Plugs into Your PC Board

Uses Plated Conductors as the Fixed Contacts

Printact Latching Relay and board with relay cross-section shown; contact armature removed. Ceramic magnet is in center of sectioned piece; pivot point exposed.

NEW low cost series LS and LD Printact®

MAGNETIC LATCHING RELAY

NO Springs

NO Wiring

NO Sockets

NO Soldering

NO Mechanical Linkage

FEATURING:

Bifurcated Contacts,
Balanced Armature,
Enclosed Housing,
Encapsulated Coil,
Plug-In Application,
Self-Wiping Contacts,
Inherent Snap Action,
Contact Arrangement Versatility

The outstanding reliability of standard Printact Series G Relays is now available in the new Printact single and double coil Latching Relays. Employing ceramic magnets, instead of mechanical linkage, the new Printact LS and LD Series Latching Relays do not require "hold-in" power to remain in either latch position. Only a momentary DC pulse of 7 milliseconds at rated voltage is required to switch Printact Latching relays which are available with 6, 12, or 24 VDC coils.

Substantial savings in space, weight and assembly costs are possible with this new ⅞" cube, 0.8 oz., Printact Plug-In Relay which mounts on and becomes an integral part of your PC board. Palladium or gold alloy spring contacts mate with rhodium plated printed circuit wiring . . . eliminating costly sockets and coil lead soldering. The bifurcated contacts, rated to three amps resistive, wipe with every actuation . . . cleaning contact surfaces to provide high reliability for your most critical circuit.

The Printact relay uses a ceramic magnet and balanced armature/pivot arrangement instead of a spring return. The magnetic force is constant . . . no need for maintenance adjustment.

Available conductor patterns for your circuit board layout provide up to 3 pole switching combinations of 3 Form A **and** 3 Form B or 3 Form C . . . or up to 5 poles to a common line . . . in any combination.

Single Coil Series LS (500Mw) Printact Relays. A DC pulse switches the relay which remains latched in this position until its coil is pulsed by a signal of opposite polarity.

Double Coil Series LD (1 watt) Printact Relays. One coil switches contacts to one latched position, the second switches to the other latched position. Double coil operation permits use of magnetically-biased adding and resetting circuits.

Save Space, Money and Manhours with the New

Printact®

Series G Plug-In

PRINTED CIRCUIT RELAY*

PLATED CONDUCTORS ON YOUR PRINTED CIRCUIT BOARD ARE THE FIXED CONTACTS

Printact relay, encapsulated in ⅞" high-impact plastic cube, is shown with clamp ready for plug-in into circuit board.

*Patent Nos.: Re 24,209 and 2,881,365

The highly reliable Printact Relay, which mounts on and becomes an integral part of your printed circuit board, makes possible substantial savings in space, weight and assembly costs. Mechanical linkage and fixed contacts on the relay are eliminated entirely. The moving contacts which are part of the armature assembly, mate with rhodium over nickel plated copper conductors printed on your circuit board. Spring connectors on the coil leads eliminate soldering.

Fully encapsulated in a ⅞" high-impact plastic cube, the Executone relay employs a permanent magnet in place of a return spring to hold the armature open. The magnetic force remains constant eliminating the need for maintenance adjustment. Recommended configurations for your circuit layout, provide for switching up to three form A *and* B or form C, or up to five pole to a common line.

Coil resistance of the standard 6, 12, and 24 volt D.C. relays are 75, 300, and 1200 ohms (500 milliwatts) with pull-in occuring at 80% of rated voltage. Variations of coil resistance are available on special order.

Operating life exceeds 10,000,000 operations when contact load is from dry circuit up to ¼ amps 24 volts D.C. See Table I for minimum life ratings up to 3 amps.

Contact Material ..... Gold alloy or Palladium

Power Consumption .....500 mw (at rated voltage)

Operating Temperature .....–30°C to + 95°C at rated voltage

Operate Time .....3 to 7 ms. See Table II

Dimensions and Weight ...7/8 x 7/8 x 13/16—0.8 oz.

