Model 2110

S.I.TECH

Optical Asynchronous Mini Bit-Driver   Point to Point

RECEIVE   R

S.I.TECH

MINI OPTICAL BIT-DRIVER
MODEL 2110
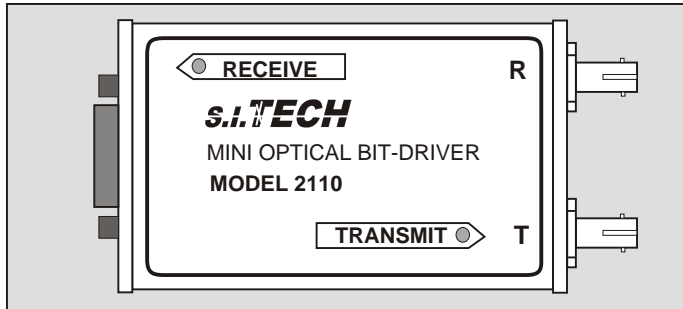
TRANSMIT   T

Operation Mode:	Asynchronous, bi-directional, half duplex
Input/Output Interface:	RS485, 9 pin type D, asynchronous at 0 to 56 Kbps** connects directly to terminal (RS485 cable not required)
Transmission Line Interface:	ST connector is standard for interfacing with fiber optic cable (SMA option)
Transmission Distance:	See distance chart
Optical Power into a 50 Micron Core Optical Fiber:	0.5 microwatt, 10 dB power budget* @ 880 nanometers
Receiver Sensitivity:	50 nanowatts at less than 10^{-9} bit error rate
Operating Temperature:	0 ^{o}C to 50 ^{o}C
Metal Enclosure:	1.75 x 3 x 0.625 in (4.5 x 7.5 x1.6 cm) Panel or DIN rail mounting option
Weight:	0.25 lb (100 grams)
Input Power:	External with power supply (S.I. Tech #2121 - 110VAC to 12 Volt DC)
230V Version:	Use S.I.Tech 2122 power supply

** Data rate must be set at factory

Meets FCC requirements of Class A, Part 15 Computing Devices Standard.
Specifications subject to change without notice.

(UL) CE

Features:
- 0 to 56 Kbps asynchronous, RS-485 half duplex operation
- 6600 ft. (2Km) maximum distance capability
- 0 ^{o}C to + 50 ^{o}C operating range
- ST connector receptacle (SMA option)
- Designed to work with Johnson Controls System - N2 Bus and Bacnet (2110BAC)
- For card version use 2310 (N2 Bus) or 2345 (point to point)
- Cable assembly use 7110 (2110 to N2 Bus)
- Data speed set at the factory

RS - 485 9 PIN CONNECTOR - FEMALE
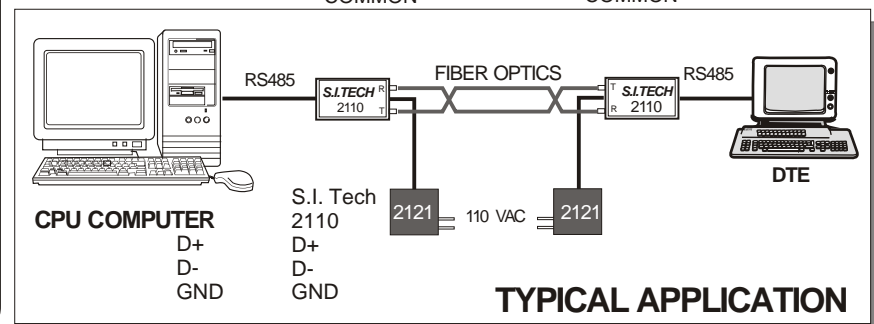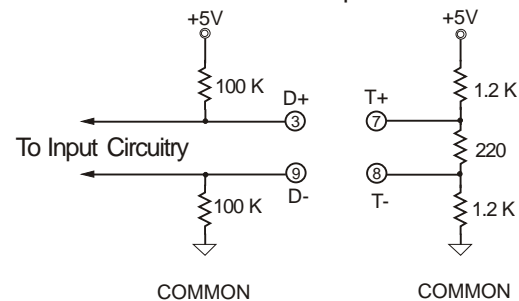### PINS UTILIZED BY 2110 MINI BIT - DRIVER

Pin No.	Description	Symbol
1	Signal Ground	SG
2	NC	
3	Data (+)	D +
5	Signal Ground	SG
6	NC	
7	Termination (+)	T +
8	Termination (-)	T -
9	Data (-)	D -

OPERATING DISTANCE FOR FIBER OPTIC CABLE

Fiber Size (Microns)	Attenuation dB/Km	Distance Meters*	Distance Feet*
1000	200	100	330
50	3.0	2000	6600
62.5	4.0	2000	6600
100	5.0	2000	6600
8 SM**	1.0	7000	23000

* High power option available ** Single mode option
1000 Micron is plastic fiber (uses SMA connectors) option

Termination Resistors provided in Bit-Driver

+5V   +5V

100 K   D+   T+   1.2 K
        ③   ⑦

To Input Circuitry   220

        ⑨   D-   ⑧   T-
100 K   1.2 K

COMMON   COMMON

ORDERING INFORMATION

Model Numbers

2110	RS485 to Fiber, Multimode, ST Connector, N2 Bus
2110BAC	RS485 to Fiber, Multimode, ST Connector, Bacnet
2610	RS485 to Fiber, Multimode, ST, High Temp.
2110-SM	RS485 to Fiber, Single Mode, ST
2110-SMA	RS485 to Fiber, Multimode, SMA Connector
2110-660	RS485 to Plastic Fiber, SMA Connector
2110-L	RS485 to Fiber, Multimode, High Power (5Km), ST
2110-DIN	RS485 to Fiber, Multimode, ST, Dinrail Unit
2110-SM-DIN	RS485 to Fiber, Single mode, ST, Dinrail Unit

Notes:
1. Power Supply # 2121 is required for all models (110VAC to 12 VDC).
2. Power Supply #2122 is for 230VAC applications
3. For 2110 rack mounted, use version 2310 (or 2345) Card with 3000 Rack, 4000 Power Supply, and 3520 (or 3500) Motherboard.

RS485   FIBER OPTICS   RS485

S.I.TECH R   T **S.I.TECH**
2110 T   R 2110

DTE

CPU COMPUTER

S.I. Tech
2110
D+   D+
D-   D-
GND   GND

2121 — 110 VAC — 2121

TYPICAL APPLICATION