INSTALLATION • OPERATION • MAINTENANCE

INSTRUCTIONS

TYPE CBU CARRIER AUXILIARY UNIT

(FOR USE WITH TYPE KR CARRIER SET)

APPLICATION

The type CBU current blocking unit is designed to be used with types HZ, HZ-4 or HZM phase relays and types HRK (current polarized) or HRP (potential polarized) directional overcurrent ground relays in plate keyed carrier relaying systems. It is applicable with intermittent carrier transmission and where the carrier microwave, or audio tone channel, is continuously supervised.

CONSTRUCTION

The type CBU current blocking unit consists of five germanium rectifiers, two resistors and a capacitor. (Fig. 1). For 250-volt D.C. circuits, five sections of two stacks in series are used.

OPERATION

The primary function of the current blocking unit is to effectively isolate, from each other, the carrier control circuits of each of the phase and ground relays while providing a common junction through which each of the carrier control circuits may initiate carrier transmission.

Current may pass through the rectifiers toward the common junction only. The high-back resistance of the rectifier stacks prevents the current from flowing through them away from the common junction. Therefore, when a Z_3 or the I_{OS} contact is closed, (Fig. 2), a positive potential, of sufficient magnitude to start carrier, appears at the plate of the carrier transmitter. The high-back resistance of the rectifier prevents the flow of current through the other CSA or CSO coil circuits. The rectifier's high-back resistance also makes it possible to start carrier manually with the test pushbutton without causing the CSA coils to be energized.

The resistor between terminals 4 and 5 provides current limiting resistance for the ground relay CSO auxiliary circuit.

CHARACTERISTICS

The type CBU current blocking unit is available

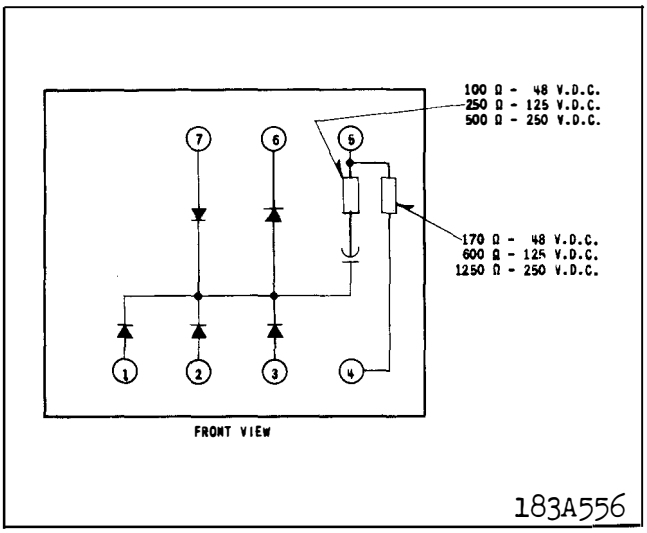

Fig. 1. Internal Schematic of the Type CBU Current Blocking Unit.

in three voltage ratings for applications with plate keyed carrier: 48 volts D.C., 125 volts D.C. and 250 volts D.C.

VOLTS D.C.	MAXIMUM FORWARD VOLTAGE DROP	FORWARD CURRENT AMPERES	MAXIMUM REVERSE CURRENT AMPERES
48	1.0	.024	.001
125	1.0	.024	.001
250	2.0	.024	.001

RENEWAL PARTS

Repair work can be done most satisfactorily at the factory. However, interchangeable parts can be furnished to the customers who are equipped for doing repair work. When ordering parts, always give the complete nameplate data.

