

# Specification for 2-pin reversible plugs and shaver socket-outlets

ICS 29.120.30

## Co-operating organizations

The Electrical Industry Standards Committee, under whose supervision this British Standard was prepared, consists of representatives from the following Government departments and scientific and industrial organizations:

Associated Offices' Technical Committee  
 Association of Consulting Engineers  
 Association of Mining Electrical and Mechanical Engineers  
 Association of Supervising Electrical Engineers  
 British Electrical and Allied Manufacturers' Association  
 British Plastics Federation  
 British Radio Equipment Manufacturers' Association  
 British Railways Board  
 Conduit Fittings Manufacturer's Association  
 Confederation of British Industry  
 Crown Agents for Oversea Governments and Administrations  
 Department of Employment and Productivity  
 Electric Cable Makers' Confederation  
 Electric Lamp Industry Council  
 Electric Light Fittings Association  
 Electrical Association for Women  
 Electrical Contractors' Association (Incorporated)  
 Electrical Contractors' Association of Scotland  
 Electrical Research Association  
 Electricity Council, the Central Electricity Generating Board and the Area Boards in England and Wales  
 Electronic Engineering Association  
 Engineering Equipment Users' Association  
 Fire Offices Committee  
 Home Office  
 Institution of Electrical Engineers  
 Ministry of Defence  
 Ministry of Defence, Army Department  
 Ministry of Defence, Navy Department  
 Ministry of Power  
 Ministry of Public Building and Works  
 Ministry of Technology  
 Municipal Passenger Transport Association (Incorporated)  
 National Inspection Council for Electrical Installation Contracting  
 National Physical Laboratory (Ministry of Technology)  
 Oil Companies Materials Association  
 Post Office  
 Public Transport Association (Incorporated)  
 South of Scotland Electricity Board  
 Women's Advisory Committee of the BSI

This British Standard, having been approved by the Electrical Industry Standards Committee, was published under authority of the Standards Board and comes into effect on 19 March 1970

© The British Standards Institution 2016  
 Published by BSI Standards Limited 2016

The following BSI references relate to work on this standard:  
 Committee reference ELE/4/2  
 Drafts for comment  
 66/8189 DC, 16/30341956 DC

ISBN 978 0 580 94334 8

### Amendments/corrigenda issued since publication

| Amd. No. | Date           | Comments     |
|----------|----------------|--------------|
| 4392     | October 1983   |              |
| 5897     | April 1988     |              |
| 9156     | November 1996  |              |
| 15175    | 11 August 2004 |              |
| A5       | August 2016    | See Foreword |

# Contents

|                                                           | Page               |
|-----------------------------------------------------------|--------------------|
| Co-operating organizations                                | Inside front cover |
| Foreword                                                  | iii                |
| <hr/>                                                     |                    |
| Section 1. General                                        |                    |
| 1.1 Scope                                                 | 1                  |
| <hr/>                                                     |                    |
| Section 2. Requirements for plugs                         |                    |
| 2.1 Interchangeability                                    | 3                  |
| 2.2 Precautions against accidental contact                | 3                  |
| 2.3 Contour of plug                                       | 3                  |
| 2.4 Dimensions and spacing of plug pins                   | 3                  |
| 2.5 Clearance and creepage                                | 3                  |
| 2.6 Materials                                             | 4                  |
| 2.7 Plug cover and plug base                              | 4                  |
| 2.8 Plug pins and terminals                               | 4                  |
| 2.9 Method of entry of flexible cord in the plug          | 4                  |
| 2.10 Plug finger grip                                     | 4                  |
| 2.11 Separation of terminals and conductors               | 4                  |
| 2.12 Marking                                              | 5                  |
| <hr/>                                                     |                    |
| Section 3. Tests                                          |                    |
| 3.1 General test requirements                             | 7                  |
| 3.2 Type tests                                            | 7                  |
| 3.3 Insulation resistance                                 | 7                  |
| 3.4 High voltage flash test                               | 7                  |
| 3.5 Conductor clamping in non-rewirable plugs             | 7                  |
| 3.6 Cord grip of rewirable plugs                          | 8                  |
| 3.7 Resistance of pins to twisting in non-rewirable plugs | 8                  |
| 3.8 Resistance of pins to pull-out in non-rewirable plugs | 8                  |
| 3.9 Gauge (see Figure 1)                                  | 8                  |
| <hr/>                                                     |                    |
| Section 4. Requirements for shaver socket-outlets         |                    |
| 4.1 Interchangeability                                    | 9                  |
| 4.2 Precautions against accidental contact                | 9                  |
| 4.3 Contact between plug and shaver socket-outlet         | 9                  |
| 4.4 Dimensions and spacings of socket-contacts            | 9                  |
| 4.5 Clearance and creepage                                | 11                 |
| 4.6 Materials                                             | 11                 |
| 4.7 Construction of shaver socket-outlets                 | 12                 |
| 4.8 Marking                                               | 14                 |
| <hr/>                                                     |                    |
| Section 5. Tests                                          |                    |
| 5.1 General test requirements                             | 15                 |
| 5.2 Type tests                                            | 15                 |
| 5.3 Insulation resistance                                 | 15                 |
| 5.4 High voltage flash test                               | 15                 |
| 5.5 Effectiveness of contact                              | 15                 |
| 5.6 Withdrawal pull of complete plugs                     | 16                 |
| 5.7 Endurance tests                                       | 16                 |

