TYPE B INTERLOCK — BASE MOUNTING

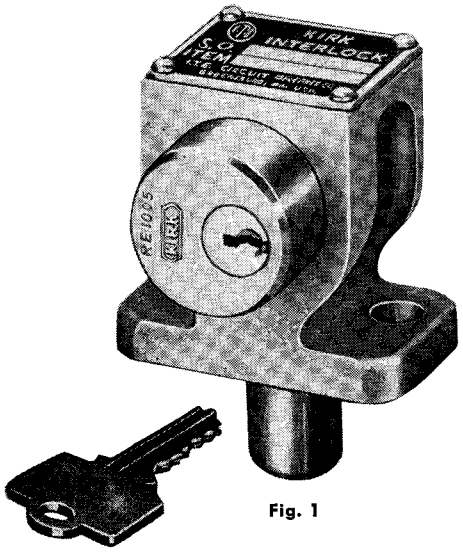
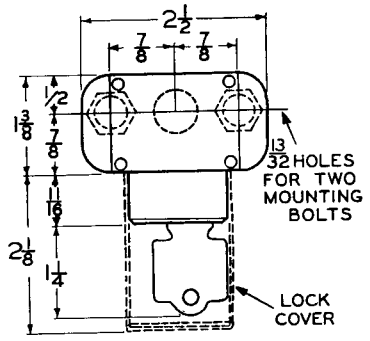


Fig. 1



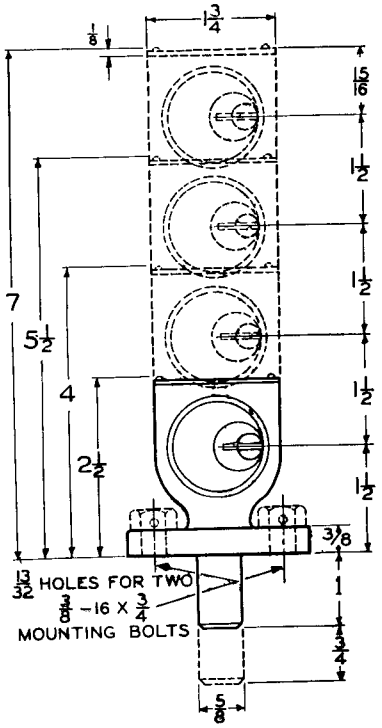


Fig. 2

The type B interlock housing is a heavy bronze casting. It is designed for mounting through flanges on their base by means of hex head bolts 3/8" x 3/4". This type is generally used for base mounting. Multiple type B interlocks having two or more locks can be furnished, for example—M2B (2 locks), M4B (4 locks).

The interlock can be arranged so that the keys may be removable when the locking bolt is either extended (E), or withdrawn (W).

The operating or locking bolt is made of Everdur, 5/8" in diameter. The throw of the operating bolt is 3/4". The operating, or locking bolt, can be made with a length so that when it is in the withdrawn position there is no projection beyond the housing. It can be made also with a projection of 3/8" to be flush with a 3/8" mounting plate, or it can be made for any projection length up to 1, 2, or 3".

TYPE F INTERLOCK — FLAT MOUNTING

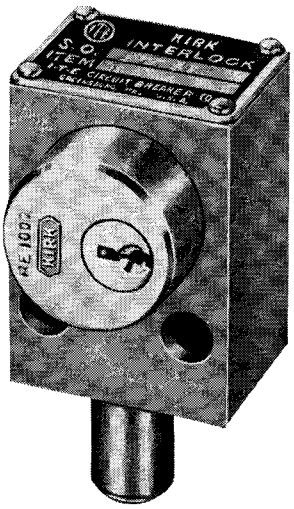


Fig. 1

The type F interlock housing is of heavy bar stock, mounted with fillister head bolts 3/8" x 1 3/4" through the front of the housing. This type is generally used for flat or face mounting. Multiple type F interlocks having two or more locks can be furnished, for example—M2F (2 locks), M4F (4 locks).

The interlock can be arranged so that the keys may be removable when the locking bolt is either extended (E), or withdrawn (W).

