

Temperature Standards for Power and Communication Equipment Rooms



Article Overview

Optimal temperatures for equipment rooms vary by equipment type: 20–25°C for IT/comms rooms, 20–26°C for control rooms, and up to 45–55°C for power and electrical machinery, depending on standards and equipment ratings.

Communications (Comms) Rooms

For IT and communications equipment such as servers, switches, and routers, maintaining a stable temperature is critical for performance and reliability. The recommended ambient temperature is around 22°C (71.6°F), with an acceptable range of 20–25°C (68–77°F). This range ensures effective heat dissipation, reduces the risk of overheating, and maintains energy efficiency. Relative humidity should be maintained between 40–60% to prevent condensation, corrosion, and static electricity buildup.

Control Rooms

Control rooms housing electronic control systems should maintain a slightly broader temperature range. Recommended ambient temperatures are 68–78°F (20–26°C) with relative humidity 35–50% ±5% for electronics controls. For rooms containing only electrical gear, temperatures should remain below 90°F (32°C) with humidity under 60%. Pressurization and proper air handling are also recommended to protect sensitive equipment....

Article Content

Jun 14, 2026

EB-ThermalEdge-ThermalManagement-Revised-02.10.16

Although the most rugged types of telecom equipment can operate without heating and cooling, most outdoor telecom cabinets are

Mar 22, 2026

What are the ASHRAE guidelines for data center electrical room

Energy Efficiency Considerations ASHRAE Standard 90.1 establishes energy efficiency requirements that impact electrical room

Apr 12, 2026

Recommended standards for monitoring server rooms

On this page you will find the standards recommended by ASHRAE for monitoring the environment in your

Feb 17, 2026

ASHRAE TC9.9 Data Center Power Equipment Thermal Guidelines

Data Center Power Equipment Thermal Guidelines and Best Practices Whitepaper created by ASHRAE Technical Committee (TC)

Oct 29, 2025

Environmental Requirements for Control Rooms, Equipment Rooms,

Proper temperature and humidity control in control rooms, equipment rooms, and electrical distribution rooms is crucial for the

May 06, 2026

Standards and Guidelines

Preview ASHRAE Standards and Guidelines Free read-only access for ASHRAE Standards and Guidelines is provided to you after

May 27, 2026

The ASHRAE Thermal Guidelines for Data Centers Past, Present,

The recommended envelope was chosen based on a number of inputs, the primary being the reliability of ITE, power increases of

Nov 16, 2025

Best Practices Guide for Energy-Efficient Data Center Design

1. Reduce energy use by making systems as efficient as possible – the associated data center metric is Power Usage Effectiveness

Feb 11, 2026

Requirements for Building Thermal Conditions under Normal and

In addition to the four classes of requirements for IT and communications equipment facilities discussed above (classes A1 through

Jul 20, 2026

What is the correct temperature for a server room?

A cool ambient temperature in the room is an easy way to cool down the thousands of hotspots in the room. But it's inefficient: The

Apr 27, 2026

eCFR :: 46 CFR 111.01-15 -

The assumed ambient temperature of the space plus the equipment's actual temperature rise at its derated load must not exceed the

Mar 06, 2026

What is the right temperature room for an electrical room?

Hi community, What is the typical room temperature for an electrical room? let's say some panels that have a PLC with modules,

Oct 24, 2025

Specifications for Networking Standards

Room design must consider physical access for staff and equipment, illumination, temperature and humidity, sound isolation, floor

Sep 20, 2025

Environmental Design Requirements for Mechanical and Electrical

Subchapter 6.1.18 “HVAC Design for Equipment Rooms” changed environmental requirements for mechanical and electrical rooms

Jan 26, 2026

Environmental Requirements for Control Rooms, Equipment Rooms,

Temperature Requirements: The recommended temperature range is 18°C to 28°C, with exact values depending on the

Apr 04, 2026

Why 22 Degrees C is the Perfect Temperature for a Comms Room

Most IT equipment manufacturers specify an optimal operating temperature range, usually between 20 and 25

Nov 28, 2025

What is the Right Temperature Set Point for An Electrical Enclosure ...

The enclosure cooling unit is intended to keep electrical equipment in an acceptable working environment, but this

Oct 10, 2025

Temperature and humidity design criteria

Use these temperature and humidity design criteria to ensure that your data center environment provides optimal

Jan 06, 2026

The elements of the telecommunications cabling system structure are:

The telecommunications room shall be dedicated to the telecommunications function and related support facilities. The

Jul 17, 2026

Section 271100

RCDD: Registered Communications Distribution Designer Entrance
Telecommunications Room (ETR): An enclosed architectural

May 14, 2026

ISO/IEC TS 22237-4:2018 (en), Information technology ? Data centre ...

The ISO/IEC TS 22237 series specifies requirements and recommendations to support the various parties involved in the design,

Dec 14, 2025

Use ASHRAE guidelines to get server temperature right

Use ASHRAE guidelines to get server temperature right Follow ASHRAE's guidelines to set up the right facility for your

Jan 16, 2026

Specifications for Networking Standards

This document is intended to act as guidance for the installation of a Communications Rooms required to support the network

Aug 03, 2025

electrical equipment room temperature | Automation & Control ...

Hi, Our HVAC gurus are on a mission to save energy cost. In the past I have asked the electrical equipment rooms to

Mar 30, 2026

Communications Units & Communications Rooms

Experience shows, the design and location of Communications Units and Communications Rooms is very often "a last minute

Jul 16, 2026

SPECIFICATION 271100 COMMUNICATIONS CABINETS AND

This section includes the specifications for constructing and building out of Telecommunications Equipment Rooms

Apr 20, 2026

Design Considerations for Maximum Allowable Temperature

Temperature tests are performed at the specified temperature range, and at least the minimum range, specified in the relevant

Aug 14, 2025

Design Considerations for Maximum Temperature per IEC Safety

Temperature tests are performed at the specified temperature range, and at least the minimum range, specified in the

Contact Us

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