

Specification for

**Distribution assemblies for
reduced low voltage electricity
supplies for construction and
building sites**

ICS 29.260.10; 91.200

Committees responsible for this British Standard

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- Association of British Mining Equipment Companies
- Association of Consulting Engineers
- ASTA Certification Services
- Construction Confederation
- Department of Trade and Industry (Consumer Safety Unit, CA Division)
- Electrical Installation Equipment Manufacturers' Association (BEAMA Ltd.)
- Electricity Association
- ERA Technology Ltd.
- GAMBICA (BEAMA Ltd.)
- Institute of Petroleum
- Institution of Incorporated Executive Engineers
- National Inspection Council for Electrical Installation Contracting

The following bodies were also represented in the drafting of the standard through Panel PEL/17/3/1:

- National Quality Assurance
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Foreword

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

BS 4363:1998+A1:2013 supersedes BS 4363:1998, which is withdrawn.

Text introduced or altered by Amendment No. 1 is indicated in the text by tags **A1** **A1**. Minor editorial changes are not tagged.

The use of electrical power on construction and building sites is widespread. In addition to providing site lighting and power supplies for small portable tools and equipment, provision has to be made for major power consuming apparatus.

The essential requirements for the various types of distribution assemblies for reduced low voltage systems intended for use on construction and building sites have been established for over 20 years and were specified in BS 4363 : 1991.

This revision of BS 4363 takes into account the issue of BS EN 61439-4, BS 7671 and the recent revision of BS 7375, and the standard has also been updated to take account of current practice.

Equipment for distribution of electricity on construction and building sites at mains voltage is specified in BS EN 61439-4.

Experience has shown that to obtain effective use of the assemblies, uniformity of practice as regards plugs and socket-outlets is essential, and these are, therefore, specified with no permissible variations.

The use of reduced low voltage equipment on sites has made a major contribution to electrical safety in these environments.

Typical system voltages at mains frequency (50 Hz) employed on construction and building sites, together with recommended applications, are detailed in annex A.

Annex B shows a typical schematic layout indicating how the assemblies may be interconnected to give a single-phase reduced low voltage (RLV) supply, and annex C shows similar layout when both single-phase and three-phase RLV supplies are required.

A British Standard does not purport to include all the necessary provisions of a contract. Users of British Standards are responsible for their 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 and ii, pages 1 to 12, an inside back cover and a back cover.

Specification

1 Scope

This British Standard specifies the requirements for distribution assemblies for the control and distribution of electricity from a three-phase reduced low voltage a.c. system at declared voltage up to 110 V (63.5 V to earth) or a single phase system at declared voltage up to 110 V (55 V to earth), for use for the protection and control of electricity supplies on construction and building sites in the UK.

2 References

2.1 Normative references

This British Standard incorporates, by dated or undated reference, provisions from other publications. These normative references are made at the appropriate places in the text and the cited publications are listed on the inside back cover. For dated references, only the edition cited applies; any subsequent amendments to or revisions of the cited publication apply to this British Standard only when incorporated in the reference by amendment or revision. For undated references, the latest edition of the cited publication applies, together with any amendments.

2.2 Informative references

This British Standard refers to other publications that provide information or guidance. Editions of these publications current at the time of issue of this standard are listed on the inside back cover but reference should be made to the latest editions.

3 Definitions

For the purposes of this British Standard the following definitions apply.

3.1 site

An area where any of the following works are undertaken/executed:

- a) new building construction;
- b) repair, alteration, extension or demolition of existing buildings or parts of buildings;
- c) engineering construction;
- d) earthworks;
- e) works similar to those listed in items a) to d).

NOTE. See [\[A1\] 704:1:1](#) [\[A1\]](#) of BS 7671 : [\[A1\] 2008+A1:2011](#). [\[A1\]](#)

3.2 [\[A1\]](#) rated current of the assembly (I_n) [\[A1\]](#)

The current rating per phase of the input switchgear or the transformer, as appropriate.

3.3 transformer assembly (TA)

An assembly of equipment incorporating a transformer and arranged to distribute electricity at reduced low voltage.

NOTE. Designated as TA/1 for single-phase, TA/3 for three-phase, and TA/1/3 for single- and three-phase.

3.4 socket-outlet assembly (SOA)

An assembly of equipment providing facilities for the connection, control and protection of final circuits by means of one or more socket-outlets operating at a voltage lower than the incoming supply system voltage.

NOTE. Designated as SOA/1 for single-phase, and SOA/3 for three-phase.

3.5 extension-outlet assembly (EOA)

An assembly of equipment providing facilities for the connection and control of final circuits by means of one or more socket-outlets operating at a voltage lower than the incoming supply system voltage.

NOTE 1. Designated as EOA/1 for single-phase, and EOA/3 for three-phase.

NOTE 2. The extension-outlet assembly is similar to the socket-outlet assembly but has no facilities for electrical overcurrent protection.

3.6 separated extra-low voltage (SELV) system

An extra-low voltage system which is electrically separated from earth and from other systems in such a way that a single fault cannot give rise to the risk of electric shock.

NOTE 1. Definition adapted from BS 7671 : [\[A1\] 2008+A1:2011](#). [\[A1\]](#)

NOTE 2. Extra-low voltage is defined in BS 7671 : [\[A1\] 2008+A1:2011](#) [\[A1\]](#) as a voltage normally not exceeding 50 V a.c. (r.m.s. value) or 120 V ripple free d.c., whether between conductors or to earth. This is a nominal voltage (i.e. the voltage by which an installation, or part of an installation is designated). The actual voltage of the installation may differ from the nominal value by a quantity within normal tolerances.

3.7 ambient temperature

The temperature of the medium surrounding an assembly.

NOTE. For the assemblies covered in this standard, the cooling medium is air, and the ambient temperature should not be confused with the temperature of the air inside the assembly, which may influence the design of items fitted within the enclosure.

