

**Power systems management and associated information exchange - Interoperability in the long term -- Part 2: End to end quality codes for supervisory control and data acquisition (SCADA)**

## EESTI STANDARDI EESSÕNA

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ICS 33.200

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**Power systems management and associated information exchange -  
Interoperability in the long term -  
Part 2: End to end quality codes for supervisory control and data  
acquisition (SCADA)  
(IEC 62361-2:2013)**

Gestion des systèmes de puissance et  
échanges d'informations associés -  
Interopérabilité à long terme -  
Partie 2: Codes de qualité de bout en bout  
pour le contrôle de supervision et  
acquisition de données (SCADA)  
(CEI 62361-2:2013)

Angeleichung der Codes für die  
Datenqualität innerhalb des TC 57 -  
Allgemeine Liste der Codes für die  
Datenqualität  
(IEC 62361-2:2013)

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Europäisches Komitee für Elektrotechnische Normung

**CEN-CENELEC Management Centre: Avenue Marnix 17, B - 1000 Brussels**

## Foreword

The text of document 57/1374/FDIS, future edition 1 of IEC 62361-2, prepared by IEC/TC 57, "Power systems management and associated information exchange" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 62361-2:2013.

The following dates are fixed:

- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2014-07-30
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2016-10-30

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## Endorsement notice

The text of the International Standard IEC 62361-2:2013 was approved by CENELEC as a European Standard without any modification.

## Annex ZA (normative)

### Normative references to international publications with their corresponding European publications

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

NOTE When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

| <u>Publication</u> | <u>Year</u> | <u>Title</u>                                                                                                                                                                            | <u>EN/HD</u>                  | <u>Year</u> |
|--------------------|-------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|-------------|
| IEC 60870-5        | Series      | Telecontrol equipment and systems -<br>Part 5: Transmission protocols                                                                                                                   | EN 60870-5                    | Series      |
| IEC 60870-6        | Series      | Telecontrol equipment and systems                                                                                                                                                       | EN 60870-6                    | Series      |
| IEC 61850          | Series      | Communication networks and systems in<br>substations                                                                                                                                    | EN 61850                      | Series      |
| IEC 61850-3        | -           | Communication networks and systems for<br>power utility automation -<br>Part 3: General requirements                                                                                    | FprEN 61850-3 <sup>1)</sup>   | -           |
| IEC 61850-7-2      | 2010        | Communication networks and systems for<br>power utility automation -<br>Part 7-2: Basic information and<br>communication structure - Abstract<br>communication service interface (ACSI) | EN 61850-7-2                  | 2010        |
| IEC 61850-7-3      | -           | Communication networks and systems for<br>power utility automation -<br>Part 7-3: Basic communication structure -<br>Common data classes                                                | EN 61850-7-3                  | -           |
| IEC 61970          | Series      | Energy management system application<br>program interface (EMS-API)                                                                                                                     | EN 61970                      | Series      |
| IEC 61970-301      | -           | Energy management system application<br>program interface (EMS-API) -<br>Part 301: Common information model (CIM)<br>base                                                               | FprEN 61970-301 <sup>1)</sup> | -           |
| ISO 8601           | 2004        | Data elements and interchange formats -<br>Information interchange - Representation of<br>dates and times                                                                               | -                             | -           |

DAIS Data Access formal/05-06-01; [www.omg.com](http://www.omg.com)

OPC Data Access version 2.03; [www.opcfoundation.org](http://www.opcfoundation.org).

OPC UA Part 8 -Data Access RC 1.01.10 Specification.doc

<sup>1)</sup> At draft stage.

