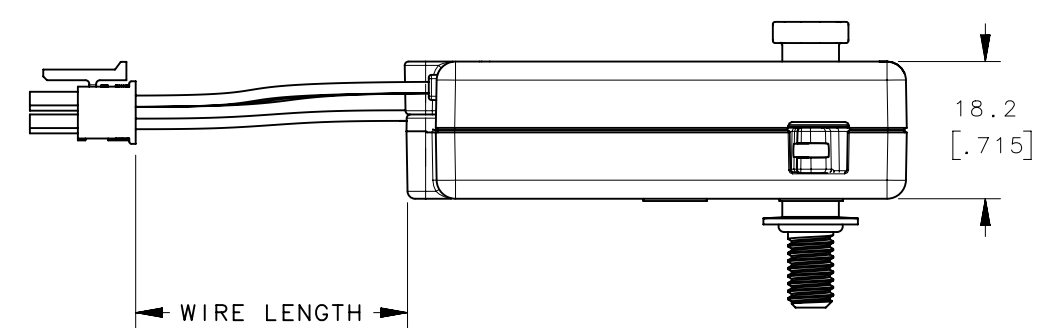
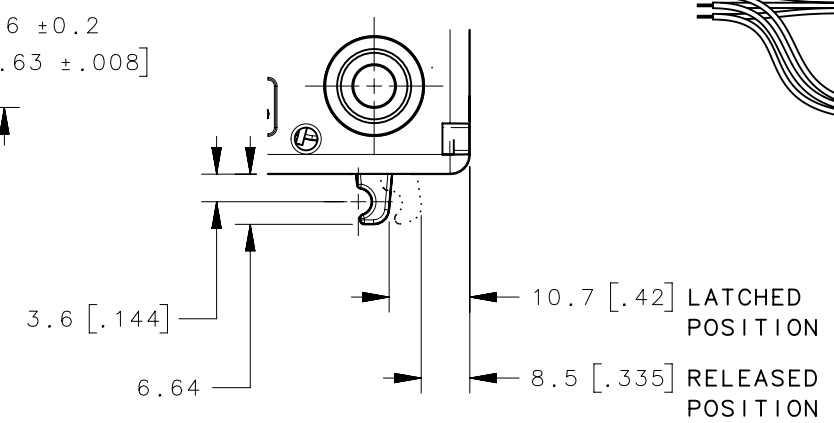
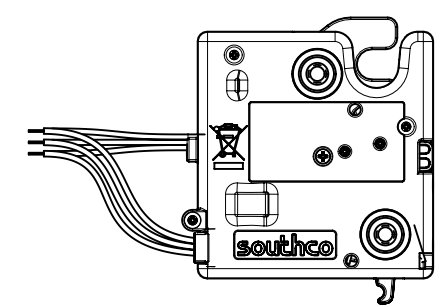
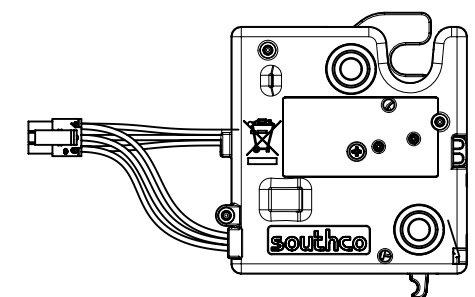
