

Technical Specifications

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Technical Specifications

The most current technical specifications for the Cisco IE3500, IE3505 Rugged Series Switch can be found in Cisco IE3500 Rugged Series Data Sheet.

Enclosure Specifications

Table 1: Enclosure specifications for the Cisco IE 3X00 Switches

	Industrial Automation and Hazardous Locations	**Substation**	**Traffic Signal**
Enclosure types	Sealed enclosures For example: NEMA4, NEMA4X, NEMA12, NEMA13, IP54, and IP66.	Vented enclosures For example: NEMA1, IP20, and IP21.	Fan or blower-equipped enclosures For example: NEMA TS-2. **Note:** The minimum airflow is 150 lfm[1].

[1] lfm = linear feet per minute.

Current and Input Voltage Ratings

Table 2: Current and Input Voltage Rating

Model	**Voltage Range**	**@Max Amps**	**Maximum PoE Power Budget**
IE-3500-8T3S-E IE-3500-8T3S-A	12–48 VDC	7.0 A	N/A

Model	Voltage Range	@Max Amps	Maximum PoE Power Budget
IE-3500-8P3S-E IE-3500-8P3S-A	12–54 VDC	11.0 A	360 W
IE-3505-8T3S-E IE-3505-8T3S-A	12–48 VDC	7.0 A	N/A
IE-3505-8P3S-E IE-3505-8P3S-A	12–54 VDC	11.0 A	360 W
IE-3500-8T3X-E IE-3500-8T3X-A	12–48 VDC	7.0 A	N/A
IE-3500-8U3X-E IE-3500-8U3X-A	12–54 VDC	11.5 A	480 W

Note The primary switch's power ratings account for the power supplied to the supported expansion modules. Since the expansion modules cannot function as standalone devices, they do not have independent power ratings. The installer must configure the PoE power budget to match the installed power supply(s).

Table 3: Required Input Voltage for PoE Class

PoE Class	Minimum Input Voltage
PoE Type 1 (PoE Classes 1 through 3)	46 VDC
PoE+ Type 2 (PoE Class 4) 4PPoE Type 3 (PoE Classes 5 and 6)	52 VDC
4PPoE Type 4 (PoE Classes 8 and 7)	54 VDC

Alarm Ratings

Table 4: Cisco IE3x00 Alarm Ratings

Alarm Ratings	Specification
Alarm input electrical specification	Senses an external dry contact. The open circuit voltage between any alarm input (1 or 2) and alarm input common is 3.3 VDC. The loop current is 3 mA max per input. When the external contact is closed it must have a low-enough resistance to ensure the voltage at the switch is below 1.9 VDC. When the external contact is open it must have a high-enough resistance to ensure the voltage at the switch is at least 2.9 VDC. Do not apply external power to the alarm input.
Alarm output electrical specification	1.0 A @ 24 VDC or 0.5 A @ 48 VDC (Resistive loads only)

Installation Guidelines for Utility, Railway, and Marine Environments

Follow the guidelines in this section when installing the switch in utility, railway, and marine environments,

- Use shielded Ethernet cables to comply with the EMC requirements for power utility, power stations, railways, and marine environments. These installations refer to DNVGL CG-0339, IACS UR E10, IEC 60945.
- Use industrial grade SFP modules rated for -40C to +85C operation.
- For marine installations, you must install the product inside a metal enclosure, preferably IP54 or better.
- Use DNVGL "Type Approved" power supply for marine installations that use DNVGL CG-0339 guidelines.

  Cisco IE3500/IE3505 switch series switches require 54 V (typical) for PoE operation. Refer to the Current and Input Voltage Ratings, on page 1 section for more details on the power input.