

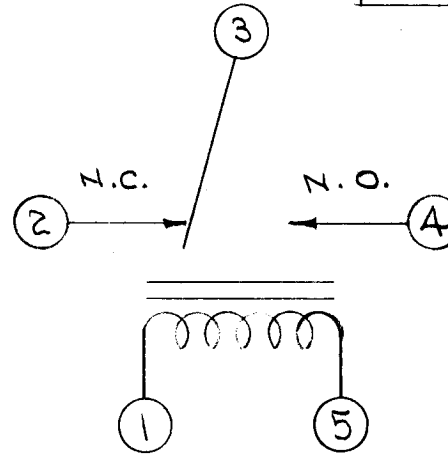
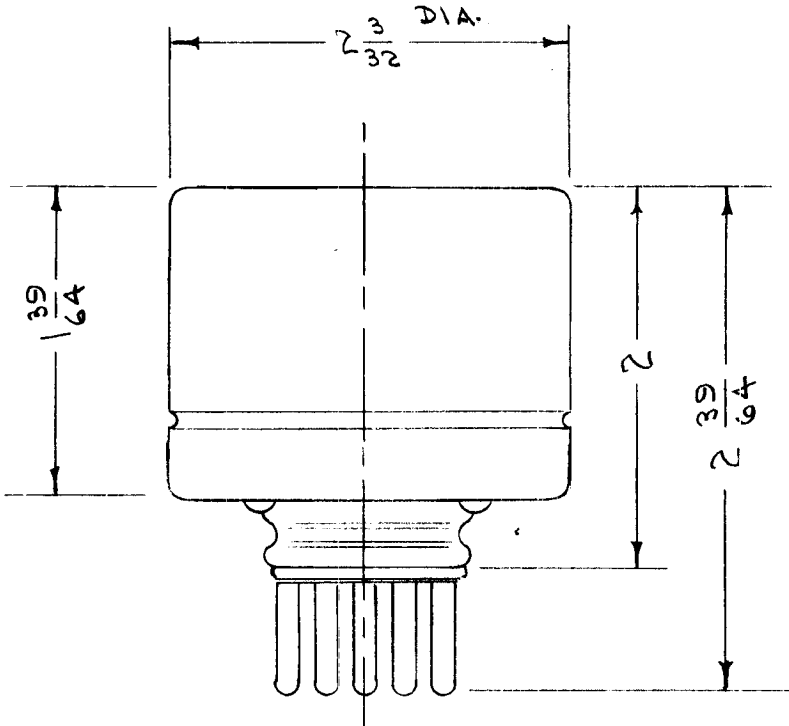
IF IT IS FOUND DESIRABLE TO CHANGE ANY TOLERANCE OR OTHER DETAIL SPECIFIED ON THIS DRAWING NOTIFY THE PURCHASER PROMPTLY.

RL-100 B

MAXIMUM ALLOWABLE TOLERANCES HAVE BEEN DETERMINED AND DEVIATIONS WILL BE CAUSE FOR REJECTION. REMOVE ALL BURRS AND SHARP EDGES

USED ON

MODEL	PROJECT NO.	ASS'Y. NO.	DATE
MRK-1	102		7-3-52



COIL RESISTANCE 2500 OHMS

WIRING DIAGRAM

DIMENSIONS FOR REF. ONLY

TO FIT STANDARD FIVE PIN TUBE SOCKET

REF. SIGMA INSTRUMENT CO

ISSUE	ITEM	CHANGED FROM	DATE	CN. NO.	DRAFTS	CHECKER	ENG. APP.
B	1	COIL RESIS WAS 3000 Ω	11/10/58	2	JAD	WHD	LMB
A	1	TYPE WAS 4AH	8/10/55	1	JAD	CMS	WHD
—	—	REDRAWN - NO CHANGE	2/12/54	—	C.D.D	JAD	WHD

REQ.	ITEM	PART NO.	DESCRIPTION	SYMBOL
			THE TECHNICAL MATERIEL CORP.	
			MAMARONECK. NEW YORK	
		4 1/2 oz.	RELAY, D.C. SPDT	
			O.D.D. 2-12-54	

TOLERANCES		SCALE	DRILL, PUNCH, COMMERCIAL STOCK SIZES AND MANUFACTURERS TOLERANCES ARE NOT INCLUDED.	
ALL OTHERS	DEC. DIM. ± FRAC. DIM. ± ANGULAR DIM. ±	— # —		

RL-100 B

IF IT IS FOUND DESIRABLE TO CHANGE ANY TOLERANCE OR OTHER DETAIL SPECIFIED ON THIS DRAWING NOTIFY THE PURCHASER PROMPTLY.

RL-101

MAXIMUM ALLOWABLE TOLERANCES HAVE BEEN DETERMINED AND DEVIATIONS WILL BE CAUSE FOR REJECTION. REMOVE ALL BURRS AND SHARP EDGES

REQ. PER UNIT

USED ON

MODEL

PROJECT NO.

ASS'Y. NO.

DATE

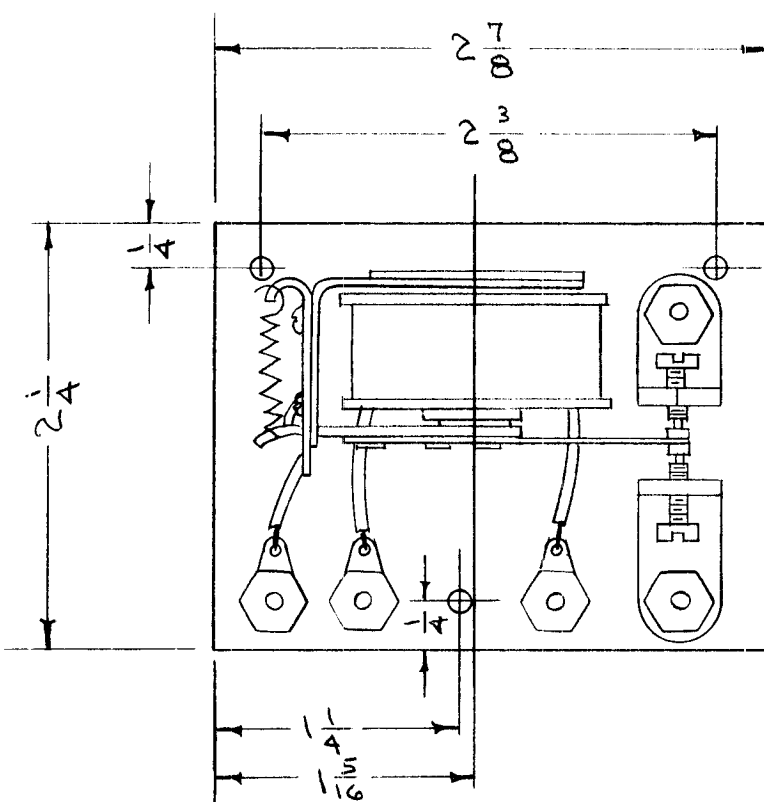
1

BAC-1-S-20

108

A-111

7-17-52



RESISTANCE 16,000 OHMS
 CONTACT AMPS. 1.5 - 115 V
 OVERALL HEIGHT $1 \frac{3}{4}$ "

DIMENSIONS FOR REF. ONLY

REF. ADVANCE RELAY CO. TYPE NO. 850

REQ.	ITEM	PART NO.	DESCRIPTION		SYMBOL
— # —			THE TECHNICAL MATERIEL CORP. MAMARONECK. NEW YORK		RELAY
STOCK SIZE					
— # —		— # —			
MATERIAL		WEIGHT PER PC.			
— # —			C.D.D. 2-12-54		
TYPE & TEMPER			DRAWN	ELEC. DES. APP.	MECH. DES. APP.
— # —			CHECKED		FINAL APPROVAL
HEAT TREAT. SPEC.					
— # —					
FINISH & SPEC. NO.					

—	—	REDRAWN - NO CHANGE	2-12-54	C.D.D.	J. J. De... f.a.l.d.
ISSUE	ITEM	CHANGED FROM	DATE	CN. NO.	DRAFTS CHECKER ENG. APP.

TOLERANCES		SCALE
ALL OTHERS	DEC. DIM. ± FRAC. DIM. ± ANGULAR DIM. ±	DRILL, PUNCH, COMMERCIAL STOCK SIZES AND MANUFACTURERS TOLERANCES ARE NOT INCLUDED.

IF IT IS FOUND DESIRABLE TO CHANGE ANY TOLERANCE OR OTHER DETAIL SPECIFIED ON THIS DRAWING NOTIFY THE PURCHASER PROMPTLY.

MAXIMUM ALLOWABLE TOLERANCES HAVE BEEN DETERMINED AND DEVIATIONS WILL BE CAUSE FOR REJECTION. REMOVE ALL BURRS AND SHARP EDGES

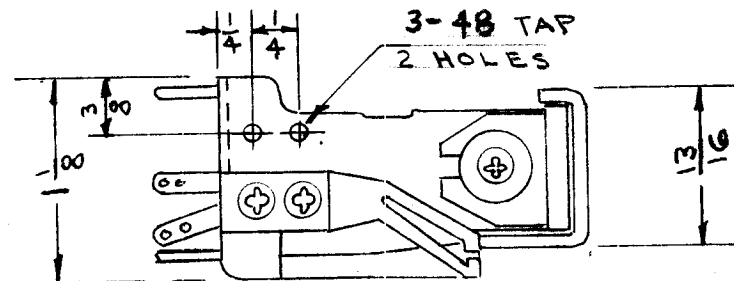
RELEASED

RL-105

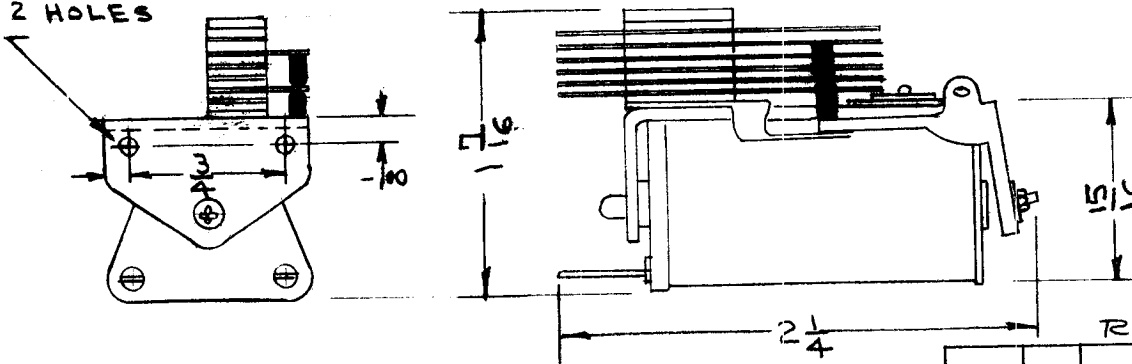
USED ON

MODEL	PROJECT NO.	ASS'Y. NO.	DATE
AMD-1	144	A-227	9-22-52
RL-110	170	A-543	9-25-53
HFA-1	1069	A-2398 A-2399	7-24-62

NOTE
DIMENSIONS
FOR REF. ONLY



6-32 TAP
2 HOLES



SPECIFICATIONS

CONTACT DP DT.
20,000 OHMS.
57,800 TURNS OF #44 ENAMEL - COVERED WIRE.
COIL ACTIVATING POWER .32 W
OPERATING VOLTAGE 80V. DC APPROX.

REF: C.P. CLARE CO. AG4070

REQ.	ITEM	PART NO.	DESCRIPTION	SYMBOL
			THE TECHNICAL MATERIEL CORP. MAMARONECK. NEW YORK	
STOCK SIZE			RELAY	
MATERIAL		WEIGHT PER PC.		
TYPE & TEMPER			DRAWN 9-22-52	
HEAT TREAT. SPEC.			ELEC. DES. APP. G.T.O.	
FINISH & SPEC. NO.			MECH. DES. APP.	
			CHECKED	
			FINAL APPROVAL	
			RL-105 B	

ISSUE	ITEM	CHANGED FROM	DATE	CN. NO.	DRAFTS	CHECKER	ENG. APP.
B	2	.32 WAS .07	9/26/52	2	JAD	WSP	AJJ
	1	VOLT. WAS 55 VDC	9/26/52	2	JAD	WSP	AJJ
A	1	REF: AG4070 Added	8/28/52	1	JAD	WSP	

TOLERANCES		SCALE FULL SIZE	
ALL OTHERS	DEC. DIM. ± FRAC. DIM. ± ANGULAR DIM. ±	DRILL, PUNCH, COMMERCIAL STOCK SIZES AND MANUFACTURERS TOLERANCES ARE NOT INCLUDED.	

IF IT IS FOUND DESIRABLE TO CHANGE ANY TOLERANCE OR OTHER DETAIL SPECIFIED ON THIS DRAWING NOTIFY THE PURCHASER PROMPTLY.

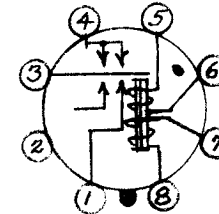
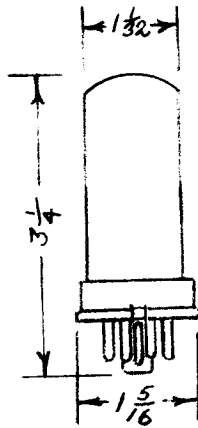
MAXIMUM ALLOWABLE TOLERANCES HAVE BEEN DETERMINED AND DEVIATIONS WILL BE CAUSE FOR REJECTION. REMOVE ALL BURRS AND SHARP EDGES

RL-107

A

USED ON

MODEL	PROJECT NO.	ASS'Y. NO.	DATE
SFO-2	115		9-5-52



Dem. for ref only.

Ref. Western Electric Type 275C

REQ.	ITEM	PART NO.	DESCRIPTION	SYMBOL
		— H —	THE TECHNICAL MATERIEL CORP. MAMARONECK, NEW YORK	
		STOCK SIZE		
		— H —	RELAY-MERCURY CONTACT	
		.211		
		MATERIAL		
		WEIGHT PER PC.		
		— H —		
		TYPE & TEMPER		
		— H —		
		HEAT TREAT. SPEC.		
		— H —		
		FINISH & SPEC. NO.		

A	1	WAS RL-104	6/11/53	1	ADD	P97
ISSUE	ITEM	CHANGED FROM	DATE	CN. NO.	DRAFTS CHECKER	ENG. APP.

TOLERANCES		SCALE
ALL OTHERS	DEC. DIM. ± FRAC. DIM. ± ANGULAR DIM. ±	DRILL, PUNCH, COMMERCIAL STOCK SIZES AND MANUFACTURERS TOLERANCES ARE NOT INCLUDED.

DRAWN	ELEC. DES. APP.	MECH. DES. APP.
CHECKED	FINAL APPROVAL	
supercedes RL-104	RL-107	A

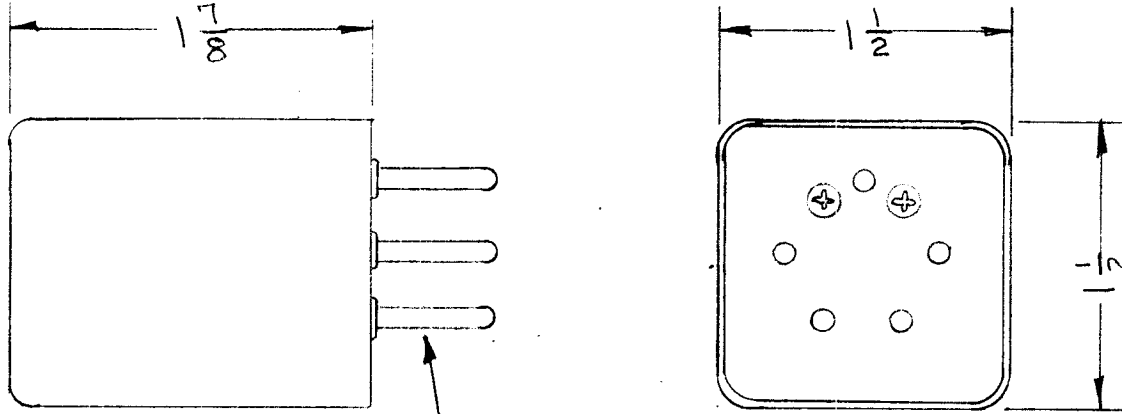
IF IT IS FOUND DESIRABLE TO CHANGE ANY TOLERANCE OR OTHER DETAIL SPECIFIED ON THIS DRAWING NOTIFY THE PURCHASER PROMPTLY.

RL-108

MAXIMUM ALLOWABLE TOLERANCES HAVE BEEN DETERMINED AND DEVIATIONS WILL BE CAUSE FOR REJECTION. REMOVE ALL BURRS AND SHARP EDGES

USED ON

MODEL	PROJECT NO.	ASS'Y. NO.	DATE
ADK-S			5/15/53



5 Prong Base

Coil Resistance: 2,000 Ω
contacts: SPDT

Ref: SIGMA INSTRUMENT CO. #76371 OR 25300

REQ.	ITEM	PART NO.	DESCRIPTION	SYMBOL
			THE TECHNICAL MATERIEL CORP. MAMARONECK. NEW YORK	
		STOCK SIZE		
		MATERIAL	WEIGHT PER PC.	
		TYPE & TEMPER		
		HEAT TREAT. SPEC.		
		FINISH & SPEC. NO.		
			RELAY	
			5/15/53	
			DRAWN	ELEC. DES. APP.
			C.D.D. 5/15/53	MECH. DES. APP.
			CHECKED	FINAL APPROVAL
				RL-108

ISSUE	ITEM	CHANGED FROM	DATE	CN. NO.	DRAFTS	CHECKER	ENG. APP.

