



Numerics

10/100/1000 ports

- cable lengths [3-8, 4-11](#)
- connecting to [3-62 to 3-64, 4-47 to 4-49](#)
- described [2-7](#)
- pinouts [B-2](#)

10/100 ports

- cable lengths [3-8, 4-11](#)
- connecting to [3-62 to 3-64, 4-47 to 4-49](#)
- described [2-6 to 2-7](#)
- pinouts [B-2](#)

100BASE-FX ports

- cable lengths [3-8, 4-11](#)
- connecting to [3-65 to 3-66, 4-50 to 4-51](#)
- connectors and cables [B-3](#)
- described [2-8](#)
- power levels, fiber-optic [A-3](#)

100BASE-LX ports

- cable lengths [3-8, 4-11](#)
- connecting to [3-67 to 3-68, 4-52 to 4-54](#)
- connectors and cables [B-3](#)
- described [2-8](#)

A

AC power

- connecting to [3-29 to 3-40](#)

adapter pinouts, terminal

- RJ-45-to-DB-25 [B-10](#)
- RJ-45-to-DB-9 [B-9](#)

addresses, assigning IP [3-69, 4-54](#)

airflow

- required clearance [3-9, 4-11](#)

alarm relay connections

- power and relay connector [2-8, 2-9](#)

alarms and relays

- LEDs [2-16](#)

altitude [A-2, A-4](#)

applying the switch protective liner [3-10, 4-13](#)

autonegotiation

- 10/100/1000 ports [2-7](#)
- 10/100 ports [2-7](#)

C

cables

- 10/100/1000 ports [2-7](#)
- 10/100 ports [2-6 to 2-7](#)

- 100BASE-FX ports [2-8](#)
- 100BASE-LX ports [2-8](#)
- crossover
 - four twisted-pair pinout, 10/100 ports [B-7](#)
 - four twisted-pair pinout, 1000BASE-T ports [B-8](#)
 - identifying [B-11](#)
 - two twisted-pair pinout [B-6](#)
- LC [B-4](#)
- LC patch cables [B-4](#)
- multimode
 - 100BASE-FX ports [2-8](#)
- problems, solving [5-4](#)
- single-mode
 - 100BASE-LX ports [2-8](#)
- straight-through
 - four twisted-pair pinout, 10/100 ports [B-7](#)
 - four twisted-pair pinout, 1000BASE-T ports [B-8](#)
 - two twisted-pair pinout [B-6](#)
- twisted-pair
 - 10/100/1000 ports [2-7](#)
 - 10/100 ports [2-6 to 2-7](#)
- Catalyst 2955C-12 switch
 - illustrated [2-4](#)
 - LEDs
 - illustrated [2-12](#)
- Catalyst 2955S-12 switch
 - illustrated [2-5](#)
 - LEDs
 - illustrated [2-12](#)
- Catalyst 2955 switch
 - warning labels [2-5](#)
- Catalyst 2955T-12 switch
 - illustrated [2-3](#)
 - LEDs
 - illustrated [2-11](#)
- cautions, defined [xviii](#)
- chassis power connection warning [C-72](#)
- chassis warnings
 - servicing [C-39](#)
- Cisco IE2100 [2-20](#)
- Cisco IE2100 Series Configuration Registrar
 - See [Cisco IE2100](#)
- Cisco Intelligent Engine 2100
 - See [Cisco IE2100](#)
- CiscoView [2-19](#)
- class 1, division 2, hazardous location
 - warning [C-29 to C-31](#)
- Class 1 laser product warning [3-5, 4-7, B-4](#)
- class 1 laser product warning [C-49](#)
- Class 1 LED product warning [3-5, 3-65, 4-7, 4-50, B-3](#)
- class 1 LED product warning [C-50](#)
- clearance [3-8, 4-11](#)
- CLI [2-19](#)
- Cluster Builder application [2-19](#)
- Cluster Management Suite
 - See [CMS](#)
- Cluster Manager application [2-19](#)

