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BS ISO 10094-1:2010



BSI Standards Publication

Pneumatic fluid power — Electro-pneumatic pressure control valves

Part 1: Main characteristics to include in the
supplier's literature

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Pneumatic fluid power — Electro- pneumatic pressure control valves —

Part 1:

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Transmissions pneumatiques — Appareils électropneumatiques de distribution à commande continue de pression —

Partie 1: Principales caractéristiques à inclure dans la documentation des fournisseurs



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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 10094-1 was prepared by Technical Committee ISO/TC 131, *Fluid power systems*, Subcommittee SC 5, *Control products and components*.

ISO 10094 consists of the following parts, under the general title *Pneumatic fluid power — Electro-pneumatic pressure control valves*:

- *Part 1: Main characteristics to include in the supplier's literature*
- *Part 2: Test methods to determine main characteristics to include in the supplier's literature*

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Introduction

In pneumatic fluid power systems, power is transmitted and controlled through a gas under pressure within a circuit.

When it is required to track precisely a variable pressure set point or when precise pressure regulation is needed, electro-pneumatic continuous pressure control valves can be used.

These control valves continuously modulate the pneumatic power of a system in response to a continuous electrical input signal and link the electrical input value to a proportional pressure value.

It is therefore necessary to know some performance characteristics of these electro-pneumatic continuous pressure control valves in order to determine their suitability.

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Pneumatic fluid power — Electro-pneumatic pressure control valves —

Part 1: Main characteristics to include in the supplier's literature

1 Scope

This part of ISO 10094 specifies which characteristics of electro-pneumatic continuous pressure control valves are to be included in the supplier's literature.

In accordance with ISO 5598, these control valves include

- electrically modulated pneumatic proportional pressure valves,
- pressure proportional control valves, and
- pressure servo-valves (closed loop).

NOTE 1 The characteristics of non-electrically modulated pneumatic pressure control valves are specified in ISO 6953-1.

NOTE 2 The characteristics of electro-pneumatic continuous flow control valves are specified in ISO 10041-1.

NOTE 3 This part of ISO 10094 is limited to the characterization of components with an exhaust port to the atmosphere.

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 5598, *Fluid power systems and components — Vocabulary*

ISO 6953-1, *Pneumatic fluid power — Compressed air pressure regulators and filter-regulators — Part 1: Main characteristics to be included in literature from suppliers and product-marking requirements*

ISO 10094-2:2010, *Pneumatic fluid power — Electro-pneumatic pressure control valves — Part 2: Test methods to determine main characteristics to include in the supplier's literature*