4 Service conditions

When tested in accordance with

[\[A1\] BS EN 61558-1](#) [\[A1\]](#), transformer assemblies shall be capable of continuous operation at an ambient temperature within the range of $-20\text{ }^{\circ}\text{C}$ to $+30\text{ }^{\circ}\text{C}$ in any condition of loading up to the rating of the complete assembly.

The design shall be such that the assemblies are capable of operating continuously in conditions of 85 % relative humidity at $20\text{ }^{\circ}\text{C}$.

5 General

5.1 Mechanical design of the enclosure

The mechanical strength of the enclosure shall conform to **Table 1** Clause 8 of BS EN 61439-4. **Table 1**

Access doors or panels to the interior of the enclosure shall be provided with a seal on the periphery to ensure satisfactory mating with the main body of the enclosure when closed.

The enclosure shall have an IP rating of not less than IP44 in accordance with BS EN 60529, with all doors and covers in place.

The top of the enclosure shall be so designed that rain-water cannot be retained on its surface.

NOTE. A sloping top or a domed top has been found to be suitable. The top may be demountable.

Except for the EOAs specified in **9.1** and **9.2** and for portable tool transformers specified in **7.2** having a rating lower than 3 kVA the top shall extend at least 76 mm beyond the main body of the enclosure.

The material used in the manufacture of the enclosure shall be metallic or of a non-combustible or flame retardant plastics material.

5.2 Transit facilities

Means shall be provided to give protection to any projecting control operating handles and all sides of the assembly when the assembly is in transit.

Means shall be provided for the lifting and manoeuvring into position of assemblies on site.

Lifting handles, lugs and eyebolts if fitted, shall together be capable of supporting twice the mass of the assembly. Steel eyebolts, if fitted, shall conform to **Table 1** BS EN ISO 3266. **Table 1**

NOTE. It is recommended that transformer assemblies should be fitted with at least two handles, lugs or eyebolts.

5.3 Earthing and bonding

The earth tubes of all socket-outlets, the star point of three-phase transformer secondary windings and the centre-tap of single-phase transformer secondary windings shall be connected to the metal frame of the assembly and to the protective conductor.

Provision shall be made so that on installation all cable armourings and earth continuity conductors can be readily bonded together and to the metal frame of the assembly. An external earth terminal shall be provided for this purpose unless all connections are by socket outlet(s) and/or appliance inlet(s). The terminal shall be marked in accordance with **Table 1** BS EN 60445. **Table 1**

5.4 Access to live parts

Access to live parts and wiring shall be gained only by use of a tool or a key or unless the parts are isolated from the supply.

Output circuits which are intended to be connected by means of terminals shall be provided with a means of isolation, and arranged such that the terminals are accessible without exposing any other live terminals. Output terminals other than socket outlets shall be provided with an ingress protection not less than IP2X, in accordance with BS EN 60529, when the outer covers of the assembly are removed.

All combinations of switches and fuses shall be arranged to ensure that the switch will isolate the fuse from the supply.

Access to fuses, if fitted, in the assembly shall be gained only by the use of a tool or key.

5.5 Circuit-breakers

Each circuit-breaker shall be clearly and permanently marked to associate it with the socket-outlet or output circuit that it controls, and a means of indicating the description of the actual circuit shall be provided, e.g. a blank label.

Means shall be provided for ensuring that individual circuit-breakers cannot be inadvertently switched to the ON position.

In any one assembly the direction of motion of the operating levers to the ON position shall be the same. All circuit breakers used on output circuits, shall disconnect all circuit conductors simultaneously. If the input circuit breaker is to be used as a means of isolation it shall disconnect all circuit conductors.

5.6 Cable entry and anchoring

Facilities shall be provided for anchoring and terminating incoming and outgoing cables so as to prevent any strain on a cable being applied to any conductor terminations. Knots in cables shall not be used as a method of cable anchoring.

5.7 Ratings

Any assembly except a single-phase socket-outlet assembly (see **8.1**) shall be fitted with a protective device which limits the current of the output circuits, unless the sum of the individual current ratings of the protective devices on the output circuits in any phase does not exceed the rating assigned to the assembly.

NOTE. When selecting protective devices over a range of current ratings, it is advantageous to select those with the same fixing dimensions.

6 Materials and components

Except where otherwise specified in this standard, the materials and components of the assemblies shall conform to the relevant British Standards as regards materials, construction and performance.

Fuses shall conform to BS 88.

Circuit-breakers shall conform to BS EN 60898 and/or BS EN 60947-2.

Transformers shall conform to **A1** BS EN 61558-1:1998 and BS EN 61558-2-23:2010. **A1**

Plugs and socket-outlets shall conform to BS EN 60309-1 and BS EN 60309-2 and shall have a minimum ingress protection rating of IP44. Plugs, socket outlets and couplers for reduced low-voltage shall be coloured yellow and have the earth contact at the 4 o'clock position as specified in BS EN 60309-2.

Composite units of switches and fuses shall conform to BS EN 60947-3.

Switches shall conform to BS EN 60947-3.

7 Transformer assemblies

7.1 Single-phase transformer assembly (TA/1)

The assembly shall comprise a single-phase double-wound transformer with a centre-tapped secondary winding and a number of socket-outlets. Input circuit overload protection shall be provided.

The rated primary voltage of the transformer shall be appropriate for the nominal supply voltage. The output voltage shall not exceed 116 V in the off-load condition.

The secondary winding shall provide 110 V between poles and the regulation at full-load and 0.9 lagging power factor shall not exceed 5 %.

The centre-tapping of the secondary winding shall be connected to the frame of the assembly and to the protective conductor.

Provision shall be made for single-phase output circuits up to 32 A capacity, where fitted, by means of socket-outlets, each controlled by a double-pole circuit-breaker. The rating of the circuit breaker shall not exceed the rating of the socket outlet.