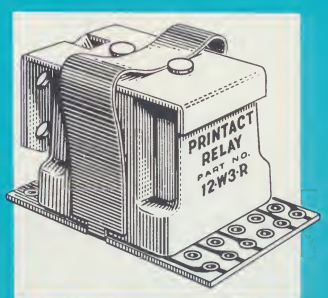
Dielectric Test .....1000 volts RMS 60 cps.

Other Printact features include Bifurcated contacts; Double-break contacts; Balanced armature; Enclosed housing; Plug-in application; Encapsulated coil; Self-wiping contacts; Inherent snap-action, greater switching versatility.

STANDARD 'G' SERIES CATALOGUE NUMBERS

	Double Pole	Three Pole
6 Volt	6-BP2-G	6-BP3-G
12 Volt	12-BP2-G	12-BP3-G
24 Volt	24-BP2-G	24-BP3-G

Contact Material Code: BW = Bifurcated Gold alloy
BP = Bifurcated Palladium



SERIES 'GR' RELAY for conventional mounting

Similar to the "G" series, the "GR" relay has its own circuit board with wiring terminals, and a bracket for easy mounting. Ideal for bread board and prototype testing before you design your final circuit board.

Now Available:

NEW Low-Cost Series LS and LD MAGNETIC LATCHING RELAY

Write for details.

Executone inc.

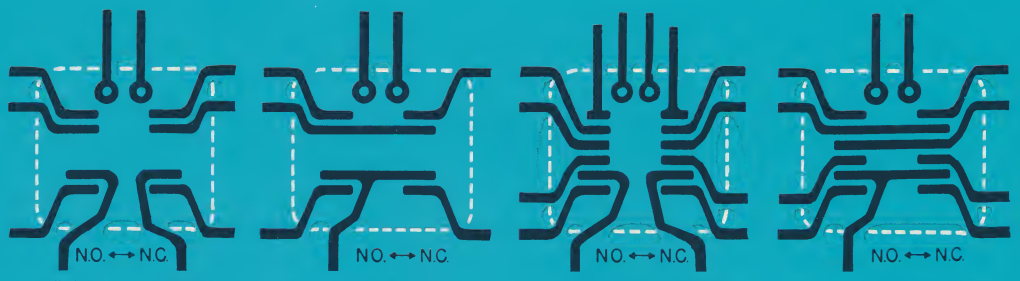
PRINTACT DIVISION

47-37 Austell Place, Long Island City 1, New York

 Printed in U. S. A. Form PR-961D

CATALOG NUMBER CODE

24	B	W	P	3	G	L	D	S	R
DC Voltage	Bifurcated	Gold-Alloy	Palladium	No. of Poles	Standard	Latching	Double Coil	Single Coil	PC Board



2 FORM A & 2 FORM B
Double Pole Single Throw

2 FORM C
Double Pole Double Throw

3 FORM A & 3 FORM B
Three Pole Single Throw

3 FORM C
Three Pole Double Throw

RECOMMENDED LAYOUTS FOR YOUR BOARD

Can be arranged in any combination for switching up to 3 Form A and 3 Form B or 3 Form C.

Up to five pole common (5A, B, or C to one common line) can be provided on special order.

Stick-on conductor patterns are available to assist you in laying out your board.

PRINTED CIRCUIT SPECIFICATIONS

Preferred Base Material.....1/16 Glass Cloth Epoxy or 3/32" XXXP

Conductors.....1 or 2 Ounce Copper (.0014 or .0028" thick)

Plating.....20-50 microinches Rhodium over 50 microinches Nickel

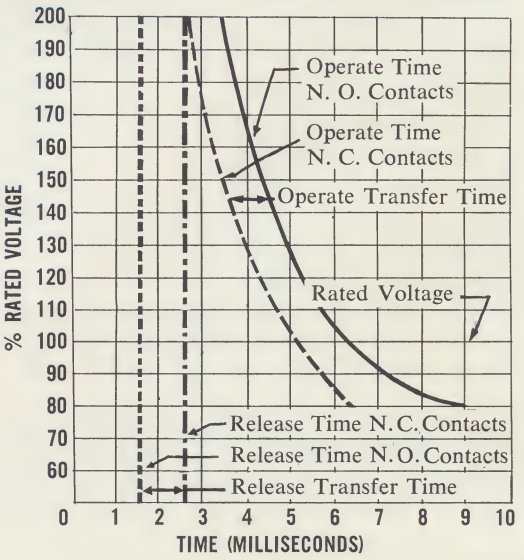
Plating can be confined to coil lead and contact areas.

