SVENSK STANDARD SS-EN 61970-402

Fastställd	Utgåva	Sida	Ansvarig kommitté
2009-04-27	1	1 (1+36)	SEK TK 57

Gränssnitt för EMS (EMS-API) – Del 402: Gemensamma tjänster

Energy management system application program interface (EMS-API) – Part 402: Common services

Som svensk standard gäller europastandarden EN 61970-402:2008. Den svenska standarden innehåller den officiella engelska språkversionen av EN 61970-402:2008.

Nationellt förord

Europastandarden EN 61970-402:2008

består av:

– **europastandardens ikraftsättningsdokument,** utarbetat inom CENELEC
– **IEC 61970-402, First edition, 2008 - Energy management system application program interface (EMS-API) - Part 402: Common services**

utarbetad inom International Electrotechnical Commission, IEC.

ICS 33.200

Denna standard är fastställd av SEK Svensk Elstandard,
som också kan lämna upplysningar om **sakinnehållet** i standarden.
Postadress: SEK, Box 1284, 164 29 KISTA
Telefon: 08 - 444 14 00. *Telefax*: 08 - 444 14 30
E-post: sek@elstandard.se. *Internet*: www.elstandard.se

Standarder underlättar utvecklingen och höjer elsäkerheten

Det finns många fördelar med att ha gemensamma tekniska regler för bl a säkerhet, prestanda, dokumentation, utförande och skötsel av elprodukter, elanläggningar och metoder. Genom att utforma sådana standarder blir säkerhetskraven tydliga och utvecklingskostnaderna rimliga samtidigt som marknadens acceptans för produkten eller tjänsten ökar.

Många standarder inom elområdet beskriver tekniska lösningar och metoder som åstadkommer den elsäkerhet som föreskrivs av svenska myndigheter och av EU.

SEK är Sveriges röst i standardiseringsarbetet inom elområdet

SEK Svensk Elstandard svarar för standardiseringen inom elområdet i Sverige och samordnar svensk medverkan i internationell och europeisk standardisering. SEK är en ideell organisation med frivilligt deltagande från svenska myndigheter, företag och organisationer som vill medverka till och påverka utformningen av tekniska regler inom elektrotekniken.

SEK samordnar svenska intressenters medverkan i SEKs tekniska kommittéer och stödjer svenska experters medverkan i internationella och europeiska projekt.

Stora delar av arbetet sker internationellt

Utformningen av standarder sker i allt väsentligt i internationellt och europeiskt samarbete. SEK är svensk nationalkommitté av International Electrotechnical Commission (IEC) och Comité Européen de Normalisation Electrotechnique (CENELEC).

Standardiseringsarbetet inom SEK är organiserat i referensgrupper bestående av ett antal tekniska kommittéer som speglar hur arbetet inom IEC och CENELEC är organiserat.

Arbetet i de tekniska kommittéerna är öppet för alla svenska organisationer, företag, institutioner, myndigheter och statliga verk. Den årliga avgiften för deltagandet och intäkter från försäljning finansierar SEKs standardiseringsverksamhet och medlemsavgift till IEC och CENELEC.

Var med och påverka!

Den som deltar i SEKs tekniska kommittéarbete har möjlighet att påverka framtida standarder och får tidig tillgång till information och dokumentation om utvecklingen inom sitt teknikområde. Arbetet och kontakterna med kollegor, kunder och konkurrenter kan gynnsamt påverka enskilda företags affärsutveckling och bidrar till deltagarnas egen kompetensutveckling.

Du som vill dra nytta av dessa möjligheter är välkommen att kontakta SEKs kansli för mer information.

SEK Svensk Elstandard
Box 1284
164 29 Kista
Tel 08-444 14 00
www.elstandard.se

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 61970-402

August 2008

ICS 33.200

English version

Energy management system application program interface (EMS-API) - Part 402: Common services
(IEC 61970-402:2008)

Interface de programmation d'application pour systèmes de gestion d'énergie (EMS-API) -
Partie 402: Services communs
(CEI 61970-402:2008)

Schnittstelle für Anwendungsprogramme für Netzführungssysteme (EMS-API) -
Teil 402: Allgemeine Dienste
(IEC 61970-402:2008)

CENELEC

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

Central Secretariat: rue de Stassart 35, B - 1050 Brussels

Ref. No. EN 61970-402:2008 E

SEK Svensk Elstandard

Foreword

The text of document 57/928/FDIS, future edition 1 of IEC 61970-402, prepared by IEC TC 57, Power systems management and associated information exchange, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 61970-402 on 2008-07-01.

The following dates were fixed:

– latest date by which the EN has to be implemented at national level by publication of an identical national standard or by endorsement	(dop)	2009-04-01
– latest date by which the national standards conflicting with the EN have to be withdrawn	(dow)	2011-07-01

Annex ZA has been added by CENELEC.

