SRI LANKA STANDARD 702:1985
UDC 643.62

SPECIFICATION FOR

ELECTRICAL CALL BELLS AND BUZZERS FOR INDOOR USE

SRI LANKA STANDARDS INSTITUTION

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SLS 702:1985

Gr.5

SRI LANKA STANDARDS INSTITUTION
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Sri Lanka.

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SRI LANKA STANDARDS INSTITUTION

Sri Lanka Standards are subject to periodical revision in order to accommodate the progress made by industry. Suggestions for improvement will be recorded and brought to the notice of the Committees to which the revisions are entrusted.

This standard does not purport to include all the necessary provisions of a contract.

SRI LANKA STANDARD
SPECIFICATION FOR ELECTRICAL CALL BELLS AND BUZZERS FOR INDOOR USE

FOREWORD

This Sri Lanka Standard was authorised for adoption and publication by the Council of the Sri Lanka Standards Institution on 1985-07-26 after the draft, finalised by the Drafting Committee on Electrical Call Bells and Buzzers for indoor use, had been approved by the Electrical Engineering Divisional Committee.

This standard has been prepared to guide the manufacture and supply of these items to ensure reliable operation, personal safety against electric shock and safety against the effect of excessive temperature and fire.

Bells and buzzers which are meant to be used for outdoor use, such as on board ships, are to be specially protected against severe atmospheric conditions - such bells and buzzers shall not be lowered by this standard.

All values in this standard have been given in SI. units.

References have been made in this standard with regard to general and safety requirements as well as methods of tests to **SLS 579** which is a necessary adjunct to this standard, should however any deviation exist between the requirements of SLS 579 and those of this standard, the provision of the latter shall apply.

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

The assistance derived from the publications of the Indian Standards Institution and the Japanese Standards Association in the preparation of this standard is gratefully acknowledged.

1 SCOPE

This standard is applicable to electrically operated call bells and buzzers for indoor use, designed for connection to supplies at voltages not exceeding 250 volt a.c. single phase 50 hertz or d.c.

2 REFERENCES

This Sri Lanka Standard specification makes reference to the following:

CS 102 Presentation of numerical values

SLS 428 Random sampling methods

SLS 579 General and safety requirements for household and similar electrical appliances.

3 DEFINITIONS

For the purpose of this standard the definitions given in 3.1 to 3.4 shall apply.

3.1 **call bell** : A signalling device in which a hammer is actuated so as to strike a gong, bell, strip etc.

3.2 **buzzer** : A signalling device for producing a buzzing sound by the vibration of an armature.

3.3 **visual inspection** : Qualitative observation of physical characteristics utilizing the unaided eye or with stipulated level of magnification.

3.4 **performance test** : A short precise check to verify that the unit under test is operational and performing its intended function.

4 MATERIAL AND CONSTRUCTION

4.1 Electrical contact points or joints

These contact points or joints shall be so constructed that poor contact by vibration or shock does not occur. Arc-proof materials shall be used for electrical contacts. The provision of Clause 24 of SLS 579:1982 shall apply.

4.2 Components

The components of the call bell and buzzers shall be so constructed and fitted securely so as not to work-loose under normal operation. The provision of Clause 23 of SLS 579:1982 shall apply.

4.3 Mounting

The bell or buzzer shall be suitably mounted. All metallic parts shall be suitably treated with a corrosion resistant material. Provision shall be made for earthing for the exposed metal parts. The provision of Clause 16 of SLS 579:1982 shall apply.

5 GENERAL AND SAFETY REQUIREMENTS

5.1 Protection against electric shock

The provision of Clause 9 of SLS 579:1982 shall apply.

5.2 Temperature limits

The provision of Clause 12 of SLS 579:1982 shall apply.

5.3 Radio interference suppression

The provision of Clause 15 of SLS 579:1982 shall apply.

5.4 Moisture resistance

The provision of Clause 16 of SLS 579:1982 shall apply.

5.5 Electrical insulation

The provision of Clause 17 of SLS 579:1982 shall apply.

5.6 Mechanical strength

The provision of Clause 22 of SLS 579:1982 shall apply.

5.7 Terminal for external conductors

The provision of Clause 27 of SLS 579:1982 shall apply.

5.8 Earthing

The provision of Clause 28 of SLS 579:1982 shall apply.

5.9 Screw and connections

The provision of Clause 29 of SLS 579:1982 shall apply.

5.10 Finish

The external finish used on metal fittings and surface shall be of a heat resisting and moisture resisting nature and shall not be adversely affected by variations in temperature occuring under normal operating conditions.

6 MARKING

The following information shall be clearly and indelibly marked on the bell or buzzer.

a) Rated voltage;

b) Manufacturer's name or abbreviation;

c) Date of manufacture;

d) Earth symbol ⏚ shall be marked on or adjacent to the earth terminal;

e) Country of origin; and

f) The call bells and buzzers may also be marked with the Certification Mark of the Sri Lanka Standard Institution illustrated below on permission being granted for such marking by the Sri Lanka Standards Institution.

NOTE - The use of the Sri Lanka Standards Institution Certification Mark (SLS mark) is governed by the provisions of the Sri Lanka Standards Institution Act, and the regulations framed thereunder. The SLS mark on products covered by a Sri Lanka Standard is an assurance that they have been produced to comply with the requirements of that standard under a well defined system of inspection, testing and quality control which is devised and supervised by the institution and operated by the producer. SLS marked products are also periodically checked by the institution for conformity to that standard as further safeguard. Details of conditions under which a permit for the use of the Certification Mark may be granted to manufacturers or processors, may be obtained from the Sri Lanka Standards Institution.

