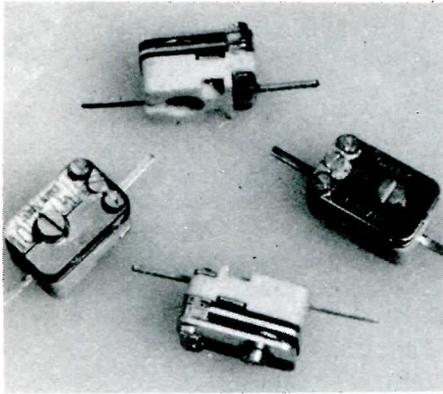
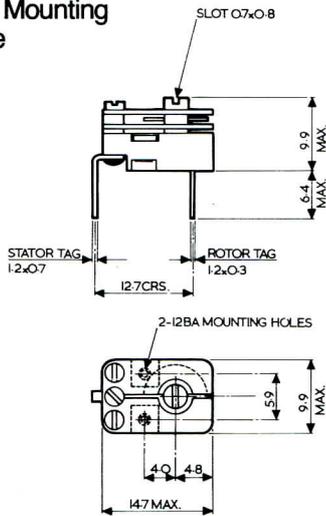


# Thermotrimmer®

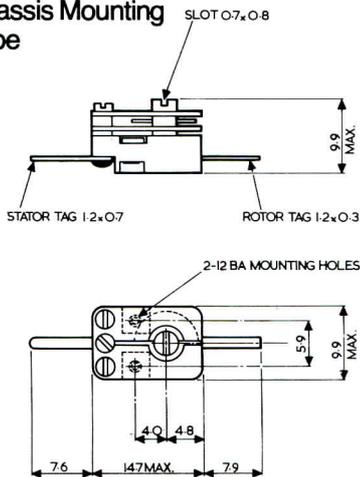


Actual Size

## P.C. Mounting Type



## Chassis Mounting Type



Scale 1:1  
Dimensions in mm.

The OXLEY® Thermotrimmer® is a miniature air dielectric trimmer capacitor with an adjustable temperature coefficient to provide compensation for thermally induced drift in electronic equipment where the available space is minimal.

The basic construction comprises two pairs of bimetallic stator vanes which are electrically connected but temperature sensitive in opposite directions. With a rise in temperature the stator vanes marked 'OXLEY' close inwards towards the rotor to effect an increase in capacitance with temperature (i.e. a maximum positive temperature coefficient) and conversely the second pair of stator vanes open outwards with increasing temperature to effect a decrease in capacitance (i.e. negative temperature coefficient).

At room temperature the capacitance remains constant at a nominal 2.5 pF for all settings of the rotor.

To establish the required setting of the capacitor for compensation, the rotor is first set to its half-way position. The circuit is then allowed to reach thermal equilibrium and the Thermotrimmer® re-adjusted to cancel any thermal drift in the reactance of the circuit; this with the knowledge that on return to ambient the capacitance of the Thermotrimmer® will return to its original value because at ambient temperatures its capacitance is constant and independent of the rotor setting.

All metal parts are gold plated with the exception of one of the bi-metals which is a corrosion resistant alloy. Both chassis and printed circuit mounting styles are available.

## CHARACTERISTICS

Nominal capacitance at 20°C  
Temperature coefficient

2.5 pF  
Continuously adjustable from  
-1000 ppm/°C to + 1000 ppm/°C  
-40 to +80 °C  
500 Vd.c.  
Greater than 1000  
Greater than 10,000 Mohm  
21 to 56 mN m (3 to 8 oz in)  
210 to 580 g cm.

Temperature range  
Breakdown voltage  
Q at 1 MHz  
Insulation resistance  
Torque

## MATERIALS

Rotor vanes  
Stator vanes  
Terminations  
Base

Brass to BS 2874 CZ 121  
gold plated  
Bimetal  
Brass to BS 2870 CZ 108  
gold plated  
High frequency ceramic

## BRITISH AND FOREIGN PATENTS

BS 9000 Approved Company – 1048/M  
DEF—STAN (05-21) Approved 12K001

Leaflet No. TM/3/79

## ORDERING INFORMATION

When ordering, please specify Thermotrimmer®, capacitance, and whether a chassis or p.c. mounting type is required.