TOLERANCES

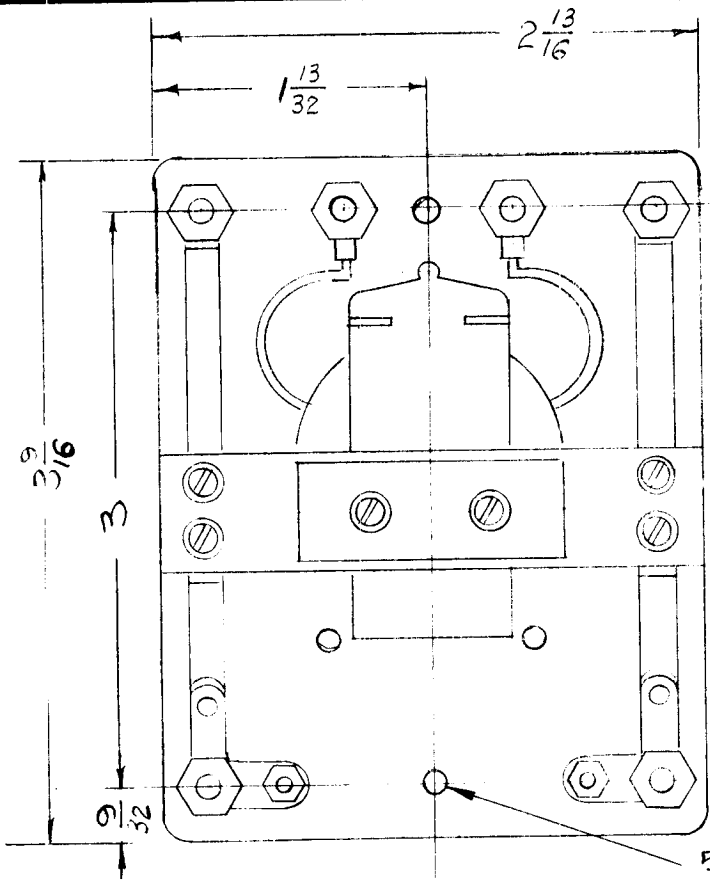
SCALE

ALL OTHERS
DEC. DIM. ±
FRAC. DIM. ±
ANGULAR DIM. ±

DRILL, PUNCH, COMMERCIAL STOCK
SIZES AND MANUFACTURERS
TOLERANCES ARE NOT INCLUDED.

REQ. PER UNIT	USED ON		
	MODEL	ASSY. NO.	DATE
1	GPT-750		
1	RTM		5-23-58
1	RTM-2		10-16-58

RL-115 C



OVERALL HEIGHT 1 15/16

5/32 DIA. - 2 HOLES

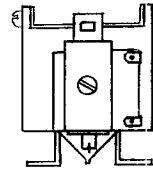
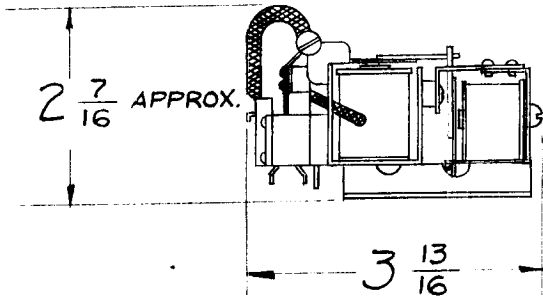
ELECTRICAL SPECIFICATION -

DOUBLE POLE - DOUBLE THROW
 CONTACT RATING - 10A NON INDUCTIVE
 COIL - 150 VDC
 COIL RES. - APPROX. 6,300 Ω

REF: ADVANCE ELECTRICAL CO. # AT/2C/150 VD

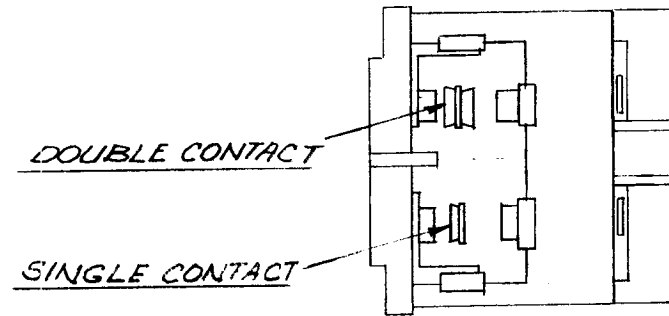
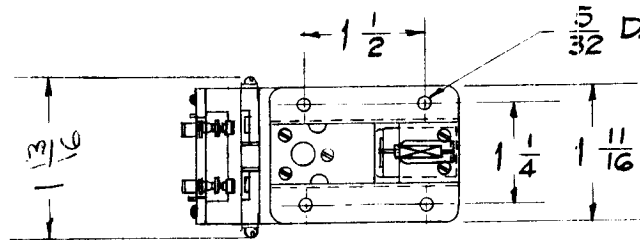
ISSUE	ITEM	CHANGED FROM	DATE	CH. NO.	DRAFTS	CHECKER	ENG. APP.	REQ. ITEM	PART NO.	DESCRIPTION	SYMBOL			
C	2	DIMS 9/32 WERE 1/32, DIM 3 ADDED ADDED 5/32 DIA TO MTG HOLES	7-12-63	9543						THE TECHNICAL MATERIEL CORP. MAMARONECK, NEW YORK	RELAY			
B	1	COIL RES. WAS 7500 Ω	5-22-61	4930					STOCK SIZE					
A	1	UNDER ELEC. SPEC. COIL RES. WAS APPROX 10,000 Ω	2-15-61	4187					MATERIAL					
TOLERANCES								SCALE:		RS 10-7-58		A. J. J.		
DEC. DIM. ± FRAC. DIM. ± ANGULAR DIM. ±								MAXIMUM ALLOWABLE TOLERANCES HAVE BEEN DETERMINED AND ANY DEVIATIONS WILL BE CAUSE FOR REJECTION. REMOVE ALL BURRS AND SHARP EDGES		TYPE & TEMPER	HEAT TREAT. SPEC.	DRAWN	CHECKED	FINAL APPROVAL
								FINISH & SPEC. NO.		ELEC. DES. APP.	MECH. DES. APP.	RL-115	C	

REQ. PER UNIT	USED ON			RL-119	Ø
	MODEL	ASS'Y. NO.	DATE		

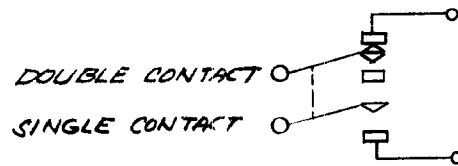


CONTACT ASSY.:
1A, 1C Code 13
Rating 15 Amps.

COIL RATINGS:
Latch Coil: 6.2V, 60 CPS.
Unlatch Coil: 7.0 VDC.



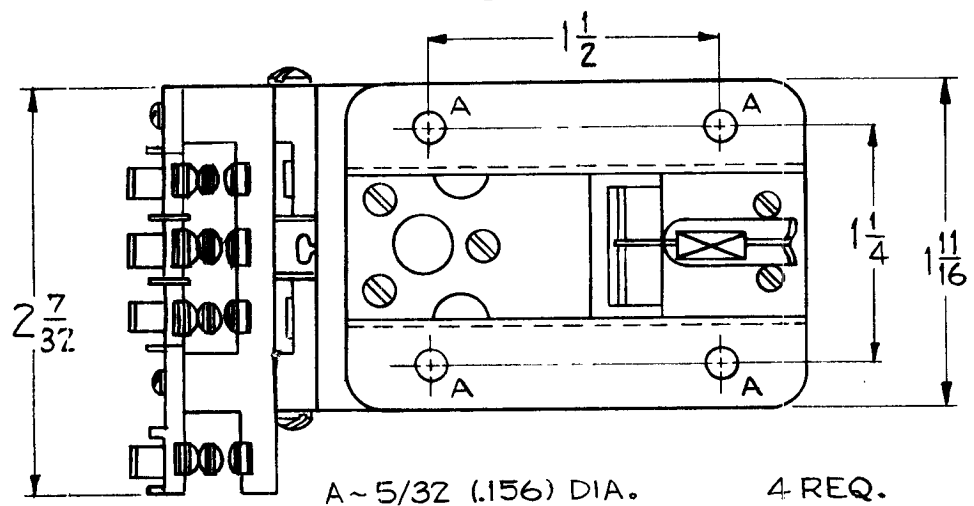
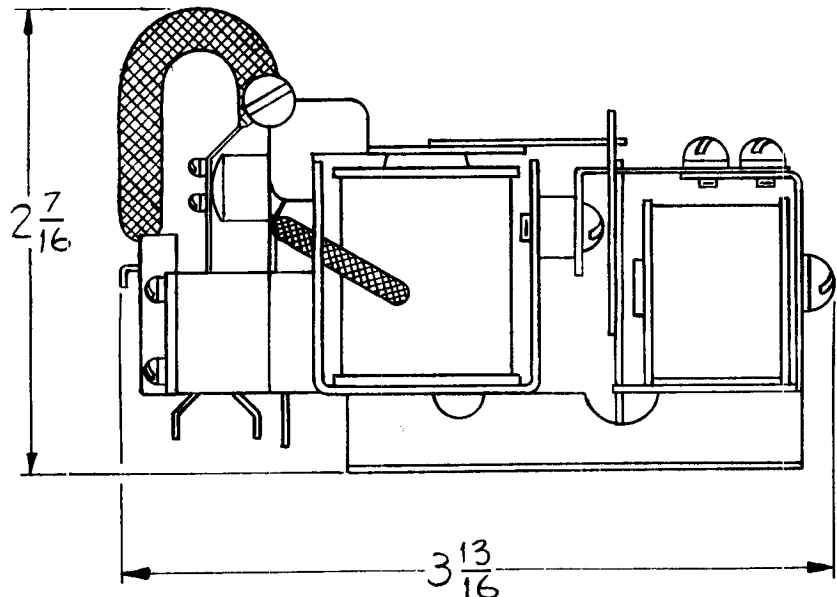
DETAIL OF CONTACTS



SCHEMATIC SHOWN IN UNLATCHED POSITION.

Ref. Philips Control Corp. Part #33BLA37B1

REQ.	ITEM	PART NO.	DESCRIPTION	SYMBOL						
		—//—	THE TECHNICAL MATERIEL CORP. MAMARONECK, NEW YORK							
		STOCK SIZE	LATCH, RELAY 2 POLE							
		—//—	P/O GPT							
		MATERIAL								
Ø	ORIGINAL RELEASE	7/29/67	9-27-57	7/26/67						
ISSUE	ITEM	CHANGED FROM	DATE	CH. NO.	DRAFTS	CHECKER	ENG. APP.			
TOLERANCES		SCALE:		TYPE & TEMPER		HEAT TREAT. SPEC.		DRAWN	CHECKED	FINAL APPROVAL
DEC. DIM. ±		MAXIMUM ALLOWABLE TOLERANCES HAVE BEEN DETERMINED AND ANY DEVIATIONS WILL BE CAUSE FOR REJECTION.		—//—		—//—				RL-119
FRAC. DIM. ±		REMOVE ALL BURRS AND SHARP EDGES		FINISH & SPEC. NO.		ELEC. DES. APP.		MECH. DES. APP.		Ø
ANGULAR DIM. ±										



A ~ 5/32 (.156) DIA. 4 REQ.

REQ. PER UNIT	USED ON			RL-122	C
	MODEL	ASSY. NO.	DATE		
1	GPT10K	(T1-106)	4-8-59		

ELECTRICAL SPECIFICATION

COIL ~ LATCH RELAY ~ 1100 Ω \pm 10 %
 UNLATCH RELAY ~ 0.93 Ω \pm 10 %
 BOTH COILS MOISTURE RESISTANT VARNISHED.

PILE UP ~ 4 FORM C (4 P.D.T.) (LATCH RELAY).

CONTACTS ~ CODE 15 1/4 SILVER CADMIUM
 RATED 25 AMPS 125V AC. RESISTIVE

ADJUSTMENT ~ LATCH-OPERATE ~ 190V \pm 5% 60 CYCLE AC OR LESS.
 UNLATCH-OPERATE ~ 1 AMPERE.
 NON-OPERATE ~ .980 AMPERES

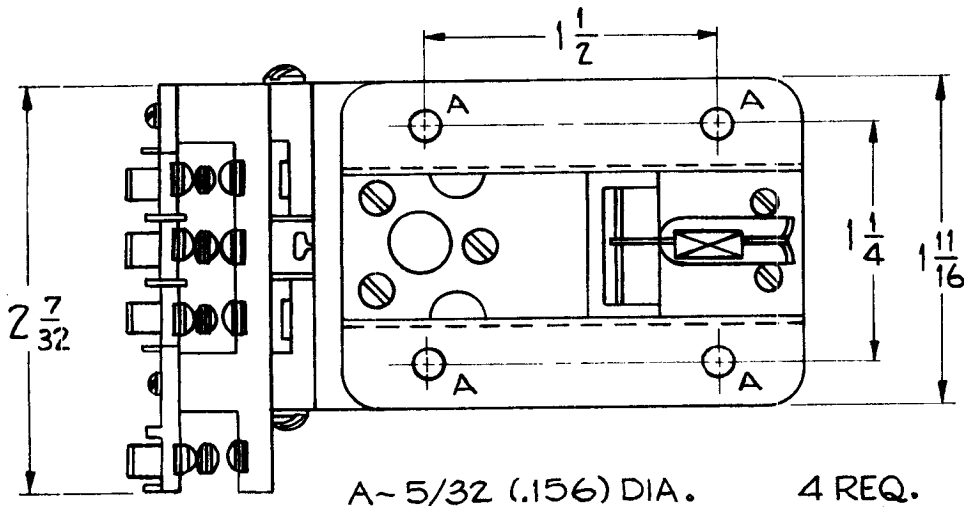
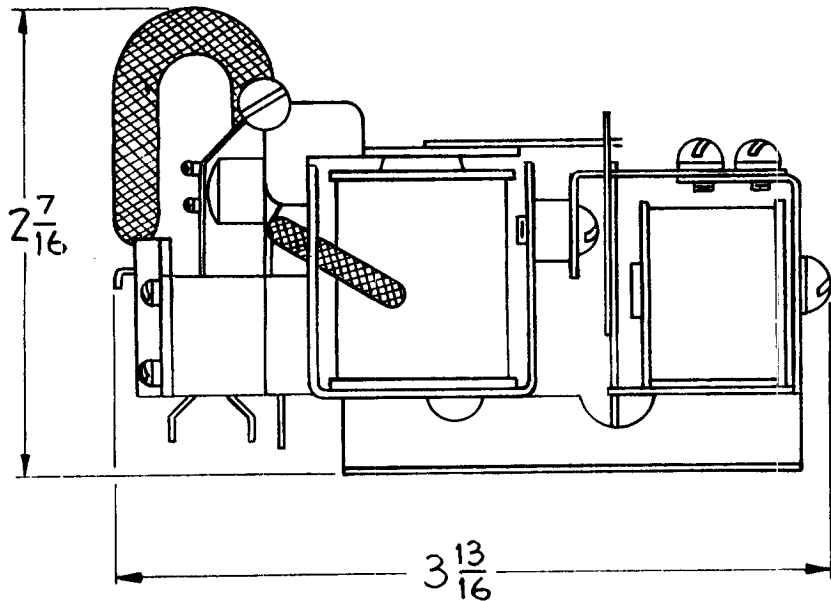
NOTE:
 NO LONGER AVAILABLE
 REPLACE BY RL 206

REF ~ PHILIPS CONTROL CORP. ~ PHILTROL - 333LA35B2

REQ.	ITEM	PART NO.	DESCRIPTION	SYMBOL
C			THE TECHNICAL MATERIEL CORP.	
B	2		MAMARONECK, NEW YORK	
A	1		RELAY, ARMATURE	
MATERIAL			J.C. BIELE	ARB
TYPE & TEMPER			DRAWN	CHECKED
FINISH & SPEC. NO.			ELEC. DES. APP	MECH. DES. APP

ISSUE	ITEM	CHANGED FROM	DATE	CH. NO.	DRAFTS	CHECKER	ENG. APP.
		NOTE: NO LONGER AVAILABLE ADD	10-31-85	22115	SD		DB
		PULL IN VOLT. - DELETED ADJ. SPECS WAS 220V.	4-15-64	11216	WB	HJ	DB
		ON ELEC. SPEC. "PULL IN VOLTAGE 175V AC" ADDED	9-12-63	9913	F.D.L.	JW	ARB

TOLERANCES		SCALE:	
DEC. DIM. \pm		MAXIMUM ALLOWABLE TOLERANCES HAVE BEEN DETERMINED AND ANY DEVIATIONS WILL BE CAUSE FOR REJECTION. REMOVE ALL BURRS AND SHARP EDGES	
FRAC. DIM. \pm			
ANGULAR DIM. \pm			



REQ. PER. UNIT	USED ON			RL-123	C
	M DEL	ASS'Y. N.	DATE		
1	GPT 10K	T1-106	4-8-59		

ELECTRICAL SPECIFICATION

COIL ~ LATCH RELAY ~ $1100 \Omega \pm 10\%$
 UNLATCH RELAY ~ $43 \Omega \pm 10\%$
 BOTH COILS MOISTURE RESISTANT
 VARNISHED.

PILE UP ~ 4 FORM C (4 P.D.T.)