The operating or locking bolt is made of Everdur, 5/8" in diameter. The throw of the operating bolt is 3/4". The operating, or locking bolt, can be made with a length so that when it is in the withdrawn position there is no projection beyond the housing. It can be made also with a projection of 3/8" to be flush with a 3/8" mounting plate, or it can be made for any projection length up to 1, 2, or 3".

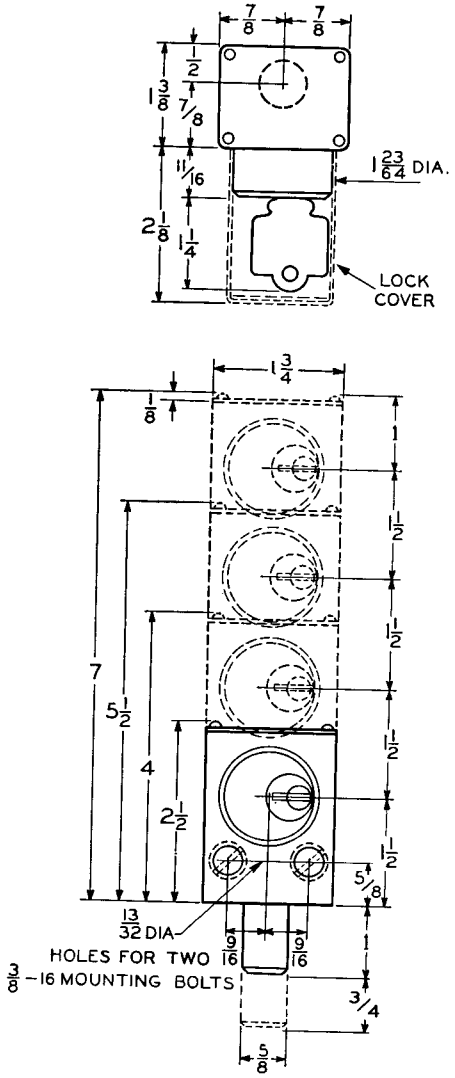


Fig. 2

TYPE T — KEY TRANSFER

A type T interlock is an assembly of two or more locks in a single housing. These locks are designed to retain one or more keys while the remaining keys are withdrawn. All keys must be inserted in the interlock before the initially retained keys can be removed. After the retained keys are removed, those which have been inserted are retained.

The type T housing is made of bronze bar stock, drilled for mounting with 3/8" x 1 3/4" fillister head bolts.

Two to four-lock assemblies are mounted with two bolts (Fig. 2), while those with five or more locks are mounted with four bolts (Fig. 3).

Transfer locks are not actually interlocks. There is no operating bolt projection through base for locking any moving part.

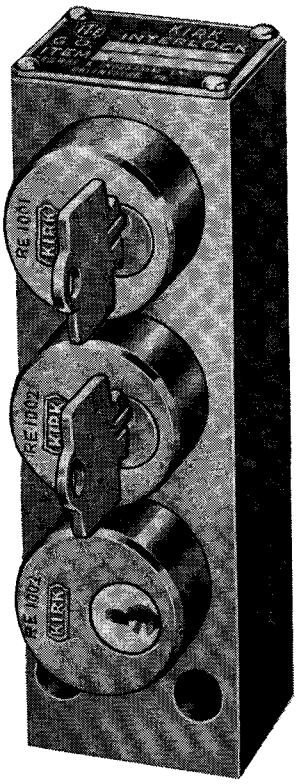
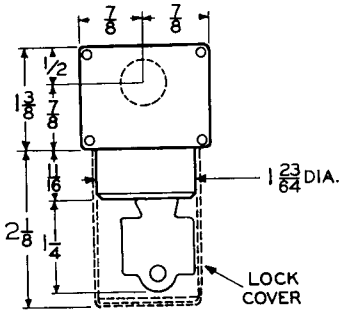