|                                                                                                                                          | Page |
|------------------------------------------------------------------------------------------------------------------------------------------|------|
| Section 6. Gauges for shaver socket-outlets                                                                                              |      |
| 6.1 “Go” gauges (see Figure 2 and Figure 3)                                                                                              | 17   |
| 6.2 “Contact” and “no-contact” gauges (see Figure 4 and Figure 5)                                                                        | 17   |
| 6.3 “Withdrawal pull” gauge (see Figure 7)                                                                                               | 17   |
| Figure 1 — “Go” gauge for plug                                                                                                           | 5    |
| Figure 2 — Maximum “Go” gauge for socket-outlet                                                                                          | 9    |
| Figure 3 — Minimum “Go” gauge for socket-outlet                                                                                          | 10   |
| Figure 4 — “Non-contact” test gauge                                                                                                      | 10   |
| Figure 5 — “Contact” test gauge                                                                                                          | 11   |
| Figure 6 — Test apparatus and circuit for use with “contact” and<br>“no-contact” test gauges for 2-pin reversible plug and socket-outlet | 13   |
| Figure 6a — Electric shaver outlet symbol                                                                                                | 14   |
| Figure 7 — “Withdrawal pull” gauge                                                                                                       | 16   |
| List of references                                                                                                                       | 19   |

## Foreword

This British Standard is published by BSI Standards Limited, under licence from The British Standards Institution.

This British Standard has been prepared by Technical Committee PEL/23 (formerly ELE/4/2).

BS 4573:1970+A5:2016 supersedes BS 4573:1970 (incorporating Amendment No. 4:2004), which is withdrawn.

Text introduced or altered by Amendment No. 5 is indicated in the text by tags **A5** **A5**. Minor editorial changes are not tagged. Previous amendments are not indicated.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

**Compliance with a British Standard cannot confer immunity from legal obligations.**

## Summary of pages

This document comprises a front cover, an inside front cover, pages i to iv, pages 1 to 19 and a back cover.

The BSI copyright notice displayed in this document indicates when the document was last issued.



# Section 1. General

## 1.1 Scope

- 1.1** This British Standard specifies requirements for reversible 2-pin plugs and shaver socket-outlets with ratings not greater than 250 V and 200 mA, a.c. **1.1**

The plugs may be rewirable or integrally moulded and may have the cable entry in any convenient face.

The shaver socket-outlets have a restricted rating of 200 mA for use on voltages of 200 V to 250 V a.c. only and are shuttered, and are for use in rooms other than bathrooms.

These socket-outlets are not necessarily suitable for the supply to electric dry shavers containing battery charging units.

NOTE The titles of the publications referred to in this standard are listed on the inside back cover.

