

Chapter 50

LAMP INDICATOR, PRESS-TO-TEST, DOWTY 7647Y SERIES

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LEADING PARTICULARS

7647 Y Indicator	Ref. No. 5CX/Table 1
<i>Warning lamps</i>	
Available for 6V, 0.1A	Ref. No. 5L/9959119
12V, 0.1A	Ref. No. 5L/9959112
28V, 0.04A	Ref. No. 5L/9959118
<i>Altitude</i> 60,000 ft.
<i>Average life</i>	10,000 operations minimum
<i>Ambient temperature range</i>	-65 to +50 deg. C
<i>Contact surfaces</i> Silver plated
<i>Terminal connections</i>	6 B.A. terminal screws with captive washers
<i>Weight of unit</i> 1.5 oz. (approx.)

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Introduction

1. The Dowty, Type 7647Y press-to-test indicator is basically a compact warning lamp, incorporating built-in facilities for dimming and lamp filament checks. The indicator is interchangeable with earlier approved types of warning lamps used in aircraft.



Fig. 1. General view of indicator

DESCRIPTION

2. A general view of the indicator is illustrated in fig. 1, and shows the lamp body in which is fitted the warning lamp. Fitted to the front end of the body is the transparent plastic lens, also facilities are provided for mounting the indicator from the front of the panel on installation. A three-entry grommet is fitted to the rear end of the indicator body.

3. When used as a 'normally off' indicator the lamp filament can be checked simply by pressing the transparent plastic lens. This action disconnects the lamp from its signal source, then lights it as a further contact energized from a continuous d.c. supply is reached as shown in fig. 2.

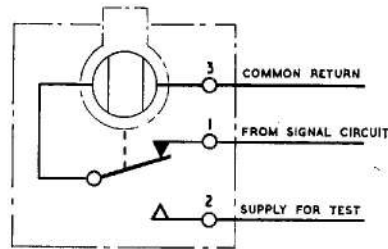


Fig. 2. Circuit diagram

4. The small replaceable lamps are available for 6, 12 or 28V d.c. working, and can be rapidly changed by unscrewing the front section of the unit, see Leading Particulars.

5. The warning lamp is available with or without variable dimming, which controls the amount of light transmitted through the lens to suit ambient lighting conditions. The dimming adjustment is made simply by rotating the lens bezel through a maximum of 90 degrees, and is indicated by a raised pip in the lens moulding. Five colours, clear, red, green, amber and blue lenses are available, the Mark number of the indicator changing with the selected lens. Indicators fitted with built-in dimmers add a suffix 'D' to the Mark number (Table 1). Each lens is designed to spread the light over a wide viewing angle.

TABLE 1
7647Y Indicator identification

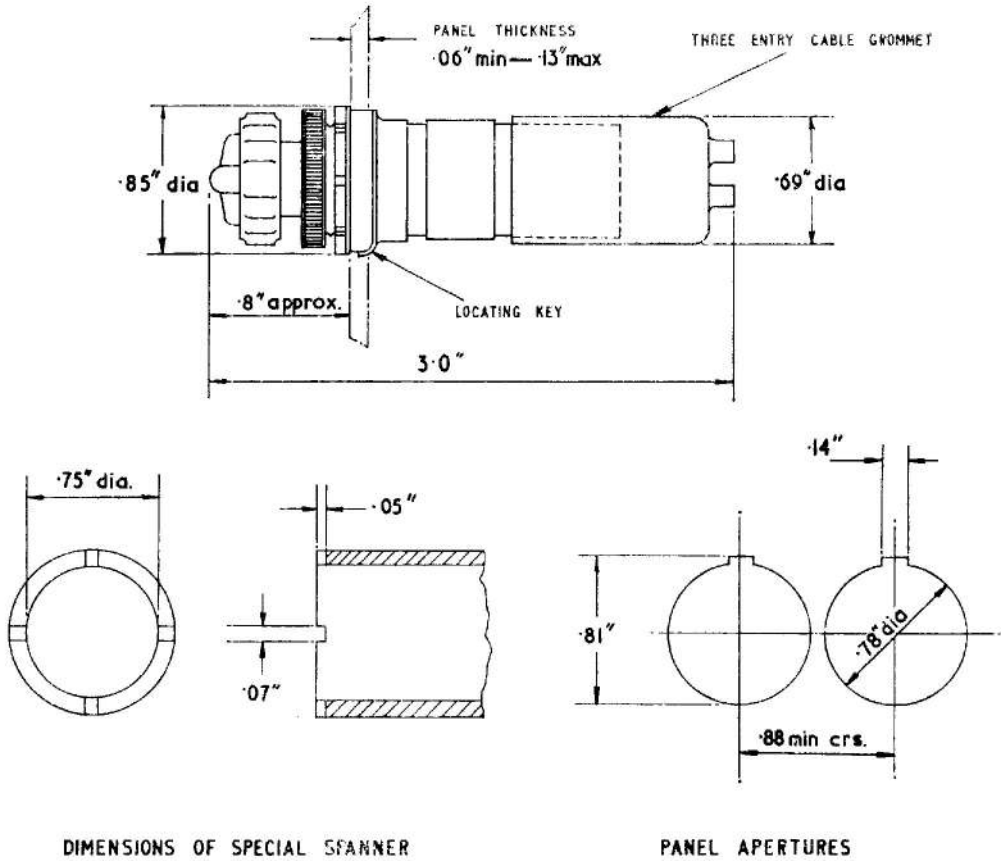
Lens Colour	Mk. No. without dimming	Mk. No. with dimming	Ref. No. 5CX/
Clear	1	1D	
Red	2	2D	5950
Green	3	3D	5988
Amber	4	4D	
Blue	5	5D	

6. The three screw type terminals are protected by a rubber grommet fitted with three-entry cable holes. Internal seals effectively reduce the ingress of moisture and foreign matter. The grommet, supplied as standard, is of a suitable length to be used with crimped terminal tags.