CONTACTS ~ CODE 14 1/4" SILVER
 RATED 20 AMPERES 125V AC RESISTIVE

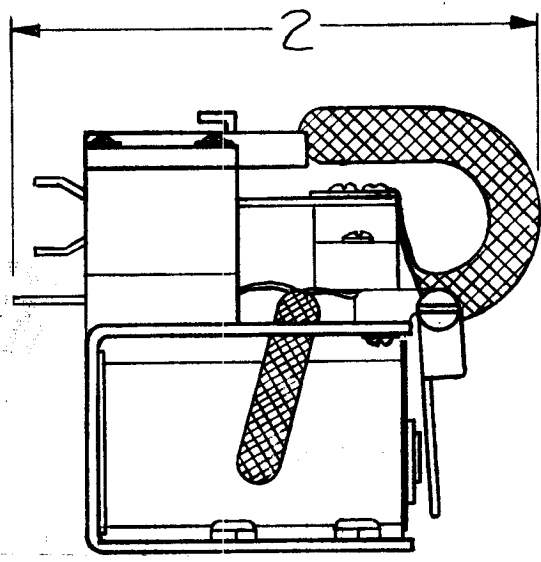
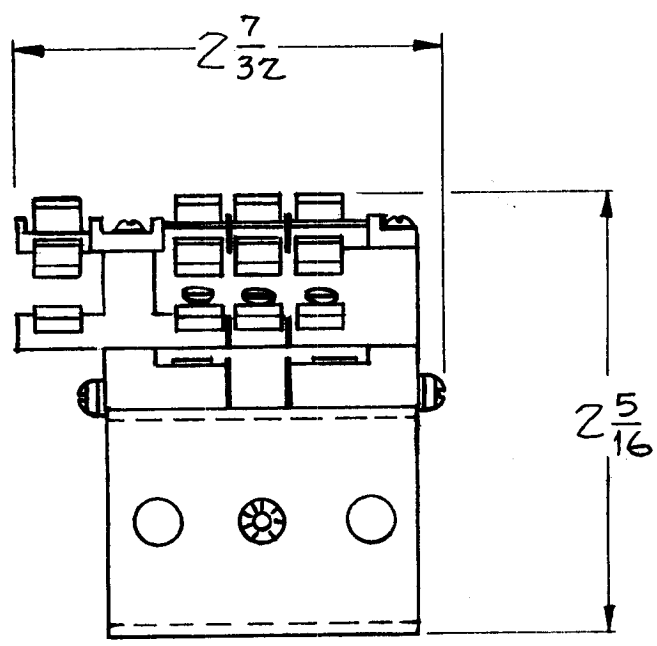
ADJUSTMENT ~ LATCH-OPERATE ~ $190V \pm 5\%$ 60 CYCLE AC OR LESS
 UNLATCH-OPERATE ~ .155 AMPERES
 NON-OPERATE ~ .140 AMPERES

NO LONGER AVAILIABLE
 REPLACE BY RL 202

REQ.	ITEM	PART NO.	DESCRIPTION	SYMBOL									
C			THE TECHNICAL MATERIEL CORP.										
B	1		MAMARONECK, NEW YORK										
A			RELAY, ARMATURE										
ISSUE	ITEM	CHANGED FROM	DATE	CH. NO.	DRAFTS	CHECKER	ENG. APP.	MATERIAL					
								J.C. BIELE					
TOLERANCES			SCALE: S401-59 (33BLAZ9B2)										
DEC. DIM. ±			MAXIMUM ALLOWABLE TOLERANCES HAVE BEEN DETERMINED AND ANY DEVIATIONS WILL BE CAUSE FOR REJECTION. REMOVE ALL BURRS AND SHARP EDGES										
FRAC. DIM. ±													
ANGULAR DIM. ±													
				TYPE & TEMPER		HEAT TREAT. SPEC.		DRAWN		CHECKED		FINAL APPROVAL	
								K.G.				RL-123	
				FINISH & SPEC. NO.		ELEC. DES. APP		MECH. DES. APP					

REQ. PER. UNIT	USED ON		
	MODEL	ASS'Y. NO.	DATE
Z	GPT 10K	RELAY/PANEL	5-11-59

RL 124 D



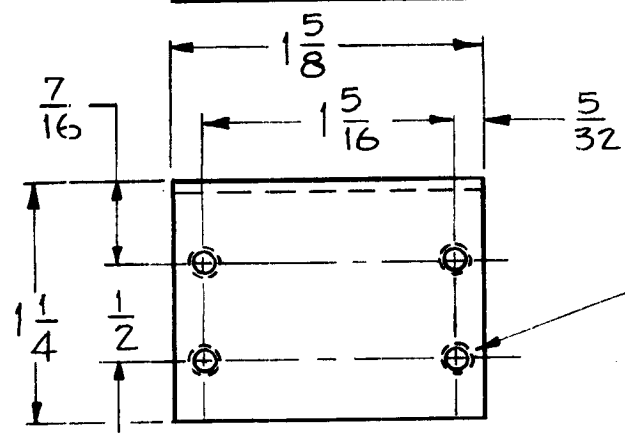
SPECIFICATIONS

COIL - 1150 OHMS ± 10%
 MOISTURE RESISTANT
 VARNISHED.

PILE UP ~ 4 FORM C
 (4 PDT)

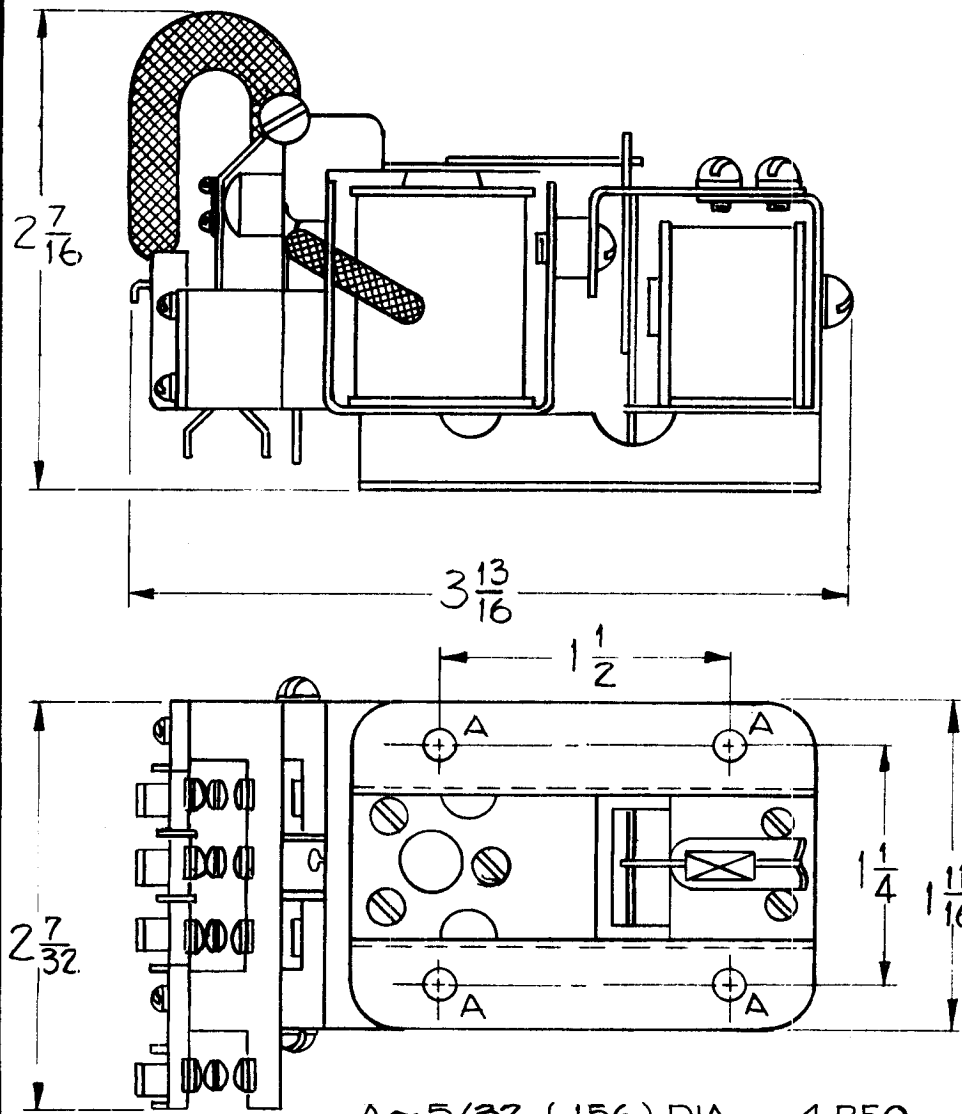
CONTACTS ~ CODE 15
 1/4" SILVER CADMIUM
 RATED 25 AMPERES

ADJUSTMENT ~ OPERATE
 220V, 50/60 CYCLE AC.
 PULL IN VOLTAGE 175V ± 5% AC.



6-32 THREAD (4 HOLES)

REQ.	ITEM	PART NO.	DESCRIPTION	SYMBOL					
D	5401-439 WAS 401-59	1030 85	GDL						
C	ADJ. SPECS. 5% ADDED	4.15.64	11214	NB					
B	IN SPECS. 1150 OHMS WAS 1800 OHMS	11/4/63	10326	ED					
A	ON ELEC. SPEC. "PULL IN VOLTAGE 175V AC" ADDED	9/12/63	9913	G.D.L.					
ISSUE	ITEM	CHANGED FROM	DATE	CH. NO.	DRAFTS	CHECKER	ENG. APP.	THE TECHNICAL MATERIEL CORP. MAMARONECK, NEW YORK	
TOLERANCES		SCALE: S-401-439-93 AX 13		MATERIAL		J.C. BIELE		RELAY, ARMATURE	
DEC. DIM. ±		MAXIMUM ALLOWABLE TOLERANCES HAVE BEEN DETERMINED AND ANY DEVIATIONS WILL BE CAUSE FOR REJECTION.		TYPE & TEMPER		HEATTREAT. SPEC.		DRAWN	
FRAC. DIM. ±		REMOVE ALL BURRS AND SHARP EDGES		FINISH & SPEC. NO.		ELEC. DES. APP		MECH. DES. APP	
ANGULAR DIM. ±								8 G.	
								RL 124 D	



REQ. PER. UNIT	USED ON			RL-125 C
	MODEL	ASS'Y. NO.	DATE	
1	GPT 10K		5-11-59	

ELECTRICAL SPECIFICATION

COIL ~ LATCH ~ 1100 Ω ± 10%
TRIP ~ 170 Ω ± 10%

PILE UP ~ 4 C's (4 P.D.T.)

CONTACTS - 1/4" SILVER
RATED 20 AMPERES NON INDUCTIVE

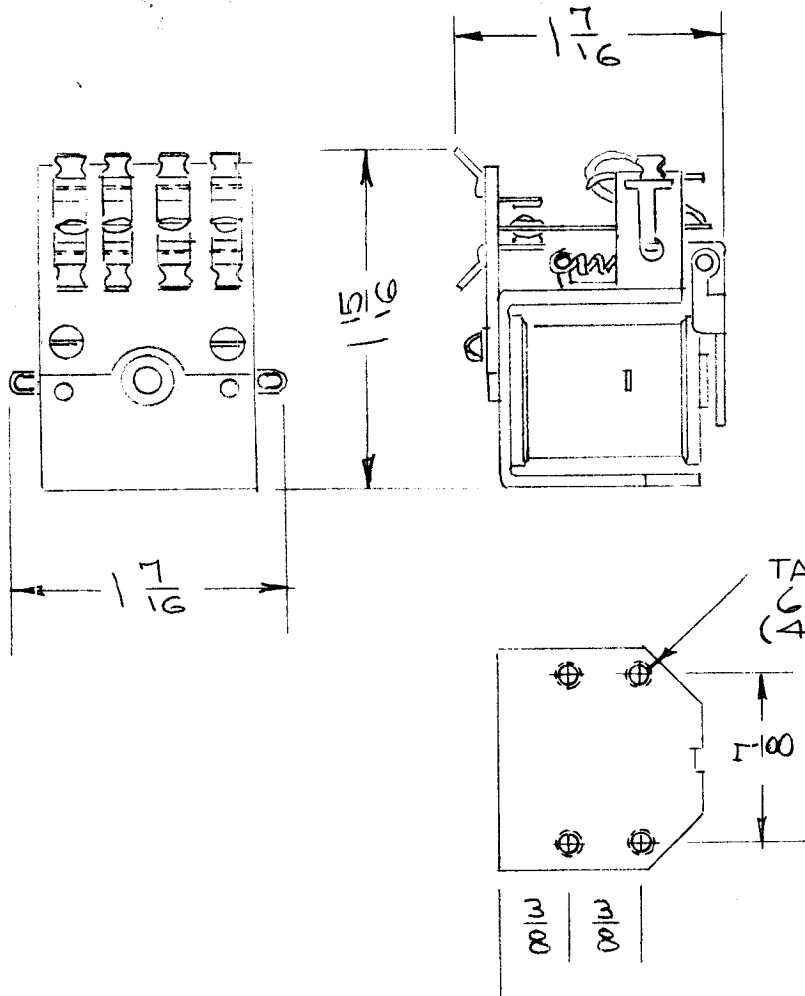
ADJUSTMENT - LATCH OPERATE - 190V ± 5% 60 CYCLE AC OR LESS
TRIP ~ .080 AMPERES OR LESS.

NO LONGER AVAILABLE
REPLACE BY RL 203

REF ~ PHILIPS CONTROL CORP ~ NO. 33BLA-29B5

ISSUE	ITEM	CHANGED FROM	DATE	CH. NO.	DRAFTS	CHECKER	ENG. APP.	REQ.	ITEM	PART NO.	DESCRIPTION	SYMBOL
C		NOTE "NO LONGER DRAWN" ADD.	3-22-55	22096	GDL		JCB				THE TECHNICAL MATERIEL CORP. MAMARONECK, NEW YORK RELAY, ARMATURE	RL-125 C
B	2	PULL IN VOLT. DELETED ADJ. SPECS WAS 220V	4-15-64	11216	WB	JCB	JCB					
A	1	ON ELEC. SPEC. 220V WAS 200V PULL IN VOLTAGE 175V AC ADDED	9-16-63	9913	GDL	JCB	JCB					
TOLERANCES		SCALE:		TYPE & TEMPER		HEAT TREAT. SPEC.		FINISH & SPEC. NO.		ELEC. DES. APP. MECH. DES. APP.		
DEC. DIM. ± FRAC. DIM. ± ANGULAR DIM. ±		MAXIMUM ALLOWABLE TOLERANCES HAVE BEEN DETERMINED AND ANY DEVIATIONS WILL BE CAUSE FOR REJECTION. REMOVE ALL BURRS AND SHARP EDGES		J.C. BIELE		DRAWN		CHECKED		FINAL APPROVAL		
				C.G.		JCB						

REQ. PER UNIT	USED ON			RL-126	B
	MODEL	ASS'Y. NO.	DATE		
2	GPT-10K	T1-106	4-13-59		



ELECTRICAL SPECIFICATION

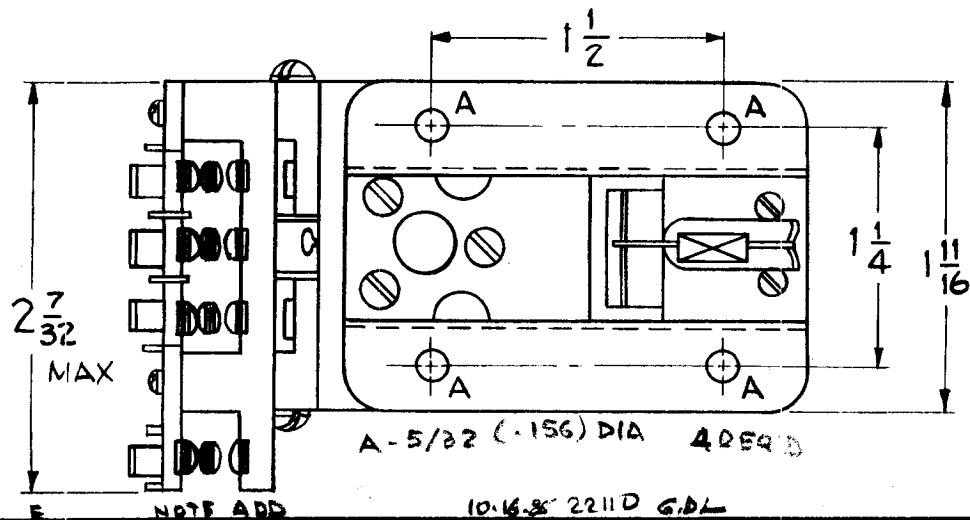
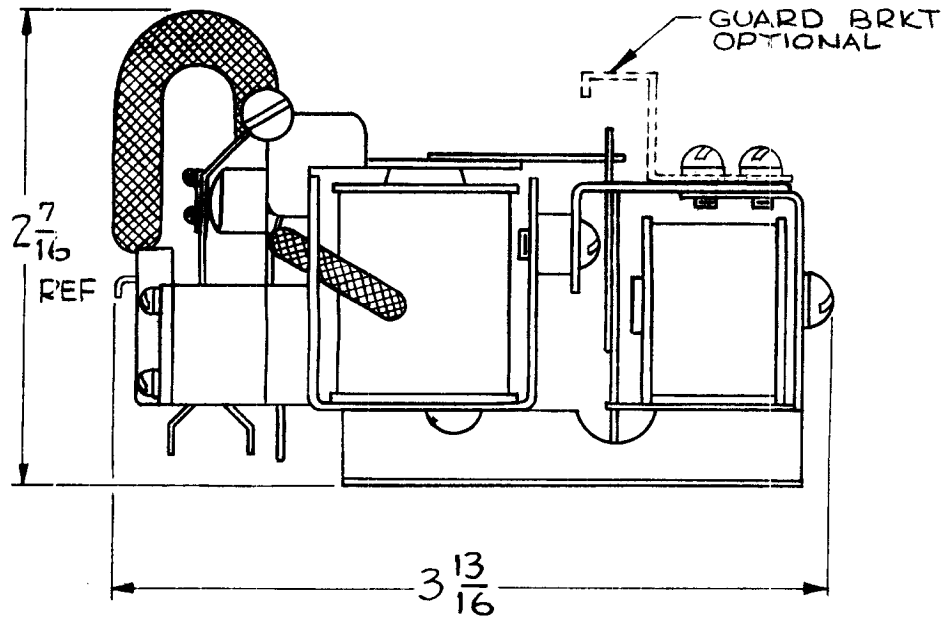
- COIL - 11,000 Ω ± 10%
- PIIE-UP - 4 Form C (4 P.D.T.)
- CONTACTS - 3/16" Silver Cad Oxite
Rated 10 A. 125 VAC Resistive
- ADJUSTMENT - Operate .010 Amperes Non-
-Operate .009 Amperes

