LNK-IRS93 Series

Industrial Serial RS232/RS485/RS422 Fiber Optic Modem

This quick start guide describes how to install and use the Industrial Serial RS232/RS485/RS422 Fiber Optic Modem. This is the Serial Fiber Modem of choice for harsh environments constrained by space.

Overview

LNK-IRS93 series is an industrial grade RS232/RS485/RS422 to fiber optic converter which converts a standard RS232/RS485/RS422 signal to a fiber optic link as to extend the signal up to 2Km on multimode fiber and 80Km on single mode fiber. The use of optical fiber communication solves the problems of electromagnetic interference, ground ring interference and lightning damage. It greatly improves the reliability, security, and confidentiality of data communication, and can be widely used in various industrial control, process control, Stage Lighting Control, and traffic control occasions. LNK-IRS93 Series are easy to mount on a DIN rail or in distribution boxes.

General

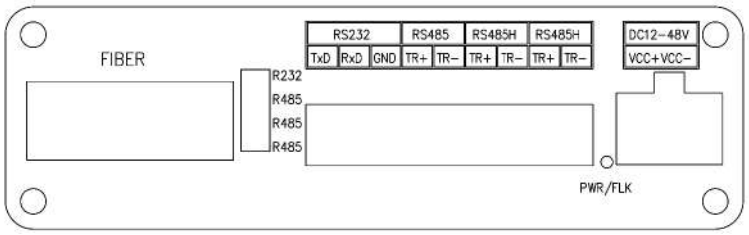
To ensure trouble free transportation and storage, all products must be thoroughly inspected, tested, and properly packed before delivery. Check the product upon receipt for any visible damage which may have been caused during shipment.

Package Content

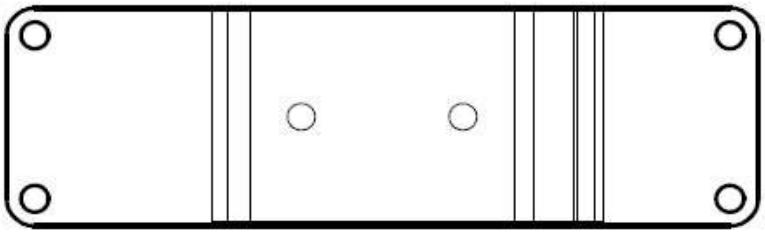
- **LNK-IRS93 Series** Fiber Optic Modem x 1
- Quick Start Guide x 1
- L-shaped wall mount bracket x 1

