

EQUIP. TYPE R390A JURE EXP. NO.

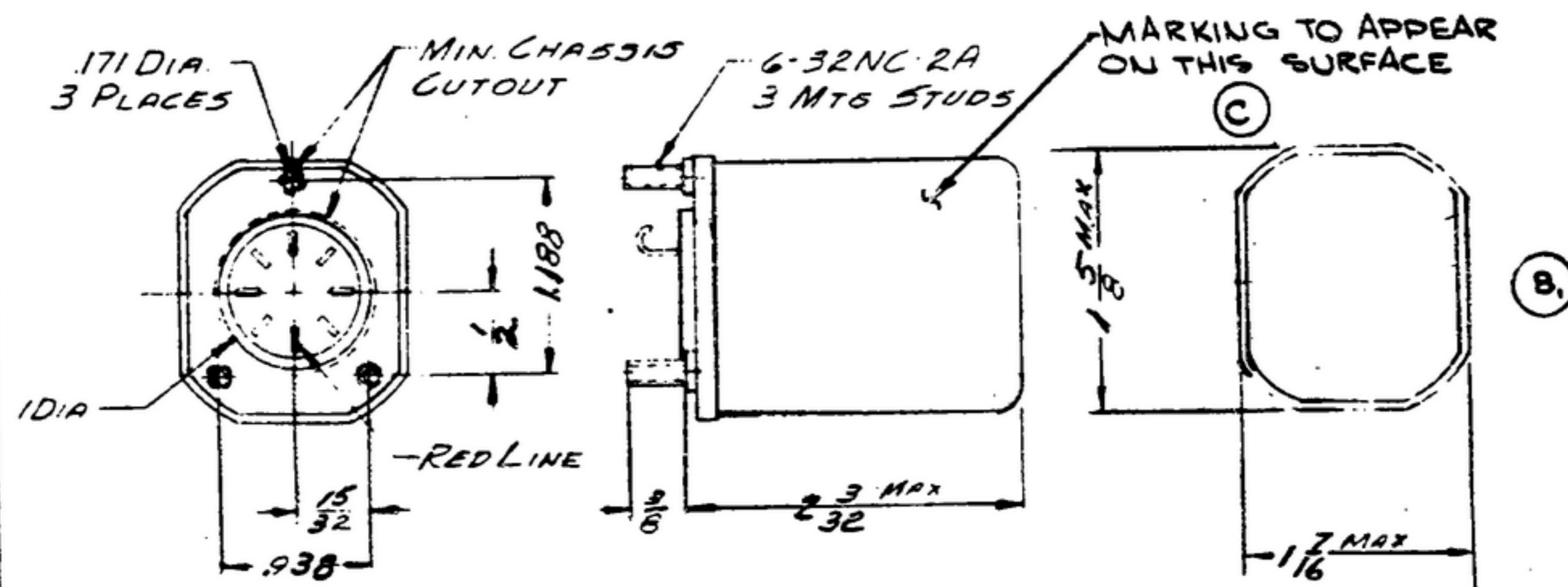
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*FOR INFORMATION ONLY. CONTRACTOR MAY AT HIS OPTION DEVIATE FROM THESE PROCESS DETAILS.

SWE APPROVAL		REVISIONS			
SYM	PR10042-7	SYM	DESCRIPTION	DATE	APPROVAL
		A,	A, WAS MIL-P-14	19 OCT 59	4242B-PC 59-AI-51 REV'D
		B,	B, SHOWN IA CONTACTS OPEN ON SCHEMATIC SCREENING	29 JUNE 60	4242B-PC 59 REV'D
		C	REVISED PICTORIAL, ADDED MARKING NOTE	7 APR 66	6-00189 REV'D 66-1100



MARKINGS SHALL BE CAPABLE OF WITHSTANDING THE HUMIDITY TEST AND SHALL MEET THE TEST REQUIREMENTS OF SPEC MIL-M-13231.

VIBRATION: THE RELAY SHALL BE CAPABLE OF CONFORMING TO THE VIBRATION REQUIREMENTS OF SPEC MIL-R-5757. THERE SHALL BE NO EVIDENCE OF CONTACT CHATTER OR BOUNCE DURING THIS TEST.

LEAKAGE: THE RELAY SHALL SHOW NO EVIDENCE OF LEAKAGE, AS INDICATED BY BUBBLES EMANATING FROM THE CASE WHEN SUBJECTED TO SEALING TEST 1, NON-DESTRUCTIVE, AS SPECIFIED IN SPEC MIL-R-5757.

