

---

---

Electrical and pneumatic analogue chart recorders for use in industrial-process control systems - Part 1: Methods for performance evaluation

**iTeh STANDARD PREVIEW  
(standards.iteh.ai)**

[SIST EN 60873-1:2004](https://standards.iteh.ai/catalog/standards/sist/40cfe32c-ca4a-434a-87a6-2aa4407e30a8/sist-en-60873-1-2004)

<https://standards.iteh.ai/catalog/standards/sist/40cfe32c-ca4a-434a-87a6-2aa4407e30a8/sist-en-60873-1-2004>

**iTeh STANDARD PREVIEW**  
**(standards.iteh.ai)**

SIST EN 60873-1:2004

<https://standards.iteh.ai/catalog/standards/sist/40cfe32c-ca4a-434a-87a6-2aa4407e30a8/sist-en-60873-1-2004>

English version

**Electrical and pneumatic analogue chart recorders  
for use in industrial-process control systems  
Part 1: Methods for performance evaluation  
(IEC 60873-1:2003)**

Enregistreurs de courbes électriques  
et pneumatiques pour une utilisation  
dans les systèmes de processus  
industriels  
Partie 1 : Méthodes pour l'évaluation  
des performances  
(CEI 60873-1:2003)

Elektrische und pneumatische analoge  
Streifenschreiber zum Einsatz  
in Systemen industrieller  
Prozessleittechnik  
Teil 1: Verfahren zu Bewertung  
des Betriebsverhaltens  
(IEC 60873-1:2003)

**(standards.iteh.ai)**

SIST EN 60873-1:2004

<https://standards.iteh.ai/catalog/standards/sist/40cfe32c-ca4a-434a-87a6-2aa4407e30a8/sist-en-60873-1-2004>

This European Standard was approved by CENELEC on 2003-12-01. 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, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, 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 document 65B/494/FDIS, future edition 1 of IEC 60873-1, prepared by SC 65B, Devices, of IEC TC 65, Industrial-process measurement and control, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 60873-1 on 2003-12-01.

This European Standard is to be used in conjunction with EN 61298.

This European Standard supersedes EN 60873:1993.

The main changes with respect to EN 60873:1993 concern the updating of methods for inspection and routine testing of devices, and recorder testing requirements now comply with EN 61298.

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) 2004-09-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2006-12-01

Annex ZA has been added by CENELEC.

---

## iTeh STANDARD PREVIEW

### Endorsement notice

The text of the International Standard IEC 60873-1:2003 was approved by CENELEC as a European Standard without any modification.

[SIST-EN 60873-1:2004](https://standards.iteh.ai/catalog/standards/sist/40cfe32c-ca4a-434a-87a6-2aa4407e30a8/sist-en-60873-1-2004)

<https://standards.iteh.ai/catalog/standards/sist/40cfe32c-ca4a-434a-87a6-2aa4407e30a8/sist-en-60873-1-2004>

## 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.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60050-351	1998	International Electrotechnical Vocabulary (IEV) Part 351: Automatic control	-	-
IEC 61010-1	2001	Safety requirements for electrical equipment for measurement, control, and laboratory use Part 1: General requirements	EN 61010-1 + corr. June	2001 2002
IEC 61187 (mod)	1993	Electrical and electronic measuring equipment - Documentation	EN 61187 + corr. March	1994 1995
IEC 61298-1	1995	Process measurement and control devices - General methods and procedures for evaluating performance Part 1: General considerations	EN 61298-1	1995
IEC 61298-2	1995	Part 2: Tests under reference conditions	EN 61298-2	1995
IEC 61298-3	1998	Part 3: Tests for the effects of influence quantities	EN 61298-3	1998
IEC 61298-4	1995	Part 4: Evaluation report content	EN 61298-4	1995

**iTeh STANDARD PREVIEW**  
**(standards.iteh.ai)**

SIST EN 60873-1:2004

<https://standards.iteh.ai/catalog/standards/sist/40cfe32c-ca4a-434a-87a6-2aa4407e30a8/sist-en-60873-1-2004>

# INTERNATIONAL STANDARD

# IEC 60873-1

First edition  
2003-10

---

---

## Electrical and pneumatic analogue chart recorders for use in industrial- process control systems –

### Part 1: Methods for performance evaluation

ITC STANDARD PREVIEW  
(standards.iteh.ai)

SIST EN 60873-1:2004

<https://standards.iteh.ai/catalog/standards/sist/40cfe32c-ca4a-434a-87a6-2aa4407e30a8/sist-en-60873-1-2004>

© IEC 2003 — Copyright - all rights reserved

No part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from the publisher.

International Electrotechnical Commission, 3, rue de Varembe, PO Box 131, CH-1211 Geneva 20, Switzerland  
Telephone: +41 22 919 02 11 Telefax: +41 22 919 03 00 E-mail: [inmail@iec.ch](mailto:inmail@iec.ch) Web: [www.iec.ch](http://www.iec.ch)



Commission Electrotechnique Internationale  
International Electrotechnical Commission  
Международная Электротехническая Комиссия

