Regulation on section 6C of the Heavy Current Regulation, special requirements for use of plugs and socket-outlets in installations

Pursuant to section 7 subsection 1 (2) of the Heavy Duty Electrical Circuitry and Electrical Equipment Act, cf. Consolidating Act no. 990 of 8 December 2003 the following is hereby established:

§ 1. Section 6C and annex Y of the Heavy Current Regulation shall be worded as annex 1 of this Regulation.

§ 2.

(1) This Regulation shall enter into force on 15 November 2011.

(2) The following regulations shall be repealed:

1) Regulation no. 693 of 27 June 2008 amending Section 6, electrical installations, of the Heavy Current Regulation, and
2) Regulation no. 694 of 27 June 2008 amending the Heavy Current Regulation.

Danish Safety Technology Authority, 10 November 2011
Carsten Sørig

/ Kasper Holmgaard Graversen

Annex 1

Heavy Current Regulation
section 6C - chapter 817
Special requirements for use of plugs and socket-outlets in installations

Introduction

The requirements of this chapter supplement the corresponding requirements of section 6, electrical installations, of Regulation of 1 July 2001, the Heavy Current Regulation with later amendments (section 6) and section 6A of Regulation of 22 March 2006, the Heavy Current Regulation (section 6A).

Socket-outlets which are manufactured or placed on the market in another EU Member State or Turkey, or which are legally manufactured in an EFTA State which is a contracting party in the EEA Agreement and which satisfy similar requirements to construction and function as stated in this Regulation, may legally and freely be imported and used in Denmark.

The numbers following the chapter number correspond to the corresponding parts or points in sections 6 and 6A. New, supplementary requirements have new numbers.

Certain installations may be subject to provisions in several chapters of section 6 parts 7 and 8. In these cases, they shall satisfy the requirements of all the chapters to which they are subject.

Note 1: For example, installations in bathrooms in households shall satisfy the provisions for households in section 6, chapter 801 and the provisions for areas containing a bath or shower in section 6 chapter 701.

817.11.2 Scope
Addition:
The particular requirements in this chapter shall apply for use and installation of plugs and socket-outlets for household and similar purposes.

817.133.1
Additions:
Plugs and socket-outlets for household and similar purposes shall satisfy the requirements and standard sheets of DS/IEC 60884-1:2004, "Plugs and socket-outlets for household and similar purposes - Part 1: General requirements", DS/IEC 60884-1 supplement 1:2007 and DS 60884-2-D1:2011 "Plugs and socket-outlets for household and similar purposes – Part 2: Particular requirements for Danish systems".

When installing socket-outlets it shall be ensured that they are fitted in a mounting box which, according to information from the manufacturer of the socket-outlet, is suitable and intended for the relevant socket-outlet.

### 817.21 Definitions

**Additions:**

#### 817.217.11 Plug

Equipment with pins designed to engage with the contacts of a socket-outlet; also incorporating means for the electrical connection and mechanical retention of flexible cable.

#### 817.217.12 Socket-outlet

Equipment having socket-contacts designed to engage with the pins of a plug and having terminals for the connection of cable.

#### 817.217.13 Fixed socket-outlet

Socket-outlet intended to be connected to fixed installation.

#### 817.217.14 Portable socket-outlet

Socket-outlet intended to be connected to, or integral with, the flexible cable and which can easily be moved from one place to another while connected to the supply.

#### 817.217.15 Socket-outlets with pin-earth

Socket-outlets with pin-earth are socket-outlets in accordance with DS 60884-2-D1: 2011 "Plugs and socket-outlets for household and similar purposes - Requirements for Danish systems, standard sheet 1-1c".

#### 817.217.16 Socket-outlets with side-earth

Socket-outlets with side earth are socket-outlets in accordance with DS 60884-2-D1: 2011 "Plugs and socket-outlets for household and similar purposes - Requirements for Danish systems, standard sheet 1-1d".

#### 817.217.17 Hospital plugs and socket-outlets

Socket-outlets in accordance with DS 60884-2-D1: 2011 "Plugs and socket-outlets for household and similar purposes - particular requirements for Danish systems, standard sheet DK 1-8a and DK 1-8b Fixed hospital socket-outlet, two-pole with earthing contact" which have specially designed pins and entry holes, which permit the connection of equipment, the function of which is essential and which prevents connection of other appliances with ordinary plugs.

#### 817.217.18 Adapter

Portable socket-outlet constructed as an integrated unit composed of a plug and one or more socket-outlets.

