

Chapter 2

MICROSWITCHES, DOWTY, 1241Z SERIES

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LEADING PARTICULARS

<i>Microswitch, Type 1241Z, Mk. 1 (without grommet)</i> ...	<i>Ref. No. 5CW/</i>
<i>Microswitch, Type 1241Z, Mk. 1A (with grommet 'A')</i> ...	<i>Ref. No. 5CW/7412</i>
<i>Microswitch, Type 1241Z, Mk. 1C (with grommet 'C')</i> ...	<i>Ref. No. 5CW/</i>
<i>Operating voltage</i>	<i>28V. d.c.</i>
<i>Load rating at 28V. d.c.</i>	
<i>Resistive</i>	<i>5A.</i>
<i>Inductive</i>	<i>3A, 0.06 H.</i>
<i>Switch operating frequency</i>	<i>41.2 per minute</i>
<i>Pre-travel</i>	<i>0.095 in. (max.)</i>
<i>Overtravel</i>	<i>0.375 in. (max.)</i>
<i>Load to operate</i>	
<i>Sea level at 20 deg. C.</i>	<i>11.8 lb. (max.)</i>
<i>60,000 ft. at 70 deg. C.</i>	<i>12.6 lb. (max.)</i>
<i>Load at maximum travel</i>	<i>26.5 lb. (max.)</i>
<i>Differential (in.)</i>	<i>0.006 (min.) 0.018 (max.)</i>
<i>Max. overall dimensions without grommet (in.)</i>	<i>2.67 × 2.83 × 1.17</i>
<i>Ambient temperature range</i>	<i>−60 to +70 deg. C.</i>

Introduction

1. The microswitch, 1241Z is a double-pole, change-over, plunger-operated type; it is sealed against attack by ester based lubricants, kerosene and water.

DESCRIPTION

2. A general view of this switch is shown in fig. 1. The microswitch is designed to operate on 28V. d.c. supply, and the contacts will switch a resistive load of 5 amperes, or an inductive load of 3 amperes, 0.06 henries.

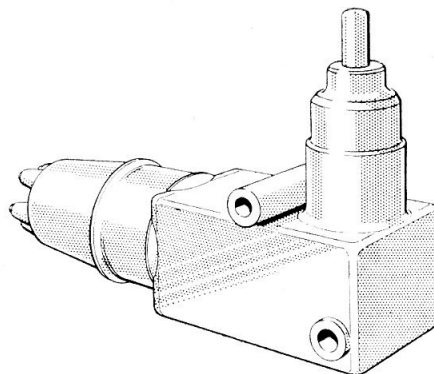


Fig. 1. Microswitch, Type 1241Z, Mk. 1A

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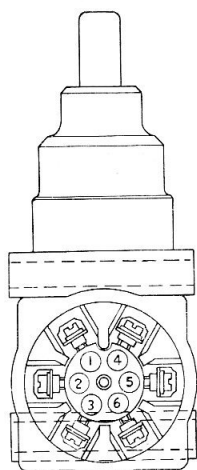


Fig. 2. Terminal arrangement

3. A view of the terminal connections is shown in figure 2, six 6 B.A. terminals connect the microswitch to the 28V. d.c. supply. A circuit diagram is shown in Fig. 3.

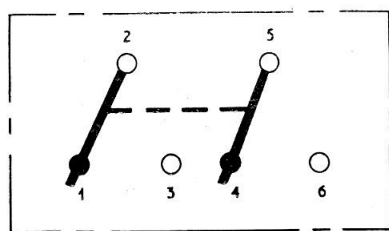


Fig. 3. Circuit diagram

4. The 1241Z, Mk. 1 microswitch has no grommet provided, whereas the 1241Z, Mk. 1A microswitch is fitted with an 'A' type grommet. The suffix letter after the mark number indicates the type of grommet fitted to the microswitch (fig. 4).

INSTALLATION

5. The microswitch is provided with two 2 B.A. clearance holes for mounting. To connect the electrical leads to a new switch fitted with a Type 'A' grommet, remove the grommet and cut the extreme tips off the required sleeves and feed the conductors through, causing the cable sleeves to invert. After connecting the cables to the switch, pull the conductors through to re-invert the sleeves. This unit will accept insulated crimped terminals of $\frac{9}{32}$ in. tongue width.

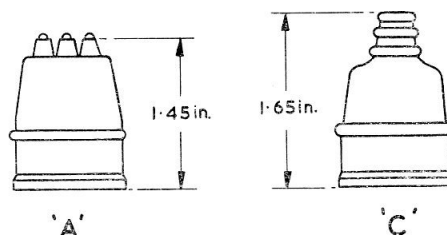


Fig. 4. Types of grommet

SERVICING

6. This type of microswitch is sealed and should not be dismantled for further servicing at user units, routine servicing is therefore restricted to examination for security of connections, mounting, deterioration of cables, and signs of corrosion. The unit should be tested for correct operation when installed in its relevant circuit.

7. Where necessary the terminal screws may be smeared with MS4 compound (Ref. No. 33C/9424829), to minimise the possibility of corrosion.