Fig. 1
Type M3T



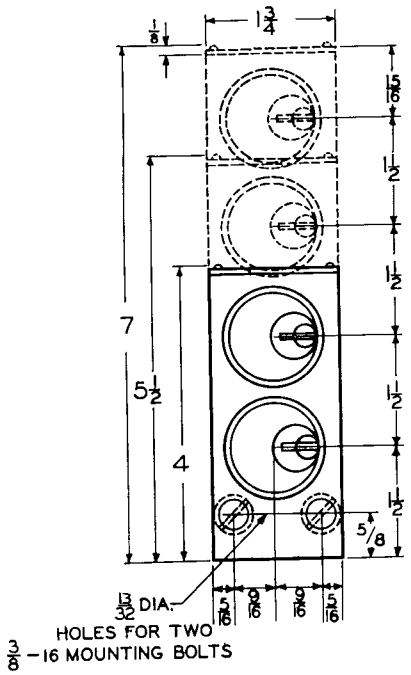


Fig. 2 2 to 4 Locks

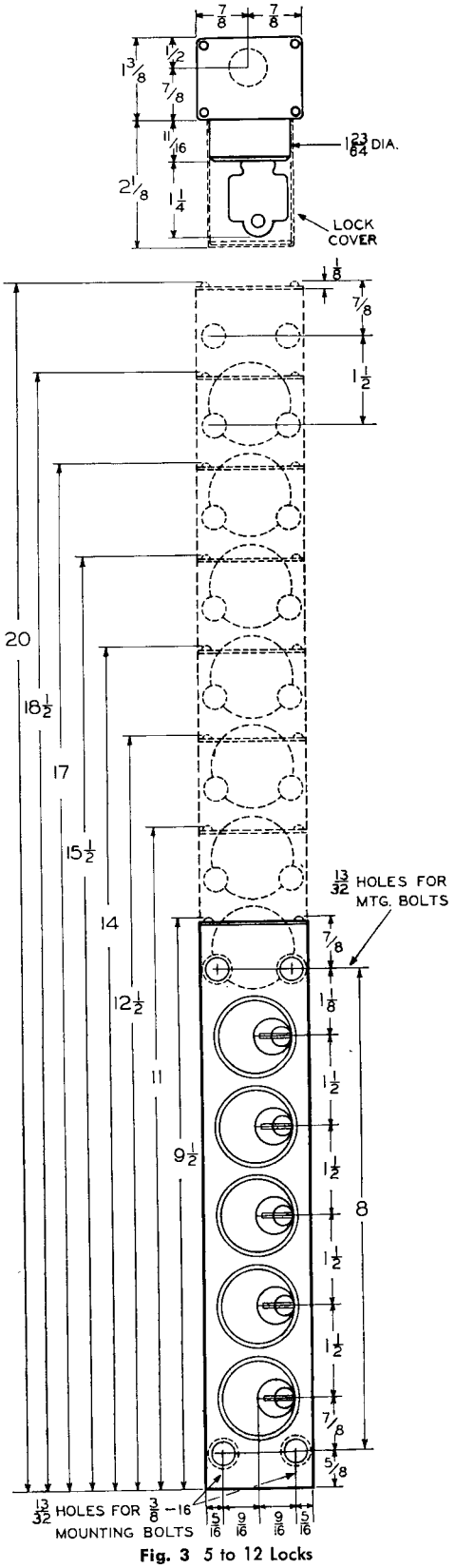


Fig. 3 5 to 12 Locks

TYPE D INTERLOCK — DOOR LATCHING

A type D, or door interlock, has two parts: a main body with one or more locks, and a latching block.

When the main body is separated from the latching block, the locking bolt is retained in the withdrawn position by concealed latch pins. While it is retained here, the key cannot turn in the lock. Thus, the key is always held in the lock whenever the two parts are separated.

When the door on which the interlock is mounted is properly closed, the socket latch pins release the concealed latch pins which restrain the operating bolt. The operating key can now be turned to extend the bolt into the latch block. After the bolt is extended, the operating key may be removed.

In Fig. 1, an E and a W type interlock are combined to afford even more safety to the operator. The key missing in the illustration is held by the operator, and without that key, the locking bolt cannot operate, even when the door is properly closed. This arrangement eliminates any possibility of the equipment being operated with the authorized operator inside the enclosure or absent from the area.

