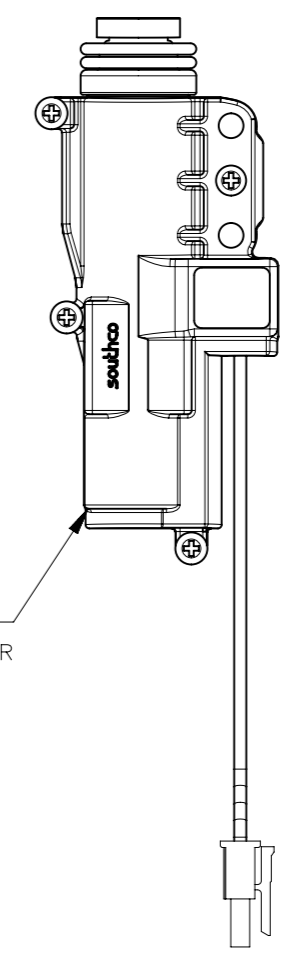


REVISION HISTORY			
REV	DATE	BY	DESCRIPTION
I	19AUG2019	DJG/MLL	PRN: P2019-1509

PERFORMANCE VALUES FOR AC-EM-100-50C1 ACTUATORS AND R4-10-11-501-10 ROTARY LATCH
ALSO SEE J-AC-EM-10-1, J-AC-EM-059-1, AND J-R4-10-11

