



COMPLIANCE ALERT

NEW DIN VDE 0620-1:2010-02

IMMEDIATELY APPLICABLE
GERMAN STANDARD FOR PLUGS AND SOCKET-OUTLETS



For who?

If you are selling products with a plug and/or products with portable socket outlets into the German market then you must pay attention. These new requirements may require, in many cases, a retest and also they require test data from production testing to be made available and kept for 10 years!

What?

A new version of the German National Requirements for Plugs and Socket-Outlets for Household and Similar Purposes is released. This new DIN VDE 0620-1:2010-02 replaces the old version of this standard: DIN VDE 0620-1:2005-04.

When?

These requirements became effective February 1, 2010. There is no transition time.

Which countries?

This revised product standard DIN VDE 0620-1:2010-02 is applicable only for products intended to be sold on the German market.

Do we need to re-test our product?

As these are major modifications, re-testing of your product is strongly advised. If you purchase cord-sets or complete products, ensure your supplier is aware of these new requirements. The older versions of the DIN VDE 0620-1 are not longer in line with the German law and there is no transition period.

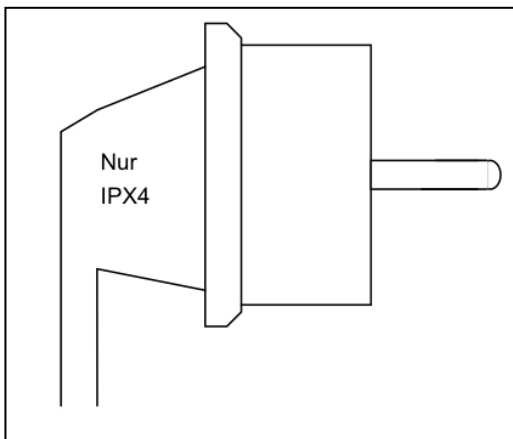
What else should we pay attention to?

There is now additional documentation required that proves that the quality of the crimped connections of plugs and socket-outlets is on the same level as measured during type-testing i.e. within standard limits. 3 random samples of each batch and for large batches every 8-hours of production at least. Results are to be kept for 10 years. ProductIP already has added this requirement to the requirement list. We always advise you to make a compliance file per batch produced.

Note: This compliance alert describes the most important changes only. For more information contact our expert for this product category Mr. R. Hendriksen of R-Tech Innovation, P +31 6 81 82 0440, M rene.hendriksen@r-tech.nl

What is new? 1 of 4 (Marking - Clause 8)

All portable socket-outlets (also cable reels) with a degree of protection of IPX4 and provided with an protection collar shall be marked with the following symbol.



This is an image to be placed on the product (preferable on the protection lid). advised height approx. 15 - 15 mm minimum to ensure readability. No specific dimensions mentioned. Note that it is important that the plug shown is an angled plug as that is the entire reason for this clause.

This symbol indicates that angled plugs may be engaged, but only if they are also classified with a degree of protection of IPX4.

Note: this whole image is the symbol

Why?

IPX4 socket-outlets are provided with an additional protection collar, which gives the socket-outlet protection against water if an IPX4 plug is engaged. Unfortunately, normal plugs (angled types), couldn't be inserted completely into the IPX4 socket-outlets, which leads to a poor electrical connection and thus a fire hazard.

Which products are effected?

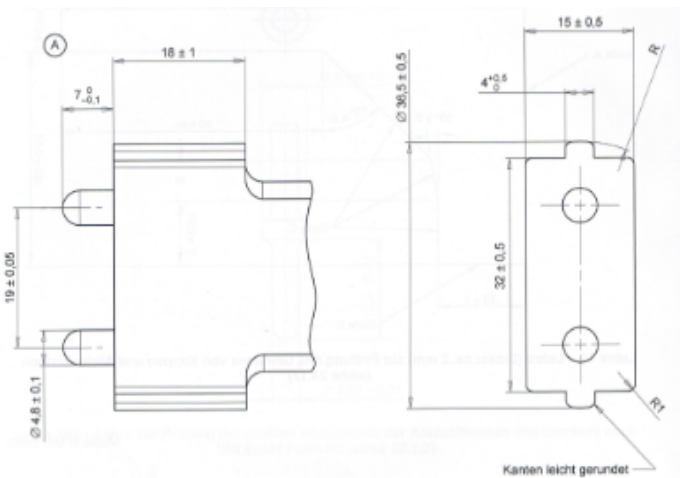
All portable socket-outlets (also cable reels) with a degree of protection of IPX4 and provided with a protection collar.



reference image

What is new? 2 of 4 (Clause 21 - Normal operation)

Additional performance tests for shutters (child protection) are introduced. After the endurance test the shutters shall still operate smoothly. The shutters shall be opened when applying a force of 50 N by using a special test plug. This test plug looks like a normal plug, but with short contact-pins, just to check if the shutters can be opened.



Aversal: Sollte mit dieser Lehre der Shutter nicht vollständig geöffnet werden können, kann das Maß a bis auf $9_{-0,1}$ erweitert werden.

Die Lehre ist beweglich und muss sich durch ihr Eigengewicht vollständig einführen lassen.

(source DIN VDE 0620)

Why?

Products are found on the German market with shutters, where it was impossible to insert a plug. To increase safety and performance, this particular test is introduced.

Which products are effected?

All products with a socket-outlet with shutters (child protection) are effected. Portable and fixed.