SHOCK: THE RELAY SHALL BE CAPABLE OF WITHSTANDING A 60 G SHOCK TEST IN A SHOCK TESTING MECHANISM CONFORMING TO STANDARD MIL-STD-202, METHOD 202, EXCEPT THE FIXTURE SHALL BE MODIFIED TO HOLD THE RELAY. THE RELAY SHALL BE SUBJECTED TO A TOTAL OF 15 IMPACT SHOCKS, 5 IN EACH PLANE. THE RELAY SHALL MEET ALL OTHER REQUIREMENTS OF THIS SPECIFICATION FOLLOWING THIS TEST.

TUMBLING: THE RELAY SHALL BE CAPABLE OF WITHSTANDING A 45 MINUTE TEST IN A TUMBLING MACHINE CONFORMING TO DRAWING SC-C-24298. THE FIXTURE FOR HOLDING THE RELAY SHALL CONFORM TO DRAWING SC-C-6587, EXCEPT THAT THE DESIGN SHALL BE MODIFIED AS NECESSARY TO ACCOMMODATE THE RELAY. THE SHELVES OF THE TUMBLING MACHINE SHALL BE ARRANGED SO THAT THE FIXTURE WILL FALL A DISTANCE OF 12 INCHES WHEN THE MACHINE IS ROTATED. THE MACHINE SHALL BE OPERATED AT 5 RPM THROUGHOUT THIS TEST. FOLLOWING THIS TEST THE RELAY SHALL CONFORM TO THE PULL-IN, DROP-OUT, AND CONTACT RESISTANCE REQUIREMENTS OF THIS SPECIFICATION.

HUMIDITY: THE SOLENOID SHALL BE CAPABLE OF WITHSTANDING A 10 DAY HUMIDITY TEST CONDUCTED IN ACCORDANCE WITH MIL-STD-202, METHOD 106. DURING THIS TEST 100 VDC SHALL BE APPLIED BETWEEN THE COIL AND MOUNTING FRAME, WITH THE POSITIVE TERMINAL CONNECTED TO THE COIL.

SALT SPRAY TEST: THE RELAY SHALL BE CONSTRUCTED SO THAT IT CAN BE SUBJECTED TO A 100 HOUR SALT-SPRAY TEST IN ACCORDANCE WITH MIL-STD-202, METHOD 101, WITHOUT EVIDENCE OF CORROSION OF THE BASE MATERIAL AND WITHOUT IMPAIRMENT OF THE RELAY'S PERFORMANCE.

NOTES:
1. PART MAY BE TYPE HL-SA-RF, AS SUPPLIED BY RBM MANUFACTURING CO., FORT WAYNE, INDIANA, OR EQUAL, PROVIDING IT MEETS THE FOLLOWING REQUIREMENTS AND DIMENSIONS SHOWN.

* PRODUCTION TESTS: EACH RELAY SHALL BE SUBJECTED TO THE FOLLOWING TESTS:
A-VISUAL EXAMINATION.
B-PULL-IN VOLTAGE.
* SAMPLING TESTS: SAMPLE QUANTITIES AS REQUIRED FROM RELAYS SUBMITTED ON PRODUCTION ORDERS MAY BE SUBJECT TO THE FOLLOWING TESTS:
A-DROP-OUT VOLTAGE
B-CONTACT RESISTANCE
C-TEMPERATURE RISE
D-TEMPERATURE CYCLING
E-VIBRATION
F-VOLTAGE BREAKDOWN
G-LIFE EXPECTANCY
H-LEAKAGE
I-SHOCK
K-TUMBLING
L-MOISTURE RESISTANCE
M-CORROSION
E

* ALL OF THE ABOVE TESTS MAY BE CONDUCTED BY THE CONTRACTOR. THE RELAY SHALL BE CAPABLE OF MEETING ALL REQUIREMENTS OF THIS SPECIFICATION FOLLOWING EACH ABOVE TEST. ANY FAILURE TO MEET THE SAMPLING TEST REQUIREMENTS MAY RESULT IN REJECTION OF THE LOT.

DESCRIPTION: HERMETICALLY SEALED ARMATURE TYPE RELAY IN ACCORDANCE WITH MILITARY SPECIFICATION MIL-R-5757 EXCEPT AS NOTED.