TABLE I
LIFE RATINGS OF PRINTACT "G" AND "R" SERIES RELAYS

Contact Load	Gold Alloy	Palladium
24 V. DC Dry Circuit	10,000,000	10,000,000
24 V. DC ¼ amp res.	5,000,000	5,000,000
24 V. DC ½ amp res.	1,000,000	3,000,000
24 V. DC 1 amp res.	200,000	2,000,000
24 V. DC 2 amp res.	not recom.	400,000
24 V. DC 3 amp res.	not recom.	300,000
110 V. AC ½ amp res.	100,000	500,000

Mechanical Life is estimated at 100,000,000 cycles. Depending upon the circuitry, contact protection, quality of the printed board, etc., actual performance may exceed rated minimums by 100% or more. For contact loads above 1 amp, 24 VDC and ½ amp, 110 VAC, plating of 40 microinches of rhodium over nickel and copper in the contact area of your board is recommended.

TABLE II
PRINTACT RELAY — AVERAGE TIME CHARACTERISTIC



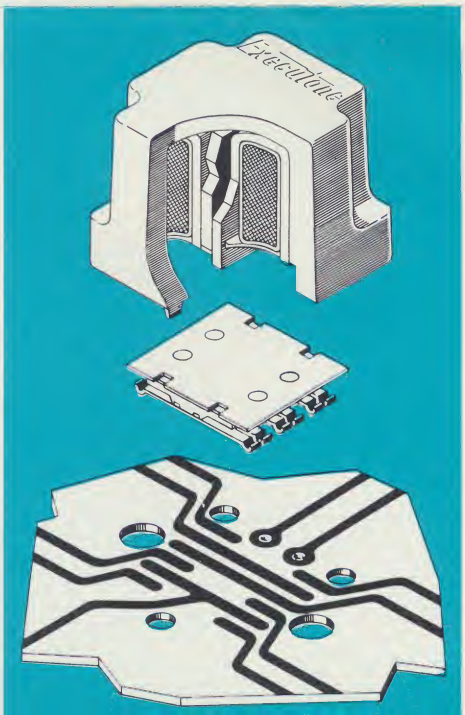
Plugs into your PC Board!

NO Springs, NO Wiring,
NO Sockets, NO Soldering,
NO Mechanical Linkage

NEW

Printact

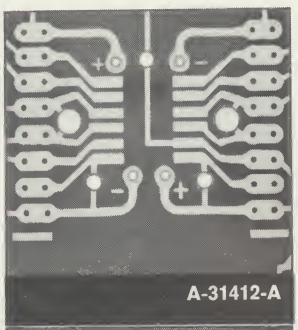
Permanent-magnet, Printed-contact *Relay*

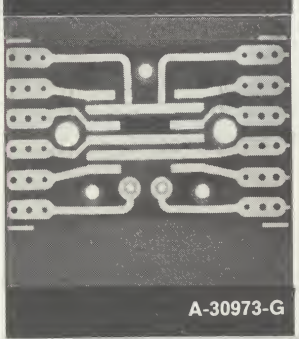


General Purpose PC Boards.....for

Printact® Relay

These 1-1/2" x 1-1/2" x 1/16" G10 glass epoxy PC boards have 20 microinches of Rhodium over 50 microinches of nickel in the relay area and solder plate on the conductor terminals. Though punched with required hole clusters for Printact relay, clamp and coil spring connectors, you can drill the terminal holes and trim the board to your requirement. 25¢ each.





