



Effective: October 1996

Supersedes I.L. 41-241 B, dated August 1969

O Denotes Change Since Previous issue

Type JM Annunciator and Current Indicator

CAUTION: Before putting relays into service, remove all blocking which may have been inserted for the purpose of securing the parts during shipment, make sure that all moving parts operate freely, and operate the relay to check the settings and electrical connections.

APPLICATION

The Type JM relay is available in several different forms. One form allows indication to be achieved in any circuit where dc current is arranged to flow through the indicator coil. Another form accommodates ac current and drops an indicator when current in excess of its rating flows through it.

A third form is "voltage-operated", and is equipped with low rated dc current coils and series resistors for the appropriate dc voltage energization and subsequent indication.

A fourth form consists of six ac current indicators having different ratings that are connected in series. An estimate of the maximum fault current that has flowed through the series circuit can be obtained by observing which of the targets has operated.

CONSTRUCTION AND OPERATION

The JM annunciator consists of a group of identical operating units connected as shown in Figs. 1, 2, or 3. The JM current indicator contains 6 operating units connected as shown in Fig. 4.

O single unit JM annunciator is shown in Fig. 5.

The operating unit consists of a small solenoid coil mounted in a steel frame, a spring-restrained

armature, and a white target flag. When the coil is energized, the armature releases the white target which then falls into a visible position indicating that a particular circuit has been energized. The indicators are reset from outside of the case by a **O** push rod in the cover. For relays in small glass cases, the indicator is reset by turning a knob on the front of the glass cover.

CHARACTERISTICS

The standard current operated JM annunciator is supplied with 0.2, 1 or 2 ampere dc coils with the following ratings:

Rated Current (amperes)	Resistance (ohms)	Continuous Rating (amperes)	One-second Rating (amperes)
0.2	2.8	0.6	18
1	.16	3	70
2	.06	6	110

O Coils are available for 50 and 60 Hertz.

The voltage operated JM annunciator is supplied with .03 ampere dc coils with the appropriate series resistor for the supply voltage.

The JM current indicator is available in a six-step range, between 3 and 50 amperes, 60 Hertz.

INSTALLATION

The relays should be mounted on switchboard panels or their equivalent in a location free from dirt, moisture, excessive vibration, and heat. Mount the relay vertically by means of the four mounting holes on the flange for semi-flush

All possible contingencies which may arise during installation, operation or maintenance, and all details and variations of this equipment do not purport to be covered by these instructions. If further information is desired by purchaser regarding this particular installation, operation or maintenance of this equipment, the local ABB Power T&D Company Inc. representative should be contacted.

mounting or by means of the rear mounting stud or studs for projection mounting. Either a mounting stud or the mounting screws may be utilized for grounding the relay. The electrical connections may be made directly to the terminals by means of screws for steel panel mounting or to the terminal studs furnished with the relay for thick panel mounting. The terminal studs may be easily removed or inserted by locking two nuts on the stud and then turning the proper nut with a wrench.

For detailed FT case information refer to I.L. 41-076.

ADJUSTMENTS

Adjust the indicator to operate at its rated current, gradually applied, by loosening the two screws on the under side of the assembly, and moving the bracket forward or backward. In the current indicator relay, if the two helical springs which reset the armature are replaced by new springs, they should be weakened slightly by stretching to obtain the proper calibration.

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.