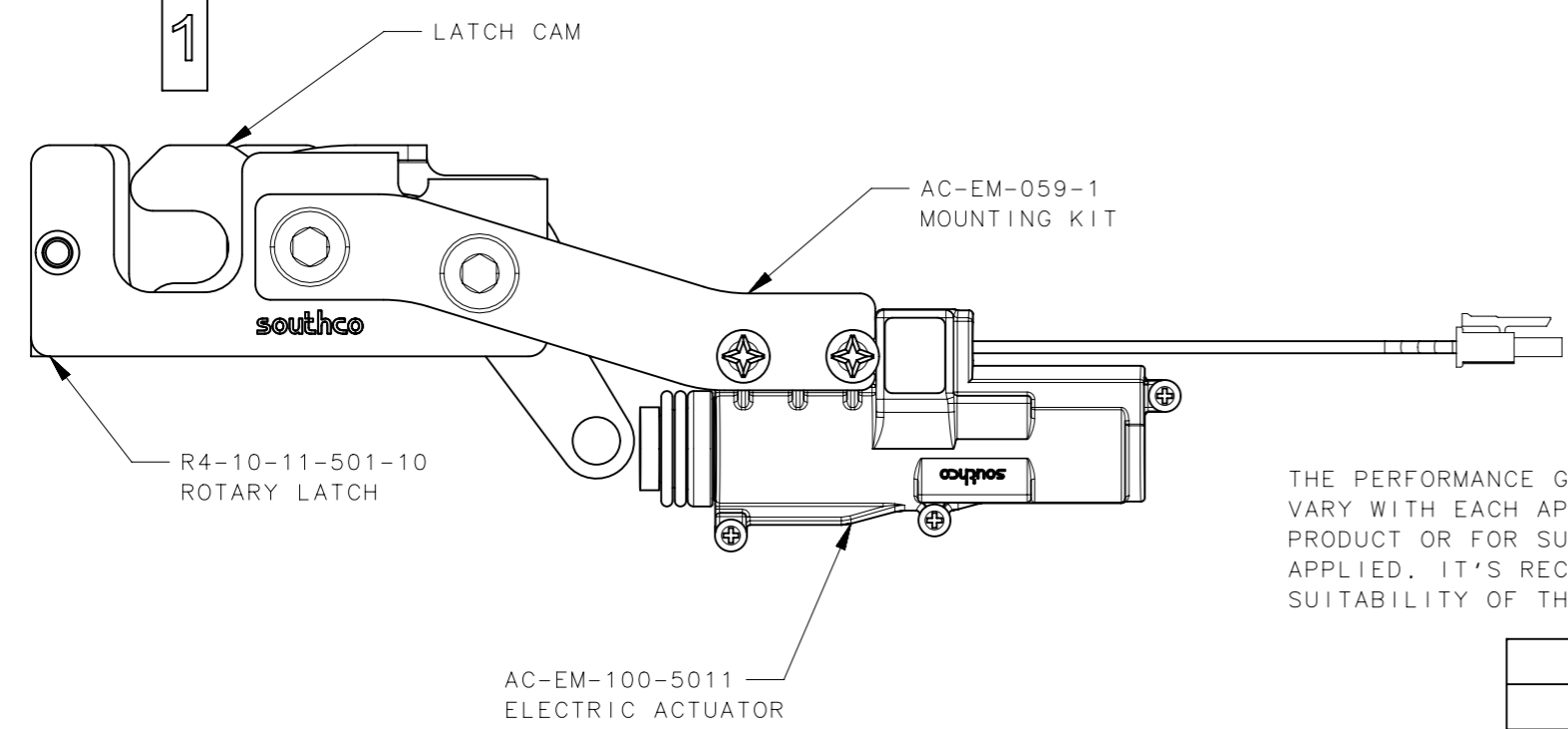
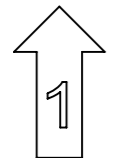
- TESTING PERFORMED ON AC-EM-100-5021 ACTUATOR.
SOME TESTS PERFORMED WITH OPTIONAL R4-10-11-501-10 ROTARY LATCH AND AC-EM-059-1 MOUNTING KIT.
- TENSILE FORCES (DIRECTION 1) ARE APPLIED AT THE NOMINAL LATERAL POSITION OF THE LATCH (ZERO MISALIGNMENT).
- CYCLE LIFE OF AC-EM-100-5021 ACTUATOR WHEN USED WITH R4-10-11-501-10 ROTARY LATCH.
 - CYCLE LIFE: 50,000 CYCLES
 - CYCLE TEMPERATURE PROFILE: 40,000 AT AMBIENT TEMP, 5000 AT -20C, 5,000 AT +60C
 - CYCLE LOAD: 44.5 N (10 lbf) TENSILE FORCE (DIRECTION 1) ON LATCH CAM.
 - SEE TD-R4-10-J FOR R4-10 LATCH CYCLE DATA
- MAXIMUM TENSILE FORCE (DIRECTION 1) ON THE CAM THAT THE R4-10 LATCH CAN RELEASE (OPEN) ELECTRICALLY ONE TIME:
 - 89.0 N (20.0 lbf) AT 4.25 VDC
 - 155.7 N (35.0 lbf) AT 5.00 VDC
 - 200.2 N (45.0 lbf) AT 5.75 VDC
- AVERAGE ULTIMATE TENSILE LOAD (DIRECTION 1) ON THE CAM BEFORE LATCH CAM FAILURE: SEE TD-R4-10-J FOR LATCH STRENGTH DATA
- MAXIMUM CONSTANT LOAD THE ACTUATOR CAN PUSH, WITH 7.5MM TRAVEL, IN DIRECTION 2 WHEN OPERATED ELECTRICALLY ONE TIME (WITHOUT R4-10 LATCH):
 - 24.5 N (5.5 lbf) AT 4.25 VDC
 - 35.6 N (8.0 lbf) AT 5.00 VDC
 - 44.5 N (10.0 lbf) AT 5.75 VDC
- OPERATING TEMPERATURE -20 TO 60 C

DIRECTION 2
ACTUATOR PUSH FORCE
SEE NOTE 6



AC-EM-100-5011
ELECTRIC ACTUATOR

DIRECTION 1
TENSILE FORCES
APPLIED TO CAM
SEE NOTES 3, 4, 5



SOUTHCO PERFORMANCE GUIDELINES

THE PERFORMANCE GUIDELINES SHOWN ON THIS PAGE ARE SUPPLIED AS A GENERAL GUIDE ONLY, AS CONDITIONS VARY WITH EACH APPLICATION AND METHOD OF INSTALLATION. STRENGTH DATA GIVEN IS FOR FAILURE OF THE PRODUCT OR FOR SUFFICIENT DEFORMATION TO MAKE THE PRODUCT INOPERABLE. NO SAFETY FACTOR HAS BEEN APPLIED. IT'S RECOMMENDED THAT THE USER REQUEST A PRODUCT SAMPLE FOR TESTING TO DETERMINE THE SUITABILITY OF THE PRODUCT FOR THE PURPOSE INTENDED AND THE USER'S PARTICULAR APPLICATION.

