

**DFB48M08UX**

**8 Port Fiber Switch**



Installation and Operations Manual

Model Number: DFB48M08UX

Description: Unmanaged 8 port  
Ethernet Fiber Switch

# DFB48M08UX

## 8-port Unmanaged Industrial Ethernet Switch - Hardware Installation Guide

### Introduction:

DFB48M08UX is a smart plug-and-play industrial Ethernet fiber switch, which can provide economical solution for Ethernet bus topology communications. It is dustproof, fully sealed structure, level IP30 protective case, over-current, over-voltage and EMC protected redundant dual input power as well as built-in intelligent alarm design can help system maintenance personnel monitor the network operation. Unit may be reliably installed and operate in harsh and wide temperature environment.

DFB48M08UX supports 6 TP ports and 2 fiber ports(DFB48M08UX: 6-port 10/100Base-Tx, 2-port 100Base-FX). TP(RJ45)support 10/100Base-T(X), Full/Half duplex mode, and auto MDI/MDI-X connection; 100BaseFX supports single-/multi-mode, SC connectors.

### Packing List:

The DFB48M08UX switch is shipped with following items:

1. Ethernet switch DFB48M08UX (plus terminal block)×1
2. Hardware Installation Guide ×1
3. DIN-Rail setting fittings

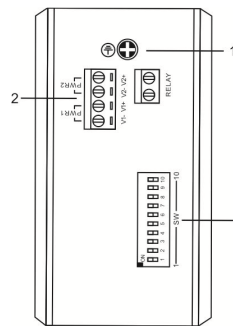
### Features:

1. Unmanaged 8 port Ethernet Fiber Switch
2. IEEE802.3/802.3u/802.3x/802.3d,store and forward
3. 10/100M,F/H duplex, MDI/MDI-X auto negotiation
4. Broadcast storm protection
5. Relay output warning for power failure and port break alarm
6. Redundant 24VDC power input(12V~48VDC)
7. Designed for industrial applications. IP30 protection, rugged high-strength metal case

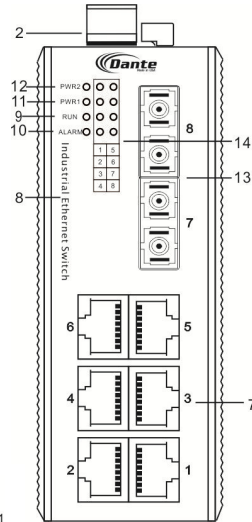
### Panel Layout:

#### DFB48M08UX (6 TP ports and 2 fiber ports):

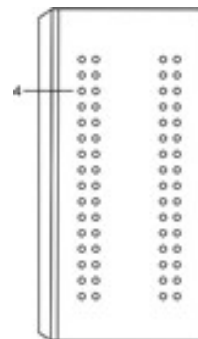
1. Grounding screw
2. Terminal block (4 pins) for PWR1/PWR2 input, terminal block (2 pins) for relay output
3. Power, port alarm enable switch (ON is enable)
4. Heat dissipation orifices
5. DIN-Rail locating kit
6. Screw hole for wall mounting kit
7. 10/100Base-T(X) port
8. Switch Type
9. Operation LED
10. System alarm indication LED
11. Power input PWR1 LED
12. Power input PWR2 LED
13. port indication LED
14. 100Base-FX ports