The lock housing and latching block of the type D interlock are made of bronze bar stock, designed for mounting with 3/8" fillister head bolts. The adapter, or mounting plate which is an extra, can be used either as a spacer or a mounting member.

Multiple type D interlocks having two or more locks can be furnished, for example—M2D (2 locks), M4D (4 locks).

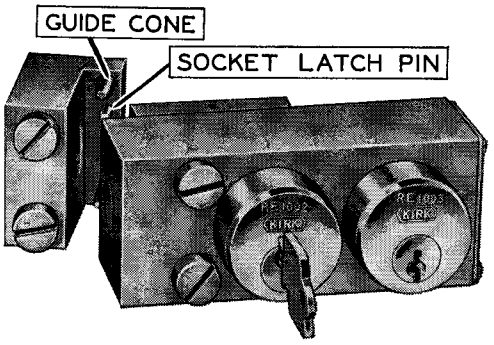
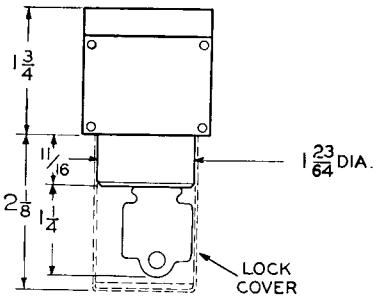
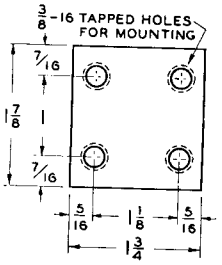


Fig. 1
Type M2D Interlock in Separated Position





Adapter or Mounting Plate
—furnished only when ordered

APPLICATIONS

Illustrations of mounting procedure for a flat or reinforced door are given below. Caution: The type D interlock should not be used to align the door, or to be the latching means for holding the door in the closed position.