- Cluster View application [2-19](#)
 - CMS
 - Cluster Builder [2-19](#)
 - Cluster Management [2-19](#)
 - Cluster View [2-19](#)
 - described [2-19](#)
 - Device Manager [2-19](#)
 - command-line interface
 - See CLI
 - configuration examples, network [2-1](#)
 - configuring ports [3-69, 4-54](#)
 - connecting
 - to 10/100/1000 ports [3-62 to 3-64, 4-47 to 4-49](#)
 - to 10/100 ports [3-62 to 3-64, 4-47 to 4-49](#)
 - to 100BASE-FX ports [3-65 to 3-66, 4-50 to 4-51](#)
 - to 100BASE-LX ports [3-67 to 3-68, 4-52 to 4-54](#)
 - to console port [3-11 to 3-13, 4-14 to 4-16](#)
 - to DC power [3-17 to 3-27, 4-20 to 4-30](#)
 - to PC [3-11 to 3-13, 4-14 to 4-16](#)
 - to terminal [3-11 to 3-13, 4-14 to 4-16](#)
 - to the power converter [3-29 to 3-47](#)
 - connecting to
 - external alarm devices [3-48 to 3-51, 4-32 to 4-36](#)
 - connecting to the console port [1-4](#)
 - connectivity problems, solving [5-5](#)
 - connectors and cables
 - 100BASE-FX ports [B-3](#)
 - 100BASE-LX ports [B-3](#)
 - console port [B-5](#)
 - console cable connection warning [C-24 to C-27](#)
 - console port
 - adapter pinouts
 - RJ-45-to-DB-25 terminal [B-10](#)
 - connecting to [1-4, 3-11 to 3-13, 4-14 to 4-16, B-9 to B-10](#)
 - default characteristics [3-12, 4-15](#)
 - described [2-10](#)
 - RJ-45-to-DB-9 adapter cable pinouts [B-9](#)
 - conventions, document [xviii to xxvi](#)
 - crossover cable [B-11](#)
 - connecting to
 - 10/100/1000 ports [3-63, 4-48](#)
 - 10/100 ports [3-63, 4-48](#)
 - connectivity problems [5-5](#)
 - pinout
 - four twisted-pair, 10/100 ports [B-7](#)
 - four twisted-pair, 100BASE-T ports [B-8](#)
 - two twisted-pair [B-6](#)
-
- D
 - DC power
 - connecting to [3-17 to 3-27, 4-20 to 4-30](#)
 - warnings [3-2, 3-17, 4-2, 4-20](#)
 - DC power disconnection warning [3-4, 3-18, 4-6](#)
 - default characteristics of the console port [3-12, 4-15](#)
 - Device Manager [2-19](#)
 - dimensions [A-2, A-5](#)

documentation

related publications [xxvi](#)

document conventions [xviii to xxvi](#)

E

electrical noise, avoiding [3-9, 4-12](#)

electromagnetic interface (EMI) [A-3, A-5](#)

EMC

agency approvals [A-3 to A-5](#)

EMC regulatory statements [3-6, 4-8](#)

ensure that the switch is grounded warning [3-4, 4-6](#)

environmental ranges [A-2, A-4](#)

ESD

requirements [3-62, 4-47](#)

European Zone 2 certification

regulatory statements [4-10](#)

examples, network configuration [2-1](#)

exposed DC power wire warning [3-5, 3-20, 3-33, 3-44, 4-4, 4-23, C-75](#)

F

features [2-1 to 2-2](#)

ferrite

attaching [3-24 to 3-25, 4-27 to 4-28](#)

fiber-port specifications [A-3](#)

front panel

10/100/1000 ports [2-7](#)

10/100 ports [2-6 to 2-7](#)

100BASE-FX ports [2-8](#)

100BASE-LX ports [2-8](#)

clearance [3-8, 4-11](#)

console port [2-10](#)

described [2-3](#)

illustrated [2-3 to 2-5](#)

LEDs [2-10 to 2-16](#)

power and relay connector [2-8](#)

functional ground lug warning [3-4, 3-14, 3-32, 4-6, 4-18](#)

