

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

Part 1: Methods for performance evaluation

The European Standard EN 60873-1:2004 has the status of a
British Standard

ICS 25.040.40

National foreword

This British Standard is the official English language version of EN 60873-1:2004. It is identical with IEC 60873-1:2003. It supersedes BS EN 60873:1993 which is withdrawn.

The UK participation in its preparation was entrusted by Technical Committee GEL/65, Measurement and control, to Subcommittee GEL/65/2, Elements of systems, which has the responsibility to:

- aid enquirers to understand the text;
- present to the responsible international/European committee any enquiries on the interpretation, or proposals for change, and keep the UK interests informed;
- monitor related international and European developments and promulgate them in the UK.

A list of organizations represented on this subcommittee can be obtained on request to its secretary.

Cross-references

The British Standards which implement international or European publications referred to in this document may be found in the *BSI Catalogue* under the section entitled “International Standards Correspondence Index”, or by using the “Search” facility of the *BSI Electronic Catalogue* or of British Standards Online.

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Summary of pages

This document comprises a front cover, an inside front cover, the EN title page, pages 2 to 17 and a back cover.

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**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)

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.

Endorsement notice

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

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.

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

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*