



INSTRUCTIONS

GEI-83964

AUXILIARY CURRENT RELAY

HAA15A & HAA15B

SWITCHGEAR DEPARTMENT

GENERAL  ELECTRIC

PHILADELPHIA, PA.

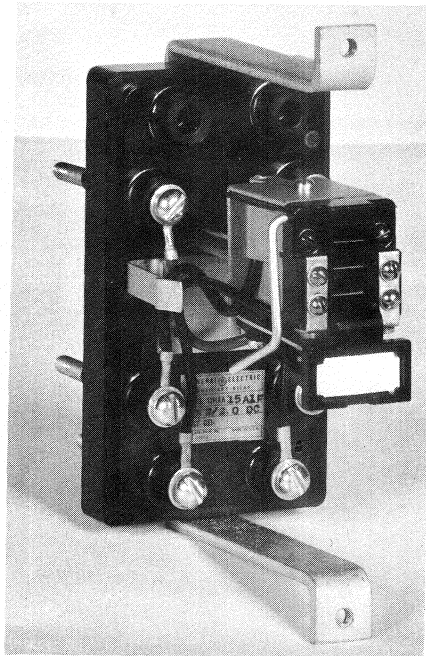


Fig. 1 (8030184) HAA15 Relay Removed From Case

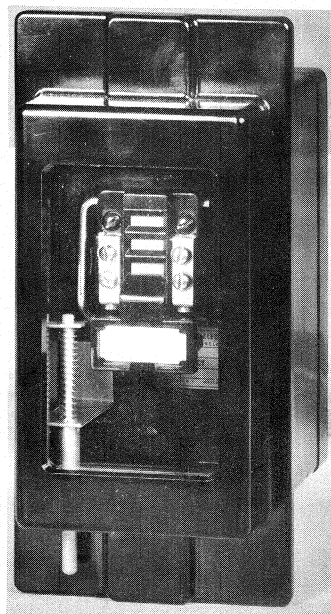


Fig. 2 (8912917) HAA15 Relay In Flush Mounted Case

AUXILIARY CURRENT RELAY

HAA15A AND HAA15B

INTRODUCTION

The HAA relays covered by this Instruction Book consist of one target unit mounted in a molded plastic case with a glass window. These relays have two normally open contacts, electrically separate from the coil circuit, which operates when the target coil is energized. The coil circuit of the HAA15A is designed for current operation while that of the HAA15B is designed for d-c voltage operation. The available current and voltage ratings are given in Table A. The internal connections are provided in Figs. 3 and 4.

TABLE "A"

MODEL	COIL RATING
HAA15A	0.2/2.0 AMP DC 0.6/2.0 AMP DC
HAA15B	250 VOLT DC 125 VOLT DC 48 VOLT DC

APPLICATION

These HAA relays may be used wherever a single external target function is required. The HAA15A in particular may be used as an external target seal-in unit.

RATINGS

The contacts will make and carry 30 amperes momentarily and will carry 6 amperes continuously.

The resistance values, the minimum operating

values and the current carrying ability of the operating coils are given in Table B.

CONSTRUCTION

The HAA relays contain a target unit which is a small hinged armature type relay with a "U" shaped magnet frame, a fixed pole piece, an armature, which operates the normally open contacts and the target, and an operating coil.

The unit is mounted in a small molded case which can be either projection mounted, Fig. 5 or semi-flush mounted, Fig. 6.

Relays with dual rated coils are connected for the higher ampere rating when shipped as indicated in Fig. 3. Interchange the green and black leads for the lower ampere rating connection.

RECEIVING, HANDLING AND STORAGE

These relays when not included as parts of a control panel, will be shipped in cartons designed to protect them against damage. Immediately upon receipt of a relay, examine it for any damage sustained in transit. If injury or damage resulting from rough handling is evident, file a damage claim at once with the transportation company and promptly notify the nearest General Electric Apparatus Sales Office.

Also check the nameplate stamping to insure that the model number and rating of the relay received agree with the requisition.

Manually check the operation of each unit and that the contact gap is at least 3/32 inch and the wipe is 1/32 inch.

