SVENSK STANDARD SS-EN 60870-6-702

Fastställd	Utgåva	Sida	Ansvarig kommitté
2014-11-19	2	1 (1+39)	SEK TK 57

Utrustning för fjärrstyrning – Del 6-702: Protokoll för fjärrstyrning kompatibla med ISO-standard och rekommendationer från ITU-T – Funktionsprofil för TASE.2 applikationstjänster i ändsystem

Telecontrol equipment and systems –
Part 6-702: Telecontrol protocols compatible with ISO standards and ITU-T recommendations –
Functional profile for providing the TASE.2 application service in end systems

Som svensk standard gäller europastandarden EN 60870-6-702:2014. Den svenska standarden innehåller den officiella engelska språkversionen av EN 60870-6-702:2014.

Nationellt förord

Europastandarden EN 60870-6-702:2014

består av:

– **europastandardens ikraftsättningsdokument,** utarbetat inom CENELEC
– **IEC 60870-6-702, Second edition, 2014 - Telecontrol equipment and systems - Part 6-702: Telecontrol protocols compatible with ISO standards and ITU-T recommendations - Functional profile for providing the TASE.2 application service in end systems**

utarbetad inom International Electrotechnical Commission, IEC.

Tidigare fastställd svensk standard SS-EN 60870-6-702, utgåva 1, 2000, gäller ej fr o m 2017-08-19.

ICS 33.200.00

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 60870-6-702

October 2014

ICS 33.200

Supersedes EN 60870-6-702:1998

English Version

Telecontrol equipment and systems - Part 6-702: Telecontrol protocols compatible with ISO standards and ITU-T recommendations - Functional profile for providing the TASE.2 application service in end systems (IEC 60870-6-702:2014)

Matériels et systèmes de téléconduite - Partie 6-702: Protocoles de téléconduite compatibles avec les normes ISO et les recommandations de l'UIT-T - Profil fonctionnel pour fournir le service d'application TASE.2 dans les systèmes finals (CEI 60870-6-702:2014)

Fernwirkeinrichtungen und -systeme - Teil 6-702: Fernwirkprotokolle, die mit ISO-Normen und ITU-T-Empfehlungen kompatibel sind - Funktionsprofil für den TASE.2-Anwendungsdienst in Endsystemen (IEC 60870-6-702:2014)

This European Standard was approved by CENELEC on 2014-08-19. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard 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 European Standard 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

Ref. No. EN 60870-6-702:2014 E

SEK Svensk Elstandard

Foreword

The text of document 57/1454/FDIS, future edition 2 of IEC 60870-6-702, 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 60870-6-702:2014.

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)	2015-05-19
– latest date by which the national standards conflicting with the document have to be withdrawn	(dow)	2017-08-19

This document supersedes EN 60870-6-702:1998.

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.

Endorsement notice

The text of the International Standard IEC 60870-6-702:2014 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following note has to be added for the standard indicated :

IEC 60870-6-802:2014	NOTE	Harmonized as EN 60870-6-802:2014 (not modified).

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 1 When an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: www.cenelec.eu.

Publication	Year	Title	EN/HD	Year
IEC 60870-6-503	-	Telecontrol equipment and systems - Part 6-503: Telecontrol protocols compatible with ISO standards and ITU-T recommendations - TASE.2 Services and protocol	EN 60870-6-503	-
IEC/TS 62351-4	-	Power systems management and associated information exchange - Data and communications security - Part 4: Profiles including MMS	-	-
ISO/IEC 8327-2	-	Information technology - Open Systems Interconnection - Connection-oriented Session protocol: Protocol Implementation Conformance Statement (PICS) proforma	-	-
ISO/IEC 8650-2	-	Information technology - Open Systems Interconnection - Protocol specification for the Association Control Service Element: Protocol Implementation Conformance Statement (PICS) proforma	-	-
ISO/IEC 8823-2	-	Information technology - Open Systems Interconnection - Connection-oriented presentation protocol: Protocol Implementation Conformance Statement (PICS) proforma	-	-
ISO 9506-1	2003	Industrial automation systems - Manufacturing Message Specification - Part 1: Service definition	-	-
ISO 9506-2	2003	Industrial automation systems - Manufacturing Message Specification - Part 2: Protocol specification	-	-

Publication	Year	Title	EN/HD	Year
ISO/ISP 14226-1	1996 [1)]	Industrial automation systems - International Standardized Profile AMM11: MMS General Applications Base Profile - Part 1: Specification of ACSE, Presentation and Session protocols for the use by MMS	-	-
ISO/ISP 14226-2	1996 [1)]	Industrial automation systems - International Standardized Profile AMM11: MMS General Applications Base Profile - Part 2: Common MMS requirements	-	-
RFC 2126	-	ISO Transport Service on top of TCP (ITOT)	-	-

[1)] Withdrawn.