VOLTS D.C.	STYLE
48	289B149A09
125	289B149A10
250	289B149A11

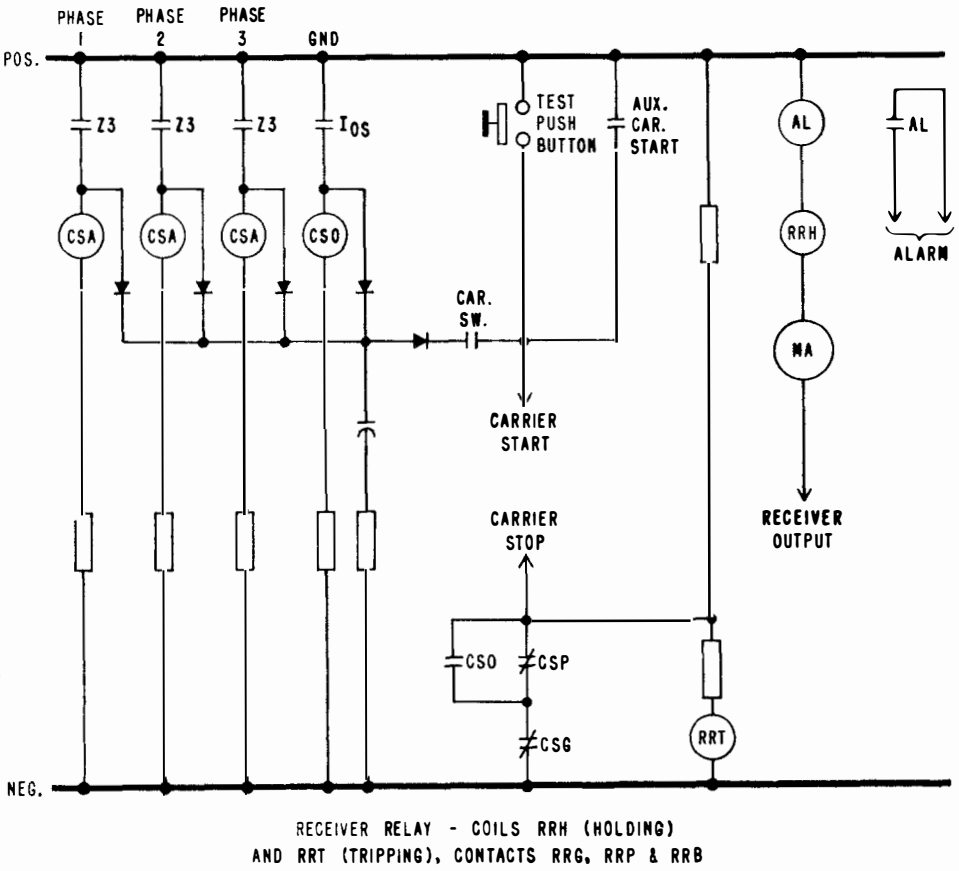

Fig. 2. Simplified D-C Schematic of Carrier Control in the Carrier Relaying Scheme.

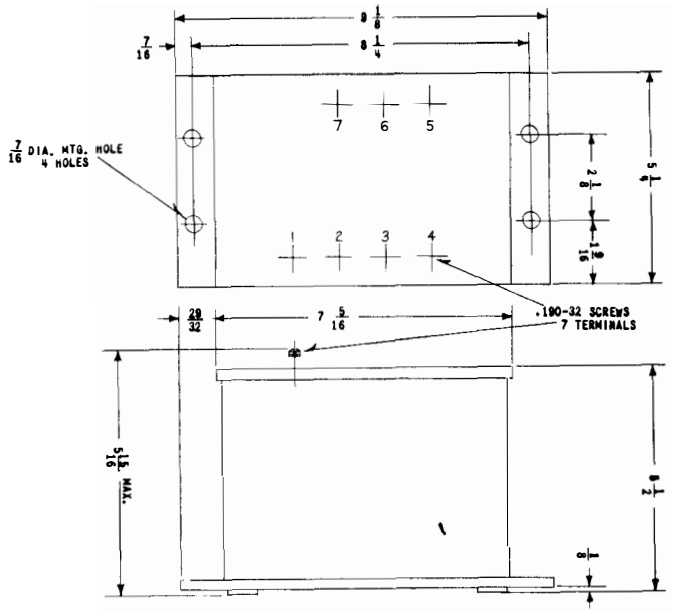

Fig. 3. Outline and Drilling Plan of the Type CBU Current Blocking Unit Case. (For reference only)

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The type CBU current blocking unit is designed to be used with types HZ, HZ-4 or HZM phase relays and types HRK (current polarized) or HRP (potential polarized) directional overcurrent ground relays in plate keyed carrier relaying systems. It is applicable with intermittent carrier transmission and where the carrier microwave, or audio tone channel, is continuously supervised.

