**PR-NET-CAB-004**

NOTIFICATION OF ELECTRICAL MEASUREMENTS REQUIRED TO ENABLE G99 FAST TRACK INSTALLATIONS

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# Introduction

This document is intended to be used by:

**Third Party Installers**

This document has been produced to permit installations of generation equipment to be run in parallel with the SSEN network in accordance with the G99 Fast Track Process.

### This document covers single, split and three phase low voltage generation of ratings up to 32 A per phase. Generators above this rating cannot be considered for Fast Track.

To enable connection prior to SSEN undertaking a design study, specific electric parameters have to be measured at the customer’s premises and a certain criterion met.

# References

The documents detailed in Table 2.1 - Scottish and Southern Electricity Networks Documents shall be used in conjunction with this document.

Table 2.1 - Scottish and Southern Electricity Networks Documents

| **Reference** | **Title** |
| --- | --- |
| FO-NET-CAB-008 | Notification of Electrical Measurements Required to Enable G99 Fast Track Installations |

# Acronyms

The acronyms shown in Table 3.1, are used in this document:

Table 3.1 - Acronyms

| **Acronym** | **Definition** |
| --- | --- |
| SSEN | Scottish and Southern Electricity Networks |
| LV | Low Voltage |
| TN-C-S | Terra Neutral – Combined - Separate |

# Deviations from this Standard

There are no permitted deviations to this document.

# Measurements of Electrical Parameters

Prior to connection of a generator under the G99 Fast Track Process the information in Table 5.1 is required to be measured and recorded by a competent electrical contractor.

The values required are obtained from undertaking two loop tests.

### The loop tests shall be performed at the incoming isolator of the customer’s consumer unit. Under no circumstances is the SSEN fuse to be removed to undertake these tests.

### The customer’s consumer unit shall be switched off and the earth connection removed, temporarily, to ensure disconnection of any metallic parallel paths which could distort the readings.

### Where the incoming supply is TN-C-S the phase to neutral and phase to earth tests are still required.

Measurements shall be taken using a calibrated loop impedance meter.

Table 5.1 - Electrical Parameters

|  |  |
| --- | --- |
| **Parameter** | **Required** |
| Phase to neutral loop impedance - mΩ | Mandatory |
| Phase to earth loop impedance - mΩ | Mandatory |
| Voltage - V | Mandatory |
| Photograph of Supply Termination | Mandatory |
| Photograph of neutral loop impedance being measured (photograph of loop impedance meter) | Mandatory |
| Prospective short circuit current - A | If available on loop meter |
| Prospective earth fault current - A | If available on loop meter |

The complete information, termed the declared values, will be required to be forwarded to SSEN immediately following connection of the generation.

### Where information is missing the application will be void and SSEN will required the missing information to be provided.

### Where this information is not provided within 7 working days of the return to the application SSEN will obtain the missing information and recharge the costs to the installer.

# Permitted Connection under the Fast Track Process

Generation is permitted to be connected to the SSEN system under the Fast Track Process where the Phase to Neutral Loop Impedance is less than 180 mΩ. Where it is above this value a G99 application must be made to SSEN to permit a design study to be undertaken.

The value shown in 6.1 may be amended as more information is gathered on the interaction of generation with the SSEN LV network. It is therefore important to regularly check the SSEN G81 website and obtain the latest copy of this document.

# Auditing

SSEN reserve the right to verify the measurements submitted.

Where the SSEN measured values of phase neutral loop impedance are in excess of 5% of the declared values, SSEN may view this is a breach of the procedure.

# Breach of this Procedure

A breach of this procedure will most likely result in other customers connected to the SSEN network being subject to ‘interference’ such as voltages outside of the statutory limits or excessive flicker.

Such interference will be taken as a breach of clause 26 (1) of the Electricity Safety, Quality and Continuity Regulations. In pursuance of this clause SSEN will require the customer to take such action need to remedy the situation, in a reasonable period of time, as stated in the written notice which will be sent to the customer. This may be as simple as they will not use their generator until remedial works have been completed.

### If the remedial works are not carried out within the timescale of the notification, then SSEN reserve the right to disconnect the customer’s supply.

# Applicable Standards

Third Parties must obtain copies of non SSEN Standards, such as BS or ENA documents, from the issuing organisations at their own expense. These documents may be subject to copyright.

Documents for use by third parties are classified as Public and are available on the SSEN website,   
  
<https://www.ssen.co.uk/ConnectionsInformation/CompetitionInConnections/>

Then scroll down for G81 Library and then click on ‘G81’.

# Revision History

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **No** | **Overview of Amendments** | **Previous Document** | **Revision** | **Authorisation** |
| **01** | New Document | n/a | 1.00 | Rodger Yuile |
| **02** |  |  |  |  |

1. Sample Completed Form

**This form is to be used in conjunction with PR-NET-CAB-004**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Declaration** | | | | |
| **Once populated, please sign below and submit to SSEN** **to** [G99fasttrack@sse.com](mailto:G99fasttrack@sse.com) | | | | |
| I confirm that the information I have given in this form is true to the best of my knowledge. Electronic Signature is acceptable | | | Name: | R. T. Clark |
| Signature: | R. T. Clark |
| Date: | 14/04/2022 |
| **Section A – Contact Details** | | | | |
| **Installer Contact Details** | | | | |
| Name | As above declaration (amend if a different contact is required) | | | |
| Company | G99 Install Limited | | | |
| Address line 1 | Unit 1, Flexborough Business Park | | | |
| Address line 2 |  | | | |
| Town | Gloucester | | | |
| Postcode | GL2 8HF | | | |
| Contact Number | 07343 563876 | | | |
| Email | rtclark@g99install.com | | | |
| **Customer Contact Details** | | | | |
| Name | | K.C. Kilmer | | |
| Contact Number | | 07698 355409 | | |
| Email | | kckilmer@set1.co.uk | | |
| **Installation Location Address** | | | | |
| Address line 1 | | 10 Appleton Road | | |
| Address line 2 | |  | | |
| Town | | Upper Downton | | |
| Postcode | | SL4 2WE | | |

|  |  |  |  |
| --- | --- | --- | --- |
| **Section B – Electrical Parameters** | | | |
| **Parameter** | **Value** | | **Requirement** |
| **Phase to neutral loop impedance**  **(must be 180 mΩ or less)** | **134** | **mΩ** | **Mandatory** |
| Phase to earth loop impedance | 695 | mΩ | Mandatory |
| Voltage | 231 | V | Mandatory |
| Prospective short circuit current | 1724 | A | If available on loop meter |
| Prospective earth fault current | 332 | A | If available on loop meter |
| Photograph of Supply Termination | Insert below (click on icon to open up explorer options) | | Mandatory |
| Photograph of neutral loop impedance being measured (photograph of loop impedance meter) | Insert below (click on icon to open up explorer options) | | Mandatory |
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