#### 817.217.19 System adapter

Adapter which permits connection of one or more types of plugs to a socket-outlet which is not constructed for these plugs.

### 817.41 Protection against electric shock

#### 817.413.5.3.2

Add:

Note 2: Household socket-outlets with two outlets in accordance with DS 60884-2-D1:2011 "Plugs and socket-outlets for household and similar purposes - particular requirements for Danish systems, standard sheet standard sheet 1-9a", which are integrated with a flush two-pole outlet without earthing for connection to Class II appliances (max. 2.5 A 250 V) and a round
two-pole outlet with earthing (13 A 250 V) can be installed legally, even though according to section 6, chapter 413.5.3.2 there is a requirement that "all socket-outlets shall have protective earthing".

It is regarded as safe to use the flush two-pole outlet without earthing (2.5 A 250 V), as the associated plug is "non-rewireable" and is only permitted to be mounted on Class II appliances, and other plugs cannot be inserted.

817.43 Overcurrent protection
Supplement for socket-outlets to table 43 D in annex A to chapter 43 of section 6 in accordance with DS 60884-2-D1: 2011 "Plugs and socket-outlets for household and similar purposes - Requirements for Danish systems".

<table>
<thead>
<tr>
<th>Socket-outlet rated current</th>
<th>Highest permitted rated current for short-circuit protection</th>
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<tbody>
<tr>
<td>10</td>
<td>13</td>
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<tr>
<td>13</td>
<td>13</td>
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<tr>
<td>16</td>
<td>16</td>
</tr>
</tbody>
</table>

Note 3: For socket-outlets constructed with flush two-pole outlet (2.5 A 250 V) in accordance with DS 60884-2-D1: 2011 "Plugs and socket-outlets for household and similar purposes - Requirements for Danish systems, standard sheet 1-9a" rated current for the socket-outlet part with earthing may be used.

Note 4: This amendment for the maximum permitted rated current for short-circuit protection has been made because it is likely that at some time it will be acceptable to use single-phase appliances connected to socket-outlets with a power consumption of up to 16 A. According to the previously permitted values, the weakest link will therefore not be the fuse, but the 10 A or 13 A equipment between the fuse and the appliance, for example circuit breakers, socket-outlets, wiring etc.

817.471 Protection against electric shock
Additions:

817.471.2 Protective earthing from socket-outlets with earthing shall be transferred to Class 1 appliances. Plugs shall be used with the same earth-contact system as the socket-outlet, or an appropriate system adapter shall be used.

817.471.2.1.4 Socket-outlets with pin-earth and side-earth shall:
- either be connected to an effective protective conductor and covered by automatic disconnection of supply, and as protection an RCD with a rated residual current of no more than 30 mA shall be used.
- or protected by a separate circuit.

Note 5: Exemptions from Regulation no. 10025 of 13 November 2006 of the Heavy Current Regulation, section 6B requirements for supplementary protection with an RCD in new installations, may not be applied for socket-outlets with pin-earth or side-earth.

817.801.471.2 Exemption for protective conductors for connections:
The exemption to omit the protective conductor through RCD protection in residences constructed before 1 April 1975 shall not apply for socket-outlets with pin-earth or for socket-outlets with side-earth.

817.90 Hospital socket outlets and plugs
The special hospital socket outlets which prevent use of ordinary plugs may only be used at hospitals and similar areas and only where special hospital equipment with hospital plugs is to be connected.

It is required that hospital equipment only be used by trained personnel.

Hospital plugs may only be used on special appliances for use in the circuits at hospitals and similar areas, where appliances with normal plugs may not be used.

Hospital plugs may only be used in hospital socket-outlets. They may not be used in ordinary socket-outlets, as ordinary socket-outlets are not constructed and tested to be used with hospital plugs. If ordinary socket-outlets are used, dangerous heat can be generated because of inadequate contact pressure. As there is no requirement that appliances be furnished with a warning,
it is the responsibility of the relevant person at the individual hospital or similar medical area to ensure compliance with the above.

Annex Y

Normative references

Addition to annex Y to section 6:

<table>
<thead>
<tr>
<th>ISO/DS</th>
<th>Title</th>
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<tr>
<td>DS 60884-2-D1</td>
<td>Plugs and socket-outlets for household and similar purposes - Requirements for Danish systems</td>
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Official notes

This Regulation has been notified in draft form in accordance with European Parliament and Council Directive 98/34/EC (the Information Procedure Directive), as amended by Directive 98/48/EC.

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