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

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National foreword

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A list of organizations represented on this committee can be obtained on request to its secretary.

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

FOREWORD

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IEC PAS 62948 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/784/PAS	65C/789/RVD

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

1 Scope

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

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. 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*

IEC 61499, *The industrial process measurement and control system function blocks*

ISO/IEC 7498-1, *Information Technology – Open Systems Interconnection – Basic Reference Model – The Basic model*

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, abbreviations, and conventions

3.1 Terms and definitions

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

3.1.1
absolute timeslot number
number of timeslots from the start of the network, generally denoting the current timeslot

Note 1 to entry: The value is incremented by one, usually the same with the current timeslot sequence number. Once the maximum value (2^{48}–1) is reached, the value is reset to 0.

3.1.2
access device
device installed in the field, which is responsible for forwarding the sensor data, alarm and network management related information of the field device to the gateway device, or forwarding control signals, management information and configuration information of the gateway device to field devices