CONTENTS

INTERNATIONAL ELECTROTECHNICAL COMMISSION

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TELECONTROL EQUIPMENT AND SYSTEMS –

Part 6-702: Telecontrol protocols compatible with ISO standards and ITU-T recommendations – Functional profile for providing the TASE.2 application service in end systems

FOREWORD

1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
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International Standard 60870-6-702 has been prepared by IEC technical committee 57: Power systems management and associated information exchange.

This second edition cancels and replaces the first edition published in 1998 and constitutes a technical revision.

The main changes with respect to the previous edition are listed below:

– Accounts, Programs, Event Enrollment, and Event Condition objects were moved from being normative to informative. As a result, the conformance tables have been updated.
– The services associated with Accounts, Programs, Event Enrollment, and Event Conditions are now out-of-scope.
– The TASE.2 conformance blocks 6, 7, 8, and 9 have been made out-of-scope.

These changes were made in order to remove TASE.2 blocks that were seldom used and whose capabilities are typically implemented by some other means besides TASE.2. This was done to promote interoperability of implementations from an application perspective.

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

FDIS	Report on voting
57/1454/FDIS	57/1478/RVD

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

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

A list of all parts in the IEC 60870 series, published under the general title *Telecontrol equipment and systems*, can be found on the IEC website.

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC web site 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.

INTRODUCTION

This part of IEC 60870 is one of the IEC 60870-6 series defining functional profiles to be used in telecommunication networks for electric power systems. It is largely based on existing ISO/IEC International Standards and International Standardized Profiles (ISP).

The notion of functional profiles is fundamental in the organization of the IEC 60870-6 series. A description of functional profiles, their classification scheme and the manner of defining them are laid down in IEC 60870-6-1.

This profile for telecontrol application service element (TASE.2, also known as inter-control centre communications protocol, ICCP) is an application-class profile (A-profile) providing communications capabilities to control centre applications. The TASE.2 in the application layer is specified in IEC 60870-6-503. The present standard refines the application layer protocol to meet interoperability requirements and specifies requirements on the presentation and session layers support for TASE.2. TASE.2 operates in a connection mode, so this A-profile needs to interface to a transport-class profile of the T-profile variety.

Since the TASE.2 is an MMS-based protocol, this functional profile (FP) is based on MMS profiles. In the OSI international standardized profile taxonomy there is a category for MMS A-profiles. The present standard makes frequent use of the AMM11 profile.

TELECONTROL EQUIPMENT AND SYSTEMS –

Part 6-702: Telecontrol protocols compatible with ISO standards and ITU-T recommendations – Functional profile for providing the TASE.2 application service in end systems

1 Scope

This part of IEC 60870 is a functional profile (FP) and defines the provision of the TASE.2 communications services between two control centre end systems. It is supported by the transport services implemented in accordance with transport-profiles defined for the type of network that interconnects the control centre end systems. This is demonstrated in Figure 1.

This FP also defines the provision of the OSI connection-mode presentation and session services between the end systems.

ISO/ISP 14226 specifies the AMM11 profiles for MMS. The parts of ISO/ISP 14226 that cover the profile that are used as a basis for this FP are ISO/ISP 14226-1 and ISO/ISP 14226-2. This FP is in alignment with ISO/ISP 14226, as far as possible, and maintains this compatibility by reference. There are TASE.2 requirements in addition to ISO/ISP 14226. These requirements are specified in this FP.

