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## Datasheet

# UK Antistatic Earth Bonding Plug

RS Stock number [392-157](#)



### Description

To fit UK 13A socket.

The Earth Bonding Point (EBP) plug is designed to provide a common ground point for grounding using protective earth in an ESD protected area (EPA). The plug fits into the mains supply socket, making a connection with the earth conductor only. In place of the live and neutral pins are moulded insulating plastic pins to allow positive location in the socket. Connectors on the front of the plug are available for connection via ground cords to the various elements of the EPA. Thus each element is held at a common potential.

A resistance of sufficient resistance to limit current to less than 0.0005 amperes (0.5 milliamperes), at the highest voltage that may be encountered, should be incorporated. Nominally, 800 kilohms are sufficient for voltages of up to 240 volts alternating current (AC). The value of one megohm is specified because it is a standard value discrete resistor. Follow appropriate regulatory or company safe grounding instructions. (Ref: ANSI/ESD S1.1).

If overstressed the resistor will open the circuit.

It is virtually impossible to misuse the plug, which is permanently sealed. The resistance between the terminations and the pin of each plug is tested after manufacture.

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Check that the connectors on the plug face correspond with the terminations on the wrist strap and ground cords: several variations of the plug are available. Insert the EBP plug into a mains supply socket and push it fully home. The plug functions safely whether the socket is switched off or on. Connect the elements of the EPA such as bench and floor mats to the EBP plug face using ground cords.

The plug is **ONLY** to be used for ESD control purposes.

**ONLY** use ground cords with compatible connections to those on plug, supply plugs with terminations for all standard ground cords.

**NOT** to be used for earthing electrical appliances

**DO NOT** open or try to repair. Test the plug by measuring the resistance from each termination to the Earth pin. Resistance should be between 0.8 and 1.2 mega ohm.

Each termination is connected to its own 1 mega ohm resistor. The resistance between two terminations should be approximately 2 mega ohms.

To avoid the need for unduly long ground cords and to simplify the daily visual check, that all connections are sound and in place, an EBP plug should not be shared by more than two work stations.

The EBP plug may also be used in conjunction with a EBP box or bar installed at the front of a bench for easier connecting of wrist straps for example.

EBP plugs are packed and labelled individually in an antistatic polyethylene bag.

### Specification:

| Property                          | Value               |
|-----------------------------------|---------------------|
| Colour                            | Yellow              |
| Size of plug casing               | 51mm x 49mm x 31mm  |
| Weight                            | 36g                 |
| Connector to earth pin resistance | 0.8 - 1.2 megohms   |
| Connector to connector resistance | Approx. 2 mega ohms |