

Chapter 41**MINIATURE PILLAR LAMP BRIDGES****LIST OF CONTENTS**

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LEADING PARTICULARS

<i>Bridge, 4-lamp, Type A, for Gyro Compass G4B</i>			
<i>Thorn Part No. 80/10/1198 (black finish)</i>		<i>Ref. No. 5CX/5350</i>	
<i>Thorn Part No. 80/10/1484 (grey finish)</i>		<i>Ref. No. 5CX/5475</i>	
<i>Bridge, 2-lamp, Type B, for artificial horizon</i>			
<i>Thorn Part No. 80/10/1193 (black finish)</i>		<i>Ref. No. 5CX/5351</i>	
<i>Thorn Part No. 80/10/1485 (grey finish)</i>		<i>Ref. No. 5CX/5476</i>	
<i>Bridge, 2-lamp, Type C, for large S.A.E. case (4B.A. fixing)</i>			
<i>Thorn Part No. 80/10/1192 (black finish)</i>		<i>Ref. No. 5CX/5352</i>	
<i>Thorn Part No. 80/10/1486 (grey finish)</i>		<i>Ref. No. 5CX/5477</i>	
<i>Bridge, 2-lamp, Type D, for small S.A.E. case (4B.A. fixing)</i>			
<i>Thorn Part No. 80/10/1190 (black finish)</i>		<i>Ref. No. 5CX/5353</i>	
<i>Thorn Part No. 80/10/1487 (grey finish)</i>		<i>Ref. No. 5CX/5478</i>	
<i>Bridge, 2-lamp, Type E for double Desynn (horizontal)</i>			
<i>Thorn Part No. 80/10/1196 (black finish)</i>		<i>Ref. No. 5CX/5354</i>	
<i>Thorn Part No. 80/10/1488 (grey finish)</i>		<i>Ref. No. 5CX/5479</i>	
<i>Bridge, 2-lamp, Type F, for large S.A.E. case (2B.A. fixing)</i>			
<i>Thorn Part No. 80/10/1191 (black finish)</i>		<i>Ref. No. 5CX/5355</i>	
<i>Thorn Part No. 80/10/1489 (grey finish)</i>		<i>Ref. No. 5CX/5480</i>	
<i>Bridge, 2-lamp, Type G, for small S.A.E. case (2B.A. fixing)</i>			
<i>Thorn Part No. 80/10/1189 (black finish)</i>		<i>Ref. No. 5CX/5356</i>	
<i>Thorn Part No. 80/10/1490 (grey finish)</i>		<i>Ref. No. 5CX/5481</i>	

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<i>Bridge, 2-lamp, Type H, for 3¼ in. Air Ministry case</i>		
<i>Thorn Part No. 80/10/1194 (black finish)</i>	<i>Ref. No. 5CX/5357</i>
<i>Thorn Part No. 80/10/1491 (grey finish)</i>	<i>Ref. No. 5CX/5482</i>
<i>Bridge, 2-lamp, Type J, for case with 3 in. P.C.D. fixing holes</i>		
<i>Thorn Part No. 80/10/1195 (black finish)</i>	<i>Ref. No. 5CX/5358</i>
<i>Thorn Part No. 80/10/1492 (grey finish)</i>	<i>Ref. No. 5CX/5483</i>
<i>Bridge, 2-lamp, Type K, for double Desynn (vertical) R.H. pillars</i>		
<i>Thorn Part No. 80/10/1197 (black finish)</i>	<i>Ref. No. 5CX/5359</i>
<i>Thorn Part No. 80/10/1493 (grey finish)</i>	<i>Ref. No. 5CX/5484</i>
<i>Bridge, 4-lamp, Type L, for Gyro Compass G4F</i>		
<i>Thorn Part No. 80/10/1236 (black finish)</i>	<i>Ref. No. 5CX/5360</i>
<i>Thorn Part No. 80/10/1494 (grey finish)</i>	<i>Ref. No. 5CX/5485</i>
<i>Bridge, 1-lamp, Type M, for G.100, Type 2, small S.A.E. case</i>		
<i>Thorn Part No. 80/10/1483 (black finish)</i>	<i>Ref. No. 5CX/5361</i>
<i>Thorn Part No. 80/10/1495 (grey finish)</i>	<i>Ref. No. 5CX/5486</i>
<i>Bridge, 2-lamp, Type N, for 2 in. diam. flangeless case</i>		
<i>Thorn Part No. 80/10/1631 (black finish)</i>	<i>Ref. No. 5CX/5362</i>
<i>Thorn Part No. 80/10/1496 (grey finish)</i>	<i>Ref. No. 5CX/5487</i>
<i>Bridge, 2-lamp, Type O, for Smith's Mk. 5 clock</i>		
<i>Thorn Part No. 80/10/0922 (black finish)</i>	<i>Ref. No. 5CX/5371</i>
<i>Thorn Part No. 80/10/1497 (grey finish)</i>	<i>Ref. No. 5CX/5488</i>
<i>Bridge, 2-lamp, Type P, for Smith's beam compass</i>		
<i>Thorn Part No. 80/10/0923 (black finish)</i>	<i>Ref. No. 5CX/5372</i>
<i>Thorn Part No. 80/10/1498 (grey finish)</i>	<i>Ref. No. 5CX/5489</i>
<i>Accessory</i>		
<i>Filament lamp, special miniature, 0.04 amp</i>	<i>Ref. No. 5L/9959118</i>
<i>Spares</i>		
<i>Lamp carrier</i>	<i>Ref. No. 5CX/5365</i>