TABLE "B"

COIL RATING	TAP RATING	DC RESISTANCE	MIN. OPER.	CONTINUOUS RATING	CARRY 30 AMPS FOR	CARRY 10 AMPS FOR
0.2/2.0 AMP	0.2 AMP TAP	7.0 OHMS	0.2 AMP	0.30 AMP	-----	0.2 SEC.
0.6/2.0 AMP	0.6 AMP TAP	0.6 OHMS	0.6 AMP	0.90 AMP	0.5 SEC.	4.5 SEC.
0.2/2.0 AMP 0.6/2.0 AMP	2.0 AMP TAP	0.13 OHMS	2.0 AMP	3.0 AMP	4 SEC.	30 SEC.
250 Volt DC	-----	11200 OHMS*	200 VOLT	250 VOLT	-----	-----
125 Volt DC	-----	5600 OHMS	100 VOLT	125 VOLT	-----	-----
48 Volt DC	-----	840 OHMS	38.4 VOLT	48 VOLT	-----	-----

* Series Resistor of 5600 Ohms Included

These instructions do not purport to cover all details or variations in equipment nor to provide for every possible contingency to be met in connection with installation, operation or maintenance. Should further information be desired or should particular problems arise which are not covered sufficiently for the purchaser's purposes, the matter should be referred to the General Electric Company.

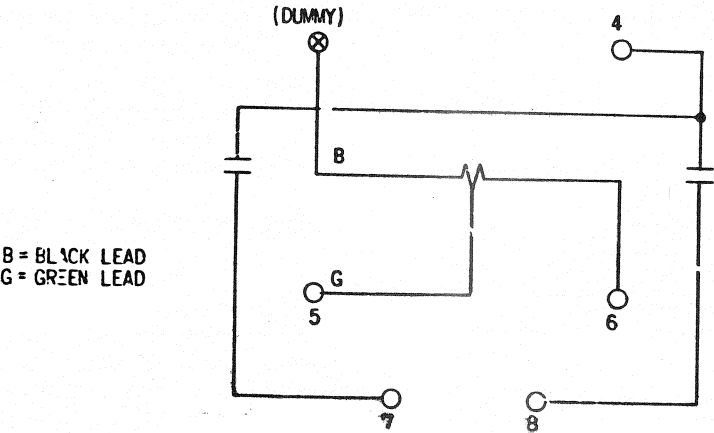
SERVICING

For cleaning fine silver contacts, a flexible burnishing tool should be used. This consists of an etched roughened strip of flexible metal, resembling a superfine file which removes corroded material quickly without scratching the surface. The flexibility of the tool insures the cleaning of the actual points of contact. Never use knives, files, abrasive paper or cloth to clean fine silver contacts. A burnishing tool as described above can be obtained from the factory.

RENEWAL PARTS

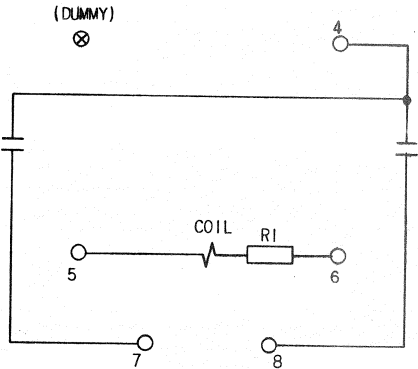
It is recommended that sufficient quantities of renewal parts be carried in stock to enable the prompt replacement of any that are worn, broken or damaged.

When ordering renewal parts, address the nearest Sales Office of the General Electric Company, specify quantity required, name of the part wanted and give complete nameplate data. If possible, give the General Electric requisition number on which the relay was furnished.



CONN. SHOWN FOR HIGHER AMP. RATING.
INTERCHANGE GREEN & BLACK LEADS FOR
LOWER AMP RATING.