## CONTENTS

|                                                                                     |    |
|-------------------------------------------------------------------------------------|----|
| FOREWORD.....                                                                       | 5  |
| INTRODUCTION.....                                                                   | 7  |
| 1 Scope.....                                                                        | 8  |
| 2 Normative references .....                                                        | 8  |
| 3 Terms and definitions .....                                                       | 9  |
| 4 Overview of applicable IEC standards .....                                        | 9  |
| 5 Quality code flow diagram from substation to control center .....                 | 10 |
| 6 List of quality codes by existing standards.....                                  | 12 |
| 6.1 Comparison of quality codes in existing standards.....                          | 12 |
| 6.2 IEC 60870-5-101/ IEC 60870-5-104 quality codes .....                            | 14 |
| 6.2.1 Data related quality .....                                                    | 14 |
| 6.2.2 Timestamp and related quality .....                                           | 14 |
| 6.3 IEC 60870-5-103 quality codes.....                                              | 15 |
| 6.4 IEC 60870-6 (TASE.2) quality codes .....                                        | 15 |
| 6.4.1 Data related quality .....                                                    | 15 |
| 6.4.2 Timestamp and related quality .....                                           | 16 |
| 6.5 IEC 61850 quality codes (from IEC 61850-7-3).....                               | 17 |
| 6.5.1 Data related quality .....                                                    | 17 |
| 6.5.2 Quality in the client server context.....                                     | 19 |
| 6.5.3 Relation between quality identifiers .....                                    | 21 |
| 6.5.4 Timestamp and related quality.....                                            | 22 |
| 6.6 IEC 61970-301 quality codes.....                                                | 24 |
| 6.6.1 General .....                                                                 | 24 |
| 6.6.2 MeasurementValueQuality Attributes defined in IEC 61970-301.....              | 24 |
| 6.6.3 MeasurementValueSource naming conventions .....                               | 25 |
| 6.7 OPC and OMG quality codes.....                                                  | 26 |
| 6.7.1 OPC DA quality codes .....                                                    | 26 |
| 6.7.2 DAIS Data Access Quality codes .....                                          | 28 |
| 6.7.3 Timestamp and related quality .....                                           | 32 |
| 6.8 OPC UA Data Access Status Codes .....                                           | 33 |
| 6.8.1 Overview .....                                                                | 33 |
| 6.8.2 Operation level result codes .....                                            | 33 |
| 7 Mapping of quality codes between standards.....                                   | 34 |
| 7.1 General.....                                                                    | 34 |
| 7.2 Mapping from IEC 61850 to IEC 60870-5-101/ IEC 60870-5-104 .....                | 34 |
| 7.3 Mapping from IEC 60870-5-101/IEC 60870-5-104 to IEC 61970-301 .....             | 36 |
| 7.4 Mapping from IEC 61850 to IEC 61970-301.....                                    | 37 |
| 7.5 Mapping from IEC 60870-6 to IEC 61970-301.....                                  | 39 |
| 7.6 Mapping from IEC 61970-301 to IEC 60870-6.....                                  | 40 |
| 7.7 Mapping from IEC 61850 to DAIS DA and OPC DA .....                              | 42 |
| 8 Common quality codes across the power systems information exchange standards..... | 44 |
| 8.1 Common quality codes .....                                                      | 44 |
| 8.2 Quality code definitions .....                                                  | 44 |
| 8.2.1 Validity quality codes.....                                                   | 44 |
| 8.2.2 Detailed quality codes .....                                                  | 45 |

|                                                                                                |                                       |    |
|------------------------------------------------------------------------------------------------|---------------------------------------|----|
| 8.2.3                                                                                          | Additional quality codes .....        | 48 |
| 8.2.4                                                                                          | Timestamp related quality codes ..... | 48 |
| 8.2.5                                                                                          | Source quality codes .....            | 48 |
| Figure 1 – Overview IEC power systems information exchange standards .....                     |                                       | 9  |
| Figure 2 – Example of quality code flow diagram from substation to remote control center ..... |                                       | 11 |
| Figure 3 – Quality type definitions .....                                                      |                                       | 17 |
| Figure 4 – Quality identifiers in a single client – server relationship .....                  |                                       | 20 |
| Figure 5 – Quality identifiers in a multiple client – server relationship .....                |                                       | 20 |
| Figure 6 – Interaction of substitution and validity .....                                      |                                       | 22 |
| Figure 7 – MeasurementValueQuality attributes inherited from IEC 61850 .....                   |                                       | 25 |
| Figure 8 – OMG DAIS quality codes .....                                                        |                                       | 30 |
| Table 1 – Overview of quality codes in existing standards .....                                |                                       | 13 |
| Table 2 – Validity attribute values .....                                                      |                                       | 16 |
| Table 3 – CurrentSource attribute values .....                                                 |                                       | 16 |
| Table 4 – NormalSource attribute values .....                                                  |                                       | 16 |
| Table 5 – NormalValue attribute values .....                                                   |                                       | 16 |
| Table 6 – DetailQual relation to invalid or questionable .....                                 |                                       | 18 |
| Table 7 – TimeStamp type definition .....                                                      |                                       | 23 |
| Table 8 – TimeQuality definition excerpt from IEC 61850-7-2:2010, Table 8 .....                |                                       | 23 |
| Table 9 – TimeAccuracy excerpt from IEC 61850-5:2013, Table 9 .....                            |                                       | 24 |
| Table 10 – Example MeasurementValueSource naming conventions .....                             |                                       | 25 |
| Table 11 – Lower 8 bits of OPC DA quality flags .....                                          |                                       | 26 |
| Table 12 – OPC standard quality BitField definition .....                                      |                                       | 26 |
| Table 13 – Substatus for BAD quality .....                                                     |                                       | 27 |
| Table 14 – Substatus for UNCERTAIN quality .....                                               |                                       | 27 |
| Table 15 – Substatus for GOOD quality .....                                                    |                                       | 28 |
| Table 16 – Limit BitField contents .....                                                       |                                       | 28 |
| Table 17 – OPCQuality members .....                                                            |                                       | 30 |
| Table 18 – Quality, status and limit bit masks .....                                           |                                       | 30 |
| Table 19 – Main quality enumerations .....                                                     |                                       | 30 |
| Table 20 – Detailed quality flags for bad quality .....                                        |                                       | 31 |
| Table 21 – Detailed quality flags for uncertain quality .....                                  |                                       | 31 |
| Table 22 – Definition of limit flags .....                                                     |                                       | 31 |
| Table 23 – DAIS masks .....                                                                    |                                       | 32 |
| Table 24 – DAIS flags defining source .....                                                    |                                       | 32 |
| Table 25 – Timestamp for DAIS quality flags .....                                              |                                       | 32 |
| Table 26 – Bad operation level result codes .....                                              |                                       | 33 |
| Table 27 – Uncertain operation level result codes .....                                        |                                       | 33 |
| Table 28 – Good operation level result codes .....                                             |                                       | 34 |
| Table 29 – Mapping from IEC 61850 to IEC 60870-5-101/IEC 60870-5-104 .....                     |                                       | 35 |
| Table 30 – Mapping from IEC 60870-5-101/IEC 60870-5-104 to IEC 61970-301 .....                 |                                       | 36 |

