

IEEE PC37.86 Working Group Minutes
14:30 PM – 15:00 PM (UTC+8), December, 06, 2022

Online

Meeting Minutes Recorded by:

Chair: Jianmin Xue

Vice Chair: Shuai Zhang

Secretary: Jingjing Huang

1. Call to Order

The meeting was called to order at 14:30 pm(UTC+8) by the Working Group Chair, Jianmin Xue.

2. Roll call and Declaration of Affiliation

Introduction of Members and Participants.

Attendees introduced themselves and stated their affiliations.

- 6 of 9 voting-members present
- 4 Participants

3. Quorum verification

Yes – Quorum was met.

4. Approval of Meeting Agenda

Motion by Shuai Zhang to approve meeting agenda.

2nd by Panke Hou.

Approved by consent.

5. Call for patents, copyright issues

IEEE Patent and IEEE Copyright slides shown.

No issues reported.

6. IEEE Entity Participation Behavior

The entity participation behavior was presented. There were no questions or concerns.

7. Division of the draft framework

Combine the comments of participants at last meeting, optimized the draft framework. Then sought the advices of each member attending the meeting, and divided according to their advices. The division is as follows:

Chapter 1. Overview, Chapter 2. Normative references, Chapter 3. Terms and definitions, Chapter 4. Architecture, Chapter 9. Appendix, written by Xu Ji.

Chapter 5. Functional scope, written by China Southern Power Grid.

Chapter 6. Hardware technical requirements, written by Siemens Corporation.

Chapter 7. Software technical requirements, written by Beijing Sifang.

Chapter 8. Test requirements, written by State Grid Corporation of China (SGCC).

In this stage, the draft framework is not determined, just to be richer so that the discussion at the working group meeting be clearer.

8. Future Working Group Meetings

The next meeting will be schedule in the middle of January 2023.

9. Adjourn

Adjourn at 15:00 pm (UTC+8).

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Chair: Jianmin Xue

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Attendees:

Name (Last, First)	Employer	12/06/2022
Jianmin Xue	XJ Group Corporation	M
Duo Qiu	XJ Group Corporation	P
Shuai Zhang	China Southern Power Grid	M
Jinsong He	China Southern Power Grid	P
Jingjing Huang	Xi'an Jiaotong University	M
Dege Li	State Grid Corporation of China (SGCC)	M
Chao Wang	State Grid Corporation of China (SGCC)	P
Liang Guo	State Grid Corporation of China (SGCC)	P
Panke Hou	ABB Ltd	M
Lifan Yang	Schneider Electric	M

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1 Draft <Gde./Rec. Prac./Std.> for 2 <Complete Title Matching PAR>

3 1. Overview

4 1.1 Scope

5 1.2 Purpose

6 1.3 Word usage

7 <This subclause is mandatory and shall appear after the Scope and Purpose (if included).>

8 The word *shall* indicates mandatory requirements strictly to be followed in order to conform to the standard
9 and from which no deviation is permitted (*shall* equals *is required to*).^{1,2}

10 The word *should* indicates that among several possibilities one is recommended as particularly suitable,
11 without mentioning or excluding others; or that a certain course of action is preferred but not necessarily
12 required (*should* equals *is recommended that*).

13 The word *may* is used to indicate a course of action permissible within the limits of the standard (*may*
14 equals *is permitted to*).

15 The word *can* is used for statements of possibility and capability, whether material, physical, or causal (*can*
16 equals *is able to*).

17 2. Normative references

18 The following referenced documents are indispensable for the application of this document (i.e., they must
19 be understood and used, so each referenced document is cited in text and its relationship to this document is
20 explained). For dated references, only the edition cited applies. For undated references, the latest edition of
21 the referenced document (including any amendments or corrigenda) applies.

22

¹ The use of the word *must* is deprecated and cannot be used when stating mandatory requirements, *must* is used only to describe unavoidable situations.

² The use of *will* is deprecated and cannot be used when stating mandatory requirements, *will* is only used in statements of fact.

3. Definitions, acronyms, and abbreviations

3.1 Definitions

For the purposes of this document, the following terms and definitions apply. The *IEEE Standards Dictionary Online* should be consulted for terms not defined in this clause.³

