LS LIGHTEM SYSTEMS

LFR series RS232/485 Serial Optic Fiber Redundant Ring Converter

Lightem LFR series is a RS232/485 Optic Fiber Redundant Ring Converter which can build a double ring self healing fiber network that greatly improves the stability of the communication of RS-485/232 serial devices. It also provides either 2 channel RS-485 port or 1 channel RS-232 plus 1 RS-485 port. A two-way half duplex communication is allowed for the 2 channel RS-485 device.

When a segment of fiber is broken or a node fails, the device automatically switches the optical fiber channel, making the network still working, the communication link is unblocked, and the safety and reliability of the optical fiber communication network is greatly improved.

LFRMRS24 provides 2 channel RS-485 port or 1 channel RS-232 plus 1 RS-485 port. A two-way half duplex communication is allowed for the 2 channel RS-485 device. Each LFRMRS24 can work in the master station mode or from the slave mode by the dialing switch, but there is only one master station in the fiber ring and the other as the slave station. When LFRMRS24 is set to Slave, the RS-232/485 port will only access slave devices.
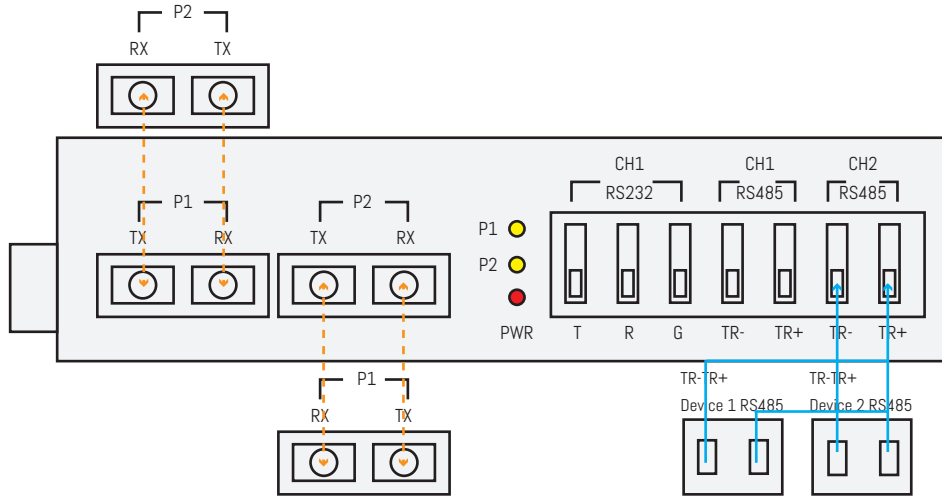
FEATURES

- Point to point, point to multipoint, ring network communication mode
- Two optical ports connect into self healing ring optical fiber network, each optical fiber interface can be single fiber or double fiber, and SC/ST/FC can choose
- 2 channel RS-485 or 1 channel RS-232 plus 1 channel RS-485
- RS-232 rate 300 to 115200bps, RS-485 rate 0~250K
- Master-slave mode, one master station mode in the ring network, and other work in slave mode
- When the slave mode is configured, it can be used as a RS-485/232 serial fiber repeater
- A maximum of 50 slave stations can be accommodated in a ring network
- Industrial design, DC9~36V power supply, DIN guide rail installation
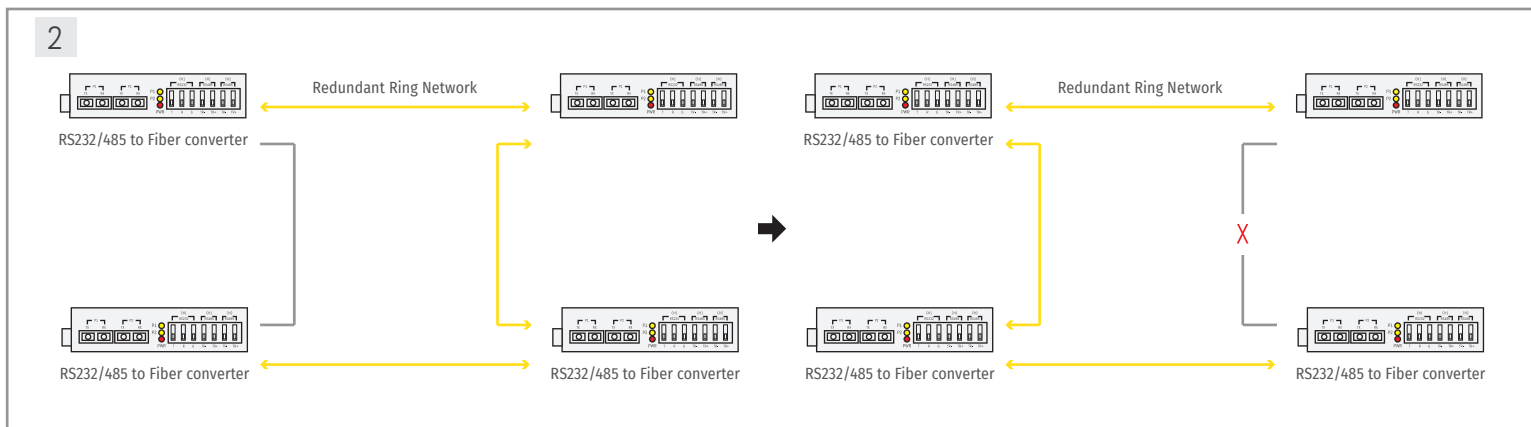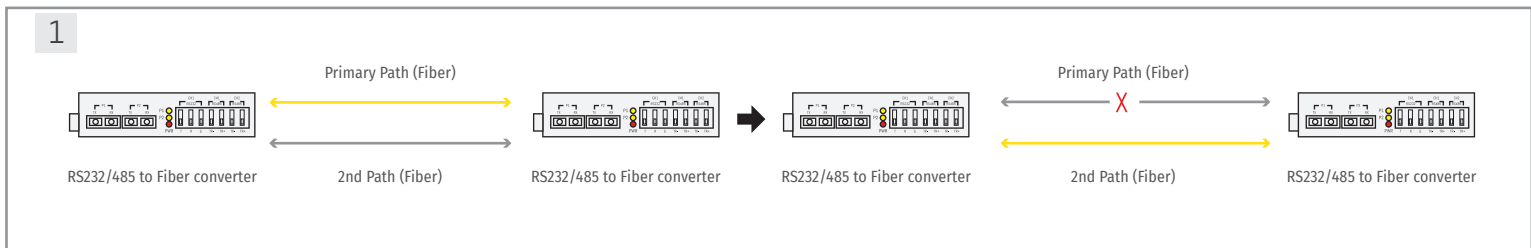
SPECIFICATIONS