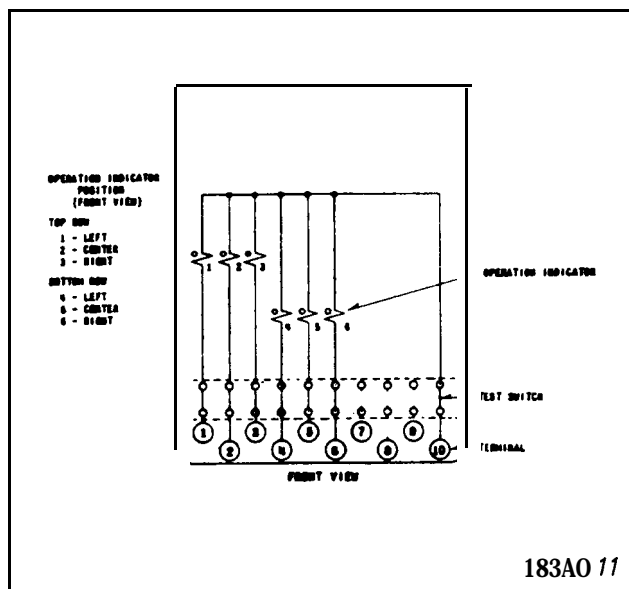


Fig. 1. Internal Schematic of the Type JM Annunciator in the Type FT11 Case. Six Units with One Terminal Common

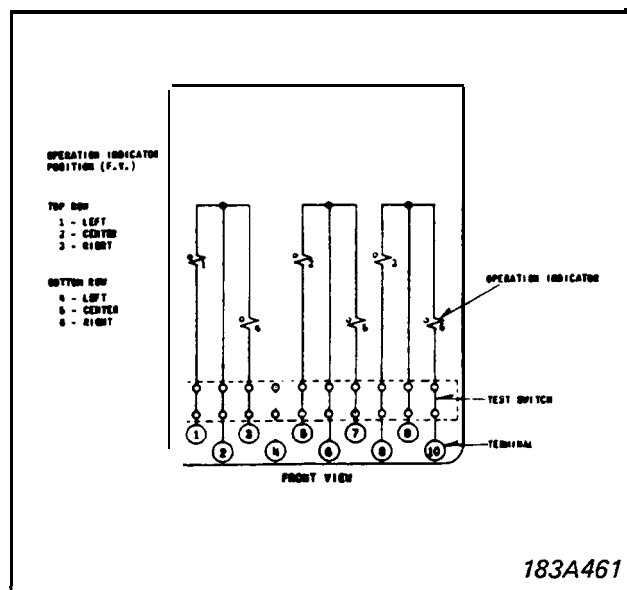


Fig. 2. internal Schematic of the Type JM Annunciator in the Type FT1 I Case. Six Units in Three Groups of Two

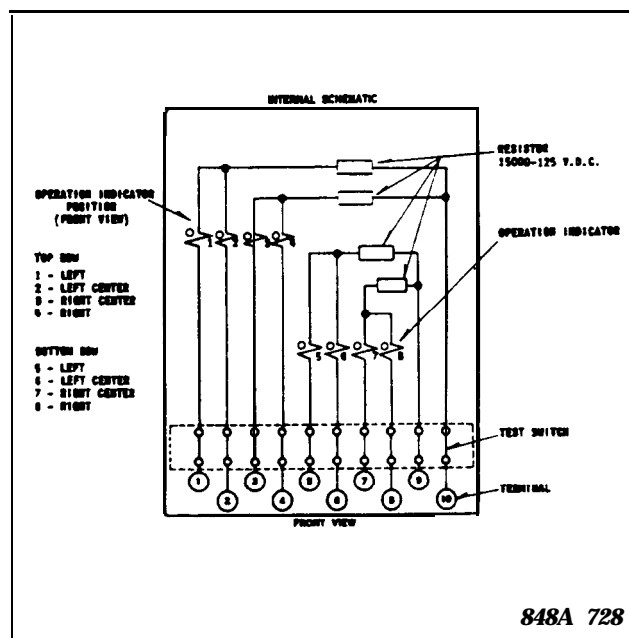


Fig. 3. Internal Schematic of Voltage Operated Type JM Group Annunciator in the Type FT11. Eight Units in Two Groups of Four