Circuits in excess of 32 A capacity shall be connected to individual miniature circuit breakers (MCBs) either directly or by socket-outlets. Socket-outlets in excess of 32 A capacity shall be mechanically or electrically interlocked to prevent on-load removal of the plug.

NOTE. Socket-outlets may be replaced by glands enabling the direct connection of a reduced low voltage (RLV) fixed lighting circuit (such as for a ladderway or staircase) to a circuit breaker.

Provision shall be made for lifting (see 5.2).

The assembly shall be fitted with supports to provide a minimum clearance of 100 mm from the surface on which the assembly stands.

7.2 Portable tool transformers

NOTE. Portable tool transformers are intended to supply small items of reduced low voltage equipment where a 230 V supply exists.

Portable tool transformers shall be connected to the supply by means of a plug and socket (as a means of isolation). The rating shall not exceed 3 kVA intermittent. No more than two 16 A or one 32 A socket-outlets shall be fitted. Overcurrent protection shall be provided by double-pole manually resettable devices in the output circuit or by a manually resettable device in the input circuit. Socket-outlets shall be mounted a minimum of 100 mm from the surface on which the assembly stands.

7.3 Three-phase transformer assembly (TA/3)

The assembly shall comprise an input protective device in conjunction with a three-phase double-wound transformer with a star connected secondary winding and a number of socket-outlets.

The rated primary voltage of the transformer shall be appropriate for the nominal supply voltage. The output voltage shall not exceed 116 V in the off-load condition.

The rated secondary voltage shall be 110 V between phases and the regulation at full-load and 0.9 lagging power factor shall not exceed 5 %.

The neutral star point of the secondary windings shall be connected to the frame of the assembly and to the protective conductor.

Provision shall be made for three-phase output circuits up to 32 A capacity by means of socket-outlets, each controlled by a triple-pole MCB. The rating of the circuit breaker shall not exceed the rating of the socket outlet. Circuits in excess of 32 A capacity shall be connected to individual MCBs either directly or by socket-outlets. Socket-outlets in excess of 32 A capacity shall be mechanically or electrically interlocked to prevent on-load removal of the plug.

NOTE. Socket-outlets may be replaced by glands enabling direct connection of an RLV fixed lighting circuit (such as for a ladderway or staircase) to a circuit breaker.

Provision shall be made for lifting (see 5.2).

The assembly shall be fitted with supports to provide a minimum clearance of 100 mm from the surface on which the assembly stands.

7.4 Single- and three-phase transformer assembly (TA/1/3)

The construction of the assembly shall be as specified in 7.3 except that additional provision shall be made for single-phase outgoing circuits which shall be connected across any two phases and shall be protected by double-pole circuit-breakers.

Provision shall be made for lifting (see 5.2).

The assembly shall be fitted with supports to provide a minimum clearance of 100 mm from the surface on which the assembly stands.

8 Socket-outlet assemblies

8.1 RLV single-phase socket-outlet assembly (SOA/1)

The assembly shall be free-standing and provide a minimum clearance of 100 mm from the surface on which the assembly stands.

Carrying handles shall be provided.

Provision shall be made for a 32 A single-phase and earth RLV supply.

Up to eight 16 A double-pole socket-outlets controlled by 16 A double-pole circuit-breakers shall be provided. No circuit-breaker shall control more than four socket-outlets.

If the assembly is provided with an input cord, the cross-sectional area of the conductors shall be not less than 4 mm².

NOTE 1. It is intended that the assembly be supplied from a 32 A single-phase RLV source.

NOTE 2. In addition, a 32 A double-pole socket-outlet connected directly to the incoming supply may be provided.

NOTE 3. A schematic connection arrangement is shown in figure 1.

8.2 RLV three-phase socket-outlet assembly (SOA/3)

The assembly shall be free-standing and provide a minimum clearance of 100 mm from the surface on which the assembly stands.

Carrying handles shall be provided.

Provision shall be made for a 32 A three-phase and earth RLV supply.

At least two 16 A triple-pole RLV socket-outlets, each controlled by 16 A triple-pole MCB shall be provided.

If the assembly is provided with an input cord, the cross-sectional area of the conductors shall be not less than 6 mm².

NOTE 1. It is intended that the assembly be supplied from a 32 A three-phase RLV source.

NOTE 2. In addition, a 32 A triple-pole and earth socket-outlet connected directly to the supply may be provided.

NOTE 3. A schematic connection arrangement is shown in figure 2.

9 Extension-outlet assemblies

9.1 RLV Single-phase extension-outlet assembly (EOA/1)

The assembly shall be free-standing, provide a minimum clearance from the surface on which the assembly stands of 100 mm and be fitted with two, three or four 16 A double-pole RLV socket-outlets.

If the assembly is provided with an input cord the cross-sectional area of the conductors shall be not less than 1.5 mm².

Carrying handles shall be provided.

NOTE. It is intended that the assembly be supplied from a 16 A single-phase RLV source.

9.2 Three-phase extension-outlet assembly (EOA/3)

The assembly shall be free standing, provide a minimum clearance from the surface on which the assembly stands of 100 mm and be fitted with two 16 A triple-pole RLV socket-outlets.



If the assembly is provided with an input cord the cross-sectional area of the conductors shall be not less than 1.5 mm².

Carrying handles shall be provided.

NOTE. It is intended that the assembly be supplied from a 16 A three-phase RLV source.



