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## TYPE SM HEAVY DUTY MASTER SWITCH Frame Numbers 1, 2, 3 INSTRUCTIONS



The Type SM master switch is designed for heavy duty service for steel mill auxiliary drives, cranes or bridges, coke pushers and similar applications where reliability and long life are essential under the most severe operating conditions

Type SM master switches are available for 1, 2, 3, 4, 5 and 6 point reversing service.

## Construction

Unusually neat appearance with rounded corners is a desirable feature of the SM master switch.

The case is cast iron and of very rugged construction. The case is split well below the center line so that when the cover is removed all parts are accessible. A wide machined surface fit is used between the cover and base, and the cover extends slightly beyond the base. This gives a weatherproof and dust-tight construction without the use of gaskets. The machine screws that hold the cover to the base can turn freely in the cover, but will not drop out of the cover when it is removed. There are only three mounting feet, and they are staggered so that master switches can be mounted on close center distances without interference of mounting feet. The handle can be padlocked in the "off" position.

The master switch can be mounted in any position. The standard master switch gives vertical handle operation. There is no necessity for geared operating handles. The handle grip is made of moulded composition.

Ease of installation is a feature. 11/4" drilled and tapped conduit openings make it possible to bring in conduit from either side or the bottom.

The terminals, as will be seen from the photograph, are unusually accessible for ease of installation.

The entire shaft assembly can be removed without disturbing the contacts or wiring by taking out the four machine screws that hold the large bronze bearings in place.

Double break silver contacts are used. The contacts are spring closed, cam opened. This eliminates any possibility of contacts "freezing" in the closed position.

Heavy Micarta duck cams are used. The moving contact is actuated by a nitrided roller, and the shaft for this roller is also nitrided. This shaft is riveted to the contact support, eliminating wear at this point.

Any switch unit can be easily removed by taking out one screw, without disturbing the wiring.

All metal parts have a corrosion resisting finish. The Type SM master switch repre-

sents a decidedly forward step in the design of a heavy duty master switch of neat appearance, overall'ruggedness, ease of installation, accessibility and reliability.

## Maintenance

Note the following important points. 1. Inspect the master switch semimonthly or often enough to see that parts are in good operating condition.

2. All contacts should have at least 1/4-inch air gap.

3. Keep all current carrying parts tight.

4. Keep both bearings, starwheel and pawl cleaned and oiled.

5. Pitted or burned contacts may be dressed with sand paper.

6. Replace moving and stationary contacts, when silver tips are worn off.

7. In order to change or replace a cam. First: Remove complete cam shaft assembly by taking out two screws, front bearing on handle end, it being necessary to remove one bearing only. Second: Remove nut from cam shaft and then cams can be pulled from shaft. But, before removing cams mark cams with respect to starwheel so they can be reassembled correctly.

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