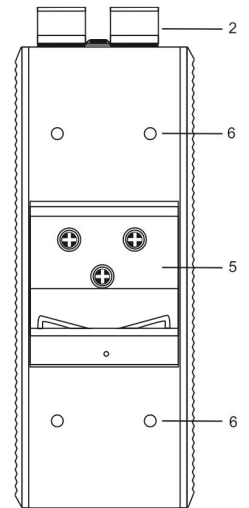
Top panel view



Front panel view

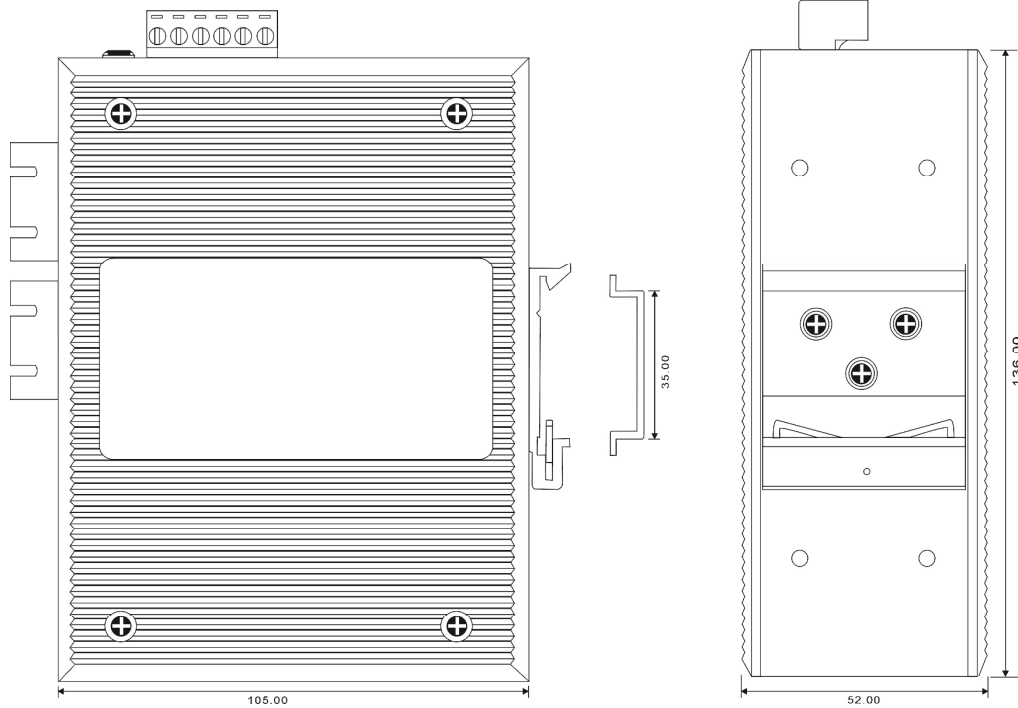


Bottom panel view



Rear panel view

## Mechanical Diagram

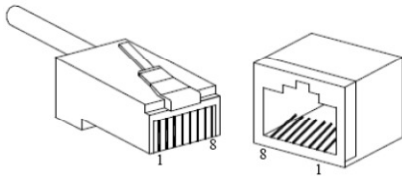


Units (mm)

## Communication connector:

DFB48M08UX features 6 10/100BaseT(X) Ethernet ports(RJ45) and 2 100BaseFX (SC/ST/FC type connector) fiber ports.  
**10/100BaseT(X) Ethernet port**

The pinout of RJ45 port display as below, connect by UTP or STP. The connect distance is no more than 100m. 100Mbps is used 100  $\Omega$  of UTP 5 , 10Mbps is used 100  $\Omega$  of UTP 3,4,5.

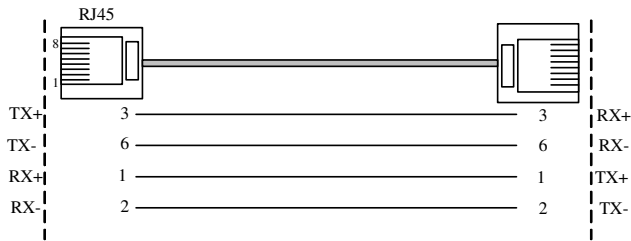


RJ45 port support automatic MDI/MDI-X operation. can connect the PC, Server, Converter and HUB .Pin 1,2,3,6 Corresponding connection in MDI. 1→3,2→6,3→1,6→2 are used as cross wiring in the MDI-X port of Converter and HUB. . 10Base-T/100Base-TX are used in MDI/MDI-X, the define of Pin in the table as below.

