

ISO/IEEE 11073-10419:2019-03 (E)

Health informatics - Personal health device communication - Part 10419: Device specialization - Insulin pump

Contents

- 1. Overview 12
 - 1.1 Scope 12
 - 1.2 Purpose 12
 - 1.3 Context 12

- 2. Normative references..... 13

- 3. Definitions, acronyms, and abbreviations 13
 - 3.1 Definitions 13
 - 3.2 Acronyms and abbreviations 15

- 4. Introduction to ISO/IEEE 11073 personal health devices (PHDs)..... 16
 - 4.1 General 16
 - 4.2 Introduction to ISO/IEEE 11073-20601 modeling constructs 16
 - 4.3 Compliance with other standards..... 17

- 5. Insulin pump device concepts and modalities 17
 - 5.1 General 17
 - 5.2 Device types 18
 - 5.3 Collected data 19
 - 5.4 Stored data 24
 - 5.5 Scheduled data..... 24

- 6. Insulin pump domain information model (DIM)..... 24
 - 6.1 Overview 24
 - 6.2 Class extensions..... 24
 - 6.3 Object instance diagram 25
 - 6.4 Types of configuration..... 26
 - 6.5 Profiles..... 27
 - 6.6 MDS object..... 27
 - 6.7 Numeric objects..... 30
 - 6.8 Real-time sample array objects..... 45
 - 6.9 Enumeration objects 46
 - 6.10 PM-store objects 51
 - 6.11 Schedule-store objects 56
 - 6.12 Scanner objects 65
 - 6.13 Class extension objects 65
 - 6.14 Insulin pump information model extensibility rules 65

- 7. Insulin pump service model..... 65
 - 7.1 General 65
 - 7.2 Object access services..... 65
 - 7.3 Object access event report services 69

- 8. Insulin pump communication model 69
 - 8.1 Overview 69
 - 8.2 Communications characteristics 69
 - 8.3 Association procedure 70
 - 8.4 Configuring procedure..... 71
 - 8.5 Operating procedure 73
 - 8.6 Time synchronization 74

9. Test associations	74
9.1 Behavior with standard configuration.....	74
9.2 Behavior with extended configurations	74
10. Conformance	74
10.1 Applicability	74
10.2 Conformance specification	75
10.3 Levels of conformance	75
10.4 Implementation conformance statements (ICSs)	76
Annex A (informative) Bibliography	81
Annex B (normative) Any additional ASN.1 definitions	82
B.1 Device status and insulin pump status bit mapping	82
B.2 Capability-mask	83
B.3 State-flag	84
Annex C (normative) Allocation of identifiers.....	86
10.5 General	86
10.6 Definitions of terms and codes	86
10.7 Systematic derivations of terms and codes	88
Annex D (informative) Message sequence examples.....	97
Annex E (normative) Schedule-store class.....	99
E.1 Schedule-store class	99
E.2 Schedule-segment class.....	103
Annex F (normative) Schedule class ASN.1 definitions	107
F.1 ACTION-method-related data types	107
F.2 Data types for new object attributes and object services	107
F.3 Data protocol definitions	110
Annex G (informative) The schedule-store concept.....	111
G.1 General.....	111
G.2 Schedule-store object hierarchy.....	112
Annex H (informative) Scedule communication model	115
H.1 Operating procedure	115
Annex I (informative) Protocol data unit (PDU) examples	119
I.1 General	119
I.2 Association information exchange	119
I.3 Configuration information exchange.....	122
I.4 GET MDS attributes service	126
I.5 Data reporting.....	128
I.6 Disassociation.....	128
Annex J (informative) Revision history	129