NO LONGER AVAILABLE -
REPLACED BY RL201

Ref: Philtrol 57QA2E1

							REQ. ITEM	PART NO.	DESCRIPTION	SYMBOL	
									THE TECHNICAL MATERIEL CORP. MAMARONECK, NEW YORK		
									RELAY, ARMATURE		
B	NOTE NO LONGER AVAILABLE ADDED	3-16-73		GDC		ARB					
A	TAPPED WAS CLEARANCE (ON 6-32)	5-3-66	16186	WNO		ARB					
ISSUE	ITEM	CHANGED FROM	DATE	CH. NO.	DRAFTS	CHECKER	ENG. APP.				
TOLERANCES			SCALE:								
DEC. DIM. ±			MAXIMUM ALLOWABLE TOLERANCES HAVE BEEN DETERMINED AND ANY DEVIATIONS WILL BE CAUSE FOR REJECTION:								
FRAC. DIM. ±			REMOVE ALL BURRS AND SHARP EDGES								
ANGULAR DIM. ±											
							TYPE & TEMPER	HEATTREAT. SPEC.	DRAWN	CHECKED	FINAL APPROVAL
									X.G.		RL-126
							FINISH & SPEC. NO.		ELEC. DES. APP	MECH. DES. APP	B

STANDARD DRAWING



REQ. PER. UNIT	USED ON			RL-127	E
	MODEL	ASS'Y. NO.	DATE		
1	GPT-10K	(T1-106)	4-9-59		

ELECTRICAL SPECIFICATION

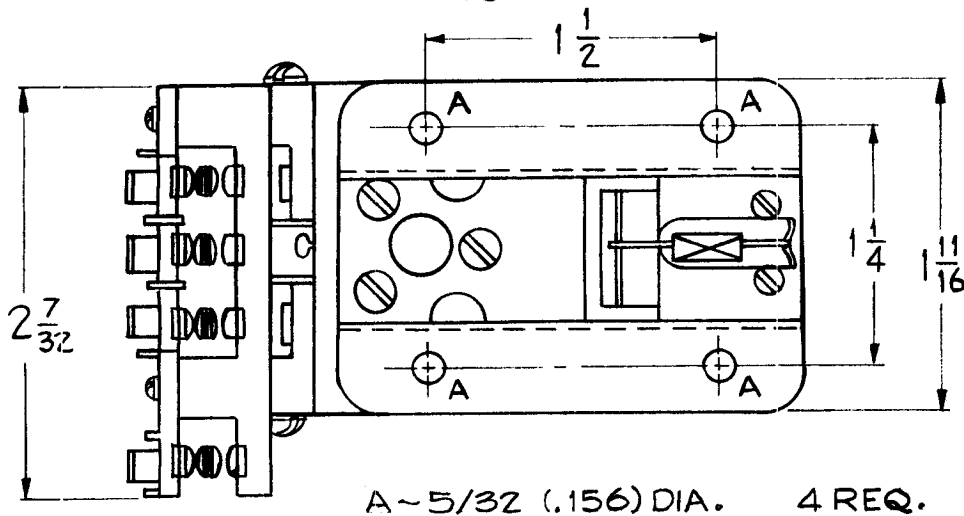
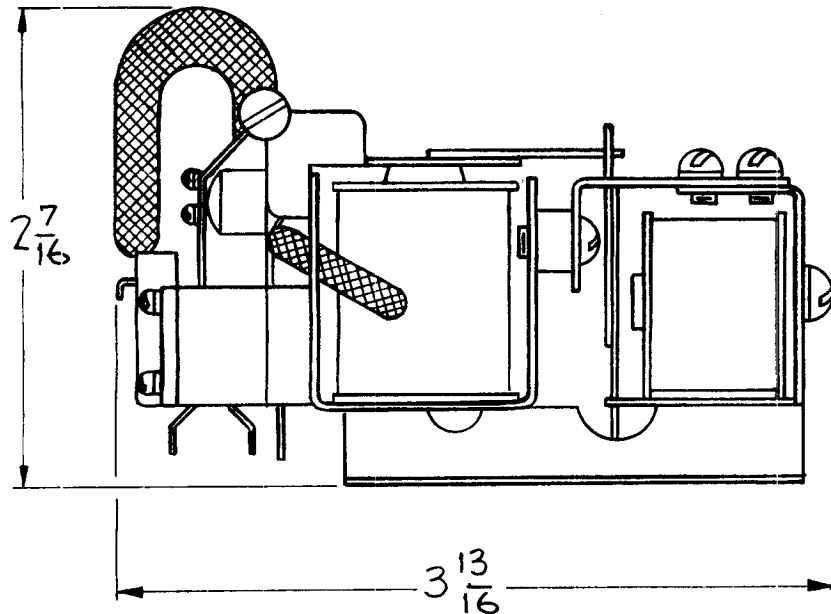
COIL ~ LATCH ~ 1,100 Ω \pm 10%
 TRIP ~ 10,000 Ω \pm 10%
 PILE UP ~ 4 Cs (4 P.D.T)
 CONTACTS ~ 1/4" SILVER
 RATED 25 AMPERES NON INDUCTIVE LOAD AT 125 VAC.
 ADJUSTMENT - LATCH OPERATE 190V \pm 5% 60 CYCLE AC OR LESS
 TRIP ~ .011 AMPERES OR LESS.

NO LONGER AVAILABLE
 REPLACE BY RL204

REF ~ PHILIPS CONTROL CORP. ~ PHILTROL-33BLA35B3

ISSUE	ITEM	CHANGED FROM	DATE	CH. NO.	DRAFTS	CHECKER	ENG. APP.	REQ.	ITEM	PART NO.	DESCRIPTION	SYMBOL		
D		GUARD BRACKET & NOTE ADDED	5-3-66	16186	WFO	APB	JC				THE TECHNICAL MATERIEL CORP. MAMARONECK, NEW YORK RELAY, ARMATURE	RL-127 E		
C	2	PULL IN VOLT. DELETED	4.15.64	11216	WB	file	APB							
B	1	ADJ. SPECS. WAS 220V ON ELEC. SPEC "PULL IN VOLTAGE 175V AC" ADDED	8-12-63	8913	SS	file	APB							
A	2	LATCH WAS 1,000 Ω	6-29-60	2560	CW	file	APB							
	1	25 AMPS WAS 20 AMPS												
TOLERANCES			SCALE:					MATERIAL		J.C. BIELE		file	APB	
DEC. DIM. \pm FRAC. DIM. \pm ANGULAR DIM. \pm			MAXIMUM ALLOWABLE TOLERANCES HAVE BEEN DETERMINED AND ANY DEVIATIONS WILL BE CAUSE FOR REJECTION: REMOVE ALL BURRS AND SHARP EDGES					TYPE & TEMPER HEATTREAT. SPEC.		DRAWN		66	CHECKED	FINAL APPROVAL
								FINISH & SPEC. NO.		ELEC. DES. APP MECH. DES. APP				

FORM 108-A
STANDARD DRAWING



REQ. PER. UNIT	USED ON			RL-128	C
	MODEL	AS 'Y. NO.	DATE		
1	GPT 10K	T1-106)	4-9-59		

ELECTRICAL SPECIFICATION

COIL ~ LATCH RELAY ~ 1100 Ω ± 10%
 UNLATCH RELAY ~ 1500 Ω ± 10%
 BOTH COILS MOISTURE RESISTANT
 VARNISHED.

PILE-UP ~ 4 FORM C (4 P.D.T.)

CONTACTS ~ CODE 14 1/4" SILVER
 RATED 20 AMPERES 125V AC RESISTIVE

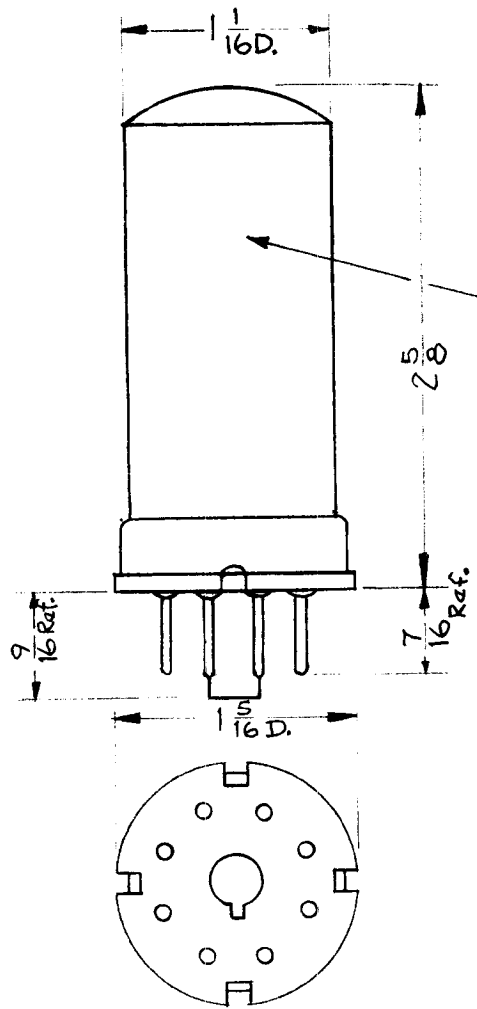
ADJUSTMENT ~ LATCH-OPERATE-190V ± 5% 60 CYCLE AC OR LESS.
 UNLATCH-OPERATE-.025 AMPERES. DC
 NON OPERATE ~ .023 AMPERES.

NO LONGER AVAILABLE
 REPLACE BY RL 20.5

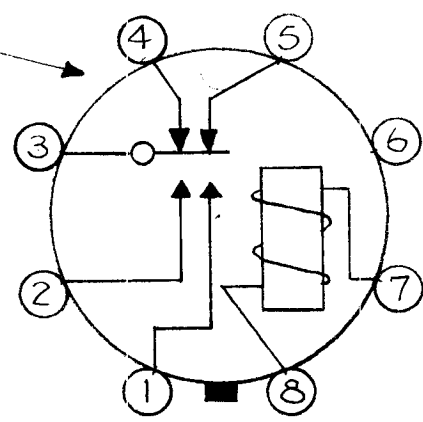
REF ~ PHILIPS CONTROL CORP. ~ PHILTROL-33BLA29B1

REQ.	ITEM	PART NO.	DESCRIPTION	SYMBOL	
C	-	NOTE ADD.	THE TECHNICAL MATERIEL CORP.		
B		(DC) Added to UNLATCH	MAMARONECK, NEW YORK		
A	1	ADJ. SPECS. WAS 220V	RELAY, ARMATURE		
ISSUE	ITEM	CHANGED FROM	MATERIAL		
TOLERANCES		SCALE:	J.C. BIELE	ARB	
DEC. DIM. ±		MAXIMUM ALLOWABLE TOLERANCES HAVE BEEN DETERMINED AND ANY DEVIATIONS WILL BE CAUSE FOR REJECTION. REMOVE ALL BURRS AND SHARP EDGES	DRAWN	CHECKED	
FRAC. DIM. ±			TYPE & TEMPER	HEATTREAT. SPEC.	FINAL APPROVAL
ANGULAR DIM. ±			FINISH & SPEC. NO.	ELEC. DES. APP	MECH. DES. APP
			E.G.	RL-128 C	

REQ. PER. UNIT 1	MODEL	USED ON		RL-131	A
	AK-100	ASS'Y. NO.	DATE		
			11/23/59		



— RELAY SCHEMATIC —



Schematic must appear on case.

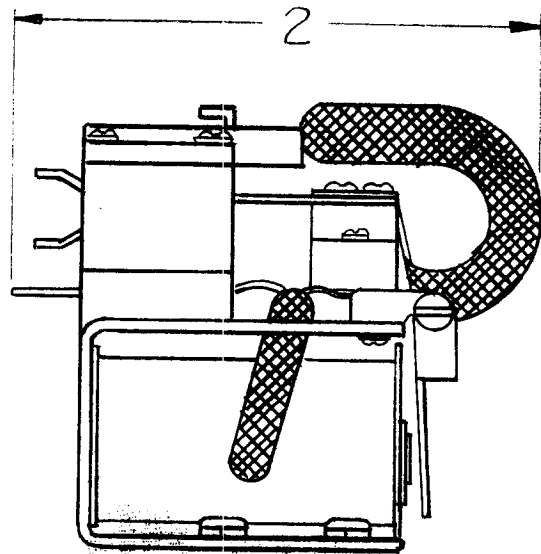
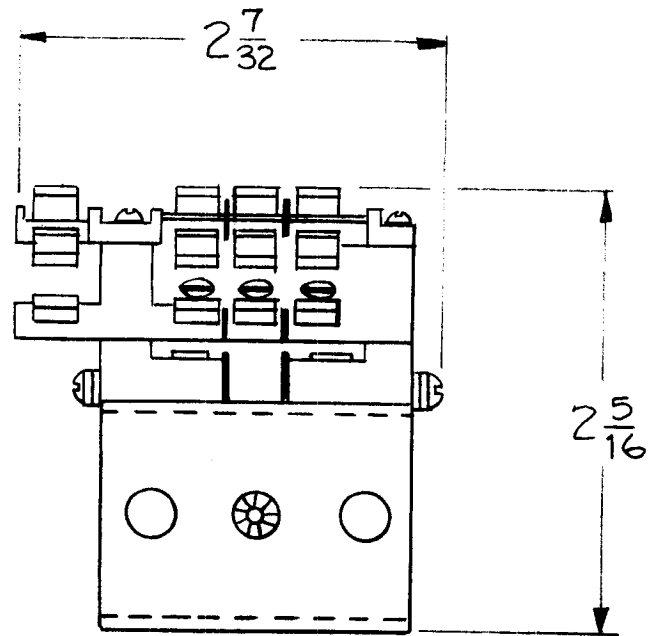
NOM. RES. of COIL - 4000 ohms $\pm 10\%$ AT 25°C
 "Pull In" Current - 8.1 MA DC
 "Release" Current - 3.6 MA DC
 CONTACTS - SPDT MAKE BEFORE BREAK
 CONTACT RATINGS - 250 VA WITH -
 CONTACT PROTECTION ONLY. 5A. MAX.
 500V. MAX. at
 Contact closing.

NOTE —

1. Contacts are Mercury wetted.
2. Switching Mechanisms & Mercury reservoir sealed in glass.
3. Metal Outer Case.
4. Std. Octal Base.

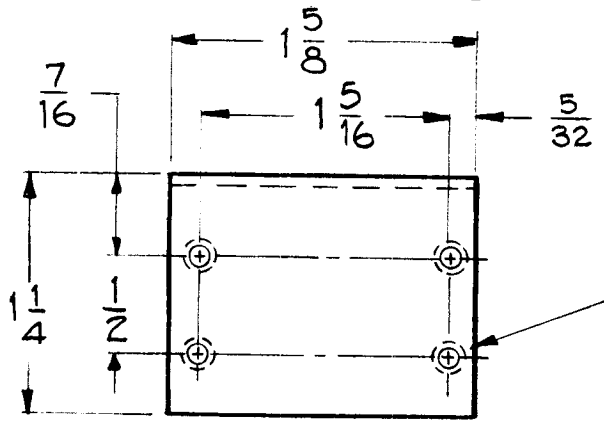
ISSUE	ITEM	CHANGED FROM	DATE	CH. NO.	DRAFTS	CHECKER	ENG. APP.	REQ.	ITEM	PART NO.	DESCRIPTION	SYMBOL	
											THE TECHNICAL MATERIEL CORP. MAMARONECK, NEW YORK		
A	3	WITH CONTACT PROTECTION ADDED	2-29-60	1876	118	[Signature]	[Signature]				RELAY, MERCURY WETTED, OCTAL BASE		
	2	MAKE BEFORE BREAK ADDED											
	1	$\pm 10\%$ AT 25°C ADDED											
TOLERANCES			SCALE: S 401-80 (HG-1002)					MATERIAL		DRAWN: [Signature] CHECKED: [Signature]		FINAL APPROVAL: [Signature]	
DEC. DIM. \pm FRAC. DIM. \pm ANGULAR DIM. \pm			MAXIMUM ALLOWABLE TOLERANCES HAVE BEEN DETERMINED AND ANY DEVIATIONS WILL BE CAUSE FOR REJECTION. REMOVE ALL BURRS AND SHARP EDGES					TYPE & TEMPER HEATTREAT. SPEC.		ELEC. DES. APP MECH. DES. APP		RL-131 A	
								FINISH & SPEC. NO.					

