



## WARNING

Dangerous voltages may occur in devices and modules during operation depending on the design and application. Incorrect use of the devices can therefore result in severe personal injury or substantial damage to property.

Only suitably qualified staff should work on this device.

Correct and safe operation of this device is dependent on proper handling, installation, operation and maintenance.

Should you require further information, or should particular problems occur which are not handled in sufficient depth in the instructions of the respective product, help can be requested through your local Siemens Office or representative.

## Mounting and Commissioning

### Mounting

The physical dimensions of the relay and the required cut-out dimensions are shown.

1. Create a slot of dimensions as shown in Figure 1-2 to house the relay in the protection panel.
2. Flush the rear-side of relay into the protection panel cut-out.
3. Fasten the relay using the four M4x20 Pan Phillips SS screws with nut provided in the 7SR45 self powered overcurrent and earth fault relay packing box to the protection panel/cubicle.
4. Carry-out all other installation steps/wiring internally from the protection panel.
5. In the rear terminal of the relay, execute the wiring process as mentioned in scheme requirements. For more details about terminal connector diagram, refer to, Figure 1-3. Refer to Table 1.1 for the recommended terminal lugs to be used. If needed, use washers from the kit to connect the current inputs to X5 terminal.
6. The earthing cable should be wired as indicated in the Figure 1-3 using a non-stranded cable of 2.5/4 mm<sup>2</sup> and this should be terminated in the shortest possible path to the earth terminal/bus bar in panel or cubicle.
7. Maintain a minimum clearance from the relay as given in Figure 1-1 to ensure safety and accidental touch of terminals. In case of work area is restricted in a cubicle, then suitable protective terminals to be provided in the cubicle.

### Commissioning

Proceed the commissioning tests if the following criteria's are satisfied:

1. Equipment has not been damaged in transit (physical damage).
2. Equipment has been correctly connected and installed.
3. Remove the gland insulator from the battery compartment.
4. Characteristics of the protection and settings which are based on calculations.
5. Confirm that settings have been correctly applied.
6. To obtain a set of test results for future reference is recommended.

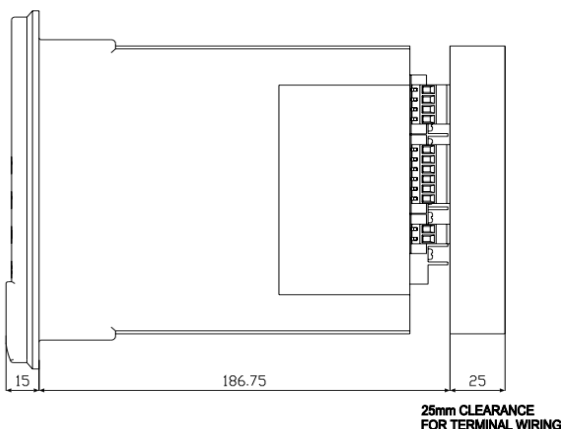


Figure 1-1 Clearance for Terminal Wiring

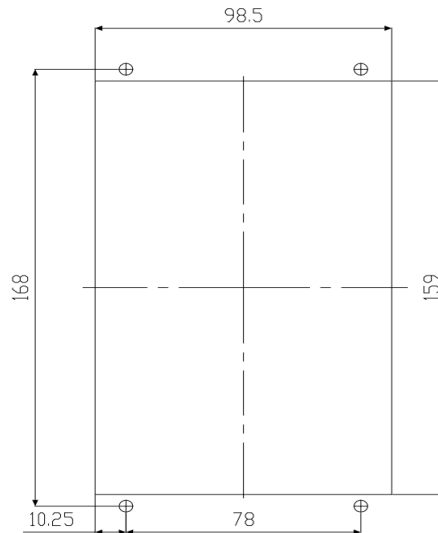
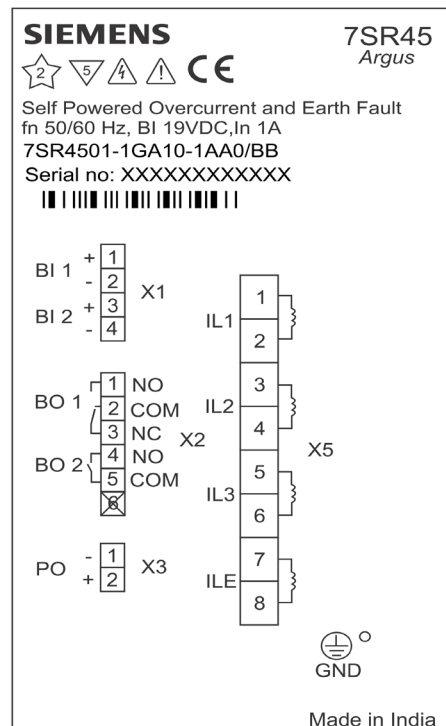


Figure 1-2 Panel Cut-Out

## Terminal / Wiring Diagram

The 7SR45 self powered overcurrent and earth fault relay should be wired according to the scheme requirements and with reference to the appropriate wiring diagram.



