

**① Mechanical trip indication**

On tripping, the red indication bar pops out. After the fault is cleared, the bar needs to be reset manually. As an optional feature, the bar can be reset automatically.

**② % Load indication**

**③ Current settings**

**④ Power ON indication**

**⑤ Time Delay settings**

**⑥ Test Button**

Keep the button pressed until the power ON indicator lights up red. On release of the button, if the indicator flashes green, it means the protection controller is healthy and if it flashes amber, the protection controller needs to be checked.

**⑦ Fault indications**

**⑧ Query Button**

On tripping, the power supply to the control unit is cut. In such an instance, keep the query button pressed, and the relevant fault indicating bulb lights up, the protection controller supplies power for the indicator

**⑨ Clear Button**

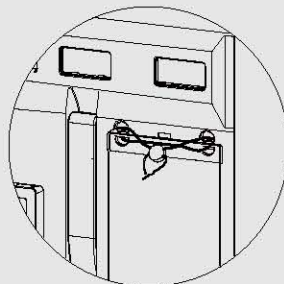
After clearing all the faults, keep the clear button pressed to reset the protection controller.

**⑩ Backlit LCD**

**⑪ Test controller using RS485 socket:**

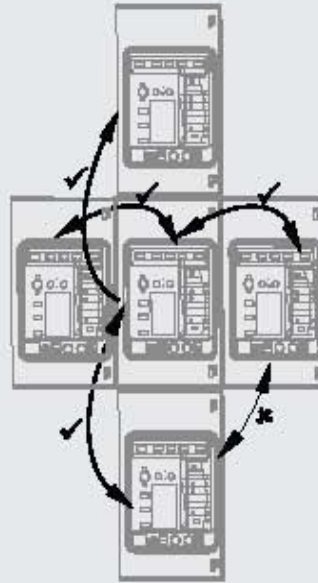
This socket can be used to connect a simulation kit to test controller settings.

Sealable front cover for controller:  
After the setting, protection controller front cover can be sealed



**Mechanical interlock (optional)**

Up to three circuit breakers in fixed/drawout/mixed versions can be mechanically interlocked. Mechanical interlock is possible in horizontal as well as vertical configurations.

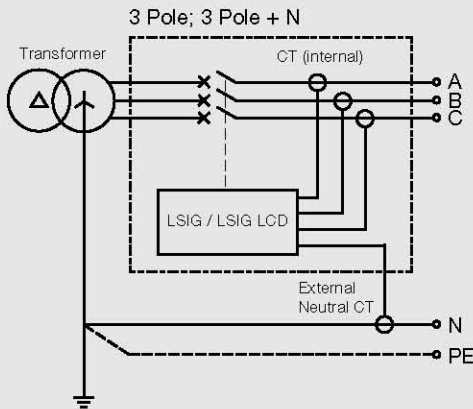
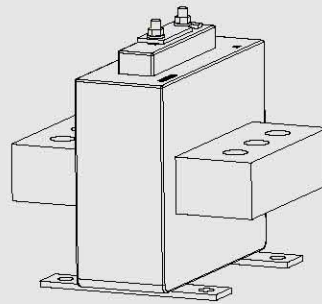


O - Breaker Open; I - Breaker Closed

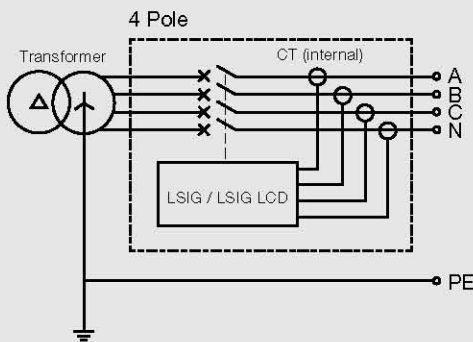
Type of Interlock	Cat. Ref.	Typical Circuit	Interlocks Possible	Schematic diagram																								
Two Incomers (2 I/C)	HWY121		<table border="1"> <tr><td>A</td><td>B</td></tr> <tr><td>O</td><td>O</td></tr> <tr><td>I</td><td>O</td></tr> <tr><td>O</td><td>I</td></tr> </table>	A	B	O	O	I	O	O	I	<p>Cable length: 2 m, Min. Radius at cable bend: 70mm</p>																
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Three Incomers (3 I/C)	HWY122		<table border="1"> <tr><td>A</td><td>B</td><td>C</td></tr> <tr><td>O</td><td>O</td><td>O</td></tr> <tr><td>I</td><td>O</td><td>O</td></tr> <tr><td>O</td><td>I</td><td>O</td></tr> <tr><td>O</td><td>O</td><td>I</td></tr> </table>	A	B	C	O	O	O	I	O	O	O	I	O	O	O	I	<p>Cable length: 2 m, Min. Radius at cable bend: 70mm</p>									
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Two Incomers & One Standby (2 I/C + 1 S/B)	HWY123		<table border="1"> <tr><td>A</td><td>B</td><td>C</td></tr> <tr><td>O</td><td>O</td><td>O</td></tr> <tr><td>I</td><td>O</td><td>O</td></tr> <tr><td>O</td><td>I</td><td>O</td></tr> <tr><td>I</td><td>I</td><td>O</td></tr> <tr><td>O</td><td>O</td><td>I</td></tr> </table>	A	B	C	O	O	O	I	O	O	O	I	O	I	I	O	O	O	I	<p>Cable length: 2 m, Min. Radius at cable bend: 70mm</p>						
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Two Incomers & One Bus Coupler (2 I/C + 1 B/C)	HWY124		<table border="1"> <tr><td>A</td><td>B</td><td>C</td></tr> <tr><td>O</td><td>O</td><td>O</td></tr> <tr><td>I</td><td>O</td><td>O</td></tr> <tr><td>O</td><td>I</td><td>O</td></tr> <tr><td>O</td><td>O</td><td>I</td></tr> <tr><td>O</td><td>I</td><td>I</td></tr> <tr><td>I</td><td>I</td><td>O</td></tr> <tr><td>I</td><td>O</td><td>I</td></tr> </table>	A	B	C	O	O	O	I	O	O	O	I	O	O	O	I	O	I	I	I	I	O	I	O	I	<p>Cable length: 2 m, Min. Radius at cable bend: 70mm</p>
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External Neutral CT:

Neutral CT is required for Earth fault protection and protection of Neutral against overloads. For 4 Pole breakers, the CT is provided with breakers. For 3 Pole breakers, external CT is required to be provided.



- This method is used with 3 pole breakers for TN-C-S, TN-C or TN-S distribution networks
- The current transformer linking externally to Neutral
- Works for earth fault protection ( connected to terminals N1 & N2 ) the maximum distance from the place where the current transformer is mounted to breaker is 2 meters.
- The earth fault protection derives from the sum of vectors of three phases current and Neutral current.
- The protection feature is definite time protection and indefinite time protection.
- If a separate CT is not used on the Neutral, the earth fault protection will be derived from the sum of vectors of three phases current.



- This method is used for TN-S or TT distribution system.
- The earth fault protection derives from the sum of vectors of three phases current and neutral current.



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