Fig.3 (0165A6061) Internal Connection Diagram Of The HAA15A Relay Showing Connections For Higher Amp Rating



VOLTS DC	OHMS	
	COIL	R1
250	5600	5600
125	5600	—
48	840	—

Fig.4 (0165A6062) Internal Connection Diagram And Table Of Resistance Values Of The HAA15A Relay

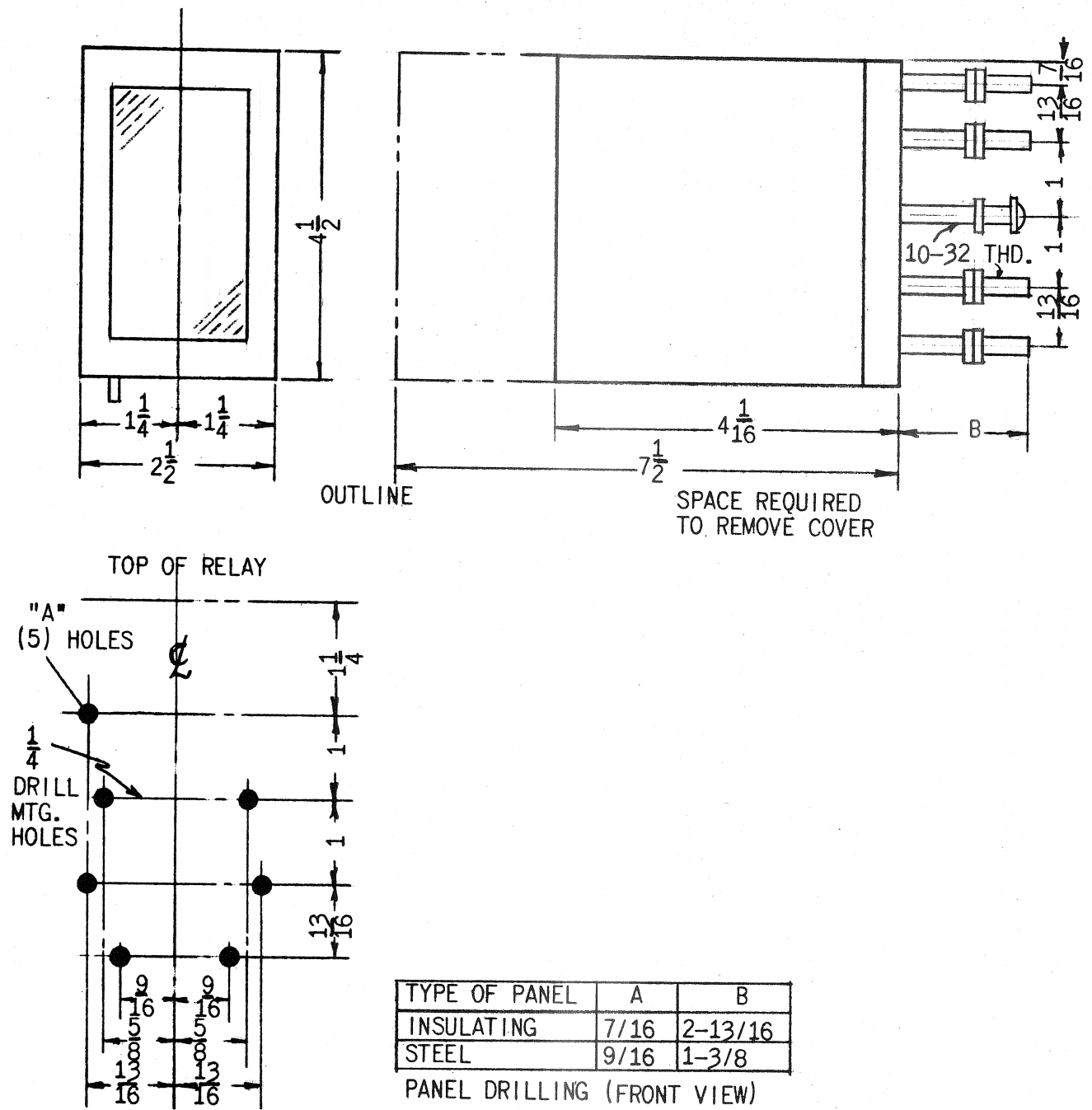


Fig.5 (0165A6003-1) Outline And Panel Drilling Dimensions For The Projection Mounted HAA15A Relay