REF: trAC-33757
trAC-34107

THIRD ANGLE PROJECTION	 CONNECT • CREATE • INNOVATE		
TOLERANCES UNLESS OTHERWISE NOTED	DESCRIPTION ACTUATOR		
ALL DIMENSIONS WITHOUT TOLERANCES ARE FOR REFERENCE ONLY.	SIZE A3	SYSTEM NX	DWG NO. TD-AC-EM-10-1
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	DRAWN BY DJG/KAM	DATE 11JUL2018
		SCALE 1:1	SHEET 1 OF 2

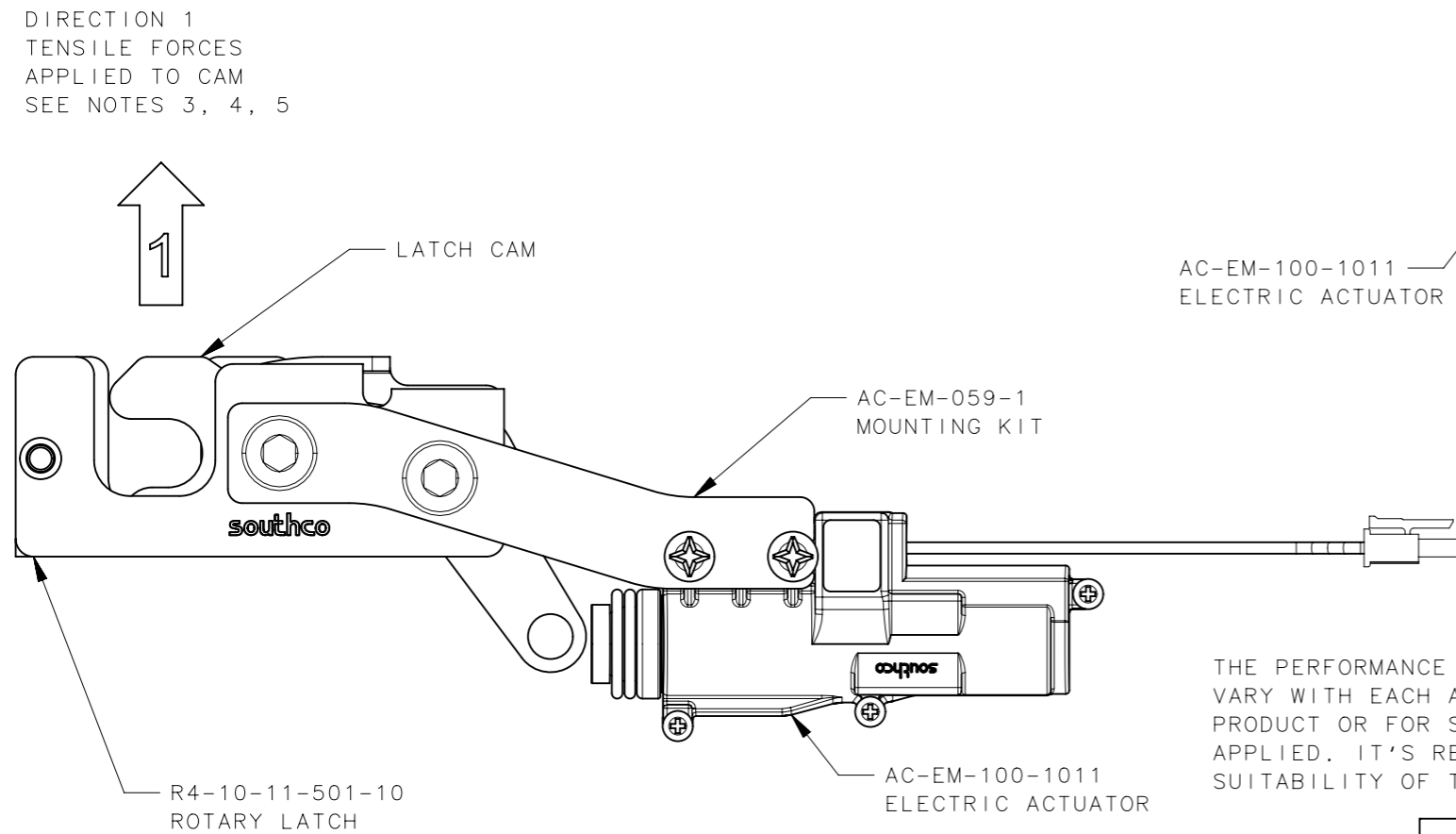
PERFORMANCE VALUES FOR AC-EM-100-10CS ACTUATORS AND R4-10-11-501-10 ROTARY LATCH
ALSO SEE J-AC-EM-10-1, J-AC-EM-059-1, AND J-R4-10-11