FUNCTION CROWBAR	REQ. PER UNIT 1	USED ON		
		MODEL GPT 40K	ASSY. NO. AR 116	DATE 1-11-60
				RL 107



~ SPECIFICATIONS ~
 COIL ~ 2.4 OHMS ± 10%
 MOISTURE RESISTANT
 VARNISHED.
 PILE UP ~ 4 FORM C
 (4 PDT)
 CONTACTS ~ CODE 15
 1/4" SILVER CADMIUM
 RATED 25 AMPERES
 ADJUSTMENT ~ OPERATE
 10 VOLT, 0.5 AMP
 AC COIL

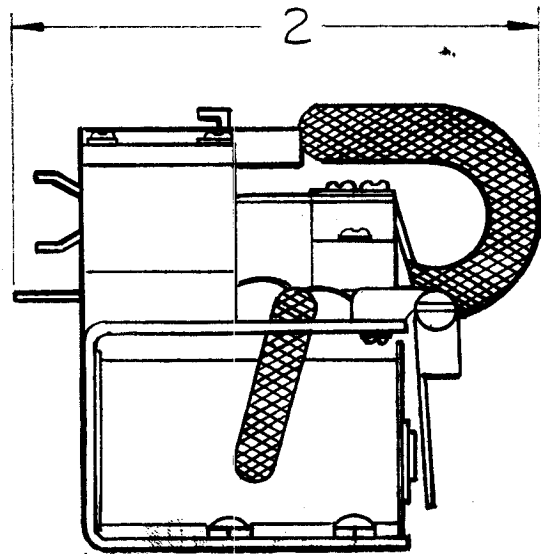
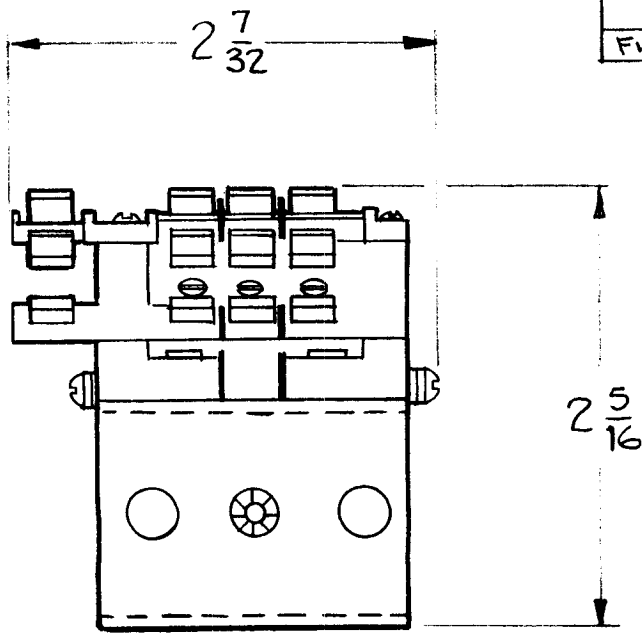
NO LONGER AVAILABLE
 REPLACE BY RL 207



6-32 THREAD (4 HOLES)

ISSUE	ITEM	CHANGED FROM	DATE	CH. NO.	DRAFTS	CHECKER	ENG. APP.	REQ. ITEM	PART NO.	DESCRIPTION	SYMBOL	
B		NOTE ADD,	6-21-90		GDL	SD	QB			THE TECHNICAL MATERIEL CORP. MAMARONECK, NEW YORK	RELAY, ARMATURE	
A	+	coil is added	2/26/60	-	HA	HO	QB					
TOLERANCES			SCALE: S-401-59 (33BAC90C1)							DRAWN: <i>DA. Man</i> CHECKED: <i>A. De</i> FINAL APPROVAL: <i>QB</i>		
DEC. DIM. ± FRAC. DIM. ± ANGULAR DIM. ±			MAXIMUM ALLOWABLE TOLERANCES HAVE BEEN DETERMINED AND ANY DEVIATIONS WILL BE CAUSE FOR REJECTION. REMOVE ALL BURRS AND SHARP EDGES					TYPE & TEMPER HEAT TREAT. SPEC.		FINISH & SPEC. NO. ELEC. DES. APP: <i>EM</i> MECH. DES. APP:		
										RL 134	B	

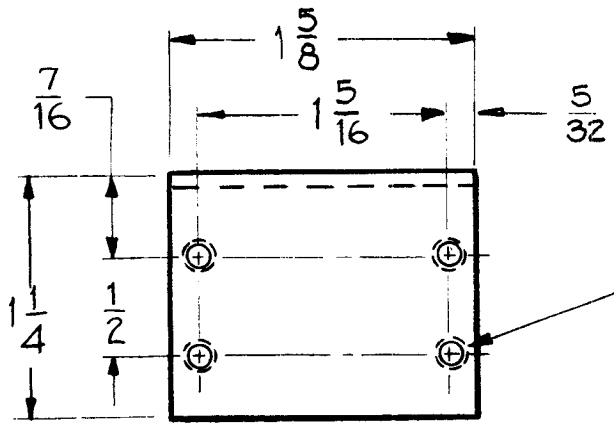
FUNCTION	REQ. PER. UNIT	USED ON		RL 136	A
FINAL FILAMENT	1	MODEL	ASS'Y. NO.		
		GPT 40K	AR 116	1-12-60	



SPECIFICATIONS

COIL ~ 0.01 OHMS ± 10%
 MOISTURE RESISTANT
 VARNISHED.
 PILE UP ~ 4 FORM C
 (4 PDT)
 CONTACTS ~ CODE 15
 1/4" SILVER CADMIUM
 RATED 25 AMPERES
 ADJUSTMENT ~ OPERATE

 3 VOLT, 10AMP AC COIL

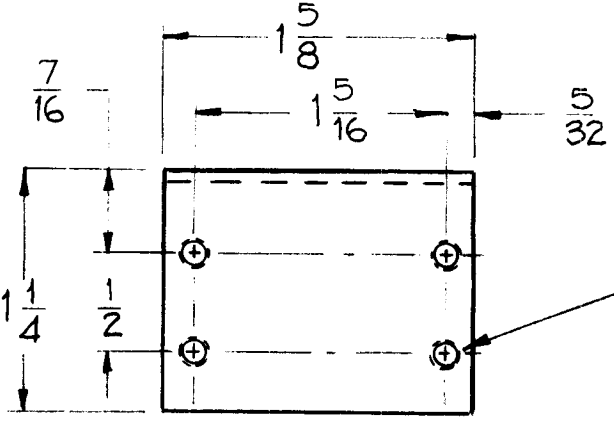
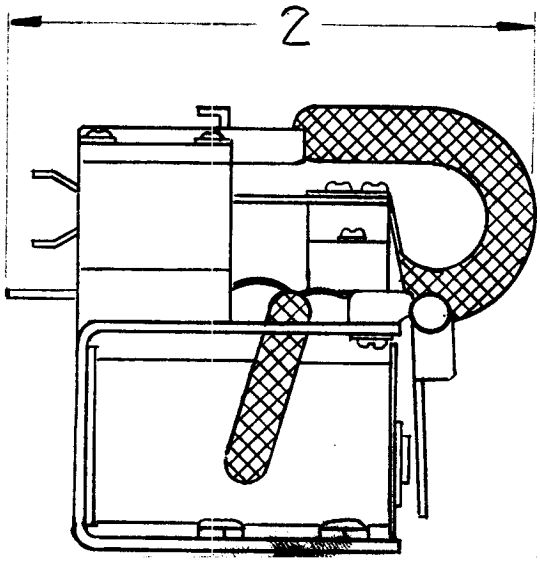
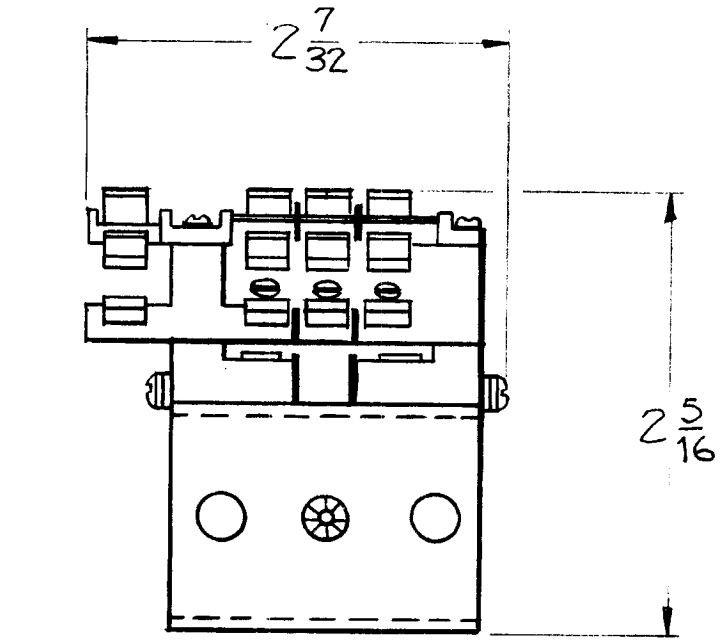


6-32 THREAD (4 HOLES)

							REQ. ITEM	PART NO.	DESCRIPTION	SYMBOL			
									THE TECHNICAL MATERIEL CORP. MAMARONECK, NEW YORK				
									RELAY, ARMATURE				
A	1	coil Ω Added 3 VOLTS WAS 10 V	2/26/60	4	fwk	fwk	DB						
ISSUE	ITEM	CHANGED FROM	DATE	CH. NO.	DRAFTS	CHECKER	ENG. APP.	MATERIAL					
TOLERANCES			SCALE: 5-401-59(33 BAC SODI)						02. man		DB		
DEC. DIM. ±			MAXIMUM ALLOWABLE TOLERANCES HAVE BEEN DETERMINED AND ANY DEVIATIONS WILL BE CAUSE FOR REJECTION. REMOVE ALL BURRS AND SHARP EDGES				TYPE & TEMPER	HEAT TREAT. SPEC.	DRAWN	CHECKED	FINAL APPROVAL		
FRAC. DIM. ±													
ANGULAR DIM. ±													
							FINISH & SPEC. NO.		ELEC. DES. APP	MECH. DES. APP	RL 136	A	

REQ. PER UNIT	USED ON		
	MODEL	ASSY. NO.	DATE
1	GPT 40K		1-15-60

RL 137



6-32 THREAD (4 HOLES)

SPECIFICATIONS

COIL ~ .93 OHMS ±10%
 MOISTURE RESISTANT
 VARNISHED.

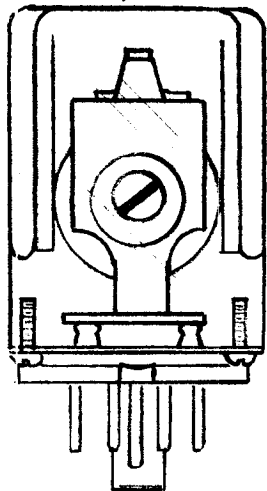
PILE UP ~ 4 FORM C
 (4 PDT)

CONTACTS ~ CODE 15
 1/4" SILVER CADMIUM
 RATED 25 AMPERES

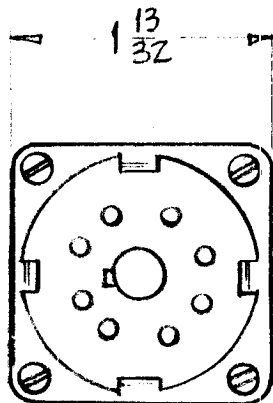
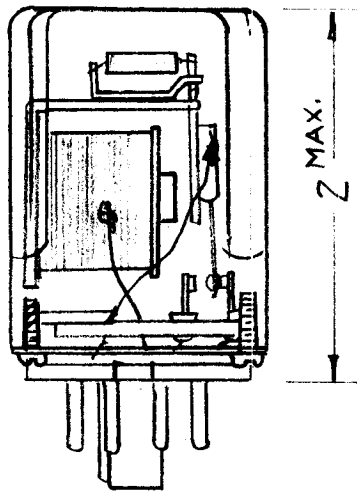
ADJUSTMENT ~ OPERATE
 1 AMP DC

ISSUE	ITEM	CHANGED FROM	DATE	CH. NO.	DRAFTS	CHECKER	ENG. APP.	REQ.	ITEM	PART NO.	DESCRIPTION	SYMBOL			
								STOCK SIZE		THE TECHNICAL MATERIEL CORP. MAMARONECK, NEW YORK					
								MATERIAL		RELAY, ARMATURE					
TOLERANCES								SCALE: 5-401-59 (33BAC90-E1)							
DEC. DIM. ± FRAC. DIM. ± ANGULAR DIM. ±								MAXIMUM ALLOWABLE TOLERANCES HAVE BEEN DETERMINED AND ANY DEVIATIONS WILL BE CAUSE FOR REJECTION. REMOVE ALL BURRS AND SHARP EDGES		DRAWN		CHECKED		FINAL APPROVAL	
								FINISH & SPEC. NO.		ELEC. DES. APP		MECH. DES. APP		RL 137	

CLEAR POLYSTYRENE CASE.



STANDARD OCTAL PLUG.



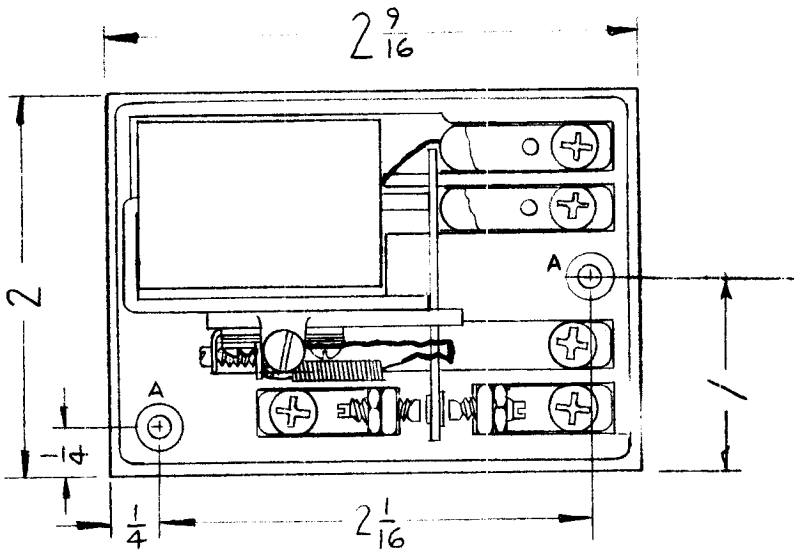
REQ. PER UNIT	USED ON			RL-140
	MODEL	ASS'Y. NO.	DATE	
1	AFC-1		8-9-60	

SPECIFICATIONS

CONTACTS - 1/8" FINE SILVER RATED AT 5 AMPS
 COIL RESISTANCE ~ 10,000 OHMS MAX.
 COIL CURRENT ~ 5 MA.
 DOUBLE POLE, DOUBLE THROW (DPDT)
 COIL POWER REQ: 250 MW

ISSUE	ITEM	CHANGED FROM	DATE	CH. NO.	DRAFTS	CHECKER	ENG. APP.	REQ.	ITEM	PART NO.	DESCRIPTION	SYMBOL			
TOLERANCES								SCALE: S-401-111 (MKF-2-10,000)		D.C. [Signature]		[Signature]			
DEC. DIM. ± FRAC. DIM. ± ANGULAR DIM. ±								MAXIMUM ALLOWABLE TOLERANCES HAVE BEEN DETERMINED AND ANY DEVIATIONS WILL BE CAUSE FOR REJECTION. REMOVE ALL BURRS AND SHARP EDGES		TYPE & TEMPER		HEAT TREAT. SPEC.	DRAWN	CHECKED	FINAL APPROVAL
								FINISH & SPEC. NO.		ELEC. DES. APP		MECH. DES. APP	RL-140		

RE PER UNIT	USED ON			RL-141
	MODEL	ASS'Y. NO.	DATE	
1	BAC-1-S-20	A-	11-7-60	



A ~ .152 DIA. — (Mtg. Hole) 2 REQ

TYPE SVIC 10000 D
26.5VDC
CONTACTS - SPDT, 1 AMP

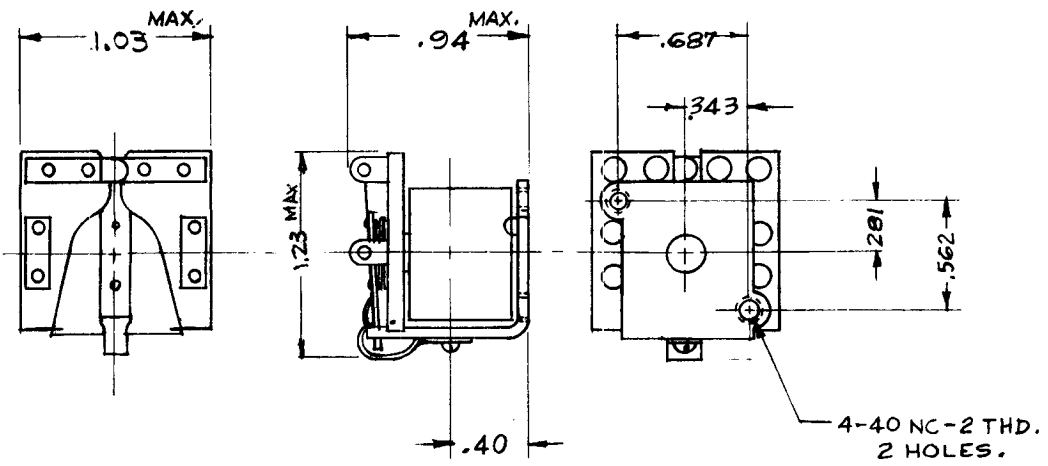
REF: ADVANCE ELECTRIC AND RELAY CO.

