

# Estates and Facilities Alert

## IMMEDIATE ACTION

Ref: EFA/2011/004 Issued: 29<sup>th</sup> November 2011  
Gateway Reference: 16958

### Device

High-Voltage (HV) 11KV Switchgear –  
Schneider Electric (Merlin Gerin) Ringmaster  
RN2c, RE2c and RN6c ring main units



### Problem

- Potential failure of the Merlin Gerin Ring Main Unit to isolate and Earth as shown on the position indicator window.
- Cable can still be **LIVE** even when switching indicator shows the switch gear in each the positions OFF and EARTH ON.

### Action by

Managers and staff responsible for the procurement, supply, maintenance and asset management of the electrical HV infrastructure and the operating (switching) of electrical High-Voltage equipment.

### Action

The service and maintenance provider of High-Voltage (HV) switchgear should be requested to carry out a survey of their equipment in use in healthcare premises to identify the particular make and model type.

All work on this equipment or the equipment connected to Merlin Gerin Ringmaster RN2c, RE2c and RN6c switchgear shall, have at least TWO earths applied to the section being worked on.

Where two earths cannot be readily applied, isolation shall be made by additional LV and HV points of isolation shall be established, to ensure there is no single switch failure risk. In all cases, before work is carried out the cable connects to the ringmaster unit shall be spiked.

### Contact

Schneider Electric  
Mike Adams  
Manager - MV and Transformer Division  
Phone: 01132903521  
[mike.adams@gb.schneider-electric.com](mailto:mike.adams@gb.schneider-electric.com)  
Address: 123 Jack Lane, Leeds, LS10 1BS,

## Problem

1. An incident occurred on the 11<sup>th</sup> October 2011 involving a Ringmaster RN2c ring main unit on the Scottish Power distribution network which also affects the RE2c and RN6c (Merlin Gerin) Ringmaster ring main units.
2. Work was being carried out on an overhead cable connected to a Ringmaster RN2c main switch. The switch was operated from the Main ON position through to OFF then to the Earth ON position. [The main electrical contacts inside the switching chamber had remained in the Main ON position whilst the operating mechanism and the position indication had changed through to OFF and through to the Earth ON position]. When the line was subsequently tested before being earthed it was found to be **LIVE**.
3. A bolt had failed and fallen out of the mechanism that connects the output of the mechanism to the drive shaft that controls the movement of the electrical contacts inside the switching device.
4. An investigation is being carried out by the manufacturer to determine the root cause of the bolt failure and identify the necessary corrective action.
5. Until the manufacturer's corrective action is identified the action shown below, shall be followed by all staff that operate or maintain HV networks on which the Ringmaster ring main unit is installed.
6. Under the ENA NEDeR's notification scheme, Scottish Power issued a Dangerous Incident Notice (DIN) Ref. DIN 2011/0056/00 dated 28<sup>th</sup> October 2011 and a Suspension of Operation Practice (SOP) Ref. SOP 2011/0373/00 dated 1<sup>st</sup> of November 2011.

## Action

7. All operators and service and maintenance providers should make themselves aware of this EFA and the Suspension of Operation Practice (SOP) Ref. SOP 2011/0373/00 dated 1<sup>st</sup> of November 2011.
8. The operators, service and maintenance providers of the High-Voltage (HV) networks switchgear should carry out a survey of their equipment in use on healthcare premises to identify this particular make and model type.
9. The operators, service and maintenance providers should ensure a copy of this EFA is displayed on the affected ring main units.
10. The operator, service and maintenance providers should also be made aware that either the left and right hand sides of the ring main units switches have the same design of mechanical drive and use the same bolt and are both affected.
11. Until the investigation by the manufacturer has been completed, HV Authorised Persons should assume that either of the ring switches **do not** isolate or earth and **cannot be relied upon** to remain isolated or be earthed by the switches.
12. The following actions are in line with the revised operational practices imposed by Scottish Power in their Suspension of Operational Practice (SOP).
13. When working on cables or equipment connected to the Schneider Electric Merlin Gerin Ring Main Units. Ringmaster RN2c, RE2c or RN6c there shall be, where practicable at least two earths applied to the section of the network being worked on.
14. In all situations where work is to be carried out on cables connected to any Ringmaster ring main unit, the cable shall be spiked before the work is started.

15. Cable identification and confirmation shall be carried out to confirm which switch the cable is connected to.
16. In situations where two earths cannot be readily applied, for example, radial feeds or single transformer feeds with no earth switch fitted to the transformer, then additional HV and LV points of isolation shall be established to ensure there is no risk due to a single switch failure.
17. If any switches are suspected of being defective and the cable identification is not achievable together with spiking of the cable, then all work and operations **must be stopped**.

## Suggested Onward Distribution

- Risk Manager
- Estates Directors,
- Facilities Directors,
- Primary Care organisations
- HV service providers
- Ambulance Stations,
- All Maintenance Estates Managers
- HV Authorised Persons (AP)
- Director of Estates and Facilities

## Additional information for England

The above sections of this Alert were compiled by Department of Health.

Action required by this alert should be **underway by: 29<sup>th</sup> November 2011**

Action required by this alert should be **completed by: 23<sup>rd</sup> December 2011**

Enquires should quote reference number EFA/2011/004 and be addressed to:

### Defects & Failures

Department of Health  
Estates & Facilities Division 3N09  
Quarry House,  
Quarry Hill,  
Leeds LS2 7UE  
[Mb-defects&failures@dh.gsi.gov.uk](mailto:Mb-defects&failures@dh.gsi.gov.uk)

#### HOW TO REPORT DEFECTS & FAILURES

Defects and failures relating to non-medical equipment, plant and buildings should be reported to the Department as soon as possible. Advice on what needs to be report can be found in DH (2008) 01. Defect and failure reporting is an on-line only reporting facility, available on the NHS Information Centre website at [www.ic.nhs.uk](http://www.ic.nhs.uk)

This Alert can be found on the following websites  
<http://www.dh.gov.uk> and <https://www.cas.dh.gov.uk>

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