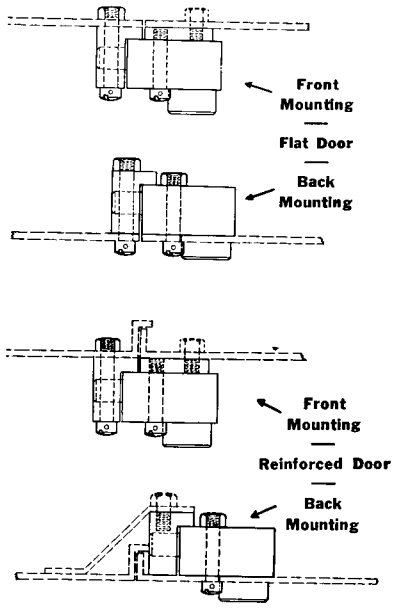


Fig. 2

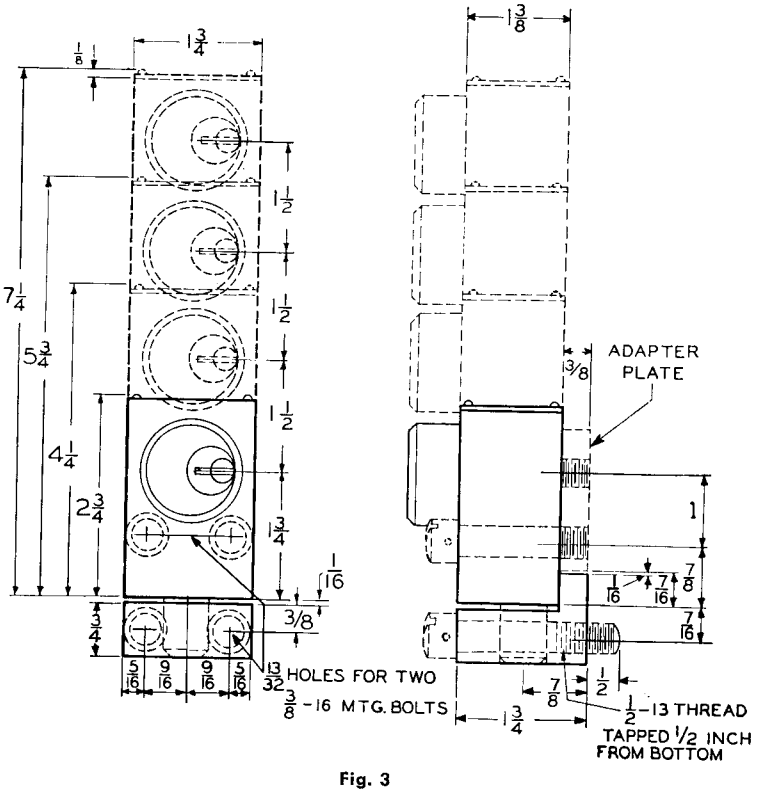


Fig. 3

SOLENOID KEY-RELEASE UNIT

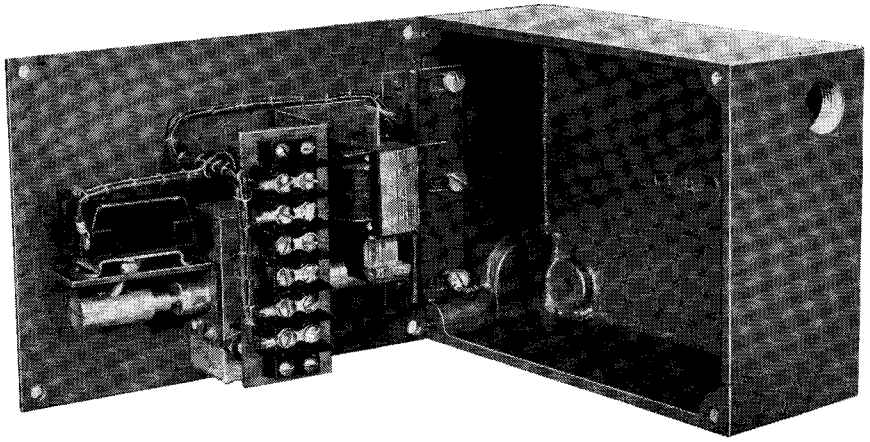


Fig. 1

The Solenoid Key-Release Unit is housed in a box which can be front or back panel mounted—for indoor or outdoor service, with or without a weatherproof gasket.

This unit normally consists of an interlock, a solenoid arranged to permit removal of the interlock key in response to an external electric signal, an indicating light to show when the key can be removed, and an auxiliary switch operated in response to the withdrawal of the interlock key.

The interlock key is normally released when the external circuit is energized. However, if desired, the key-release units can be arranged to permit removal of the key when the circuit and solenoid are de-energized.

The auxiliary switch is a quick-make, quick-break device which operates when the interlock key is turned. A double-pole, single-throw switch is normally provided with the key-release units.

If desired, a push button can be furnished connected in series with the solenoid, so as to control the operation of the solenoid. The push button can be furnished with any of the solenoid key-release units. The signal lamp, when furnished with the push button, indicates when the solenoid can be energized by operating the push button.