OXLEY® and Thermotrimmer® are Registered Trade Marks of Oxley Developments Company Ltd.

The Oxley Tempatrimmer® is an air dielectric capacitor with an adjustable temperature coefficient to provide compensation for thermally inducted drift in electronic equipment. The temperature coefficient is varied by adjusting the position of the rotor within the "U" shaped stator assembly. The capacitance of the device, nominally 6.5pF at room temperature, is independent of the position of the rotor and temperature control is achieved by virtue of the bi-metal strip which connects the stator to the high frequency ceramic base.

The temperature coefficient has its maximum positive value with the rotor on one side of the stator and its maximum negative value with the rotor turned through 180°.

To establish the required setting of the capacitor for compensation, the rotor is first set to its half way position. The circuit is then allowed to reach thermal equilibrium and the Tempatrimmer re-adjusted to cancel any thermal drift in the reactance of the circuit; this with the knowledge that on return to ambient the capacitance of the Tempatrimmer will return to its original value because at ambient temperatures its capacitance is constant and independent of the rotor setting. Both rotor and stator are milled from solid brass and the optically ground ceramic base provides a stable bearing surface to minimise spurious effects.

## CHARACTERISTICS

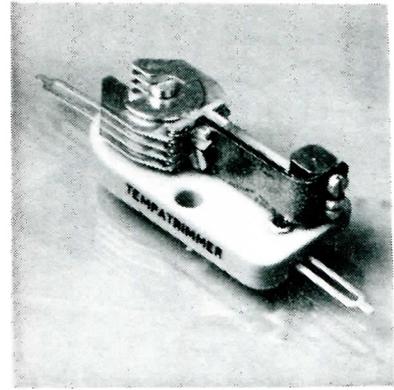
Nominal capacitance at 20°C	6.5 pF
Temperature coefficient	Continuously adjustable from -2000 ppm/°C to +2000 ppm/°C
Temperature range	-40 to 100°C
Working voltage	375 V d.c.
Proof voltage	750 V d.c.
Q at 1 MHz	greater than 1000
Insulation resistance	greater than 10,000 MΩ
Torque	21 to 56 mNm (3 to 8 oz in) 210 to 580 g cm

## MATERIALS

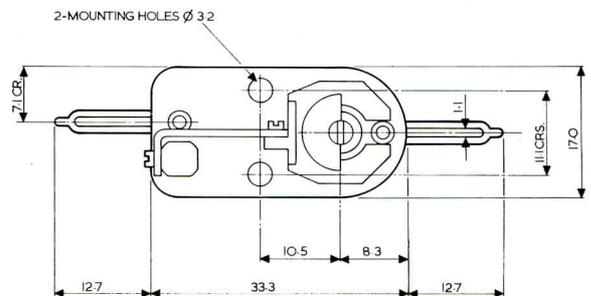
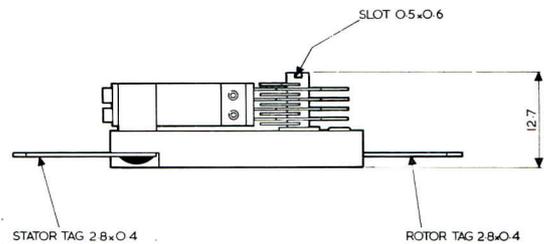
Vanes and Tags:	Brass to BS 2870 CZ 108 silver plated to DEF STAN 03-9/1
Base:	High frequency ceramic
Bi-metal strip:	Heat treated bi-metal

## ORDERING INFORMATION

When ordering please specify Tempatrimmer and capacitance.



Actual Size



Scale 1:1

Dimensions in mm

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BRITISH & FOREIGN PATENTS

BS 9000 Approved Company—  
1048/M

DEF STAN (05-21) Approved—  
12K001

Leaflet No. TM/11/78