

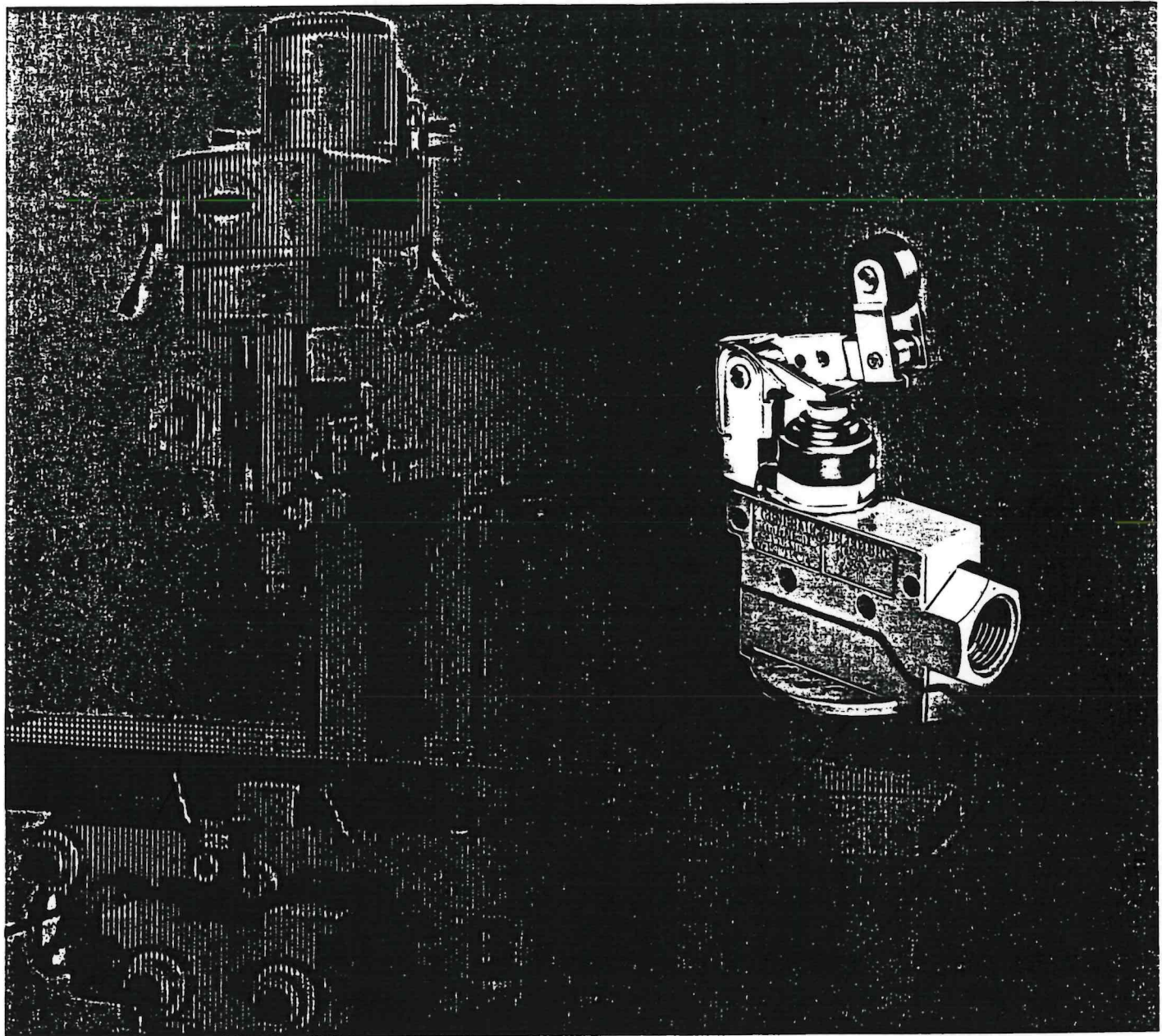
MR. 5, 5A, 6A



control

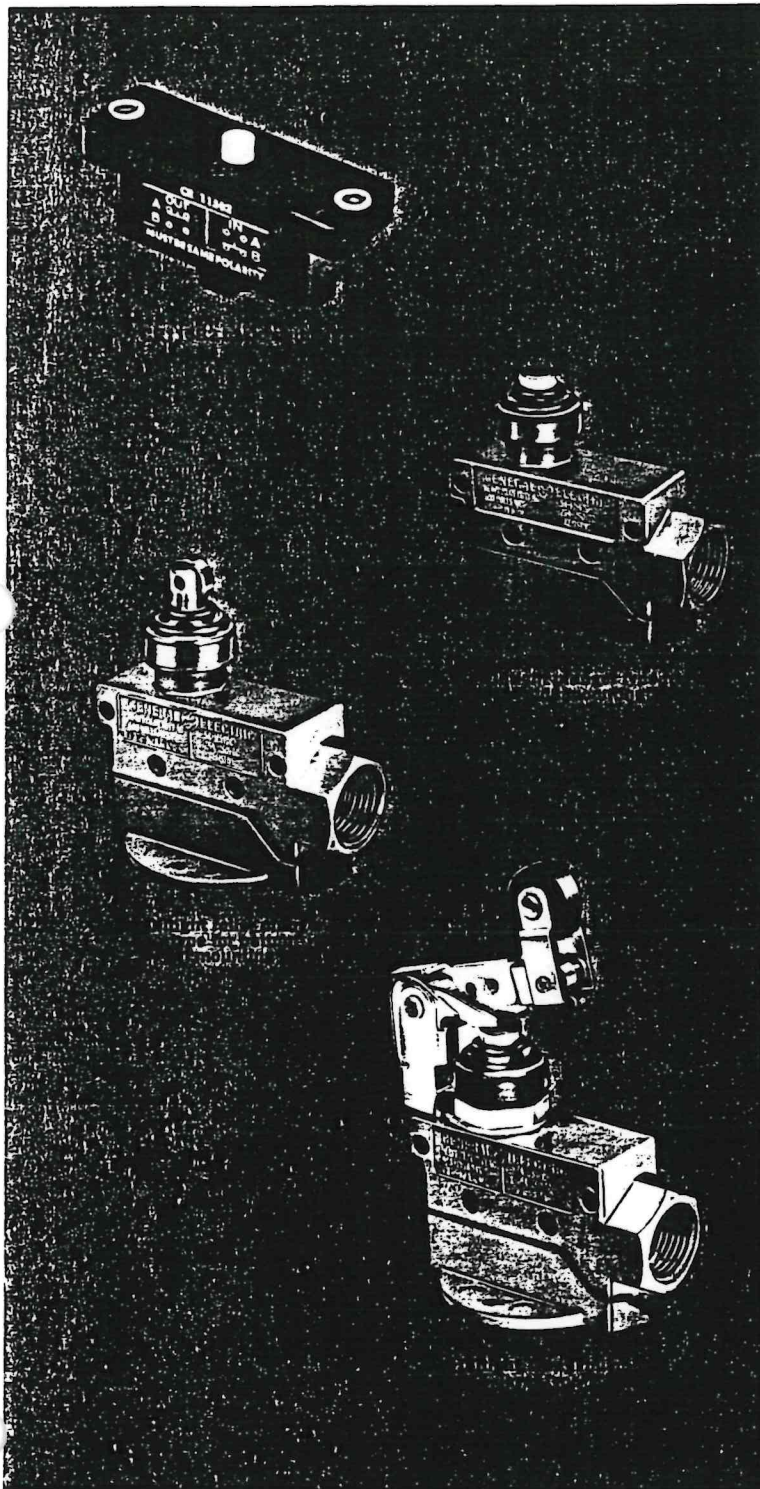
GEA- 8395A

precision snap-acting switches



GENERAL  ELECTRIC

precision snap-acting switches



Limit switches control the motion of a machine or equipment as a function of position detection by altering an electrical circuit. By tripping the switch contacts, movable components can be started, stopped, raised, lowered, traversed, reversed, speeded up or slowed down.