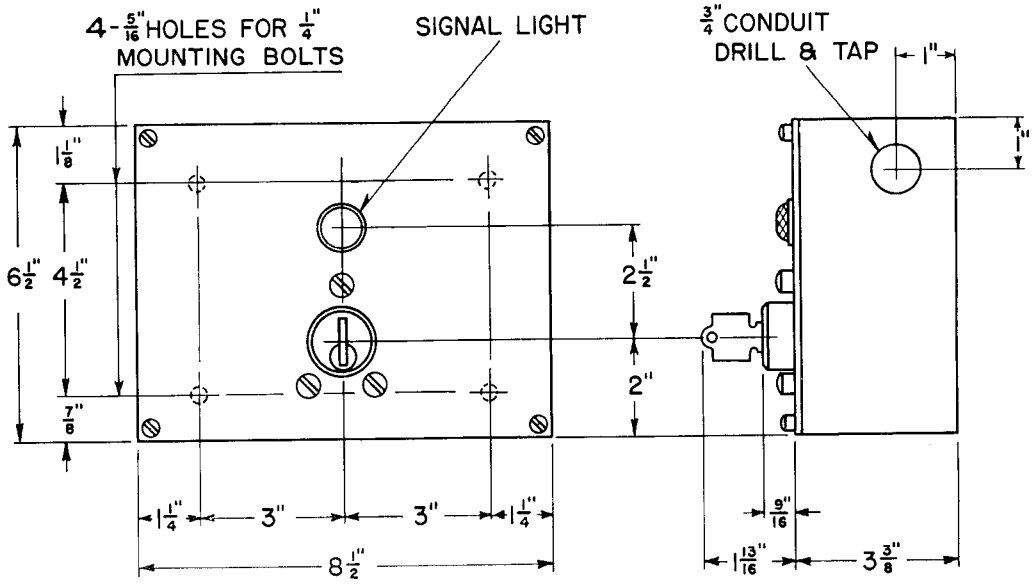


Fig. 2

TIME-DELAY KEY-RELEASE UNIT

The Time-Delay Key-Release Unit is housed within a box which can be front panel or back panel mounted.

The unit comprises two interlocks, a push-button contactor, a timing device and by-pass relay, a solenoid and signal light for indication.

Fig. 1 illustrates the unit in its normal position with a key retained in its lock. A second or initiating key is introduced and turned, which starts the time delay relay. After a given delay, the solenoid is energized, permitting the previously held key to be withdrawn for further operations. (The signal light shows the operator when the solenoid has been energized). After removing the initially held key, the initiating key is retained.

Should an operator accidentally remove the initiating key during the time delay period, the timing device instantly returns to its original position.

