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**Safety and control devices for gas and/or  
oil burners and gas and/or oil  
appliances — Particular requirements —**

**Part 1:  
Fuel/air ratio controls, electronic type**

*Dispositifs de commande et de sécurité pour brûleurs à gaz et/ou à fioul  
et pour appareils à gaz et/ou à fioul — Exigences particulières —*

*Partie 1: Dispositifs de régulation du rapport air/combustible de type  
électronique*

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Tel. + 41 22 749 01 11  
Fax + 41 22 749 09 47  
E-mail [copyright@iso.org](mailto:copyright@iso.org)  
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## Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 23552-1 was prepared by Technical Committee ISO/TC 161, *Control and protective devices for gas and oil burners and gas and oil burning appliances*.

ISO 23552 consists of the following parts, under the general title *Safety and control devices for gas and/or oil burners and gas and/or oil appliances — Particular requirements*:

— *Part 1: Fuel/air ratio controls, electronic type*

Additional parts are planned.

## Introduction

For electronic fuel/air ratio control systems, there are numerous solutions for specific applications in the market. For this reason, ISO/TC 161 decided to draft an International Standard for type testing for closed-loop fuel/air ratio control systems only.

This part of ISO 23552 does not override requirements of relevant appliance standards. It is the intention that the safety of the appliance not be reduced by any normal or abnormal operation of the ERC described in this part of ISO 23552.

In this part of ISO 23552, there is no classification, either by heat input or by applications.

The accuracy of actual fuel/air ratio is not specified as a fixed value.

This part of ISO 23552 specifies which parameters the manufacturer is required to declare and under what conditions this declaration is considered fulfilled. These parameters relate to the fuel/air ratio control systems rather than the combustion process.

This part of ISO 23552 does not include a standard test rig, however, the purpose of the tests is to verify the manufacturer's declaration under the conditions required in this part of ISO 23552.

This part of ISO 23552 is expected to be used in conjunction with ISO 23550:2004. This part of ISO 23552 refers to clauses and subclauses of ISO 23550:2004 or to variations thereof by the qualifier "addition", "modification" or "replacement" in the corresponding element.

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# Safety and control devices for gas and/or oil burners and gas and/or oil appliances — Particular requirements —

## Part 1: Fuel/air ratio controls, electronic type

### 1 Scope

This part of ISO 23552 specifies safety, construction and performance requirements for electronic fuel/air ratio control systems intended for use with gas or oil burners and gas or oil burning appliances. It also describes the test procedures for evaluating these requirements and specifies information necessary for installation and use.

This part of ISO 23552 is applicable only to closed-loop fuel/air ratio controls (see 3.1) and does not differentiate into classes by heat input.

This part of ISO 23552 applies to electronic fuel/air ratio control systems that can be tested independently or as part of an appliance or as part of a burner.

### 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.

ISO 23550:2004, *Safety and control devices for gas burners and gas-burning appliances — General requirements*

IEC 60068-2-6:1995, *Environmental testing — Part 2: Tests — Test Fc: Vibration (sinusoidal)*

IEC 60529:2001, *Degrees of protection provided by enclosures (IP Code)*

IEC 60730-1:2007, *Automatic electrical controls for household and similar use — Part 1: General requirements*

IEC 60730-2-5:2004, *Automatic electrical controls for household and similar use — Part 2-5: Particular requirements for automatic electrical burner control systems*