

## **PLACING**

### **KS-8274 ELECTROLYSIS SWITCH**

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#### **1. GENERAL**

- 1.01 This section covers the installation of the KS-8274 Electrolysis Switch in manholes and on poles.

#### **2. PLACING SWITCH**

2.01 The switch assembly is housed in a water-tight galvanized steel case that is approximately 16 inches high, 16 inches wide and 10 inches deep. The interior of the box is painted black. The cover is equipped with a rubber gasket and is clamped in place by means of nuts of the hand wheel type.

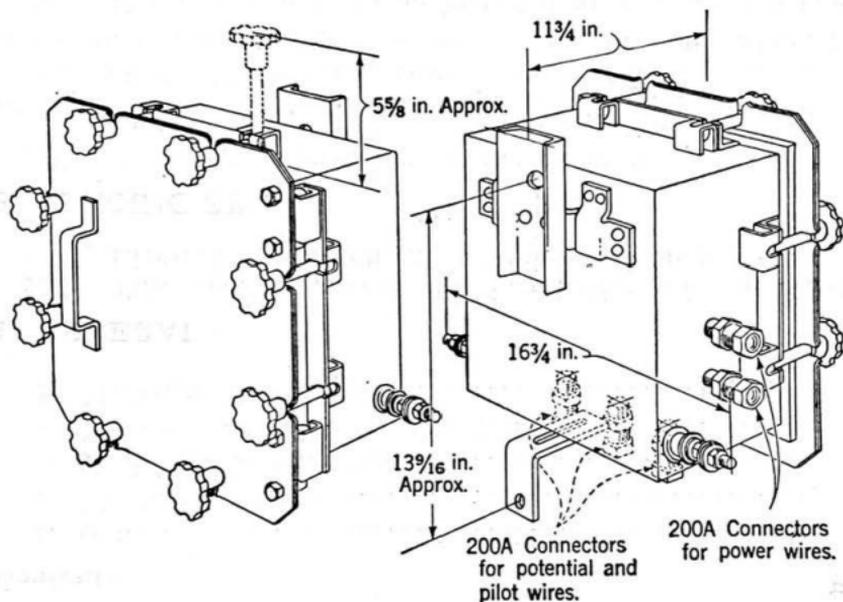
2.02 If the switch is to be installed at a location where it will be exposed to the direct rays of the sun, the case should be painted white on the outside in order to lessen the absorption of heat from the sun, and to increase the dissipation of heat from the switch. The case should be given one coat of white primer and two coats of white enamel. Before applying the primer the case should be wire brushed to remove dirt, etc., washed thoroughly with a cloth wetted with paint solvent to remove all grease, and then wiped dry.

2.03 The case is equipped with a detachable channel bracket located near the top of the case and an adjustable angle bracket at the bottom for mounting purposes. An 11/16 inch hole is provided in the channel bracket and a 7/16 inch hole

in the angle bracket for attaching the case to a pole or manhole wall with screws or bolts.

2.04 **Pole Installation:** The channel mounting bracket should be fastened to the pole by means of a 5/8 inch through bolt, the switch hung on the bracket and the angle bracket secured to the pole with a 3/8 inch by 4-1/2 inch lag screw. The switch should be hung in a vertical position as illustrated below.

2.05 **Manhole Installation:** In manholes, a 1/2 inch masonry anchor and a 3/8 inch by 2 inch galvanized expansion bolt should be used to attach the switch to the manhole wall.