10 Marking of assemblies

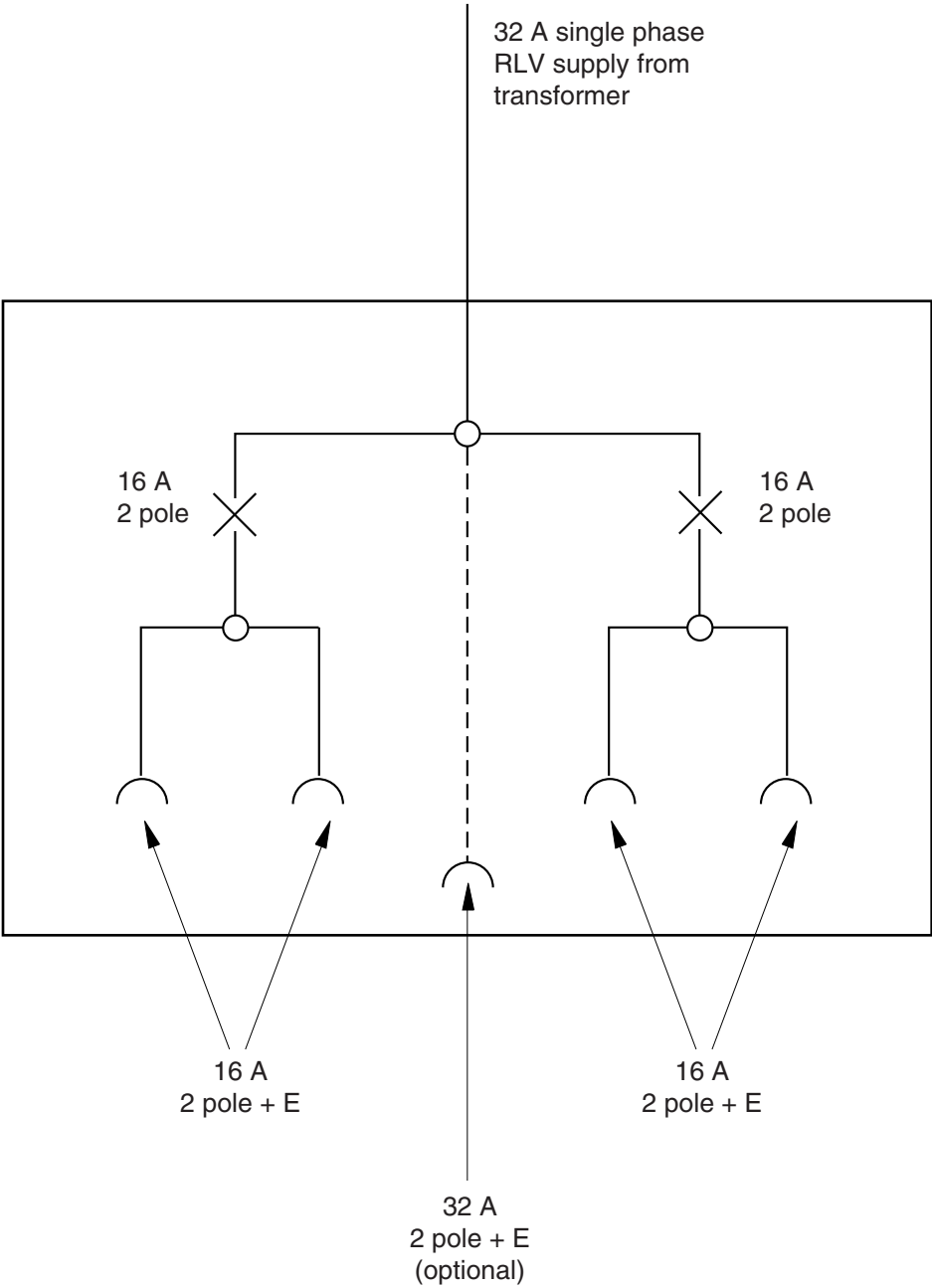
10.1 The enclosure of each assembly shall have affixed to it a rating plate which is marked with the following information:

- a)  the number and date of this British Standard i.e. BS 4363:1998+A1:2013¹⁾ 
- b) the manufacturer's name or equivalent means of identification;
- c) the designation of the unit in accordance with clauses 7 to 9 as appropriate;
- d) the total mass of the unit in kilograms (not applicable to socket-outlet assemblies or to extension-outlet assemblies);
- e) the relevant symbol given in figure 3 (see 10.2);
- f) the output rating of the transformer (for TA units);
- g) the IP rating of the enclosure (see 5.1).

10.2 Transformer assemblies shall be marked externally in bold black characters on a yellow background with the symbol given in figure 3a).

Socket-outlet assemblies and extension-outlet assemblies shall be marked externally in bold black characters on a yellow background with the symbol given in figure 3b).

