

PAR for a New IEEE Standard

Section 1

1.1 Assigned Project Number:

1.2 Type of Document: Guide

1.3 Life Cycle: Full Use

Section 2

2.1 Project Title: Guide for the Technical Specification of IoT (Internet of Things) Intelligent Terminal within Switchgear

Section 3

3.1 Working Group:

3.2 Sponsoring Society and Committee:

3.3 Joint Sponsor:

Section 4

4.1 Sponsor Balloting Information: Entity

4.2 Expected Date of Submission of Draft to the IEEE-SA for Initial Sponsor Ballot
Month:May Year:2023

4.3 Projected Completion Date for Submittal to RevCom
Month:Oct Year:2024

Section 5

5.1 Approximate number of people expected to be actively involved in the development of this project:

11

5.2 Scope of the proposed standard:

This guide provides the functional and technical specifications for IoT intelligent terminal (as a device) used in intelligent switchgear, which are widely needed in power system, and the system voltage is up to 35kV.

It addresses various functions and requirements of IoT terminal's environment aspect, performance parameter, shape and installation dimensions, information exchange interface, data acquisition and precision, security, and advanced application. It can be used as a reference during the design, manufacturing, and operation for intelligent switchgear.

5.3 Is the completion of this standard contingent upon the completion of another standard? Yes or No

No

5.4 Will this document contain a Purpose clause? Yes

This guide based on IoT and configurable software and hardware platform technology is mainly to keep up with the evolving requirement of operation management and extended services within switchgear.

5.5 Need for the project:

The traditional terminal has limitations such as inadequate software scalability, non-standardized design, proprietary communication and high upgrade and operation costs. While the IoT intelligent terminal could solve these issues, but the differences between many IoT intelligent terminals are large, such as hardware structure, software function, technical principle and performance. So it is necessary to formulate a guide for its design, manufacture and acceptance to support its healthy and sustainable development.

5.6 Stakeholders for the standard:

Manufacturers, developers, consultants utilities, energy service companies, and other interested entities

Section 6

6.1 Intellectual Property:

A. Is the Sponsor aware of any copyright permissions needed for this project?
Yes or No

No

B. Is the Sponsor aware of possible registration activity related to this project?
Yes or No

No

Section 7

7.1 Are there other standards or projects with a similar scope? *Yes or No*

Sponsor Organization: IJSRD-International Journal for Scientific Research & Development

Project/Standard Number: Vol.7, Issue11

Project/Standard Date: 2020

Project/Standard Title: Advancement in the Switchgear to Intelligent Switchgear for Smart Grid

This paper elaborates the technology of switchgear intelligent construction and proposes that the use of intelligent terminals will accelerate the pace of switchgear intelligent construction.

Sponsor Organization: BS EN

Project/Standard Number: 62271

Project/Standard Date: 2004

Project/Standard Title: AC Metal-Enclosed Switchgear and Controlgear for rated voltages above 1 kV and up to and including 52kV.

This standard provides specification definition for AC Metal-Enclosed Switchgear and Controlgear for rated voltages above 1 kV and up to and including 52kV.

Sponsor Organization: IEEE

Project/Standard Number: C37.100

Project/Standard Date: 2001

Project/Standard Title: IEEE Standard Definitions for Power Switchgear

The standard defines the terms for switchgear products, including power generation, transmission, distribution circuit breakers, transfer switches, metering, and regulating power switching equipment.

Sponsor Organization: IEEE

Project/Standard Number: P2815

Project/Standard Date: 2020

Project/Standard Title: Guide for the Technical Specification of Smart Distribution Transformer Terminal

Currently approved standard is IEEE P2815, which is limited to the distribution transformer terminal to adapt to the evolving requirement brought by the increasing penetration of distributed generations and electric vehicles.

To sum up, there is no relevant international standard that can accurately and comprehensively regulate the functional requirements and performance requirements of the intelligent terminal of switchgear and RMU in the field of power transformation and distribution network.

7.2 Joint Development - Is it the intent to develop this document jointly with another organization? *Yes or No*

No

7.3 International Standards Activities

A. Adoptions - Is there potential for this standard to be adopted by another organization?: *Yes or No*

No

B. Harmonization - Are you aware of another organization that may be interested in portions of this document in their standardization development efforts?

No

7.4 Does the sponsor foresee a longer term need for testing and/or certification services to assure conformity to the standard? *Yes or No*

yes

Additionally, is it anticipated that testing methodologies will be specified in the standard to assure consistency in evaluating conformance to the criteria specified in the standard? *Yes or No*

yes

Section 8

8.1 Additional Explanatory Notes:

8.2 IEEE Code of Ethics

The PAR will not be accepted if the box below is not checked.

I acknowledge that I have read and I understand the IEEE Code of Ethics

I agree to conduct myself in a manner that adheres to the IEEE Code of Ethics when engaged in official IEEE business.