1. TESTING PERFORMED ON AC-EM-100-1021 ACTUATOR.
SOME TESTS PERFORMED WITH OPTIONAL R4-10-11-501-10 ROTARY LATCH AND AC-EM-059-1 MOUNTING KIT.
2. TENSILE FORCES (DIRECTION 1) ARE APPLIED AT THE NOMINAL LATERAL POSITION OF THE LATCH (ZERO MISALIGNMENT).
3. CYCLE LIFE OF AC-EM-100-1021 ACTUATOR WHEN USED WITH R4-10-11-501-10 ROTARY LATCH.
 - SEE TABLE 1 FOR CYCLE PROFILE
 - SEE TD-R4-10-J FOR R4-10 LATCH CYCLE DATA
4. MAXIMUM TENSILE FORCE (DIRECTION 1) ON THE CAM THAT THE R4-10 LATCH CAN RELEASE (OPEN) ELECTRICALLY ONE TIME:
 - 133 N (30 lbf) AT 9 VDC
 - 222 N (50 lbf) AT 12 VDC
 - 311 N (70 lbf) AT 15 VDC
5. AVERAGE ULTIMATE TENSILE LOAD (DIRECTION 1) ON THE CAM BEFORE LATCH CAM FAILURE: SEE TD-R4-10-J FOR LATCH STRENGTH DATA
6. MAXIMUM CONSTANT LOAD THE ACTUATOR CAN PUSH, WITH 7.5MM TRAVEL, IN DIRECTION 2 WHEN OPERATED ELECTRICALLY ONE TIME (WITHOUT R4-10 LATCH):
 - 40 N (9.0 lbf) AT 9 VDC
 - 53 N (12.0 lbf) AT 12 VDC
 - 65 N (14.5 lbf) AT 15 VDC
7. OPERATING TEMPERATURE -20 TO 60 C

REVISION HISTORY			
REV	DATE	BY	DESCRIPTION
I	19AUG2019	DJG/MLL	PRN: P2019-1509

NUMBER OF CYCLES	LOAD	VOLTAGE (VDC)	TEMPERATURE (DEG C)
40,000	44.5 N (10 lbf) TENSILE FORCE (DIRECTION 1) ON LATCH CAM	12	25
5,000		9	25
5,000		15	25
5,000	NONE	9	-20
5,000	NONE	15	-20
5,000	NONE	9	60
5,000	NONE	15	60

TABLE 1 - CYCLE LIFE PROFILE



SOUTHCO PERFORMANCE GUIDELINES

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REF: trAC-37480

THIRD ANGLE PROJECTION						
MILLIMETERS [IN]	DESCRIPTION					
TOLERANCES UNLESS OTHERWISE NOTED	ACTUATOR					
ALL DIMENSIONS WITHOUT TOLERANCES ARE FOR REFERENCE ONLY.	SIZE	SYSTEM	DWG NO.	DATE		
PROPRIETARY ITEM	A3	NX	TD-AC-EM-10-1	11JUL2018		
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		DJG/KAM	11JUL2018	1:2	2 OF 2	