CONSTRUCTION

The type CBU current blocking unit consists of four copper-oxide Rectox rectifier stacks and a 600-ohm resistor for intermittent service at 125 volts D.C. (Fig. 1). For 250-volt D.C. circuits, four sections of two stacks in series are used with a 1250-ohm resistor. When the current blocking unit is used with continuously supervised carrier, selenium rectifier stacks are used instead of copper-oxide stacks.

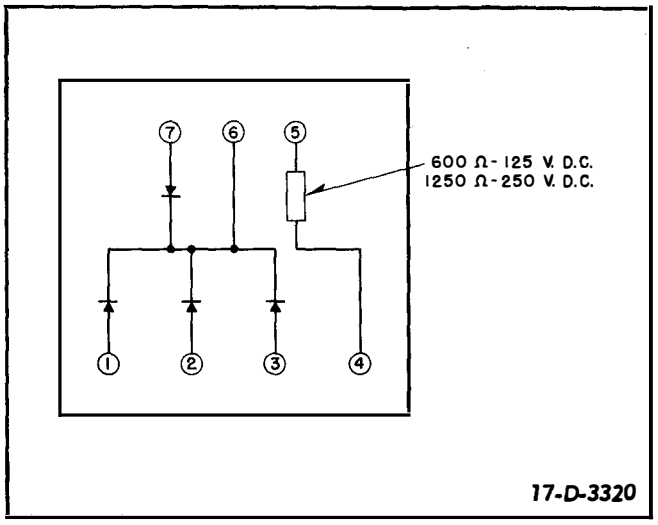


Fig. 1. Internal Schematic of the Type CBU Current Blocking Unit.

OPERATION

The primary function of the current blocking unit is to effectively isolate, from each other, the carrier control circuits of each of the phase and ground relays while providing a common junction through which each of the carrier control circuits may initiate carrier transmission.

Current may pass through the rectifier stacks toward the common junction only. The high-back resistance of the rectifier stacks prevents the current from flowing through them away from the common junction. Therefore, when a Z_3 or the I_{0S} contact is closed, (Fig. 2), a positive potential, of sufficient magnitude to start carrier, appears at the plate of the carrier transmitter. The high-back resistance of the Rectox prevents the flow of current through the other CSA or CSO coil circuits. The rectifier's high-back resistance also makes it possible to start carrier manually with the test pushbutton without causing the CSA coils to be energized.

The resistor provides current limiting resistance for the ground relay CSO auxiliary circuit.

CHARACTERISTICS

The type CBU current blocking unit is available in two voltage ratings and for two kinds of applications with plate keyed carrier: 125 volts D.C. and 250 volts D.C. for intermittent carrier, and 125 volts D.C. and 250 volts D.C. for applications using continuous supervision of the channel.