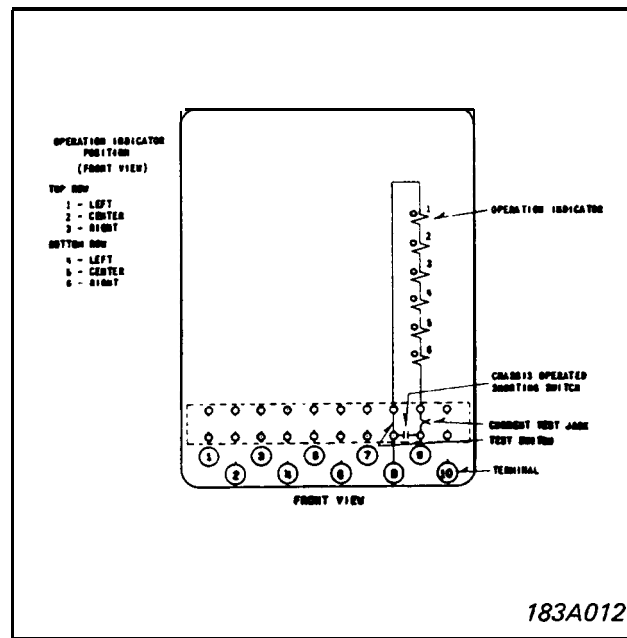
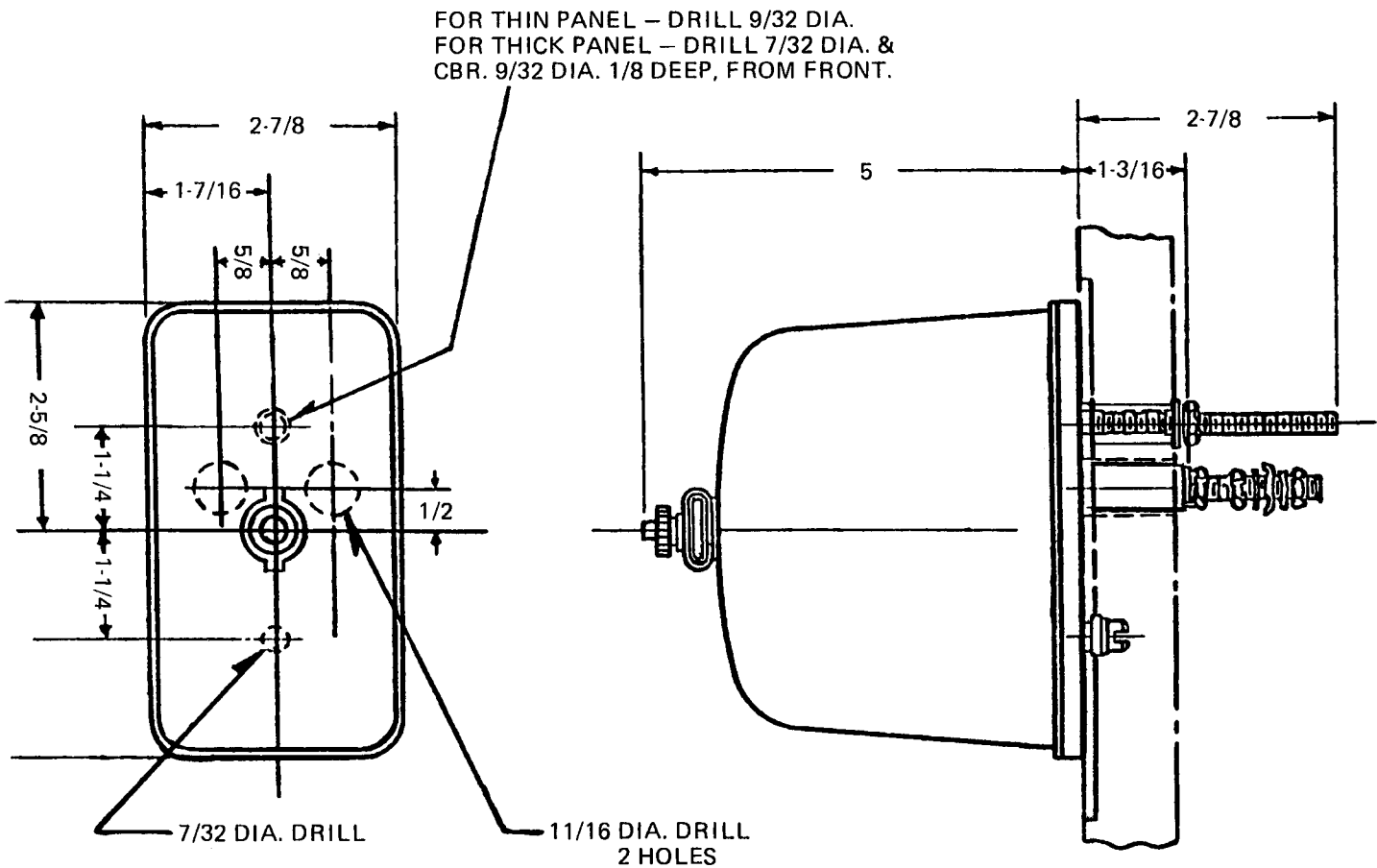


