
**Vgrajeni gasilni sistemi - Sestavni deli sistemov za gašenje s plinom - 3. del:
Zahteve in preskusne metode za naprave za ročni vklop in izklop**

Fixed firefighting systems - Components for gas extinguishing systems - Part 3:
Requirements and test methods for manual triggering and stop devices

Ortsfeste Brandbekämpfungsanlagen - Bauteile für Löschanlagen mit gasförmigen
Löschmitteln - Teil 3: Anforderungen und Prüfverfahren für Handauslöseeinrichtungen
und Stoptaster

(standards.iteh.ai)

Installations fixes de lutte contre l'incendie - Eléments constitutifs pour installations
d'extinction a gaz - Partie 3: Exigences et méthodes d'essai pour dispositifs manuels de
déclenchement et d'arrêt d'urgence

Ta slovenski standard je istoveten z: EN 12094-3:2003

ICS:

13.220.10 Gašenje požara Fire-fighting

SIST EN 12094-3:2003 en

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN 12094-3:2003

<https://standards.iteh.ai/catalog/standards/sist/7b0a0963-8862-4d60-ae51-39c711ae33fa/sist-en-12094-3-2003>

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 12094-3

March 2003

ICS 13.220.20

English version

Fixed firefighting systems - Components for gas extinguishing systems - Part 3: Requirements and test methods for manual triggering and stop devices

Installations fixes de lutte contre l'incendie - Eléments constitutifs pour installations d'extinction à gaz - Partie 3: Exigences et méthodes d'essai pour dispositifs manuels de déclenchement et d'arrêt d'urgence

Ortsfeste Brandbekämpfungsanlagen - Bauteile für Löschanlagen mit gasförmigen Löschmitteln - Teil 3: Anforderungen und Prüfverfahren für Handauslöseeinrichtungen und Stoptaster

This European Standard was approved by CEN on 7 November 2002.

CEN 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 Management Centre or to any CEN 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 CEN member into its own language and notified to the Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

Management Centre: rue de Stassart, 36 B-1050 Brussels

Contents

	page
Foreword.....	3
Introduction	5
1 Scope	6
2 Normative references	6
3 Terms and definitions.....	6
4 Requirements	7
4.1 Electrical triggering and stop devices.....	7
4.2 Non-electrical triggering devices	8
4.3 Documentation.....	9
5 Tests.....	9
5.1 Electrical triggering devices.....	9
5.2 Non-electrical triggering devices	10
5.3 Resistance to overload for stop devices.....	13
6 Marking	13
7 Evaluation of conformity.....	13
7.1 General.....	13
7.2 Initial type testing	14
7.3 Factory production control (FPC).....	14
Annex ZA (informative) Clauses of this European Standard addressing the provisions of the EU Construction Products Directive	18
Bibliography	21

Foreword

This document (EN 12094-3:2003) has been prepared by CEN/TC 191 "Fixed firefighting systems", the secretariat of which is held by BSI.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by September 2003, and conflicting national standards shall be withdrawn at the latest by September 2005.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

For relationship with EU Directive(s), see informative Annex ZA, which is an integral part of this document.

This part of EN 12094 is one of a number of European Standards prepared by CEN/TC 191 covering components for gas extinguishing systems.

They are included in a series of European Standards planned to cover:

- gas extinguishing systems (EN 12094)
- sprinkler systems (EN 12259 and EN 12845)
- powder systems (EN 12416)
- explosion protection systems (EN 26184)
- foam systems (EN 13565)
- hose systems (EN 671)
- smoke and heat control systems (EN 12101)
- water spray systems¹⁾

This European Standard has the general title "*Fixed firefighting systems – Components for gas extinguishing systems*" and will consist of the following parts:

- Part 1: *Requirements and test methods for electrical automatic control and delay devices*
- Part 2: *Requirements and test methods for non-electrical automatic control and delay devices*
- Part 3: *Requirements and test methods for manual triggering and stop devices*
- Part 4: *Requirements and test methods for high pressure container valve assemblies and their actuators*
- Part 5: *Requirements and test methods for high and low pressure selector valves and their actuators for CO₂ systems*
- Part 6: *Requirements and test methods for non-electrical disable devices for CO₂ systems*

¹⁾ Under preparation.