Since these switches are made in a wide variety of sizes and types, several application requirements must first be considered in order to select the particular form of switch best suited to your need.

A precision snap-acting switch is a mechanically operated electric switch having predetermined and accurately controlled characteristics.

A momentary contact snap-acting switch is one that returns from the operated condition to its normal circuit condition when the actuating force is removed.

For applications requiring momentary circuit operations, many General Electric track-type switches are provided with spring-return contacts.

Where long contact life is of prime consideration, snap-action contact operation is important. Snap action contacts open or close instantaneously upon release of an overcenter mechanism, independent within limits, of the speed of the actuator. They are particularly valuable where tripping speed is slow, avoiding the problem of contact burning that could occur with "slow-make-and-break" contacts.

The following pages cover a variety of precision snap-acting switches that can be used where small size and high repetitive accuracy are required.

TYPICAL APPLICATIONS

- Controlling solenoids
- Opening and closing valves
- Motor control



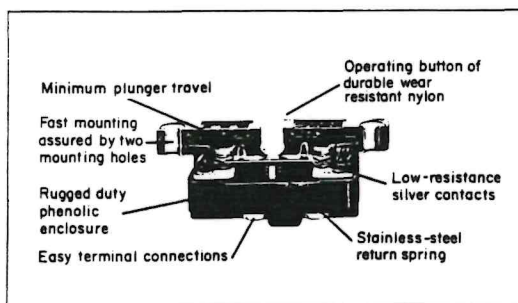
control

CR115 type B PRECISION SNAP-ACTING APPLICATIONS

General Electric CR115 Type B precision snap-acting switches combine compact size with high repetitive accuracy to meet limited-space, high-speed applications. These solidly-constructed precision switches provide the durability required on heavy-duty industrial operations.

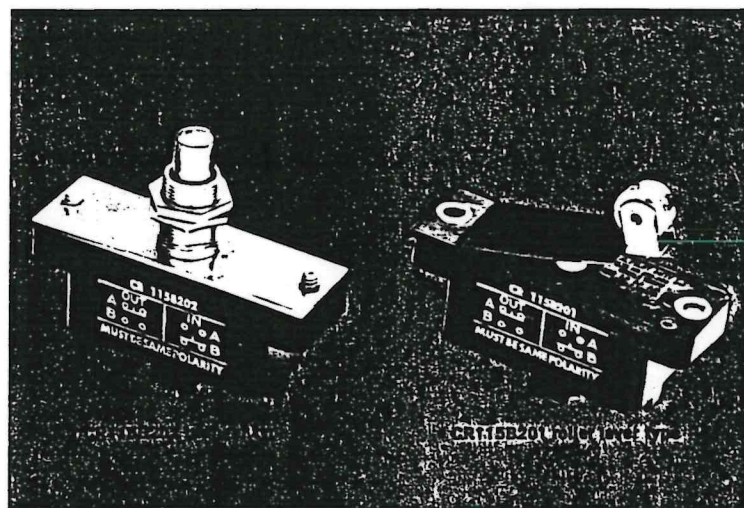
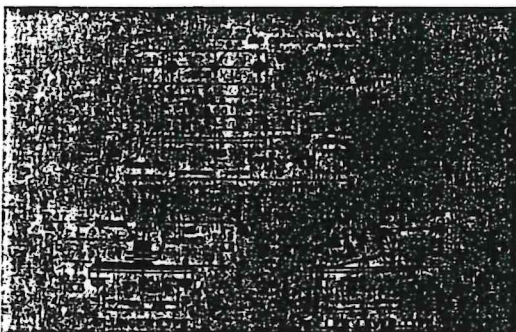
CR115 Type B forms are available with single- and double-pole snap-acting double-throw contacts. Typical applications include controlling solenoids, opening and closing valves and pilot circuits, and operating as an interlock between a machine and a motor control.