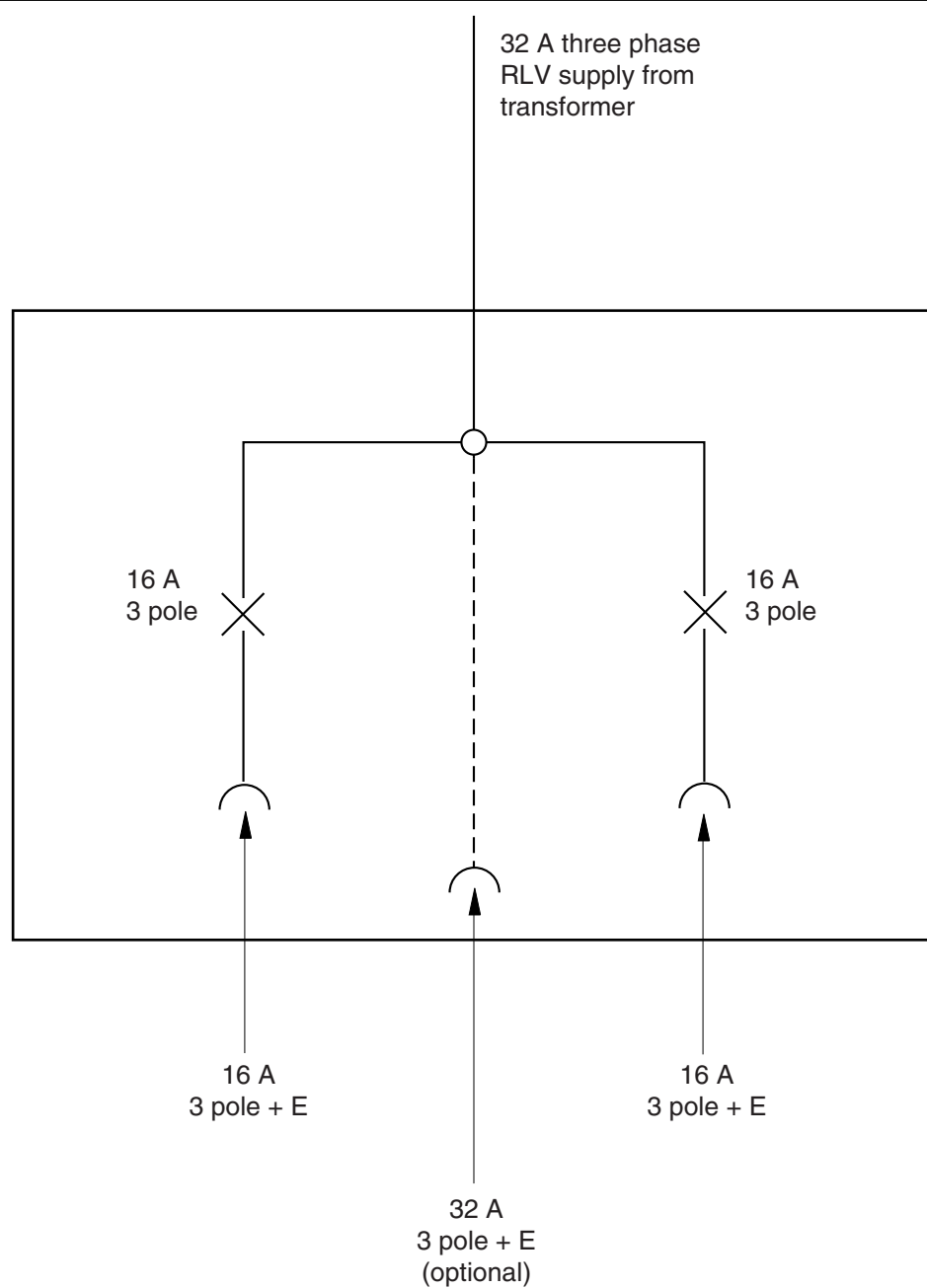
¹⁾ Marking  BS 4363:1998+A1:2013  on or in relation to a product represents a manufacturer's declaration of conformity, i.e. a claim by or on behalf of the manufacturer that the product meets the requirements of the standard. The accuracy of the claim is solely the claimant's responsibility. Such a declaration is not to be confused with third party certification of conformity, which may also be desirable.



E is the earth.

NOTE. This is a typical arrangement only: up to eight socket-outlets shall be fitted (see 8.1).

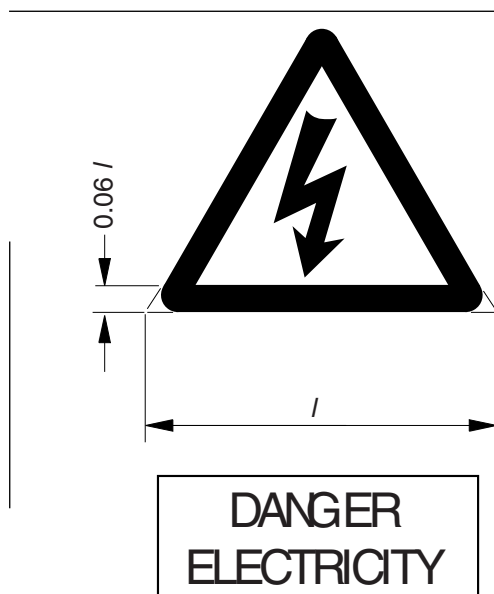
Figure 1. Socket-outlet assembly single-phase RLV: schematic connection arrangement (see 8.1)



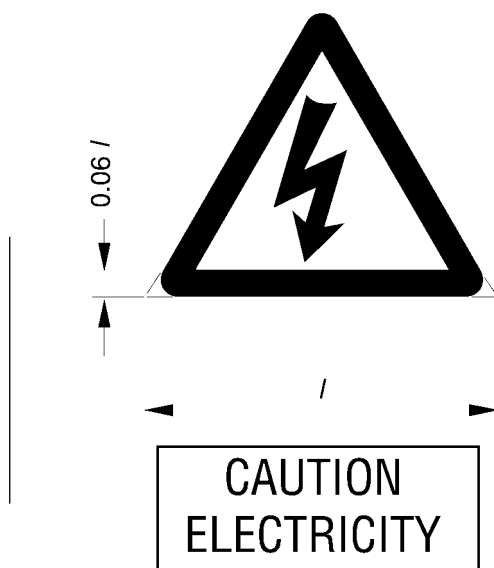
E is the earth.

NOTE. This is a typical arrangement only: at least two socket-outlets shall be fitted (see 8.2).

Figure 2. Socket-outlet assembly three-phase RLV: schematic connection arrangement (see 8.2)



a) Marking for transformer assemblies



b) Marking for socket-outlet or extension-outlet assemblies

NOTE. The warning symbol cautioning against the risk of electric shock is specified in BS 5378 : Part 1. This symbol is illustrated above. It is in the form of a black lightning flash inside a black triangular band all on a yellow background. The symbol has, in general, the proportions indicated.

Figure 3. Markings

11 Terminal markings and identification of connections

NOTE 1. As some assemblies are incomplete as supplied by the manufacturer with some connections inevitably made on site, it is impracticable to specify a complete system. The requirements specified below are compatible with BS 5559 which should be followed when wiring is to be completed by the purchaser or altered on site.

The phases of a three-phase supply shall be identified 1, 2 and 3 on the socket-outlets. The neutral conductor terminal shall be identified N. Other markings, where applied for identification purposes, shall be co-ordinated in the same way.