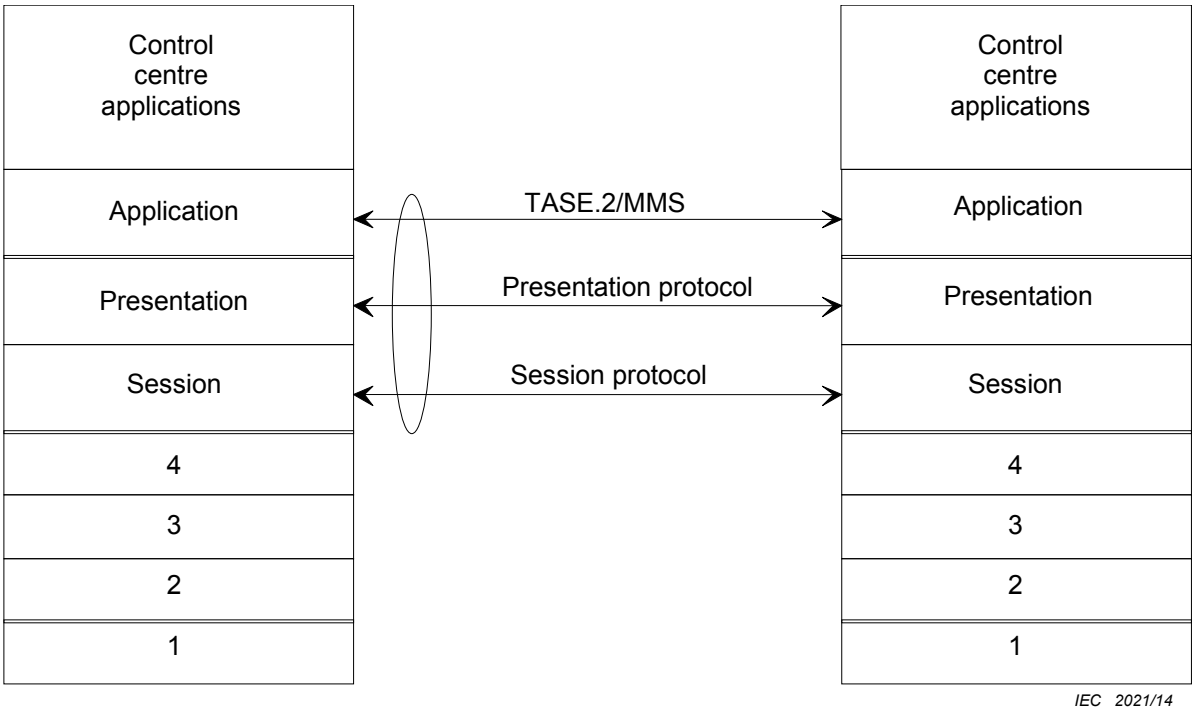

Figure 1 – Applicability of functional profile

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 60870-6-503, *Telecontrol equipment and systems – Part 6-503: Telecontrol protocols compatible with ISO standards and ITU-T recommendations – TASE.2 Services and protocol*

IEC/TS 62351-4, *Power systems management and associated information exchange – Data and communications security – Part 4: Profiles including MMS*

ISO/IEC 8327-2, *Information technology – Open Systems Interconnection – Connection-oriented Session protocol: Protocol Implementation Conformance Statement (PICS) proforma*

ISO/IEC 8650-2, *Information technology – Open Systems Interconnection – Protocol specification for the Association Control Service Element: Protocol Implementation Conformance Statement (PICS) proforma*

ISO/IEC 8823-2, *Information technology – Open Systems Interconnection – Connection-oriented presentation protocol: Protocol Implementation Conformance Statement (PICS) proforma*

ISO 9506-1:2003, *Industrial automation systems – Manufacturing Message Specification – Part 1: Service definition*

ISO 9506-2:2003, *Industrial automation systems – Manufacturing Message Specification – Part 2: Protocol specification*

ISO/ISP 14226-1:1996, *Industrial automation systems – International Standardized Profile AMM11: MMS General Applications Base Profile – Part 1: Specification of ACSE, Presentation and Session protocols for the use by MMS*[1]

ISO/ISP 14226-2:1996, *Industrial automation systems – International Standardized Profile AMM11: MMS General Applications Base Profile – Part 2: Common MMS requirements*[1]

RFC 2126, *ISO Transport Service on top of TCP (ITOT)*

[1] This publication has been withdrawn from circulation.