Terminal Blocks	Type/Cable Specifications	Manufacturer/Part number
<b>Current Inputs</b> (Terminal X5)	Ring type lug/2.5 mm <sup>2</sup> or 4 mm <sup>2</sup> control cable	Dowell's/RS009 or equivalent
<b>Front Communication Port</b>	USB 2.0, Type B	Tyco/974329-1 or equivalent
<b>Binary Input</b> (Terminal X1)	Pin type lug/1.5 mm <sup>2</sup> / 2.5 mm <sup>2</sup> control cable	Dowell's/CP9/CP1 or equivalent
<b>Binary Output</b> (Terminal X2)	Pin type lug/1.5 mm <sup>2</sup> / 2.5 mm <sup>2</sup> control cable	Dowell's/CP9/CP1 or equivalent
<b>Pulse Output</b>	M3 screw-type plug-in terminals suitable for 2.5 mm <sup>2</sup> /4 mm <sup>2</sup> cable	Dowell's/RS007 or equivalent
<b>Ground Terminal</b>	M3 ring type terminals suitable for 2.5 mm <sup>2</sup> / 4 mm <sup>2</sup> cable	Dowell's/RS 613- 9334

Table 1-1 Recommended Terminal Lugs Specifications

### Do's

Follow the Do's when installing the 7SR45 self powered overcurrent and earth fault relay:

- During installation, follow the instructions provided herewith. For more information, please refer the 7SR45 Argus User Manual (EMEA-T10023-00-7600)
- Execute the wiring based on the scheme requirements and wiring diagrams.
- Before energizing the relay, it should be ensured the relay is earthed using protective terminal on the back plate and power supply plug. Refer to, Figure 1-3.

### Don'ts

Follow the Don'ts when working with the 7SR45 self powered overcurrent and earth fault relay:

- Do not attempt to remove the relay without disconnecting all the wires.

### Output Test

After commissioning the relay, the operator can execute the output test and verify the binary outputs assigned to the corresponding functions.

To execute the output test in the relay, follow the procedure:

1. In the **Settings Mode**, select **Maintenance** and **Output Test**.
2. For testing, select output by pressing **ENTER**.
3. Select **Yes/No**.
4. Perform the test by pressing **ENTER**.

### Troubleshooting

This section provides the common problems and the recommended solution to resolve the problem.

Observation	Action
<b>Relay does not power up</b>	<ul style="list-style-type: none"> <li>• Check the phase connections based on the terminal diagram and CT power is applied (or)</li> <li>• Check the relay is connected with USB power (or)</li> <li>• Check the battery is healthy</li> </ul>
<b>Relay won't accept the password</b>	<ul style="list-style-type: none"> <li>• The password entered is wrong. Enter the correct password.</li> <li>• If correct password has been forgotten, note down the numeric code displayed at the Change Password screen.</li> <li>• To retrieve the password, communicate this numeric code to a Siemens Limited Customer representative.</li> </ul>
<b>Protection Healthy LED/LCD flashes</b>	<ul style="list-style-type: none"> <li>• The relay may have insufficient current from CT.</li> </ul>
<b>Cannot communicate with the relay</b>	<ul style="list-style-type: none"> <li>• Check the communication cable is connected properly.</li> <li>• Check that the USB driver is installed correctly.</li> <li>• Check that all the communications settings matches with the settings used by Reydisp Evolution.</li> </ul>
<b>Status inputs do not work</b>	<ul style="list-style-type: none"> <li>• Check that the correct DC voltage is applied and that the polarity is correct.</li> <li>• Check that the status input settings such as the pick-up and drop-off timers and the status inversion function are correctly set.</li> </ul>
<b>Low Battery Indication</b>	<ul style="list-style-type: none"> <li>• Check the battery is connected with the proper polarity.</li> <li>• Check the battery is healthy.</li> </ul>
<b>Protection Healthy is not glowing</b>	<ul style="list-style-type: none"> <li>• The relay may not have CT current inputs.</li> </ul>

For enquires please contact our customer support center:

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