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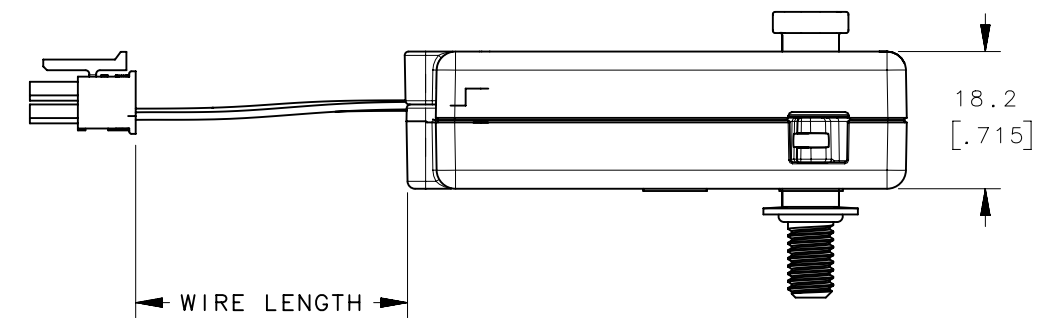
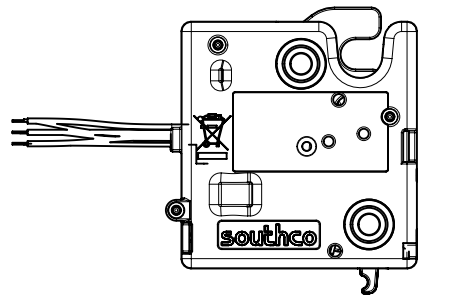
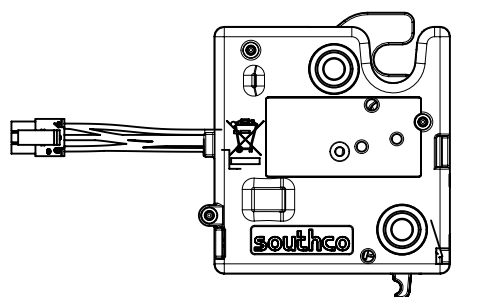
