

**TECHNICAL REPORT**  
**ISA-TR18.2.6-2012**  
**Alarm Systems for Batch  
and Discrete Processes**  
**Approved 31 May 2012**

ISA-TR18.2.6-2012, Alarm Systems for Batch and Discrete Processes

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

E-mail: [standards@isa.org](mailto:standards@isa.org)

## Preface

This preface is included for information purposes only and is not part of ISA-TR18.2.6-2012.

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The following served as members of ISA18 Work Group 6 (WG6) to develop this technical report:

### NAME

### COMPANY

Joseph Alford	Consultant
John Bogdan	J. Bogdan Consulting LLC
Bridget Fitzpatrick	Mustang Engineering
Tejas Ghiya	Genentech
Bill Hollifield	PAS
Douglas Metzger	DPM Consulting
Graham Nasby	Eramosa Engineering Inc.
Alan Phipps	Eli Lilly
Gregory Ruklic	Consultant
Henry Salomons	Dow Chemical
Nicholas Sands	DuPont
Ruth Schiedermayer	Object Technologies CEM, Inc.
Marcus Tennant	Yokogawa
Bob Weibel	TiPS, Inc.

The following people acted as voting members of ISA18 in approving publication of this technical report:

<b>NAME</b>	<b>COMPANY</b>
Donald Dunn, Co-Chair	Aramco Services Co.
Nicholas Sands, Co-Chair	DuPont
Erwin Icayan	ACES Inc.
Joseph Alford	Joseph S. Alford LLC
Stephen Apple	IntelaTrac-Wonderware Mobile Solutions
Joe Bingham	AES Global Inc.
Alex Boquiren	Bechtel Corp.
Alan Bryant	Oxy Inc.
John Campbell	Consultant
Bridget Fitzpatrick	Mustang Engineering
Max Hanson	MCC Control Systems
Bill Hollifield	PAS
Alan Hugo	Capstone Technology
Lokesh Kalra	Chevron
Edward Marszal	Kenexis
Michael Marvan	Shell Canada
Douglas Metzger	DPM Consulting
Ian Nimmo	User Centered Design Services LLC
Patrick O'Donnell	BP
Douglas Rothenberg	D. Roth Inc.
Todd Stauffer	Exida Co.
David Strobhar	Beville Engineering Inc.
Angela Summers	SIS-TECH Solutions LP
Beth Vail	URS SMS
Bob Weibel	TiPs Inc.

This technical report was approved for publication by the ISA Standards and Practices Board on 31 May 2012.

<b>NAME</b>	<b>COMPANY</b>
D. Dunn, Vice President	Aramco Services Co.
E. Cosman, Vice President-Elect	The Dow Chemical Co.
D. Bartusiak	ExxonMobil Chemical Company
P. Brett	Honeywell Inc.
J. Campbell	Consultant
M. Coppler	Det Norske Veritas Certification Inc..
B. Dumortier	Schneider Electric
J. Federlein	Federlein & Assoc. Inc.
J. Gilsinn	U.S. NIST
E. Icayan	ACES Inc.
J. Jamison	EnCana Corporation Ltd.
K. Lindner	Endress+Hauser Process Solutions AG
V. Maggioli	Feltronics Corp.
T. McAviney	Instrumentation & Control Engineering LLC
R. Reimer	Rockwell Automation
S. Russell	Valero Energy Corp.
N. Sands	DuPont
H. Sasajima	Azbil Corp.
T. Schnaare	Rosemount Inc.
J. Tatera	Tatera & Associates Inc.

I. Verhappen  
W. Weidman  
J. Weiss  
M. Wilkins  
D. Zetterberg

Yokogawa Canada Inc.  
WCW Consulting  
Applied Control Solutions LLC  
Yokogawa IA Global Marketing USMK  
Chevron Energy Technology Company



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## Foreword

In 2003, the ISA Standards and Practices Board reactivated its ISA18 Committee (which had produced a standard in 1979 on Annunciator Sequences and Specifications – ISA-18.1-1979) to create standards for computer-based alarm systems for the process industries. In June of 2009, the ANSI/ISA approval process was completed for the standard, the result being ANSI/ISA-18.2-2009, *Management of Alarm Systems for the Process Industries*, commonly referred to as ISA-18.2. Starting in mid-2009, the ISA18 committee established working groups to produce technical reports, designed to augment the standard with additional rationale, usage guidelines, and examples in different areas of alarm management. Six technical reports are being created by these working groups:

- a) WG1 – Alarm Philosophy
- b) WG2 – Alarm Identification and Rationalization
- c) WG3 – Basic Alarm Design
- d) WG4 – Enhanced and Advanced Alarm Methods
- e) WG5 – Alarm System Monitoring, Assessment, and Auditing
- f) WG6 – Alarm Systems for Batch and Discrete Processes

This technical report, produced by Working Group 6, is designed to provide guidance, rationale, and examples for those with a need for understanding and application of ISA-18.2 to batch and discrete processes.

The guidance as presented in this document is general in nature and should be applied to each system as appropriate by personnel knowledgeable in the manufacturing process and control systems to which it is being applied. The guidance includes suggestions on appropriate techniques that are generally applicable; however, selection of activities and practices for a given system is the responsibility of the system's designers, users, and/or support staff.

It is intended that this guidance will be updated over time as experience is gained. As such, while the general format of this guidance is expected to remain relatively stable, the specifics of its application and specific solutions are expected to evolve.

## Introduction

This technical report (TR) is one of several TRs developed to provide examples and discuss how to implement the requirements and best practices contained in ISA-18.2, *Management of Alarm Systems for the Process Industries*. This TR provides guidance to manufacturers, vendors, consultants, and practitioners at end-user companies in describing how the standard applies to batch and discrete processes. Relevant techniques and examples are included.

The technical report is organized into two parts. The first part is introductory in nature (Clauses 1-5). The second part, which is the main body of the technical report (Clauses 6-18), presents information and examples on how each of the alarm management lifecycle activities described in the standard, ISA-18.2, applies to batch and discrete processes. In order to facilitate use of this technical report as an extension of the standard, Clauses 6-18 refer to the same lifecycle activities in both documents. Clause 6 in the TR, for example, corresponds to Clause 6 in ISA-18.2.

Following the recommended guidance in this technical report will not necessarily ensure that alarm management problems will be avoided. It will, however, help to identify and address alarm specification, design, implementation, and management opportunities that are important to batch and discrete processes. It can also help minimize the generation of nuisance alarms that could complicate and frustrate operators' awareness, understanding, and response to abnormal situations.

The guidance as presented in this document is general in nature and should be applied to each system, as appropriate, by personnel knowledgeable in the manufacturing process and control systems to which it is being applied. The guidance includes suggestions on appropriate applications that are generally applicable; however, selection of activities and practices for a given system is the responsibility of the system's designers, users, and/or support staff.

It is intended that this guidance will be updated over time with future revisions to this TR as experience is gained in dealing with the nuances of batch and discrete process alarms. As such, while the general format of this guidance is expected to remain relatively stable, the specifics of its application and specific solutions are expected to evolve.

## Purpose

This technical report addresses the specification, design, implementation, and management of alarms and alarm systems for batch and discrete processes. It explains how ISA-18.2 applies to batch and discrete processes and contains several examples.

This technical report was written to provide guidance for the use of ISA-18.2 for batch and discrete processes with due consideration of other guidance documents that have been developed throughout industry.

Alarms for batch and discrete processes are often associated with additional design, implementation, and management considerations compared to those for continuous processes. This technical report is intended to include these additional considerations.