G

ground connection warning [3-3, 3-14, 3-36, 3-42, 4-5, 4-18, C-42 to C-43](#)

grounded equipment warning [C-22 to C-23, C-66](#)

grounding procedures [3-14 to 3-17, 4-18 to 4-20](#)

H

hazardous location installation warning [C-7](#)

hazardous location warnings

connecting and disconnecting cables [1-4, 4-5](#)

console cable [1-6, 2-10, 4-5, 4-14, 4-16, 4-30, 5-2](#)

disconnecting equipment [4-3](#)

power and relay connector [2-9, 4-3, 4-28](#)

relay wires [2-16, 4-4, 4-32](#)

safe operating voltage range [4-3](#)

hot surface warning label

illustrated [2-6](#)

HP OpenView [2-19](#)

humidity [A-2](#)

industrial environment warning [3-3, 4-4](#)

installation

applying the switch protective liner [3-10, 4-13](#)

assigning the IP Address [1-6](#)

attaching the ferrite [3-24 to 3-25, 4-27 to 4-28](#)

attach the power and relay connector [3-25, 4-28](#)

connecting to a power source [1-2](#)

grounding procedures [3-14 to 3-17, 4-18 to 4-20](#)

guidelines [3-8, 4-11](#)

mounting on a DIN rail [3-52 to 3-56, 4-37 to 4-41](#)

package contents [3-9 to 3-10, 4-12 to 4-13](#)

POST [1-2 to 1-3, 3-27 to 3-29, 4-30 to 4-32](#)

power on [3-27, 4-30](#)

pre-installation information and guidelines [3-2 to 3-10, 4-2 to 4-10](#)

rack-mount [3-57 to 3-58, 4-42 to 4-43](#)

required clearance [3-9, 4-11](#)

starting the terminal-emulation software [1-6](#)

verifying switch operation [3-11 to 3-29, 4-14 to 4-32](#)

warning [C-3](#)

wiring the relays [3-48 to 3-51, 4-32 to 4-36](#)

installation instructions warning [C-38](#)

invisible laser radiation warning [3-5, 4-7, B-4](#)

IOS command-line interface

See CLI

IP address procedures [3-69, 4-54](#)

J

jewelry removal warning [3-4, 4-6, C-45](#)

L

laser beam exposure warning [3-6, 4-7, C-56](#)

laser radiation warning [C-52](#)

laser safety warning label

illustrated [2-6](#)

laser viewing warning [3-5, 4-7, C-54](#)

LC

patch cables [B-4](#)

LEDs

alarm relay [2-16](#)

alarm relay status [2-16](#)

front panel [2-10 to 2-16](#)

port [2-13](#)

port status [2-13](#)

uplink ports [2-14 to 2-15](#)

uplink port status [2-14 to 2-15](#)

lightning activity warning [3-5, 4-7, C-1](#)

M

management options [2-19](#)

mounting

DIN rail [3-52 to 3-56, 4-37 to 4-41](#)

rack [3-57 to 3-58, 4-42 to 4-43](#)

MT-RJ

connector [B-3](#)

N

network configuration examples [2-1](#)

noise, electrical [3-9, 4-12](#)

notes, defined [xviii](#)

O

open type equipment warning [C-18 to C-21](#)

overtemperature warning [3-3, 4-5, C-27](#)

P

package contents [3-9 to 3-10, 4-12 to 4-13](#)

patch cables, LC [3-10, 4-13](#)

patch cables, MT-RJ [3-10, 3-65, 3-67, 4-13, 4-50, 4-52](#)

PC, connecting to switch [3-11 to 3-13, 4-14 to 4-16, B-9](#)

performance problems, solving [5-4](#)

physical dimensions [A-2, A-5](#)

pinouts

10/100/1000 ports [B-2](#)

10/100 ports [B-2](#)

adapters [B-11](#)

DB-25 [B-10](#)

console port

DB-25 adapter [B-10](#)