Can be drilled and trimmed as required

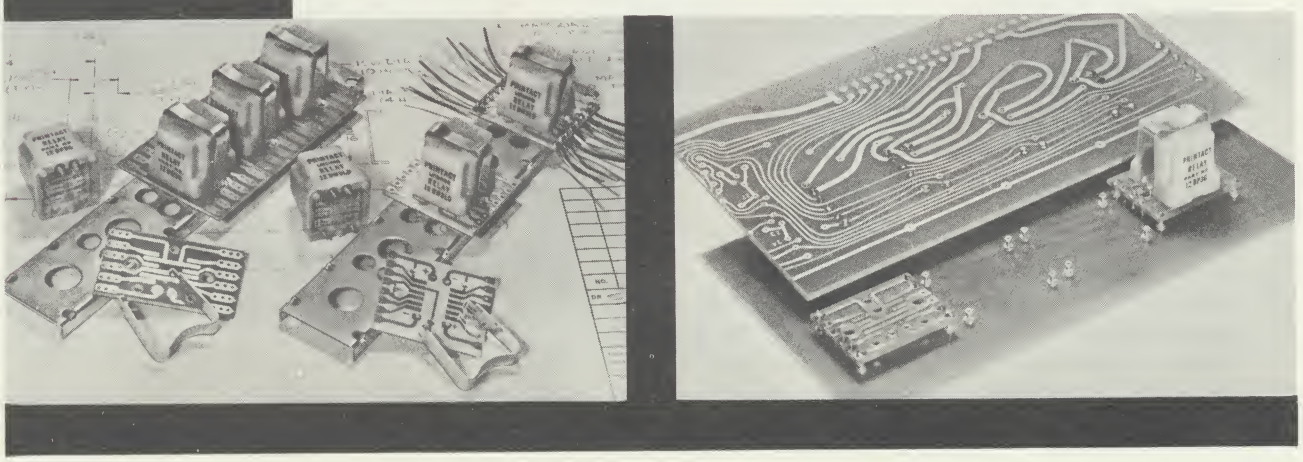
A-31412-A or A-32063 PC BOARDS for all single and double coil Printact relays including Series LD double coil Latching relays, can switch up to 3 Form A **and** 3 Form B in separate circuits or 3 Form C when leads are interconnected.

A-30973-G PC BOARDS for single coil standard Series G or Latching Series LS Printact relays are laid out for switching up to 3 Form C or combinations of As, Bs and Cs as required.

Can be mounted in a variety of arrangements

A-32016 MOUNTING CHANNEL (6-1/2" x 1-3/16" x 1/4") accommodates five single coil Printact relays on A-30973-G boards or three double coil relays on A-31412-A boards when boards are trimmed and drilled for point-to-point wiring. Order relays with low pressure clamps for this application. Channels are priced at 65¢ each.

FOR DIP-SOLDER MOUNTING on larger mother boards inexpensive (Lerco 5025 or Cambion 1011-2) stand-offs support the 4 corners. Other lines are interconnected by stripped wires. Useful to mount relay on component side of single sided board or where only 1 or 2 relays will be used on a larger module. Costs less than a plug-in socket.