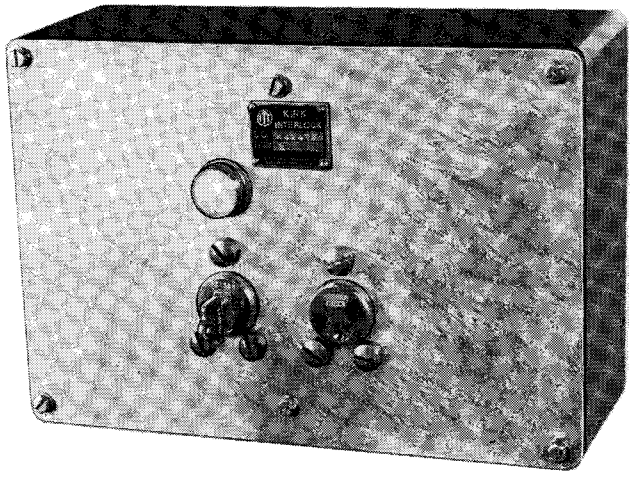


Fig. 1

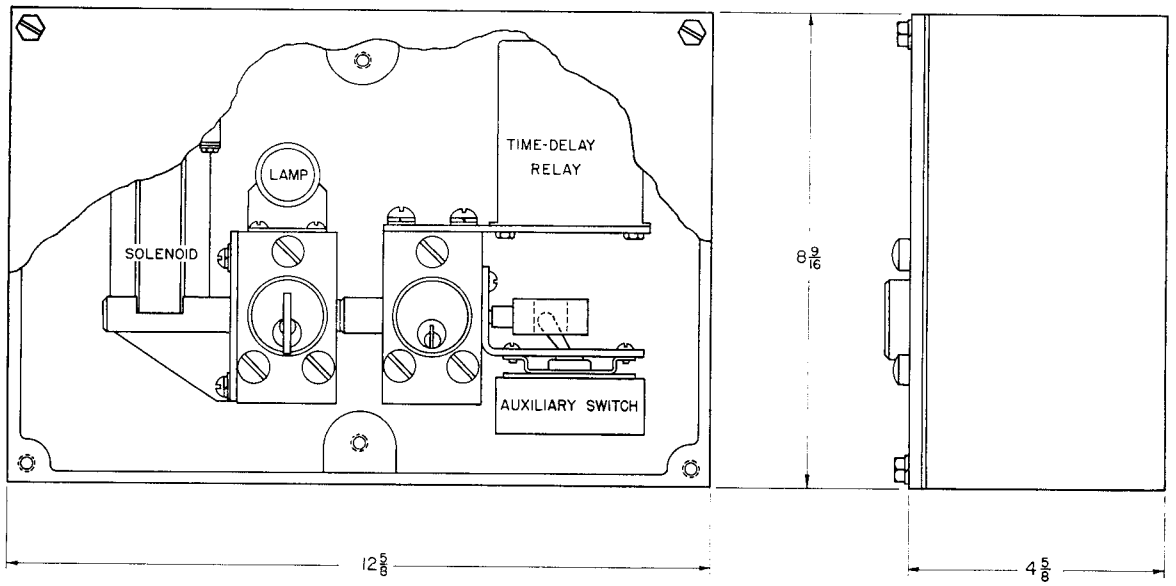


Fig. 2

TYPE S & SS AUXILIARY SWITCHES

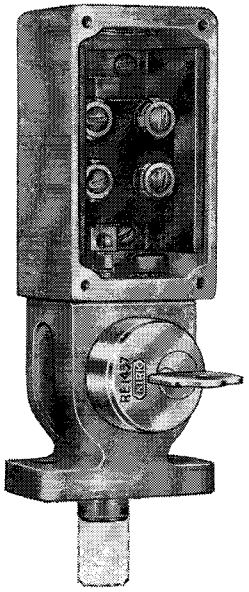


Fig. 1

Shown Mounted on Type B Lock

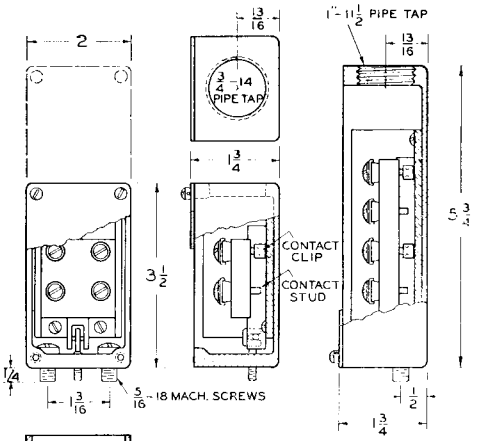


Fig. 3

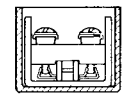


Fig. 2

S and SS auxiliary switches can be added to any of the standard interlocks. The switch is mounted on top of the interlock as shown above. This is a slow-make, slow-break switch, moving in direct response to the movement of the key. It is used primarily as a disconnect switch in a control circuit, but it can be used as a load make or break switch.

The switch has a continuous current rating of 50 amperes, with a maximum temperature rise of 30°C. Its withstand voltage is 2500 volts (line to ground).

The switch is normally mounted with the cover on the same side as the lock. However, this arrangement can be reversed so that the switch and lock face in opposite directions. This way interlocks can be mounted for operation from the front of a panel while wiring runs into the back of the panel.The removable cover at the back permits easy connection to the switch terminals.

The dimensions of any combination S or SS switch with interlocks (B, F, D, and T) can be obtained by adding the switch dimensions to the interlock device desired. Examples are shown below.

Other information pertaining to these switches is listed in the following table:

Type of Switch	Type S	Type SS
Circuit	2	4
Make	1	2
Break	1	2
Conduit Opening	¾"	1"