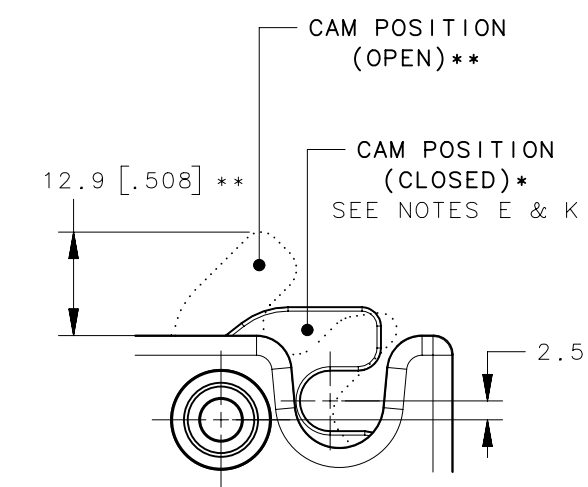
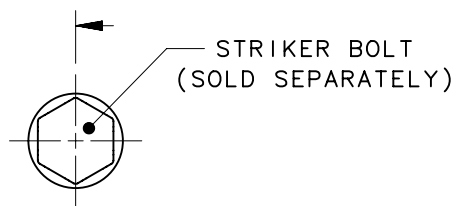
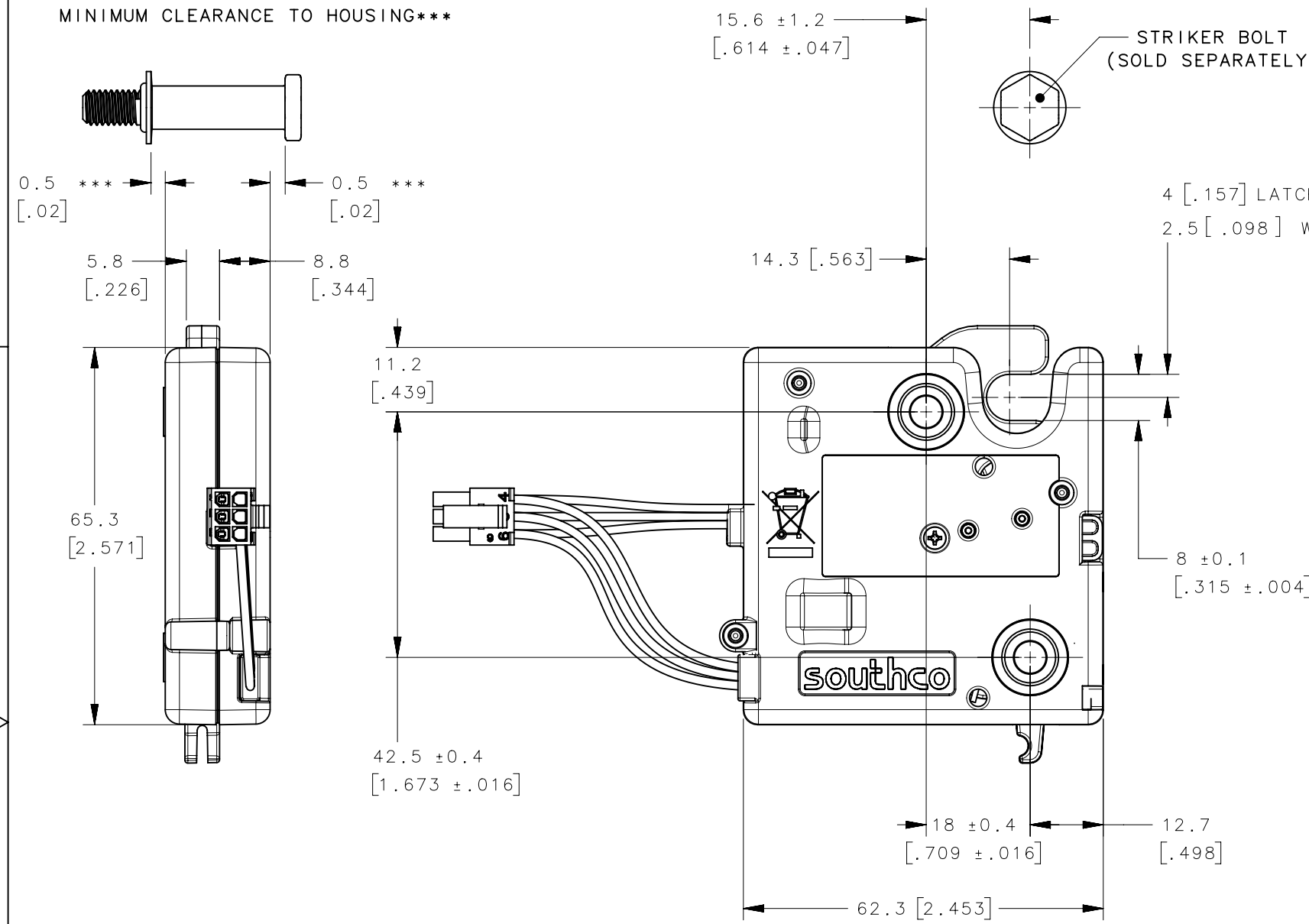


