



Switch Mode Power Supply (Driver) Installation, Risk Assessment and Installation for led lighting that requires a driver

Installation:

- Before any installation or maintenance work, please disconnect your system from the utility. (mains power supply at the fuse box).
- Ensure that it can't be re-connected inadvertently!
- Keep enough insulation distance between mounting screws and internal components of power supplies.
- If in doubt please refer to case drawing on specifications to receive the maximum length of mounting screw.
- Mounting orientations other than standard orientation or operate under high ambient temperature may increase the internal component temperature and will require a de-rating in output current.
- Please refer to the specification sheets to receive the optimum mounting position and information about the de-rating curve.
- Fans and ventilation holes must be kept free from any obstructions. Also a 100-150 mm clearance must be kept when the adjacent device is a heat source
- Make sure that all strands of each stranded wire enter the terminal connection and the screw terminals are securely fixed to prevent poor contact.
- For other information about the products, please refer to www.meanwell.com for details.

Warning / Caution !!

1. Risk of electrical shock and energy hazard. All failure should be examined by a qualified technician. Please do not remove the case of the power supply by yourself!
2. Please do not install power supplies in places with high moisture or near the water.
3. Please do not install power supplies in places with high ambient temperature or near fire source. The maximum ambient temperature please refer to their specifications.
4. Output current and output wattage must not exceed the rated values on specifications.
5. The ground(FG) must be connected to earth ground.
6. All PSUs are designed in accordance with EMC regulations and the related test reports are available by request. Since they are belong to component power supplies and will be installed inside system enclosure, when they are integrated into a system, the EMC characteristics of the end system must be re-verified again

Restriction of Hazardous Substances (RoHS)

The Restriction of Hazardous Substances in Electronic Equipment Directive (2011/65/EU) came into force on the 21st July 2011. The application and enforcement were aligned with the so-called New Legislative Framework.

The Directive is aimed at eradicating certain hazardous substances from new electrical and electronic equipment (EEE). Producers of EEE within the scope of the Directive are responsible for ensuring that their products meet the requirements of the Directive. Furthermore, the act of placing a product on the market is a declaration by the producer that the product complies with the Directive.

The RoHS requirements apply to end products that fall within the scope of the Directive. However, as a final product is made up of components and sub-assemblies it is inevitable that all components and sub-assemblies must not contain any of the restricted substances above the defined maximum concentration values. A technical file must be produced containing the analysis and component data and be kept for at least four years from the date the equipment was put on the market. There are specific exemptions from the RoHS directive as the Commission realizes that it may not be possible to manufacture some products without the use of banned substances. The RoHS Regulations in the UK are specifically worded so that any European Commission Decisions reflecting exemptions to the RoHS Directive become UK law as soon as they are officially published.

The RoHS enforcement agency for the UK is the National Measurement Office (NMO). Contravening or failing to comply with the prohibition on hazardous substances in the RoHS Regulations could result in those held responsible facing a fine up to the statutory maximum (currently £20000) on summary conviction or an unlimited fine on conviction on indictment. Also, the 2008 RoHS Regulations gave the enforcement agency the further power to issue enforcement notices requiring non-compliant goods to be withdrawn from the market.

Purpose

The RoHS Directive prevents all new electrical and electronic equipment placed on the market in the European Economic Area from containing lead, mercury, cadmium, hexavalent chromium, poly-brominated biphenyls (PBB) or polybrominated diphenyl ethers (PBDE), except in certain specific applications, in concentrations greater than the values decided by the European Commission. These values have been established as 0.01% by weight per homogeneous material for cadmium and 0.1% for the other five substances.

Scope

The RoHS Directive draws its scope from that of the Waste Electrical and Electronic Equipment (WEEE) Directive, with a few exceptions, as listed below. The WEEE Directive specifies ten broad product categories. Groups eight and nine “medical devices” and “monitoring and control instruments” were not within scope of the RoHS 1 but are being included within the scope of RoHS 2, these will be phased in completely by 2019. Also “Light bulbs and luminaries in households” have been included in the scope of the RoHS Directive, although they are not within the scope of the WEEE Directive.

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Lighting equipment

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The RoHS Directive applies only to products “placed on the market” in the European Economic Area. The NWML definition of “placed on the market” is taken in the sense implied by the European Commission's "Guide to the implementation of Directives Based on the New Approach and the Global Approach" (the "Blue Book"). This definition also has “grey areas” for certain circumstances, but in general is interpreted to mean the initial action of making a product available for the first time on the Community market. This takes place when the product is transferred from the producer to a distributor or final consumer or user in the Community market. Moreover the transfer can be when the physical hand-over or the transfer of ownership has taken place, can be for a payment of free of charge and can be based on any type of legal instrument. Again, the only way to determine whether a product has been “placed on the market” or not is to examine each case individually.

Producer Compliance, Responsibility and Requirements

Producers of EEE within the scope of the Directive are responsible for ensuring that their products meet the requirements of the Directive. Furthermore, the act of placing a product on the market is a declaration by the producer that the product complies with the Directive. It is of course important, therefore, that producers can demonstrate the compliance of any product that they place on the market by obtaining and maintaining sufficient technical documentation.

The term “producer” can refer to various people depending on the market situation. Irrespective of the selling technique used it can mean any person who..

- manufactures and sells EEE under his own brand
- resells under his own brand equipment produced by other suppliers
- imports or exports EEE on a professional basis into a member state

The RoHS requirements apply to end products that fall within the scope of the Directive. The components and sub-assemblies within the final products are not specifically covered by the scope of the Directive and so do not of themselves need to comply with the Directive. However, as a final product is made up of components and sub-assemblies it is inevitable that all components and combinations of components put together to form sub-assemblies in the final product must themselves not contain any of the restricted substances above the defined maximum concentration values. So although technically excluded from the ultimate scope of the Directive, component and sub-assembly manufacturers must ensure that their products are RoHS compliant if they want their products to be purchased.

To demonstrate compliance, a producer must prove that all components, materials, sub-assemblies etc that comprise the product are RoHS compliant. To avoid expensive testing of all components, the simplest way to do this is to obtain certification from his suppliers that the parts supplied are compliant. Producers are also expected to perform selected analysis of components as necessary. A technical file must be produced containing all the analysis and component data and must be kept for at least four years from the date the equipment was put on the market. If the compliance of a product is called into question by an authority, it is the technical file they will request first for assessment, and one must be produced within 28 days of the request.

CE Marking requirements

Requirements for CE Marking of EEE to attest conformity with RoHS 2 is effective from July 2013. As part of RoHS 2, all EEE within the scope of the directive must be CE marked and include reference to RoHS 2 on the declaration of conformity from the date the substance restrictions apply.

Useful Links

[RoHS 2 FAQs - europa website](#)