VOLTS D.C.	FORWARD VOLTAGE DROP	FORWARD CURRENT AMPERES	REVERSE CURRENT AMPERES
125	7	.024	.002
250	14	.024	.002

RENEWAL PARTS

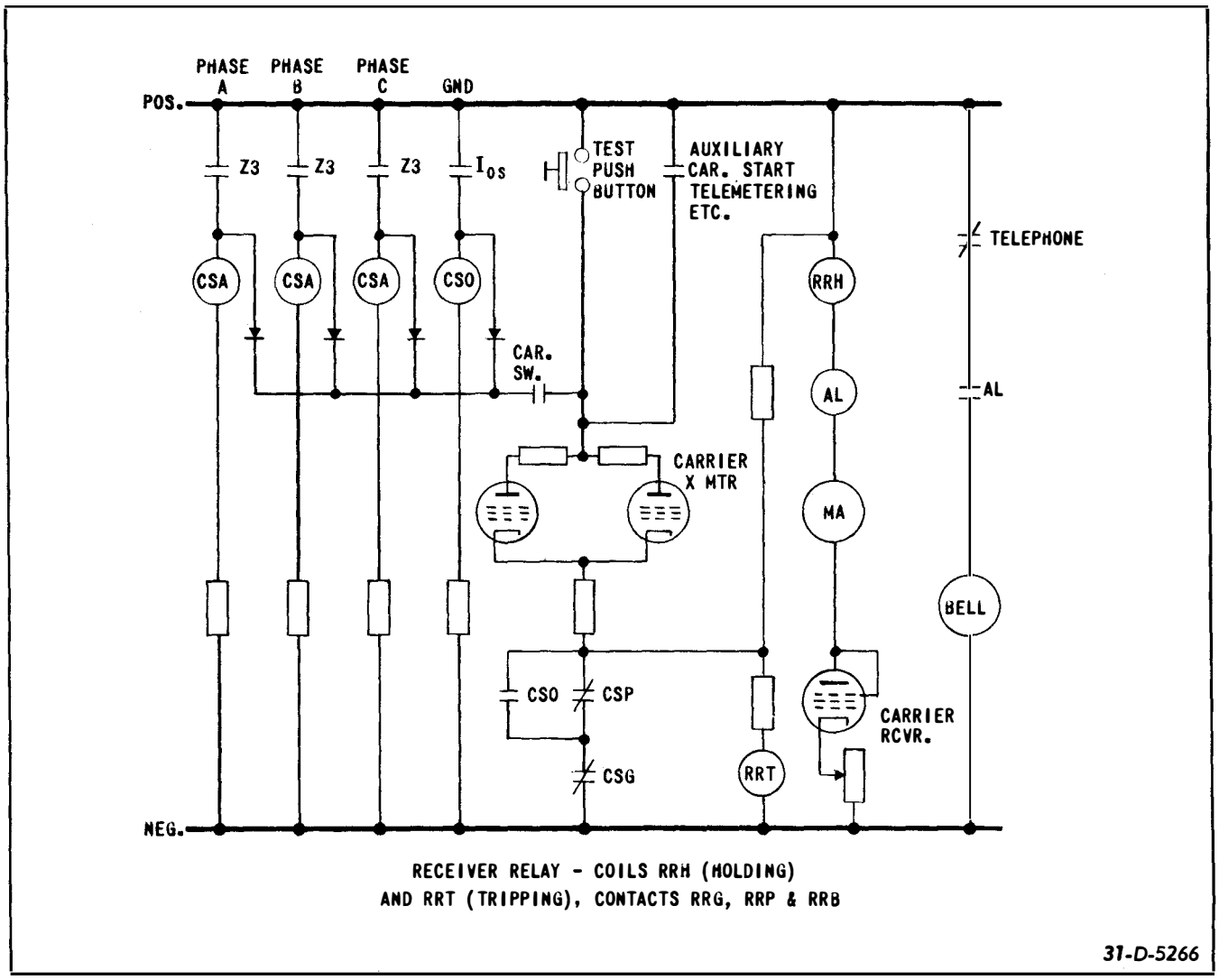
Repair work can be done most satisfactorily at the factory. However, interchangeable parts can be furnished to the customers who are equipped for doing repair work. When ordering parts, always give the complete nameplate data.

