ISO/IEEE 11073-10404:2010-05 (E)

Health informatics — Personal health device communication — Part 10404: Device specialization — Pulse oximeter

Contents

Page

Foreword v

Introduction vii

1. Overview 1

1.1 Scope 1
1.2 Purpose 1
1.3 Context 2

2. Normative references 2

3. Definitions, acronyms, and abbreviations 2

3.1 Definitions 2
3.2 Acronyms and abbreviations 3

4. Introduction to ISO/IEEE 11073 personal health devices 3

4.1 General 3
4.2 Introduction to IEEE 11073-20601 modeling constructs 4

5. Pulse oximeter device concepts and modalities 4

5.1 General 4
5.2 Device types 5
5.3 General concepts 5
5.4 Collected data 6
5.5 Derived data 8
5.6 Stored data 8
5.7 Device configurations 8

6. Pulse oximeter DIM 9

6.1 Overview 9
6.2 Class extensions 9
6.3 Object instance diagram 9
6.4 Types of configuration 10
6.5 MDS object 11
6.6 Numeric objects 14
6.7 Real-time sample array (RT-SA) objects 24
6.8 Enumeration objects 25
6.9 PM-store objects 29
6.10 Scanner objects 33
6.11 Class extension objects 37
6.12 Pulse oximeter information model extensibility rules 37

7. Pulse oximeter service model 37

7.1 General 37
7.2 Object access services 37
7.3 Object access EVENT REPORT services 40

8. Pulse oximeter communication model 41

8.1 Overview 41
8.2 Communications characteristics 41
8.3 Association procedure 42
8.4 Configuring procedure 43
8.5 Operating procedure 45
8.6 Time synchronization 46

9. Test associations 46

9.1 Behavior with standard configuration 46
9.2 Behavior with extended configurations 46

10. Conformance 46

10.1 Applicability 46
10.2 Conformance specification 47
10.3 Levels of conformance 47
10.4 Implementation conformance statements (ICSs) 48

Annex A (informative) Bibliography 52

Annex B (normative) Additional ASN.1 definitions 53

Annex C (normative) Allocation of identifiers 55

Annex D (informative) Message sequence examples 57

Annex E (informative) PDU examples 59