

100BASE-TX TO 100BASE-FX Single Fiber Media Converters

KC-201-W3-S3

KC-201-W5-S3

Installation Guide



P/N 750-0156-001
DOC.010801-KC201-NK

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TRADEMARKS

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FCC NOTICE

This device complies with Class A Part 15 the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received including the interference that may cause.

CE NOTICE

Marking by the symbol  indicates compliance of this equipment to the EMC directive of the European Community. Such marking is indicative that this equipment meets or exceeds the following technical standards:

EMC Class A

EN 50081-1/1992 : EN55022, EN61000-3-2, EN61000-3-3

EN 50082-1/1998 : EN61000-4-2, EN61000-4-3, EN61000-4-4, EN61000-4-5,
EN61000-4-6, EN61000-4-11

1. Introduction

The 100BASE-TX to 100BASE-FX single fiber media converter series provides a media conversion allowing high-speed integration of fiber optic and twisted-pair segments.

With WDM technology, the converters uses one single fiber cable instead of duplex fiber cable for data transmission. A complete set of LEDs allows for quick status verification.

The converters also provide the following key features:

- Compliance with IEEE 802.3u standard
- Auto-negotiation function built in twisted-pair port that allows to operate at optimal configuration connecting to an auto-negotiation capable device
- Extending network span up to 30km over dual wavelength single strand single mode fiber cabling
- Tremendous cost saving of single mode optic fiber cable
- Providing both MDI jack and MDI-X jack on the twisted-pair interface for flexible UTP cable selection

The converter series support the following configuration needs:

100BASE-TX to 100BASE-FX single mode SC (30Km)

KC-201-W3-S3 Tx 1310nm, Rx 1550nm

KC-201-W5-S3 Tx 1550nm, Tx 1310nm

1.1 Specifications

Twisted-Pair Interface

Connectors	Two Shielded RJ-45 jacks
Pin Assignments	MDI and MDI-X
Compliance	IEEE 802.3u 100BASE-TX
Data Speed	100Mbps
Duplex Mode	Half-duplex or Full-duplex
Cable Type	100Mbps - Category 5 UTP
Supported Link Length	100 meters

Fiber Optic Interface

Compliance	IEEE 802.3u 100BASE-FX
Connector	Simplex SC
Data Speed	100Mbps
Duplex Mode	Full-duplex
Cable Types	Single mode (SM) - 8.7/125, 9/125, 10/125 mm

General Information

Frame Types Supported	IEEE 802.3 Std. 64Bytes ~ 1518Bytes frames & VLAN tagged frames (4 bytes tag)
Power DC Input	+12V 0.8A min.
Dimension	H 28mm x W 96mm x D 151mm
Housing	Enclosed metal with no fan
Operating Temperature	0°C ~ 50°C
Storage Temperature	-20°C ~ 90°C
Relative Humidity	5% ~ 90%

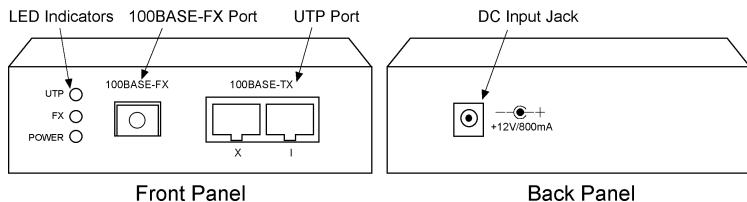
2. Installation

2.1 Unpacking

Check that the following components have been included:

- Installation guide
- 100 Single Fiber Media Converter
- One AC power adapter for the converter

2.2 Media Converters



Functions of UTP Port (Twisted-Pair Interface)

- Auto-negotiation support for connecting to 100M auto-negotiation devices
- Supports both of half duplex and full duplex operations
- MDI and MDI-X jacks are provided for flexible selection of UTP connection

Functions of 100BASE-FX Port (Fiber Optic Interface)


- Full data rate of 100Mbps for remote fiber connection
- Full-duplex operation
- Single mode Single fiber SC interface (up to 30Km)

Model	Tx Wave	Rx Wave	Output power	Input Sensitivity
KC-201-W3-S3	1310nm	1550nm	-7 dBm	-23dBm min.
KC-201-W5-S3	1550nm	1310nm	-7 dBm	-23dBm min.

DC Input Jack

DC Input +12VDC

DC Power min. 0.8A

DC Input Jack 

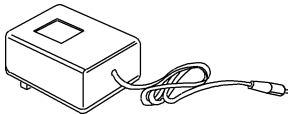
2.3 LED Indicators

<u>Name</u>	<u>Status</u>	<u>State</u>	<u>Interpretation</u>
POWER	Power status	On	Power on
		Off	Power off
UTP	UTP link & Rx status	On	Link up
		Off	Link down
FX	Fiber link & Rx status	On	Link up
		Off	Link down

Note: UTP & FX LED blink to off for 0.1 second for every received packet

2.4 Applying Power

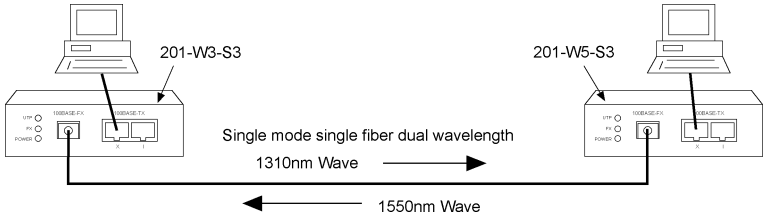
Before you begin the installation, check the AC voltage of your area. The AC power adapter which is used to supply the DC power for the unit should have the AC voltage matching the commercial power voltage in your area. The specifications of the AC power adapter are:



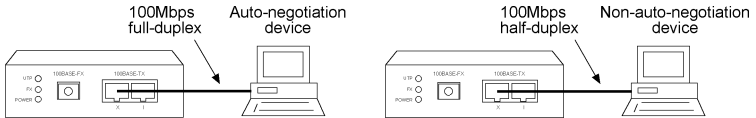
- AC input power: AC power voltage of your area
 - DC output power: +12V VDC 0.8A minimum
1. Connect power adapter DC plug to the DC input jack located on the back of the converter before connecting to the AC outlet.
 2. Connect the power adapter to the AC outlet.
 3. Check Power LED indication.

2.5 Making Connection

The converters must be used in pair of 201-W3-S3 and 201-W5-S3. Both use different wavelengths to transmit and receive data. See the following example:



The figure below shows the configuration used when connecting to auto-negotiation device and non-auto-negotiation device.



For proper communication, the UTP connections on both ends must be in same configuration, either 100M full-duplex or 100M half-duplex.

