

6

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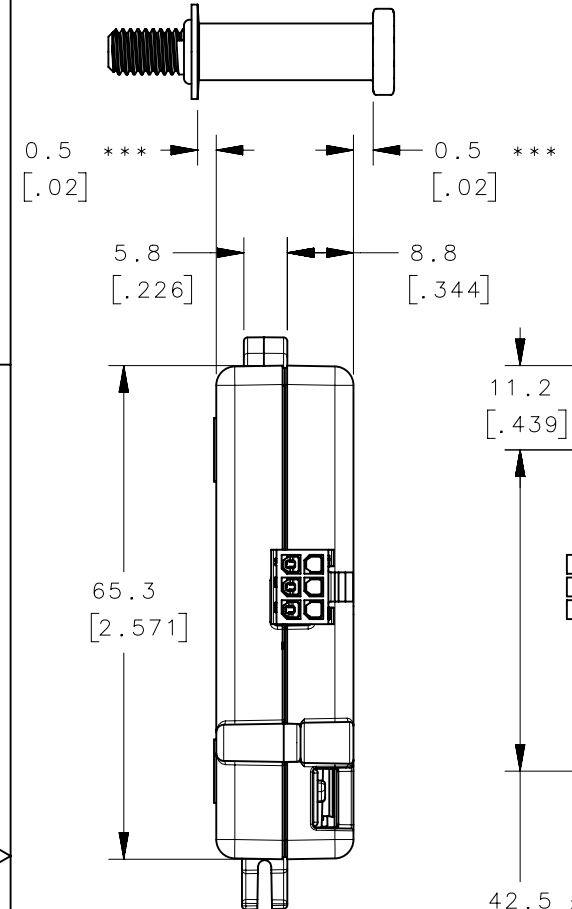
2

