

# C37.68 Distribution Controls Meeting

## April 30, 2012 – St. Pete Beach, FL

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The meeting was called to order at 3:47 PM by Tim Royster.

There were 19 members and 6 guests present for the meeting. Members and guests introduced themselves.

We are now a task force again. Don Parker is not able to join us because of Southern Company restrictions if you are not the chair of a working group. Tim Royster is now the chair.

The signup sheet is coming around. Indicate if you want to be a member of the task force on it since we are now a taskforce again.

Minutes from previous meeting were approved.

It was pointed out there has been a good bit of work already completed on this document.

Royster explained that a report to the RODE Subcommittee is needed to provide the Task Force group's recommendations on how to continue. He went into some of the background as to how this came about. In short, the RODE Subcommittee never received a report from the initial TF and a PAR was obtained and WG formed without proper guidance from the RODE Subcommittee.

Royster displayed for discussion a proposed report for presenting at the RODE Subcommittee.

The various slides of the report were discussed and the following shown in italics is what was completed and agreed upon by the TF for reporting to the Subcommittee:

### *Proposed justification*

- *There is no single industry document which tries to describe the various conditions to which distribution controls are subjected.*
- *Distribution controls are exposed to a variety of conditions which are, in many cases, unique from the substation application.*
- *Determining what industry standards exist which covers the various conditions is difficult to piece together from the various standards that are utilized. This document can also serve to bring together into a single document various industry documents that can be referenced. This will aid all those involved in their design and application.*
- *The former WG, which consists of a majority of the Subcommittee, voted during the last meeting that it was agreed the effort was worth continuing.*

### **Title (previous)**

**IEEE P37.68™/ D3-3 May 2011 Draft Guide for Requirements for Microprocessor Based Controls for Distribution Padmount and Pole-mount Switchgear Rated Above 1kV Up to 38kV.**

**Title (proposed)**

**IEEE P37.68™/ D3-3 May 2011 Draft Guide for Electronic Controls for Distribution Overhead and Underground Switchgear Rated Above 1kV Up to 38kV.**

**Scope (previous)**

*This guide presents basic considerations for design, testing and application of microprocessor-based controls to distribution switchgear rated above 1kV up to 38kV. Such equipment is typically mounted on power poles or in padmounted switchgear enclosures, and is used with overhead and underground electric utility distribution lines. The microprocessor-based controls often include protective functions as well as control functions. This guide includes considerations, test and application principles for: environmental factors vibration harmonics grounding electromagnetic interference functional requirements voltage disturbances including lightning and switching surges. This guide does not apply to power system protective relays which are covered in the IEEE C37.90 ("Standard for Relays and Relay Systems Associated with Electric Power Apparatus") and related standards. This guide also does not apply to microprocessor-based devices employed in high voltage circuit breakers (IEEE 19 C37.04 "Standard Rating Structure for AC High-Voltage Circuit Breakers").*

**Scope (proposed)**

*This guide presents considerations for the design, testing, and application of electronic controls for distribution switchgear rated above 1kV up to 38kV. This equipment is installed on overhead or underground electric utility distribution lines. This guide does not apply to electronic controls, relays or relay systems in substations or in AC High-Voltage Circuit Breakers.*

Outline of document sections:

Table of Contents

Introduction

1.1 Scope

1.2 Purpose

2. Definitions

3. References listed in document

4. Environmental factors

4.1 Ambient temperature

4.2 Cabinet temperature

4.3 Corrosion

4.4 Condensation

4.5 Submersion

4.6 Dust

4.7 Temperature cycling

4.8 Intrusion (insects, mold, rodents, reptiles, plants, etc.)

4.9 Rain

- 5. *Mechanical*
  - 5.1 *Continuous Vibration*
  - 5.2 *Pulse vibration (transport, faults, wind, etc.)*
  - 5.3 *Seismic*
  - 5.4 *Mounting options*
  - 5.5 *Vandalism (cabinet/connection integrity)*
- 6. *Grounding*
  - 6.1 *Equipotential considerations*
  - 6.2 *Soil conditions*
  - 6.3 *Connections*
    - 6.3.1 *Same pole vs. adjacent pole power supply*
  - 6.4 *Test methods*
- 7. *Electromagnetic compatibility*
  - 7.1 *Harmonics*
  - 7.2 *Lightning surges*
  - 7.3 *Switching surges*
  - 7.4 *Fault interruption*
  - 7.5 *Radiated fields*
- 8. *Functional requirements*
  - 8.1 *Supervisory control*
  - 8.2 *User interface*
  - 8.3 *Control of equipment functions*
  - 8.4 *Display function*
    - 8.4.1 *Programming*
    - 8.4.2 *Operation*
  - 8.5 *Data acquisition*
- 9. *Battery and Battery Charging*
- 10. *Hardware Interface (to the apparatus)*
- 11. *Commissioning*
- 12. *Safety*

Royster will present it to RODES on May 2<sup>nd</sup>. Royster indicated RODES would need to then decide how it wants to proceed.

Meeting adjourned at 4:56 PM