NOTE 2. Where installed apparatus such as switchgear has no terminal markings, the poles should be taken as 1, 2 and 3 from left to right or from top to bottom or from front to back, as may be applicable.

12 Production tests

12.1 High-voltage test

Each completed assembly shall pass a high-voltage test at the manufacturer's premises. The test shall be made with the assembly in clean new condition.

All switches and circuit-breakers shall be in the closed position during the test.

If it is impracticable to test with the cover or covers of the assembly closed, it shall be established that the test could be passed with the cover or covers in the closed position.

The test voltage shall be 2 kV a.c. at a nominal frequency of 50 Hz. The voltage shall be applied for 10 s between current-carrying and non-current-carrying metal parts of the completed assembly. No breakdown shall take place.

In addition, transformer assemblies shall be tested in accordance with A1 BS EN 61558-1:1998 and BS EN 61558-2-23:2010 A1 and shall conform to the requirements specified in those standards. The connection between the secondary winding and the protective conductor shall be disconnected during the test.

12.2 Earth bonding test

12.2.1 The connection between the protective earthing terminal and parts required to be connected thereto, shall be of low resistance. When tested in accordance with **12.2.2** the connection shall conform to **12.2.3**.

12.2.2 A current derived from an a.c. source having a no-load voltage not exceeding 12 V and equal to 1.5 times rated input current or to 25 A, whichever is greater, shall be passed between the protective earthing terminal and each of the accessible metal parts in turn. The test shall be applied for a minimum of 3 s. The test shall also be applied between the protective earthing terminal and each of the socket-outlet earth contact tubes.

The voltage drop between the protective earthing terminal and the accessible metal part shall be measured, and the resistance calculated from the current and this voltage drop.

NOTE 1. Care should be taken that the contact resistance between the tip of the measuring probe and metal part under test does not influence the test results.

NOTE 2. The resistance of the flexible cable or cord is not included in the resistance measurement.

12.2.3 In no instance shall the resistance exceed 0.1 Ω .

12.3 Circuit conductor continuity test

Each completed assembly shall pass a continuity/polarity test applied to all circuit conductors.

12.4 Transformer functional tests

Transformer assemblies shall be tested in accordance with A1 BS EN 61558-1:1998 and BS EN 61558-2-23:2010, A1 in addition to the high-voltage tests in 12.1, and shall conform to the requirements specified in those standards.

13 Type tests

13.1 General

A single new clean sample of each assembly shall pass the following tests which may be carried out in any sequence.

13.2 Overturning test

Unless the assembly is specifically designed for wall mounting it shall pass an overturning test when standing on a horizontal surface. When the assembly is moved 10° from the vertical in any direction it shall return to its original position when the disturbing force is removed.

13.3 Degree of ingress protection test

The assembly shall fulfil the test requirements specified in BS EN 60529 for the marked rating of ingress protection (see 10.1g).

13.4 Transformer temperature rise test

Transformer assemblies shall be tested for temperature rise as specified in A1 BS EN 61558-1:1998 and BS EN 61558-2-23:2010 A1 and shall conform to the requirements specified in those standards.

13.5 Verification of creepage and clearance distances

A1 Assemblies shall conform to the clearance as detailed in 8.3.2 and creepage distances as detailed in 8.3.3 of BS EN 61439-1. A1

13.6 Insulation resistance test

Assemblies shall be subjected to an insulation resistance test. A test voltage of 500 V d.c. shall be applied. The test shall be applied between all circuit conductors and exposed conductive parts. The minimum insulation resistance shall be 5 M Ω .

Annexes

Annex A (informative)

Typical distribution voltages at 50 Hz employed on sites in the UK and recommended applications

Typical distribution voltages at mains frequency (50 Hz) employed on sites together with typical applications are detailed in table A.1.

| Table A.1 Distribution voltages for typical applications | | |
|--|--------------|---------------------|
| Application | Voltage V | System |
| Fixed plant | 400 | Three phase |
| Movable plant fed via a trailing cable over 3.75 kW | 400 | Three phase |
| Installations in site buildings | 230 | Single phase |
| Fixed flood lighting | 230 | Single phase |
| Portable and hand-held tools | 110 | Reduced low voltage |
| Site lighting (other than fixed flood lighting) | 110 | Reduced low voltage |
| Portable hand-lamps (general use) | 110 | Reduced low voltage |
| Portable hand-lamps (confined and damp situations) | 50 or 25 | SELV (see 3.6) |