VOLTS D.C.	FOR INTERMITTENT SUPERVISION	FOR CONTINUOUS SUPERVISION
*125	1545346	S#1732684
* 250	1545347	S#1732685

SUPERSEDES I.L. 41-922

* Denotes Change From Superseded Issue

EFFECTIVE MAY 1957



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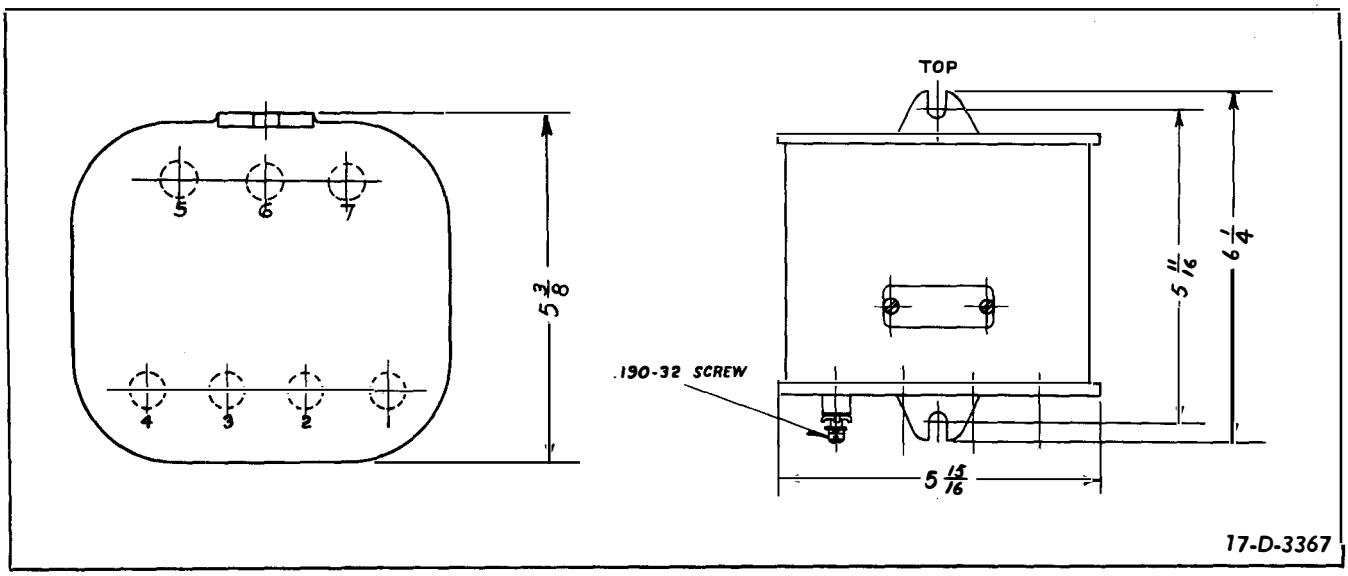

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WESTINGHOUSE ELECTRIC CORPORATION
METER DIVISION • NEWARK, N.J.
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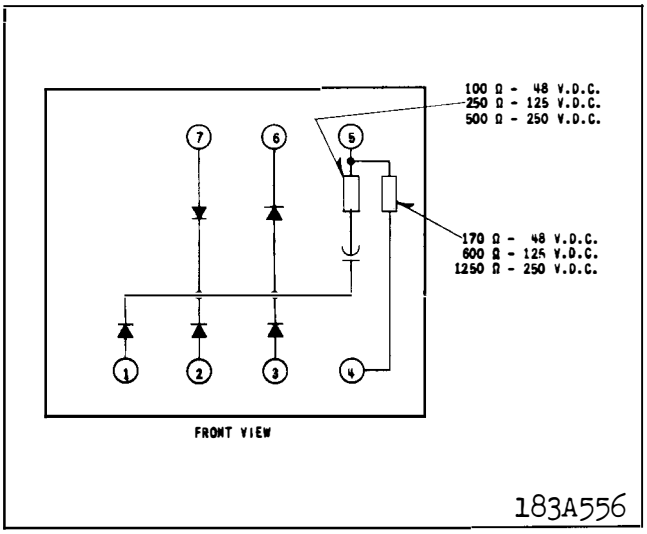
The resistor between terminals 4 and 5 provides current limiting resistance for the ground relay CSO auxiliary circuit.

CHARACTERISTICS

The type CBU current blocking unit is available in three voltage ratings for applications with plate keyed carrier: 48 volts D.C., 125 volts D.C. and 250 volts D.C.