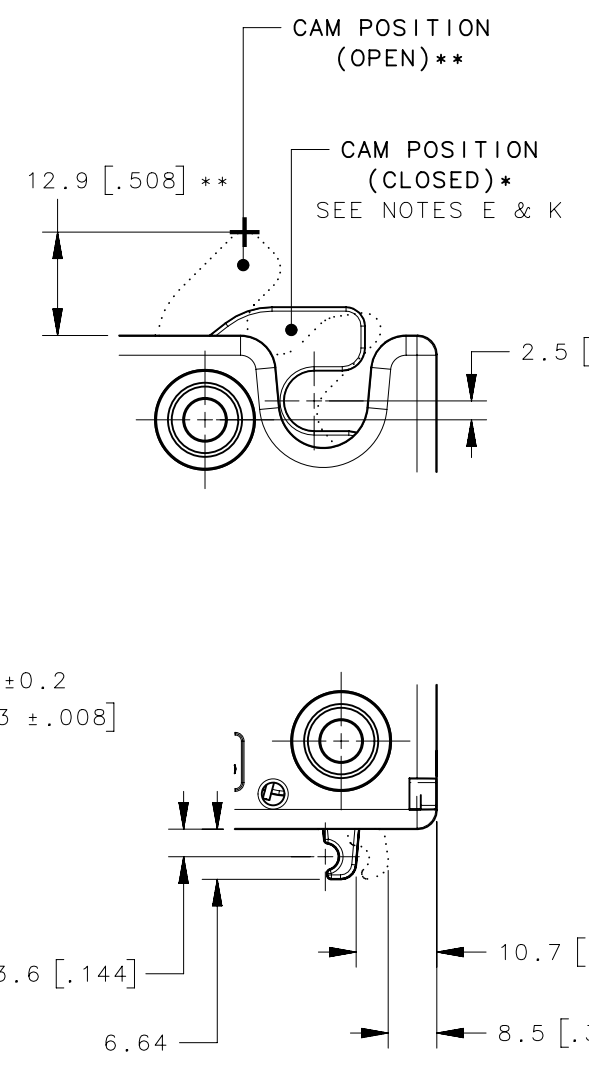
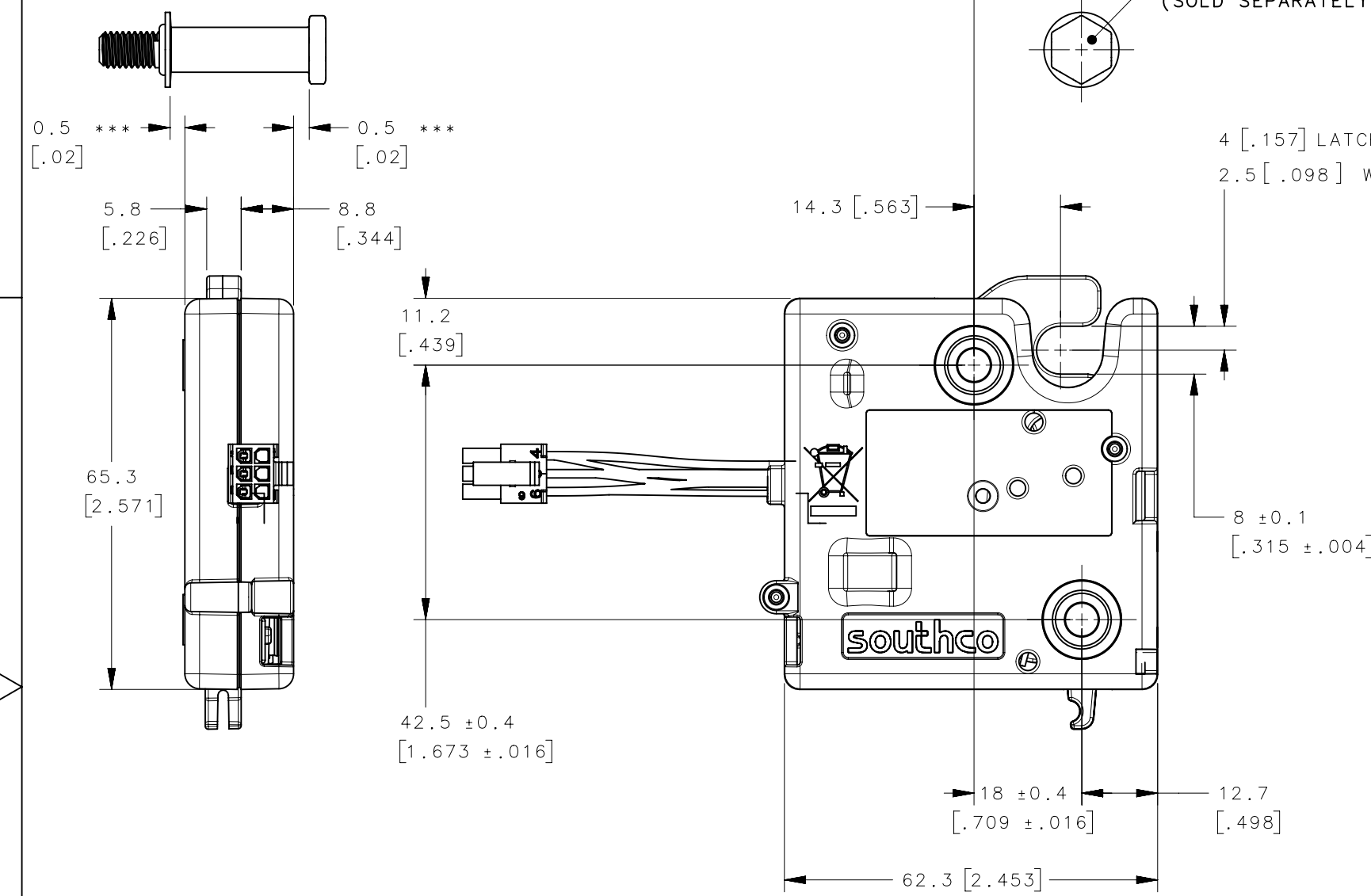
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REVISION HISTORY			
REV	DATE	BY	DESCRIPTION
1	23JUN2022	SAK/MBT	PRN: P2022-1176