7 TEST AND INSPECTION

7.1 General conditions for tests

Unless specified otherwise in the relevant clauses, the conditions in Clause 5 of SLS 579:1982 shall apply.

7.2 Acceptance tests

The following shall constitute acceptance tests.

7.2.1 *Visual inspection*

This inspection shall be made with relevant requirements specified in 4.5 and 6.

7.2.2 *Protection against electric shock*

The provision of Clause 9 of SLS 579:1982 shall apply.

7.2.3 *Temperature limit*

The provision of Clause 12 of SLS 579:1982 shall apply.

7.2.4 *High voltage test*

The provision of Clause 14.3 of SLS 579:1982 shall apply.

7.2.5 *Moisture resistance*

The provision of Clause 16 of SLS 579:1982 shall apply.

7.2.6 *Insulation resistance test*

When insulation resistance between live parts and metal parts are measured with a 500-volt d.c. insulation resistance meter the value shall be not less than 2 MΩ (Clause 17 of SLS 579:1982).

7.3 Endurance test

The bell or buzzer shall be kept in an ambient temperature not exceeding 40 °C, and shall be operated 10,000 times at the rated voltage with a test cycle of 1 second 'ON' and 2 seconds 'OFF'. During this period it shall not be necessary to make adjustments more than twice. At the end of the 10,000 operations, the bell or buzzer shall be in working order.

8 SAMPLING

8.1 Lot

In any consignment all the electrical call bells or buzzers of the same make, model, type, rating and manufactured under similar conditions of production shall be grouped together to constitute a lot.

8.2 Scale of sampling

8.2.1 Each lot shall be tested separately for ascertaining its conformity to the requirements of this specification.

8.2.2 The number of electrical call bells or buzzers to be selected from the lot shall depend upon the size of the lot and shall be in accordance with Columns 1 and 2 of the table.

TABLE 1 - Scale of sampling

Number of call bells or buzzers in the lot (1)	Number of call bells or buzzers to be selected (2)	Acceptance number (3)
Up to 25	2	0
26 to 50	3	0
51 to 150	5	0
151 and above	8	1

8.2.3 The electrical call bells or buzzers shall be selected at random. In order to ensure randomness of selection random number tables as given in SLS 428 shall be used.

8.4 Number of tests

8.4.1 Each item of the sample selected as in 8.2.2 shall be examined for requirements given in 6.

8.4.2 Each item of the sample selected as in 8.2.2 shall be tested for requirements specified in 7.

8.5 Criteria for conformity

8.5.1 A lot shall be declared as conforming to the requirements of this specification if the following conditions are satisfied.

8.5.2 Each item examined as in 8.4.1 satisfies the relevant requirements.

8.5.3 The number of items not conforming to any one or more requirements when tested as in 8.4.2 does not exceed the corresponding acceptance number given in Column 3 of Table 1.

SLS CERTIFICATION MARK

The Sri Lanka Standards Institution is the owner of the registered certification mark shown below. Beneath the mark, the number of the Sri Lanka Standard relevant to the product is indicated. This mark may be used only by those who have obtained permits under the SLS certification marks scheme. The presence of this mark on or in relation to a product conveys the assurance that they have been produced to comply with the requirements of the relevant Sri Lanka Standard under a well designed system of quality control inspection and testing operated by the manufacturer and supervised by the SLSI *which includes surveillance inspection of the factory, testing of both factory and market samples.*

Further particulars of the terms and conditions of the permit may be obtained from the Sri *Lanka Standards Institution, 17, Victoria Place, Elvitigala Mawatha, Colombo 08.*

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SRI LANKA STANDARDS INSTITUTION

The Sri Lanka Standards Institution (SLSI) is the National Standards Organization of Sri Lanka established under the Sri Lanka Standards Institution Act No. 6 of 1984 which repealed and replaced the Bureau of Ceylon Standards Act No. 38 of 1964. The Institution functions under the Ministry of Science & Technology.

The principal objects of the Institution as set out in the Act are to prepare standards and promote their adoption, to provide facilities for examination and testing of products, to operate a Certification Marks Scheme, to certify the quality of products meant for local consumption or exports and to promote standardization and quality control by educational, consultancy and research activity.

The Institution is financed by Government grants, and by the income from the sale of its publications and other services offered for Industry and Business Sector. Financial and administrative control is vested in a Council appointed in accordance with the provisions of the Act.

The development and formulation of National Standards is carried out by Technical Experts and representatives of other interest groups, assisted by the permanent officers of the Institution. These Technical Committees are appointed under the purview of the Sectoral Committees which in turn are appointed by the Council. The Sectoral Committees give the final Technical approval for the Draft National Standards prior to the approval by the Council of the SLSI.

All members of the Technical and Sectoral Committees render their services in an honorary capacity. In this process the Institution endeavours to ensure adequate representation of all view points.

In the International field the Institution represents Sri Lanka in the International Organization for Standardization (ISO), and participates in such fields of standardization as are of special interest to Sri Lanka.

Printed at the Sri Lanka Standards Institution, 17, Victoria Place, Elvitigala Mawatha, Colombo 08.