



**SLOVENSKI STANDARD**  
**SIST EN 60255-3:2001**

**01-september-2001**

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**Electrical relays - Part 3: Single input energizing quantity measuring relays with dependent or independent time**

Electrical relays -- Part 3: Single input energizing quantity measuring relays with dependent or independent time

Elektrische Relais -- Teil 3: Meßrelais mit einer Eingangsgröße mit abhängiger oder unabhängiger Zeitkennlinie

Relais électriques -- Partie 3: Relais de mesure et dispositifs de protection à une seule grandeur d'alimentation d'entrée à temps dépendant ou indépendant

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**Ta slovenski standard je istoveten z: EN 60255-3:1998**

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**ICS:**

29.120.70	Releji	Relays
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<b>SIST EN 60255-3:2001</b>	<b>en</b>
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EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

**EN 60255-3**

January 1998

ICS 29.120.70

English version

**Electrical relays**  
**Part 3: Single input energizing quantity measuring relays**  
**with dependent or independent time**  
(IEC 60255-3:1989, modified)

Relais électriques  
Partie 3: Relais de mesure et dispositifs  
de protection à une seule grandeur  
d'alimentation d'entrée à temps  
dépendant ou indépendant  
(CEI 60255-3:1989, modifiée)

Elektrische Relais  
Teil 3: Meßrelais mit einer  
Eingangsgröße mit abhängiger  
oder unabhängiger Zeitkennlinie  
(IEC 60255-3:1989, modifiziert)

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[91ca8be5260b/sist-en-60255-3-2001](https://standards.iteh.ai/catalog/standards/sist/2b80e458-2cf8-4c58-aca8-91ca8be5260b/sist-en-60255-3-2001)

This European Standard was approved by CENELEC on 1997-07-01. 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 Central Secretariat 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 Central Secretariat has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

**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

### Foreword

The text of the International Standard IEC 60255-3:1989, prepared by IEC TC 95, Measuring relays and protection equipment, together with the common modifications prepared by the CENELEC BTTF 63-5, Static measuring relays, was submitted to the Unique Acceptance Procedure and was approved by CENELEC as EN 60255-3 on 1997-07-01.

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) 1998-08-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 1998-08-01

Annexes designated "normative" are part of the body of the standard.  
In this standard, annex ZA is normative.  
Annex ZA has been added by CENELEC.

### Endorsement notice

The text of the International Standard IEC 60255-3:1989 was approved by CENELEC as a European Standard with agreed common modifications as given below.

### COMMON MODIFICATIONS

<https://standards.iteh.ai/catalog/standards/sist/2b80e458-2cf8-4c58-aca8-91ca8be5260b/sist-en-60255-3-2001>

**Add:**

### Introduction

Publications of IEC Technical Committee TC 95 are classified on a hierarchical basis:

- First level: General standards
- Second level: Generic standards relating wholly or partly to a family of relays
- Third level: Standards applicable wholly or partly to a particular group of relays
- Fourth level: Particular requirements or specifications relating to a specific type (or pattern) of a relay

This is a third level publication.

### 1 Scope and object

Replace "IEC 255-8 (1978), first edition" by "IEC 60255-8:1990".

Replace in the last line "255" by "EN 60255 and IEC 60255".



## 2 Definitions

### 2.1 *Theoretical curve of time/characteristic quantity* (see Figure 1)

Delete "(see Figure 1)".

Add in the last line "(see figure 1)".

### 2.2 *Curves of maximum and minimum limits of the operating time* (see Figure 1)

Delete "(see Figure 1)".

Add in the last line "(see figure 1)".

### 2.3 *Setting value of the characteristic quantity ( $G_S$ )* (see Figure 1)

Delete "(see Figure 1)".

Add in the last line "(see figure 1)".

Delete the note.

### 2.4 *Threshold value of the characteristic quantity ( $G_T$ )* (see Figure 1)

Delete "(see Figure 1)".

Add in the first line "(see figure 1)".

Delete "lowest".

## 3 Standard values

Add new subclause 3.1:

### "3.1 *Standard values of independent specified times*

There are no standard values of independent specified times."

### 3.1 *Standard values of dependent specified times*

Replace numbering "3.1" by "3.2".

### 3.2 *Operative ranges of auxiliary energizing quantities*

Replace numbering "3.2" by "3.3" and replace the text by:

"For other operative ranges than the preferred 80 % to 110 % the limits of the operative range shall be as declared by the manufacturer."

**3.3 Values of resetting and disengaging ratios**

Replace numbering "3.3" by "3.4".

Delete "specified in National Standards or".

**3.4 Standard reference conditions and test tolerances of influencing quantities and factors**

Replace numbering "3.4" by "3.5".

