# Guide to Low Voltage Panel Separation

<table>
<thead>
<tr>
<th>Form 1</th>
<th>No separation.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form 2a</td>
<td>Separation of the busbars from the functional units, with terminals for external conductors not separated from the busbars.</td>
</tr>
<tr>
<td>Form 2b</td>
<td>Separation of the busbars from the functional units, with terminals for external conductors separated from the busbars.</td>
</tr>
<tr>
<td>Form 3a</td>
<td>Separation of busbars from the functional units, and separation of all functional units from one another. Separation of the terminals, for external conductors, from the functional units, but not from each other. Terminals for external conductors not separated from busbars.</td>
</tr>
<tr>
<td>Form 3b</td>
<td>Separation of busbars from the functional units, and separation of all functional units from one another. Separation of the terminals, for external conductors, from the functional units, but not from each other. Terminals for external conductors separated from busbars.</td>
</tr>
<tr>
<td>Form 4</td>
<td>Separation of busbars from the functional units, and separation of all functional units from one another, including the terminals for external conductors which are an integral part of the functional unit.</td>
</tr>
<tr>
<td>Type 1</td>
<td>Terminals for external conductors located in the same compartment as the associated functional unit. Busbar separation is achieved by insulated coverings, e.g., sleeving, wrapping, or coatings. Cables may be glanded elsewhere.</td>
</tr>
<tr>
<td>Type 2</td>
<td>Terminals for external conductors located in the same compartment as the associated functional unit. Busbar separation is achieved by metallic or non-metallic, rigid barriers, or partitions. Cables may be glanded elsewhere.</td>
</tr>
<tr>
<td>Type 3</td>
<td>Terminals for external conductors located in the same compartment as the associated functional unit. Busbar separation is achieved by insulated coverings, e.g., sleeving, wrapping, or coatings. The termination for each functional unit has its own integral glanding facility.</td>
</tr>
<tr>
<td>Type 4</td>
<td>Terminals for external conductors located in the same compartment as the associated functional unit, but in individual, separate, enclosed protected spaces, or compartments. Busbar separation is achieved by insulated coverings, e.g., sleeving, wrapping, or coatings. Cables may be glanded elsewhere.</td>
</tr>
<tr>
<td>Type 5</td>
<td>Terminals for external conductors located in the same compartment as the associated functional unit, but in individual, separate, enclosed protected spaces, or compartments. Busbar separation is achieved by metallic or non-metallic, rigid barriers, or partitions. Terminals may be separated by insulated coverings, and glanded in common cabling chambers.</td>
</tr>
<tr>
<td>Type 6</td>
<td>Terminals for external conductors located in the same compartment as the associated functional unit, but in individual separate, enclosed protected spaces, or compartments. All separation is by metallic or non-metallic, rigid barriers, or partitions. Cables are glanded in common cabling chamber.</td>
</tr>
<tr>
<td>Type 7</td>
<td>Terminals for external conductors located in the same compartment as the associated functional unit, but in individual separate, enclosed protected spaces, or compartments. All separation is by metallic, or non-metallic, rigid barriers, or partitions. The termination for each functional unit has its own integral glanding facility.</td>
</tr>
</tbody>
</table>
Form 1

No internal separation - This form construction is rarely used.

Symbol Key

Enclosure

Internal Barriers

Busbars

Incoming Isolation Device

Functional Unit

Terminal for external conductors

Cable gland

Form 2a

Functional Units separated from busbars, but terminals NOT separated from busbars.
Form 2b

Functional Units, and terminals, separated from busbars, but not from each other.

**Type 1** - Separation by insulated coverings.

**Type 2** - Separation by metallic, or non-metallic rigid barriers.

Symbol Key

- Enclosure
- Internal Barriers
- Busbars
- **Incoming Isolation Device**
- Functional Unit
- **Terminals for external conductors**
- **Cable gland**

Form 3a

Functional Units separated from each other, terminals, and busbars, but terminals NOT separated from busbars.
Form 3b

Functional Units separated from each other, terminals, and busbars. Terminals separated from Functional Units, and busbars, but not from each other.

Symbol Key

Enclosure

Internal Barriers

Busbars

Incoming Isolation Device

Functional Unit

Terminals for external conductors

Cable gland
Form 4 - Type 1 and 2

Functional Units separated from each other, and busbars, cables ganged elsewhere. Terminals associated with Functional Units, to be located in the same compartment as the Functional Unit.

Type 1 - Separation by insulated coverings.
Type 2 - Separation by metallic, or non-metallic rigid barriers.

Form 4 - Type 3

Functional Units separated from each other, and busbars, cables ganged on the Functional Unit compartment. Terminals associated with Functional Units to be located in the same compartment as the Functional Unit.

Separation by metallic, or non-metallic rigid barriers.
Form 4 - Type 4, 5, and 6

Functional Units separated from each other, and busbars, cables glandsed on commonceiling together. Terminals associated with Functional Units, to be separated from those of other Functional Units, and located in separate compartments.

Type 4 - Busbar separation by insulated coverings.
Type 5 - Busbar separation by metallic, or non-metallic rigid barriers.
       Terminal separation by insulated coverings.
Type 6 - Busbar separation by metallic, or non-metallic rigid barriers.
       Terminal separation by metallic, or non-metallic, rigid barriers.

Form 4 - Type 7

Functional Units separated from each other, and busbars, cables glandsed on terminal compartment. Terminals associated with Functional Units, to be separated from those of other Functional Units, and located in separate compartments. Separation by metallic, or non-metallic rigid barriers.