|                                                               |    |
|---------------------------------------------------------------|----|
| Table 31 – Mapping from IEC 61850 to IEC 61970-301 .....      | 38 |
| Table 32 – Mapping from IEC 60870-6 to IEC 61970-301 .....    | 39 |
| Table 33 – Mapping from IEC 61970-301 to IEC 60870-6 .....    | 41 |
| Table 34 – Mapping from IEC 61850 to DAIS DA and OPC DA ..... | 42 |
| Table 35 – Validity quality codes .....                       | 45 |
| Table 36 – Detailed good quality codes .....                  | 45 |
| Table 37 – Detailed invalid quality codes .....               | 46 |
| Table 38 – Detailed questionable quality codes .....          | 47 |
| Table 39 – Additional quality codes .....                     | 48 |
| Table 40 – Timestamp quality codes .....                      | 48 |
| Table 41 – Process and substituted quality codes .....        | 49 |

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## INTRODUCTION

The scope of IEC 62361-2 is to create a common list of SCADA quality codes for reference by other standards to avoid embedding quality code lists in other standards.

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# **POWER SYSTEMS MANAGEMENT AND ASSOCIATED INFORMATION EXCHANGE – INTEROPERABILITY IN THE LONG TERM –**

## **Part 2: End to end quality codes for supervisory control and data acquisition (SCADA)**

### **1 Scope**

This part of IEC 62361 documents the quality codes used by existing IEC standards related to supervisory control and data acquisition (SCADA) in the field of power systems management. Meter reading quality coding is not considered to be in the scope of this version of the document. It determines and documents mapping between these standards. Eventual loss of quality information that might occur in mapping is documented. A cohesive and common list of quality codes with semantics is defined. The identified standards to be dealt with in this document are: IEC 60870-5, IEC 60870-6 TASE.2, IEC 61850, IEC 61970, DAIS DA, OPC DA and OPC UA.

Data covered by this part of IEC 62361 is measurements provided by the following links, applications or interfaces:

- RTU, 61850 or OPC DA links to SCADA
- Validation added by state estimation
- TASE.2 (ICCP) or TASE.1 (ELCOM) links between control centers
- Servers, e.g. SCADA, that provide OPC or DAIS DA-data.