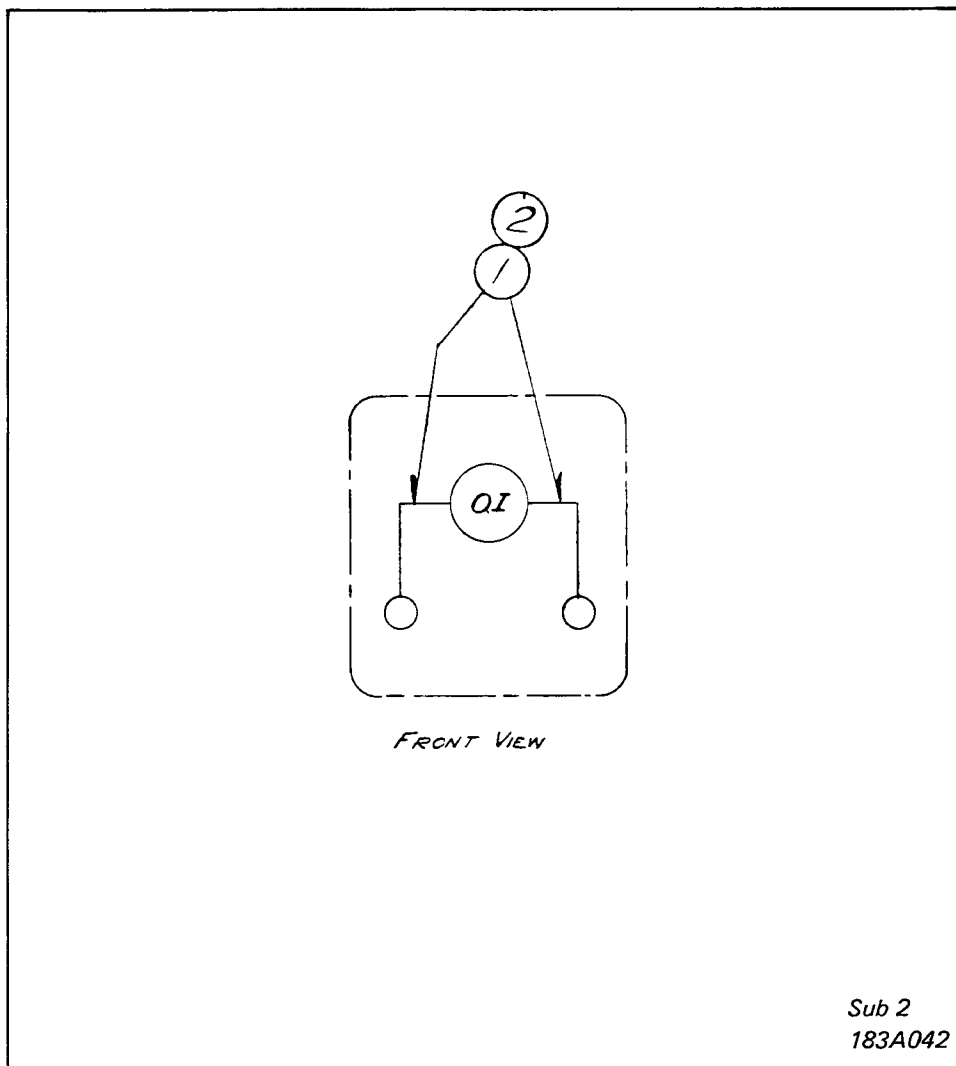
Fig. 4. Internal Schematic of the Type JM Current Indicator in the Type FT11 Case