Three types of operators are offered with snap-acting forms: basic switch has a nylon-button operator that features outstanding wear resistance; plunger-operated units are offered for back-of-panel mounting where only the plunger protrudes (a plunger accessory kit is also available for converting basic button-operated switches to plunger-operated forms); roller-lever-operated forms are offered for applications requiring a transfer of axis for detection of objects passing the switch.



DUAL DIMENSIONS (For estimating only)

INCHES	MILLIMETERS
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ORDERING INFORMATION

FORMS WITH 0.020-IN. CONTACT GAP	
Basic Switch	
SPDT (1 NO-1 NC)*	CR115 B1
SPST (1 NO)	CR115 B11
SPST (1 NC)	CR115 B12
FORMS WITH 0.040-IN. CONTACT GAP	
Basic Switch	
SPDT (1 NO-1 NC)*	CR115 B2
SPST (1 NO)	CR115 B21
SPST (1 NC)	CR115 B22
Roller-lever-type Switch	
SPDT (1 NO-1 NC)*	CR115 B201
SPST (1 NO)	CR115 B211
SPST (1 NC)	CR115 B221
Plunger-type Switch	
SPDT (1 NO-1 NC)*	CR115 B202
SPST (1 NO)	CR115 B212
SPST (1 NC)	CR115 B222
DOUBLE-POLE FORMS	
Basic Switch	
DPDT (2 NO-2 NC)†	CR115 B4
DPST (2 NO)†	CR115 B41
DPST (2 NC)†	CR115 B42
Roller-lever-type Switch	
DPDT (2 NO-2 NC)†	CR115 B401
DPST (2 NO)†	CR115 B411
DPST (2 NC)†	CR115 B421
Plunger-type Switch	
DPDT (2 NO-2 NC)†	CR115 B402
DPST (2 NO)†	CR115 B412
DPST (2 NC)†	CR115 B422
PLUNGER ACCESSORY KIT	
Use with basic switch of double-pole forms and 0.040-inch gap forms to make plunger-type switch.	CR115 X3

* Double throw circuits must be same polarity.

† Circuits 1A and 1B are electrically isolated from circuits 2A and 2B. Connections to 1A and 1B or to 2A and 2B must be same polarity.

CONTACT RATINGS

Alternating Current		
Volts	AC	DC
Single-pole Forms		
115	40 amp	15 amp
230	20 amp	10 amp
460	10 amp	6 amp
575	8 amp	5 amp
Double-pole Forms		
0-115	30 amp	3 amp
115-600	3450 va	345 va
Direct Current—Pilot Duty		
Volts	DC	AC
Forms with 0.02-inch Gap		
115	0.25 amp	0.50 amp
230	0.10 amp	0.25 amp
600	0.05 amp
Forms with 0.04-inch Gap		
115	0.50 amp	2.0 amp
230	0.20 amp	0.5 amp
600	0.02 amp	0.1 amp
Double-pole Forms		
Volts	DC	AC
DPDT Forms		
115	0.2 amp	1.0 amp
230	0.1 amp	0.3 amp
600	0.1 amp



control

CR115 type H ENCLOSED PRECISION SNAP-ACTING APPLICATIONS



Oiltight hand operator
type for side mounting



General Purpose roller
lever type for side
mounting

General Electric CR115 Type H switches combine the highly repetitive accuracy of a precision snap-acting device with small size and durability.

CR115 Type H forms are available with one normally open and one normally closed contact with three terminals. The contacts are snap-acting and free of flutter.

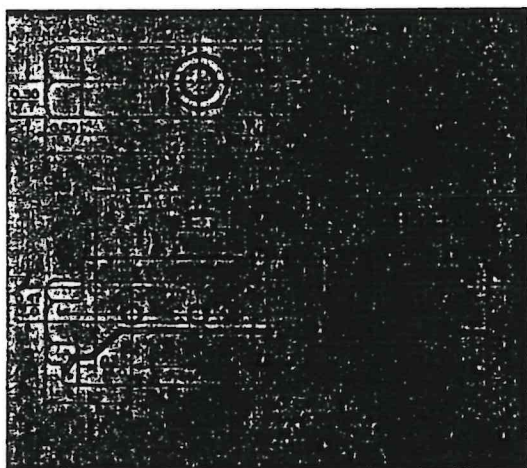
Eight basic types of operators are available with this line. You may choose from plunger, adjustable plunger, roller plunger, cross roller plunger, roller lever, unidirectional roller lever, spring rod lever, and hand operator.