### 3. CABLE AND DRAIN WIRES

3.01 The sizes of the cable and drain wires to be used will be specified in the detail plans. Soldering lugs should be used to terminate the cable and drain wires on the studs projecting from the case. Data regarding suitable lugs are given below:

## H.B. Sherman, Side Formed Soldering Lugs

<u>Size (Outside diameter of "bell" in inches)</u>	<u>Inside diameter of "bell" in inches</u>	<u>Maximum Size A.W.G. Stranded Wire Accommodated</u>	<u>Diameter of Bolt Hole in inches</u>
1/2	.398	#0	11/32
9/16	.461	#00	13/32
5/8	.511	#000	13/32
11/16	.559	#0000	13/32
13/16	.651	250,000 Cir. Mils.	13/32
15/16	.776	400,000 Cir. Mils.	13/32
1	.820	450,000 Cir. Mils.	13/32
1-1/16	.880	550,000 Cir. Mils.	13/32

Note: The bolt hole in the lugs must be redrilled to 9/16 inch.

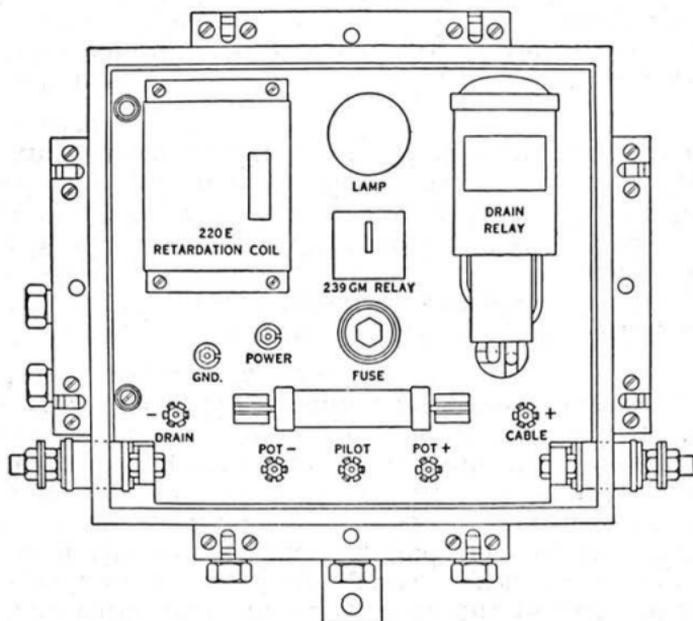
### **4. POWER, POTENTIAL AND PILOT WIRES**

4.01 The cable pairs to be used on the power wires will be specified in the detail plans. These pairs will be terminated in a UG 16 terminal, for underground installations, or in a distribution terminal on aerial cable. The connections from the terminal to the switch should be carried into the switch case through the appropriate 200A Connectors (similar to the connectors in UG 16 terminal) and should be terminated directly on the switch panel. The terminal nuts are 3/8 inch across the flats and are designed to fit a 216 tool.

4.02 AL or U Bridle Wire or LR cable is satisfactory for making the power, potential and pilot wire connections. The braid should be removed from the portion of the AL or U wire which will be passed through the rubber bushing of the connector and rubber tape applied over the insulation. Sufficient tape should be applied to provide a tight fit of the wire in the bushing and thus minimize the possibility of moisture entering along the wire.

4.03 When pilot wires or potential leads are not used, the 200A connectors provided for these wires should be removed and replaced with standard 3/8 inch brass pipe plugs. Also, when potential leads are not used, the "POT+" terminal should be strapped directly to the "Cable+" terminal on the panel, and the "POT-" terminal to the "Drain-" terminal.

AL or U Bridle Wire may be used for making these connections.



4.04 **Ballast Lamp and Fuses:** The detail plans will indicate the size ballast lamp or fuse that should be used in the receptacle marked "Lamp." A 3-ampere plug fuse should be placed in the lamp receptacle marked "Fuse." A 100-ampere 250-volt knife block fuse should be placed in the fuse terminals of the drainage circuit.

## 5. MOISTURE PROTECTION

5.01 In order to minimize the possibility of trouble in the switch due to condensation, about 50 grams of desiccant should be poured into an open container and placed in the bottom of the case.

5.02 In closing the case, tighten the hand wheel nuts securely by hand (do not use a wrench). The nuts should be turned down a little at a time in sequence around the cover to ensure uniform pressure on the gasket.