

## CONSUMER EARTH BONDS

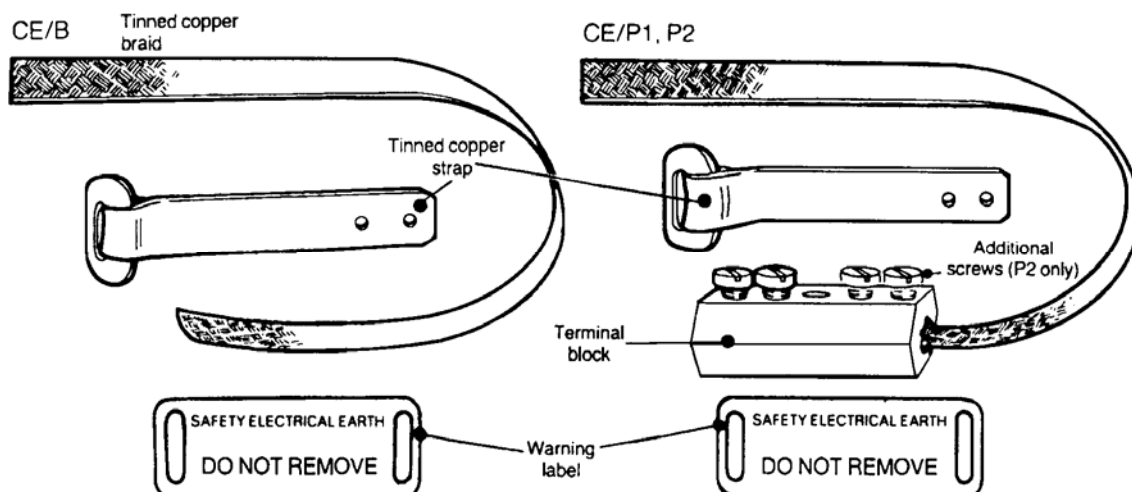


### CE connectors

**CE/B** With copper strap, warning label and copper braid only.

**CE/P1** With copper strap, warning label, copper braid and sweated-on terminal block.

**CE/P2** With copper strap, warning label, copper braid and independent fitting terminal block.



The increasing use of protective multiple earthing by the British Electricity Supply Authorities, together with the specifications for earthing and bonding set out in the IEE Wiring Regulations, requires a reliable connection to the lead sheath of existing paper insulated service cables. In establishing a satisfactory electrical contact it is important to avoid any damage to either the lead sheath or the underlying paper insulation, especially as in many instances fitting takes place whilst the cable is energised.

The Hepworth Consumer Earth Bonding system is designed to meet these objectives, and employs a fail-safe method of ensuring that a consistent and controlled pressure is applied to the lead sheath during fitting.

The system comprises a tinned, annealed copper strap which is wrapped around the sheath to secure a tinned copper bonding braid, the strap being tightened with the aid of the Hepworth Lightweight Tension Tool (Ref: JTS/2), which ensures that the strap cannot be over-tightened, to cause damage to either sheath or paper insulation.

### CE/B

Available in packs of ten (x10), containing 10 x copper straps and 10 x Warning Labels. The 11mm wide copper bonding braid is supplied separately according to requirements.

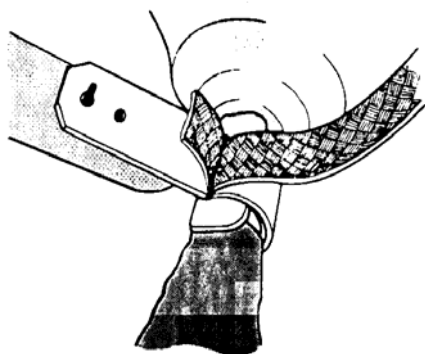
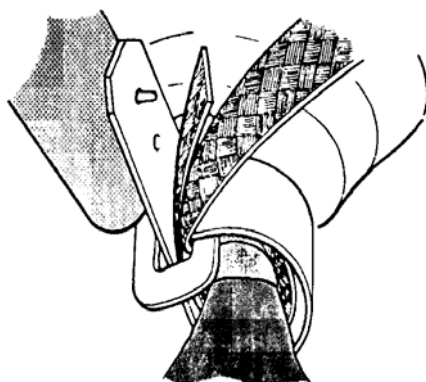
### CE/P1, CE/P2

Packed individually, containing all of the components necessary for a complete bond, including a 11mm wide copper bonding braid and brass terminal block, supplied either already fixed (P1) or loose for local fitting (P2). Bonds to alternative specification are also available on request, and details of fitting appear with the technical data overleaf.

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### CE connectors



The Hepworth Consumers Earth Bonds have been extensively tested both in our own laboratories and by independent authorities. Resistance values measured on bonds attached to a twin 0.0225 sq in (14.5mm<sup>2</sup>) PILC cable sheath before and after 2000 load cycles were as follows:-

Sample	Resistance in microhms		
	Initial	Final	Difference
1	100	111	11
2	92	103	11
3	90	101	11
4	97	106	9
5	102	115	13
Average	96	107	11

Detailed examination of test results show that the majority of any resistance increase occurs at an early stage, with stability being achieved after a few hundred cycles.

### Fitting Instructions

1. Thoroughly clean and abrade the lead sheath, then thread the tinned copper braid through the buckle, around the sheath and back through the buckle as shown.
2. Encircle the strap over the braid, introduce through the buckle and pull tight before engaging the tool spigot through the hole, with the nose of the tool engaged in the buckle. It is important that the tool is kept tangential to the cable, which is the position the tool will naturally adopt when tensioning.
3. Continue turning the tool handle until the hole in the strap begins to tear, at which stage the strap must be "set" by pushing the tool back as shown. Do not release the tool before setting the strap.
4. Remove the tool and trim the surplus strap, leaving a 25mm tail which should be pressed down hard onto the buckle. To complete the bond the warning label should be threaded onto the braid.

NOTE: When using bond CE/P1 the label will have to be threaded onto the braid prior to assembly.