

TECHNICAL REPORT

ISA-TR20.00.01-2007

Updated with 27 new specification forms in 2004-2006

Updated with 11 new specification forms in 2007

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

ISA-TR20.00.01-2007
Specification Forms for Process Measurement and Control Instruments
Part 1: General Considerations

ISBN: 978-1-93756-000-3

Copyright © 2011 by ISA. All rights reserved. Not for resale. Printed in the United States of America. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means (electronic, mechanical, photocopying, recording, or otherwise), without the prior written permission of the Publisher.

ISA
67 Alexander Drive
P. O. Box 12277
Research Triangle Park, North Carolina 27709
USA

[This is a preview. Click here to purchase the full publication.](#)

Preface

This preface, as well as all footnotes and annexes, is included for information purposes and is not part of ISA–TR20.00.01–2007.

The standards referenced within this document may contain provisions that, through reference in this text, constitute requirements of this document. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this document are encouraged to investigate the possibility of applying the most recent editions of the standards indicated within this document. Members of IEC and ISO maintain registers of currently valid International Standards. ANSI maintain registers of currently valid U.S. National Standards.

This document has been prepared as part of the service of ISA–The Instrumentation, Systems, and Automation Society, 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; Fax (919) 549-8288; 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, recommended practices, and technical reports to the greatest extent possible. *Standard for Use of the International System of Units (SI): The Modern Metric System*, published by the American Society for Testing & Materials as IEEE/ASTM SI 10-97, 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, recommended practices, and technical reports. Participation in the ISA standards-making process by an individual in no way constitutes endorsement by the employer of that individual, of ISA, or of any of the standards, recommended practices, and technical reports that ISA develops.

CAUTION — ISA ADHERES TO THE POLICY OF THE AMERICAN NATIONAL STANDARDS INSTITUTE WITH REGARD TO PATENTS. IF ISA IS INFORMED OF AN EXISTING PATENT THAT IS REQUIRED FOR USE OF THE STANDARD, IT WILL REQUIRE THE OWNER OF THE PATENT TO EITHER GRANT A ROYALTY-FREE LICENSE FOR USE OF THE PATENT BY USERS COMPLYING WITH THE STANDARD OR A LICENSE ON REASONABLE TERMS AND CONDITIONS THAT ARE FREE FROM UNFAIR DISCRIMINATION.

EVEN IF ISA IS UNAWARE OF ANY PATENT COVERING THIS STANDARD, THE USER IS CAUTIONED THAT IMPLEMENTATION OF THE STANDARD MAY REQUIRE USE OF TECHNIQUES, PROCESSES, OR MATERIALS COVERED BY PATENT RIGHTS. ISA TAKES NO POSITION ON THE EXISTENCE OR VALIDITY OF ANY PATENT RIGHTS THAT MAY BE INVOLVED IN IMPLEMENTING THE STANDARD. ISA IS NOT RESPONSIBLE FOR IDENTIFYING ALL PATENTS THAT MAY REQUIRE A LICENSE BEFORE IMPLEMENTATION OF THE STANDARD OR FOR INVESTIGATING THE VALIDITY OR SCOPE OF ANY PATENTS BROUGHT TO ITS ATTENTION. THE USER SHOULD CAREFULLY INVESTIGATE RELEVANT PATENTS BEFORE USING THE STANDARD FOR THE USER'S INTENDED APPLICATION.

HOWEVER, ISA ASKS THAT ANYONE REVIEWING THIS STANDARD WHO IS AWARE OF ANY PATENTS THAT MAY IMPACT IMPLEMENTATION OF THE STANDARD NOTIFY THE ISA STANDARDS AND PRACTICES DEPARTMENT OF THE PATENT AND ITS OWNER.

ADDITIONALLY, THE USE OF THIS STANDARD MAY INVOLVE HAZARDOUS MATERIALS, OPERATIONS OR EQUIPMENT. THE STANDARD CANNOT ANTICIPATE ALL POSSIBLE APPLICATIONS OR ADDRESS ALL POSSIBLE SAFETY ISSUES ASSOCIATED WITH USE IN HAZARDOUS CONDITIONS. THE USER OF THIS STANDARD MUST EXERCISE SOUND PROFESSIONAL JUDGMENT CONCERNING ITS USE AND APPLICABILITY UNDER THE USER'S PARTICULAR CIRCUMSTANCES. THE USER MUST ALSO CONSIDER THE APPLICABILITY OF ANY GOVERNMENTAL REGULATORY LIMITATIONS AND ESTABLISHED SAFETY AND HEALTH PRACTICES BEFORE IMPLEMENTING THIS STANDARD.