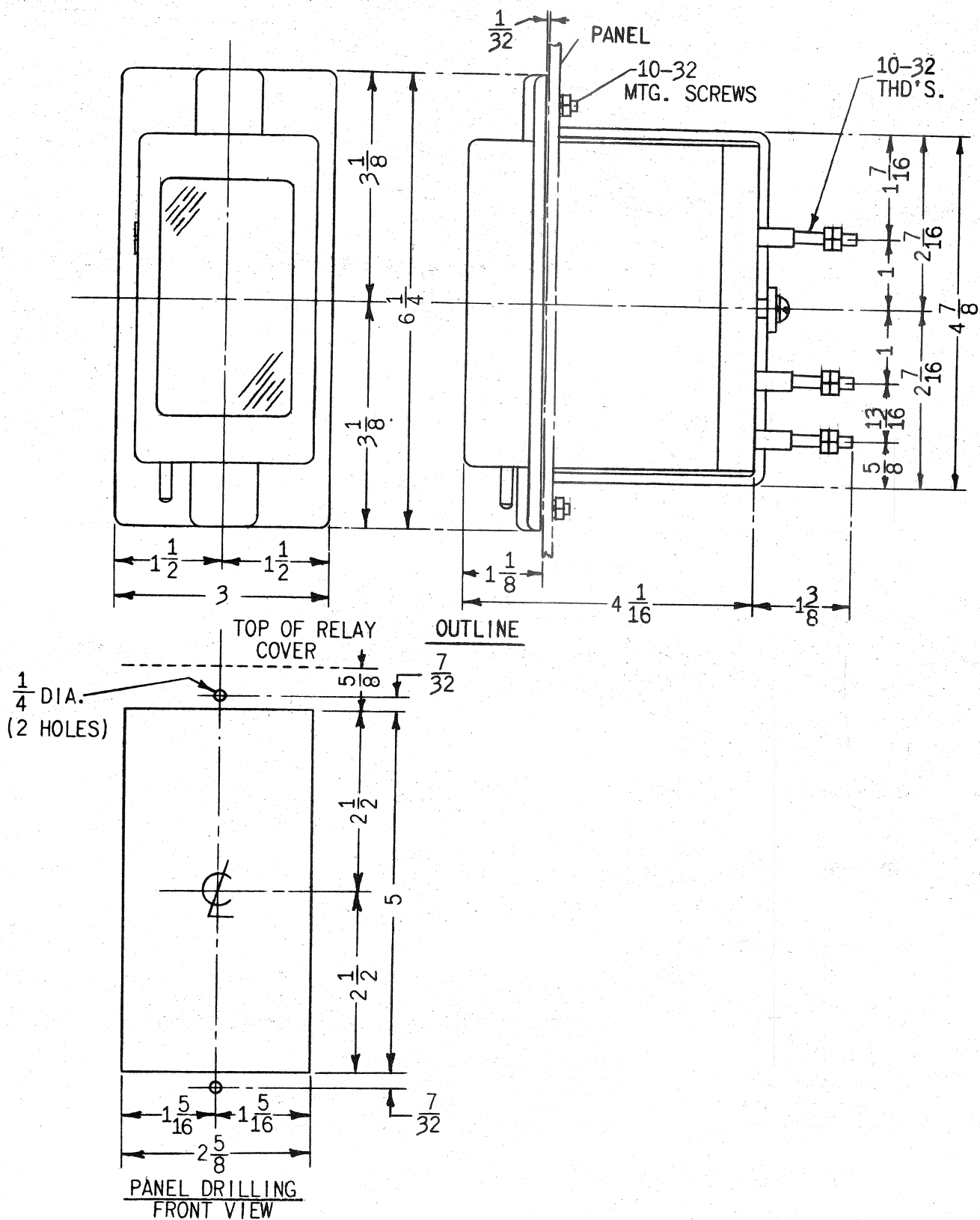


Fig.6 (0127A9555-1) Outline And Panel Drilling Dimensions For The Semi-Flush Mounted HAA15A Relay