REVISION HISTORY			
REV	DATE	BY	DESCRIPTION
M	23JUN2022	SAK/MBT	PRN: P2022-1176

MINIMUM CLEARANCE TO HOUSING***



LATCH PART NUMBERS				
ASSEMBLY PART NUMBER	MOUNTING HOLE OPTION	WIRE LENGTH	CONNECTOR	SWITCH
R4-EM-45-161	10-24 UNC THREAD	135MM ±10	YES	YES
R4-EM-44-161	M5 x0.8 THREAD			
R4-EM-43-161	Ø 5.5 THRU HOLE			
R4-EM-45-162	10-24 UNC THREAD	400MM	NO	
R4-EM-44-162	M5 x0.8 THREAD			
R4-EM-43-162	Ø 5.5 THRU HOLE			

THIRD ANGLE PROJECTION

MILLIMETERS [IN]

TOLERANCES UNLESS OTHERWISE NOTED

ALL DIMENSIONS WITHOUT TOLERANCES ARE FOR REFERENCE ONLY.

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

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

SIZE B SYSTEM NX DWG NO. J-R4-EM-40-161

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

southco
CONNECT · CREATE · INNOVATE

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)
PIN4: BLACK: SWITCH COMMON
PIN5: BLUE: SWITCH N.O. CONTACT
PIN6: GREY: SWITCH N.C. CONTACT

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 WITHOUT RETRIGGERING THE LATCH (8-12 VDC ONLY)
-POWER MUST BE REMOVED TO RETRIGGER THE LATCH

E. OPTIONAL "CAM CLOSED" POSITION FEEDBACK SWITCH AVAILABLE:

-NORMALLY OPEN CONTACT (BLUE WIRE) PROVIDES SWITCH CLOSURE WHEN LATCH CAM IS CLOSED
-NORMALLY CLOSED CONTACT (GREY WIRE) PROVIDES SWITCH OPEN WHEN LATCH CAM IS CLOSED
-SWITCH COMMON (BLACK WIRE)
SWITCH RATING: 3A @ 12VDC MAX

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.

