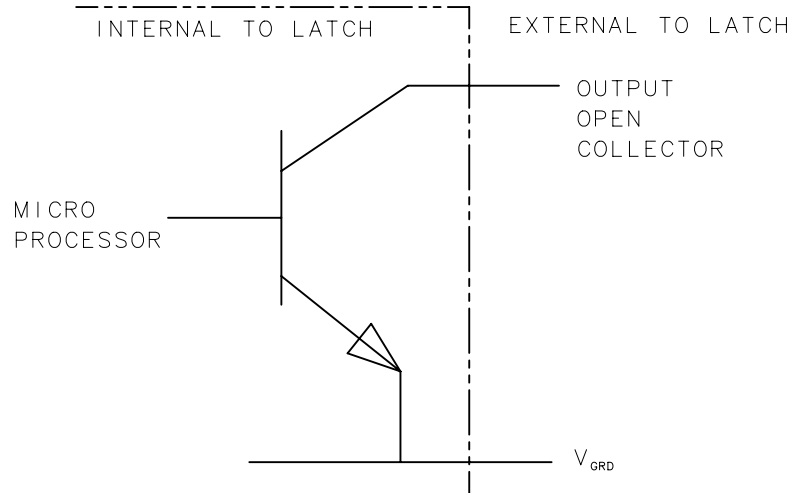
CAUTION!: SECURE WIRES SUCH THAT THEY DO NOT
INTERFERE WITH LATCH CAM, LOCK PLUG OR
OTHER INSTALLED ACCESSORIES
CHECK THAT THE WIRES ARE NOT PINCHED
BETWEEN THE LATCH HOUSING AND PANEL

ACTUATOR MODULE
ELECTRICAL SPECIFICATION:

- A. POWER: 12V TO 24V
- OPERATING CURRENT: LESS THAN 200mA AT 12VDC WITH NO EXTERNAL MECHANICAL LOAD APPLIED TO HANDLE.
 - MAX CURRENT WITH STALLED ACTUATOR: 1A MAX AT 12VDC (STALL LIMITED TO 2 SECONDS)
 - STANDBY CURRENT: 25mA TYPICAL.
- B. CONTROL INPUT:
- TO UNLOCK: SUPPLY 9VDC MINIMUM (DO NOT EXCEED SUPPLY VOLTAGE) 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. OUTPUT:
- OPEN COLLECTOR OUTPUT. RATING 9 TO 24VDC. 100mA MAX LOAD
 - 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 TRUTH TABLE.
- D. CONNECTIONS:
- SIX POSITION CONNECTOR
 - HIROSE ELECTRIC CO LTD. PART NUMBER DF11-6DP-2DSA.
 - SEE PIN-OUT TABLE.

PIN	DESCRIPTION	NOTE
1	VGND	GROUND (MUST BE SAME AS PROX READER MODULE)
2	VSUPPLY	12 TO 24 VDC POWER SUPPLY INPUT (MAY BE CONNECTED TO PROX READER VCC INPUT)
3	N/C	NO CONNECT
4	CONTROL SIGNAL	COMMAND INPUT (9VDC UP TO SUPPLY VOLTAGE, 100 MILLISECONDS MINIMUM)
5	ELECTRONIC LOCK STATUS	OPEN COLLECTOR OUTPUT (RATED FOR VSUPPLY, 100mA MAX. LOAD)
6	MECHANICAL LOCK STATUS	OPEN COLLECTOR OUTPUT (RATED FOR VSUPPLY 100mA MAX. LOAD)

- E. WIRE HARNESS (NOT INCLUDED)
- SOUTHCO P/N: EA-W01-100 *, SEE ALSO J-EA-W01 FROM ACTUATOR MODULE TO STRIPPED AND TINNED END LENGTH 1000MM
- *CONTACT SOUTHCO FOR OTHER LENGTHS



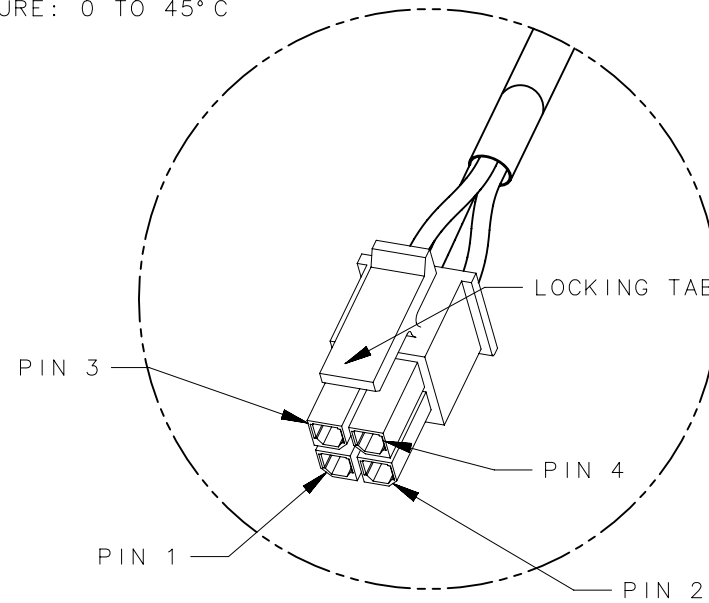
ACTUATOR
PIN-OUT DIAGRAM
(SEE NOTE D)

PROXIMITY READER MODULE
ELECTRICAL SPECIFICATION:

- F. - SUPPLY VOLTAGE (VCC): 12VDC TO 24VDC
- OPERATING CURRENT: 60mA MAXIMUM (NO EXTERNAL DEVICES ATTACHED)
 - TRANSMIT FREQUENCY: 13.56 MHz
 - DATA SIGNAL VOLTAGE: 5VDC
 - DATA PULSE INTERVAL TIME: 40 MICRO-SECONDS
 - DATA SIGNAL DELAY: 2ms
 - SUPPORTS 4 AND 7 BYTE UID
 - ISO 14443A COMPLIANT
- G. PROX READER CONNECTIONS:
- 4 POSITION CONNECTOR
 - MOLEX, 3.mm 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.

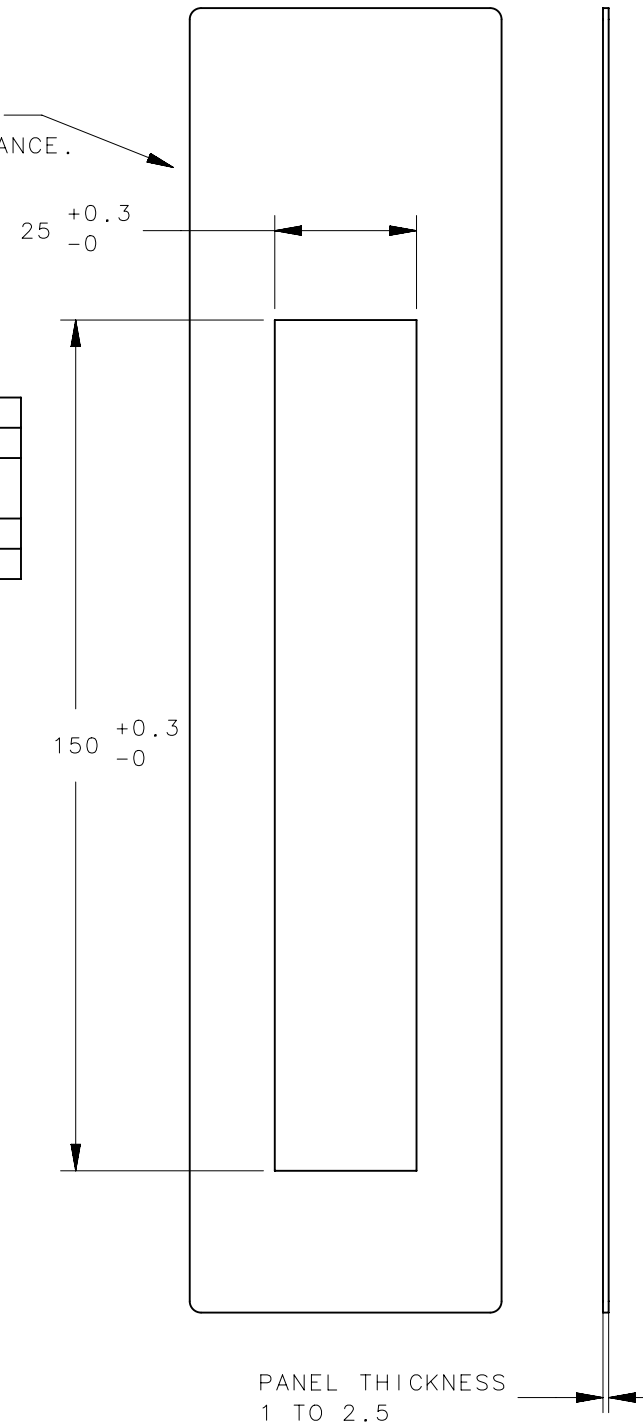
PIN	WIRE COLOR	DESCRIPTION	NOTE
1	BLACK	GND	GROUND (MUST BE SAME AS ACTUATOR PORTION)
2	RED	VCC	12 TO 24VDC POWER SUPPLY INPUT (MAY BE CONNECTED TO ACTUATOR MODULE V _{SUPPLY} INPUT)
3	GREEN	DATA0	DATA0 OUTPUT
4	WHITE	DATA1	DATA1 OUTPUT

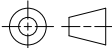
- H. WIRE HARNESS (NOT INCLUDED):
- SOUTHCO P/N: EA-W23-503 *, SEE ALSO J-EA-W23-X03 FROM PROXIMITY MODULE TO STRIPPED AND TINNED LENGTH 5000MM.
 - *CONTACT SOUTHCO FOR OTHER LENGTHS AND MODELS
- I. SEE H3-EM-66-100 ELECTRONIC SWINGHANDLE OPERATING INSTRUCTIONS FOR MORE INFORMATION.
- J. OPERATING TEMPERATURE: 0 TO 45°C

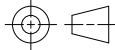


PROX READER PIN-OUT DIAGRAM
(SEE NOTE G)
SCALE 2:1

SEE SHEET 1, NOTE 2
FOR FRAME EDGE DISTANCE.



	THIRD ANGLE PROJECTION		southco® CONNECT • CREATE • INNOVATE			
	MILLIMETERS [IN]		DESCRIPTION H3-EM ELECTRONIC SWINGHANDLE WITH RFID READER WITH WIEGAND DATA OUTPUT, iCLASS UID			
	TOLERANCES UNLESS OTHERWISE NOTED					
	ALL DIMENSIONS WITHOUT TOLERANCES ARE FOR REFERENCE ONLY.		SIZE A3	SYSTEM NX	DWG NO. J-H3-EM-66-100	
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		DRAWN BY NAM/WB	DATE 09SEP2014	SCALE 1:1	SHEET 3 OF 4

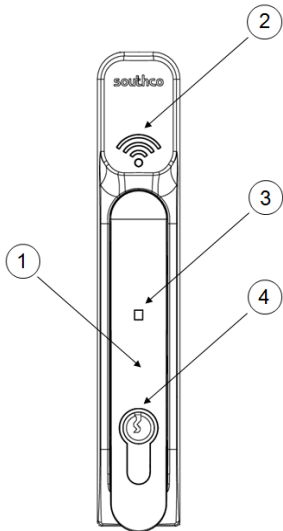
6		5		4		3		2		1																																																																									
								REVISION HISTORY																																																																											
								REV	DATE	BY	DESCRIPTION																																																																								
								D	13NOV2017	CBI/VK	PRN: P2017-3023																																																																								
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																																																																															
ELECTRONIC SWINGHANDLE MATERIALS																																																																																			
H3-EM-66-LLL																																																																																			
COMPONENT	MATERIAL	FINISH			NOTE																																																																														
CIRCUT 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	30% GF NYLON (UL94- V0)	BLACK (A&B SURFACES VD136)																																																																																	
HANDLE MOULDING	30% GF NYLON (UL94- V0)	BLACK (A&B SURFACES VD136)																																																																																	
LIGHT PIPE	PC (LEXAN V0)	CLEAR																																																																																	
BOTTOM MOUNTING BRACKET	30% GF NYLON (UL94- V0)	BLACK																																																																																	
SLIDE	30% GF NYLON (UL94- V0)	WHITE																																																																																	
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	30% 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																																																																														
SLIDE SPRING	302 STAINLESS STEEL	NATURAL																																																																																	
														THIRD ANGLE PROJECTION				 CONNECT • CREATE • INNOVATE																																																																	
														MILLIMETERS [IN]																																																																					
														TOLERANCES UNLESS OTHERWISE NOTED		DESCRIPTION H3-EM ELECTRONIC SWINGHANDLE WITH RFID READER WITH WIEGAND DATA OUTPUT, iCLASS UID		SIZE A3		SYSTEM NX		DWG NO. J-H3-EM-66-100																																																													
														ALL DIMENSIONS WITHOUT TOLERANCES ARE FOR REFERENCE ONLY.																																																																					
														PER ASME Y14.5M-1994		DRAWN BY NAM/WB		DATE 09SEP2014		SCALE 1:1		SHEET 4 OF 4																																																													
														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.																																																																					
												6												5												4												3												2												1											

H3-EM-66-100 Electronic Swinghandle Operating Instructions

Package Contents

- H3-EM-66-x00 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 (qty1)
- 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-66-x00 Electronic Swinghandle with RFID Reader



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

Features

- Installed 13.56MHz RFID reader module with Wiegand data output
- Compatible with 13.56Mhz RFID cards with 4, 7, or 8byte Unique Identifiers (UID)
- 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
- DIN lock manual override
- Accommodates both left and right doors
- For indoor use only

WARNING: The H3-EM-66-000 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 to 24VDC (NOTE: Status LED will blink red if the supply voltage is out of range.)
Standby Current:	50mA maximum at 12VDC
Operating Current:	200mA maximum at 12VDC (with no external mechanical load applied to handle)
Stall Current:	1A maximum (at 12VDC, limited to 2 seconds)
Operating Transit Time:	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.)
Electronic Unlock Time:	3 seconds minimum
Open Collector Outputs:	Rated for V_{SUPPLY} , 100mA maximum load

RFID Reader Module

Supply Voltage (V_{CC}):	12VDC to 24VDC
Operating Current:	60mA maximum (no external devices attached)
Transmit Frequency:	13.56MHz
DATA Signal Voltage:	5VDC
DATA Pulse Interval Time:	40µs
DATA Signal Delay:	2ms
Output Format:	Reverse Byte Order with Upper and Lower Parity Bits

Mounting and Installation

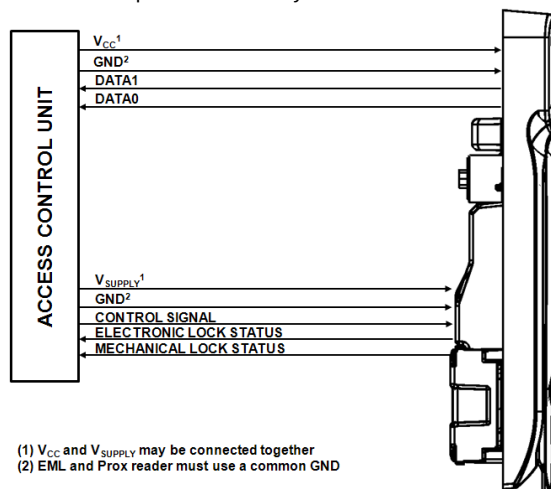
Please refer to Southco trade drawing J-H3-EM-66-100 for mounting and installation details.

NOTE: Use a #1 POZIDRIV® driver when installing the mounting screws. See Southco trade drawing J-H3-EM-66-100 for additional details.

Wiring Diagrams

The H3-EM-66-x00 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.

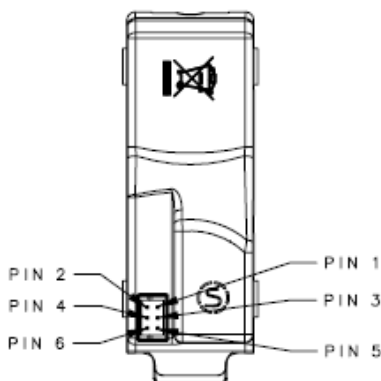
These two modules operate independently of each other and require connection to an access control unit (**not provided**), as illustrated below, for the entire product to be fully functional.



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

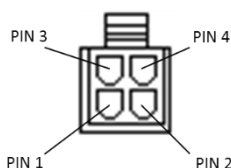
H3-EM-66-100 Electronic Swinghandle Operating Instructions

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 (must be same as RFID reader module)
2	V _{SUPPLY}	12 to 24 VDC power supply input (may be connected to RFID reader V _{CC} input)
3	N/C	no connect
4	Control Signal	command input (9VDC up to supply voltage, 100 milliseconds minimum)
5	Electronic Lock Status	open collector output (rated for V _{SUPPLY} , 100mA max. load)
6	Mechanical Lock Status	open collector output (rated for V _{SUPPLY} , 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:

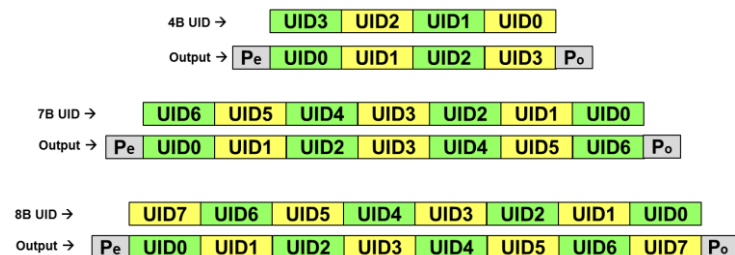


Pin	Wire Color	Description	Note
1	Black	GND	ground (must be same as actuator module)
2	Red	VCC	12 to 24VDC power supply input (may be connected to EML V _{SUPPLY} input)
3	Green	DATA0	DATA0 output
4	White	DATA1	DATA1 output

⚠ NOTE: The mating connectors/harnesses are not provided with the H3-EM-66-x00. Refer to Southco trade drawing J-H3-EM-66-100 for mating connector/harness requirements.

Wiegand Data Output

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.

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.

H3-EM-66-100 Electronic Swinghandle Operating Instructions

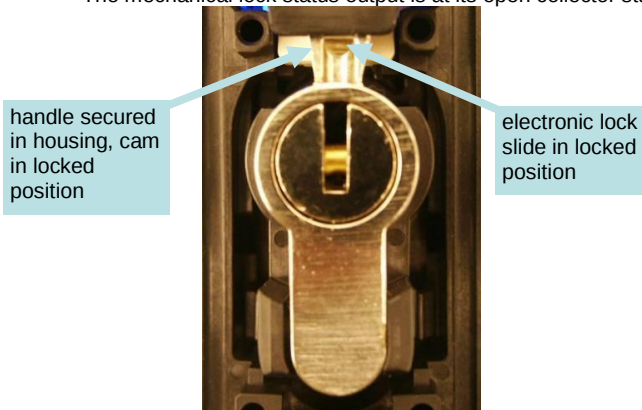
Status LED and Output Signals

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.

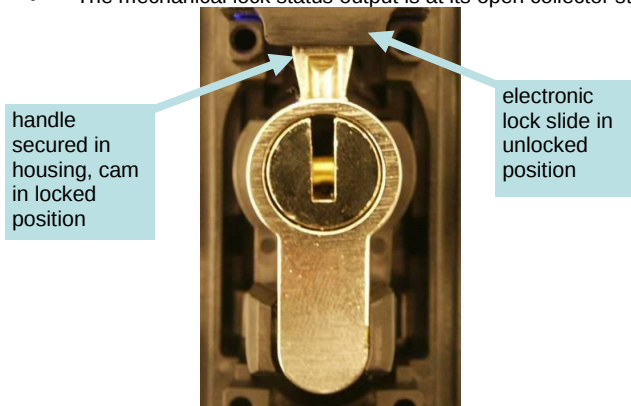


"Secured" State

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.



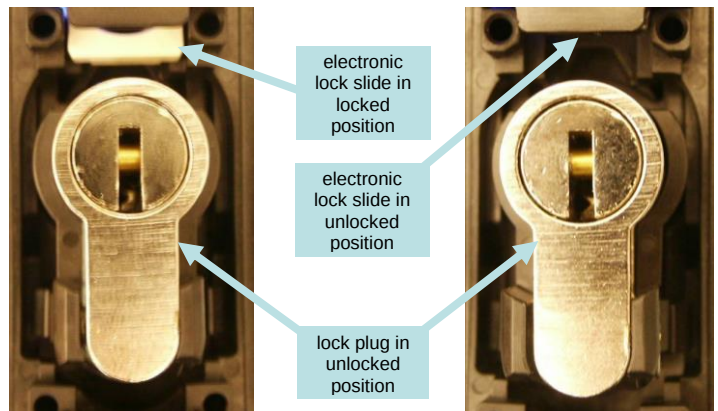
"Electronically Released" State

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.

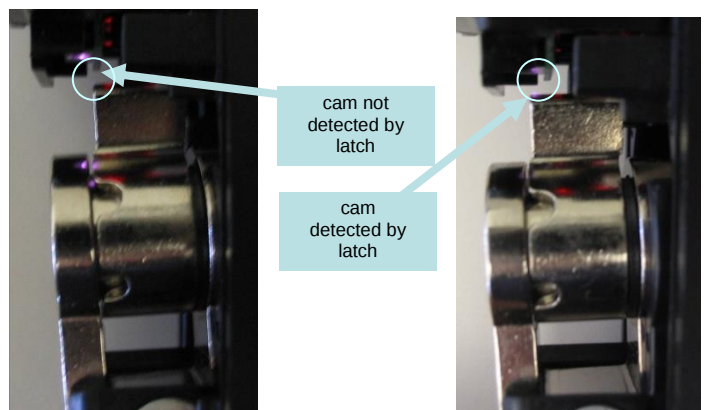


"Mechanically Released" State

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 locked 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

H3-EM-66-100 Electronic Swinghandle Operating Instructions

Electronic Lock Slide Error

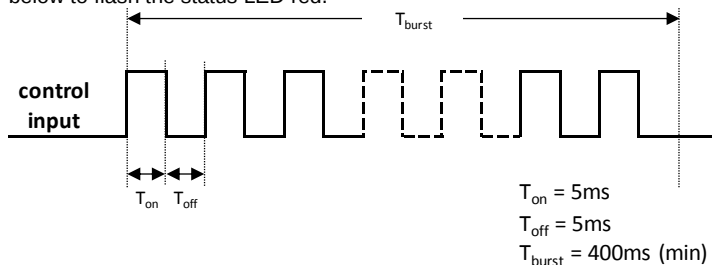
The electronic lock slide does not respond to the command input signal.

- 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.



POZIDRIV® is a registered trademark of the Phillips Screw Company

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.