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 * Industrial Equipment (including Agent and Distributor) Sales
 † Electric Utility Equipment Sales
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	Pine Bluff 71602	1900 E. Washington P. O. Box 1033
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†	Los Angeles 90054	212 N. Vignes St.
†	Los Angeles 90005	3325 Wilshire Blvd.
†	Oakland 94612	409 Thirteenth St.
†	Redwood City 94063	55 Veterans Blvd.
†	Sacramento 95816	2407 "J" St.
†	San Diego 92103	2560 First Ave.
†	San Francisco 94106	235 Montgomery St.
†	San Jose 95128	2155 So. First St.
COLORADO		
* †	Denver 80201	201 University Blvd.
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†	Hartford 06105	764 Asylum Ave.
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†	Miami 33134	1901 Hill St.
†	Pensacola 32503	4100 West Flagler St.
†	Tampa 33609	First Bank Bldg.
†	Tampa 33609	Henderson Blvd. at Lois Ave.
†	Tampa 33609	2106 S. Lois Ave.
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†	Fort Wayne 46806	3606 S. Calhoun St.
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†	Sioux City 51101	520 Pierce St.
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†	New Orleans 70112	837 Gravier St.
†	New Orleans 70125	4747 Earhart Blvd.
†	Shreveport 71101	400 Travis St.
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†	Augusta	152 State St.
†	Bangor 04402	77 Central St.
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†	Springfield 01103	120 Maple St.
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†	Kalamazoo	927 S. Fordick St.
†	Lansing 48901	501 Bank of Lansing Bldg.
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†	Fergus Falls 56537	106 E. Washington St.
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†	Jackson 39201	210 S. Lamar St.
MISSOURI		
†	Joplin 64802	212½ W. Fifth St.
†	Kansas City 64105	106 W. Fourteenth St.
†	St. Louis 63101	1015 Locust St.
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†	Billings 59101	303 N. Broadway
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†	Cleveland 44104	4966 Woodland Ave.
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†	Columbus 43212	937 Burrell Ave.
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†	Dayton 45402	118 W. First St.
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†	Johnstown 15902	841 Oak St.
†	Philadelphia 19102	3 Penn Center Plaza
†	Pittsburgh 15222	The Oliver Bldg., Mellon Sq.
†	Pittsburgh 15228	733 Washington Rd.
†	York 17403	56 N. Harrison St.
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†	Knoxville 37916	1301 Hannah Ave., N.W.
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†	Nashville 37203	1717 W. End Bldg.
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TEXAS		
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†	Amarillo 79101	403 Amarillo Blvd.
†	Beaumont 77701	1385 Calder Ave.
†	Corpus Christi 78401	205 N. Chaparral
†	Dallas 75207	8101 Stemmons Freeway
†	El Paso 79901	215 N. Stanton St.
†	Fort Worth 76102	408 W. Seventh St.
†	Houston 77027	4219 Richmond Ave.
†	Lubbock 79408	500 E. 50th St.
†	Midland	122 North N. St.
†	San Antonio 78204	419 S. Main Ave.
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* †	Salt Lake City 84110	200 S. Main St.
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†	Rutland	38½ Center St.
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†	Newport News 23601	
		P.O. Box 1038, 311 Main St.
†	Richmond 23230	500 W. Broad St.
†	Roanoke 24005	920 S. Jefferson St.
WASHINGTON		
†	Pasco 99301	824 W. Lewis St.
†	Seattle 98104	710 Second Ave.
†	Spokane 99220	S. 162 Post St.
†	Spokane 99220	E. 1805 Trent St.
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	Buffalo 14211	318 Urban St.
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	(New York) North Bergen, N. J.	07047
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	Cincinnati 45232	260 W. Mitchell Ave.
	Cleveland 44125	4477 East 49th St.

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	Youngstown 44507	272 E. Indianola Ave.
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	Johnstown 15902	841 Oak St.
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	Charleston 25328	306 MacCorkle Ave.
WISCONSIN		
	Appleton 54910	Midway Industrial Area
		P.O. Box 83 County Trunk P.
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GENERAL ELECTRIC COMPANY, PHILADELPHIA, PA.