

Information on BS 1363 Plugs and
Sockets

PlugSafe Fact Sheet

Does Size Matter?

British power sockets are fully regulated by the UK government. The BS 1363A standard for 13 Amp plugs, sockets and adaptors is required by “*The Plugs and Sockets etc. (Safety) Regulations 1994*”. Sockets must be safe and include internal shutters to prevent children from poking objects into them. (BS 1363 was introduced in 1947!)

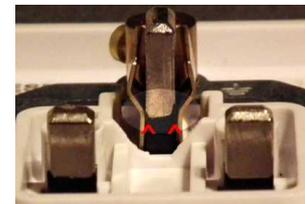


BS 1363 starts by specifying the dimensions of the 13 Amp plug, and then specifies the requirements for sockets to be both safe and work properly with all 13 Amp plugs. **It is essential that only devices with the correct dimensions of a 13 Amp plug are ever inserted into sockets.** Unfortunately there are many counterfeit and substandard plugs, adaptors and chargers on the market illegally which do not meet those dimensions. (The picture above compares the plug part of a typical travel adaptor to a real plug – note the pins of the adaptor on the left are misaligned and shorter than the real plug.)

It is impossible to predict how sockets will perform when incorrectly sized covers are used with them. PlugSafe has found many sub-standard devices which have pins of incorrect size and shape, as a result you can never be sure if such a device will be securely held in a socket, or if the device will damage the socket. A non-standard device which works in one BS 1363 socket may be unsatisfactory in another socket of slightly different, but still fully compliant design, and there are hundreds of slightly different sockets in use in Britain!, All work properly with plugs which meet the BS 1363 standard, but their performance with non-standard plugs is completely unpredictable!. We cut away a typical 13 Amp socket to show how the pin of the real plug fits into the socket, a pin which is thinner may not make proper contact and can overheat or arc. A pin which is too fat can cause permanent damage to the contact so that subsequent use of a standard plug will overheat or arc.



BS 1363 requires that the power pins are partially insulated for safety reasons, but the earth pin must be solid metal (although moulded plugs intended only for two wire applications may have a completely insulated pin). A common problem with counterfeit plugs is that the earth pin is partially insulated. To demonstrate why partially sleeved earth pins are so dangerous we stripped away all of the parts of a socket except the earth contact. We were then able to take this picture which shows that the earth contact only touches the insulated part of the pin (at the points indicated by red arrows). This lack of effective earthing leads to a seriously dangerous situation which could result in a fatal electric shock.



Standards are created for a reason; BS 1363 ensures that plugs and sockets work together.

In the absence of standards, anarchy rules.

YES – Size Does Matter!