3.1.1 Switchgear Terminals

3.1.2 Containers

3.1.3 Micro Application

3.1.4 Software Definition Terminals

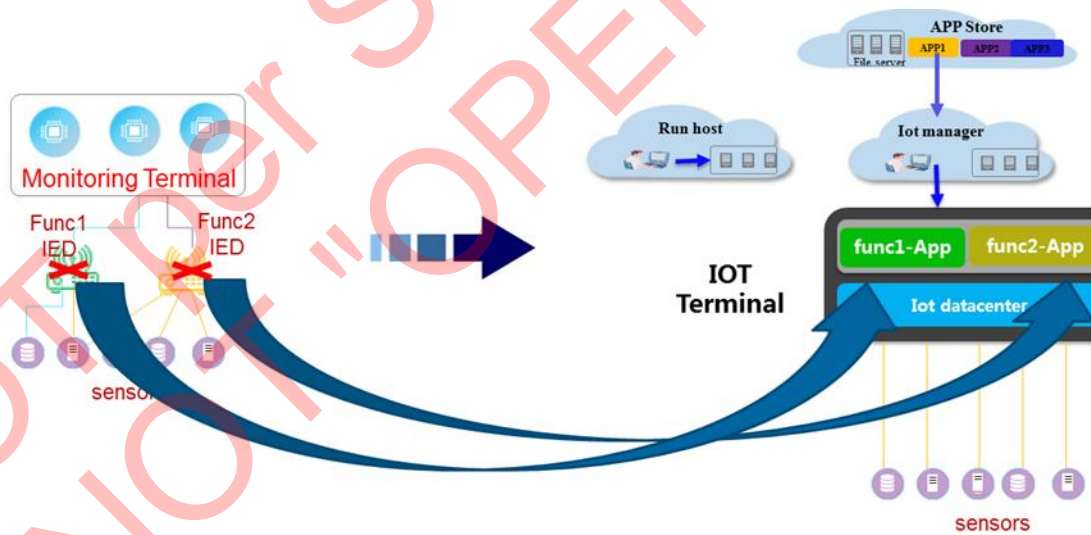
3.1.5 Edge Calculation

3.2 Acronyms and abbreviations

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<Editorial note: copy these placeholders as needed into your draft. It is recommended that you keep the unused placeholders in this section at the end of the main body (non annex) of your draft in case they are needed later. This section will be removed upon acceptance of the draft during publication and any numbering will be updated as necessary>

4. Architecture



17

18

Figure 1—

³IEEE Standards Dictionary Online is available at: <http://dictionary.ieee.org>. An IEEE Account is required for access to the dictionary, and one can be created at no charge on the dictionary sign-in page.

- 1 **5. Functional scope**
- 2 **5.1 Data collection**
- 3 **5.1.1 Temperature data acquisition**
- 4 **5.1.2 Air chamber status data acquisition**
- 5 **5.1.3 Mechanical characteristics data collection**
- 6 **5.1.4 Partial discharge data acquisition**
- 7 **5.1.5 Image Information Acquisition**
- 8 **5.2 Data processing and analysis**
- 9 **5.2.1 Temperature rise analysis**
- 10 **5.2.2 Air chamber state analysis**
- 11 **5.2.3 Insulation state analysis**
- 12 **5.2.4 Image information analysis**
- 13 **5.3 Comprehensive Analysis and Forecast**
- 14 **5.3.1 Temperature rise analysis and prediction**
- 15 **5.3.2 Air chamber state analysis and control**
- 16 **5.3.3 Insulation status**
- 17 **5.3.4 Mechanical inspection**
- 18 **5.4 Communication**
- 19 **5.4.1 Communication Objects**
- 20 **5.4.2 Physical interface and protocol for communication**
- 21 **5.5 Functions for Maintenance and upgrades**
- 22 **5.5.1 Configuration and commissioning**
- 23 **5.5.2 Diagnosis and recovery**
- 24 **5.5.3 Software upgrades**
- 25 **5.6 Extension of application area in future**

1 **6. Hardware technical requirements**

2 **6.1 Hardware architecture**

3 **6.2 External Interface**

4 **6.2.1 Transducer interface**

5 **6.2.2 Binary input and output interfaces**

6 **6.2.3 Serial communication interface**

7 **6.2.4 Wireless Sensing Interface**

8 **7. Software technical requirements**

9 **7.1 Software Architecture**

10 **7.2 Public Resource Services**

11 **7.2.1 IoT OS Services**

12 **7.2.2 Hardware Resource Services**

13 **7.3 App Management**

14 **7.3.1 Inter-App Information Model**

15 **7.3.2 App Information Model**

16 **7.4 Information remote transmission interface**

17 **7.4.1 Service Channel Interface**

18 **7.4.2 Device Management Interface**

19 **7.5 Security**

20 **7.6 Storage and Logging**

21 **8. Performance Requirements**

22 **8.1 Insulation performance**

23 **8.1.1 Insulation resistance**

24 **8.1.2 Medium strength**

1 **8.1.3 Impulse voltage**

2 **8.2 Mechanical vibration performance**

3 **8.3 Enclosure and protection**

4 **8.4 Electromagnetic compatibility**

5 **8.5 Reliability requirements**

6 **8.6 Stability requirements for continuous energization**

7 **9. Tests rules**

8 **9.1 Factory tests**

9 **9.2 Outgoing Inspection**

10 **9.3 On-site inspection**

11

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1 **Annex A**

2 (informative)

3 **Annex Heading placeholder**

4 =====

5 *<Editorial note: copy these placeholders as needed into your draft. It is recommended that you keep the
6 unused placeholders in this section at the end of the annexes in case they are needed later. This section
7 will be removed upon acceptance of the draft during publication and all numbering will be updated as
8 necessary.>*

9

10 **A.1 Annex header 1**

11 **A.1.1 Annex header 2**

12 **A.1.1.1 Annex header 3**

13 **A.1.1.1.1 Annex header 4**

14 **A.1.1.1.1.1 Annex header 5**

15 [Annex Equation placeholder] (A.1)

16 **Figure A.1—Annex figure caption placeholder**

17 **Table A.1—Annex table caption placeholder**

18

19

1 **Annex B**

2 (informative)

3 **Bibliography**

4 Bibliographical references are resources that provide additional or helpful material but do not need to be
5 understood or used to implement this standard. Reference to these resources is made for informational use
6 only.

7 [B1] Bibliographic entry placeholder.

8 [B2]

9 [B3]

10

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