SLOVENSKI STANDARD
SIST EN 60870-5-104:2007/A1:2017

01-januar-2017

Oprema in sistemi za daljinsko vodenje – 5-104. del: Protokoli prenosa – Omrežni dostop za transportne profile po standardu IEC 60870-5-101 - Dopolnilo A1

Telecontrol equipment and systems - Part 5-104: Transmission protocols - Network access for IEC 60870-5-101 using standard transport profiles

Fernwirkeinrichtungen und -systeme - Teil 5-104: Übertragungsprotokolle - Zugriff für IEC 60870-5-101 auf Netze mit genormten Transportprofilen

Matériels et systèmes de téléconduite - Partie 5-104 : protocoles de transmission - Accès aux réseaux utilisant des profils de transport normalisés pour la CEI 60870-5-101

Ta slovenski standard je istoveten z: **EN 60870-5-104:2006/A1:2016**

ICS:

33.200	Daljinsko krmiljenje, daljinske meritve (telemetrija)
	Telecontrol. Telemetering

SIST EN 60870-5-104:2007/A1:2017 **en**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 60870-5-104:2006/A1

November 2016

ICS 33.200

English Version

Telecontrol equipment and systems - Part 5-104: Transmission protocols - Network access for IEC 60870-5-101 using standard transport profiles (IEC 60870-5-104:2006/A1:2016)

Matériels et systèmes de téléconduite - Partie 5-104 : protocoles de transmission - Accès aux réseaux utilisant des profils de transport normalisés pour la CEI 60870-5-101 (IEC 60870-5-104:2006/A1:2016)

Fernwirkeinrichtungen und -systeme - Teil 5-104: Übertragungsprotokolle - Zugriff für IEC 60870-5-101 auf Netze mit genormten Transportprofilen (IEC 60870-5-104:2006/A1:2016)

This amendment A1 modifies the European Standard EN 60870-5-104:2006; it was approved by CENELEC on 2016-07-13. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this amendment the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CENELEC member.

This amendment exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

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

European foreword

The text of document 57/1613/CDV, future IEC 60870-5-104:2006/A1, 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 60870-5-104:2006/A1:2016.

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) 2017-05-18
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2019-11-18

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC [and/or CEN] shall not be held responsible for identifying any or all such patent rights.

This document has been prepared under a mandate given to CENELEC by the European Commission and the European Free Trade Association.

Endorsement notice

The text of the International Standard IEC 60870-5-104:2006/A1:2016 was approved by CENELEC as a European Standard without any modification.

IEC 60870-5-104

Edition 2.0 2016-06

INTERNATIONAL STANDARD

NORME INTERNATIONALE

AMENDMENT 1
AMENDEMENT 1

Telecontrol equipment and systems –
Part 5-104: Transmission protocols – Network access for IEC 60870-5-101 using standard transport profiles

Matériels et systèmes de téléconduite –
Partie 5-104: Protocoles de transmission – Accès aux réseaux utilisant des profils de transport normalisés pour l'IEC 60870-5-101

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

COMMISSION
ELECTROTECHNIQUE
INTERNATIONALE

ICS 33.200 ISBN 978-2-8322-3432-7

Warning! Make sure that you obtained this publication from an authorized distributor.
Attention! Veuillez vous assurer que vous avez obtenu cette publication via un distributeur agréé.

FOREWORD

This amendment has been prepared by IEC technical committee 57: Power systems management and associated information exchange.

The text of this amendment is based on the following documents:

CDV	Report on voting
57/1613/CDV	57/1667/RVC

Full information on the voting for the approval of this amendment can be found in the report on voting indicated in the above table.

The committee has decided that the contents of this amendment and the base publication will remain unchanged until the stability date indicated on the IEC website under "http://webstore.iec.ch" in the data related to the specific publication. At this date, the publication will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

5.1 Protection against loss and duplication of messages

Replace the 4th sentence of the 2nd paragraph of Subclause 5.1 with the following new text:

The sending station holds the APDU or APDUs in a buffer until it receives back its own Send Sequence Number as a Receive Sequence Number which is a valid acknowledge for all numbers < the received number.

6 Selections of ASDUs defined in IEC 60870-5-101 and additional ASDUs

Replace the NOTE below Table 2 and Table 6 with the following new text:

NOTE ASDUs marked (CON) in control direction are confirmed application services and have to be mirrored in monitor direction with different causes of transmission. These mirrored ASDUs are used for positive/negative acknowledgements (verifications).

Exception: A controlled station receiving an ASDU with time tag (Type ID 58-64, 100, 101, 103, 105, 107, 110-113) which has exceeded the maximum allowable delay (system specific parameter) will not perform mirroring.

7.1 Station initialization (6.1.5 to 6.1.7 of IEC 60870-5-5)

Add the following NOTE after the 5th paragraph of Subclause 7.1:

NOTE Figures 19 to 22 show the principle sequences for TCP connection establishment (Figure 19), Initialization of the controlling station (Figure 20), Local initialization of the controlled station (Figure 21) and Remote initialization of the controlled station (Figure 22).

Depending on the operating system or TCP stack being used for the implementation, the sequences may differ slightly.

Figure 30 – ASDU: C_TS_TA_1 Test command with time tag CP56Time2a

Replace in Figure 30

INFORMATION OBJECT ADDRESS

by

INFORMATION OBJECT ADDRESS = 0

9.5 Application layer

Replace the first sentence of the section "Type identifier and cause of transmission assignments (station-specific parameters)" of 9.5 with the following new text:

Shaded boxes are not defined in this companion standard and shall not be used.

Add the following NOTE at the end of Subclause 9.5:

NOTE It makes sense to mark Cause of transmission (COT) 44 only for unsupported Type identifications.