PRICE CODE

Q

*For price, see current catalogue*

## INTERNATIONAL ELECTROTECHNICAL COMMISSION

## ELECTRICAL AND PNEUMATIC ANALOGUE CHART RECORDERS FOR USE IN INDUSTRIAL-PROCESS SYSTEMS –

### Part 1: Methods for performance evaluation

#### 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.
- 2) The formal decisions or agreements of IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested IEC National Committees.
- 3) IEC Publications have the form of recommendations for international use and are accepted by IEC National Committees in that sense. While all reasonable efforts are made to ensure that the technical content of IEC Publications is accurate, IEC cannot be held responsible for the way in which they are used or for any misinterpretation by any end user.
- 4) In order to promote international uniformity, IEC National Committees undertake to apply IEC Publications transparently to the maximum extent possible in their national and regional publications. Any divergence between any IEC Publication and the corresponding national or regional publication shall be clearly indicated in the latter.  
<https://standards.iteh.ai/catalog/standards/sist/40cfe32c-ca4a-434a-87a6-eaa41c0a5/iec-60873-1-2003>
- 5) IEC provides no marking procedure to indicate its approval and cannot be rendered responsible for any equipment declared to be in conformity with an IEC Publication.
- 6) All users should ensure that they have the latest edition of this publication.
- 7) No liability shall attach to IEC or its directors, employees, servants or agents including individual experts and members of its technical committees and IEC National Committees for any personal injury, property damage or other damage of any nature whatsoever, whether direct or indirect, or for costs (including legal fees) and expenses arising out of the publication, use of, or reliance upon, this IEC Publication or any other IEC Publications.
- 8) Attention is drawn to the Normative references cited in this publication. Use of the referenced publications is indispensable for the correct application of this publication.
- 9) Attention is drawn to the possibility that some of the elements of this IEC Publication may be the subject of patent rights. IEC shall not be held responsible for identifying any or all such patent rights.

International Standard IEC 60873-1 has been prepared by subcommittee 65B: Devices, of IEC technical committee 65: Industrial-process measurement and control.

This first edition of IEC 60873-1 cancels and replaces IEC 60873 (1986) and constitutes a technical revision.

The main changes with respect to the previous edition concern the updating of methods for inspection and routine testing of devices, and recorder testing requirements now comply with IEC 61298.



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

FDIS	Report on voting
65B/494/FDIS	65B/511/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 standard is to be used in conjunction with IEC 61298.

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

The committee has decided that the contents of this publication will remain unchanged until 2009. At this date, the publication will be

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

A bilingual version of this publication may be issued at a later date.

**iTeh STANDARD PREVIEW**  
**(standards.iteh.ai)**

SIST EN 60873-1:2004

<https://standards.iteh.ai/catalog/standards/sist/40cfe32c-ca4a-434a-87a6-2aa4407e30a8/sist-en-60873-1-2004>

## INTRODUCTION

The methods of evaluation specified in this part of IEC 60873 are intended for use by manufacturers to determine the performance of their products and by users or independent testing establishments to verify manufacturers' performance specifications.

The test conditions in this standard, for example, the range of ambient temperatures and power supply, represent those which commonly arise in use. Consequently, the values specified herein shall be used where no other values are specified by the manufacturer.

The tests specified in this standard are not necessarily sufficient for instruments specifically designed for unusually arduous duties. Conversely, a restricted series of tests may be suitable for instruments designed to perform within a more limited range of conditions.

It will be appreciated that the closest communication should be maintained between the evaluating body and the manufacturer. Note should be taken of the manufacturer's specifications for the instrument when the test programme is being decided, and the manufacturer should be invited to comment on both the test programmes and the results.

## **iTeh STANDARD PREVIEW** **(standards.iteh.ai)**

[SIST EN 60873-1:2004](https://standards.iteh.ai/catalog/standards/sist/40cfe32c-ca4a-434a-87a6-2aa4407e30a8/sist-en-60873-1-2004)

<https://standards.iteh.ai/catalog/standards/sist/40cfe32c-ca4a-434a-87a6-2aa4407e30a8/sist-en-60873-1-2004>

# ELECTRICAL AND PNEUMATIC ANALOGUE CHART RECORDERS FOR USE IN INDUSTRIAL-PROCESS SYSTEMS –

## Part 1: Methods for performance evaluation

### 1 Scope and object

This part of IEC 60873 provides methods for determining the performance of all electrical and pneumatic analogue chart recorders operating from a standardized signal which may be used in process control. It is intended that continuous and dotted-line traces, multiple-pen and multiple-channel instruments should be covered. Some tests should not apply to all instruments and additional tests may be required for certain types of recorders.

The object of this standard is to specify uniform methods of test for the evaluation of the performance of electrical and pneumatic analogue chart recorders operating from a standardized signal which may be used in process control.

When a full evaluation in accordance with this standard is not required, those tests which are required should be performed and the results reported in accordance with those parts of the standard which are relevant. It should be made clear in such a report that the evaluation reported is not a full evaluation and the parts omitted should be indicated.

### 2 Normative references (standards.iteh.ai)

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 60050-351:1998, *International Electrotechnical Vocabulary (IEV) – Part 351: Automatic control*

IEC 61010-1:2001, *Safety requirements for electrical equipment for measurement, control, and laboratory use – Part 1: General requirements*

IEC 61187:1993, *Electric and electronic measuring equipment – Documentation*

IEC 61298-1:1995, *Process measurement and control devices – General methods and procedures for evaluating performance – Part 1: General considerations*

IEC 61298-2:1995, *Process measurement and control devices – General methods and procedures for evaluation performance – Part 2: Tests under reference conditions*

IEC 61298-3:1998, *Process measurement and control devices – General methods and procedures for evaluation performance – Part 3: Tests for the effects of influence quantities*

IEC 61298-4:1995, *Process measurement and control devices – General methods and procedures for evaluation performance – Part 4: Evaluation report content*