CTC union® CTC Union Technologies Co., Ltd.
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Quick Installation Guide

IFS-500
IFS-500-E
IFS-800
IFS-800-E
Industrial Grade Fast Ethernet Switches

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To download this QIG or a more complete user manual, please visit
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Introduction

IFS-500/800 models are 5/8-port 10/100Base-T(X) Ethernet switches that provide stable and reliable Ethernet transmission. Housed in rugged DIN rail or wall mountable enclosures, these switches are designed for harsh environments, such as industrial networking and intelligent transportation systems (ITS) and are also suitable for many military and utility market applications where environmental conditions exceed commercial product specifications. Standard operating temperature range models (0 to 60°C) and wide operating temperature range models (-40 to 75°C) fulfill the special needs of industrial automation applications.

Features

- Redundant dual DC inputs 12/24/48VDC
- IP30 rugged metal housing
- Wide temperature range -40~75C (500-E, 800-E)
- Industrial grade EMS certification
- DIP switch enable/disable broadcast storm filter
- UL508, CE, FCC, EN50121-4 Rail traffic

Specifications
Ethernet Interface
- Connector: RJ-45 (shielded)
- IFS-500; 5-ports / IFS-800; 8-ports
- Auto MDI/MDI-X
- Speed: 10/100Base-TX (Auto per 802.3u)
- Duplex: Full/Half (Auto per 802.3u)
- Supports IEEE802.3x Flow Control
- Store & Forward Switch
- Switching Fabric: 1Gbps (IFS-500), 1.6Gbps (IFS-800)
- Packet buffer: 448kb
- Packet size: 64~1536 bytes
- Standards: IEEE802.3, 802.3u, 802.3x
- 2K MAC table
- MTU: 64~1536 bytes
- Broadcast Storm protection

Specifications (cont.)
Power
- Absolute range: 9.6~60VDC
- Reverse polarity protection: Yes
- Dual power inputs: Yes
- Connector: terminal block
- Consumption:
  IFS-500 - 0.06A@48VDC, 2.88 watts
  IFS-800 - 0.08A@48VDC, 3.84 watts

Mechanical
- Water & Dust Proof : IP30 Protection
- Dimensions : 106 x 39 x 142mm (D x W x H)
- Mounting :   DIN-Rail, Wall Mount (kits included)
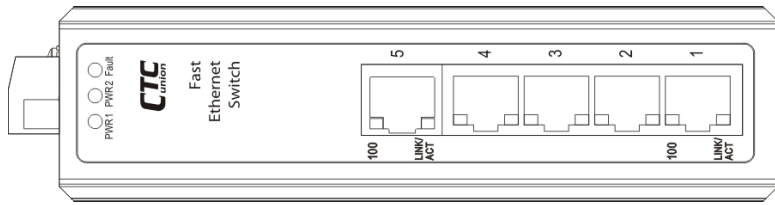- Weight : 620 g (500) / 625 g (800)

Environmental
- Operating Temperature :
  - 0°C ~ 60°C, -40°C ~ 75°C (wide temp. for *-E)
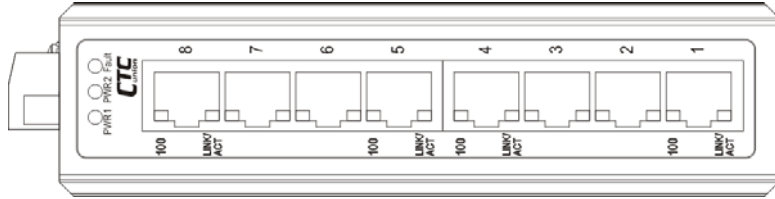- Storage Temperature: -40°C ~ 85°C
- Humidity : 5 ~ 95% (non-condensing)

Certifications
- EMI: FCC Part 15 sub B class A, EN55022 Class A
- EMS: (Electomagnetic Susceptibility)
  - EN61000-4-2 (ESD) Level 3,Criteria B
  - EN61000-4-3 (RS) Level 3,Criteria A
  - EN61000-4-4 (Burst) Level 3,Criteria A
  - EN61000-4-5 (Surge) Level 3,Criteria B
  - EN61000-4-6 (CS) Level 3,Criteria A
  - EN61000-4-8 (Magnetic Field) Level 3,Criteria A
- Safety: UL508 (pending)
- Railway Traffic: EN50121-4
- Shock: EN60068-2-27 Freefall: EN60068-2-32
- Vibration: EN60068-2-6
- MTBF: 650473 hours (IFS-500) 552587 hours (IFS-800)
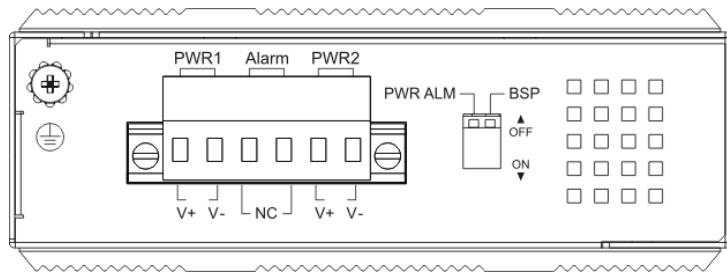
Connectors

