TECHNICAL REPORT

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Specification Forms for Process Measurement and Control Instruments
Part 1: General Considerations

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Foreword

This technical report has been prepared by the ISA20 standards committee, Instrument Specification Forms. The ISA20 committee welcomes comments and suggestions, and requests that they be addressed to the Chairperson, ISA20, ISA, 67 Alexander Drive, Research Triangle Park, NC 27709 USA.

This technical report provides separate form parts for operating parameters, device specifications, and general requirements. Forms from ISA-20-1981 have been modified extensively, and many of the forms represent new devices not previously covered.

This technical report applies to all processes of development and use of ISA specification forms for process measurement and control instruments. It provides the listing of the forms, the classification of the devices, and the approved forms.

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Introduction

The completion of instrument specification forms is an extremely important segment of the complete design, purchase, and manufacture of process measurement and control instrumentation.

Approved ISA specification forms for many devices are developed that follow the guidelines of ISA–20.00.03–2001 and have been reviewed by users and manufacturers. These forms are adequate for most applications and can be provided by ISA. The defining of specification forms and a data dictionary will allow electronic data exchange between users and manufacturers.

The purposes of ISA specification forms are

a) to assist in preparation of a complete specification by listing and providing space for all principal descriptive attributes;

b) to facilitate quoting, bid reviews, purchasing, receiving, calibration, inspection, piping design, design audit, accounting, and ordering procedures by uniform display of information;

c) to improve efficiency of instrumentation activities from initial concept to final commissioning and any subsequent reviews and revisions; and

d) to provide standard data definitions and field lengths adequate for electronic exchange of information.

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1 Scope

Instrument devices with dedicated functionality may be specified using data-sheet-type, approved ISA specification forms. This technical report does not address system specifications such as shared control and shared display devices, where extensive use of functionality or performance specifications is required.

This technical report lists the ISA specification forms by form part category, measured or initiating variable, readout, or final control device categories, and form number. A form numbering system has been implemented that identifies the form categories, device function grouping, and page number. The form number, title, and development status is listed for each proposed or approved form.

2 Normative references

ISA–20.00.03–2001, Specification Forms for Process Measurement and Control Instruments, Part 3: Form Requirements and Development Guidelines.

3 Definitions

For the purpose of this technical report, the following definition applies:

3.1 specification form:
the document, or its electronic data equivalent, that details the statement of parameters or properties prescribing the design basis, construction, materials, and performance for an instrument to be supplied.

4 Application

ISA specification forms may be used for the following different levels of device specification.

4.1 Operating parameters documentation

Documentation of the operating parameters may be completed and endorsed independently of the hardware device selection and preliminary specification through the use of the separate form page.

4.2 Preliminary inquiry/quotation

For a preliminary inquiry or quotation, the specifier and vendor may agree on a minimum level of information. In this case, the specifier may mark with an asterisk (*) in the revision column of the *Operating Parameters* or *Device Specification* forms, any line that the recipient of the specification form is requested to complete.

4.3 Traditional specification

Documentation of operating parameters required for sizing or selection analysis, and identification of the instrument properties that are pertinent to the development of a manufacturer's model number, should be the minimum data provided on specification forms used to purchase instruments.

4.4 Conforming specification

A complete specification ideally should include all relevant information about the main device and associated secondary devices that has been agreed to by the purchaser and supplier. In this case, the fully completed specification form can be used for the final documentation of the instrument specifications.