1

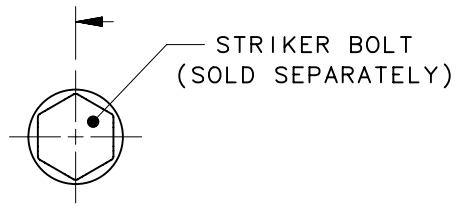
REVISION HISTORY			
REV	DATE	BY	DESCRIPTION
F	31MAY2022	SAK/MBT	PRN: P2022-1000

MINIMUM CLEARANCE TO HOUSING\*\*\*

D

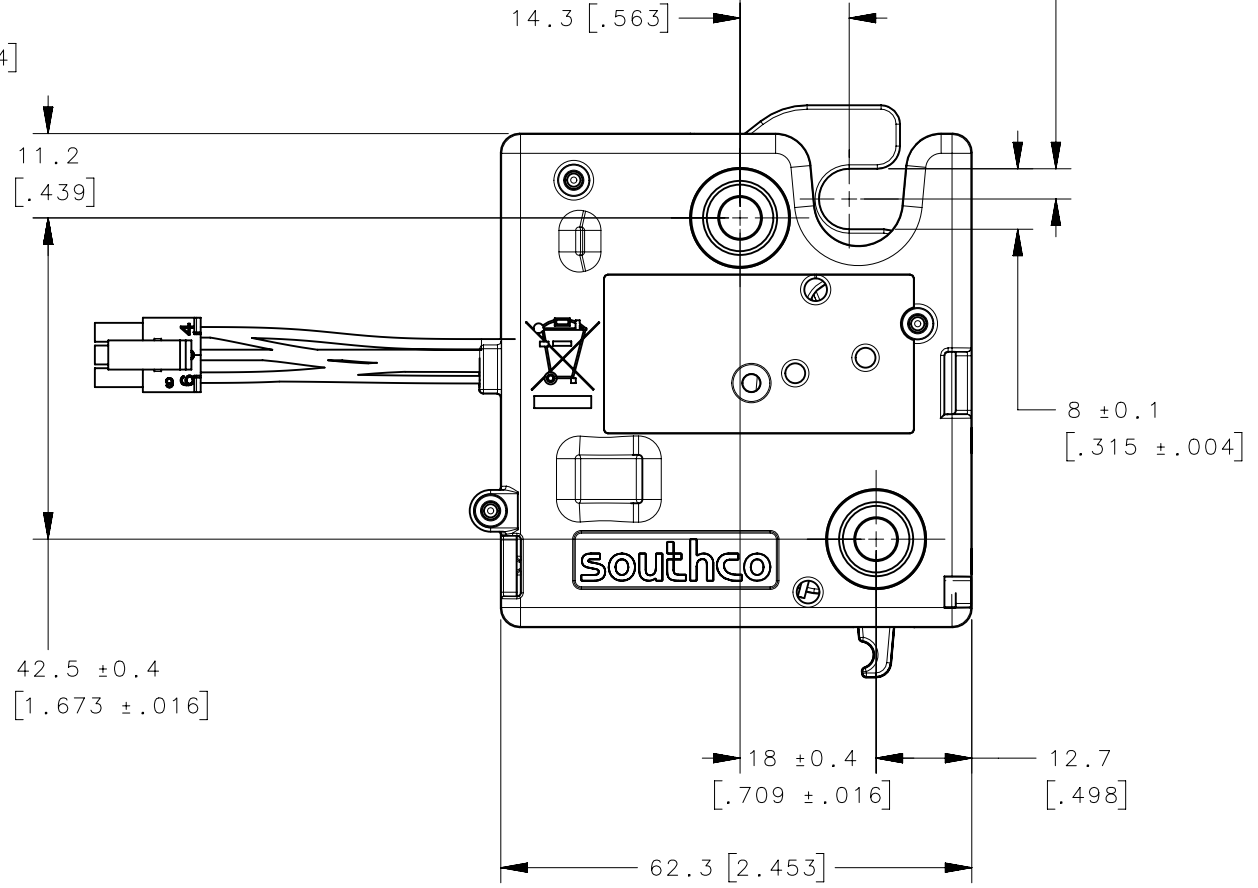


15.6 ±1.2  
[.614 ±.047]

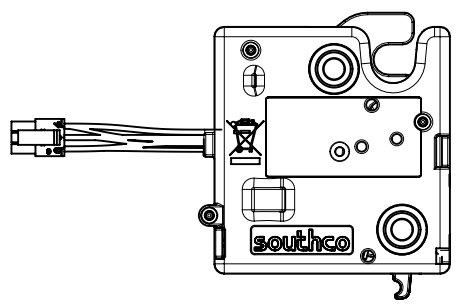
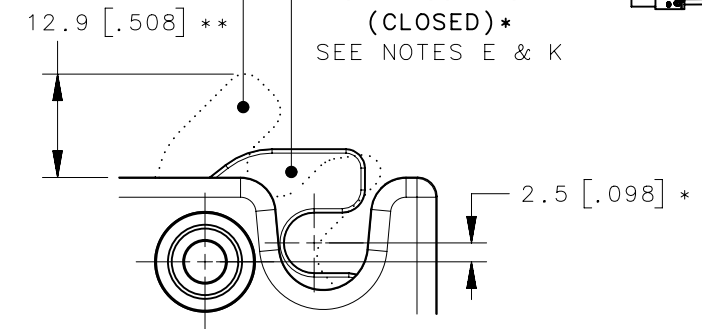


STRIKER BOLT  
(SOLD SEPARATELY)

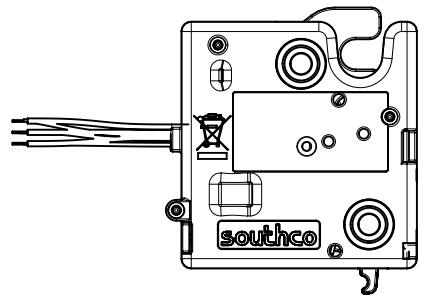
4 [.157] LATCHED  
2.5 [.098] WITH OVERTRAVEL