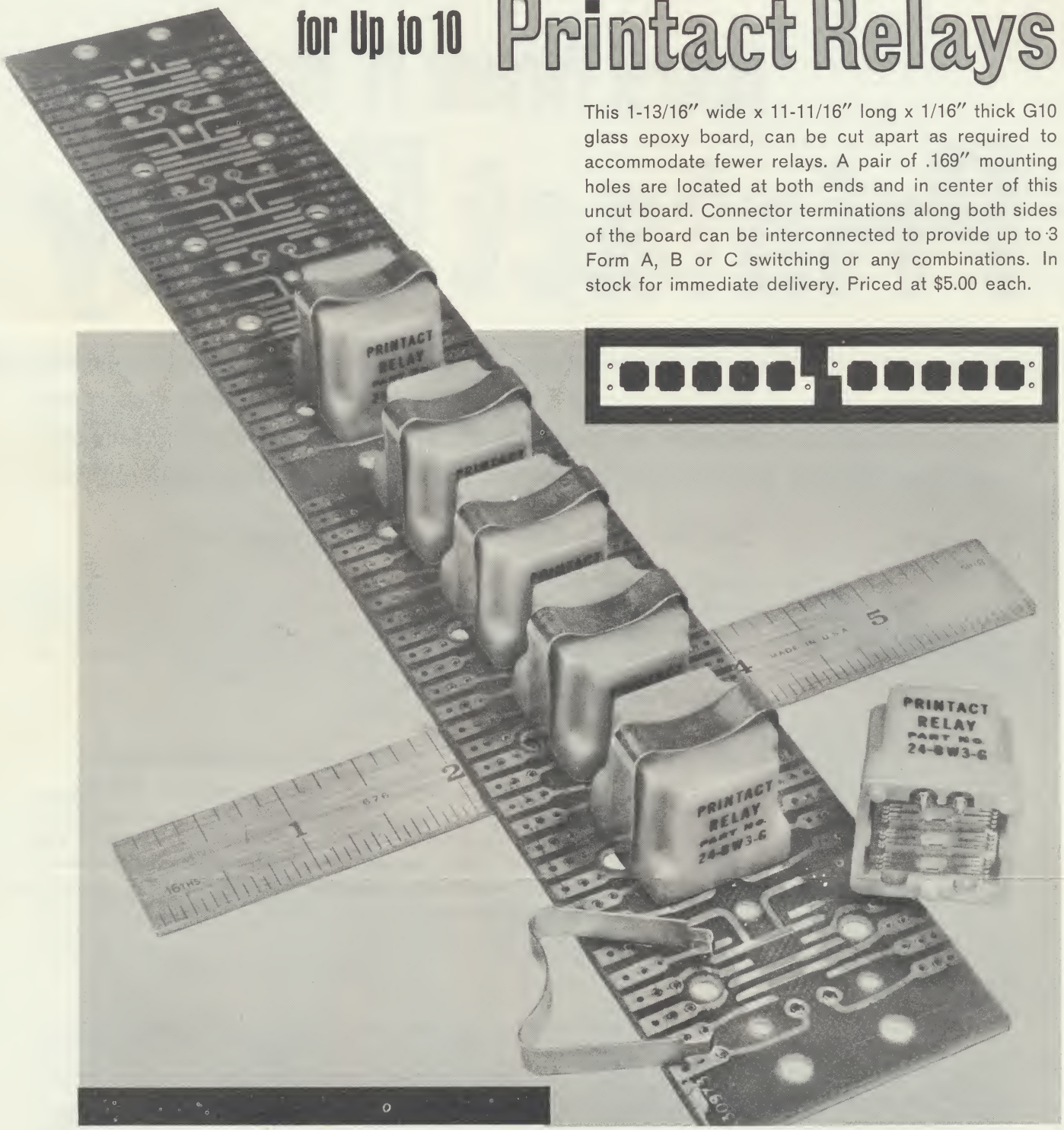


(over)

General Purpose Printed Circuit Boards for Up to 10 Printact Relays

Part A-30973 for up to 10 single coil relays to switch 3 Form A, B or C as shown, $5.00 each.
Part A-31412 for up to 10 double coil relays for Form A **and** B in separate circuits, $7.00 each.

This 1-13/16" wide x 11-11/16" long x 1/16" thick G10 glass epoxy board, can be cut apart as required to accommodate fewer relays. A pair of .169" mounting holes are located at both ends and in center of this uncut board. Connector terminations along both sides of the board can be interconnected to provide up to 3 Form A, B or C switching or any combinations. In stock for immediate delivery. Priced at $5.00 each.

