THE DISTRIBUTION CODE OF LICENSED DISTRIBUTION NETWORK OPERATORS OF GREAT BRITAIN

Distribution Code Consultation DCRP/MP/22/06

Engineering Recommendation (EREC) G12 Issue 5 – Requirements for the Application of Protective Multiple Earthing to Low Voltage Networks

Modification to provide clarity to the user from feedback received in the Public Consultation phase for Issue 4

Target Audience:

The modifications will be of interest to all Distribution Code Stakeholders & Users including Distribution Network Operators, Transmission System Operators, Generators, Customers, Demand Side Response providers, Distribution Energy Resource providers and manufacturers of small scale embedded Power Generating Modules.

Date Published: 13 February 2023

Deadline for responses: 17:00 17 March 2023

Summary:

This Distribution Code consultation relates to the changes proposed to Engineering Recommendation (EREC) G12. This version being consulted on was reviewed as part of the Technical Author Service (TAS) provided by Energy Networks Association's (ENA), as well as additional comments received from Stakeholders as part of the previous revision to the document.

This public consultation for EREC G12 (Issue 5) provides the user with all general revisions in-line with the program provided by the TAS (editorial by nature). And those areas of the document which are proposed to address previous comments from wider industry received.

1. Introduction

As the public consultation for G12 Issue 4 (amendment 2) was focused on delivering improvements in a specific area of the document, all comments received from stakeholders as part of that consultation relating to the remaining clauses within EREC G12 being were collated, assessed, and prepared for a general revision designated EREC G12 Issue 5.

This consultation on a general revision to EREC G12 focuses on a number of areas within the document and looks to address Stakeholder comments received and provide additional clarity to the user. Areas of note are the inclusion of terms 'hybrid' and 'PME enabled' networks. More examples of PME scenarios and clarity for where PME earth terminals can be offered on mixed networks. The option of supply from an isolating transformer.

2. Analysis and Proposal

The revision to EREC G12 was undertaken by the ENA's Earthing Co-ordination Group (ECG). All comments were reviewed, and draft text formulated to address each assessed.

A full set of the general revisions to EREC G12 have been listed below,

- Clause 3 – Definitions of "hybrid networks" and "PME enabled networks" have been added.
- Clause 4.3.2 – Wording simplified.
- Clause 4.4.2 – Expanded explanation of examples in Figure 4.4.
- Figure 4.4 – Text changes for clarity and examples added.
- Figure 4.5 – Has been re-drawn and simplified.
- Clause 4.7 – 40 Ω value added in and note added regarding origin of 20 Ω value.
- Clause 4.9 – Paragraph regarding copper and aluminium connections deleted.
- Table 4.9 – Wording amended to align with BS 7671.
- Clause 4.11 – 40 Ω value added.
- Clause 4.11 – Reference to treat PNB earth terminals as PME terminals has been deleted.
- Clause 5.3 – Previously in G12 Issue 4 A2 on polarity testing has been deleted.
- Clause 6.1 – Reference to ESQCR regulation 24 (4) added.
- Clause 6.2.1.1 – Item (c) added.
- Clause 6.2.1.2 – Reference to specific information on compliance of railway operators has been deleted.
- Figures 6.2.2.1 and 6.2.2.2 – Have been re-drafted.
- Clause 6.2.2.3 and Figure 6.2.2.3 – Added to illustrate the option of supply via an isolating transformer.
- Clause 6.2.5 – References 'Competent person' and 'Consumer's Electrician' removed.
- Clause 6.2.12 – Section on metal clad buildings re-worded and option (b) previously in G12 Issue 4 Amendment 2 has been removed.
- Figures 6.2.14(a) and 6.2.14(b) – Have been re-drafted for clarity.
- Clause 6.2.16 – Reworded for clarity.
- Clause 6.2.16.2 – paragraph re-worded to clarify assumptions made in Sections 6.2.14 and 6.2.15 on the use of a supplementary electrode as an additional form of protection to PME.
- Appendix 2, "Operators of AC Electrified Traction Systems in the UK" and Appendix 3, "DC electrified traction systems in the UK" – Have been deleted.

These changes can be viewed in the Track Change copy of EREC G12 Issue 5 attached as part of the consultation pack.

3. Removal of Appendices

As part of the revision process to EREC G12 it is proposed to remove Appendices 2 and 3 on the grounds that the information provided is no longer representative of all rail operators across Great Britain. In the interests of clarity to the reader these sections have been deleted from Issue 5 of the document.

4 Applicable Distribution Code Objectives

The Applicable Distribution Code Objectives are to**:**

a) permit the development, maintenance, and operation of an efficient, co-ordinated, and economical system for the distribution of electricity; and

b) facilitate competition in the generation and supply of electricity; and

c) efficiently discharge the obligations imposed upon distribution licensees by the distribution licences and comply with the Regulation and any relevant legally binding decision of the European Commission and/or the Agency for the Co-operation of Energy Regulators; and

d) promote efficiency in the implementation and administration of the Distribution Code.

5. Consultation Questions

1. Do you agree with the general intent of the proposed modification? If not, please explain your view.
2. Do you agree that the proposed modifications satisfy the applicable Distribution Code objectives? If not, please explain your concerns.
3. Do you have any comments relating to specific clause amendments as part of this general modification to EREC G12? If so, please expalin your views.
4. Do you have any other relevant comments?

6. Next Steps

Responses to this consultation should be sent to the Distribution Code Review Panel Secretary at dcode@energynetworks.org by **17:00 - 17 March 2023** on the pro-forma provided expressly for the purpose. Responses after this date may not be considered.

7. Consultation Pack Contents

As part of this public consultation the following documents are to be considered,

1. DCRP/MP/22/06 – EREC G12 Issue 5 Consultation Copy.
2. DCRP/MP/22/06 – Consultation Paper.
3. DCRP/MP/22/06 – Response Proforma.

For more information, please contact:

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