F. 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

G. 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

H. 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)

I. 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

J. 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

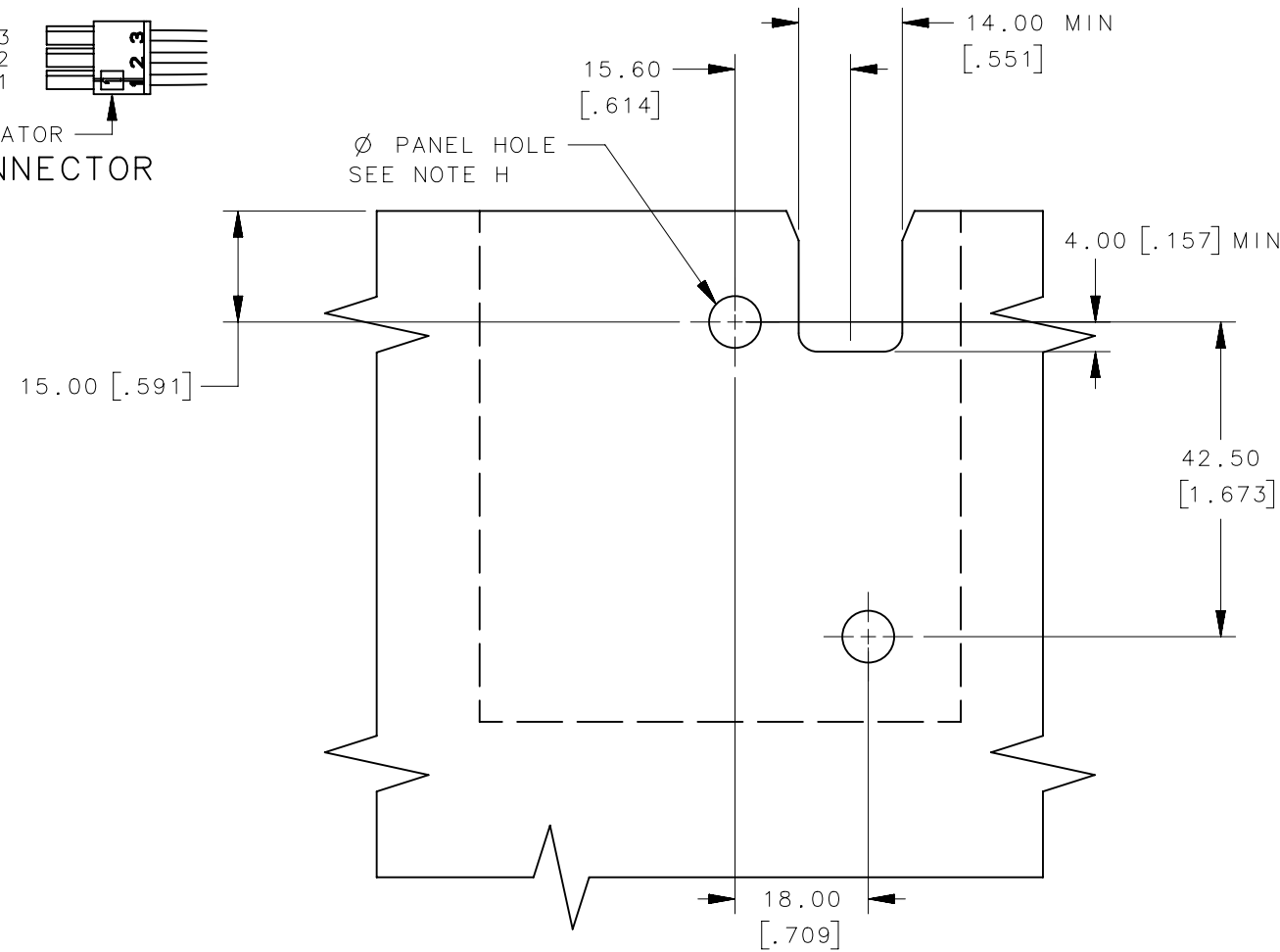
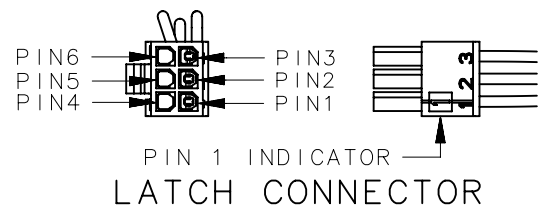
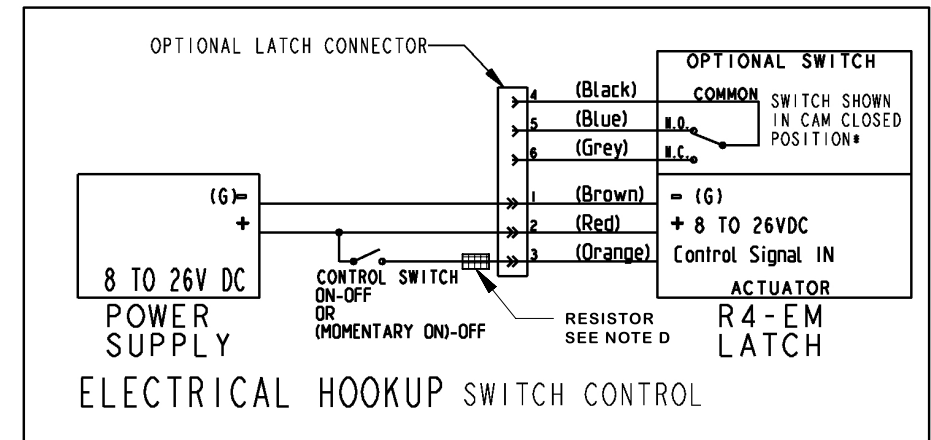
K. CAM TORSION SPRING KICK OUT TORQUE UPON UNLOCKING FROM CLOSED POSITION: 30 N-mm.

L. PACKAGED IN INDIVIDUAL BOXES OR ADD -1 TO PART NUMBER FOR BULK PACKAGING

EXAMPLE: R4-EM-45-161
R4-EM-45-161-1

REVISION HISTORY table with columns: REV, DATE, BY, DESCRIPTION. Row 1: M, 23JUN2022, SAK/MBT, PRN: P2022-1176

RESISTOR CHART table with columns: SUPPLY VOLTAGE, STANDARD RESISTOR VALUE, RESISTOR. Includes notes: RESISTOR CASE STYLE: AXIAL LEADED, POWER RATING: 250mW, RESISTANCE TOLERANCE: ±1%, RESISTOR ELEMENT TYPE: METAL FILM, TEMPERATURE COEFFICIENT: ±50ppm/°C



Technical drawing footer containing: THIRD ANGLE PROJECTION symbol, southco logo with tagline 'CONNECT · CREATE · INNOVATE', DESCRIPTION: LIGHT DUTY R4-EM ASSEMBLY, AUTO RE-LOCK WITH SWITCH, SIZE: B, SYSTEM: NX, DWG NO.: J-R4-EM-40-161, DRAWN BY: BGL/CLB, DATE: 19DEC2012, SCALE: 1:1, SHEET: 2 OF 2, PER ASME Y14.5M-1994, and PROPRIETARY ITEM notice.