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Industrial networks – Wireless communication network and communication profiles – WIA-FA

Réseaux industriels – Réseau de communication sans fil et profils de communication – WIA-FA

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INDUSTRIAL NETWORKS – WIRELESS COMMUNICATION NETWORK AND COMMUNICATION PROFILES – WIA-FA

1 Scope

This International Standard specifies the system architecture and communication protocol of WIA-FA (Wireless Networks for Industrial Automation – Factory Automation) based on IEEE STD 802.11-2012 physical layer (PHY).

This document applies to wireless network systems for factory automation measuring, monitoring and control.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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.

IEC 61588, *Precision clock synchronization protocol for networked measurement and control systems*

IEEE STD 802.11-2012, *IEEE Standard for Information technology – Telecommunications and information exchange between systems – Local and metropolitan area networks – Specific requirements – Part 11: Wireless LAN Medium Access Control (MAC) and Physical Layer (PHY) specifications*

3 Terms, definitions, abbreviated terms, and conventions

3.1 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

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- IEC Electropedia: available at http://www.electropedia.org/
- ISO Online browsing platform: available at http://www.iso.org/obp

3.1.1
absolute timeslot number
number of timeslots counted from the start of the network

Note 1 to entry: The value is the sequence number of the current timeslot, which is incremented by one each timeslot. Once the maximum value ($2^{48}-1$) is reached, the value is reset to 0.

3.1.2
access device
device installed in the industrial field, which forwards the sensor data, alarms and network management related information of the field devices to the gateway device, or forwards control signals, management information and configuration information of the gateway device to field devices