Table 2 Replace table 2 by:

**Table 2**

	Influencing quantity or factor	Reference condition	Test tolerances
General	Position	As for normal service condition	For static relays 5° in any direction or as declared by the manufacturer
Characteristics and input energizing quantities	Input energizing voltage	As declared by the manufacturer	As declared by the manufacturer
	Input energizing current	As declared by the manufacturer	As declared by the manufacturer
	D.C. transient component in a.c.	Zero	2 % peak value or as declared by the manufacturer
	Setting value	As declared by the manufacturer	As declared by the manufacturer
Auxiliary energizing quantities	Voltage or current	Rated value(s)	± 5 % of rated value or as declared by the manufacturer
Time	Parameters of the characteristic curve	As declared by the manufacturer	As declared by the manufacturer
	Setting value		
NOTE: For frequency relays, the input energizing quantity shall have its rated value ± 5 %.			

### 3.5 Standard values of the limits of the nominal ranges of influencing quantities and factors

Replace numbering "3.5" by "3.6".

Table 3 Replace table 3 by:

**Table 3**

	Influencing quantity or factor	Nominal range
General	Relative humidity	see note
	Position	For static relays 10° in any direction or as declared by the manufacturer
	External magnetic field	As declared by the manufacturer
Characteristics and input energizing quantities	Input energizing voltage	As declared by the manufacturer
	Input energizing current	
	Waveform (D.C. transient component in a.c.)	
Time	Setting parameter(s) of the curve	As declared by the manufacturer
Auxiliary energizing quantities	Voltage or current	Where necessary, as declared by the manufacturer
	Frequency	
	Waveform	
	D.C. transient component in a.c.	
NOTE: There should be neither condensation nor ice formation inside the relay.		

## 4 Accuracy

### 4.1.2 Dependent time relays

In a) replace "relays" by "overvoltage and overcurrent relays" and replace "of the higher level document 255-6 (1988)" by "of the higher level document EN/IEC 60255-6".

In b) replace "relays" by "undervoltage, undercurrent and underfrequency relays".

Add:

c) For other types of relays the characteristic accuracy shall be as stated by the manufacturer.

4.2 *Effective range of characteristic quantity*

In a) replace "relays" by "overvoltage and overcurrent relays".

In b) replace "relays" by "undervoltage, undercurrent and underfrequency relays".

**Add:**

c) For other types of relays the effective range of the characteristic quantity shall be specified by the manufacturer.

6 **Accuracy tests**6.1 *General*

**Replace the text by:**

"The conditions specified in EN 60255-6 shall be complied with."

6.3 *Determination of errors relating to the specified time*

Table 5 **Replace table 5 by:**

**Table 5**

Type of relay	Characteristic quantity	
	Initial value (unless otherwise specified by the manufacturer)	Final value
Undervoltage or undercurrent relays	0	As declared by the manufacturer
Maximum voltage or current relays	Rated value	
Frequency relays (over and/or under, see note)	Rated value	

NOTE: The tests shall be made at least at two different final values.



Table 6 Replace table 6 by:

Table 6

Type of relay	Characteristic quantity	
	Initial value	Final value
Overvoltage or overcurrent relay	0	Extreme values of effective range and at least two intermediate values
Overvoltage or overcurrent relay	0	Zero and at least one more value
Undervoltage relay	rated value	Zero and at least one more value
Undervoltage relay	rated value	as declared by the manufacturer
Undercurrent relay	as declared by the manufacturer	as declared by the manufacturer
Frequency relays (over and/or under)	rated value	as declared by the manufacturer

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## 7 Test conditions for the measurement of overshoot

Replace table 7 by: <https://standards.iteh.ai/catalog/standards/sist/2b80e458-2cf8-4c58-aca8-91ca8be5260b/sist-en-60255-3-2001>

Table 7

Type of relay	Characteristic quantity	
	Initial value	Final value
Maximum measuring relays with decreasing time function	Upper limit of effective range	0

## Annex ZA (normative)

Normative references to international publications  
with their corresponding European publications

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

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 60050	series	International electrotechnical vocabulary (IEV)	-	-
IEC 60255	series	Electrical relays	EN 60255	series
IEC 60255-6 (mod)	1988	Part 6: Measuring relays and protection equipment	EN 60255-6 + corr. February	1994 1995
IEC 60255-8 (mod)	1990	Part 8: Thermal electrical relays	EN 60255-8	1998

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## Corrigendum to EN 60255-3:1998

English version

Subclause 4.1.2

Replace the common modification to a) by:

- In a) replace "relays" by "overvoltage and overcurrent relays",  
 replace "3.1" by "3.2", and  
 replace "255-6(1988)" by "EN/IEC 60255-6".

Table 5

Replace table 5 by:

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Type of relay	Characteristic quantity	
	Initial value (unless otherwise specified by the manufacturer)	Final value
Overvoltage or overcurrent relays	0	As declared by the manufacturer
Overvoltage or overcurrent relays	Rated value	
Frequency relays (over and/or under, see note)	Rated value	

NOTE: The tests shall be made at least at two different final values.

January 1998