RJ-45-to-DB-9 adapter cable [B-9](#)

crossover cable [B-11](#)

crossover cables

four twisted-pair, 10/100 ports [B-7](#)

four twisted-pair, 1000BASE-T ports [B-8](#)

two twisted-pair [B-6](#)

RJ-45-to-DB-25 terminal adapter [B-10](#)

RJ-45-to-DB-9 adapter cable [B-9](#)

RJ-45-to-DB-9 PC adapter cable [B-9](#)

straight-through cables

four twisted-pair, 10/100 ports [B-7](#)

four twisted-pair, 1000BASE-T ports [B-8](#)

two twisted-pair [B-6](#)

pollution degree 2 industrial environment
warning [C-33](#)

port

10/100/1000BASE-T

LEDs [2-14](#)

100BASE-FX

LEDs [2-15](#)

100BASE-LX

LEDs [2-15](#)

LEDs [2-13 to 2-15](#)

port connection warning [C-35 to C-38](#)

ports

- 10/100
 - pinouts [B-2](#)
- 10/100/1000
 - pinouts [B-2](#)

See 10/100 ports, 10/100/1000 ports, 100BASE-FX ports, 100BASE-LX ports, and console ports

POST

- description [1-2, 3-27, 3-46, 4-30, 5-2](#)
- problems, solving [5-5](#)
- results [1-2, 3-27, 3-46, 4-30, 5-2](#)

power

- connecting to
 - AC [3-29 to 3-40](#)
 - DC [3-17 to 3-27, 4-20 to 4-30](#)
 - power and relay connector [2-8](#)
- requirements [A-2, A-5](#)

power and relay connector

- connecting to the switch [3-25, 4-28](#)
- described [2-8](#)
- illustrated [2-8](#)

power and relay connector warning [C-3 to C-6](#)

power connection

- power and relay connector [2-8](#)

power on [3-13, 4-16](#)

power on the switch [3-27, 4-30](#)

procedures

- connecting to AC power [3-29 to 3-40](#)

- connecting to DC power [3-17 to 3-27, 4-20 to 4-30](#)
- installation [3-57 to 3-58, 4-42 to 4-43](#)
- IP address [3-69, 4-54](#)
- power on [3-13 to 3-27, 4-16 to 4-26](#)

product disposal warning [3-5, 4-7, C-47](#)

protective liner

- applying [3-10, 4-13](#)

publications, related [xxvi](#)

Q

qualified personnel warning [C-68](#)

R

rack-mounting

- procedures [3-57 to 3-58, 4-42 to 4-43](#)

rear panel

- clearance [3-8, 4-11](#)

regulatory statements, EMC [3-6, 4-8](#)

regulatory statements, European Zone 2 certification [4-10](#)

related publications [xxvi](#)

relays

- connecting to
 - power and relay connector [2-9](#)
- described [2-9](#)
- wiring [3-48 to 3-51, 4-32 to 4-36](#)

remove power before disconnecting
warning [C-15 to C-18](#)

removing the switch from a DIN rail or a
rack [3-59 to 3-61, 4-45 to 4-46](#)

removing the switch from parallel and
face-down mounted
positions [3-59 to 3-61, 4-45 to 4-46](#)

restricted area warning [C-69](#)

S

safe operating voltage range
warning [C-9 to C-10](#)

safety agency approvals [A-3, A-5](#)

safety warnings [3-2 to 3-6, 4-2 to 4-7, C-1 to C-76](#)

SELV-IEC 60950 DC power supply
warning [C-44](#)

service personnel warning [3-2, 4-2, C-39](#)

servicing warning [C-58 to C-66](#)

SNMP network management platforms [2-19](#)

software switch management [2-19](#)

specifications [A-1 to A-5](#)

stacking the chassis warning [C-39, C-41 to C-42](#)

straight-through cable

- connecting to
- 10/100/1000 ports [3-63, 4-48](#)
- 10/100 ports [3-63, 4-48](#)

connectivity problems [5-5](#)

pinout

- four twisted-pair, 10/100 ports [B-7](#)
- four twisted-pair, 1000BASE-T ports [B-8](#)
- two twisted-pair [B-6](#)

