

# Safety Alert

## LV Commissioning - Labelling & Identification of Conductors

### BACKGROUND

Over the last number of years we have focused on the important safety aspects associated with Reverse Polarity. Due to the diligence of most NTs, there has been a significant reduction in the number of Reverse Polarity Incidents nationwide. This has made our LV Network safer for the public.

Section 4.2 of [DTIS-081004-BOT "Procedure - Commissioning the LV Single Phase System"](#) requires the identification and labelling of all phase and neutral conductors on both sides of the break prior to cut being made. Internal audits recorded on SHIELD have identified a worrying trend around compliance with this important requirement. Regretfully, there also has been a reverse polarity incident at a customer's premises following a meter replacement.

### INCIDENT INVESTIGATION FINDINGS

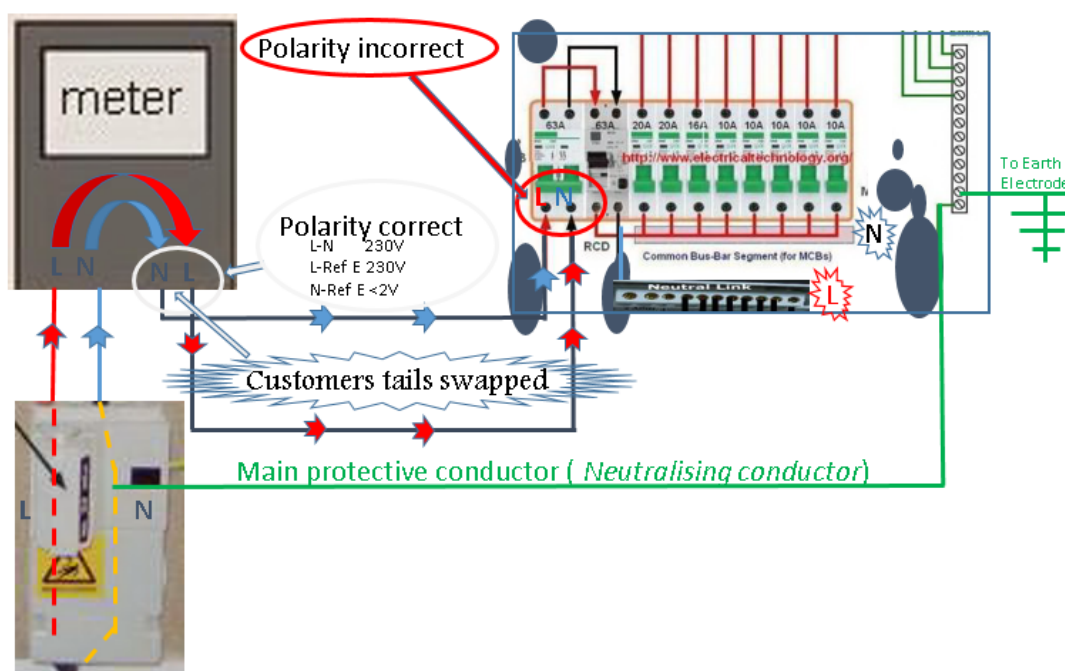
The incident investigation findings below, highlight why this aspect of the procedure is required. The investigation established the following:

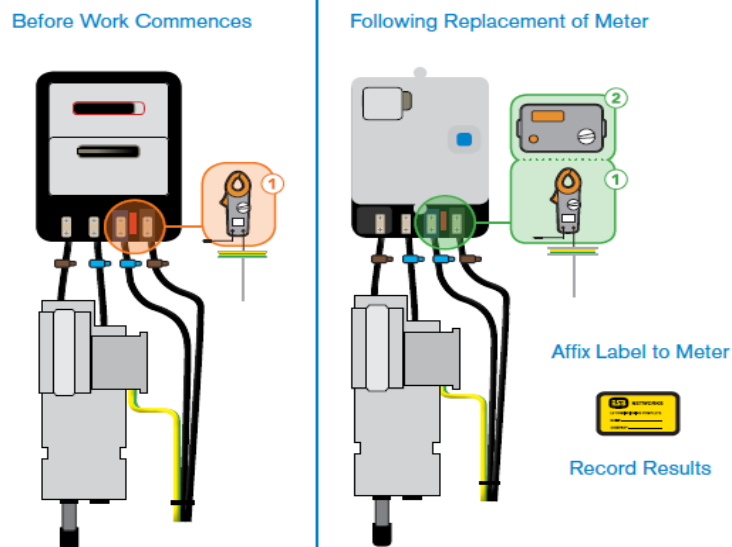
- The tails from the outgoing side of the new meter were incorrectly reconnected so that phase and neutral conductors were in reverse configuration.
- The NT who replaced the meter had not Identified and labelled all conductors prior to retiring the old meter.
- Although the NT carried out commissioning tests on completion of the job, the reverse polarity was not evident as there was less than 2 volts present on what he assumed to be the Customers neutral.

### LEARNING

In a healthy customer installation, LV commissioning tests will not capture reverse polarity when tails have been swapped at or beyond the customer interface point (meter terminals in this case). ESB Networks are not permitted to carry out any work or tests on the customer installation.

The circuit diagram below illustrates the reversal of the conductors as occurred in this incident.





Page 14 of the [LV Single Phase Commissioning - Reference Guide](#) outlines the requirements for Meter Exchange/ Replacement

## What should I Do?

### Managers/Supervisors

- Brief All Staff that hold an LV Commissioning Approval (NC- COMM01 / NC-COMM03) on the requirements of section 4.2 of the Procedure – Commissioning the LV Single phase system.
- Consider reviewing issues associated with identification and labelling of conductors in site audits where LV commissioning has taken place.

### All Staff holding LV Commissioning Approval - NC- COMM01 / NC-COMM03:

- Review Procedure – Commissioning the LV Single phase system and implement requirements in full including section 4.2 Identification & Labelling.
- Ensure that the requirement to identify and mark the phase and neutral conductors on both sides of a proposed break is complied with.

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