

# Application Note

## How to Properly Test Light Switches

Use a robust insulation resistance tester to check whether light switches are connected correctly.

### Highlights

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Once the light installation work is finished, check the insulation state of the light line before turning on the light.

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Check the line from the light switch to the light for proper insulation in order to prevent fire hazards.

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### Measurement method

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1. Turn off the ampere breaker and the circuit breaker for the light line.
2. Connect the insulation resistance tester to the circuit breaker.
3. Output an appropriate test voltage (which varies depending on the supply voltage).
4. Check that the insulation state is good at the time the light switch is off.
5. Turn on the light switch and check that the resistance value approaches zero (by the load resistance of the light).
6. A low resistance value at the time the light switch is OFF indicates an insulation failure. The likely cause is a connection failure.  
A high resistance value at the time the light switch is ON indicates the possibility of a connection failure.

