

## Chapter 83

## ROTARY SWITCHES, ALBRIGHT, TYPES SW.73/1 and SW.78/1

## LIST OF CONTENTS

	Para.		Para.
<i>Introduction</i> ... ..	1	<b>Installation</b> ... ..	8
<b>Description</b> ... ..	4	<b>Servicing</b> ... ..	9
<i>Operation</i> ... ..	6	<i>Testing</i> ... ..	10

## LIST OF ILLUSTRATIONS

	Fig.		Fig.
<i>Sectional view of switch</i> ... ..	1	<i>Installation drawing of switch</i> ... ..	3
<i>Switch positions</i> ... ..	2		

## LEADING PARTICULARS

<i>Rotary switch, Type SW.73/1</i> ... ..	<i>Ref. No. 5CW/6680</i>
<i>Rotary switch, Type SW.78/1</i> ... ..	<i>Ref. No. 5CW/</i>
<i>Voltage, SW.73/1 switch</i> ... ..	200 to 208V, 3-phase, 400 c/s
<i>Voltage, SW.78/1 switch</i> ... ..	28V d.c.
<i>Current rating of switches</i> ... ..	5 amp.
<i>Temperature range</i> ... ..	-55 to +70 deg. C
<i>Max. operating altitude</i> ... ..	25,000 ft.
<i>Overall dimensions of switch</i> } (excluding spindle) (in.)	1.937 × 1.750

RESTRICTED

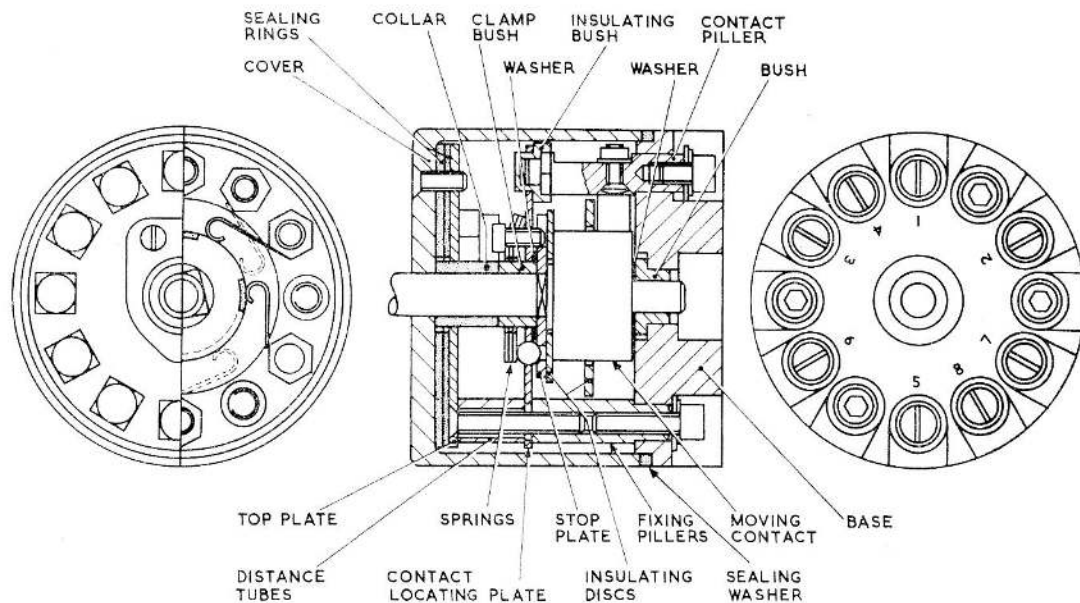


Fig. 1. Sectional view of switch

### Introduction

1. The switches, Type SW.73/1 and SW.78/1, though of similar design, are used for different services in aircraft.

2. The SW.73/1 switch is used in conjunction with a twin a.c. motor Dunlop Maximue windscreen wiper unit, to give two positions i.e. "OFF SLOW" (1 motor), "FAST" (2 motors).

3. The SW.78/1 switch is used in conjunction with a solenoid-operated Hot/Cold Air system for heating and ventilated suit.

### DESCRIPTION

4. A sectional view of the switch is shown in fig. 1. Both switches are manually operated from the "OFF" position.

5. The SW.73/1 three position switch is designed to function when fitted in a 208 volt, 400 cycles, 3-phase a.c. supply, to control a windscreen wiper motor, while the SW.78/1 2-pole, 3-way switch is designed to function when fitted in a 28V d.c. supply to control a solenoid-operated Hot/Cold air system. Both switches operate efficiently up to a load of 5 amp. maximum. Fitted at the base of the switch are the eight 4 B.A. terminals for taking the 5 amp. connectors.

### Operation

6. The SW.73/1 three-position switch is operated from the OFF position in a clockwise

direction. Fig 2 shows position 1 (OFF), all contacts open, position 2 (SLOW), three contacts make (position 2 contacts remain made) and at position 3 (FAST), further three contacts make.

7. With the SW.78/1, 2-pole, 3-way switch (fig. 2) when operated gives three contact positions on each pole.

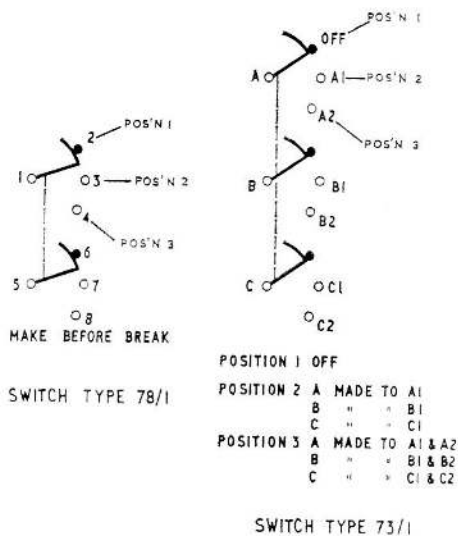


Fig. 2. Switch positions

RESTRICTED

### INSTALLATION

8. The switches, which can be installed in any attitude, are panel mounted, the panel thickness can vary between  $\frac{1}{32}$  and  $\frac{3}{16}$  in. Three fixing holes, equally spaced, tapped 4 B.A. for securing switch to mounting panel are located at head of switch, fig. 3.