EN 12094-3:2003 (E)

- Part 7: *Requirements and test methods for nozzles for CO₂ systems*
- Part 8: *Requirements and test methods for flexible connectors for CO₂ systems*
- Part 9: *Requirements and test methods for special fire detectors*
- Part 10: *Requirements and test methods for pressure gauges and pressure switches*
- Part 11: *Requirements and test methods for mechanical weighing devices*
- Part 12: *Requirements and test methods for pneumatic alarm devices*
- Part 13: *Requirements and test methods for check valves and non-return valves*
- Part 16: *Requirements and test methods for odorizing devices for CO₂ low pressure systems*
- Part 17: *Pipe hangers*
- Part 20: *Requirements and test methods for the compatibility of components*

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland and the United Kingdom.

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN 12094-3:2003

<https://standards.iteh.ai/catalog/standards/sist/7b0a0963-8862-4d60-ae51-39c711ae33fa/sist-en-12094-3-2003>

Introduction

It has been assumed in the preparation of this European Standard that the execution of its provisions is entrusted to appropriately qualified and experienced people.

All pressure data in this European Standard are given as gauge pressures in bar, unless otherwise stated.

NOTE 1 bar = 10^5 N m^{-2} = 100 kPa.

iTeh STANDARD PREVIEW (standards.iteh.ai)

[SIST EN 12094-3:2003](https://standards.iteh.ai/catalog/standards/sist/7b0a0963-8862-4d60-ae51-39c711ae33fa/sist-en-12094-3-2003)

<https://standards.iteh.ai/catalog/standards/sist/7b0a0963-8862-4d60-ae51-39c711ae33fa/sist-en-12094-3-2003>

EN 12094-3:2003 (E)**1 Scope**

This European Standard specifies requirements and describes test methods for manual triggering and stop devices of CO₂-, Inert Gas- or Halocarbon Gas fire extinguishing systems.

2 Normative references

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).

EN 54-11:2001, *Fire detection and fire alarm systems - Part 11: Manual call points*.

EN 60068-2-6:1996, *Environmental testing - Part 2: Tests - Tests Fc: Vibration (sinusoidal) (IEC 60068-2-6:1995 + Corrigendum 1995)*.

3 Terms and definitions

For the purpose of this European Standard, the following terms and definitions apply.

3.1 control device

component which receives a signal from a fire sensor, a fire detector, a fire detection installation or a manual triggering device and processes and transmits signals for actuation and auxiliary functions

3.2 CO₂-high-pressure installation

fire extinguishing installation in which the CO₂ is stored at ambient temperature. For example, the pressure of the CO₂ in storage is $p_{abs} = 58,6$ bar at 21 °C

3.3 CO₂-low-pressure installation

fire extinguishing installation in which the CO₂ is stored at low temperature, normally – 19 °C to – 21 °C

3.4 electrical control device

component using electrical means

3.5 halocarbon gas

extinguishing agent that contains as primary components one or more organic compounds containing one or more of the elements fluorine, chlorine, bromine or iodine

3.6 halocarbon gas installation

fire extinguishing installation in which the halocarbon gas is stored at ambient temperature

3.7 inert gas

non liquefied gas or mixture of gases which extinguish the fire mainly by reducing the oxygen-concentration in the protected zone, e.g. Argon, Nitrogen or CO₂ or mixtures of these gases

3.8**inert gas installation**

fire extinguishing installation in which the inert gas is stored at ambient temperature

3.9**manual stop device**

electrical device which allows a person to initiate the emergency stop function of the electrical control of the fire extinguishing system

NOTE The stop function is described in prEN 12094-1.

3.10**manual triggering devices**

non-electrical or electrical device which allows a person to trigger the control device of the fire extinguishing system

3.11**non-electrical control device**

component operating by mechanical or pneumatic means

3.12**working pressure**

pressure at which the component is used in the system

4 Requirements

iTeh STANDARD PREVIEW
(standards.iteh.ai)

4.1 Electrical triggering and stop devices**4.1.1 Electrical triggering devices**

SIST EN 12094-3:2003

Electrical triggering devices (with the exception stated under 4.1.3) shall comply with the technical requirements of EN 54-11:2001, type B (excluding 4.1, 4.2 and 4.7.2.3 of EN 54-11:2001) with clear indication of the function. This means that the component shall be permanently marked, in the format of 4.7.3.2.1 of EN 54-11:2001, on the front face with "MANUAL RELEASE - Gas extinguishing system" (or in the national language(s) acceptable in the country of use²⁾). The colour of the component shall be yellow.

