

INTERNATIONAL STANDARD

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**Application integration at electric utilities – System interfaces for distribution management –
Part 3: Interface for network operations**

**Intégration d'applications pour les services électriques – Interfaces système pour la gestion de la distribution –
Partie 3: Interface pour l'exploitation du réseau**



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INTERNATIONAL
ELECTROTECHNICAL
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ICS 33.200

ISBN 978-2-8322-4084-7

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CONTENTS

FOREWORD.....	6
INTRODUCTION.....	8
1 Scope.....	9
2 Normative references	10
3 Terms, definitions and abbreviated terms	11
3.1 Terms and definitions.....	11
3.2 Abbreviated terms.....	11
4 Reference and Information Models	11
4.1 General approach to network operations	11
4.2 Reference Model.....	12
4.3 Interface Reference Model.....	13
4.4 Network operations functions and components	13
4.5 Static Information Model	15
4.5.1 General	15
4.5.2 Classes related to network operations.....	15
5 Network operations message payloads.....	15
5.1 General.....	15
5.2 OperationsConfiguration payload.....	16
5.2.1 General	16
5.2.2 Message payload.....	16
5.3 MeasurementsAndControls payload	17
5.3.1 General.....	17
5.3.2 Measurement.....	17
5.3.3 Control	18
5.3.4 Message payload.....	18
5.4 TemporaryNetworkChanges payload.....	21
5.4.1 General	21
5.4.2 Message payloads.....	22
5.5 SwitchingPlan payload	27
5.5.1 General	27
5.5.2 Message payload.....	28
5.6 OperationalTags payload.....	36
5.6.1 General	36
5.6.2 Message payload.....	37
5.7 TroubleTicket payload.....	38
5.8 Incident payload	39
5.8.1 General	39
5.8.2 Message payload.....	41
5.9 Outage payload	42
5.9.1 General	42
5.9.2 Message payload.....	44
5.10 Metering message payloads.....	45
5.10.1 EndDeviceEvent	45
5.10.2 MeterReading	45

5.11	Work message payloads.....	46
5.11.1	WorkOrder	46
5.12	SwitchingOrder	47
5.12.1	General.....	47
5.12.2	Message payload.....	48
5.13	TroubleOrder	49
5.13.1	General.....	49
5.13.2	Message payload.....	50
5.14	OutageSchedule	51
5.14.1	General.....	51
5.14.2	Message payload.....	52
6	Document Conventions.....	55
6.1	UML diagrams.....	55
6.2	Message payload definitions.....	55
6.2.1	General.....	55
6.2.2	Mandatory versus Optional.....	55
6.3	Synchronous versus Asynchronous Messages.....	55
6.4	Message exchanges.....	55
Annex A (informative)	Use Cases.....	56
A.1	General.....	56
A.2	FLISR.....	56
A.2.1	Overview.....	56
A.2.2	FLISR for SCADA-detected outage, SCADA switching.....	56
A.2.3	FLISR for trouble call and AMI outage, crew switching.....	58
A.3	Planned outage.....	62
A.3.1	Planned outage for maintenance – Manual process.....	62
A.3.2	Planned outage for maintenance – Crew switching.....	63
Annex B (normative)	XML Schemas for message payloads.....	68
B.1	General.....	68
B.2	Incidents message payload.....	68
B.3	MeasurementsAndControls message payload.....	75
B.4	OperationalTags message payload.....	82
B.5	OperationsConfig message payload.....	85
B.6	OutagesAndFaults message payload.....	87
B.7	OutageSchedules message payload.....	96
B.8	SwitchingOrders message payload.....	117
B.9	SwitchingPlans message payload.....	123
B.10	TemporaryNetworkChanges message payload.....	140
B.11	TroubleOrders message payload.....	150
Bibliography	160
Figure 1	– IEC 61968-3 Scope.....	10
Figure 2	– IEC 61968-3 Reference Model.....	12
Figure 3	– OperationsConfiguration message payload.....	16
Figure 4	– MeasurementsAndControls	17

Figure 5 – **MeasurementsAndControls** message payload 19

Figure 6 – **MeasurementsAndControls** message payload, **AnalogValue** detail 20

Figure 7 – **MeasurementsAndControls** message payload, Setpoint
(**AnalogControl**) detail 21

Figure 8 – Temporary Network Changes 22

Figure 9 – **TemporaryNetworkChanges** message payload 22

Figure 10 – **TemporaryNetworkChanges** message payload, **Clamp** detail 23

Figure 11 – **TemporaryNetworkChanges** message payload, **Cut** detail 24

Figure 12 – **TemporaryNetworkChanges** message payload, **EnergySource**
Details 25