### **2 Normative references**

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 60870-5 (all parts), *Telecontrol equipment and systems – Part 5: Transmission protocols*

IEC 60870-6 (all parts), *Telecontrol equipment and systems – Part 6: Telecontrol protocols compatible with ISO standards and ITU-T recommendations*

IEC 61850 (all parts), *Communication networks and systems for power utility automation*

IEC 61850-3, *Communication networks and systems for power utility automation – Part 3: General requirements*

IEC 61850-7-2:2010, *Communication networks and systems for power utility automation – Part 7-2: Basic information and communication structure – Abstract communication service interface (ACSI)*

IEC 61850-7-3, *Communication networks and systems for power utility automation – Part 7-3: Basic communication structure – Common data classes*

IEC 61970 (all parts), *Energy management system application program interface (EMS-API)*

IEC 61970-301, *Energy management system application program interface (EMS-API) – Part 301: Common information model (CIM) base*

ISO 8601, *Data elements and interchange formats – Information interchange – Representation of dates and times*

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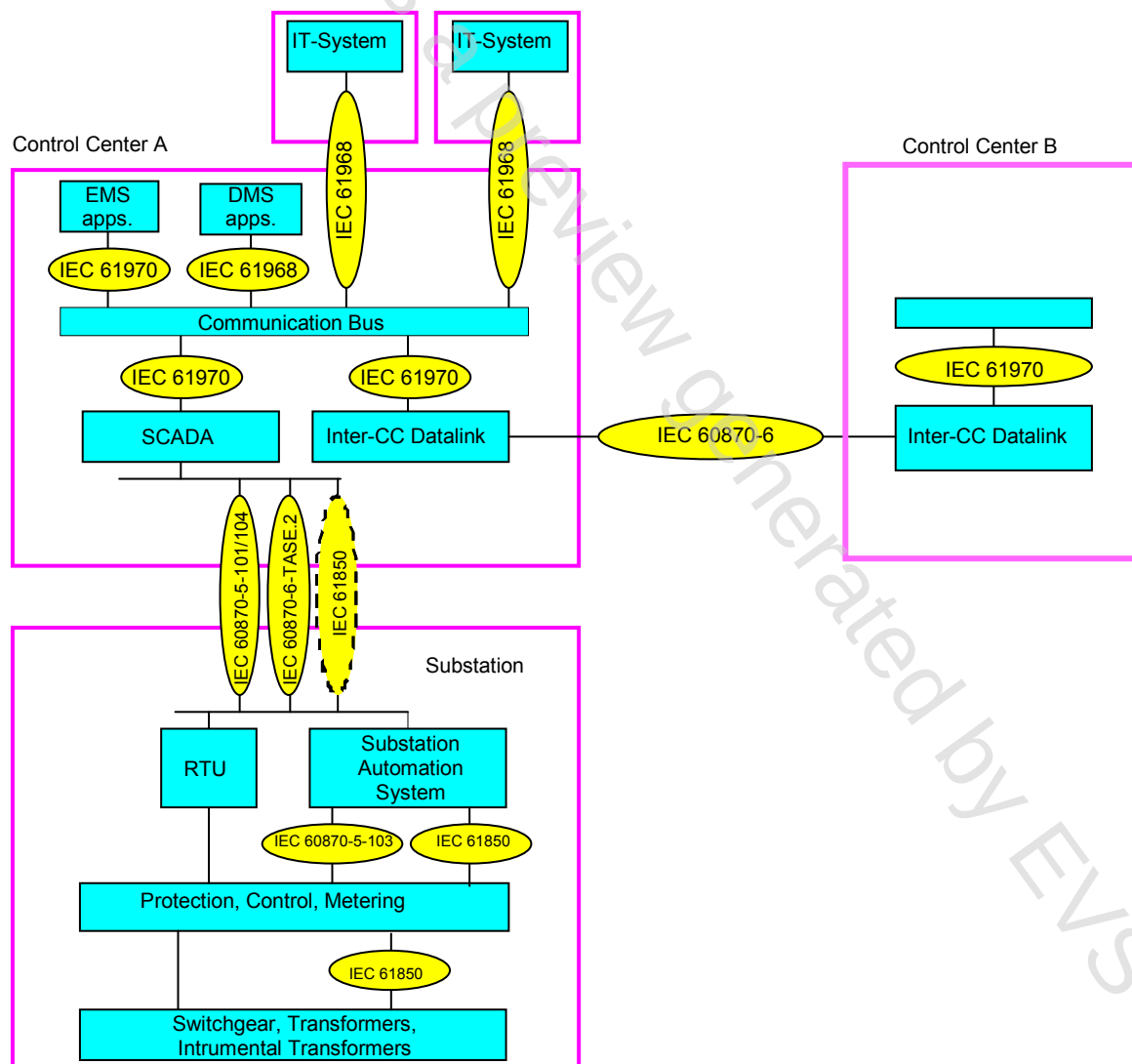
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### 3 Terms and definitions

No special terms or definitions are required to understand this document.

### 4 Overview of applicable IEC standards



IEC 2213/13

Figure 1 – Overview of IEC power systems information exchange standards