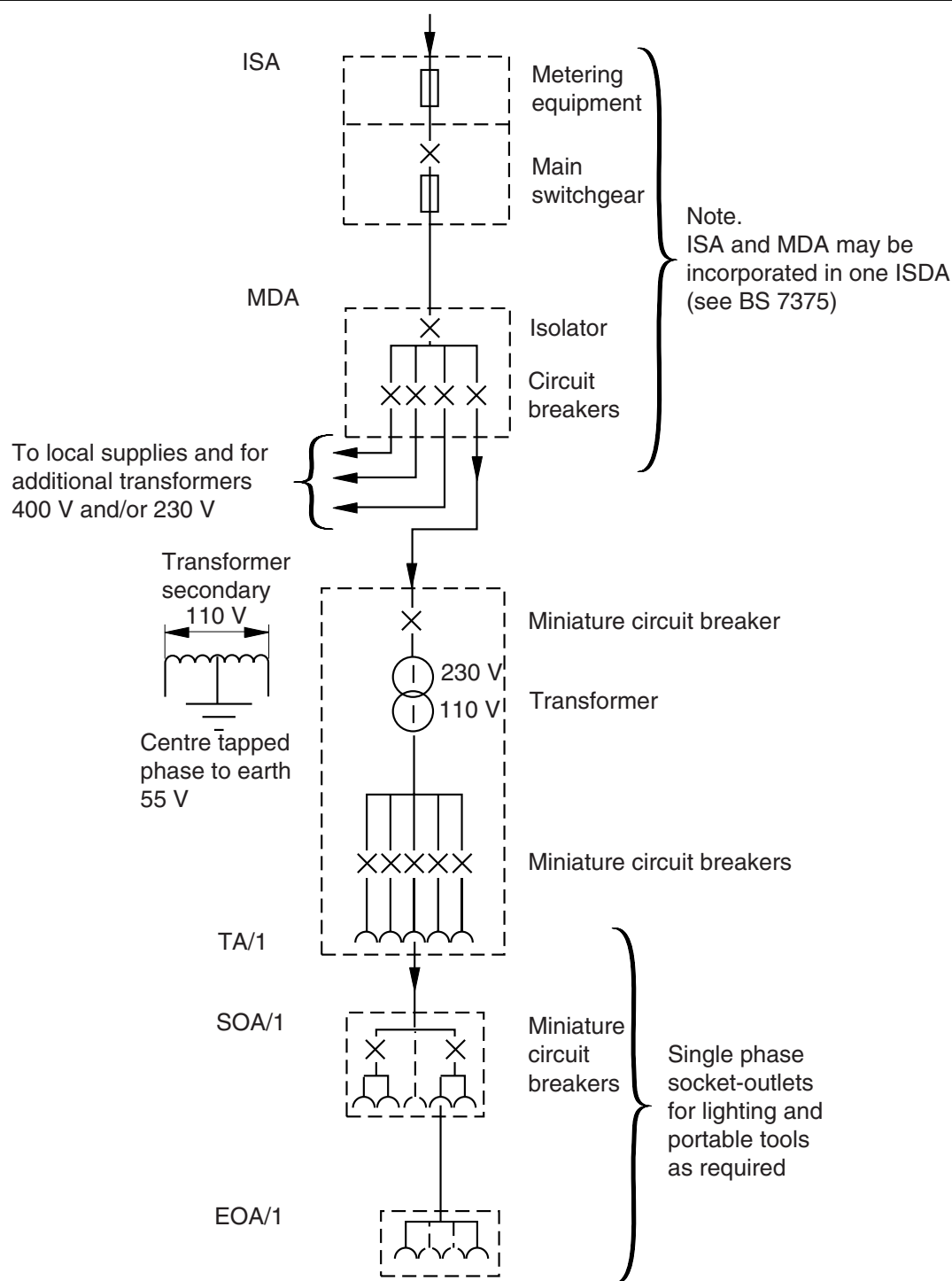
Annex B (informative)

Typical schematic layout incorporating single-phase RLV distribution

A typical schematic layout indicating how the assemblies are incorporated to give a single-phase RLV distribution is illustrated in figure B.1. Typical ratings for the various components are given in tables B.1 and B.2.

| Table B.1 Single-phase RLV distribution | | |
|--|-------------|---------------|
| Description | Designation | Rating |
| Extension-outlet assembly (see clause 9) | EOA/1 | 110 V 16 A |
| Socket-outlet assembly (see 8.1) | SOA/1 | 110 V 32 A |
| NOTE. See figure B.1. | | |

| Table B.2 Current input and rating for single-phase transformer assembly (see 7.1) | | |
|--|-----------------------------|---------------|
| Designation | Current input at 230 V A | Rating kVA |
| TA/1 | 13 | 3 |
| | 25 | 6.3 |
| | 43 | 10 |
| | 70 | 16 |
| NOTE. See figure B.1. | | |



NOTE 1. See tables B.1 and B.2.

NOTE 2. Incoming supply assembly (ISA), incoming supply and distribution assembly (ISDA) and main distribution assembly (MDA) are not part of this standard. Refer to BS 7375.

Figure B.1 Typical layout incorporating single-phase RLV distribution

Annex C (informative)