INSTALLATION

7. The indicator can be installed from the front of the mounting panel and requires little space—its overall diameter 0.85 in. allows a minimum centre-to-centre distance of $\frac{7}{8}$ in.

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DIMENSIONS OF SPECIAL SPANNER

PANEL APERTURES

Fig. 3. Installation details

8. The lamp is located on the mounting panel by a key and is firmly held in the panel by the grip of a rubber washer which expands when the lamp fixing nut is tightened. This provides a resilient mounting which protects the lamp filament from excessive shock or vibration.

SERVICING

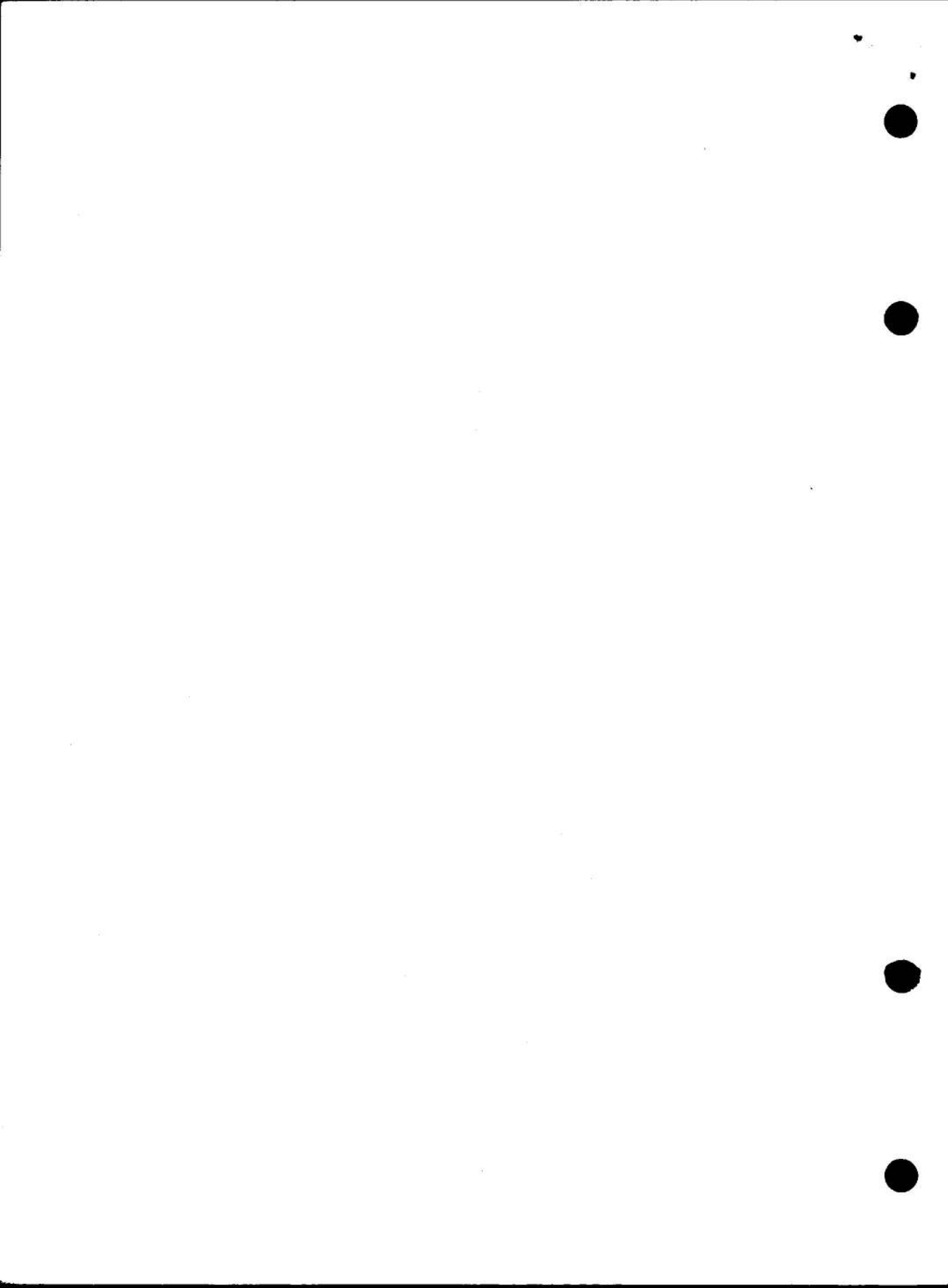
9. Little servicing is necessary with these indicators, apart from a visual inspection

for security of connections and lamp checking. Indicators fitted with dimmers should have this additional functional check.

Insulation resistance test

10. Using a 250 volt d.c. insulation resistance tester (and with lamp removed), measure the insulation resistance between the lamp case and any terminal, also between any two terminals; it should not be less than 5 megohm (R.A.F.) and 0.5 megohm (R.N.).

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