

Temperature Standard for Air Switch in Distribution Box

Article Overview

Air switches in distribution boxes should operate within an ambient temperature range of -5°C to 40°C , with a 24-hour average not exceeding 35°C , according to IEC 62271-1 standards.

Standard Operating Temperature

For indoor medium-voltage and low-voltage equipment, including air switches in distribution boxes, the normal service ambient temperature is defined as follows:

- Maximum ambient temperature: 40°C
- Average over 24 hours: Not to exceed 35°C
- Minimum ambient temperatures: Commonly -5°C , -15°C , or -25°C depending on installation requirements . These limits ensure that the air switch operates reliably without overheating, insulation breakdown, or reduced mechanical performance.

Enclosure Considerations

The enclosure housing the air switch plays a critical role in maintaining safe operating temperatures:

- Ensure adequate ventilation or forced airflow to dissipate heat generated by the switch and connected conductors .
- The ambient temperature inside the enclosure should ideally be about 5 K lower t...

Article Content

Jan 12, 2026

Switchboard Enclosure Cooling

Proper Temperature Settings A special physical effect is caused by a high degree of fluctuation in ambient

Feb 01, 2026

Airflow management in electrical enclosures

To mitigate this issue, implementing efficient airflow management solutions is essential to help regulate heat and humidity in

Oct 17, 2025

PowerPoint Presentation

ACCC Designation Allowable Continuous Current Class Identified on air switch nameplate Code for composite curve of limiting

Jan 01, 2026

Use ASHRAE guidelines to get server temperature right

There are three major factors that affect your data center operating environment and server temperature: inlet air

Sep 23, 2025

Optimizing Air Circulation in Electrical Enclosures

Effective air circulation is paramount for dissipating the heat generated by each of the electrical components. In order to achieve this,

Jan 26, 2026

IEC 61439: Rated current of electrical panel and switchboard

The scope of the IEC 61439 standard includes the design, construction, and checking of low-voltage switchgear and

Jan 26, 2026

What Is Air Switch and How It Works

Air switch, I think everyone has heard of it. Each of our families has a distribution box, and

May 11, 2026

Standards and Guidelines

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

Jan 12, 2026

ASHRAE TC9.9

ASHRAE's document , "Thermal Guidelines for Data Processing Environments- Fourth Edition" has increased the industry's

Dec 06, 2025

Temperature rise limits for switchgear assemblies to IEC 61439-1

Table 6 of IEC 61439 specifies temperature rise limits which is summarized below:
The temperature rise limits always apply on the

May 15, 2026

What is the ambient operating temperature range for all the General ...

The normal ambient operating temperature range is -30 degrees C (-22 degrees F) to 40 degrees C (104 degrees F)

Mar 14, 2026

Thermal study of LV electric switchboards

The temperature of the air surrounding the bars is of particular importance in order to size the bars accurately and ensure that they

Dec 29, 2025

Airswitch Switching and isolating equipment for metal-enclosed

The Airswitch and switch-disconnectors comply with Italian CEI 17-9/1 (file 1672) Standards, International IEC 60265-1 and

Oct 28, 2025

Operating Temperature Range

Chart showing minimum and maximum operating temperatures for standard product.

Nov 10, 2025

Control Panel Technical Guide

Temperature management with air-water exchangers Air-water exchangers are used mainly for cooling or heating enclosures

Jun 29, 2026

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

In other words, if the temperature outside the box exceeds the target temperature intended inside the box, convection

Jun 06, 2026

Top Content on LinkedIn

Explore top LinkedIn content from members on a range of professional topics.

Apr 23, 2026

Designing for Comfort & IAQ: Air distribution per

The goal of a room air distribution system is to provide thermal comfort and a healthy living

Feb 16, 2026

MilliporeSigma | Life Science Products & Service Solutions

Together, we impact life and health with science. We offer one of the broadest portfolios in the industry for scientists, best-in-class

Mar 31, 2026

The Perfect Climate Inside Your Enclosure

One of the requirements relates to the detection of heat. The DIN EN IEC 61439 standard "Low-voltage switchgear and controlgear

Oct 07, 2025

ASHRAE TC9.9

Per the IEC 61439 standard for low-voltage switchgear and control gear assemblies , the ambient temperature specification for

Dec 05, 2025

IEC 61439: Rated current of electrical panel and switchboard

Scope of the IEC 61439 standard The scope of the IEC 61439 standard includes the design, construction, and

May 30, 2026

ED distribution enclosed air switch catalog

Eaton's Cooper Power™ series Type ED switch is a distribution enclosed single-pole air switch rated at 7.8 kV, 75 kV BIL, 400 and

Contact Us

For more information, pricing, or custom solutions, please contact us:

Website: <https://www.iiss.co.za>

Email: sales@iiss.co.za

Phone: +27 63 174 2895

Address: Unit 8, Innovation Park, 15 Rivonia Road, Sandton, Johannesburg, 2196, South Africa

This document is for informational purposes only. Specifications subject to change without notice.