Typical schematic layout incorporating single- and three-phase RLV distribution

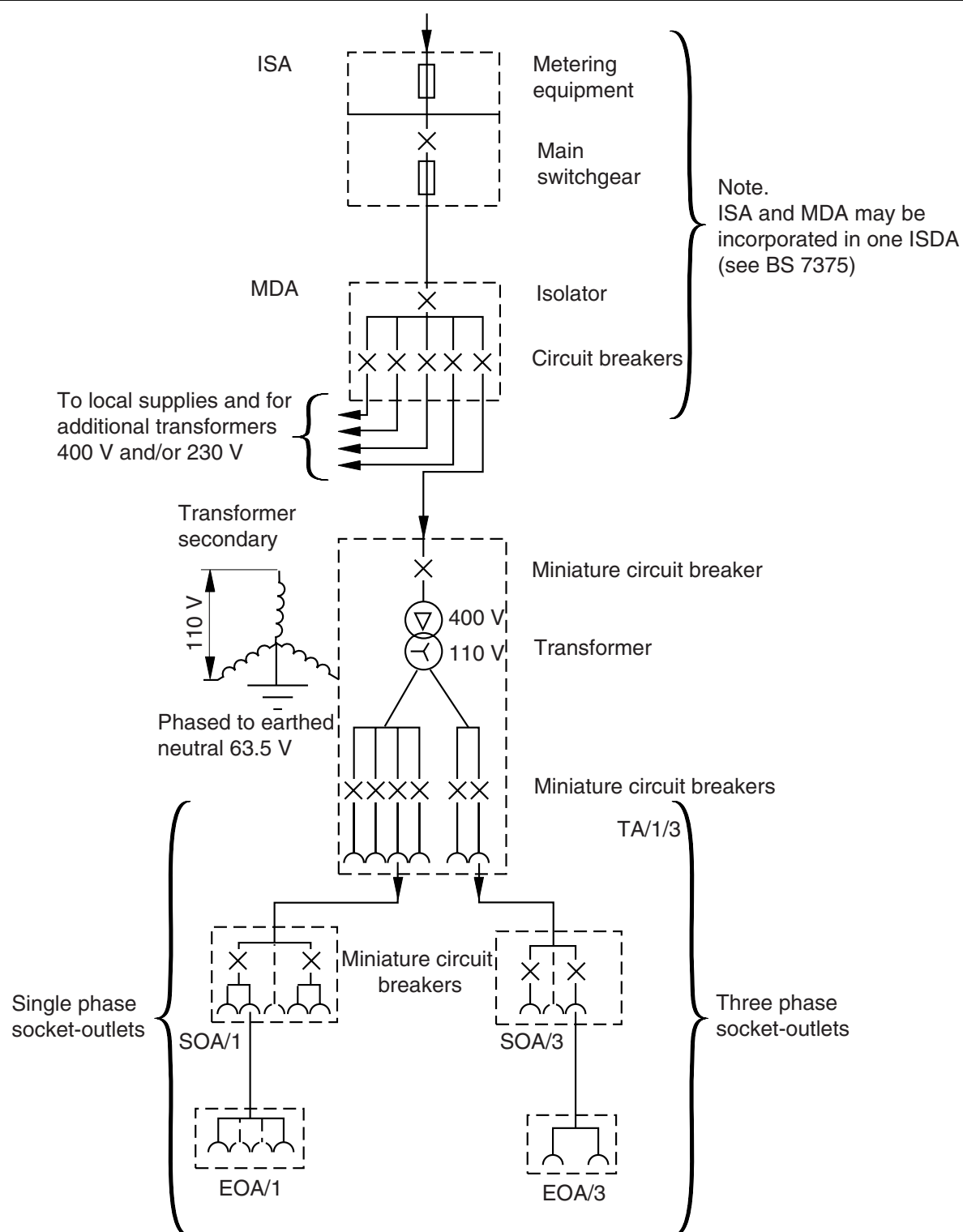
A typical schematic layout indicating how the assemblies can be incorporated to give a single-phase and three-phase RLV distribution is illustrated in figure C.1. The ratings for the various components are given in tables C.1 and C.2.

Output circuits connected across any two phases need to be arranged so as to provide an effective balance across all three phases.

| Table C.1 Typical ratings of components for single- and three-phase RLV distribution | | |
|--|-----------------|---------------|
| Description | Designation | Rating |
| Extension-outlet assemblies (see 9.1 and 9.2) | EOA/1 and EOA/3 | 110 V 16 A |
| Socket-outlet assemblies (see 8.1 and 8.2) | SOA/1 and SOA/3 | 110 V 32 A |
| NOTE. See figure C.1. | | |

Table C.2 Current input and rating for single- and three-phase transformer assembly (see 7.4)

| Designation | Current input at 400 V | Rating |
|-----------------------|------------------------|--------|
| | A | kVA |
| TA/1/3 | 9 | 6.3 |
| | 15 | 10 |
| | 23 | 16 |
| | 36 | 25 |
| NOTE. See figure C.1. | | |



NOTE 1. See tables C.1 and C.2.

NOTE 2. Incoming supply assembly (ISA), incoming supply and distribution assembly (ISDA) and main distribution assembly (MDA) are not part of this standard. Refer to BS 7375.

Figure C.1 Typical layout incorporating single- and three-phase RLV distribution

List of references (see clause 2)

Normative references

BSI publications

BRITISH STANDARDS INSTITUTION, London

- BS 88 : *Cartridge fuses for voltages up to and including 1000 V a.c. and 1500 V d.c.*
- ~~A1~~ *Text deleted* ~~A1~~
- BS EN 60309 : *Plugs, socket-outlets and couplers for industrial purposes*
 BS EN 60309-1 : ~~A1~~ 1999 ~~A1~~ *General requirements*
 BS EN 60309-2 : ~~A1~~ 1999 ~~A1~~ *Dimensional interchangeability requirements for pin and contact-tube accessories of harmonized configurations*
- ~~A1~~ *Text deleted* ~~A1~~
- ~~A1~~ BS EN 61439-1:2011 *Low-voltage switchgear and controlgear assemblies: General Rules*
 BS EN 61439-4: 2012 *Low-voltage switchgear and controlgear assemblies: Particular requirements for assemblies for construction sites (ACS)* ~~A1~~
- BS EN 60529 : 1992 *Specification for degrees of protection provided by enclosures (IP code)*
- BS EN 60898 : 1991 *Specification for circuit-breakers for overcurrent protection for household and similar installations*
- BS EN 60947 : *Specification for low-voltage switchgear and controlgear*
 BS EN 60947-2 : ~~A1~~ 2009 ~~A1~~ *Circuit breakers*
 BS EN 60947-3 : ~~A1~~ 2012 ~~A1~~ *Switches, disconnectors, switch-disconnectors and fuse-combination units*
- ~~A1~~ BS EN 61558-1:1998 *Safety of power transformers, power supply units and similar. General requirements and tests*
- BS EN 61558-2-23:2010 *Safety of transformers, reactors, power supply units and combinations thereof. Particular requirements and tests for transformers and power supply units for construction sites*
- BS EN 60445:2010 *Basic and safety principles for man-machine interface, marking and identification. Identification of equipment terminals, conductor terminations and conductors*
- BS EN ISO 3266:2010 *Forged steel eyebolts grade 4 for general lifting purposes* ~~A1~~

Informative references

BSI publications

BRITISH STANDARDS INSTITUTION, London

- BS 5378 : *Safety signs and colours*
 BS 5378 : Part 1 : ~~A1~~ 1994 ~~A1~~ *Specification for colour and design*
- BS 7375 : ~~A1~~ 2010 ~~A1~~ *Code of practice for distribution of electricity on construction and building sites*
- BS 7671 : ~~A1~~ 2008+A1:2011 ~~A1~~ *Requirements for electrical installations. IEE Wiring Regulations. Sixteenth edition*

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