Physical Description

Front Panel



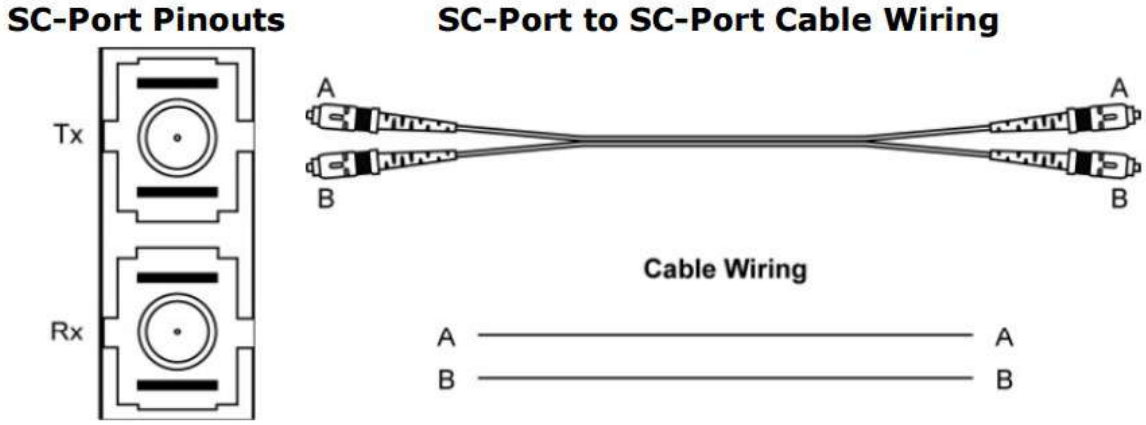
Rear Panel

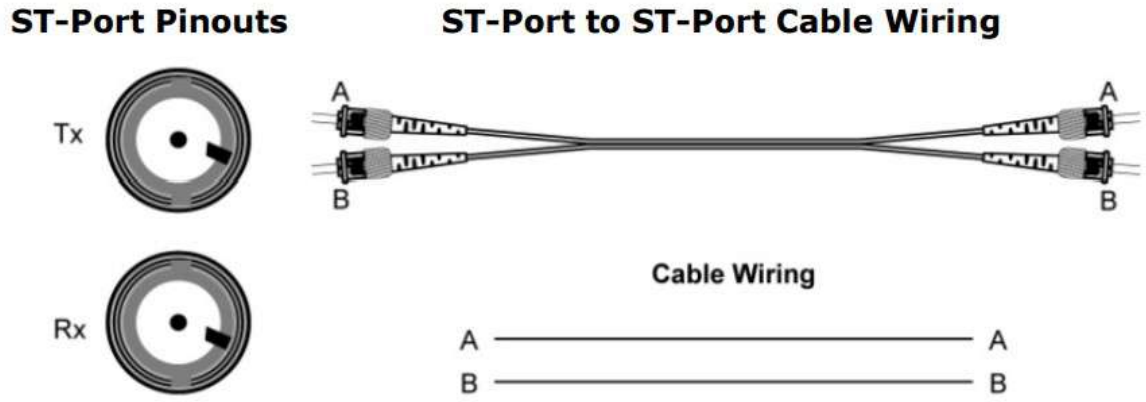


Installation

SC/ST Fiber Optic Port Connection (SC default, ST optional)

The concept behind the SC/ST port and cable is straightforward. Suppose you are connecting devices I and II. Contrary to electrical signals, optical signals do not require a circuit in order to transmit data. Consequently, one of the optical lines is used to transmit data from device I to device II, and the other optical line is used transmit data from device II to device I, for full-duplex transmission.
All you need to remember is to connect the Tx (transmit) port of device I to the Rx (receive) port of device II, and the Rx (receive) port of device I to the Tx (transmit) port of device II. If you make your own cables, we suggest labeling the two sides of the same line with the same letter (A-to-A and B-to-B, as shown below, or A1-to-A2 and B1-to-B2).



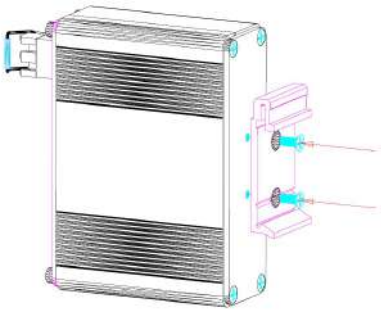


ATTENTION:

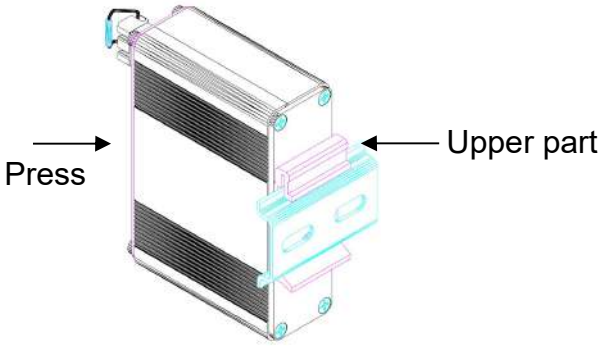
1. This is a Class 1 Laser/LED product. To avoid causing serious damage to your eyes, do not stare directly into the laser beam.
2. The above text is for dual fiber port connection only; if for single fiber port connection, just using 1 fiber cable for connection, not need to tell Tx or Rx side.

DIN Rail Installation

LNK-IRS93 Series can be installed on a DIN rail. Installation steps are as follows:



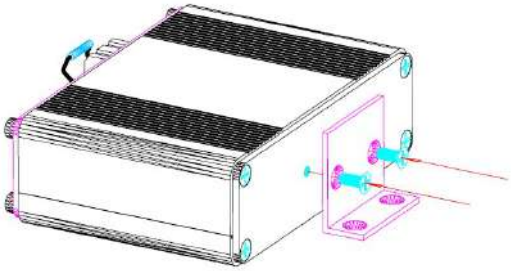
1. Tighten the screws to fix the DIN Rail plate



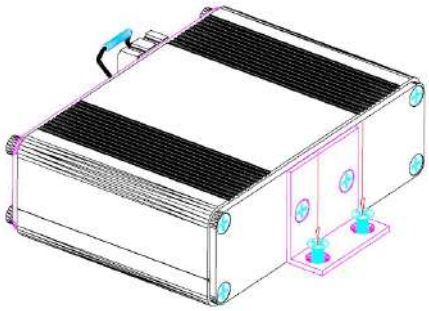
2. Lock the upper part of the DIN rail clip on the upper side of the track. Gently press it until the clip is securely locked on the track.