NOTE A suitable yellow colour is specified in ISO 3864.

4.1.2 Electrical stop devices

Electrical stop devices (with the exception stated under 4.1.3) shall comply with EN 54-11:2001, type B (excluding 4.1, 4.2 and 4.7.2.3 of EN 54-11:2001) except they shall be self-resetting, with clear indication of the function. This means that the component shall be permanently marked, in the format of 4.7.3.2.1 of EN 54-11:2001, on the front face with "EMERGENCY STOP - Gas extinguishing system", (or in the national language(s) acceptable in the country of use²⁾). The colour of the component shall be blue.

NOTE A suitable blue colour is specified in ISO 3864.

The component shall function correctly when tested in accordance with 5.3.

4.1.3 Other designs

Triggering and stop devices, which do not follow the design requirements of EN 54-11:2001, shall have the same electrical function, performance and marking as specified in 4.1.1 and 4.1.2 respectively.

²⁾ A list with equivalent words in all languages accepted by each CEN member is under preparation.

EN 12094-3:2003 (E)**4.2 Non-electrical triggering devices****4.2.1 General design**

Pressurized parts of components except seals shall be made of metal.

Non-metallic materials and elastomers shall not alter, so that the operation of the device is impaired, during any of the tests.

The working pressure of a component shall be specified by the manufacturer.

The component shall be permanently marked with "MANUAL RELEASE - Gas extinguishing system" (see footnote 2 in 4.1.1).

The component shall be specified by the manufacturer either for installation on walls only or for installation on both walls and machinery.

4.2.2 Pressure

The correct function of a component shall not be impaired, when pressurised to 1,5 times the working pressure, as described in 5.2.4.

4.2.3 Strength

Components shall not burst, when pressurised to three times the working pressure, as described in 5.2.5.

4.2.4 Function and ambient temperatures

The components shall function, when tested as described in 5.2.6 and 5.2.7.

<https://standards.iteh.ai/catalog/standards/sist/7b0a0963-8862-4d60-ae51-39c711ae33fa/sist-en-12094-3-2003>

4.2.5 Operational reliability

There shall be no deterioration of performance, when a component is tested as described in 5.2.8.

4.2.6 Corrosion

Components shall operate satisfactorily after being subjected to the corrosion test as described in 5.2.9.

4.2.7 Stress corrosion

Any copper alloy part used in the component shall not crack, when tested as described in 5.2.10.

4.2.8 Vibration

Where assessment of the drawings and technical data shows that the components may be adversely affected by vibration, the component shall not operate or be damaged, when tested as described in 5.2.11 and it shall function correctly, when subsequently tested as described in 5.2.6.

The sample shall not operate during the test as a result of the vibrations. No deterioration or detachment of parts shall occur. The samples shall be able to function after the vibration test.

4.2.9 Operating force

The force required to operate the component shall not exceed:

- a) 150 N for hand operation; or

- b) 50 N for finger pull operation; or
- c) 10 N for finger push operation;

when tested as described in the 5.2.6 and 5.2.7.

The component shall function correctly during and after this test.

4.3 Documentation

4.3.1 The manufacturer shall prepare and maintain documentation.

4.3.2 The manufacturer shall prepare installation and user documentation, which shall be submitted to the testing authority together with the sample(s). This documentation shall comprise at least the following:

- a) a general description of the component, including a list of its features and functions;
- b) a technical specification including:
 - 1) the information mentioned in 4.1 and 4.2.1;
 - 2) sufficient information to permit an assessment of the compatibility with other components of the system (if applicable e.g. mechanical, electrical or software compatibility);
- c) installation instructions including mounting instructions;
- d) operating instructions;
- e) maintenance instructions;
- f) routine testing instructions if appropriate.

ITEH STANDARD PREVIEW
(standards.iteh.ai)

SIST EN 12094-3:2003

<https://standards.iteh.ai/catalog/standards/sist/7b0a0963-8862-4d60-ae51-39c711ae33fa/sist-en-12094-3-2003>

4.3.3 The manufacturer shall prepare design documentation, which shall be submitted to the testing authority together with the sample(s). This documentation shall include drawings, parts lists, block diagrams (if applicable), circuit diagrams (if applicable) and a functional description to such an extent that compliance with this European Standard can be checked and that a general assessment of the design is possible.

5 Tests

5.1 Electrical triggering devices

5.1.1 Test conditions and tests

The test conditions and tests are given in EN 54-11:2001.