								REQ.	ITEM	PART NO.	DESCRIPTION	SYMBOL	
											THE TECHNICAL MATERIEL CORP.		
											MAMARONECK, NEW YORK		
								STOCK SIZE			RELAY, ARMATURE		
								MATERIAL					
ISSUE	ITEM	CHANGED FROM	DATE	CH. NO.	DRAFTS	CHECKER	ENG. APP.			Ruzzo		OPP	
TOLERANCES			SCALE: Do Not Scale							DRAWN	CHECKED	FINAL APPROVAL	
DEC. DIM. ±			MAXIMUM ALLOWABLE TOLERANCES HAVE BEEN DETERMINED AND ANY DEVIATIONS WILL BE CAUSE FOR REJECTION. REMOVE ALL BURRS AND SHARP EDGES					TYPE & TEMPER		HEAT TREAT. SPEC.		RL-141	
FRAC. DIM. ±								FINISH & SPEC. NO.		ELEC. DES. APP		MECH. DES. APP	
ANGULAR DIM. ±													

THE CONTENTS OF THIS DRAWING ARE THE EXCLUSIVE PROPERTY OF THE TECHNICAL MATERIEL CORP. ITS UNAUTHORIZED USE OR REPRODUCTION IN WHOLE OR IN PART IS STRICTLY FORBIDDEN.

REQ. PER UNIT	USED ON		
	MODEL	ASS'Y. NO.	DATE
1	HFR-1/N		1/22/62

RL-145 B



NOTES;

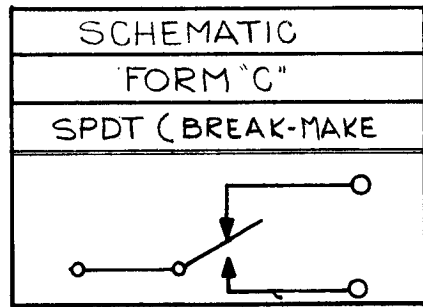
RATING: a. 3 AMPERES, 26 VDC RESISTIVE
b. 5 AMPERES, MAXIMUM,

COIL: a. 6VAC
b. CONTINUOUS DUTY
c. WITHSTANDS 95% HUMIDITY,
d. LUGS FOR COIL TERMINALS,

VIBRATION & SHOCK:
a. 10G, 5-55CPS OPERATING.
b. 50G, NON OPERATING

WEIGHT: 1.25 OUNCES ±

AMBIENT TEMPERATURE RANGE;
-65° TO +70°C



REQ.	ITEM	PART NO.	DESCRIPTION	SYMBOL
			THE TECHNICAL MATERIEL CORP. MAMARONECK, NEW YORK	
B	DIM. 1.03 MAX. WAS .103 MAX	3-4-63 8332	STOCK SIZE	
A	SCHEMATIC ADDED	7-11-62 7324	MATERIAL	
SYM	DESCRIPTION	DATE	CH. NO.	DRAFTS
			CHECKER	ENG. APP.
UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES TOLERANCES ON FRAC. ± 1/64 DEC. ± .005 ANGLES ± 1/2°		SCALE: 5401-146 (5300-13)		
		MAXIMUM ALLOWABLE TOLERANCES HAVE BEEN DETERMINED AND ANY DEVIATIONS WILL BE CAUSE FOR REJECTION. REMOVE ALL BURRS AND SHARP EDGES		
		TYPE & TEMPER	HEATTREAT. SPEC.	DRAWN
				CHECKED
				FINAL APPROVAL
		FINISH & SPEC. NO.	ELEC. DES. APP.	MECH. DES. APP.
				BP
				RL-145 B

STANDARD DRAWING

USED ON UNIT	MODEL	DATE
1	KIT 155	6-6-64
	ASSY. NO.	
	A3139	

RL151

MAXIMUM CONTACT BOUNCE FOR NORMALLY OPEN CONTACTS-3 MILLISECONDS
 MAXIMUM CONTACT BOUNCE FOR NORMALLY CLOSED CONTACTS-7.5 MILLISECONDS
 TYPICAL CAPACITANCE ACROSS OPEN CONTACTS-3pf
 TYPICAL CAPACITANCE COIL TO FRAME-6pf

HI-POT DIELECTRIC STRENGTH: ACROSS OPEN CONTACTS:
 500VDC/350VRMS; OTHER-1500VDC/1000VRMS

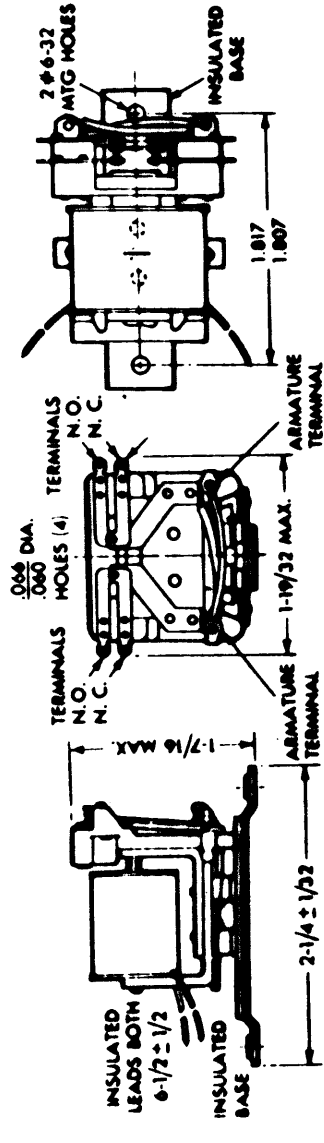
UNENCLOSED, SCREW MOUNTING
 INSULATED BASE
 OPERATING TEMP. RANGE: 65°C TO +85°C

COIL- DC RESISTANCE: 500 OHMS NOMINAL
 OPERATE CURRENT: 20MA DC
 SUGGESTED VOLTAGE SOURCE: 12V DC
 RELEASE CURRENT: NOT LESS THAN 2MA

CONTACTS: ARRANGEMENT: TWO FORM "C"
 RATED CONTACT LOAD: 5 AMPS,
 28VDC OR 120VAC, RESISTIVE

MATERIAL: SILVER

RESISTANCE: 100 MILLIOHMS MAXIMUM



TYPE 42F2

WBGMT. 2 1/4 OZ. MAX.

SYM	DESCRIPTION	DATE	CH. NO.	DRAFTS	CHECKER	ENG. APP.	SCALE	TYPE & TEMPER	HEAT TREAT. SPEC.	FINISH & SPEC. NO.	CODE
Ø	ORIGINAL RELEASE	8-24-64	4	AB							
X	EXPER. RELEASE	8-6-64	X	AB							
	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES AND INCLUDE CHEMICALLY APPLIED OR PLATED FINISHES										
	TOLERANCES										
	FRACTIONS										
	DECIMALS										
	XX ± .01										
	.XXX ± .005										
	± 1/64										
	± 90° 30'										
	5401-132 (42F2)										
	8/24/64										
	RL151										
	MECH. DES. APP.										
	MECH. DES. APP.										
	FINAL APPROVAL										
	CHECKED										
	DRAWN										
	MATERIAL										
	STOCK SIZE										
	PART NO.										
	DESCRIPTION										
	JOHNSON										
	THE TECHNICAL MATERIEL CORP.										
	MAMARONECK.										
	NEW YORK										
	RELAY, GENERAL PURPOSE										
	SYMBOL										

STANDARD DRAWING

APPROVAL NO. 4408

TMC FORM 100-A

STANDARD DRAWING

THE CONTENTS OF THIS DRAWING ARE THE EXCLUSIVE PROPERTY OF THE TECHNICAL MATERIEL CORP. ITS UNAUTHORIZED USE FOR REPRODUCTION IN WHOLE OR IN PART IS STRICTLY FORBIDDEN.

REQ. PER UNIT	USED ON		
	MODEL	ASS'Y. NO.	DATE
1	GPT-200K	AP-108	2-27-63
2	GPT-200K	AX-392	2-12-64

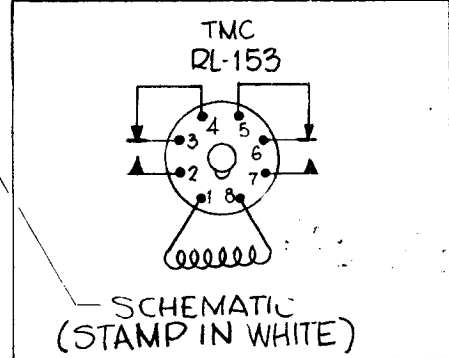
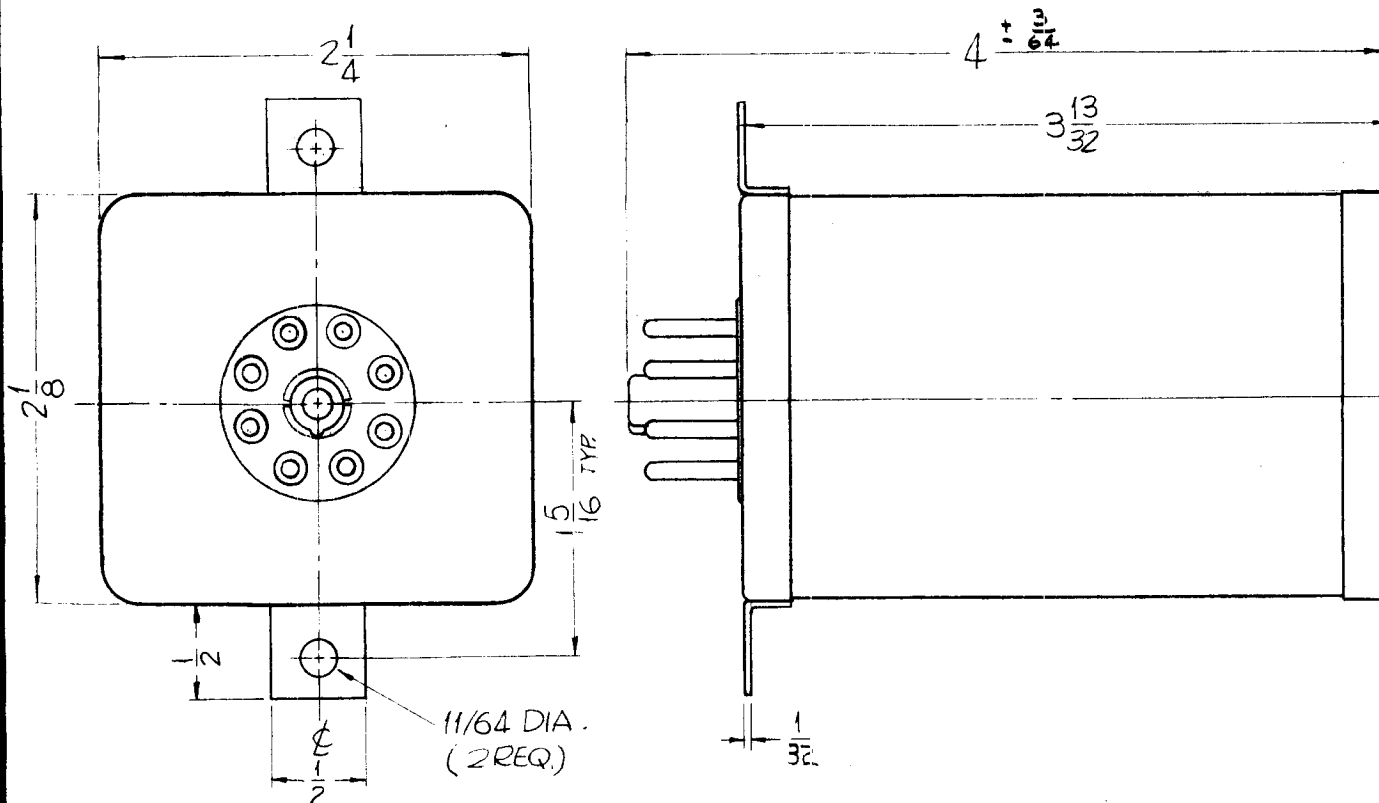
RL-153

A

SPECIFICATIONS:

OPERATION:
PULL IN VOLTAGE 180VAC.
MAX. OPER. 250VAC.
DUTY: CONTINUOUS
CONTACTS:
DPDT ARRANGEMENT.
DATED AT 15 AMPS.
DIELECTRIC STRENGTH:
1000VRMS

SPECIAL FEATURES:
8 PIN PLUG (CONTACT ARRANGEMENT AS SHOWN) PLUS MTG BRKTS AS SHOWN.



NOTE:

1-NC FINISH ON MOUNTING BRACKETS.
2-S-197-BLACK MATTE FINISH.

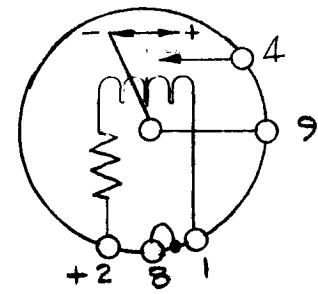
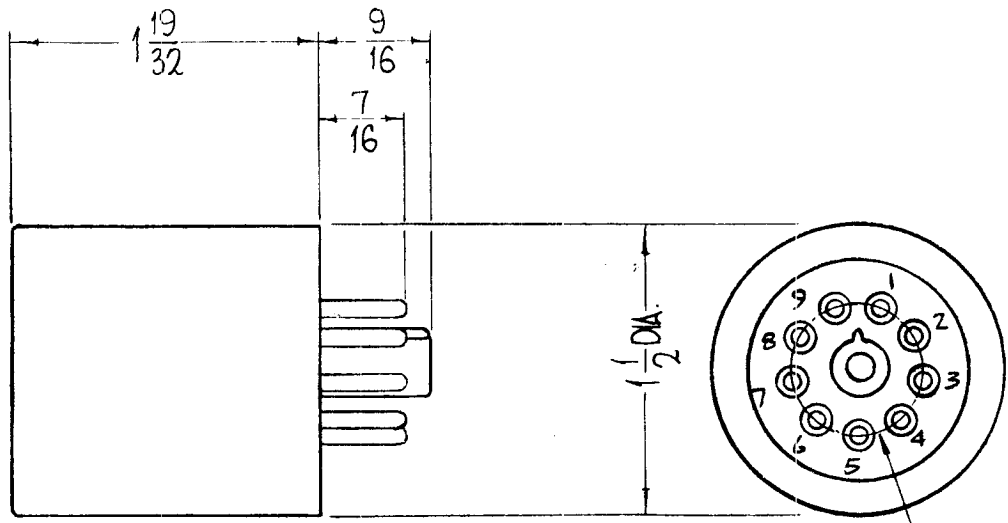
NOTE TO MFG:

ANY REF. BY MFG. STAMPED ON CAN WILL BE CAUSE FOR REJECTION

REQ.	ITEM	PART NO.	DESCRIPTION			SYMBOL
THE TECHNICAL MATERIEL CORP. MAMARONECK. NEW YORK						
A	ADDED ± 3/64 TO 4", CHG'D 1/6 TO 1/32. ADDED S401 REF	7.2666	16637	RME	JCB	RELAY, PLUG IN
Ø	ORIGINAL RELEASE FOR PRODUCTION	3-3-64		A.M.		
SYM	DESCRIPTION	DATE	CH. NO.	DRAFTS	CHECKER	ENG. APP.
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES AND INCLUDE CHEMICALLY APPLIED OR PLATED FINISHES		SCALE S401-227 (POH RX-71)				
DECIMALS .X ± .05 .XX ± .01 .XXX ± .005		TOLERANCES		FRACTIONS ± 1/64 ANGLES ± 0° 30'		CODE C
SEE NOTE		TYPE & TEMPER	HEAT TREAT. SPEC.		DRAWN	CHECKED
FINISH & SPEC. NO.		ELEC. DES. APP.		MECH. DES. APP.		RL-153 A

STANDARD DRAWING

REQ. PER UNIT	USED ON			RL-158 A
	MODEL	ASS'Y. NO.	DATE	
1	SWCU-1		3-30-64	



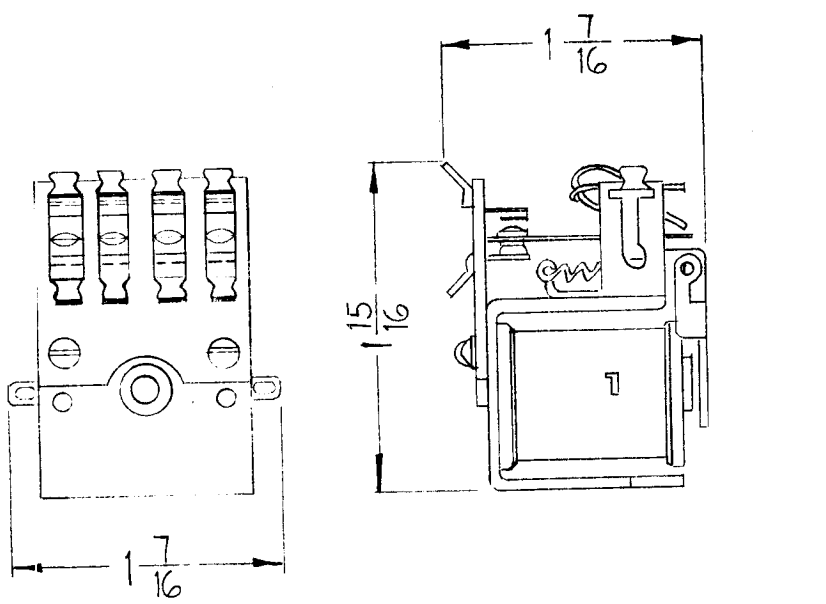
SCHEMATIC

MECHANICAL SPECS:
 CAN - CORROSION RES. (ALUMINUM)
 CONTACTS - NON-LOCKING, PLATINUM
 FACTORY ADJUSTED TO WITHIN 5%
 WEIGHT - 6.0 OUNCES
 CONTACT FORM A (SPST)
ELECTRICAL SPECS:
 INSULATION BREAKDOWN - 400 V.D.C. OR 300 V.A.C.
 OPERATION - IT WITHSTANDS OPER. AT 50 LB/SQ. IN. & VACUUMS TO 2.5" MERCURY, STORAGE UP TO 185°F.
 CALIBRATION - NORMAL CAL. IS FOR VERTICAL MTG. AT 77°F
 CONTACTS - CLOSED 50UA ± 5%
 RES 2700 ± 20%, COIL RATING - 100 UA