Switches are available in both general purpose and oiltight enclosures and may be either side- or bottom-mounted. All terminals are screw type and readily accessible for wiring.

TYPICAL APPLICATIONS

- Controlling solenoids
- Controlling pilot circuits
- Operating as interlocks

DUAL DIMENSIONS $\frac{\text{INCHES}}{\text{MILLIMETERS}}$
(For estimating only)



APPLICATION DATA (CR115 Type B and Type H)

	SP-15, DP-10	10
Maximum Continuous Amperes	1NO, 1NC, 1NO-1NC	1NO-1NC
Contact Arrangements Available	2NO, 2NC, 2NO-2NC	
Contact Operation		
Snap Action	X	X
Slow-make; slow-break	X	
Action		
Spring Return	X	X
Terminal Connections	Screw	Screw
Maximum Recommended Speed of Actuator	100 Ft./Min.	—
Maximum Recommended Frequency of Operation	200 Op./Min.	100 Op./Min.
Type of Actuation	Plunger Roller Lever	Plunger Roller Plunger Hand Operated Roller Lever Rod Lever
Enclosure Type	Open	General Purpose Oiltight

		Travel Max. in Inches Millimeters	Overtravel Min. in In- ches Millimeters	Differential Max. in In- ches Millimeters
CR115B	Plunger	0.07 1.8	0.20 5.1	0.04 1.0
	Roller Lever	0.22 5.6	0.08 2.0	0.11 2.8
CR115H	Plunger	0.02 non-oiltight 0.4 0.08 oiltight 2.0	0.30 7.6	0.002 0.05
	Roller Plunger	0.02 non-oiltight 0.5 0.08 oiltight 2.0	0.19 4.8	0.002 0.05
	Hand Operated	0.08 2.0	0.12 3.0	0.002 0.05
	Roller Lever	0.19 4.8	0.50 12.7	0.01 0.2
	Rod Lever	0.72 18.2	1.50 38.1	0.30 7.6

NOTE: For trip and/or reset force, contact nearest GE Sales Office or franchised distributor for complete information.

ORDERING INFORMATION

Operator	Mounting	CR115 H011	CR115 H013
Plunger	Side	CR115 H011	CR115 H013
Plunger	Bottom	CR115 H012	CR115 H014
Adj. Plunger	Side	CR115 H01101	CR115 H01301
Adj. Plunger	Bottom	CR115 H01201	CR115 H01401
Roller Lever	Side	CR115 H01102	CR115 H01302
Roller Lever	Bottom	CR115 H01202	CR115 H01402
One-Way Roller Lever	Side	CR115 H01103	CR115 H01303
One-Way Roller Lever	Bottom	CR115 H01203	CR115 H01403
Hand Operator	Side	CR115 H01304
Hand Operator	Bottom	CR115 H01404
Spring Rod Lever	Side	CR115 H01105	CR115 H01305
Spring Rod Lever	Bottom	CR115 H01205	CR115 H01405
Roller Plunger	Side	CR115 H01108	CR115 H01308
Roller Plunger	Bottom	CR115 H01208	CR115 H01408
Cross-Roller Plunger	Side	CR115 H01181	CR115 H01381
Cross-Roller Plunger	Bottom	CR115 H01281	CR115 H01481

*For alternate side mounting type, refer to nearest GE Sales Office.

