



Forms of Separation

What are Forms of Separation?

- It is the classification for the internal separation of enclosures/assemblies by barriers or partitions.

What is the applicable European Standard?

- BS EN 60439:1999 Incorporating Amendments No. 1 and Corrigenda Nos. 1 and 2 is the applicable standard for Type-tested and partially type tested assemblies. This defines the Forms of Separation.

How many Forms of Separation are there?

- There are four basic forms of separation defined in the standard, with sub criteria's 'a' and 'b'. In addition, the standard also defines in the National annex (informative) additional information regarding the different types of construction used typically in the U.K.

How are the Forms of Separation defined?

Forms of Separation			
Main criteria	Sub-criteria	Form	Type of construction
No internal separation		Form 1	
Separation of busbars from the functional units	Terminals for external conductors not separated from busbars	Form 2a	
		Form 2b	Type 1
	Type 2		Busbar separation is by metallic or non-metallic rigid barriers or partitions
	Terminals for external conductors separated from busbars		

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Separation of busbars from the functional units Separation of all functional units from one another	Terminals for external conductors not separated from busbars	Form 3a		
	Terminals for external conductors separated from busbars	Form 3b	Type 1	Busbar separation is achieved by insulated coverings e.g. sleeving, wrapping and coatings
Separation of the terminals for external conductors from the functional units, but not from each other			Type 2	Busbar separation is by metallic or non-metallic rigid barriers or partitions
Separation of busbars from the functional units Separation of all functional units from one another Separation of terminals from the functional units	Terminals for external conductors in the same compartment as the associated functional unit	Form 4a	Type 1	Busbar separation is achieved by insulated coverings e.g. sleeving, wrapping and coatings Cables may be glanded elsewhere
			Type 2	Busbar separation is by metallic or non-metallic rigid barriers or partitions Cables may be glanded elsewhere
			Type 3	All separation is by metallic or non-metallic rigid barriers or partitions The termination for each functional unit has its own integral glanding facility.
	Terminals for external conductors NOT in same compartment as the associated functional unit	Form 4b	Type 4	Busbar separation is achieved by insulated coverings e.g. sleeving, wrapping and coatings Cables may be glanded elsewhere
			Type 5	All separation is by metallic or non-metallic rigid barriers or partitions Terminals separated by insulated coverings and cables glanded in common cabling chamber.
			Type 6	All separation is by metallic or non-metallic rigid barriers or partitions. Cables are glanded in common cabling chamber
			Type 7	All separation is by metallic or non-metallic rigid barriers or partitions. The terminals for each functional unit have their own integral glanding facility