MINIMUM CLEARANCE TO HOUSING***



LATCH PART NUMBERS				
ASSEMBLY PART NUMBER	MOUNTING HOLE OPTION	WIRE LENGTH	CONNECTOR	SWITCH
R4-EM-45-131	10-24 UNC THREAD	135MM ±10	YES	NO
R4-EM-44-131	M5 x0.8 THREAD			
R4-EM-43-131	Ø 5.5 THRU HOLE			
R4-EM-45-132	10-24 UNC THREAD	400MM	NO	
R4-EM-44-132	M5 x0.8 THREAD			
R4-EM-43-132	Ø 5.5 THRU HOLE			

THIRD ANGLE PROJECTION

MILLIMETERS [IN]

TOLERANCES UNLESS OTHERWISE NOTED

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PER ASME Y14.5M-1994

southco
CONNECT · CREATE · INNOVATE

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

SIZE B SYSTEM NX DWG NO. J-R4-EM-40-131

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

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REVISION HISTORY			
REV	DATE	BY	DESCRIPTION
1	23JUN2022	SAK/MBT	PRN: P2022-1176

NOTE:

A. MATERIAL AND FINISH:

HOUSING, CONTRAST RING, AND SWITCH COVER - PC/ABS, UL94-V-0 RATED
 CAM - PBT, GF15, UL94-V-0 RATED
 TRIGGER - PBT, GF6.5, UL-94-V-0 RATED
 DRIVE CAM - POM
 PINS, SCREWS - STEEL, ZINC PLATED
 PIN PLATE AND 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 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 (-)
 PIN2: RED: POWER (-12V TYPICAL)
 PIN3: ORANGE: CONTROL SIGNAL (+12V TYPICAL)

D. ELECTRICAL OPERATION:

TO RELEASE OR TRIGGER 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)
 ALTERNATE OPERATING MODE: TRIGGER ON POWER UP
 -CONNECT CONTROL WIRE (ORANGE) TO POWER (RED)
 -CONNECT POWER AND GROUND. LATCH WILL TRIGGER UPON POWER UP.
 -POWER MUST BE AVAILABLE FOR A MINIMUM OF 1 SECOND
 -POWER CAN REMAIN ON INDEFINITELY PER CONTROL SIGNAL INFORMATION ABOVE.
 -POWER MUST BE REMOVED TO RETRIGGER THE LATCH

WARNING! SWITCH CIRCUIT IS NOT FUSED OR ELECTRONICALLY PROTECTED. USE APPROPRIATE EXTERNAL CIRCUIT PROTECTION. CORRECTLY WIRE SWITCH PER ELECTRICAL HOOKUP DIAGRAM AND DO NOT SHORT CIRCUIT. A SHORT CIRCUIT CAN DAMAGE LATCH AND MAY POSE AN ELECTRICAL FIRE HAZARD.

E. LATCH CONNECTOR (OPTIONAL)

MANUFACTURER: MOLEX, SERIES: MICROFIT 3.0
 -CONNECTOR RECEPTICAL 6POSITION 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. MALE CONNECTOR FOR OPTIONAL LATCH CONNECTOR (NOT SUPPLIED)

MANUFACTURER: MOLEX, SERIES: MICROFIT 3.0
 -CONNECTOR PLUG 6 POSITION 3MM VERTICLE 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
 -MAXIMUM ALLOWABLE TORQUE ON THREADED MOUNTING SCREWS IS 230 N.cm (20 in. lbs)

