

# Correlation between UL 248 and EU LVD

One method of showing conformance to the EU Directive 2014/35/EU, otherwise known as the Low Voltage Directive (LVD), is to comply with a harmonized standard listed in the Official Journal of the European Union under the directive. For the purpose of low voltage industrial fuses, that would be **EN 60269-1:2007 +A1:2009 +A2:2014** and one of its subsequent parts. Compliance with the harmonized standard provides a presumption of conformity to the LVD, more specifically to the safety objectives located in Annex I of Directive 2014/35/EU (LVD). These safety objectives are the essential requirements to be met as stated in Article 3 of the LVD.

However, compliance to the harmonized standards is voluntary. A manufacturer may also conform to the LVD by showing evidence their product meets the safety objectives in Annex 1. The purpose of this document is to identify which clauses of UL 248 (Low Voltage Fuses) address the essential requirements (safety objectives) of the LVD.

## Correlation between UL 248-1 3<sup>rd</sup> Ed. and Annex I of EU Directive 2014/35/EU (LVD)

Safety Objectives of LVD	Relevant clause(s) or sub-clause(s) of UL 248-1 in combination with subsequent parts	Remarks/Notes
<b>1. General Conditions</b>		
1(a) The essential characteristics, the recognition and observance of which will ensure that electrical equipment will be used safely and in applications for which it was made, shall be marked on the electrical equipment, or, if this is not possible, on an accompanying document.	1 - General 3 - Service conditions 4 - Classification 5 - Characteristics 6 - Marking	
1(b) The electrical equipment, together with its component parts, shall be made in such a way as to ensure that it can be safely and properly assembled and connected.	3 - Service conditions 5 - Characteristics 6 - Marking 7 - Construction 8 Tests	
1(c) The electrical equipment shall be so designed and manufactured as to ensure that protection against the hazards set out in points 2 and 3 is assured, providing that the equipment is used in applications for which it was made and is adequately maintained.	1 - General 3 - Service conditions	

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2. Protection Against Hazards Arising from the Electrical Equipment		
2(a) Persons and domestic animals are adequately protected against the danger of physical injury or other harm which might be caused by direct or indirect contact.	1 - General 3 - Service conditions 5 - Characteristics 6 - Marking 7 - Construction 8.2 - Verification of temperature rise	
2(b) Temperatures, arcs or radiation which would cause a danger, are not produced.	8.2 - Verification of temperature rise 8.4.4 - Acceptability of test results	
2(c) Persons, domestic animals and property are adequately protected against non-electrical dangers caused by the electrical equipment which are revealed by experience.	3 - Service Conditions 6 - Marking 7 - Construction 8.2 - Verification of temperature rise	
2(d) the insulation is suitable for foreseeable conditions.	7 - Construction 8.4.4 - Acceptability of rest results	Ensures the fuse will not restrike when left under rated voltage.
3. Protection Against Hazards which may be Caused by External Influences on the Electrical Equipment		
3(a) Meets the expected mechanical requirements in such a way that persons, domestic animals and property are not endangered.	7 - Construction 8.2 - Verification of temperature rise 8.3 - Verification of overload operation	
3(b) Is resistant to non-mechanical influences in expected environmental conditions, in such a way that persons, domestic animals and property are not endangered.	3 - Service Conditions 6 - Marking 7 - Construction 8.2 - Verification of temperature rise 8.4.4 - Acceptability of rest results	
3(c) Does not endanger persons, domestic animals and property in foreseeable conditions of overload.	7 - Construction 8.2 - Verification of temperature rise 8.3 - Verification of overload operation 8.4.4 - Acceptability of rest results	