

# SOCKET OUTLET



- **Use :** Electrical outlet
- **Applications :** Residential, interior
- **Characteristics :** Minimalist design, various installation options, rust-free, weather and heat resistant, naturally antibacterial

AC power plugs and sockets connect electric equipment to the alternating current (AC) power supply in buildings and at other sites. Electrical plugs and sockets differ from one another in voltage and current rating, shape, size, and connector type. Different standard systems of plugs and sockets are used around the world.

Plugs and sockets for portable appliances became available in the 1880s, to replace connections to light sockets with wall-mounted outlets. A proliferation of types developed for both convenience and protection from electrical injury. Today there are about 70 types in common use around the world, and many obsolete socket types are found in older buildings. Coordination of technical standards has allowed some types of plug to be used across large regions to facilitate trade in electrical appliances, and for the convenience of travellers and consumers of imported electrical goods.

Some multi-standard sockets allow use of several types of plug; improvised or unapproved adaptors between incompatible sockets and plugs may not provide the full safety and performance of an approved socket-plug combination.

## Concepts and terminology

Plugs and sockets may sometimes combine male and female contacts.

A plug is the movable connector attached to an electrically operated device, and the socket is fixed on equipment or a building structure and connected to an energised electrical circuit. The plug is a male connector, often with protruding pins that match the openings and female contacts in a socket. Some plugs have female contacts that are used only for an earth ground connection. Some plugs have built-in fuses for safety.

To reduce the risk of electric shock, plug and socket systems have safety features in addition to the recessed contacts of the energised socket. These may include plugs with insulated sleeves, recessed sockets, or automatic shutters to block socket apertures when a plug is removed.

A socket may be surrounded by a decorative or protective cover[<sup>1</sup>] which may be integral with the socket.

Single-phase sockets have two current-carrying connections to the power supply circuit, and may also have a third pin for a safety connection to earth ground. Depending on the supply system, one or both current-carrying connections may have significant voltage to earth ground.