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ICS 35.020
CCS M33

YD

INDUSTRY STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

YD/T 6059.1-2024

Quantum Key Distribution (QKD) Equipment Security Requirements - Part 1: QKD equipment based on the BB84 protocol in a decoyed state

量子密钥分发（QKD）设备安全要求 第1部分：基于诱骗态BB84协议的QKD设备

(English Translation)

Issued on: October 24, 2024 **Implemented on: February 1, 2025**

Issued by: Ministry of Industry and Information Technology

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1 Foreword

YD/T 6059.1-2024 was issued by Ministry of Industry and Information Technology on 24 October 2024 and has been in force since 1 February 2025.

The YD/T prefix marks a recommended standard. It is not law in itself: it becomes binding when a contract names it, when a regulation or a mandatory standard refers to it, or when a producer declares conformity with it.

The document runs to 15 pages in English translation.

2 Scope Preview

This standard specifies the physical environment requirements for the deployment of quantum key distribution (QKD) devices based on the decoyed BB84 protocol, as well as the QKD protocol implementation security requirements, device management function security requirements, and quantum security requirements of the device. This standard applies to the design, development, production and inspection of quantum key distribution (QKD) equipment based on the decoyed BB84 protocol in quantum secure communication networks.

YD/T 6059.1-2024 falls under ICS 35.020, in the field of information technology.

This catalogue holds 725 other YD/T standards in that field.

In this catalogue, YD/T standards carry edition years from 1982 to 2026.

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3 About this standard

Sector: Telecommunication Industry Standard (Recommended)

Issued by: Ministry of Industry and Information Technology

English translation: about 15 pages (approximate)

4 Related standards

Standards on related subjects:

YD/T 2554.1-2013 - Plastic optical fiber connector - Part 1: Type LC

GB/T 9771.1-2008 - Single-mode optical fibres for telecommunication -- Part 1: Characteristics of a dispersion unshifted single-mode optical fibre

GB/T 18480-2001 - Specification for submarine optical fiber cables

YD/T 1114-2026 - Halogen-free flame retardant optical fibre cable

YD/T 6053-2024 - Testing method for access network equipment supporting SRv6 function

YD/T 6060-2024 - Quantum Key Distribution (QKD) Network - Technical requirements for Kq interface

5 Classification and status

International classification (ICS): 35.020

Chinese Standard Classification (CCS): M 33

Prefix YD/T: recommended standard.

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