SunNet Manager [2-19](#)

supply wires warning [3-3, 3-32, 3-42, 4-4, C-32 to C-33](#)

switch, power-on [3-13 to 3-27, 4-16 to 4-30](#)

switch relays warning [C-11 to C-14](#)

T

technical specifications [A-1 to A-5](#)

Telnet, and accessing the CLI [2-19](#)

temperature

- operating [A-2, A-4](#)
- warning [3-3, 4-5](#)

terminal, connecting to a switch [3-11 to 3-13, 4-14 to 4-16, B-10](#)

terminal-emulation software [1-5, 3-11, 4-15](#)

translated warnings [C-1 to C-76](#)

troubleshooting [5-1](#)

- diagnosing problems [5-3 to 5-5](#)
- understanding POST results [5-2](#)

U

uplink ports

- LEDs [2-14 to 2-15](#)

V

- verifying package contents [3-9 to 3-10](#),
[4-12 to 4-13](#)
- verifying switch operation [3-11 to 3-29](#),
[4-14 to 4-32](#)

W

warning labels

- hot surface [2-6](#)
- illustrated [2-5](#)
- laser safety [2-6](#)

warnings

- chassis power connection [C-72](#)
- Class 1 laser product [3-5](#), [4-7](#), [B-4](#)
- class 1 laser product [C-49](#)
- Class 1 LED product [3-5](#), [3-65](#), [4-7](#), [4-50](#), [B-3](#)
- class 1 LED product [C-50](#)
- console cable connection [C-24 to C-27](#)
- DC power [3-2](#), [3-17](#), [4-2](#), [4-20](#)
- ensure that the switch is grounded [3-4](#), [4-6](#)
- exposed DC power wire [C-75](#)
- functional ground lug [3-4](#), [3-14](#), [3-32](#), [4-6](#), [4-18](#)
- ground connection [3-3](#), [4-5](#), [C-42 to C-43](#)
- grounded equipment [C-22 to C-23](#), [C-66](#)
- hazardous locations
 - class 1, division 2 hazardous location [C-29 to C-31](#)
 - connecting and disconnecting cables [1-4](#),
[4-5](#)

- console cable [1-6](#), [2-10](#), [4-5](#), [4-14](#), [4-16](#), [4-30](#), [5-2](#)
- disconnecting equipment [4-3](#)
- pollution degree 2 industrial environment [C-33](#)
- port connection [C-35 to C-38](#)
- power and relay connector [2-9](#), [4-3](#), [4-28](#)
- relay wires [2-16](#), [4-4](#), [4-32](#)
- safe operating voltage range [4-3](#)
- switch installation [C-7](#)
- industrial environment [3-3](#), [4-4](#)
- installation [3-2 to 3-6](#), [4-2 to 4-7](#), [C-3](#)
- installation instructions [C-38](#)
- invisible laser radiation [3-5](#), [4-7](#), [B-4](#)
- jewelry removal [3-4](#), [4-6](#), [C-45](#)
- laser beam exposure [3-6](#), [4-7](#), [C-56](#)
- laser radiation [C-52](#)
- laser viewing [3-5](#), [4-7](#), [C-54](#)
- lightning activity [3-5](#), [4-7](#), [C-1](#)
- open type equipment [C-18 to C-21](#)
- overtemperature [3-3](#), [4-5](#), [C-27](#)
- product disposal [3-5](#), [4-7](#), [C-47](#)
- qualified personnel [C-68](#)
- remove power before disconnecting [C-15 to C-18](#)
- restricted area [C-69](#)
- SELV-IEC 60950 DC power supply [C-44](#)
- service personnel [3-2](#), [4-2](#), [C-39](#)
- servicing [C-39](#), [C-58 to C-66](#)
- stacking the chassis [C-39](#), [C-41 to C-42](#)

supply wires [3-3](#), [3-32](#), [3-42](#), [4-4](#), [C-32 to C-33](#)
temperature [3-3](#)
translated [C-1 to C-76](#)
wiring the relays [3-48 to 3-51](#), [4-32 to 4-36](#)