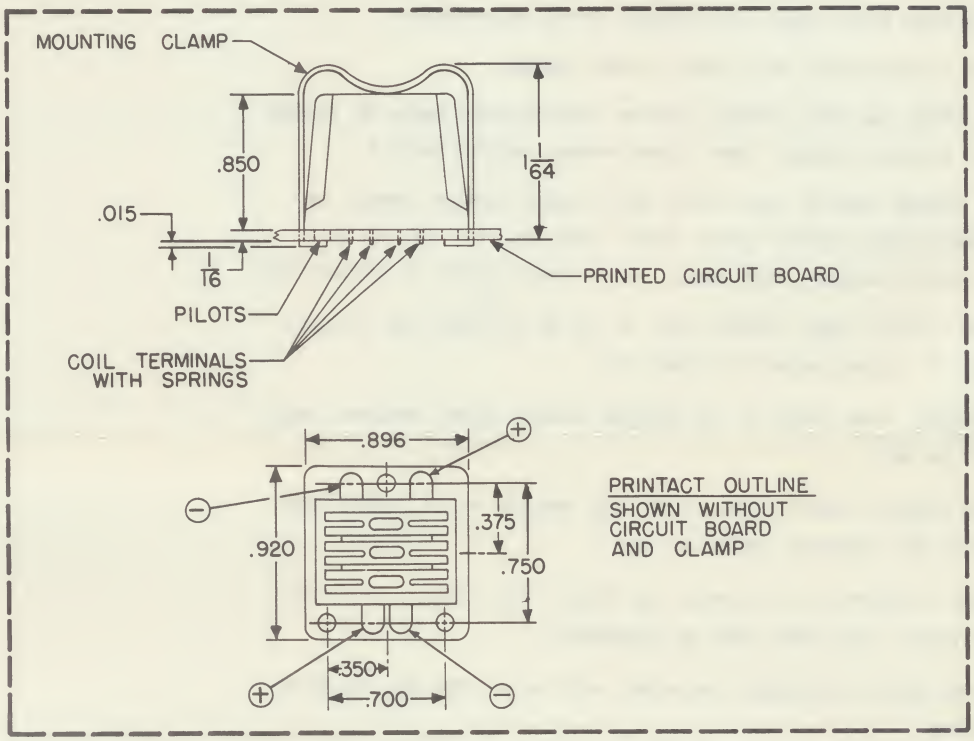


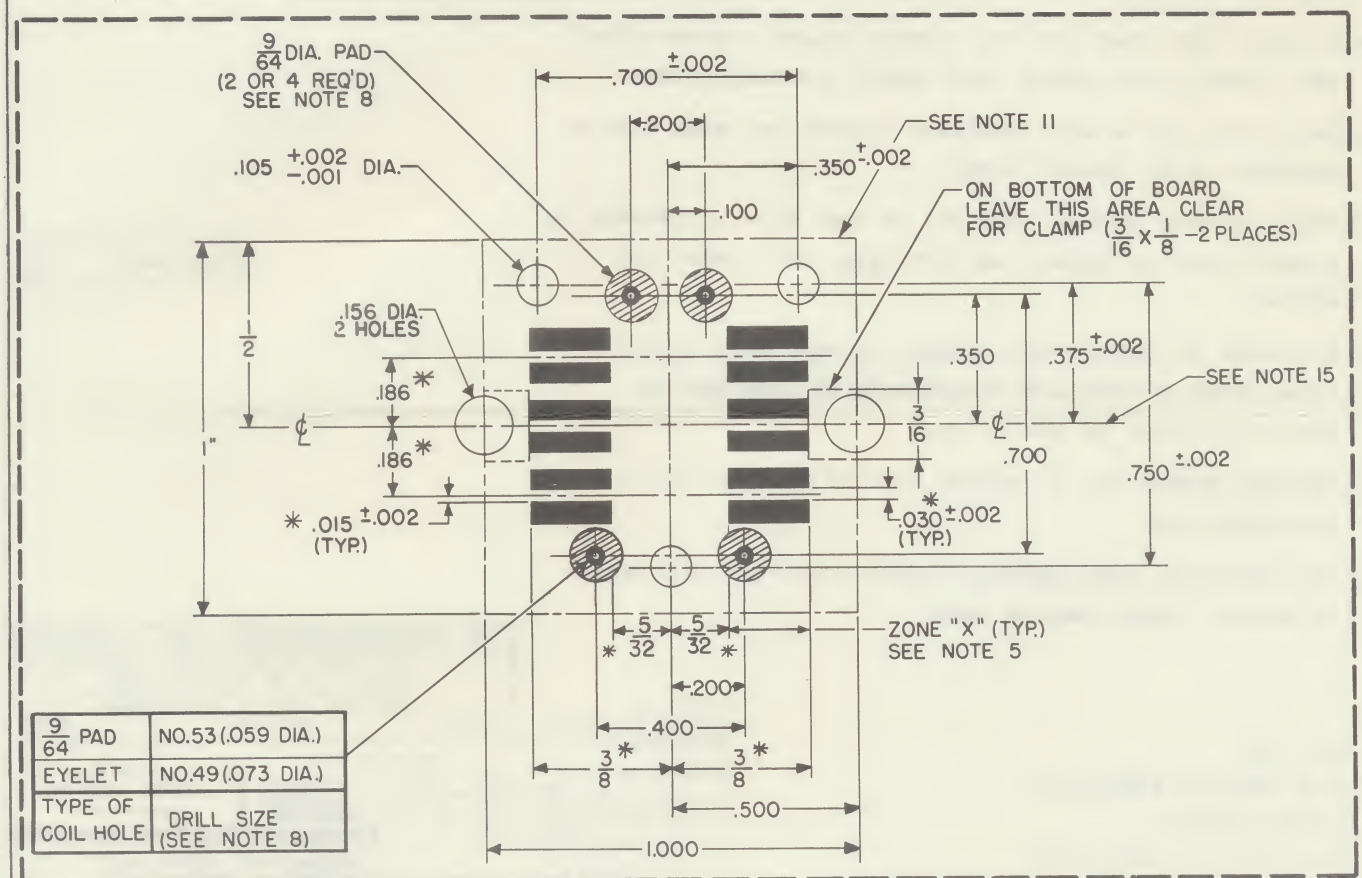
FOR SPECIAL PC BOARDS to accommodate Printact relays and other components, we will gladly provide SD 12433 Board Preparation Prints including plating specifications and conductor patterns. We can also assist you on board layout and procurement through approved Printact PC board sources.