The following people served as members of ISA Committee SP20:

NAME	COMPANY
G. Barta, Chairman	Bechtel Corp.
W. Albe	Dow Corning Corp.
S. Alvarez	Compania Inspeccion Mexicana
T. Baldwin	Brown & Root, Inc.
N. Battikha	Bergo Tech, Inc.
E. Berger	Mitre Corp.
J. Carew	Consultant
T. Caston	Eastman Chemicals Co.
B. Cleary	Rosemount, Inc.
K. Cole	Burns & Roe Enterprises
E. Crawford	Nova Control Systems, Inc.
T. D. Daniel	Consultant
A. Engels	Praxair, Inc.
G. Erk	Consultant
F. Ford	Bayer Corp.
G. Gifford	Flowserve
R. Gulley	Vara International
R. Hartman	Fisher-Rosemount Systems, Inc.
C. Hill	Brown & Root, Inc.
H. Hinssen	Exxon Chemical Engineering
W. Ingham	Stantec Consulting Ltd.
A. Iverson	Ivy Optiks
D. Kelly	VECO Rocky Mountain, Inc.
H. Koning	DSM Services
M. Kulkarni	General Instruments Consortium
T. McAviney	Merrick & Co.
A. McCauley	Chagrin Valley Controls, Inc.
J. McQuighan	Constellation Energy
J. Meppen	Y. Meppen Consultants
D. Osborn	Greeley & Hansen
C. Phillips	Technip USA Corp.
G. Ramachandran	Cytec Industries, Inc.
G. Richardson	Thermco Instrument Corp.
J. Rourke	Jacobs Engineering Group
P. Rowland	SOIGNE Associates, Inc.
G. Sanders	Penberthy, Inc.
M. Scott	Process Measurement Tech. Ltd.
J. Sen	Bechtel Corp.
R. Shah	Consultant

J. Soos
 M. Spencer
 J. Summerfield
 R. Sundar
 L. Takeyasu
 D. Taylor
 R. Town
 I. Verhappen
 E. Welch
 B. Williams

Huntsman Corp.
 Desktop Engineering Ltd.
 Consultant
 Foster Wheeler USA Corp.
 Kenonic Controls, Inc.
 Spartan Controls
 Jefferson Services Co, Inc.
 Syncrude Canada Ltd.
 Duke/Fluor Daniel, Inc.
 Merck & Co. Inc.

This technical report was approved for publication by the ISA Standards and Practices Board on 04 April 2001.

NAME

COMPANY

M. Zielinski
 D. Bishop
 M. Cohen
 M. Coppler
 B. Dumortier
 W. Holland
 E. Icyan
 A. Iverson
 R. Jones
 V. Maggioli
 T. McAviney
 A. McCauley, Jr.
 G. McFarland
 D. Rapley
 R. Reimer
 J. Rennie
 H. Sasajima
 I. Verhappen
 R. Webb
 W. Weidman
 J. Weiss
 M. Widmeyer
 R. Wiegler
 C. Williams
 G. Wood

Fisher-Rosemount Systems, Inc.
 Consultant
 Consultant
 Ametek, Inc.
 Schneider Electric
 Southern Company
 Advanced Control & Engineering Solutions
 Ivy Optiks
 Dow Chemical Co.
 Feltronics Corp.
 Merrick & Co.
 Chagrin Valley Controls, Inc.
 Westinghouse Process Control Inc.
 Rapley Consulting Inc.
 Rockwell Automation
 Factory Mutual Research Corp.
 Yamatake Corp.
 Syncrude Canada Ltd.
 Power Engineers
 Parsons Energy & Chemicals Group
 EPRI
 EG&G Defense Materials
 CANUS Corp.
 Eastman Kodak Co.
 Graeme Wood Consulting

This page intentionally left blank.

Contents

Preface	3
Foreword	9
Introduction	11
1 Scope	13
2 Normative references.....	13
3 Definitions	13
4 Application	13
4.1 Operating parameters documentation.....	13
4.2 Preliminary inquiry/quotation	13
4.3 Traditional specification	13
4.4 Conforming specification	13
5 Requirements.....	14
5.1 Three form parts	14
5.2 Form numbers and titles for <i>Operating Parameters</i> forms.....	14
5.3 Form numbers and titles for <i>Device Specification</i> forms	14
5.4 Form numbers and titles for <i>General or Special Requirements</i> forms.....	14
6 General sections of ISA specification forms	14
6.1 Specification identification section.....	14
6.2 Endorsements.....	14
6.3 Revision chronicle.....	14
6.4 Component identification	15
7 Classification and designation	15
Annex A (informative) – Specification forms tables of contents.....	17
Annex B (informative) – Approved specification forms	23
Annex C (informative) – Specification forms pick list and contextual help references	117

This page intentionally left blank.

Foreword

This technical report has been prepared by ISA's SP20 standards committee, Instrument Specification Forms. The ISA-SP20 committee welcomes comments and suggestions, and requests that they be addressed to the Chairperson, ISA-SP20, 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.

This page intentionally left blank.