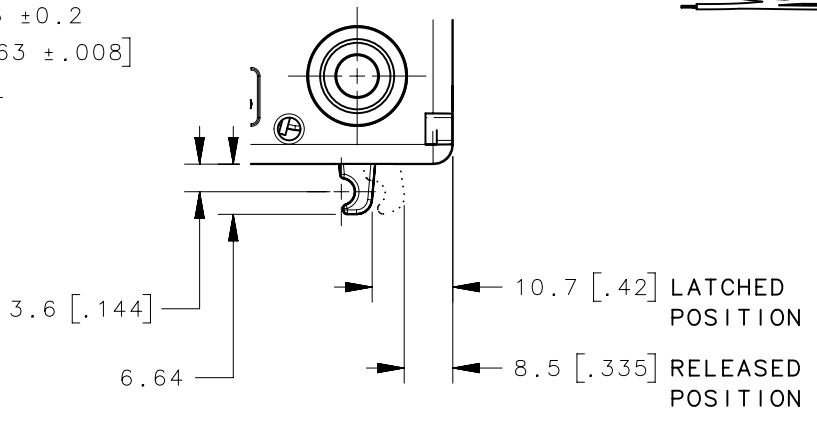
CAM POSITION (OPEN)\*\*  
CAM POSITION (CLOSED)\*  
SEE NOTES E & K



WITH CONNECTOR  
R4-EM-65-131  
R4-EM-64-131  
R4-EM-63-131



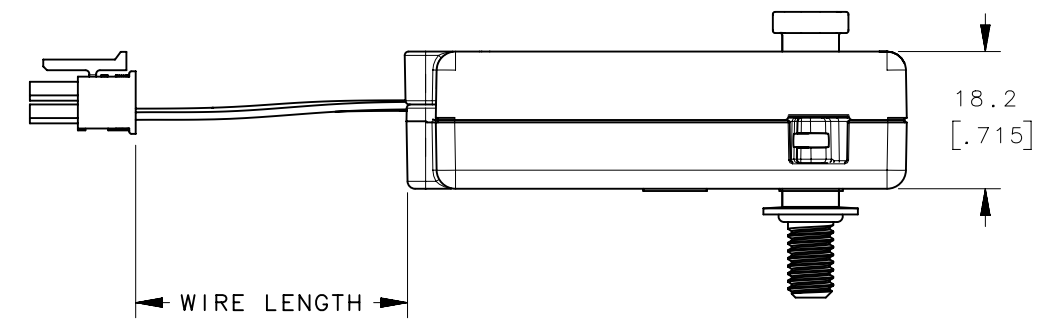
NO CONNECTOR  
R4-EM-65-132  
R4-EM-64-132  
R4-EM-63-132



C

B

A



LATCH PART NUMBERS				
ASSEMBLY PART NUMBER	MOUNTING HOLE OPTION	WIRE LENGTH	CONNECTOR	SWITCH
R4-EM-65-131	10-24 UNC THREAD	135MM ±10	YES	NO
R4-EM-64-131	M5 x0.8 THREAD			
R4-EM-63-131	Ø 5.5 THRU HOLE			
R4-EM-65-132	10-24 UNC THREAD	400MM	NO	
R4-EM-64-132	M5 x0.8 THREAD			
R4-EM-63-132	Ø 5.5 THRU HOLE			

THIRD ANGLE PROJECTION

MILLIMETERS [IN]

TOLERANCES UNLESS OTHERWISE NOTED

ALL DIMENSIONS WITHOUT TOLERANCES ARE FOR REFERENCE ONLY.

PROPRIETARY ITEM  
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PER ASME Y14.5M-1994

**southco**  
CONNECT · CREATE · INNOVATE

DESCRIPTION  
LIGHT DUTY R4-EM ASSEMBLY, DELAYED RE-LOCK

SIZE B SYSTEM NX DWG NO. J-R4-EM-60-131

DRAWN BY BGL/CLB DATE 19DEC2012 SCALE 1:1 SHEET 1 OF 2

6

5

4

3

2

1

NOTE:

- A. **MATERIAL AND FINISH:**  
HOUSING, CONTRAST RING, SWITCH COVER - UL94 PC/ABS  
CAM UL94 - VO GF15 PA6  
TRIGGER - UL94-VO GF6.5 PBT  
DRIVE CAM - POM  
PINS, SCREWS - STEEL, ZINC PLATED  
PIN PLATE SPRINGS - STAINLESS PASSIVATED
- B. **ELECTRICAL SPECIFICATION:**  
OPERATING VOLTAGE: 8 TO 26 VDC  
TYPICAL OPERATING CURRENT: LESS THAN 600 mA AT 12VDC  
PEAK/STALL OPERATING CURRENT: 1A MAX AT 12VDC [STALL LIMITED TO 1.4 SECOND]  
STANDBY CURRENT: TRIGGERED [SIGNAL HIGH]: LESS THAN 15mA AT 12 VDC  
UNTRIGGERED [SIGNAL LOW]: LESS THAN 100 MICROAMPS  
CONTROL SIGNAL HIGH (UNLOCK COMMAND): 8 TO 12VDC, 13 mA MAX  
CONTROL SIGNAL LOW (LOCK COMMAND): 0 TO 1VDC (OPEN)  
LATCH TRANSIT TIME TO RELEASE: 800 MILLISECONDS NO LOAD, 1 SECOND MAX.  
OPERATING TEMPERATURE RANGE: 0C TO 60C
- C. **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 1 AMP MINIMUM IS RECOMMENDED.  
-POWER MUST BE AVAILABLE TO OPERATE THE LATCH AND MUST REMAIN AVAILABLE DURING THE FULL RELEASE TRANSIT TIME OF THE LATCH.

