



## Engineering Recommendation G103

Issue 1 2017

Generic industry risk assessment and asset management approach for Low Voltage service termination equipment

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## **1 Purpose of this document**

The purpose of this document is to describe in generic terms the risks arising from Low Voltage (LV) service termination equipment that is present in customer's premises including the approach taken by electricity distribution network operators (DNO) in Great Britain to manage this asset class. In doing so it describes the potential risk posed by the equipment, the existing mitigations and controls that the industry has in place and further mitigations that are being developed to enhance the efficacy and efficiency of these regimes in order to ensure that risk is mitigated to a level that is as low as reasonably practicable.

This document is not intended to be prescriptive or to supersede or supplant in any way the detailed individual asset management and risk mitigation strategies that DNOs have in place for this class of asset. However, the details in this document describe the consolidated view of the GB DNOs and represent the basic framework practice that all DNOs intend to adopt, as a minimum.

## **2 Scope of this document**

The scope of this document is limited to LV Whole Current Meter installations including the DNO service termination equipment within them.

## **3 Introduction and background**

In order to provide safe and reliable supplies of electricity to customers, DNOs install at customers' premises service termination equipment (i.e. a cut-out or service fuse and service cable), the purpose of which is to:

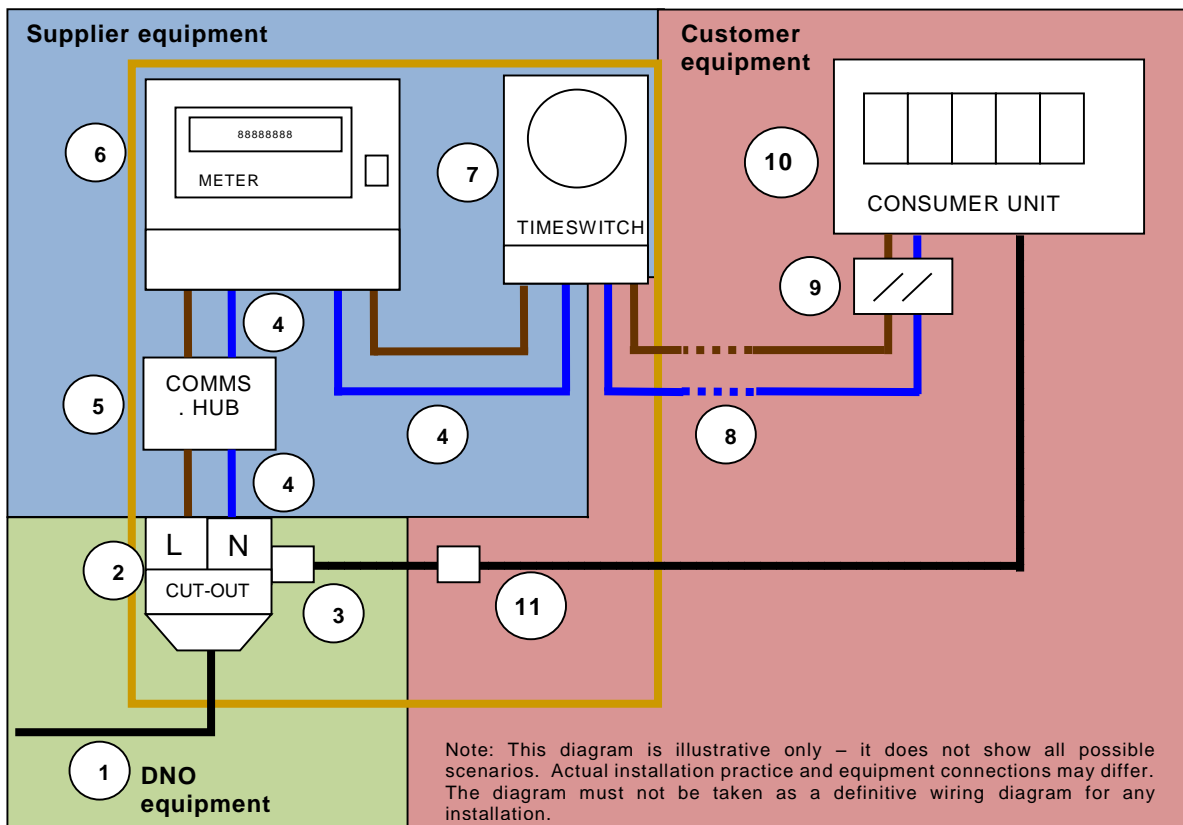
- Protect the network from faults on the downstream side of the service termination;
- Provide a means of connecting the Supplier's, Customer's or Building Network Operator's (BNO) installation to the distribution network;
- Provide a means of de-energising or isolating the supply; and
- Make available, if appropriate, a terminal for the connection of the Customer's or BNO's earth conductor.

Service termination equipment is normally electrically and mechanically very simple comprising a fuse carrier with fuse positioned at the boundary between the DNO's network and the Supplier's or BNO's equipment.

The design of service termination equipment is such as to prevent risk of fire or explosion, shock and electrocution in all normal environmental conditions and for the equipment to remain operational for several tens of years.

## **4 Description of the service position**

The diagram below describes a typical domestic non half hourly (NHH) metered service position. The DNO service termination equipment and the extent of their responsibility is captured within the green area of the diagram.



| DNO equipment                          | Supplier equipment   | Customer equipment  |
|--|--|---|
| 1 - Service cable                      | 4 - Meter tails (cut-out to meter and meter to timeswitch) | 8 - Meter tails (between the meter / timeswitch and the Customer equipment)                 |
| 2 - Cut-out (or main fuse or DNO fuse) | 5 - Communications hub if fitted (may be within the meter) | 9 - Customer isolating switch (if fitted / requested)                                       |
| 3 - DNO earth terminal                 | 6 - Meter<br>7 - Timeswitch (if fitted)                    | 10 - Customer consumer unit<br>11 - Customer earthing conductor (and earth block if fitted) |

Source: MOCOPA Guidance on Service Termination Issues Reporting

## 5 Compliance with legislation

Under Regulations 3 and 5 of The Electricity Safety, Quality and Continuity Regulations 2002 (ESQCR) DNOs have a duty to ensure, so far as is reasonably practicable, that their equipment is:

- Sufficient for the purposes for and the circumstances in which it is used;
- So constructed, installed, protected (both electrically and mechanically), used and maintained as to prevent danger, interference with or interruption of supply; and