REQ. ITEM	PART NO.	F. BUDETTI			DESCRIPTION	SYMBOL
A	ON SCHEMATIC POS. SPST WAS 6PDT, CONTACT FORM A ADD. SQ. IN. WAS SQ. ± 20% = 5% COIL RATED	6216814292	D.V.V.	Job	THE TECHNICAL MATERIEL CORP. MAMARONECK. NEW YORK	
O	ORIGINAL RE. EASE	428.64	WB		RELAY, "HI-SEN"	
SYM	DESCRIPTION	DATE	CH. NO.	DRAFTS	CHECKER	ENG. APP.
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES AND INCLUDE CHEMICALLY APPLIED OR PLATED FINISHES		SCALE		MATERIAL		
		S401-44 (MODEL 800C)		John C. Biele		
				TYPE & TEMPER		HEAT TREAT. SPEC.
				DRAWN		CHECKED
				FINISH & SPEC. NO.		ELEC. DES. APP.
						MECH. DES. APP.
DECIMALS X ± .05 .XX ± .01 .XXX ± .005		FRACTIONS ± 1/64 ANGLES ± 0° 30'		CODE C		RL-158 A

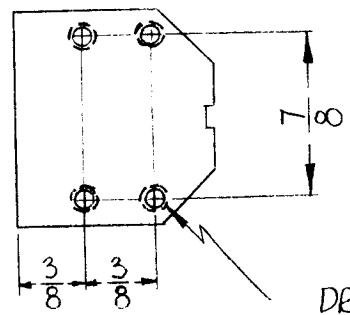
REQ. PER UNIT	USED ON		
	MODEL	ASSY. NO.	DATE
1	GPT-200K	AR-144	1-10-64
1	GPT-200K	AR-153	1-10-64

RL-159 A



~ ELECTRICAL SPECIFICATION ~

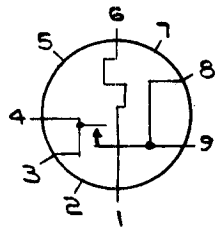
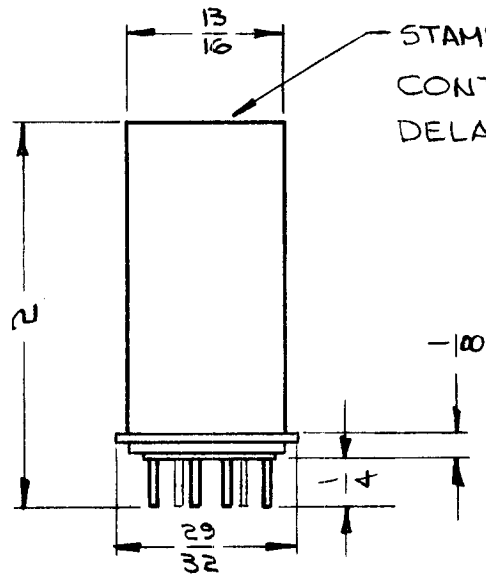
COIL ~ 60Ω
 PILE UP ~ 4 FORM C (4 P. D. T.)
 CONTACTS ~ 3/16" SILVER CAD OXIDE
 RATED 10A. 125 VAC RESISTIVE.
 ADJUSTMENT ~ OPERATE .110 AMPERES
 NON OPERATE .090 AMPERES
 NOMINAL - .200 AMPERES



DRILL & TAP 6-32
 4 HOLES

STANDARD DRAWING

REQ.	ITEM	PART NO.	F. BUDETTI			DESCRIPTION	SYMBOL		
			THE TECHNICAL MATERIEL CORP. MAMARONECK, NEW YORK			RELAY, ARMATURE			
A	6-32 TAPPED HOLES WERE CLEARANCE HOLES	4/15/66 16067 Jc				SRG			
0	ORIGINAL RELEASE FOR PROD.	4-24-64							
SYM	DESCRIPTION	DATE	CH. NO.	DRAFTS	CHECKER	ENG. APP.			
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES AND INCLUDE CHEMICALLY APPLIED OR PLATED FINISHES		SCALE 1:1							
DECIMALS .X ± .05 .XX ± .01 .XXX ± .005	TOLERANCES	FRACTIONS ± 1/64 ANGLES ± 0° 30'	CODE C	S401-3 (57QA2H1)		W.A. FRANCO	RL		
				TYPE & TEMPER	HEAT TREAT. SPEC.	DRAWN	CHECKED		
				FINISH & SPEC. NO.		ELEC. DES. APP.	MECH. DES. APP.		
						RL	RL		
						RL-159	A		



TMC CODE	VOLTAGES AVAILABLE
6	6.3
26	26
115	115

TIME DELAYS AVAILABLE IN SEC.	
5	30
10	45
15	60
20	75
	90

REQ. PER UNIT	USED ON			RL166	A
	MODEL	ASS'Y. NO.	DATE		
1	RTTD-1	A3704	10-14-64		

CONTACTS: SPST NORMALLY OPEN
OR NORMALLY CLOSED.
RATED AT 2 AMPS, 115 V. AC.
HEATER VOLTAGE: SEE CHART
HEATER POWER: 2 1/2 WATTS NOMINAL
TIME DELAY: SEE CHART
TOLERANCE OF TIME DELAY: ±20 %
WEIGHT: LESS THAN 1/2 OZ.
FINISH: ALUMINUM

TMC PART NO. TO BE IN THE FOLLOWING FORM:

RL166-6-NO-90

BASIC PART NUMBER

VOLTAGE CODE

CONTACTS	
NC	NORMALLY CLOSED
NO	NORMALLY OPEN

DELAY TIME IN SEC.
90

STANDARD DRAWING

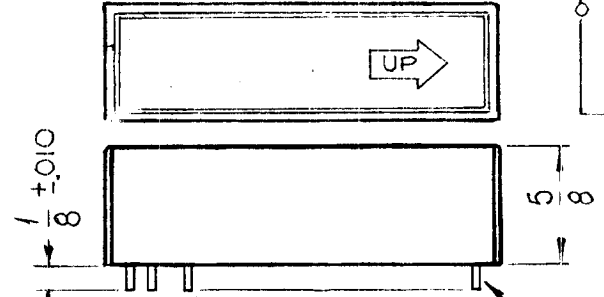
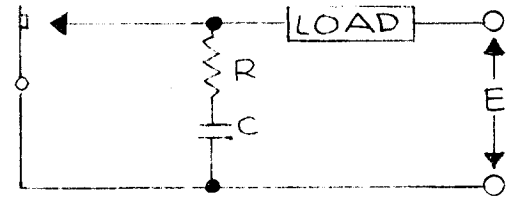
SYM	DESCRIPTION	DATE	CH. NO.	DRAFTS	CHECKER	ENG. APP.	REQ. ITEM	PART NO.	EATON	DESCRIPTION	SYMBOL	
A	"STAMP" NOTE REVISED	11-7-66	upw	17192								
Ø	ORIGINAL RELEASE FOR PRODUCTION	11-30-64	Ø	Ø								
XI	BASIC P/N & (2) CHARTS ADDED	11-24-64	XI									
X	EXPER. RELEASE	10-14-64	X									
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES AND INCLUDE CHEMICALLY APPLIED OR PLATED FINISHES							SCALE					
							1:1					
DECIMALS .X ± .05 .XX ± .01 .XXX ± .005							TOLERANCES					
FRACTIONS ± 1/64 ANGLES ± 0° 30'							CODE					
							C		5401-316			
							FINISH & SPEC. NO.					
							TYPE & TEMPER		HEAT TREAT. SPEC.			
									DRAWN		CHECKED	
									G. Jensen		@ 11-24-64	
											FINAL APPROVAL	
											RL166	
											A	

TMC PART NO. MFG PART NO.
 RL167-1 HG5M52112N00

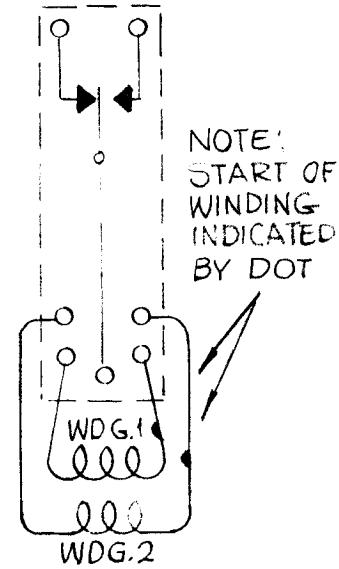
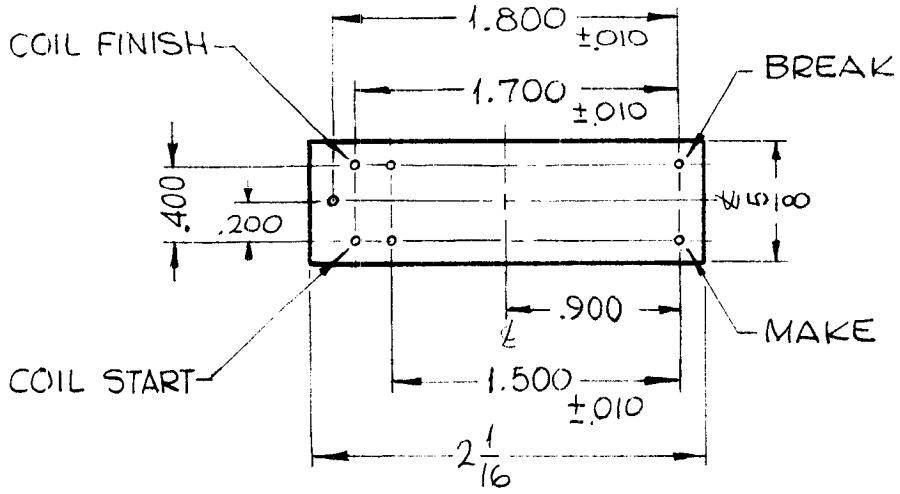
REQ. PER UNIT USED ON
 MODEL ASS'Y. NO. DATE
 RT1A-1 9-22-64

RL167 B

TO BE STAMPED WITH
 TMC PART NUMBER
 AND "UP" DIRECTION.



ARMATURE
 PINS FOR DOUBLE WOUND COILS.
 ALL WIRE .040 DIA.



ELECTRICAL SPECS:

COIL:
 WINDING #1 250 OHMS ± 10% 2570 TURNS ± 3% 39 GA. BELDURE
 WINDING #2 250 OHMS ± 10% 2570 TURNS ± 5% 39 GA. BELDURE

TEST DATA: OPERATE RELEASE
 WINDING #1 5.85 MA 5.85 MA
 WINDING #2 5.85 MA 5.85 MA

CONTACTS:
 2 AMPS MAX, 500V MAX.
 $C = \frac{I^2}{10} \mu f$
 $R = \frac{E}{10I(1 + \frac{50}{E})} \text{ OHMS}$

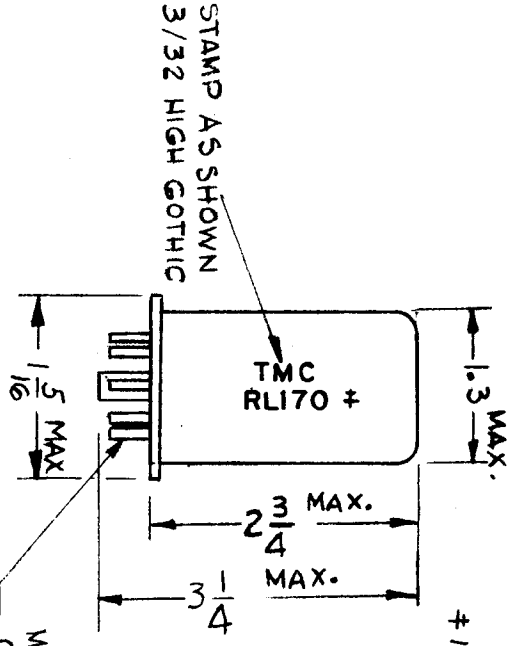
NOTES:
 PLUS POLARITY APPLIED TO START OF EITHER COIL WINDING WILL CLOSE & LATCH THE CONTACTS SHOWN OPEN.
 RELAY ADJUSTED FOR 1% MAX. UNBALANCE AT 60 CYCLES AC, 120V, 4000 Ω IN SERIES WITH COIL.

B	MFG. PIN CHANGED PER ENM	8/9/77	21564	K.P.	*	
A	MFG. PIN WAS HG5X5022 NP-179 RELOCATED. NOTE ADDED R= WAS 5/10I(1+50)	11/12/65	14971	Y.V.		
Ø	ORIGINAL RELEASE FOR PRODUCTION	9-23-64	Ø	92		
X	EXPERIMENTAL RELEASE	9-17-64	Ø	SRG		
SYM	DESCRIPTION	DATE	CH. NO.	DRAFTS	CHECKER	ENG. APP.
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES AND INCLUDE CHEMICALLY APPLIED OR PLATED FINISHES		SCALE	1:1			
DECIMALS .X ± .05 .XX ± .01 .XXX ± .005	TOLERANCES	FRACTIONS ± 1/64 ANGLES ± 0° 30'	CODE	[REDACTED]		

REQ. ITEM	PART NO.	F. EATON	DESCRIPTION	SYMBOL
STOCK SIZE		THE TECHNICAL MATERIEL CORP. MAMARONECK. NEW YORK		
SEE SPEC		RELAY, MERCURY-WETTED CONTACT		
MATERIAL				
TYPE & TEMPER	HEAT TREAT. SPEC.	DRAWN	CHECKED	FINAL APPROVAL
SEE SPEC		SRG	9-23-64	[Signature]
FINISH & SPEC. NO.		ELEC. DES. APP.	MECH. DES. APP.	
		9/23/64	9/23/64	RL167 B

REQ. UNIT	MODEL	USED OR ASSY. NO.	DATE	RL170
1	KMCU-1		3-12-65	D

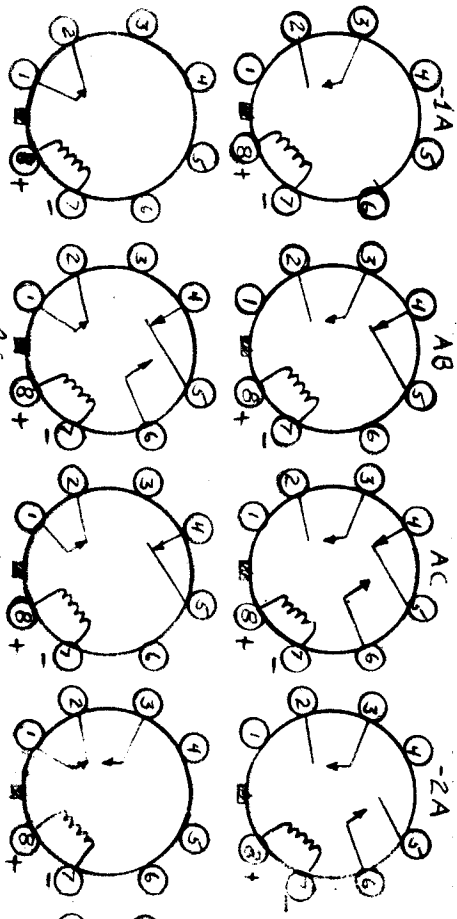
† INSERT CONTACT CODE



MATES WITH STANDARD OCTAL SOCKET.
REF: TS101 OR TS165

SPECIFICATIONS

CONTACTS: QUANTITY: SEE SCHEMATICS
TYPE: SEE SCHEMATICS
VOLTAGE RATING: 250VDC RESISTIVE
CURRENT RATING: 50 MADC RESISTIVE
COIL: NOMINAL VOLTAGE: 24VDC
MUST OPERATE VOLTAGE: 20VDC MAX
MUST RELEASE VOLTAGE: 4.0VDC MIN (@25°C)
RESISTANCE: 1200 Ω ±10% (@25°C)
OPERATING TEMP. RANGE: -50 TO +85°C
SHOCK: 50g
VIBRATION: 20-2,000 cps AT 25g
LIFE*: 1,000,000 OPERATIONS MIN
OPERATING POSITION: ANY
MAKE TIME (23.5VDC ON COIL): 2.5MS MAX
BRAKE TIME (3.0VDC ON COIL): 5MS MAX INCLUDING BOUNCE
OPERATE OR RELEASE DIFFERENTIAL: 1.0m SEC MAX (WITHIN THE SAME RELAY)
COIL POLARIZATION: OPTIONAL AS SHOWN



ALL CONTACTS SHOWN IN UNENERGIZED POSITION

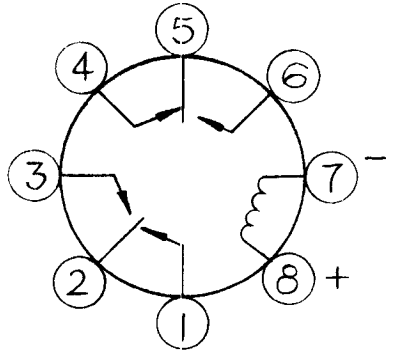
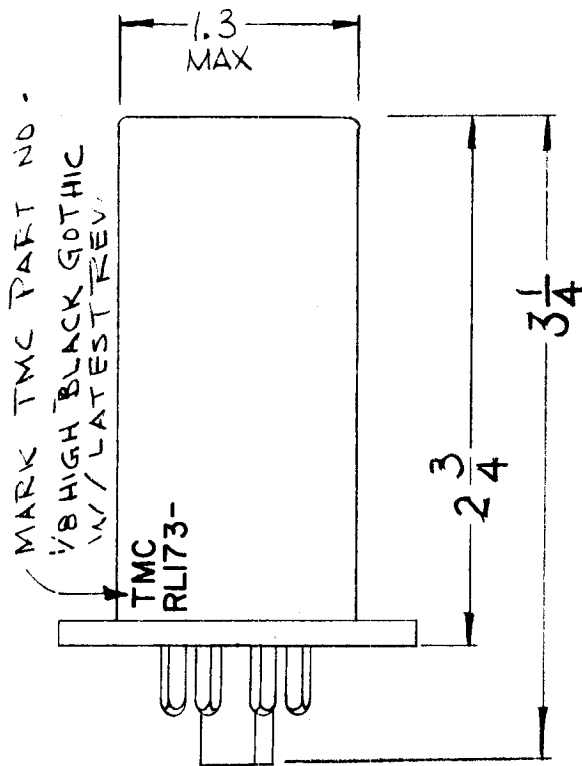
BASIC P/N CONTACT TYPE & QUAN.