Printact **RELAY DIVISION, EXECUTONE, INC.**
47-37 Austell Place, Long Island City, New York 11101
212 EX 2-4800

Form 965 B Printed in U.S.A.

PRINTACT RELAY DIMENSIONS AND PC BOARD HOLE CLUSTERS, SWITCHING CONFIGURATION AND PLATING SPECIFICATIONS





9 64 PAD	NO.53 (.059 DIA.)
EYELET	NO.49 (.073 DIA.)
TYPE OF COIL HOLE	DRILL SIZE (SEE NOTE 8)

AL-9537
DO NOT SCALE DRAWING

OVER

REVISIONS						
REV	ZONE	DESCRIPTION	DATE	BY	CKD	APPD

NOTES:

1. BOARD: 1/16 GLASS EPOXY NEMA G-10 (FORMICA FR-45 RECOMMENDED)
2. CONDUCTOR: 1 OUNCE (.0014) OR 2 OUNCE (.0028) COPPER.
3. ALL CONDUCTORS AND PADS WITHIN PHANTOM OUTLINE (1X1) SHALL BE PLATED .00002 OR .000035 RHODIUM OVER .00005 NICKEL AS PER NOTE 4.
4. NORMALLY .00002 RHODIUM OVER NICKEL AND 1 OUNCE COPPER SHOULD BE USED. HOWEVER, FOR CONTACT LOADS ABOVE 1 AMP, 24 V.D.C. AND 1/2 AMP., 110 V.A.C. .000035 RHODIUM OVER NICKEL AND 2 OUNCE COPPER IS RECOMMENDED.
5. ALL PRINTED CIRCUIT LINES WITHIN ZONE "X" TO BE .056* WIDE AND STRAIGHT. ALL BENDS TO BEGIN OUTSIDE OF ZONE "X".
6. ALL 12 CONTACT PADS MUST BE ON PRINTED CIRCUIT BOARD WHETHER USED IN CIRCUIT OR NOT
7. ALL OTHER PRINTED CIRCUIT LINES TO BE .035 MINIMUM WIDTH. THESE LINES MUST CLEAR .156 DIAMETER HOLES BY .040
8. DRILL PLAN IS SHOWN FOR A DOUBLE COIL RELAY. FOR A SINGLE COIL RELAY THE TWO HOLES .400 APART MAY BE ELIMINATED.
9. PLUS (+) AND MINUS (-) MARKINGS ON BOARD ARE SHOWN FOR COIL POLARITY IDENTIFICATION
10. IF DOUBLE SIDED BOARD WITH COIL CONTACT EYELETS (A-30494) IS USED THEN ELIMINATE 9/64 DIAMETER PADS AROUND .073 DIAMETER HOLES
11. BOARD TO BE FLAT IN AREA INDICATED BY PHANTOM LINE WITHIN ±.002 AND COMPLETELY NICKEL-RHODIUM PLATED
12. PRINTED CIRCUITRY MUST BE LAYED OUT SO THAT RELAY IS SUPPORTED IN AS MANY PLACES AS POSSIBLE AND KEPT LEVEL. USE SUPPORT PADS IF NECESSARY
13. RELATIONSHIP OF PRINTED CIRCUIT CONTACTS TO HOLES TO BE CHECKED ON FINISHED BOARD BY USING GAUGE A-32687. HOLES ON GAUGE MUST LIE COMPLETELY WITHIN THE PRINTED AREAS
14. DIMENSIONS MARKED WITH (*) ASTERISK APPLY TO THE LAYING OUT OF THE ARTWORK ONLY.
15. THIS CENTER-LINE TO BE CENTRALLY LOCATED WITHIN ±.002 WITH RESPECT TO ADJACENT CONTACT PADS AS SHOWN