### SERVICING

9. Little servicing is necessary with this type of switch beyond inspection for signs of corrosion, freedom from damage and a check for positive operation. If switch is faulty it must be replaced by a serviceable switch of the same design.

#### Testing

10. The switch is to be tested at full electrical rating (5 amp.) for a total of 50 operations.

11. After the above test a millivolt drop test is to be carried out across each pair of contacts; the drop should not exceed 100 millivolts (actual—40 millivolts max.).

12. Using a 500V megger for the SW.73/1 200V switch and a 250V megger for the SW.78/1 28V switch, test the insulation resistance between contacts and all contacts to switch frame. The reading should not be less than 5 megohms (R.A.F.) and 0.5 megohms (R.N.).

13. The switch action should be smooth in each case and give positive location with reasonable hand force applied to turn, using a control knob no greater than 1 in. diameter.

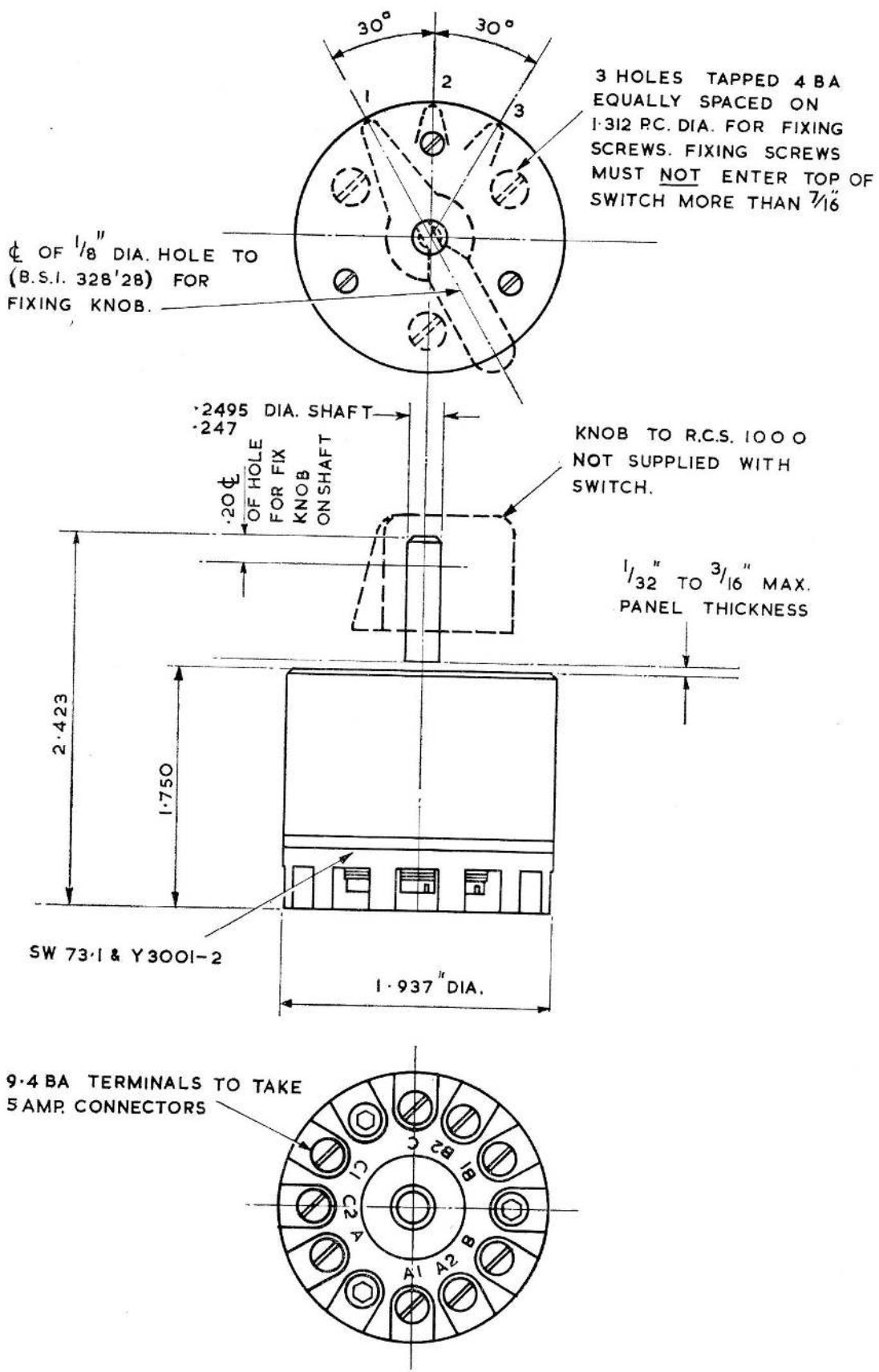


Fig. 3. Installation drawing of switch  
**RESTRICTED**

This file was downloaded  
from the RTFM Library.  
Link: [www.scottbouch.com/rtfm](http://www.scottbouch.com/rtfm)

Please see site for usage terms,  
and more aircraft documents.

