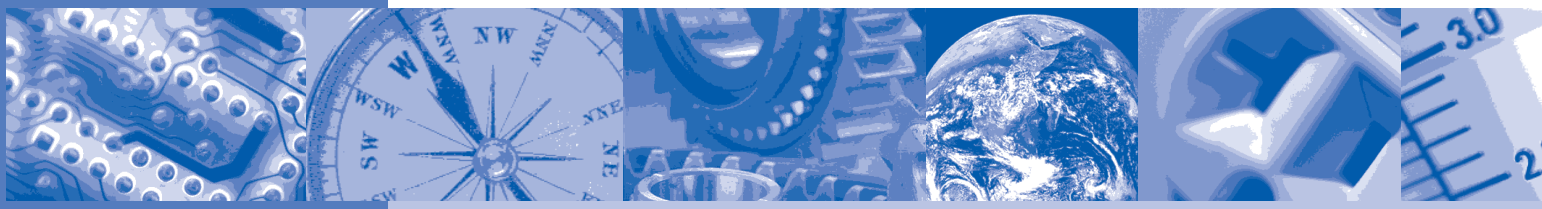
STANDARD

ISA–S71.02–1991



Environmental Conditions for Process Measurement and Control Systems: Power

Approved 30 June 1991

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Full document details: ISA S71.02-1991

ISA-S71.02 — Environmental Conditions for Process Measurement and Control Systems: Power

ISBN 1-55617-324-5

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Preface

This preface is included for informational purposes and is not part of the standard.

This standard has been prepared as part of the service of ISA toward a goal of uniformity in the field of instrumentation. To be of real value, this document should not be static, but should be subject to periodic review. Toward this end, the Society welcomes all comments and criticisms, and asks that they be addressed to the Secretary, Standards and Practices Board, ISA, 67 Alexander Drive, P.O. Box 12277, Research Triangle Park, NC 27709, Telephone (919) 549-8411, e-mail: standards@isa.org.

The ISA Standards and Practices Department is aware of the growing need for attention to the metric system of units in general, and the International System of Units (SI) in particular, in the preparation of instrumentation standards. The Department is further aware of the benefits to USA users of ISA standards of incorporating suitable references to the SI (and the metric system) in their business and professional dealings with other countries. Toward this end, this Department will endeavor to introduce SI-acceptable metric units in all new and revised standards to the greatest extent possible. *The Metric Practice Guide,* which has been published by the Institute of Electrical and Electronics Engineers as ANSI/IEEE Std. 268-1982, and future revisions will be the reference guide for definitions, symbols, abbreviations, and conversion factors.

It is the policy of ISA to encourage and welcome the participation of all concerned individuals and interests in the development of ISA standards. Participation in the ISA standards-making process by an individual in no way constitutes endorsement by the employers of the individual, of ISA, or of any of the standards that ISA develops.

The information contained in the preface, footnotes, and appendices is included for information only and is not a part of the standard.

This document is one of several standards that cover various environmental conditions affecting process measurement and control systems. In developing this standard the committee goals include the following:

1) To provide a practical standard that can be applied with minimum research and technical effort by the user.

2) To provide a concise method of stating environmental classifications for convenient communications between users of the standard.

3) To cover real-world ranges of each classified parameter.

This standard is limited to power considerations only, covering power considerations that affect industrial process measurement and control systems.

In order to make S71.02 compatible with international standards, the SP71 committee used the same limit values, except as noted below, as presented in Publication 654-2, first edition (1979), of the International Electrotechnical Commission: Operating Conditions for Industrial Process Measurement and Control Equipment, Part 2: Power. The following exceptions were made:

AC voltage unbalanced for polyphase systems was added to bring this standard into compliance with an existing ANSI standard.

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DC voltage tolerance, range 2, was adjusted to reflect tighter tolerance limits introduced since 1979.

The number of pneumatic power supply levels has been reorganized for instruments and control elements.

The assistance of those who aided in the preparation of this standard, by their review of the draft and by offering suggestions toward its improvement, is gratefully acknowledged.

The persons listed below served as members of ISA Committee SP71, which prepared this standard.

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This standard was approved for publication by the ISA Standards and Practices Board in June 1991.

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