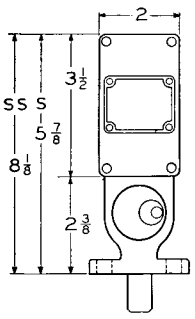


Fig. 4 Type BS

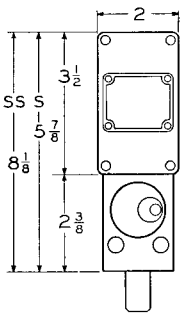


Fig. 5 Type FS

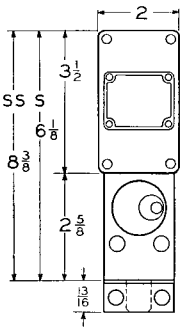


Fig. 6 Type DS

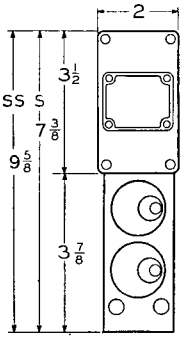


Fig. 7 M2TS

TYPE K AUXILIARY SWITCH

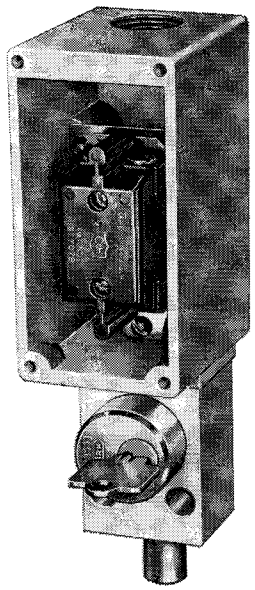


Fig. 1

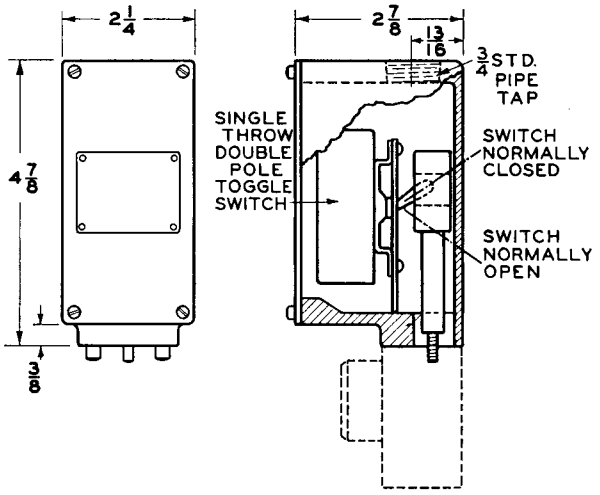


Fig. 2

The type K auxiliary switch can be added to any of the standard interlocks. The switch is mounted on top of the interlock as shown. This is a quick-make, quick-break device capable of handling relatively large currents. The assembly normally uses a Cutler-Hammer extra-heavy-duty snap switch, catalog No. 7410. This switch is rated 20 amperes, 250 volts a-c or d-c, (non-inductive), or at 2 H.P., 125/250 volts.

The snap switch is operated in response to the movements of the interlock lock bolt. However, the type K switch remains in its initial position until the lock bolt has traveled substantially the full ¾" distance to its second position. The type K auxiliary switch therefore does not give an indication as to initial movement of the lock bolt.

The switch is normally mounted with the cover on the same side as the lock, but can be mounted so that the cover faces away from the lock. This arrangement makes for easy access to the switch from the back of a panelboard, for instance.

The dimensions of any combination K switch with interlocks (B, F, D, and T) can be obtained by adding the switch dimensions to the interlock device desired.

TYPE P PADLOCK

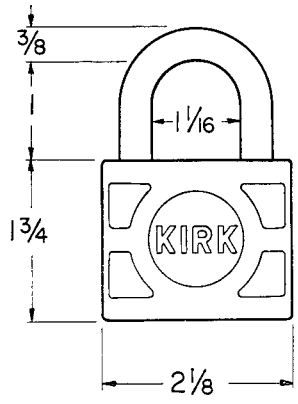


Fig. 3

Special heavy-duty padlocks are provided for the Kirk Interlock System, where it is necessary to incorporate this type of lock. These padlocks have cast bronze housings and bronze shackles. They also have a special tumbler arrangement which permits inter-changeability with all other Kirk Interlocks.

Three padlocks are available. The standard model is similar to ordinary padlocks in that the key may be removed when the shackle is either open or closed. A second type is made so that the key is removable only when the shackle is closed.

The third padlock is distinctively different. It is operated with two keys. Either key may be removed whether the shackle is open or closed, but its removal immediately makes the other key non-removable.

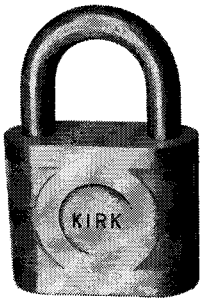


Fig. 4