D | SD-12433 | C REV

NO.	REVISION	DATE
D	±.002 WAS ±.200 SD HM	1-5-65
C	1/16 GLASS EPOXY G-10. HM SD	12-11-64
	NOTES 14 & 15. MATERIAL WAS REDRAWN WAS C SIZE. ADDED	

ITEM	REQ	DRAWING OR MFG. NO.

BILL OF MATERIAL

DRAWN BY: A.B. DATE 12-11-64
CKD BY: SD
APPD BY: HM
MATERIAL
FINISH

UNLESS OTHERWISE SPECIFIED. DIM. ARE IN INCHES TOL ARE FRAC ±1/64 DEC ±.005 ANGLES ± 1° — BREAK ALL SHARP CORN.

NEXT ASSEMBLY DWG. NO. | NO. REQ.

Manufacturing Subsidiary of Executone

ADAMS LABS. INC.
LONG ISLAND CITY, N. Y.

PRINTACT - P.C. BOARD HOLE CLUSTER & PRINTED PAD GENERAL INFORMATION

SCALE: 1:1 | D | SD-12433 | C REV
MACH. FINISH: | PART NO. | SHT OF

Executone, Inc.
PRINTACT RELAY DIVISION
47-37 Austell Place,
Long Island City 1, New York

OVER

Postage
Will Be Paid
by
Addressee

No
Postage Stamp
Necessary
If Mailed in the
United States

BUSINESS REPLY CARD

FIRST CLASS PERMIT NO. 488 LONG ISLAND CITY 1, NEW YORK

Executone inc.

Printact Relay Division

47-37 Austell Place,

Long Island City 1, N. Y.

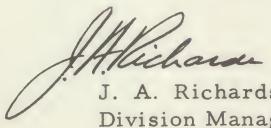
PRINTACT RELAY DIVISION
EXECUTONE, INC.
47-37 Austell Place, L. I. C., N. Y.

Dear Friend:

Thanks for your reply to our recent advertisement. We enclose literature on the Printact Standard series G and Latching series LS/LD relays.

If you will fill out and return this card today, we will gladly send you cost and technical information on the Printact relay recommended for your application as well as data on required PC boards.

Thank you.



J. A. Richards,
Division Manager

PR5

Please send data and quote on **Printact®**

PRINTED CONTACT—PERMANENT MAGNET RELAY

☐ *Latching LS Series* ☐ *Latching LD Series* ☐ *Standard G Series*

*Coil Voltage*_____ *DC* *Contacts Req.*_____ *Life Req.*_____

*Contact Load: Volts*_____ *DC or AC*_____ *Amps Inductive or Resistive*

Please quote in lots of _____

Name_____ Title_____

Firm_____ Dept._____

Address_____ Telephone_____

City_____ Zone_____ State_____