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Internet of things (IoT) – Application of sensor network for wireless gas meters

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National foreword

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INTERNET OF THINGS (IoT) – APPLICATION OF SENSOR NETWORK FOR WIRELESS GAS METERS

FOREWORD

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ISO/IEC TR 30148, which is a Technical Report, has been prepared by subcommittee SC 41: Internet of Things and related technologies, of ISO/IEC joint technical committee 1: Information technology.

The text of this Technical Report is based on the following documents:

Draft TR	Report on voting
JTC1-SC41/90/DTR	JTC1-SC41/104/RVDTR

Full information on the voting for the approval of this Technical Report can be found in the report on voting indicated in the above table.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

A bilingual version of this publication may be issued at a later date.

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INTRODUCTION

With the improvement of wireless communication technologies and the demand for intelligent products required by home automation, factory automation and so on, wireless gas meter systems can develop in terms of safety, reliability, and convenience. Wireless gas meters can not only avoid the errors from manual meter reading and issues such as unstable signals during traditional gas meter reading, but also achieve functions such as dynamic rates, energy management, event alarm service, real-time data collection and analysis.

From the perspective of gas meter companies, the promotion of wireless gas meters is conducive to reducing labour costs and improving efficiency. From the point of view of gas meter manufacturers, the implementation of wireless gas meters will also help them to reduce costs. Consumers will readily accept the lower cost and increased convenience of wireless gas meters. So in the near future, with significant cost benefits and technical advantages, wireless gas meters will become more important in the market.

INTERNET OF THINGS (IoT) – APPLICATION OF SENSOR NETWORK FOR WIRELESS GAS METERS

1 Scope

This document describes

– the structure of wireless gas meter networks, and
– the application protocol of wireless gas meter networks.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

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

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

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

3.1
access point
equipment that is used to connect each wireless gas meter to other networks

3.2
acquisitor
equipment that is used for data acquisition, data transmission, and data relay for wireless gas meters

3.3
application layer
layer that performs calculation, processing and management of data collected by the sensing layer

3.4
application sub-layer
layer that provides services for the application layer

3.5
entity
unit that connects to other units defined in the wireless gas meter networks reference architecture with a distinct set of attributes

3.6
gateway
device that is used to connect wireless gas meter networks to outside IP networks