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Health informatics—Personal health device communication

Part 10427: Device specialization—Power Status Monitor of Personal Health Devices

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Approved 22 September 2016

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Abstract: Guidelines for establishing criteria for application, performance, interchangeability, tests, life cycle costs, and safety requirements of traction power rectifier transformers are established in this standard. Set forth are the electrical, mechanical and thermal design, manufacturing, and testing requirements for traction power rectifier transformers for dc electrification systems. Covered in this standard are liquid-immersed and dry-type transformers, including those with cast coil and epoxy resin encapsulated windings.

Keywords: basic lightning impulse insulation, BIL, commutating impedance, design optimization, electrical requirements, factory tests, ferroresonance, heavy rail, hot spot, IEEE 1653.1™, light rail, load cycle, overvoltage transient, partial discharge (PD) service conditions, tests, traction power duty cycle, traction power rectifier transformers, transit application

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Introduction

This introduction is not part of IEEE Std 11073-10427-2016, Health Informatics—Personal health device communication—Part 10427: Device Specialization—Power Status Monitor of Personal Health Devices.

ISO/IEEE 11073 standards enable communication between medical devices and external computer systems. This document uses the optimized framework created in ISO/IEEE 11073-20601 and describes a specific, interoperable communication approach for power status monitor of personal health devices (PHDs). These standards align with and draw on the existing clinically focused standards to provide support for communication of data from clinical or PHDs.

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Contents

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Health informatics—Personal health device communication

Part 10427: Device specialization—Power Status Monitor of Personal Health Devices

1. Overview

1.1 Scope

This standard establishes a normative definition of communication between devices containing a power source (agents) and managers (e.g., cell phones, personal computers, personal health appliances, set-top boxes) in a manner that enables plug-and-play interoperability. Using existing terminology, information profiles, application profile standards, and transport standards as defined in other ISO/IEEE 11073 standards, this standard defines a common core of communication functionality of personal health devices (PHDs) containing a battery, including: 1) current device power status (e.g., on mains or on battery); 2) power charge status (e.g., percent of full charge); and 3) estimated time remaining (e.g., minutes).

1.2 Purpose

This standard addresses a need for an openly defined, independent standard for power status information exchange from PHDs to manager(s) (e.g., cell phones, personal computers, personal health appliances, and set-top boxes). Interoperability is the key to growing the potential market for monitoring the power status of devices and enabling people to be better informed participants in the management of their health.

1.3 Context

See ISO/IEEE 11073-20601:2016[1] for an overview of the environment within which this standard is written.

This standard defines the specialization for monitoring the power status of PHDs, as well as being a specific agent type. It also provides a description of the concepts, its capabilities, and its implementation according to this standard.

[1]Information on references can be found in Clause 2.

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