Figure 13 – **TemporaryNetworkChanges** message payload, **Ground** details 26

Figure 14 – **TemporaryNetworkChanges** message payload, **Jumper** Details 27

Figure 15 – Switching Plan 28

Figure 16 – **SwitchingPlans** message payload 29

Figure 17 – **SwitchingPlans** message payload, **SafetyDocument** detail 30

Figure 18 – **SwitchingPlan** message payload, **ClearanceAction** detail 31

Figure 19 – **SwitchingPlan** message payload, **GenericAction** detail 32

Figure 20 – **SwitchingPlan** message payload, **EnergySourceAction** detail 32

Figure 21 – **SwitchingPlan** message payload, **CutAction** detail 33

Figure 22 – **SwitchingPlan** message payload, **GroundAction** detail 34

Figure 23 – **SwitchingPlan** message payload, **JumperAction** detail 34

Figure 24 – **SwitchingPlan** message payload, **SwitchingAction** detail 35

Figure 25 – **SwitchingPlan** message payload, **TagAction** detail 36

Figure 26 – Tags 37

Figure 27 – **OperationalTags** message payload 38

Figure 28 – Trouble Ticket 39

Figure 29 – **Incident** 40

Figure 30 – **Incident** message payload 41

Figure 31 – **Outage** 42

Figure 32 – **OutagesAndFaults** message payload 44

Figure 33 – End Device Event 45

Figure 34 – Meter Reading 46

Figure 35 – Work Order 47

Figure 36 – Switching Order 48

Figure 37 – **SwitchingOrder** message payload 49

Figure 38 – Trouble Order 50

Figure 39 – **TroubleOrder** message payload 51

Figure 40 – Outage Schedule 52

Figure 41 – **OutageSchedule** message payload 53

Figure 42 – OutageSchedule message payload, PlannedOutages detail	54
Figure A.1 – FLISR for SCADA-Detected Outage, SCADA Switching	57
Figure A.2 – FLISR for trouble call and AMI outage, crew switching	60
Figure A.3 – Planned outage for maintenance – Manual process	63
Figure A.4 – Planned outage for maintenance, crew switching	65
Table 1 – Business Functions and Abstract Components	14
Table 2 – Interpretation of Network Operations Business Functions	15
Table 3 – Classes related to network operations	15
Table A.1 – Message Flow for FLISR SCADA-Detected Outage, SCADA Switching	58
Table A.2 – Message flows for FLISR for trouble call and AMI outage, crew switching	61
Table A.3 – Message flows for planned outage for maintenance, crew switching	66

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**APPLICATION INTEGRATION AT ELECTRIC UTILITIES –
SYSTEM INTERFACES FOR DISTRIBUTION MANAGEMENT –**

Part 3: Interface for network operations

FOREWORD

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International Standard IEC 61968-3 has been prepared by IEC technical committee 57: Power systems management and associated information exchange.

The text of this standard is based on the following documents:

FDIS	Report on voting
57/1810/FDIS	57/1841/RVD

Full information on the voting for the approval of this International Standard can be found in the report on voting indicated in the above table.

This document has been drafted in accordance with the ISO/IEC Directives, Part 2.

This second edition cancels and replaces the first edition published in 2004. It constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

- a) Replaced Measurement list with Measurement and Controls.
- b) Replaced OperationalRestriction with Tag.
- c) Replaced OutageRecord with Outage.
- d) Replaced SafetyDocument with ClearanceDocument.
- e) Replaced SwitchingSchedule with SwitchingOrder.
- f) Added SwitchingPlan.
- g) Added Temporary Network Change.
- h) Added TroubleTicket.
- i) Added Incident.
- j) Added TroubleOrder.
- k) Added use cases and sequence diagrams.

In this standard, the following print types are used:

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A list of all parts of the IEC 61968 series, under the general title: *Application integration at electric utilities – System interfaces for distribution management* can be found on the IEC website.

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INTRODUCTION

The purpose of this part of IEC 61968 is to define a standard for the integration of network operations systems with each other and other systems and business functions within the scope of IEC 61968. The specific details of communication protocols those systems employ are outside the scope of this part of IEC 61968. Instead, this part of IEC 61968 will recognize and model the general capabilities that can be potentially provided by network operations systems. In this way, this part of IEC 61968 will not be impacted by the specification, development and/or deployment of next generation network operations systems, either through the use of standards or proprietary means.

The IEC 61968 series of standards is intended to facilitate inter-application integration as opposed to intra-application integration. Intra-application integration is aimed at programs in the same application system, usually communicating with each other using middleware that is embedded in their underlying runtime environment, and tends to be optimised for close, real-time, synchronous connections and interactive request/reply or conversation communication models. Therefore, these inter-application interface standards are relevant to loosely coupled applications with more heterogeneity in languages, operating systems, protocols and management tools. This series of standards is intended to support applications that need to exchange data every few seconds, minutes, or hours rather than waiting for a nightly batch run. This series of standards, which are intended to be implemented with middleware services that exchange messages among applications, will complement, not replace utility data warehouses, database gateways, and operational stores.

As used in IEC 61968, a distribution management system (DMS) consists of various distributed application components for the utility to manage electrical distribution networks. These capabilities include monitoring and control of equipment for power delivery, management processes to ensure system reliability, voltage management, demand-side management, outage management, work management, automated mapping and facilities management. Standard interfaces are defined for each class of applications identified in the interface reference model (IRM), which is described in IEC 61968-1.