

praktijkrichtlijn

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Structuring principles for technical products and technical product documentation - Letter codes - Main classes and subclasses of objects according to their purpose and task (IEC/PAS 62400:2005,IDT)

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PUBLICLY
AVAILABLE
SPECIFICATION

IEC
PAS 62400

First edition
2005-06

**Structuring principles for technical products
and technical product documentation –**

**Letter codes – Main classes and subclasses
of objects according to their purpose
and task**



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Preview

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**STRUCTURING PRINCIPLES FOR TECHNICAL PRODUCTS AND
TECHNICAL PRODUCT DOCUMENTATION –
LETTER CODES – MAIN CLASSES AND SUBCLASSES OF OBJECTS
ACCORDING TO THEIR PURPOSE AND TASK**

FOREWORD

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IEC-PAS 62400 has been processed by IEC technical committee 3: Information structures, documentation and graphical symbols.

The text of this PAS is based on the following document:

This PAS was approved for publication by the members of the committee concerned as indicated in the following document:

Draft PAS	Report on voting
3/746/NP	3/761/RVN

Following publication of this PAS, the technical committee will investigate the possibility of incorporating the contents of it into a part of IEC 61346, in the context of the maintenance of this standard.

This PAS shall remain valid for an initial maximum period of three years starting from 2005-06. The validity may be extended for a single three-year period, following which it shall be revised to become another type of normative document, or shall be withdrawn.

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STRUCTURING PRINCIPLES FOR TECHNICAL PRODUCTS AND TECHNICAL PRODUCT DOCUMENTATION –

LETTER CODES – MAIN CLASSES AND SUBCLASSES OF OBJECTS ACCORDING TO THEIR PURPOSE AND TASK

1 Scope

This PAS extends the letter codes of the main classes for purposes or tasks of objects in accordance with IEC 61346-2, Table 1, with a second-letter code for subclasses. These specifications are generally applicable. They apply equally for all disciplines, such as construction, process and electrical engineering, and for standards, for example, for power generation, power distribution, process engineering facilities, naval architecture and ocean engineering. Additional letter codes may be specified for further subdivision of the classes.

Specification of letter codes for the main and subclasses for infrastructure objects in accordance with IEC 61346-2, Table 2, are not part of this document.

2 Normative references

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.

IEC 61346-2, *Industrial systems, installations and equipment and industrial products – Structuring principles and reference designations – Part 2: Classification of objects and codes for classes*

ISO 3511-1, *Process measurement, control functions and instrumentation – Symbolic representation – Part 1: Basic requirements*

ISO 14617-6:2002, *Graphical symbols for diagrams – Part 6: Measurement and control functions*

3 Specification of letter codes

Letter codes are specified and are generally applicable for objects fulfilling the following purposes or tasks.

- | | | |
|---|-----|-----------------------|
| – Control functions, functional allocation | = = | Functional allocation |
| – Functional equipment unit, equipment unit | = | Function, system |
| – Product, components | – | Product, component |

4 Letter codes for objects based on their purpose or task

4.1 Overview of main classes of objects with associated letter codes

Table 1 – Letter codes for objects in accordance with IEC 61346-2 (main classes)

Letter code	Purpose or task of object
A	Two or more purposes or tasks
B	Conversion of an input variable (physical property, condition or event) to a specific signal for further processing
C	Storage of energy, information or material
D	<i>Reserved for future standardization</i>
E	Providing radiant or thermal energy
F	Direct (self-acting) protection of an energy or signal flow, of personnel or facilities from dangerous or unwanted conditions including systems and equipment for protective purposes
G	Initiation of an energy or material flow; generation of signals which are used as an information carrier or reference source
H	Production of a new type of material or products
J	<i>Reserved for future standardization</i>
K	Processing (receipt, processing and providing) signals or information (with the exception of objects for protection purposes; see class F)
L	<i>Reserved for future standardization</i>
M	Providing mechanical energy (rotational or linear mechanical motion) for driving purposes
N	<i>Reserved for future standardization</i>
P	Presentation of information
Q	Controlled switching or variation of a flow of energy, signal or material (see classes K and S for signals in closed/open feedback control loops)
R	Restricting or stabilization of movement or flow of energy, information or material
S	Conversion of a manual operation to a specific signal for further processing
T	Conversion of energy while maintaining the kind of energy, conversion of an established signal while maintaining the content of information, conversion of the form or shape of a material
U	Keeping objects in a defined position
V	Processing (handling) of material or products (including pre-treatment and post-treatment)
W	Conducting or routing energy, signals, materials or products from one location to another
X	Connecting objects
Y	<i>Reserved for future standardization</i>
Z	<i>Reserved for future standardization</i>

4.2 Rules for generating subclasses

The following rules have been observed for determining the letter codes for the subclasses (2nd data character).

- The main classes as defined in Table 1 are subdivided into subclasses as shown in Table 2, with the exception of the main class with the letter code B.
- The letter codes for subclasses of the main class with the letter code B are specified according to ISO 3511-1.

Table 2 – General assignment of groups of letter codes for subclasses to application areas

Letter code for subclasses	Object, task based on
A	Electrical energy
B	
C	
D	
E	
F	Information or signals
G	
H	
J	
K	
L	Mechanical engineering Structural engineering (Non-electrical engineering)
M	
N	
P	
Q	
R	
S	
T	
U	
X	
Y	
Z	Combined tasks

4.3 Definition of subclasses of objects

Table 3 – Definitions and letter codes of subclasses related to main classes

A ^a	Purpose or task of object: two or more purposes or tasks	
Class and subclass	Task related to subclass	Examples of components
AA	Free for the subdivision of objects, tasks obtained on electrical energy	
AB		
AC		
AD		
AE		
AF	Free for the subdivision of objects, tasks obtained on information or signals	
AG		
AH		
AJ		
AK		
AL	Free for the subdivision of objects, tasks obtained on mechanical engineering, structural engineering (non-electrical engineering)	
AM		
AN		
AP		
AQ		
AR		
AS		
AT		
AU		
AV		
AW		
AX	Combined tasks	
AY		
AZ		
^a	This class is only for objects for which no main purpose or no main task can be identified.	

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