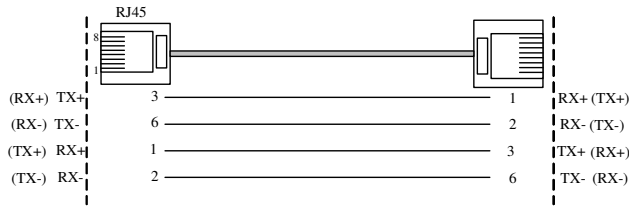
NO.	MDI signal	MDI-X signal
1	TX+	RX+
2	TX-	RX-
3	RX+	TX+
6	RX-	TX-
4,5,7,8	—	—

Note: "TX±"transmit data ±, "RX±"receive data ±, "—"not use

**MDI(straight-through cable)**



**MDI-X(Cross over cable)**

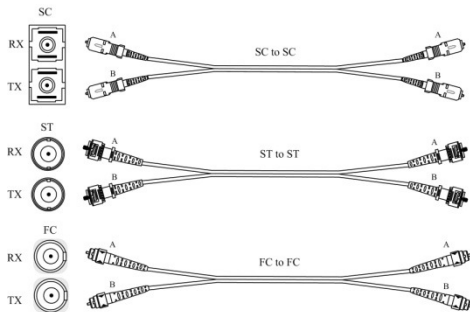


**100BaseFX port**

100Base-FX full-duplex SM or MM port , SC/ST/FC type .The fiber port must be used in pair, TX (transmit) port connect remote switch's RX(receive) port; RX(receive) port connect remote switch's TX(transmit) port.

The optical fiber connection supports the line to instruct enhance the reliability of network effectively.

**Suppose:** When preparing your cable, please label the two sides of the same line with the same letter (A-to-A and B-to-B, shown as below, or A1-to-A2 and B1-to-B2).



### LED Indicator:

LED indicator light on the front panel of DFB48M08UX .the function of each LED is described in the table as below

System indication LED		
LED	State	Description
PWR1	ON	Power1 is being supplied to
	OFF	Power1 is <b>not</b> being supplied to
PWR2	ON	Power2 is being supplied to
	OFF	Power2 is <b>not</b> being supplied to
Alarm	ON	When the alarm is enabled, power and the port's link is inactive.
	OFF	Power and the port's link is active, <b>no</b> alarm present
Run	ON	Common straight link mode
	OFF	disable
Link/ACT 1~8	ON	TP port is active
	Blinking	Data is being transmitted
	OFF	TP port is inactive

### Relay contact:

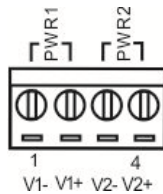


The relay consists of the two middle contacts of the terminal block on DFB48M08UX's top panel. The two terminal block connector are used to detect both power faults and port faults. The two wires attached to the Fault contacts form an open circuit when:

(1) DFB48M08UX has lost power from one of the DC power inputs; one of the ports for which the corresponding Port alarm DIP Switch is set to ON is not properly connected.

If neither of these two conditions occur , the alarm circuit will be closed.

### Power Input:



DFB48M08UX have redundant power input, provides one terminal block (4 pins) for PWR1 and PWR2 input. The redundant power can be used single and used two self-governed power to supply to the system, PWR1 and PWR2 input at the same time, when neither of these two power fails, the other power acts as a backup, and automatically supplies power needs to ensure continuous Ethernet operation .

## Switch Settings:



Provide 10 bits switch for function setting. 1~8 alarm enable switch setting. ON show enable ,9 show PWR1 alarm setting .10 show PWR 2 alarm setting . ON show alarm state.

## Installation:

Before installation, confirm that the work environment meets the installation requirement, including power and space and whether it is close enough to the equipment interfacing to it.