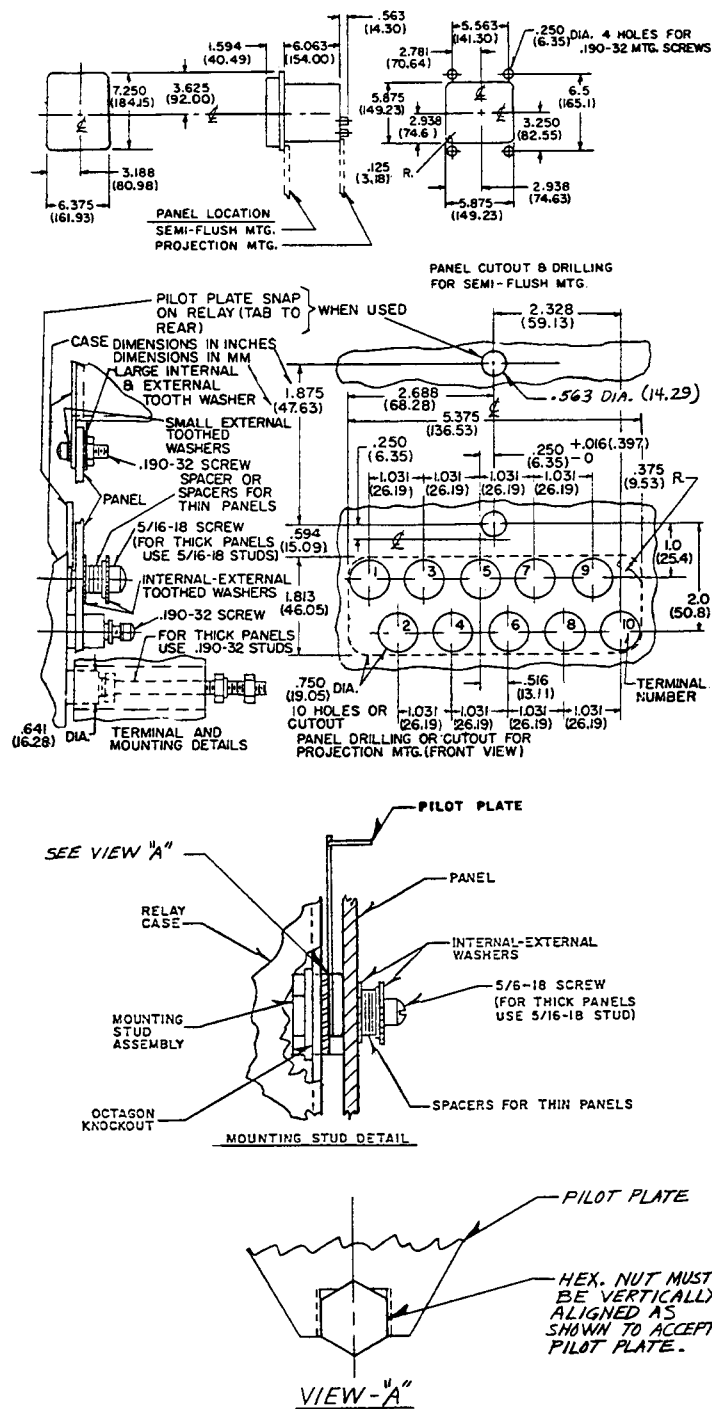
FOR 1/8 IN. OR 3/16 IN. SWITCHBOARD USE SCREWS FOR MOUNTING
RELAY AND FOR TERMINALS.
FOR 1/4 IN. TO 1 IN. SWITCHBOARD USE STUDS FOR MTG. RELAY AND
SCREWS FOR TERMINALS.
FOR OTHER SWITCHBOARDS USE STUDS FOR MTG. RELAY AND
FOR TERMINALS.

Sub 1
183A043

Fig. 5. Type JM Relay – Single Oper. Ind. Outline and Drilling Plan



★ Fig. 6. Wiring Drawing, Relay Type JM



Sub 16
57D7900

★ Fig. 7. Outline and Drilling Plan for the Type JM Annunciator and Current Indicator in the Type FT11 Case