*Failure to operate, or a contact resistance of 2.0 ohms or greater is end of life.
TMC PART NUMBER SHALL BE IN THE FOLLOWING FORM:
RL170 AC

DECIMALS	TOLERANCES	FRACTIONS	CODE	SCALE	DATE	CH. NO.	DRAFTS	CHECKER	ENG. APP.	REQ. ITEM	PART NO.	DESCRIPTION	SYMBOL
± .01 ± .005	± 1/64 ± 0.30	± 1/64 ± 0.30	A	DO NOT SCALE	5.14.65	14061	ALC	QJS	QJS	1	THE TECHNICAL MATERIEL CORP. MAMARONECK NEW YORK	RELAY, DRY REED	RL170
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES AND INCLUDE CHEMICALLY APPLIED OR PLATED FINISHES										DRAWN: QJS CHECKED: QJS FINAL APPROVAL: RL			
SYMBOL DESCRIPTION										ELEC. DES. APP. MECH. DES. APP.			

STANDARD DRAWING

REQ. PER UNIT	USED ON			RL173	Ø
	MODEL	ASS'Y. NO.	DATE		
1	KMCU-1		5-6-66		



SPECIFICATIONS

CONTACTS:
 QUANTITY: 8
 FORM TYPE: 2C
 VOLTAGE RATING: 250V MAX @10 WATTS
 CURRENT RATING: 500MA MAX @10 WATTS
 CONTACT RESISTANCE: .150Ω MAX INITIAL.

COIL:
 NOMINAL VOLTAGE: 24VDC
 MUST OPERATE: 18VDC
 MUST RELEASE:
 COIL RESISTANCE: 800Ω ±10%
 OPERATE TIME: 1MS NOM. INCLUDING BOUNCE, MAKE & BREAK
 TEMPERATURE RANGE: -40°C TO +65°C
 INTEGRAL MAGNETIC SHIELD
 CASE TYPE:
 MARKING: ON SIDE

NOTES

- 1 OCTAL BASE MATES WITH TS101 & TS165
- 2 REPLACEMENT FOR RL170

REQ.	ITEM	PART NO.	DESCRIPTION	SYMBOL				
		//	THE TECHNICAL MATERIEL CORP. MAMARONECK. NEW YORK RELAY, PLUG-IN DRY REED					
		//						
		//						
Ø		6-22-66	ORIGINAL RELEASE FOR PRODUCTION					
SYM		DATE	CH. NO.	DRAFTS	CHECKER	ENG. APP.		
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES AND INCLUDE CHEMICALLY APPLIED OR PLATED FINISHES			SCALE					
DECIMALS		FRACTIONS	CODE					
.X ± .05		± 1/64	5401-310(3-2234)					
.XX ± .01		ANGLES						
.XXX ± .005		± 0° 30'						
TOLERANCES								
		FINISH & SPEC. NO.		ELEC. DES. APP.	MECH. DES. APP.	RL173		Ø

APPLICATION

QTY	MODEL USED ON	ASS'Y NO.	LTR	DESCRIPTION	DATE	E.M.N.NO	DRAFT	CHKD	APPD
1	BCT 10KA	AX681	X	EXPERIMENTAL RELEASE	8/24/67	X	C.V.		
			Ø	ORIG RELEASE FOR PROD.	8/28/67	Ø	C.V.		
			A	DELE NOTE	3/20/71	20306	GE		

REVISIONS

TMC P/N	MFGR P/N	COIL VOLTAGE	COIL FREQ.	* AUX. CONTACTS
RL179-1	DE1615	230 VAC	60 HZ	NO

* AUX. CONTACTS: 2 SPDT
ELECTRICAL RATING: 10 AMPS @125/250 VAC

VACUUM SWITCH ELECTRICAL SPECIFICATIONS

SWITCH KV PK TEST: 15 KV @60 CY
SWITCH RATING: 100 AMPS

DIMENSION TOLERANCES WILL BE AS DESCRIBED IN MANUFACTURES LITERATURE.

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
AND INCLUDE CHEMICALLY APPLIED
OR PLATED FINISHES.

DECIMALS FRACTIONS
.X ± .05 TOLS. 1/64
.XX ± .01 ANGLES 0° .30'
.XXX ± .005

MATERIAL

FINISH

S401-48

REQ'D ITEM PART NUMBER DESCRIPTION SYM.

F. BUDETTI

LIST OF MATERIAL

THE TECHNICAL MATERIEL CORP.
MAMARONECK, NEW YORK

SWITCH, VACUUM, SOLENOID, OPERATED

NOTICE TO PERSONS RECEIVING THIS DRAWING
THE TECHNICAL MATERIEL CORPORATION claims proprietary right in the material disclosed hereon. This drawing is issued in confidence for engineering information only and may not be reproduced or used to manufacture anything shown hereon without permission from **THE TECHNICAL MATERIEL CORPORATION** to the user. This drawing is loaned for mutual assistance and is subject to recall at any time.

SIZE CODE IDENT. NO. DWG NO.

A **82679**

RL 179

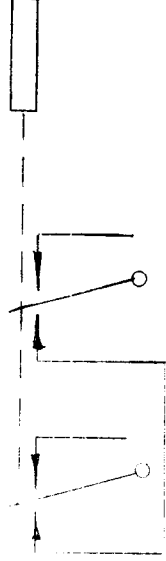
SCALE SHEET OF

APPLICATION			REVISIONS						
QTY	MODEL USED ON	ASS'Y NO.	LTR	DESCRIPTION	DATE	E.M.N.NO	DRAFT	CHKD	APPD
1	TTA-1		X	EXPERIMENTAL RELEASE	10/23/67	X	C.V.		
			Ø	ORIG. RELEASE FOR PROD.	10-31-67	Ø	R.G.		

MFGR PART NO.: DK2-60B-2C
 COIL VOLTAGES: 24 VDC
 RF CONNECTOR : UHF

SPECIFICATIONS

FREQUENCY RANGE: 0 TO 500 Mc
 POWER RATING: 1 KW AV
 VSWR: LESS THAN 1.15 TO 1 FROM 0 TO 500 Mc
 ISOLATION: GREATER THAN 30 dB AT 500 Mc,
 INCREASES 6 dB PER OCTAVE BELOW
 500 Mc
 LOSS: LESS THAN 0.03 dB AT 30 Mc
 SIZE: 2-3/4 X 3-3/4 X 1-3/4
 WEIGHT: LESS THAN 12 OUNCES

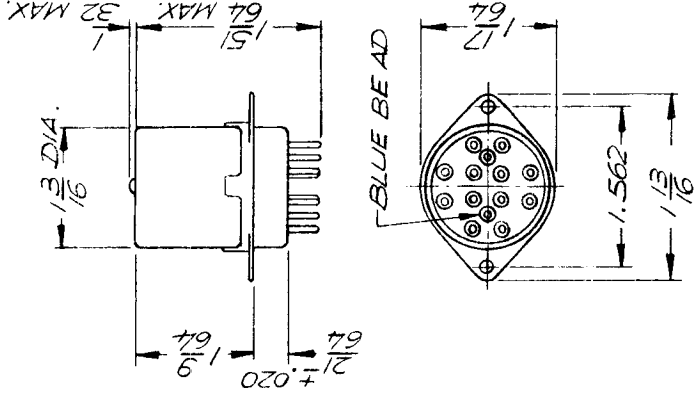


PURCHASING NOTE: VENDOR MUST INCLUDE THE FOLLOWING INFORMATION WHEN SHIPPING THIS ITEM TO TMC.

1. AN OUTLINE DRAWING OR ILLUSTRATION FROM CATALOG SHOWING ALL PERTINENT DIMENSIONS AND TOLERANCES.
2. ELECTRICAL AND/OR MECHANICAL SPECIFICATIONS AS SHOWN IN THEIR CATALOGS.

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES AND INCLUDE CHEMICALLY APPLIED OR PLATED FINISHES	REQ'D	ITEM	PART NUMBER	DESCRIPTION	SYM.
DECIMALS X ± .05 XX ± .01 XXX ± .005 FRACTIONS 1/64 TOLS. ANGLES 0°-30°				LIST OF MATERIAL	
MATERIAL				THE TECHNICAL MATERIEL CORP. MAMARONECK, NEW YORK	
FINISH				RELAY, COAXIAL	
S401-458					
NOTICE TO PERSONS RECEIVING THIS DRAWING THE TECHNICAL MATERIEL CORPORATION claims proprietary right in the material disclosed hereon. This drawing is issued in confidence for engineering information only and may not be reproduced or used to manufacture anything shown hereon without permission from THE TECHNICAL MATERIEL CORPORATION to the user. This drawing is loaned for mutual assistance and is subject to recall at any time.					
SIZE A	CODE IDENT. NO. 82679	DWG NO. RL 180	ISSUE		
SCALE	M/L	SHEET	OF		

APPLICATION			REVISIONS						
QTY	MODEL USED ON	ASSY NO.	LTR	DESCRIPTION	DATE	E.M.N.NO	DRAFT	CHKD	APPD
	RTTD-4		X	EXPERIMENTAL RELEASE	6/18/68		C.V.		<i>[Signature]</i>
			Ø	ORIG. RELEASE FOR PROD	11/21/68	Ø	R.G.		<i>[Signature]</i>



MFGR (TMC CODE NO.): S401-227

DC NOMINAL COIL DATA

VOLTS: 26.5
 AMPS: .132
 OHMS: 200

CONTACT ARRANGEMENT: 4 POLE DOUBLE THROW
 AMBIENT TEMPERATURE: -65°C TO +125°C
 ENCLOSURE: HERMETICALLY SEALED

MOUNTING .125 DIA. HOLES (2)

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES AND INCLUDE CHEMICALLY APPLIED OR PLATED FINISHES				REQ'D ITEM				PART NUMBER				DESCRIPTION		SYM.			
DECIMALS		FRACTIONS		TOLS.		ANGLES											
.X ± .05		1/64		.XX ± .01		0° - 30'											
.XXX ± .005																	
MATERIAL				S.D.E MARCO								LIST OF MATERIAL					
				FINAL APPROVAL <i>[Signature]</i>				DATE 1/20/69				THE TECHNICAL MATERIEL CORP.					
				MECH. DES. <i>[Signature]</i>				DATE 1/20/68				MAMARONECK, NEW YORK					
				ELECT. DES. <i>[Signature]</i>				DATE				RELAY, ARM. DC, 4 PDT					
FINISH				CHECKED				DATE									
				DRAWN <i>[Signature]</i>				DATE 1/17/68									
NOTICE TO PERSONS RECEIVING THIS DRAWING								SIZE				CODE IDENT. NO.		DWG NO.		ISSUE	
THE TECHNICAL MATERIEL CORPORATION claims proprietary right in the material disclosed hereon. This drawing is issued in confidence for engineering information only and may not be reproduced or used to manufacture anything shown hereon without permission from THE TECHNICAL MATERIEL CORPORATION to the user. This drawing is loaned for mutual assistance and is subject to recall at any time.								A				82679		RL 182		OF	
				SCALE								SHEET					

THE CONTENTS OF THIS DRAWING ARE THE EXCLUSIVE PROPERTY OF THE TECHNICAL MATERIEL CORP. ITS UNAUTHORIZED USE FOR REPRODUCTION IN WHOLE OR IN PART IS STRICTLY FORBIDDEN.

REQ. PER UNIT

USED ON

MODEL

ASS'Y. NO.

DATE

PLA 10 K

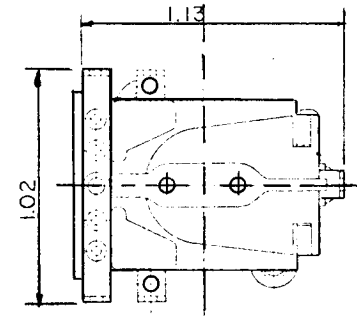
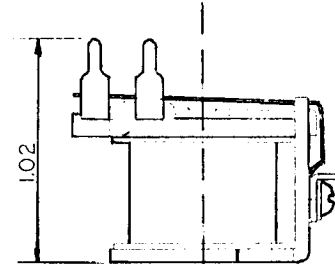
A4840

RL185

A

TMC PART NO.	MFR PART NO.	STYLE	DC VOLT	CONTACT MATL.	SWITCHED CURRENT MAX.		TERM. TYPE	CONTACT ARRANGEMENT
					28VDC	115 VDC		
RL185-1	PL6331310	1	24	SILVER	300MA	500MA	PC SPACE	SPIT

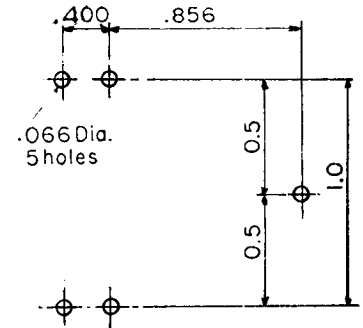
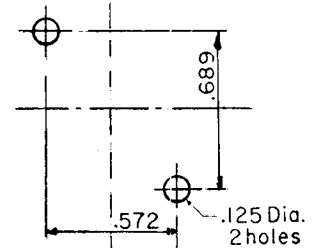
DIMENSIONS (Inches)



ACTUAL SIZE

STYLE 1

BASE MOUNT



DRILLING TERMINAL MOUNT (FC EC)

REQ.	ITEM	PART NO.	DESCRIPTION				SYMBOL		
A		MFR P/NO WAS JAAA-31A3-024DP ON DRILL MTG DIM: 400 WAS .200	6-29-76	21420	GDL	ON	ON	THE TECHNICAL MATERIEL CORP. MAMARONECK, NEW YORK	
Ø		ORIG. RELEASE	8/11/76		(u)				
X		EXP. RELEASE	5-7-70		GE				
SYM	DESCRIPTION		DATE	CH. NO.	DRAFTS	CHECKER	ENG. APP.	MATERIAL	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES AND INCLUDE CHEMICALLY APPLIED OR PLATED FINISHES			SCALE						
DECIMALS X ± .05 XX ± .01 XXX ± .005		TOLERANCES		FRACTIONS ± 1/64 ANGLES ± 0° 30'		CODE		S401-48	
TYPE & TEMPER		HEAT TREAT. SPEC.		DRAWN		CHECKED		FINAL APPROVAL	
FINISH & SPEC. NO.		ELEC. DES. APP.		MECH. DES. APP.		RL185		A	

APPLICATION			REVISIONS							
QTY	MODEL USED ON	ASS'Y NO.	LTR	DESCRIPTION	DATE	E.M.N.NO	DRAFT	CHKD	APPD	
1	BCT 10KA	AX681	X	EXPERIMENTAL RELEASE	8/24/67	X	C.V.			
			Ø	ORIG RELEASE FOR PROD.	8/28/67	Ø	C.V.			
			A	DELE NOTE	3/30/71	20306	GE			

TMC P/N	MFGR P/N	COIL VOLTAGE	COIL FREQ.	* AUX. CONTACTS
RL179-1	DE1615	208 VAC*	400 Hz	NO

* AUX. CONTACTS: 2 SPDT
 ELECTRICAL RATING: 10 AMPS @125/250 VAC

VACUUM SWITCH ELECTRICAL SPECIFICATIONS
 SWITCH KV PK TEST: 15 KV @400 CY
 SWITCH RATING: 100 AMPS

NOT USED

DIMENSION TOLERANCES WILL BE AS DESCRIBED IN MANUFACTURES LITERATURE.

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES AND INCLUDE CHEMICALLY APPLIED OR PLATED FINISHES	REQ'D	ITEM	PART NUMBER	DESCRIPTION	SYM.
DECIMALS: X ± .05, .XX ± .01, XXX ± .005 FRACTIONS: 1/64, ANGLES: 0°-30'			F. BUDETTI	LIST OF MATERIAL	
MATERIAL	FINAL APPROVAL			THE TECHNICAL MATERIEL CORP.	
FINISH	MECH. DES.			MAMARONECK, NEW YORK	
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