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Introduction

1. The miniature pillar lamp bridges are used in many types of aircraft to illuminate a variety of different instruments. The bridges, in most instances, carry two or more lamps and are fixed across the top of the instrument which they are to illuminate. The full range of these lamp bridges is given in Leading Particulars.

DESCRIPTION

General

2. The lamp bridges consist of one, two or four small floodlights in the form of pillars mounted on a bridge piece. The bridges themselves are designed to fit over or around a variety of standard instruments and in several cases have fixing holes positioned so that the instrument fixing screws also retain the lamp bridge.

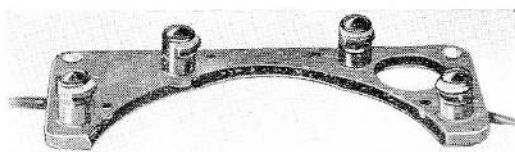


Fig. 1. Bridge, 4-lamp, Type A

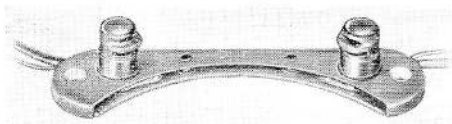


Fig. 2. Bridge, 2-lamp, Type B

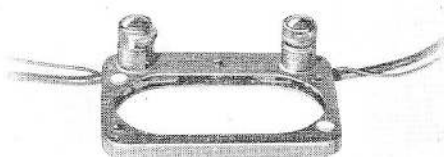


Fig. 3. Bridge, 2-lamp, Type K

Bridge and base assembly

3. The bridge and base assembly is constructed of two light alloy pressings which are secured together by rivets and spacers. The spacers maintain sufficient space between

the two pressings to enable the centre contact assemblies to be fitted and are also drilled to accept the mounting screws. Immediately above the centre contact assemblies, are mounted the cylindrical pillars which accept the lamp carriers. These pillars have two thin slots, 1/10 in. apart, cut longitudinally in their walls; small dimples are punched in the tongues so formed and these serve to retain the lamp carriers in position.

Lamp carriers

4. The lamp carriers have angled light apertures, rather similar to the slot in a pillar box, which supply the required amount of light divergence to illuminate the respective instrument. A keyway in the wall of the lamp carrier locates with a key machined in the wall of the lamp pillar; this ensures that the distribution of light is accurately determined. A spring circlip, located on the inner wall of the lamp carrier retains the special miniature filament lamp.

Supply leads

5. When two or more lamps are carried on a bridge piece, two separate supplies are led into the unit; this ensures that a failure of one supply does not lead to a complete failure of instrument illumination.

6. The two supplies enter the bridge piece at the R.H. and L.H. side respectively. The R.H. supply leads are coloured red (+ve) and black (-ve) while the L.H. leads are coloured yellow (+ve) and black (-ve). In the case of 2-lamp installations, the red lead is connected to the centre contact of the R.H. lamp while the yellow lead connects to the centre contact of the L.H. lamp; the black leads are both earthed to the metal frame of the bridge piece.