CONTACT RATINGS Continuous Carry: 10 amps

115	60	6.0	125	0.5
230	30	3.0	250	0.25
460	15	1.5		
575	12	1.2		

GENERAL ELECTRIC COMPANY
GENERAL PURPOSE CONTROL PRODUCTS DEPARTMENT
BLOOMINGTON, ILLINOIS 61701

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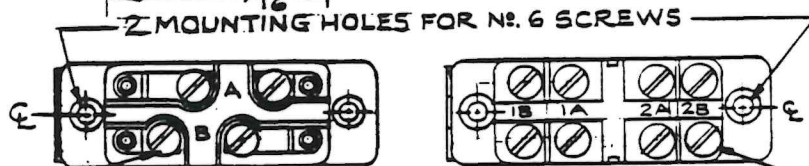
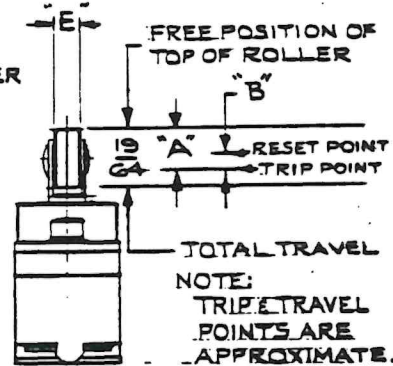
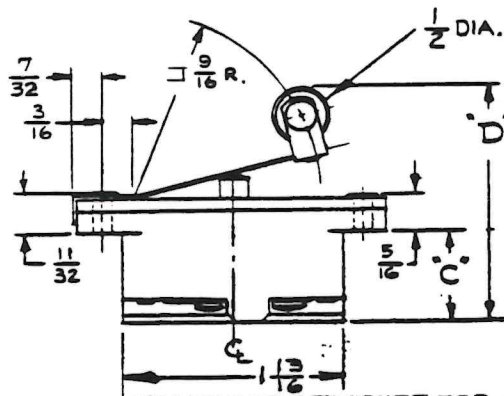
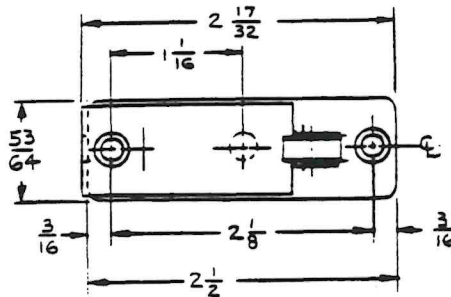
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CONT ON SHEET PL SH NO. 1

REV. NO. 5
CONT ON SHEET SH NO.

TITLE
OUTLINE
FIRST MADE FOR CR 115 B 201

REVISIONS	
1	Rev. 10/16/62
2	Rev. 10/16/62
3	Rev. 10/16/62
4	Rev. 10/16/62



4 NO. 6 BIND. HEAD
TERMINAL SCREWS.

FIG. 1

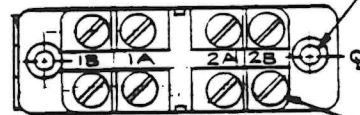


FIG. 2
(OTHERWISE SAME AS
FIGURE NO. 1)

8 NO. 6 BIND. HEAD
TERMINAL SCREWS

PART NO.	FIG.	"A"	"B"	"C"	"D"	"E"
1	1			23/32	1 29/32	.215
2	1	7/32	3/32	23/32	1 29/32	.215
3	2	7/32	3/32	13/16	2	.215
4	3			23/32	1 29/32	.215
5	3	7/32	3/32	23/32	1 29/32	.215
6	1	7/32	3/64	23/32	1 29/32	.215

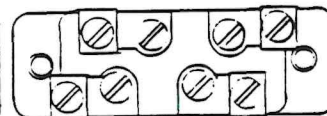
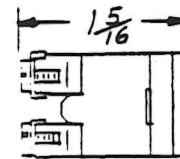


FIG. 3

SADDLE CLAMP TERMINALS
OTHERWISE SAME AS FIG. NO. 1



ALL DIMENSIONS IN INCHES

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J. J. R. 007. 20. 1960
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APPROVALS
J. J. R. 11/60

GENERAL PURPOSE CONTROL
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CONT ON SHEET PL SH NO. 1

PRINTS TO

B 6 B