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VOLTS D.C.	MAXIMUM FORWARD VOLTAGE DROP	FORWARD CURRENT AMPERES	MAXIMUM REVERSE CURRENT AMPERES
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125	1.0	.024	.001
250	2.0	.024	.001

RENEWAL PARTS

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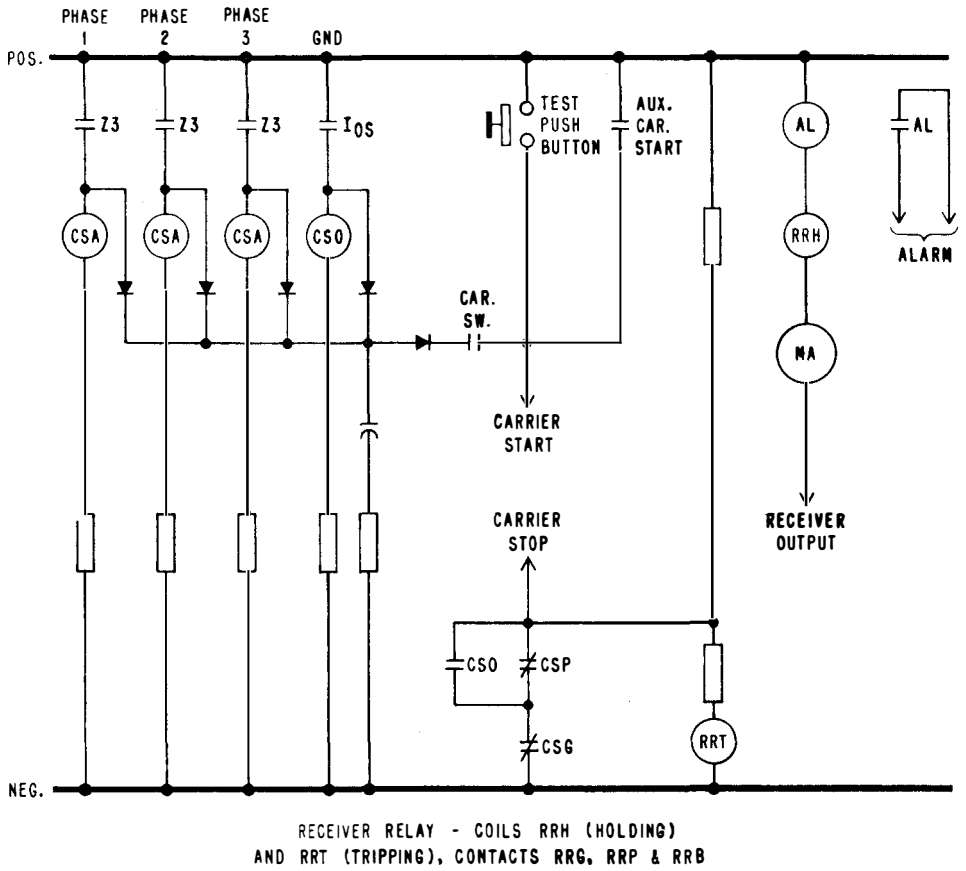
VOLTS D.C.	STYLE
48	289B149A09
125	289B149A10
250	289B149A11

NEW INFORMATION

EFFECTIVE MARCH 1958



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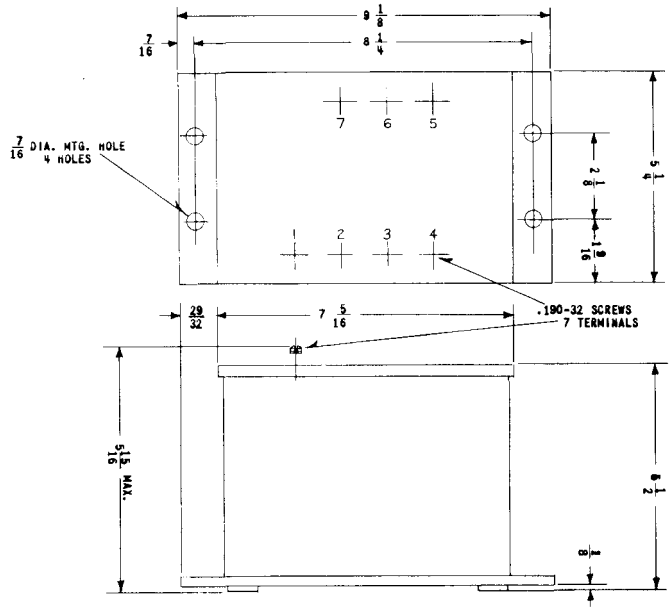

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