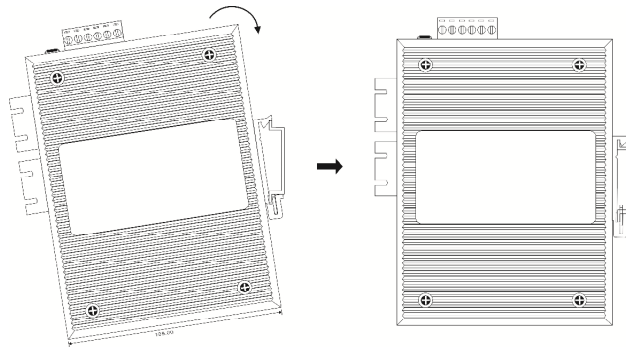
### Installation requirement

1. Avoid installing under direct sunlight, keep away from the heat generating equipment or areas of intense EMI.
2. Examine the cables and plugs to be employed in the installation.
3. Check whether the cables are less than 70-100m according to network cable type.
4. Screws, nuts, tools required for installation.
5. Power need: Redundant, dual 24VDC(12VDC~48VDC)
6. Environment: -40 to 75°C  
Storage Temperature: -45°C to 85°C  
Relative humidity 10% to 95%

### DIN-Rail Installation

In order to use in industrial environments, DFB48M08UX employs 35mm DIN-Rail installation, the installation steps are as follows:

1. Examine the DIN-Rail attachment
2. Examine DIN Rail if firmly installed and the position is correct in the enclosure or wall
3. Insert the top of the DIN-Rail into the slot just below the stiff metal spring.
4. The DIN-Rail attachment unit will insert into place as shown below.



## Wiring Requirements:

Be sure to disconnect the power cord before installing and/or wiring your Ethernet Switch.

Calculate the maximum possible current in each power wire and common wire. Observe all electrical codes dictating the maximum current allowable for each wire size. If the current is above the maximum ratings, the wiring could overheat and cause serious damage to your equipment. User should also check the following items:

1. Use separate path to route wiring for power and devices. If power wiring and device wiring paths must cross, make sure the wires are perpendicular at the intersection point.
2. NOTE: Do not run signal or communications wiring and power wiring in the same wire conduit. To avoid interference, wires with different signal characteristics should be routed separately.
3. User may use the type of signal transmitted through a wire to determine which wires should be kept separate. The rule of thumb is that wiring that shares similar electrical characteristics can be bundled together.
4. Keep input and output wiring separated. It is strongly advised that you label wiring to all devices in the system when necessary.

## Specifications:

### Interface

RJ45 Ports: 10/100BaseT(X) auto connection, F/H duplex or force work mode, and support MDI/MDI-X connection

Fiber Ports: 100BaseFX ports (SC/ST/FC connector, optional)

Single-mode: 20, 40Km versions

Multi-mode: 2.5Km

Wavelength: 850nm, 1310 nm, 1550nm

Alarm output interface: One relay alarm output; supports power, port link and network alarm

Indicator: Power, Port link, alarm indication

### Technology

Standards: IEEE802.3, IEEE802.3x, IEEE802.3u

Forwarding and Filtrate Rate: 148810pps

Processing type: Store and Forward

System exchange bandwidth: 1.6G

### Relay

Max voltage: 24V

Max current input: 1A

### Power

Input Voltage: 24VDC (12VDC~48VDC)

Overload Current Protection

Support dual power backup

### Mechanical

Dimensions: 136mm×52mm×105mm (H×W×D)

Casing: IP30 protection, Metal case

Installation: DIN-Rail

Weight: 900g

### Environmental

Operating Temperature: -40 to 75°C

Storage Temperature: -45 to 85 °C

Ambient Relative Humidity: 10% to 95% (non-condensing)

### Compliance

EMI: FCC Part 15, CISPR (EN55022) class A

EMS: EN61000-4-2(ESD),

EN61000-4-3(RS),

EN61000-4-4(EFT),

EN61000-4-5 (Surge),

EN61000-4-6 (CS),

EN61000-4-8,

EN61000-4-11

Shock: IEC 60068-2-27

Free Fall: IEC 60068-2-32

Vibration: IEC 60068-2-6

**Warranty: 1 year - extended warranty available**

### For Warranty Support contact:

**support@dantesecurity.net**

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