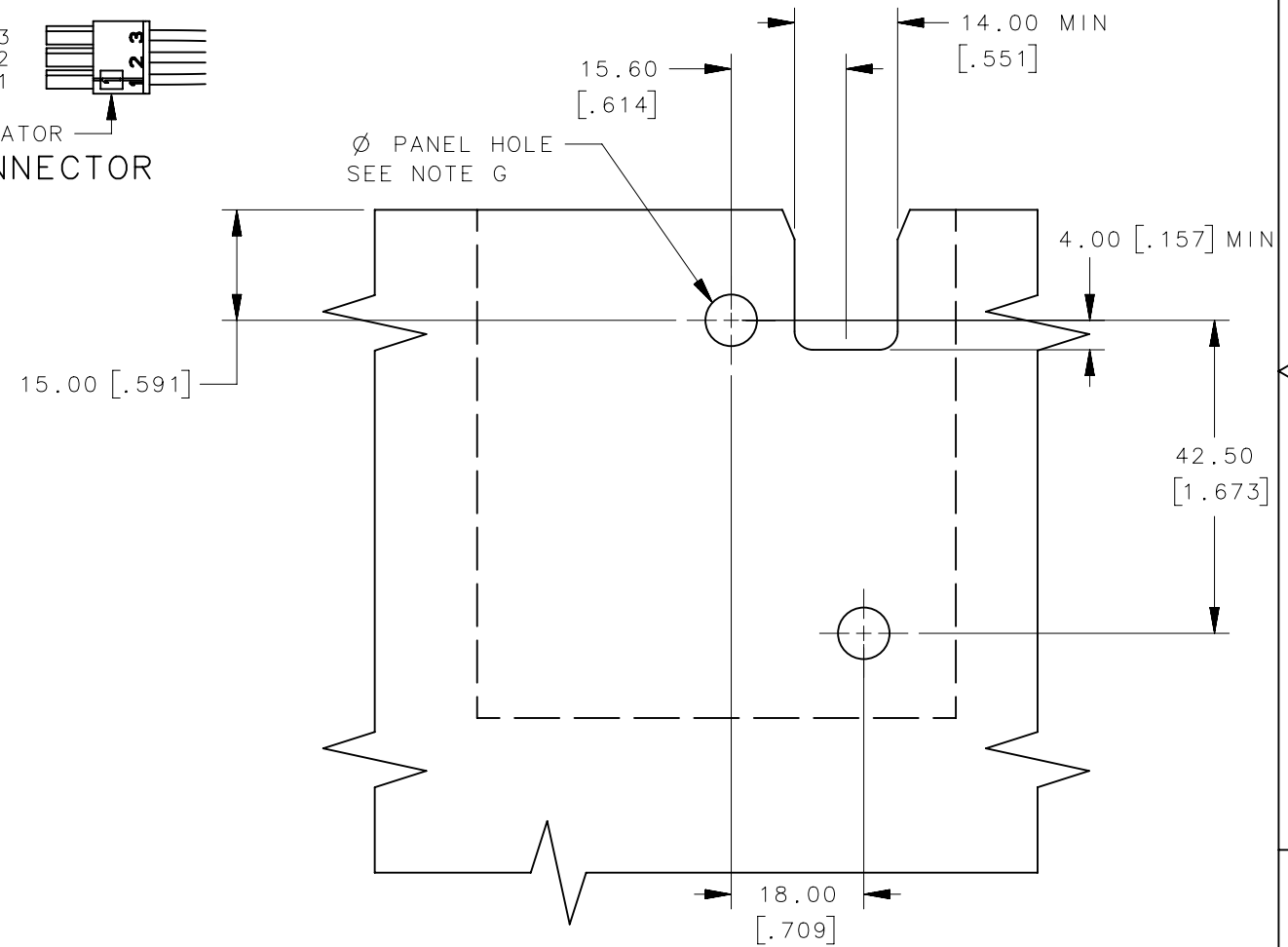
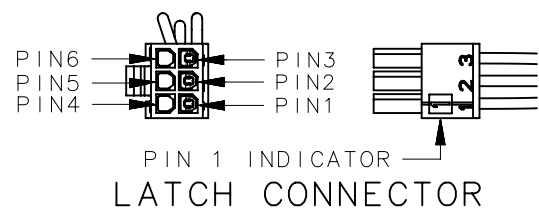
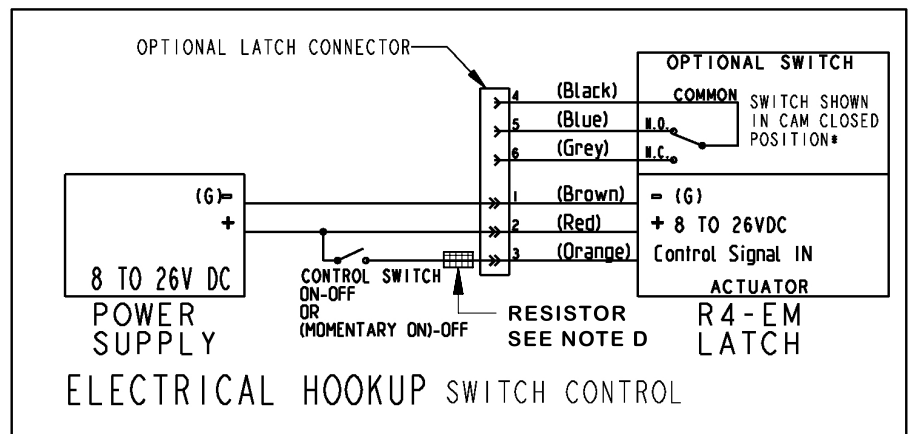
- CAUTION!** LATCH CAN BE DAMAGED IF WIRED INCORRECTLY, OR IF IMPROPER VOLTAGE IS APPLIED!  
WIRE COLOR CODE/CONNECTOR PIN ASSIGNMENT:  
PIN1: BROWN: GROUND (-)                      PIN4: BLACK: SWITCH COMMON  
PIN2: RED: POWER (-12V TYPICAL)        PIN5: BLUE: SWITCH N.O. CONTACT  
PIN3: ORANGE: CONTROL SIGNAL (+12V TYPICAL)    PIN6: SWITCH N.O. CONTACT
- D. **ELECTRICAL OPERATION:**  
TO UNLOCK OR RELEASE THE LATCH:  
PROVIDE THE FOLLOWING CONTROL SIGNAL TO THE ORANGE WIRE OR CONNECTOR PIN 3  
-PROVIDE 8 TO 12VDC (CONTROL SIGNAL HIGH) FOR A MINIMUM OF 50 MILLISECONDS (CONTACT SOUTHCO IF HIGHER COMMAND SIGNAL REQUIRED).  
-THE CONTROL SIGNAL CAN REMAIN HIGH FOR EXTENDED PERIODS OF TIME (WHEN THE CONTROL SIGNAL REMAINS HIGH FOR LONGER THAN 1 HOUR A RESISTOR SHOULD BE INSTALLED BETWEEN THE SUPPLY AND THE LATCH. SELECT RESISTOR VALUE FROM THE RESISTOR CHART BASED ON THE SUPPLY VOLTAGE TO MEET MINIMUM SPECIFICATIONS)  
-THE LATCH WILL STAY UNLOCKED FOR A MINIMUM OF 1 SECOND OR AS LONG AS THE SIGNAL IS HIGH  
TO LOCK THE LATCH:  
PROVIDE THE FOLLOWING CONTROL SIGNAL TO THE ORANGE WIRE OR CONNECTOR PIN 3  
-PROVIDE 0-1VDC (CONTROL SIGNAL LOW). POWER MUST BE AVAILABLE DURING TRANSIT TO LOCKED POSITION

- NOTE:  
-THE DOOR IS NOT LATCHED WHEN IN THE UNLOCKED POSITION. ENSURE THAT DOOR IS BIASED CLOSED OR DETENTED IN THE CLOSED POSITION. THE CAM MUST REMAIN IN THE CLOSED POSITION TO RE-LOCK  
-FROM THE LOCKED POSITION WITH THE CAM IN THE OPEN POSITION THE DOOR CAN BE PUSHED TO CLOSE AND WILL LOCK.
- E. **LATCH CONNECTOR (OPTIONAL)**  
MANUFACTURER: MOLEX, SERIES: MICROFIT 3.0  
-CONNECTOR RECEPTICAL 6 POSITION 3MM VERTICAL DUAL: MOLEX:P/N 43025-0600  
-CONTACTS: FEMALE CRIMP TERMINAL (SOCKET) MOLEX P/N 43030-0007  
-WIRE GAGE: 24 AWG STYLE 1007  
-WIRE LENGTH: SEE SHEET 1
- F. **MATE CONNECTOR FOR OPTIONAL LATCH CONNECTOR (NOT SUPPLIED)**  
MANUFACTURER: MOLEX, SERIES: MICROFIT 3.0  
-CONNECTOR PLUG 6 POSITION 3MM VERTICAL DUAL MOLEX P/N: 43020-0601  
-RECOMMENDED CONTACTS (6 MAXIMUM REQUIRED): MOLEX, MALE CRIMP TERMINAL (PIN) MOLEX P/N 43031-0007  
-RECOMMENDED WIRE GAGE: 24 AWG
- G. **MOUNTING:**  
-MOUNT THE LATCH SECURELY USING TWO (2) CAP SCREWS IN THE MOUNTING HOLES PROVIDED (SCREWS NOT PROVIDED)  
-MOUNTING HOLES ARE AVAILABLE WITH 10-24 UNC THREAD, M5x0.8 THREAD OR Ø5.5 THRU HOLE  
-MOUNTING SCREWS HAVE TO BE CAP SCREW STYLE ONLY.  
-MAXIMUM ALLOWABLE TORQUE ON THREADED MOUNTING SCREWS IS 230 N.cm (20 in. lbs)

- H. **MECHANICAL OPERATION**  
THE LATCH IS PROVIDED WITH A MECHANICAL TRIGGER TO RELEASE THE LATCH.  
THE MAXIMUM TRAVEL OF THE TRIGGER IS SHOWN ON SHEET 1. THE TRIGGER MOVES THROUGH ITS FULL TRAVEL DURING ELECTRICAL OPERATION OF THE LATCH.
- CAUTION!** IT IS IMPORTANT TO NOT OBSTRUCT THE MOTION OF THE TRIGGER DURING ELECTRICAL OPERATION TO PREVENT LONGTERM DAMAGE TO THE ELECTRICAL COMPONENTS IN THE LATCH.  
TWO HOLES PROVIDED CAN BE USED TO MOUNT MECHANICAL OVERRIDE LINKAGE RETAINING BRACKETS. STANDARD M3x1.34x8 SELF TAPPING SCREWS CAN BE USED FOR FASTENING. CONTACT SOUTHCO FOR MECHANICAL RELEASE CABLES AND ACTUATORS. AN OPTIONAL KIT WITH ONE CABLE MOUNTING BRACKET AND TWO SCREWS IS AVAILABLE AS PART NUMBER R4-EM-72 SEE CUSTOMER DRAWING J-R4-EM-72 FOR MORE INFORMATION
- I. STRIKER BOLT ASSEMBLY SOLD SEPARATELY  
STRIKER BOLT PART NUMBER: R4-90-511-20, REFER TO CUSTOMER DRAWING J-R4-90-511-20 FOR ADDITIONAL INFORMATION
- J. CAM TORSION SPRING KICK OUT TORQUE UPON UNLOCKING FROM CLOSED POSITION: 7.5 N-m.
- K. PACKAGED IN INDIVIDUAL BOXES OR ADD -1 TO PART NUMBER FOR BULK PACKAGING  
EXAMPLE: R4-EM-63-131  
R4-EM-63-131-1

REVISION HISTORY			
REV	DATE	BY	DESCRIPTION
F	31MAY2022	SAK/MBT	PRN:P2022-1000

RESISTOR CHART		
SUPPLY VOLTAGE	STANDARD RESISTOR VALUE	RESISTOR
26	2.26kΩ	RESISTOR CASE STYLE: AXIAL LEADED POWER RATING: 250mW RESISTANCE TOLERANCE: ±1% RESISTOR ELEMENT TYPE: METAL FILM TEMPERATURE COEFFICIENT: ±50ppm/°C
24	2.00kΩ	
22	1.78kΩ	
20	1.50kΩ	
18	1.27kΩ	
16	1.00kΩ	
14	750Ω	
12	499Ω	
10	255Ω	



THIRD ANGLE PROJECTION		
MILLIMETERS [IN]		
TOLERANCES UNLESS OTHERWISE NOTED	DESCRIPTION	
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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 B	SYSTEM NX
PER ASME Y14.5M-1994	DWG NO. J-R4-EM-60-131	SCALE 1:1
	DRAWN BY BGL/CLB	DATE 19DEC2012
		SHEET 2 OF 2