———————

Endorsement notice

The text of the International Standard IEC 61970-402:2008 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following notes have to be added for the standards indicated:

IEC 61850-7-2	NOTE	Harmonized as EN 61850-7-2:2003 (not modified).
IEC 61968	NOTE	Harmonized in EN 61968 series (not modified).
IEC 61968-1	NOTE	Harmonized as EN 61968-1:2004 (not modified).
IEC 61968-3	NOTE	Harmonized as EN 61968-3:2004 (not modified).
IEC 61970-301	NOTE	Harmonized as EN 61970-301:2004 (not modified).

———————

Annex ZA
(normative)

Normative references to international publications with their corresponding European publications

The following referenced documents are indispensable for the application of this document. 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.

Publication	Year	Title	EN/HD	Year
IEC 61970-1	- [1)]	Energy management system application program interface (EMS-API) - Part 1: Guidelines and general requirements	EN 61970-1	2006 [2)]
IEC/TS 61970-2	- [1)]	Energy management system application program interface (EMS-API) - Part 2: Glossary	CLC/TS 61970-2	2005 [2)]
IEC/TS 61970-401	- [1)]	Energy management system application program interface (EMS-API) - Part 401: Component interface specification (CIS) framework	-	-
IEC 61970-403	- [1)]	Energy management system application program interface (EMS-API) - Part 403: Generic data access	EN 61970-403	2008 [2)]
IEC 61970-404	- [1)]	Energy management system application program interface (EMS-API) - Part 404: High Speed Data Access (HSDA)	EN 61970-404	2007 [2)]
IEC 61970-405	- [1)]	Energy management system application program interface (EMS-API) - Part 405: Generic Eventing and Subscription (GES)	EN 61970-405	2007 [2)]
IEC 61970-407	- [1)]	Energy management system application program interface (EMS-API) - Part 407: Time Series Data Access (TSDA)	EN 61970-407	2007 [2)]
OMG DAF	2002	Utility Management System (UMS) Data Access Facility (DAF)	-	-

[1)] Undated reference.

[2)] Valid edition at date of issue.

CONTENTS

INTRODUCTION

This standard is one of the IEC 61970 series parts that define an application program interface (API) for utility operational systems. This standard is based upon the work of the Electric Power Research Institute (EPRI) Control Center API (CCAPI) research project (RP-3654-1).

The IEC 61970-4xx series specifies a set of interfaces that a component (or application) should implement to be able to exchange information with other components and/or access publicly available data in a standard way. The IEC 61970-4xx series component interfaces describe the specific event types and message contents that can be used by applications independent of any particular component technology. The implementation of these messages using a particular component technology is described in the IEC 61970-5xx series of documents. Thus, IEC 61970-4xx documents describe a Platform Independent Model (PIM), while IEC 61970-5xx documents describe a Platform Specific Model (PSM).

IEC 61970-402 contains API services that are considered to be foundational. As such, all the other parts in the IEC 61970-4xx series assume their existence. As a result, the services described in IEC 61970-402 are required for any component that complies with the IEC 61970-4xx series.

The component interface specifications refer to entity objects for the power system domain that are defined in the IEC 61970-3xx series: Common Information Model (CIM).

This standard contains normative and informative text. Clauses are marked as normative or informative. A subclause inherits its parent clause’s label unless overridden by the lower level subclause label.

ENERGY MANAGEMENT SYSTEM APPLICATION PROGRAM INTERFACE (EMS-API) –

Part 402: Common services

1 Scope

This International Standard provides the base functionality considered necessary and common that is provided by neither the normative standards incorporated by reference nor the new APIs specified in the IEC 61970-403 to IEC 61970-449 [1)] generic interface standards. An application is expected to use the Common Services in conjunction with the generic interfaces. These application category independent interfaces include:

- IEC 61970-403: Generic Data Access (GDA)
- IEC 61970-404: High Speed Data Access (HSDA)
- IEC 61970-405: Generic Eventing and Subscription (GES)
- IEC 61970-407: Time Series Data Access (TSDA)

To support these objectives, the Common Services are divided into three categories:

a) Resource Identifiers – A common way of identifying classes, class attributes, and object instances.
b) Resource Description – A common way of encoding values associated with classes, class attributes, and object instances.
c) Views – A common way of presenting classes, class attributes, and object instances via hierarchies.

IEC 61970-402 contains API services that are considered to be foundational. As such, all the other parts in the IEC 61970-4xx series assume their existence. As a result, the services described in IEC 61970-402 are required for any component that complies with the IEC 61970-4xx series of standards.

Though the target of this IEC standard includes the control center technical domain, common services encompass a general set of concepts that can be applied to many types of systems. Examples of these systems include:

- Distribution management systems
- Work or asset management systems
- Geographic information systems
- Outage management systems
- Other types of operational business systems.

In recognition that the integration between applications in two or more of these systems is often necessary, the intent of this specification is to address general common service requirements to the extent that they are common to different types of systems while effectively addressing the control center needs.

---

1) At this time, only parts 402 to 408 exist. Additional generic services beyond are not yet under consideration.