Wall Mount Installation

LNK-IRS93 Series can also be installed on a wall or a flat surface. Installation steps are as follows:



1. Tighten the screws to fix the wall mount bracket



2. Mount the switch on the wall or on a flat surface with 2 screws piercing through the mounting holes to secure it in position.

Setup

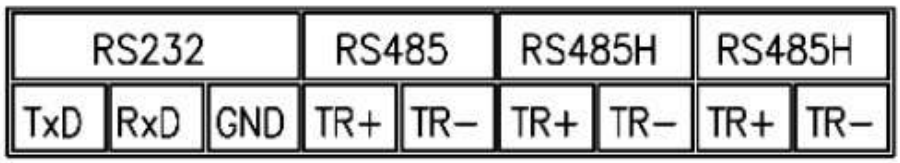
a) Connect the RS232/422/485 port of the media converter to a serial device with a serial cable.

b) Connect the fiber cable from the device (media converter) on the other end to the SC/ST connector.

c) After the device is powered on, the PWR indicator will all be on. If the indicators are not on, check the power supply connection.

d) After all cables are correctly connected, the indicators will be lit as per port status LEDs (page 4).

Serial Interface



Serial Interface	Industrial Terminal
Signal Ports	1Ch RS232 - 1Mbps 1Ch R485 - 1Mbps 2Ch RS485H- 2Mbps 2Ch RS485H can be grouped into 1Ch High Speed RS422

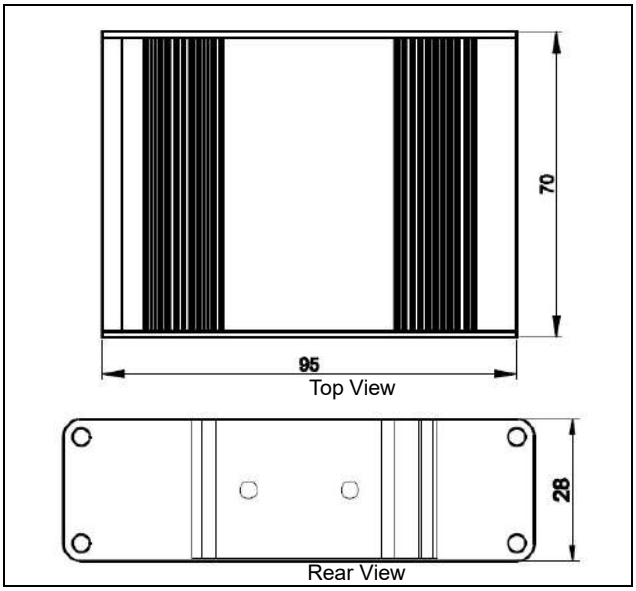
Power Connection



12~48VDC	**VCC-**	GND	Terminal Block
	VCC+	12~48V	

The Port Status LEDs, dimension drawing

LED	State	Indication
PWR	Red	Power on (Light flashes)
	Off	Power off.
FLK	Red	A valid fiber connection established (Light always on, not flashing)
RS232	Green	A valid RS232 connection established
RS485-1	Green	A valid RS485 connection established
RS485-2	Green	A valid RS485H connection established
RS485-3	Green	A valid RS485H connection established



Functional Description

- Plug-and-play, hot pluggable
- Extends Bi-directional RS-232/RS-485/RS-422 up to 2Km on MMF, 80Km on SMF
- EIA /TIA standard RS232/485/422, 0-115,200 Baud rate
- Serial data is fully transparent, baud rate is self-adaptive, no setting is required
- The high-speed serial data can be used for DMX512 communication in Stage Lighting Control
- Support DIN-Rail & Wall-mount installation.
- Built-in surge and static protection
- Diagnostic and unit indicator LEDs
- Environmentally Hardened -40°C to 75°C (-40°F to 176°F) operating temperature