Australian Standard™

Supervisory control and data acquisition (SCADA)—Generic telecommunications interface and protocol

Part 2: Fire alarm systems

Standards Australia

This Australian Standard was prepared by Committee IT/24, Supervisory Control and Data Acquisition (SCADA). It was approved on behalf of the Council of Standards Australia on 17 July 2000 and published on 25 September 2000.

The following interests are represented on Committee IT/24:

Association of Consulting Engineers Australia

Australasian Fire Authorities Council

Australasian Railway Association

Australian Communications Authority

Australian Electrical and Electronic Manufacturers Association

Australian Gas Association

Australian Information Industry Association

Australian Pipeline Industry Association

Australian Security Industry Association Limited

Australian Telecommunications Users Group

AUSTROADS

Cable & Wireless Optus Limited

CIGRE AP35

Electricity Supply Association of Australia

Fire Protection Association Australia

Institution of Engineers Australia

Telstra Corporation Limited

Water Services Association of Australia

Keeping Standards up-to-date

Standards are living documents which reflect progress in science, technology and systems. To maintain their currency, all Standards are periodically reviewed, and new editions are published. Between editions, amendments may be issued. Standards may also be withdrawn. It is important that readers assure themselves they are using a current Standard, which should include any amendments which may have been published since the Standard was purchased.

Detailed information about Standards can be found by visiting the Standards Australia web site at www.standards.com.au and looking up the relevant Standard in the on-line catalogue.

Alternatively, the printed Catalogue provides information current at 1 January each year, and the monthly magazine, *The Australian Standard*, has a full listing of revisions and amendments published each month.

We also welcome suggestions for improvement in our Standards, and especially encourage readers to notify us immediately of any apparent inaccuracies or ambiguities. Contact us via email at mail@standards.com.au, or write to the Chief Executive, Standards Australia International Ltd, GPO Box 5420, Sydney, NSW 2001.

This Standard was issued in draft form for comment as DR 99199.

Australian Standard™

Supervisory control and data acquisition (SCADA)— Generic telecommunications interface and protocol

Part 2: Fire alarm systems

Originated as AS 4418.2—1996.
Second edition 2000.

Published by Standards Australia International Ltd
GPO Box 5420, Sydney, NSW 2001, Australia

ISBN 0 7337 3557 6

PREFACE

This Standard was prepared by the Standards Australia Committee IT/24 on Supervisory Control and Data Acquisition as a revision to AS 4418.2 — 1996.

The objective of this Standard is to provide fire equipment manufacturers and fire alarm monitoring organizations with a telecommunications protocol for connecting fire alarm systems to monitoring centres, in order to achieve system and equipment interoperability. Other industry groups may also find the requirements applicable. The objective of this revision is to enhance interoperability and to add additional features based on practical implementation of the Standard.

This Standard is consistent with requirements developed by IEC and published in IEC 60870, *Telecontrol equipment and systems,* the relevant Parts of which have been issued as Australian Standard, AS 60870 of the same name. This Part has been prepared as one of a possible series of Standards for SCADA applications. AS 4418.1 defines the general requirements, including security and addressing, for SCADA networks and this Part is a specific fire alarm monitoring application. The two Parts should be read in conjunction.

Other applications which could form further Parts of this series of Standards could cover areas such as systems for service utilities, transport and security.

Standards Australia/Standards New Zealand Committee FP/2 on Automatic Fire Detection, Warning and Intercom Systems has prepared a product Standard for alarm signalling equipment designed to utilize this telecommunications protocol, AS 4428.6 *Fire detection, warning, control and intercom systems—Control and indicating equipment* Part 6: *Alarm signalling equipment*. In addition, Committee FP/2 has prepared a Standard which specifies minimum alarm monitoring network performance parameters which network designers are able to use to ensure adequate performance of monitored fire alarm systems, AS 1670.3 *Fire detection, warning, control and intercom systems — Control and indicating equipment —System design, installation, and commissioning* Part 3: *Monitoring network performance.*

The term 'informative' has been used in this Standard to define the application of the appendix to which it applies. An 'informative' appendix is only for information and guidance.

CONTENTS

Page

STANDARDS AUSTRALIA

Australian Standard

Supervisory control and data acquisition (SCADA)—Generic telecommunications interface and protocol

Part 2: Fire alarm systems

SECTION 1 SCOPE AND GENERAL

1.1 SCOPE

The purpose of this Standard is to standardize the monitoring of fire alarm systems installed in remote premises, and connected to a monitoring centre.

1.2 APPLICATION

The protocol defined in this Standard is for connection-oriented networks. If a connectionless protocol is required, ITU-T Rec.X.400 addressing shall be used. Supervisory control and data acquisition (SCADA) networks for fire alarm monitoring applications shall comply with the relevant parts of AS 4418.1 and this Standard.

Whilst this Standard specifies many features and a high degree of functionality, smaller lower technology systems can still be accommodated. Most responses from a controlled station allow a particular message from an individual controlled station to not be implemented. This can be used by manufacturers to enable the production of partially functional, yet fully compliant, alarm system DTE. In addition, the text area available for the description of the location of the actuating devices may be used to describe the area of coverage of an individual alarm zone circuit, thus permitting the connection of collective control and indicating equipment (CIE). In this case, references to actuating devices should be read as alarm zone circuits.

NOTE: To assist manufacturers to detail the level of functionality available with individual alarm systems DTEs, Appendix A provides a simple tick-the-box information supplement to enable monitoring network providers and end users to make direct comparisons between equipment suppliers.

Whilst this Standard may be more easily implemented using dedicated point-to-point links, it may also be implemented using switched or packet networks as allowed in AS 60870-1-4.

1.3 REFERENCED AND RELATED DOCUMENTS

1.3.1 Referenced documents

The following documents are referred to in this Standard:

AS	
1670	Fire detection, warning, control and intercom systems—System design, installation, and commissioning
1670.3	Part 3: Monitoring network performance
2484	Fire—Glossary of terms
2484.2	Part 2: Fire protection and fire fighting equipment
4418	Supervisory control and data acquisition (SCADA)—Generic telecommunications interface and protocol
4418.1	Part 1: General