Technical	Values
Serial port	2 channel RS-485 or 1 channel RS-485 and 1 channel RS-232
Optical Port	P1: Connect to the next device P2
	P2: Connect to the previous device P1
Communication rate	RS232 rate 300 ~ 115200bps, RS485 rate 0~250K
Connection mode	7 terminal connection
Fiber optic port	2 channel optical fiber port, single / multi-mode SC/ST/FC interface optional, default (SC double fiber)
Wavelength	1310nm (double fiber), 1310/1550 (Dan Xian)
Transmission distance	Multimode 2km, Singlemode 20km
Power supply	DC9~36V/400mA, less than 3W (VS+: Power positive, VS-: Power negative)
Power connection mode	3 Terminal Connection
RS-232	Channel 1: R,T,G as (RXD,TXD,GND)
RS-485	Channel 1: TR+,TR-, Channel 2: TR+,TR-
LED indicator	Power indicator, Fiber port 1 and 2 communication instructions
	P1: P1 Optical Port Communication Instructions
	P2: P2 Optical Port Communication Instructions
Working temperature	-20 C~ +70 C
Storage temperature	-40 C~85 C
Relative humidity	5% to 95% non condensation
Dimensions	40 (W) mm X 120 (H) mm X 90 (L) mm

INSTALLATION

1, Before power supply is connected, the master station dial switch is to set "Master", and the slave station as "Slave"
2, Optical fiber port P1 is connected to the P2 optical fiber port of the next device.
3, Optical fiber port P2 is connected to the P1 optical fiber port of the previous device.
4, Connected the Fiber TX to RX and RX to TX, P1 is connected to P2 when single fiber option is choosen
5, If Master station uses serial port 1, slave station should use serial port 1, vice versa if master station uses serial port 2, slave station should use serial port 2.

APPLICATION

1

Primary Path (Fiber)

2nd Path (Fiber)

RS232/485 to Fiber converter   RS232/485 to Fiber converter   RS232/485 to Fiber converter   RS232/485 to Fiber converter

Primary Path (Fiber)

2nd Path (Fiber)

2

Redundant Ring Network   Redundant Ring Network

RS232/485 to Fiber converter   RS232/485 to Fiber converter   RS232/485 to Fiber converter   RS232/485 to Fiber converter   RS232/485 to Fiber converter   RS232/485 to Fiber converter

ORDERING INFORMATION

P/N	Descriptions		
LFRMRS24 - ABC	LFR series RS232/485 Serial Optic Fiber Redundant Ring Converter		
A	M: Multimode	S: Singlemode	
B	D: Duplex	S: Simplex	
C	T: ST	F: FC	S: SC