What is new? 3 of 4 (Withdrawal force - Clause 22)

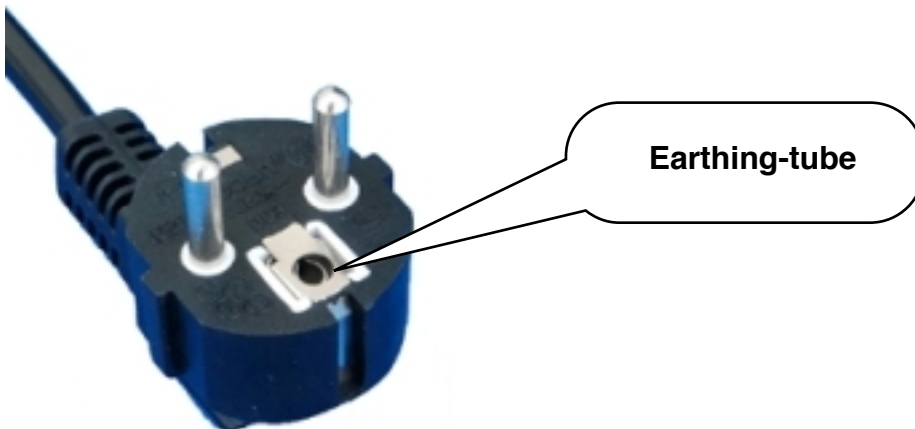
Additional tests are introduced for plugs provided with an earthing-tube. The contact-pressure of the earthing-tube is tested also after the endurance test.

Why?

Previously the contact-pressure of the earthing tube on a plug was only tested after engaging it to a socket 10 times. Several cases in the market proved that testing after endurance is required.

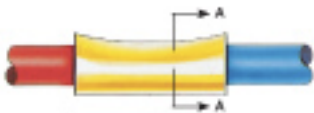
Which products are effected?

All products provided with a plug with an earthing-tube.



What is new? 4 - 4 (Annex D)

Additional tests during production is required for plugs and socket-outlets using crimped connections. The crimping height, withdrawal force or voltage drop of the crimped connection shall be documented by the manufacturer.



Good



Bad



Inclusion of air (not airtight)

reference image from www.taller.de

The values measured during production may not be higher than the measured values during type testing of the relevant product. These tests shall be conducted on at least 3 samples of every batch and every 8 hours of production the same batch. These documents shall be filed for at least 10-years.

Why?

During market inspection tests in Germany, It was proven that many certified products failed on temperature rise. The temperature rise measured on the crimping connections were found sometimes extremely high, which can lead to fire hazard. After investigation it appeared that bad crimping methods was the main reason of high temperature rise values of the tested products. To eliminate this production problem, manufacturers and suppliers need to proof additional quality checks are conducted at the crimped-connection.

Which products are effected?

All products with a plug and/or socket-outlets that have a crimped connection between the cable and the internal parts.

What is revised? 1 of 2 (Flexible cords and their connection - Clause 23)

1 - (23.3) cross-section of cables

The cross-sectional area of cables used for portable socket-outlets shall be 1.5 mm². Smaller cross-sectional areas are no longer allowed, unless the portable socket-outlet is provided with a protection device, such as a fuse or circuit breaker.

Why?

Testing has shown that a product with a 1.0 mm² cable cannot pass the temperature rise tests. The measured temperatures always exceeded the standard limits.

Which products are effected?

All portable socket-outlets with a cable with a cross-section with 1.0 mm².

Examples: portable socket outlets and cord extension sets.



reference image

What is revised? 2 of 2 (Temperature rise - Clause 19)

The clause for temperature rise testing is changed completely. Plugs, Socket-outlets (both fixed as well as portable) and now also adaptors with or without additional components, such as timers, dimmers, switches shall be tested with 20 A and in addition with the rated current of the product. If the product is equipped with a protection device, additional temperature rise tests are required.

Why?

Additional components such as dimmers, switches or timers generate heat. This can influence the internal connections, contact-pins and contact-tubes. Market inspections in German showed that additional components in plugs and socket-outlets increase the temperature rise, which can lead to overloading the product.

Which products are effected?

Almost all products with a plug and / or socket including plug-in products such as timers, dimmers, surge protectors



reference images



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Responsible companies make adequate files

According to the New Legislative Framework (NLF), in force per January 1st, 2010, the entire supply chain has an active responsibility in bringing products on the market that comply with the relevant requirements and there are more and more requirements. Also the nature of the directives is changing. The first directives such as LVD and EMC focussed on safety and functionality, RoHS and WEEE focussed on the environment but REACH focusses on the health of the consumer. Perhaps non-compliance with LVD can be repaired via a recall, non-compliance with REACH cannot be repaired!

ProductIP offers a web solution to create, manage and share compliance files. Our expert system informs you about the relevant requirements for certain markets and allows you to collaborate with your suppliers to collect the information required to make a complete file.

You can use our system all by yourself (DIY mode) or you can ask our team to help you create your compliance files (FAST mode).

ProductIP is not an open system nor a sourcing system. You, as owner of the file, offer access rights to others. As all documents are linked to requirements we are able to inform you which files might be affected by changes in requirements. We work with a one time fee per file system, no annual charges. For large accounts we offer a license solution.

For more information info@productip.com



ProductIP exhibits at Booth# 3KA30, HK Electronics Fair (13-16 April 2010).
COME "CE" US at our Coffee Corner!

Coming Soon: ProductIP & InterCham Seminar in HK on 16 April 2010!