WORK INSTRUCTION – Internal Use Only

Using Your Voltage Detector - H&S Guidance

Purpose - When and How to use Your Voltage Detector in the Field safely

Step by Step

1. Before you start

This guidance contains important information about attending a cabinet for a service call install or following a power outage. We recognise that in general and following a power outage you would expect to find the cabinet "dead". However we have recently been made aware that in certain, rare fault conditions, on the electricity supply network, our cabinet casing may become "live". Some of you may already be aware of this issue but it is important that you first check the cabinet casing and immediate area before starting any work. You should do this by using your voltage detector.

Why do I need to use my voltage detector?

As you probably know, our current network was built in the late 80s/early 90s by numerous contractors all to different standards. All of our cabinets have effective earthing through the supply company CNE conductor or standard earth conductor. However we have inherited a network where some cabinets supplied from the Distribution Network Operator (electricity supply company) PME supply does not have an independent earthing that meets the 20 ohm requirement. This means that in certain, rare fault conditions, our network cabinet may become “live” due to a fault on the electricity supply system i.e. it loses its neutral connection.

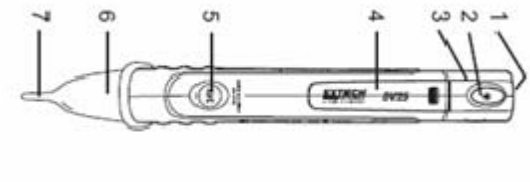
When should I use my voltage detector?

Every time you attend a cabinet for a service call, install or with an apparent power outage, you should use your voltage detector, before touching the cabinet, as there is the potential that the casing has become “live” due to a fault on the electricity supply network i.e. it has lost its neutral connection.

2. Activity – How do I use my voltage detector?

You should be supplied with a voltage detector – its full name is a DV25 Dual Range AC Voltage. Please make sure you have read the user instructions before using the device.

- First of all test for low voltage (24v to 100v), press and hold the 24V button (5).
- For standard electrical work (>100v, this is not necessary).
- Touch the probe tip (7) onto the cabinet surface.
- If AC voltage is present, the detector cone will illuminate (6) and the detector beep.
- Note the detector is designed with high sensitivity. Static electricity or other sources of energy may randomly trip the sensor.
- Keep hands and fingers on the body of the probe and away from the tip when testing.
- Buttons (1) and (2) operate the flash light.
- Buttons (3) and (4) relate to the battery installation (see below)



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What should I do if a cabinet is found to be "live"?

If, when you test the cabinet casing using your voltage detector, you find a cabinet to "live" you must immediately stop work on or near to the cabinet. You must:

- contact your line manager who will advise you on the next steps to take
- remain near to the cabinet to ensure that any other people or animals in the vicinity do not come into contact with the cabinet
- keep away from any other items of street furniture e.g. lighting in case it's experiencing the same fault and has become "live"
- not use your gate guards (unless they are completely plastic)

I'm a line manager what should I do if one of my team calls to report a "live" cabinet?

If you are a Line Manager you need to:

- ensure the team are following the above procedure
- ensure the Distribution Network Operator (electricity supply company) is contacted immediately to isolate the power to the area (and our cabinet) so that work can be carried out safely
- report the instance via the accident reporting system so that this incident can be investigated

I don't have a voltage detector and think I need one - how do I get one?

You must not work on a cabinet without first testing the cabinet casing with a voltage detector. You need to let your line manager know that you don't have a voltage detector so that one can be obtained for you. In the meantime, you should utilise one of your colleague's detectors when attending any cabinet.

What are the chances of this occurring?

The likelihood of risk actually occurring is extremely low, and we've had an independent report to confirm this position and we've not had any instances reported.

I have some useful information relating to these issues – who should I tell?

We currently have a large national project underway to address this matter as quickly as we can and we appreciate that some of you may have local knowledge that may be helpful. Any information you have will help the operational teams prioritise their work to get this sorted as soon as possible. You can talk to your line manger, email safety@virginmedia.co.uk or you can get in touch with your local H&S Advisor.

Other Useful Information

Battery Installation

- Remove the end cap (3) by gently lifting the pocket clip (4) to release the catch
- Insert two AAA batteries (observe polarity)
- Replace the end cap
- Note: If your meter does not work properly, check the battery to make sure that it still good and that it is properly inserted

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General Specification

- Voltage Sensitivity 100V to 1000V AC, 50/60Hz 24V to 1000V AC, 50/60Hz
- Detection distance <0.2”
- Operating Temperature 32 to 122°F (0 to 50°C)
- Storage Temperature -4 to 140°F (-20 to 60°C)
- Altitude Operating below 2000m
- Relative Humidity 80% up to 31°C, decreasing to 50% at 50°C
- AAA batteries x 2

Document Control

Version	Effective Date	Change Agent/Author	Comments
V 2.1	July 2013	Barry Evans	Changed to Controlled Document Format
V 2.2	July 2014	Barry Evans	Annual Review