7. In the case of the 4-lamp installations the red lead is connected to the centre contact of the 2nd and 4th lampholder from the left, while the yellow lead connects to the centre contact of the 1st and 2nd; as before the black lead is earthed.

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SERVICING

8. The lamps should be inspected for freedom from damage and corrosion and checked for security of attachment. The filament carrier caps should be checked for security within the lampholder pillars, and should require a pull of not less than 2 lb. to remove them.

Insulation resistance test

9. With the filament lamps removed from the lamp bridges, and measured with a 250 volt insulation resistance tester, the insulation resistance measured between the red and yellow leads, and the case should be not less than 5 megohms.

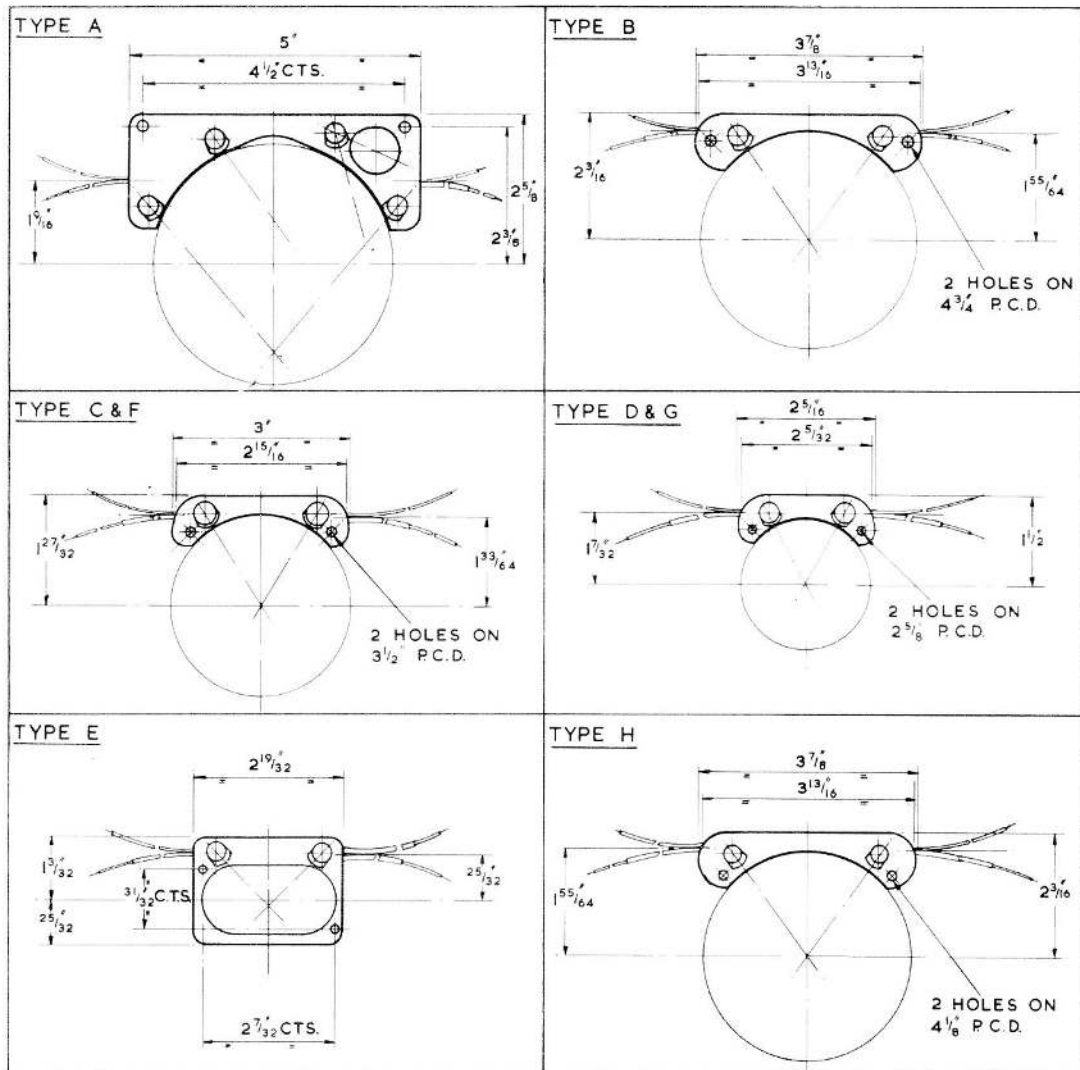


Fig. 4(a). Installation diagram

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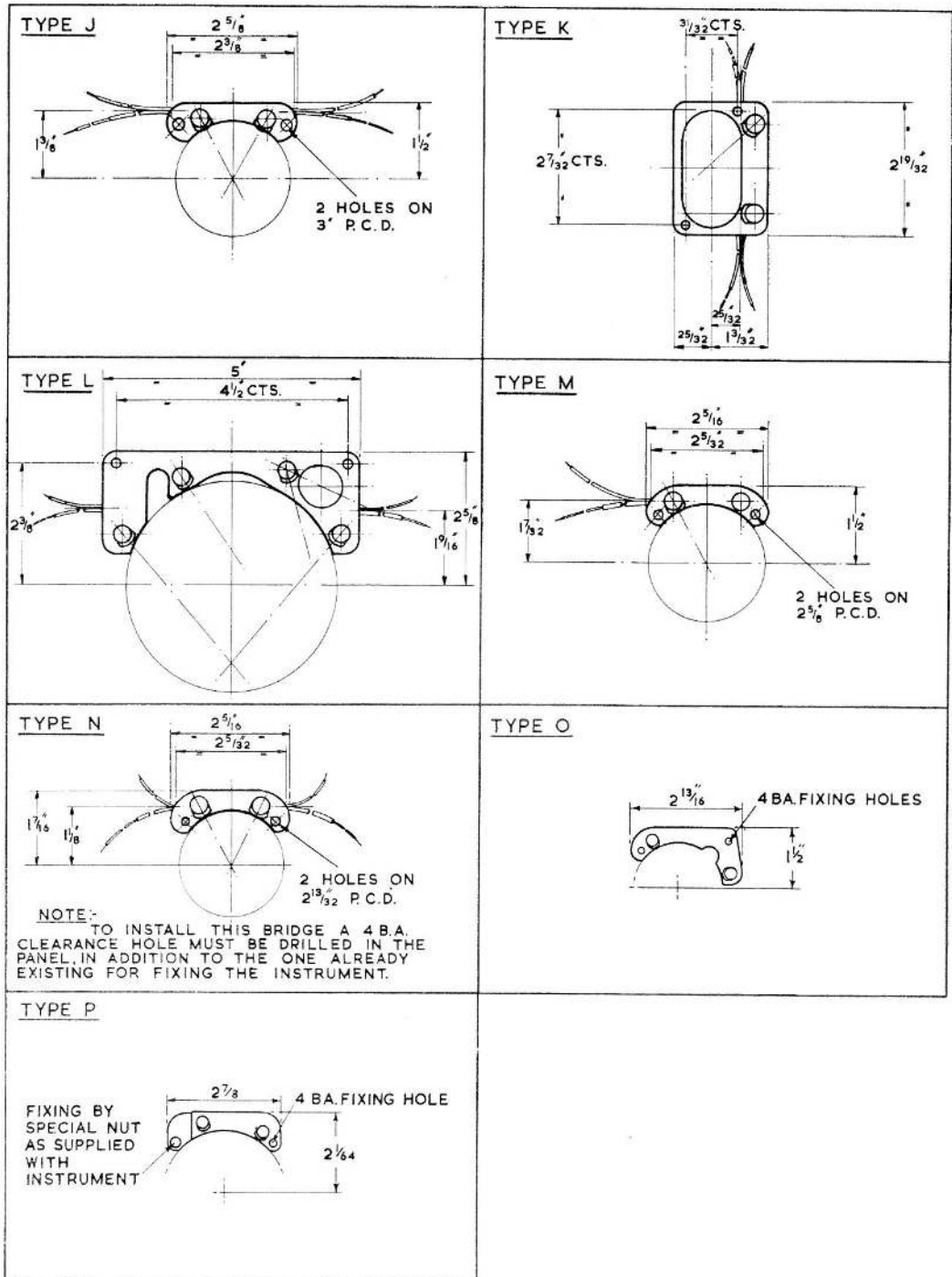


Fig. 4(b). Installation diagram

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