IFS-500 5-port Fast Ethernet switch

IFS-800 8-port Fast Ethernet switch

IFS-500 and **IFS-800** are 5 and 8-port Fast Ethernet industrial switches. The LAN connections uses shielded RJ-45 which support Auto MDI/MDI-X.

Power & Alarm

A removable terminal block provides both power and alarm connections. Power can be provided through the dual inputs from separate sources. One electrical relay can be wired into an alarm circuit. The relay is connected as Normally Closed (NC).

LED Indicators

IFS-500 and **IFS-800** have LEDs on the front face that report the condition of power, alarm, LAN link and speed.

PWR1: This green LED will light if power is connected and active at the PWR1 terminal connection.

PWR2: This green LED will light if power is connected and active at the PWR2 terminal connection.
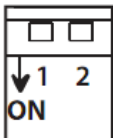
Fault: This amber LED will light if either power input has any fault condition and as long as DIP sw#1 is OFF.

100: This yellow LED will light when the LAN connected speed is 100M and will remain off if the connected speed is 10M.

LINK/ACT: This green LED will light when the LAN port has a link and will flash when there is Ethernet traffic.

Operation Mode Switch

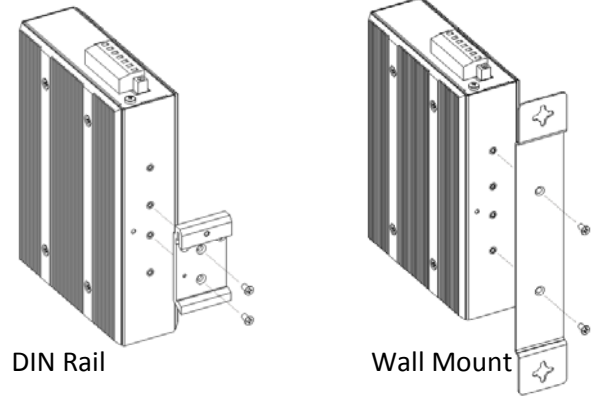**IFS-500/800** uses a 2-pole DIP switch for configuration.

Each pole of the switch has the following functions:

1. **PWR Alarm**: When 'On' this switch will disable alarm if there is a power failure in one supply. If only connecting to a single power source, place this switch 'On' to disable the alarm.

2. **BSP**: When 'On' this switch will disable the broadcast storm protection feature which is enabled by default.

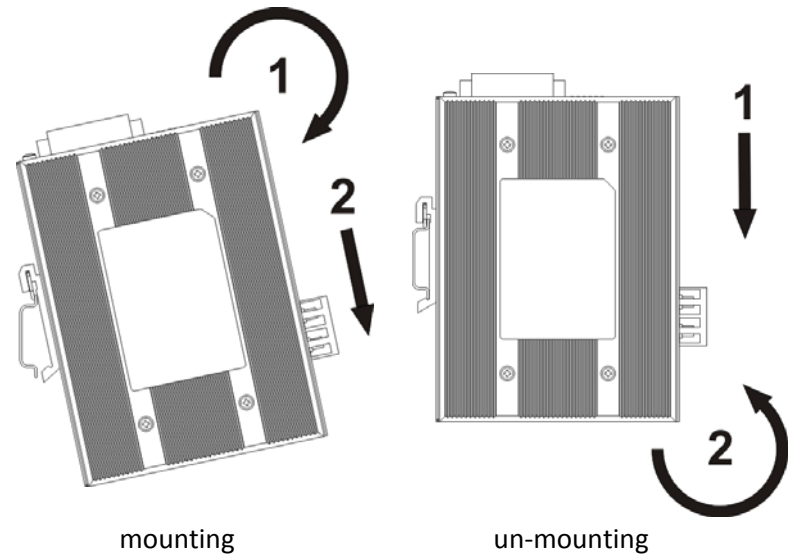 sales@ctcu.com   w w w . c t c u . c o m

Installation

IFS-500/800 comes with both wall mount and DIN rail hardware brackets. When installing the DIN rail bracket, be sure to correctly align the orientation pin.

DIN Rail   Wall Mount

IFS-500/800 with DIN Rail bracket has a steel spring in the upper rail of the bracket. This spring is compressed for mounting and un-mounting by applying downward force.

mounting   un-mounting

Notes: