

SRI LANKA STANDARD 734 PART 1 : 2017
UDC 621.316

**SPECIFICATION FOR
13 A PLUGS, SOCKET-OUTLETS,
ADAPTORS AND CONNECTION UNITS
PART 1 : SPECIFICATION FOR REWIRABLE AND
NON-REWIRABLE 13A FUSED PLUGS
(SECOND REVISION)**

SRI LANKA STANDARDS INSTITUTION

Sri Lanka Standard
SPECIFICATION FOR 13 A PLUGS, SOCKET-OUTLETS, ADAPTORS AND
CONNECTION UNITS

PART 1 : SPECIFICATION FOR REWIRABLE AND NON-REWIRABLE 13A FUSED
PLUGS
(SECOND REVISION)

SLS 734 Part 1 : 2017
(AMD 518 Attached)

Gr. 21

Copyright Reserved
SRI LANKA STANDARDS INSTITUTION
17, Victoria Place
Elvitigala Mawatha
Colombo 8
Sri Lanka

CONTENTS

CLAUSE	PAGE
Foreword.....	3
1 Scope	3
2 References.....	4
3 Terms and definitions.....	6
4 Conditions of use	9
5 General conditions for type testing.....	10
6 Classification.....	12
7 Marking and labelling	12
8 Clearances, creepage distances and solid insulation	15
9 Accessibility of live parts	18
10 Provision for earthing	19
11 Terminals and terminations	21
12 Construction of plugs	23
13 Resistance to ageing and to humidity	33
14 Insulation resistance and electric strength	34
15 Temperature rise.....	35
16 Breaking capacity of switched incorporated in fused plugs.....	37
17 Normal operation of switches	37
18 Connection of flexible cable and cable anchorage.....	37
19 Mechanical strength.....	40
20 Screws, current- carrying parts and connections	41
21 Resistance to heat	43
22 Resistance to abnormal heat and fire	43
23 Resistance to excessive residual stresses and to rusting	45
24 Electrical and thermal stress of clamp type (screwless) terminals	45
25 Overload tests	46
26 Cyclic loading test.....	47

List of Tables

Table 1 Schedule of tests.....	11
Table 2 Rated current and maximum fuse rating in normal use, and load for flexing and cable grip tests related to size of flexible cable	14
Table 3 Minimum clearances for basic insulation.....	16
Table 4 Minimum creepage distances (mm) for basic insulation	17
Table 5 Withstand voltages for insulation types.....	18
Table 6 Torque values for screws and nuts	20
Table 7 Actuator test force.....	32
Table 8 Permitted temperature rises	36
Table 9 Connection of flexible cables.....	40
Table 10 Application of glow-wire test	44
Table F.1 Test voltages for verifying clearances at sea level	83
Table H.1 List of Clauses.....	87

List of Figures

FIGURE 1 - Test pin (see 9).....	48
FIGURE 2 - Apparatus for mechanical strength test on resilient covers (see 9).....	49
FIGURE 3 - Hardwood block for Figure 2	50
FIGURE 4 - Dimensions and disposition of pins (see 12) (Continued)	51
FIGURE 4 - Dimensions and disposition of pins (see 12) (Concluded)	52
FIGURE 5 – Concave shrinkage allowances for ISOs.....	53
FIGURE 6 - Gauge for plug pins (see 12, 19, and 21) (Continued)	54
FIGURE 6 - Gauge for plug pins (see 12, 19, and 21) (Concluded)	55
FIGURE 7 - Apparatus for testing plug cover fixing screws (see 12).....	55
FIGURE 8 - Mounting plate (see 12).....	56
FIGURE 9 – Plug pin deflection test apparatus for resilient adaptors (see 12) (Continued)	57
FIGURE 9 – Plug pin deflection test apparatus for resilient adaptors (see 12) (Concluded)	58
FIGURE 10 - Apparatus for abrasion test insulating sleeves of plug pins (see 12).....	59
FIGURE 11 - Apparatus for Pressure test at high temperature (see 12).....	60
FIGURE 12 – Go gauge for socket- outlet (see 12).	61
FIGURE 13 - Test apparatus for temperature rise test (see 15).....	62
FIGURE 14 – Dummy front plate for temperature rise test (see 15) (Continued)	63
FIGURE 14 – Dummy front plate for temperature rise test (see 15) (Concluded)	64
FIGURE 15 –Apparatus for flexing test (see 18)	64
FIGURE 16 – Solid link for test on fuse clips (see 19)	65
FIGURE 17 – Tumbling barrel (see 19)	65
FIGURE 18 - Apparatus for pressure test (see 21) (Continued)	66
FIGURE 18 - Apparatus for pressure test (see 21) (Concluded)	67
FIGURE 20- Calibration jig for calibrated link (see A.2) (Continued)	69
FIGURE 20- Calibration jig for calibrated link (see A.2) (Concluded)	70
FIGURE 21 - Apparatus for tests on plug pins pins : A plug pin under test (see 12)	71
FIGURE 22 - Apparatus for tests on plug pins: Details of anvils (see 12)	71
FIGURE 23 – Apparatus for torsion test on pins (see 12)	72
FIGURE I.1 - Normal plug profile	88
FIGURE I.2- Compact plug profile.....	89

List of Annexes

Annex A The construction and calibration of a calibrated link	73
Annex B Measurement of clearance and creepage distances.....	75
Annex C Determination of the comparative tracking index (CTI) and proof tracking index (PTI)	79
Annex D Relation between rated impulse withstand voltage, rated voltage and overvoltage	80
Annex E Pollution degree	81
Annex F Impulse voltage test	82
Annex G Requirements for incorporated electronic components.....	84
Annex H Recommendations for products that incorporate SLS 734 plug pins.....	87
Annex I Dimensions for plug profiles.....	88

Sri Lanka Standard
SPECIFICATION FOR 13 A PLUGS, SOCKET-OUTLETS, ADAPTORS AND
CONNECTION UNITS
PART 1 : SPECIFICATION FOR REWIRABLE AND NON-REWIRABLE 13A
FUSED PLUGS
(SECOND REVISION)

FOREWORD

This Standard was approved by the Sectoral committee on Electrical appliances and accessories and was authorized for adoption and publication as a Sri Lankan standard by the council of the Sri Lanka standards institution on 2017-02-24.

This standard is presented in five parts as given below and Part 1 and Part 2 are second revision of **SLS 734: 1996** and other parts are newly included in this standard:

- Part 1: Specification for rewirable and non-rewirable 13A fused plugs
- Part 2: Specification for 13A switched and unswitched socket outlets
- Part 3: Specification for adaptors
- Part 4: Specification for 13A fused connection units, switched and unswitched
- Part 5: Specification for fused conversion plugs

This is Part 1 of the **SLS 734** and it specifies requirements for 13 A fused plugs having insulating sleeves on line and neutral pins, for household, commercial and light industrial purposes, with particular reference to safety in normal use.

All values given in this specification are in SI unit.

For the purpose of deciding whether a particular requirement of this standard is complied with the final value observed or calculated, expressing the results of a test or an analysis shall be rounded off in accordance with **SLS 102**. The number of figures to be retained in the rounded off values shall be the same as that of the specified value in this standard.

In the preparation of this standard, the assistance derived from the **BS 1363** for 13 A Plugs, Socket outlets, Adaptors and Connection units, Part 1: 2016 Specification for rewirable and non-rewirable 13 A fused plugs is gratefully acknowledged.

1 SCOPE

This part of **SLS 734** specifies requirements for 13 A fused plugs having insulating sleeves on line and neutral pins, for household, commercial and light industrial purposes, with particular reference to safety in normal use. The plugs are suitable for the connection of portable appliances, sound-vision equipment, luminaries, etc. in a.c. circuits only, operating at voltages not exceeding 250 V r.m.s at 50 Hz. Additional requirements are included for plugs suitable for electric vehicle charging.