CONTACT DATA:
CONTACT ARRANGEMENT: 1A, 1C.
CONTACT RATING: 1A, LOW LEVEL AUDIO OR R.F.; 1C, 1.0 AMPERE AT 25 VOLTS AC, 2 MILLIHENRIES INDUCTIVE AT 60 CPS.
CONTACT SIZE AND MATERIAL: 1A, 1/64 MINIMUM DIAMETER OR CROSS BAR TYPE, GOLD ALLOY WITH 50% MINIMUM GOLD CONTENT; 1C, PALLADIUM, SIZE AS REQUIRED.
CONTACT RESISTANCE: 50 MILLIONHMS TERMINAL TO TERMINAL, MAXIMUM, BEFORE LIFT TEST; 100 MILLIONHMS TERMINAL TO TERMINAL, MAXIMUM, AFTER LIFE TEST.

COIL DATA:
NOMINAL COIL VOLTAGE: 6.3 VOLTS A.C., 60 CPS.
PULL-IN VOLTAGE: 5.6 VOLTS A.C., 60 CPS MAXIMUM OVER THE SPECIFIED OPERATING TEMPERATURE RANGE.
MAXIMUM OPERATING VOLTAGE: 6.9 VOLTS A.C., 60 CPS.
COIL RESISTANCE: 2.8 OHMS ±10%.
DUTY CYCLE: 50% ON, 50% OFF.
LIFE EXPECTANCY: 500,000 OPERATIONS, MINIMUM.
AMBIENT OPERATING TEMPERATURE: -55°C TO +85°C.

TEMPERATURE RISE: THE RELAY SHALL BE SO CONSTRUCTED THAT IT CAN BE OPERATED AT THE SPECIFIED MAXIMUM COIL VOLTAGE, AT THE SPECIFIED MAXIMUM AMBIENT OPERATING TEMPERATURE, AND USING THE INDICATED DUTY CYCLE FOR A SUFFICIENT LENGTH OF TIME TO ENABLE THE RELAY COIL TO REACH ITS MAXIMUM OPERATING TEMPERATURE WITHOUT THE INSULATION BEING HARMED AND WITHOUT THE OPERATION OF THE RELAY BEING IMPAIRED.

INSULATION: LAMINATED PHENOLIC MATERIAL SHALL BE GRADE PBE OR PBE-P OR BETTER, IN ACCORDANCE WITH MILITARY SPECIFICATION MIL-P-3115. MOLDED PHENOLIC MATERIAL SHALL BE IN ACCORDANCE WITH MILITARY SPECIFICATION MIL-M-14.

FINISH: METALS SHALL BE OF A CORROSION-RESISTANT TYPE, FINISH P213E PER SPEC MIL-F-14072.

MARKINGS: MANUFACTURER'S SYMBOL OR NAME AND PART NUMBER, CONTRACTOR'S PART NUMBER, NOMINAL COIL VOLTAGE, AND RELAY SCHEMATIC, INCLUDING TERMINAL DESIGNATION, SHALL BE STAMPED LEGIBLY ON RELAY.

EAC PT. NO. 1500-0185

* WHEN PART NO. APPEARS AS 559-0434-0-3, MILITARY SOURCE INSPECTION READY

COLLINS PART NO.	REV.	QTY.	DESCRIPTION	DATE SPEC.
LIST OF MATERIAL				
COLLINS PART NO. 559-0434-003				

DRAWN DC. WRIGHT	CHECKED SG	APPROVED	COLLINS PART NO. 14214-PH-51-93	DEPARTMENT OF THE ARMY SIGNAL CORPS ENGINEERING LABORATORIES FORT MONMOUTH NEW JERSEY
UNLESS OTHERWISE SPECIFIED DECIMAL DIMENSIONS INCLUDING HOLE SIZES MAY VARY .005 FRACTIONAL DIMENSIONS INCLUDING HOLE SIZES MAY VARY .0154 MACHINED ANGLES MAY VARY .1° SHEARED ANGLES MAY VARY .5° BROKEN ANGLES MAY VARY .2° ECCENTRICITY BETWEEN ANY DIAMETERS ON THE SAME CENTERLINE SHALL NOT EXCEED .010 TOTAL INDICATOR READING ALL DIMENSIONS ARE FINISH DIMENSIONS INCLUDING APPLIED FINISH AND ARE GIVEN IN INCHES			SIGNAL CORPS REVIEWED PME APPROVED HLY RME	RELAY-ARMATURE
559-0340-004-1	5MD-248901	56-DE-248975	DATE 6 MAR 59	SCALE 1/1
COLLINS NO.	QTY.	NEXT ASBY	USED ON	5M-C-283244
APPLICATION				