IEC/PAS 62633

Edition 1.0 2009-08

PUBLICLY AVAILABLE SPECIFICATION

PRE-STANDARD

**Industrial communication networks – Profiles –
Additional Fieldbus profiles for real-time networks based on ISO/IEC 8802-3 – SNpTYPE**

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

PRICE CODE R

ICS 25.040.40; 35.100.05

ISBN 978-2-88910-818-3

® Registered trademark of the International Electrotechnical Commission

CONTENTS

FOREWORD 3
INTRODUCTION 4
1 Scope 5
2 Normative references 5
3 Terms, definitions, abbreviated terms, acronyms, and conventions 5
3.1 Terms and definitions 5
3.1.30 5
3.2 Abbreviated terms and acronyms 5
3.3 Symbols 6
3.3.12 CPF SNpFAMILY symbols 6
3.4 Conventions 6
4 Conformance to communication profiles 6
5 RTE performance indicators 6
6 Conformance tests 6
7 Communication Profile Family SNpFAMILY (SafetyNET p) - RTE communication profiles 7
7.1 General overview 7
7.2 Profile SNpFAMILY/1 7
7.2.1 Physical layer 7
7.2.2 Data link layer 7
7.2.3 Application layer 10
7.2.4 Performance indicator selection 11
7.3 Profile SNpFAMILY/2 14
7.3.1 Physical layer 14
7.3.2 Data link layer 14
7.3.3 Application layer 17
7.3.4 Performance indicator selection 19

Table 1 – CP SNpFAMILY/1: DLL service selection 7
Table 2 – CP SNpFAMILY/1: DLL protocol selection 9
Table 3 – CP SNpFAMILY/1: AL service selection 10
Table 4 – CP SNpFAMILY/1: AL protocol selection 11
Table 5 – CP SNpFAMILY/1: Performance indicator overview 12
Table 6 – CP SNpFAMILY/1: Performance indicator dependency matrix 12
Table 7 – CP SNpFAMILY/2: DLL service selection 15
Table 8 – CP SNpFAMILY/2: DLL protocol selection 16
Table 9 – CP SNpFAMILY/2: AL service selection 17
Table 10 – CP SNpFAMILY/2: AL protocol selection 18
Table 11 – CP SNpFAMILY/2: Performance indicator overview 19
Table 12 – CP SNpFAMILY/2: Performance indicator dependency matrix 19

INTERNATIONAL ELECTROTECHNICAL COMMISSION

INDUSTRIAL COMMUNICATION NETWORKS – PROFILES – ADDITIONAL FIELDBUS PROFILES FOR REAL-TIME NETWORKS BASED ON ISO/IEC 8802-3 – SNpTYPE

FOREWORD

1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
2) The formal decisions or agreements of IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested IEC National Committees.
3) IEC Publications have the form of recommendations for international use and are accepted by IEC National Committees in that sense. While all reasonable efforts are made to ensure that the technical content of IEC Publications is accurate, IEC cannot be held responsible for the way in which they are used or for any misinterpretation by any end user.
4) In order to promote international uniformity, IEC National Committees undertake to apply IEC Publications transparently to the maximum extent possible in their national and regional publications. Any divergence between any IEC Publication and the corresponding national or regional publication shall be clearly indicated in the latter.
5) IEC provides no marking procedure to indicate its approval and cannot be rendered responsible for any equipment declared to be in conformity with an IEC Publication.
6) All users should ensure that they have the latest edition of this publication.
7) No liability shall attach to IEC or its directors, employees, servants or agents including individual experts and members of its technical committees and IEC National Committees for any personal injury, property damage or other damage of any nature whatsoever, whether direct or indirect, or for costs (including legal fees) and expenses arising out of the publication, use of, or reliance upon, this IEC Publication or any other IEC Publications.
8) Attention is drawn to the Normative references cited in this publication. Use of the referenced publications is indispensable for the correct application of this publication.
9) Attention is drawn to the possibility that some of the elements of this IEC Publication may be the subject of patent rights. IEC shall not be held responsible for identifying any or all such patent rights.

A PAS is a technical specification not fulfilling the requirements for a standard, but made available to the public.

IEC-PAS 62633 has been processed by subcommittee 65C: Industrial networks, of IEC technical committee 65: Industrial-process measurement, control and automation.

The text of this PAS is based on the following document:	This PAS was approved for publication by the P-members of the committee concerned as indicated in the following document
Draft PAS	**Report on voting**
65C/530/PAS	65C/534/RVD

Following publication of this PAS, which is a pre-standard publication, the technical committee or subcommittee concerned may transform it into an International Standard.

This PAS shall remain valid for an initial maximum period of 3 years starting from the publication date. The validity may be extended for a single 3-year period, following which it shall be revised to become another type of normative document, or shall be withdrawn.

INTRODUCTION

This PAS contains an additional profile – SNpTYPE – which may be integrated into a future new edition of IEC 61784-2.

INDUSTRIAL COMMUNICATION NETWORKS – PROFILES – ADDITIONAL FIELDBUS PROFILES FOR REAL-TIME NETWORKS BASED ON ISO/IEC 8802-3 – SNpTYPE

1 Scope

This Clause is identical in form and content for all CPFs to that of IEC 61784-2:2007.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

This Clause is identical in form and content for all CPFs to that of IEC 61784-2:2007.

IEC 61784-2:2007, *Industrial communication networks – Profiles – Part 2: Additional fieldbus profiles for real-time networks based on ISO/IEC 8802-3*