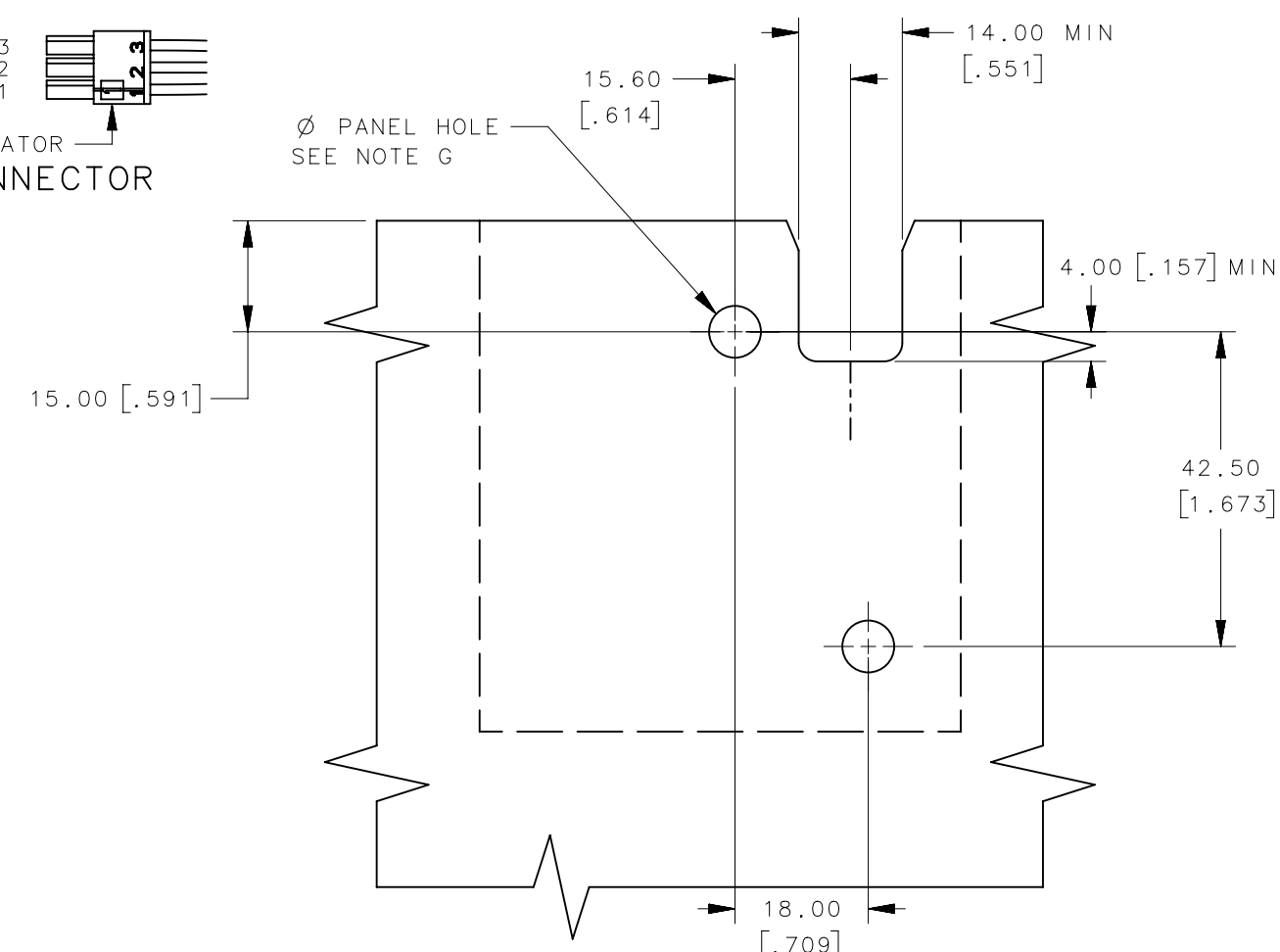
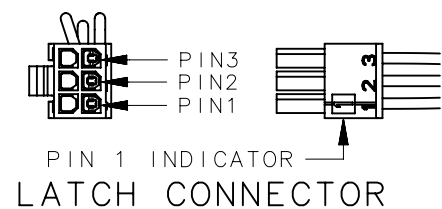
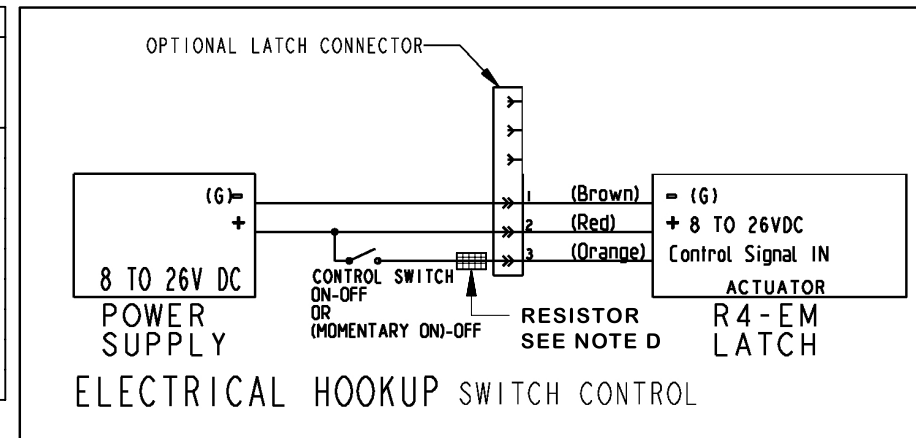
H. MECHANICAL OPERATION

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: 30 N-mm.
- K. PACKAGED IN INDIVIDUAL BOXES OR ADD -1 TO PART NUMBER FOR BULK PACKAGING
 EXAMPLE: R4-EM-45-131
 R4-EM-45-131-1

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]			
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PER ASME Y14.5M-1994		SIZE B SYSTEM NX DWG NO. J-R4-EM-40-131	
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