Current Loop -Line Driver

MODEL: LD-1C

INTERFACEPRODUCTS. INFO Phone: 91-79-55124898 / 55310266 (M) 0-98253-50221
www.interfaceproducts.info

INTRODUCTION

Milestone Line Drivers Model LD-1C are designed for high speed data transmission between computer system and or peripherals over long distance under high noise conditions. They provide dual line interface per signal.

In this model, only TxD and RxD signals are used. Each signal is converted to two wire signal. Transmit signal is converted to + Tx and –Tx and received signal is converted to +Rx and –Rx signal. Line Driver output will have correspondingly 2 pairs of wires +Tx output from one line driver is connected to +Rx of remote line driver, while –Tx is connected to –Rx. *Typical RS 232 cable connections are shown in TABLE II.*

APPLICATIONS

Application for Line Driver can be for factory automation, programmable logic controllers, attendance recording systems, Bar Code Readers, remote data transmission, remote terminals,

Specifications:	
Input	RS232 D25 Female connector
Output	Two-wire differential output for each signal-D25 Male Connector/Terminal Strip with Opto-Isolation, Surge and Fuse protection
Signals	Supports TX & RX
Max. Distance	1.5Kms @ 19,200 bps 3.0Kms @ 9,600 bps
Output Cable	Shielded twisted pair cable –90 ohms/km
Transient Protection	2500 V Peak
Front Panel LED	TX, RX, LS, PWR (TC, RC)
Power Supply	Mains input –230V AC, 50 Hz
Power	Max. 20 VA Built-In Power Supply

Installation

Generally, when it is required to communicate between two remotely located systems; a pair of Line Driver is to be installed near each system.

The Front Panel consists of LED indicators showing the status of various transmitted and received signals. The LED blinks when the particular signal is received or transmitted. 'TD' and 'RD' indicate transmit and Receive signals respectively. 'LS' indicates **Line Status** when remote Line Driver is connected with Power On condition. When 'LS' is ON, it shows that cable connection to the other end is OK.

The back panel consists of RS232 port and Line Driver (LD port) port. The Tables I and II give the details of RS 232 port. A 2-way slide switch is also provided on the rear panel. "NOR" position is kept for normal working.

Cabling between two line drivers will depend on whether Tx and Rx signals are active or passive. The Interface diagram is shown in figures 1 to 5.

TABLE I RS 232 Port – D25 Female Connector

Pin No.	Signal Name	In / Out
2	RX	Input
3	TX	Output
7	Signal Ground	-

TABLE II RS 232 Cable

Computer End			Line Driver RS232 Port	
Pin D25	Pin D 9	Signal	Pin D25 M	Signal
2	3	TX	2	RX
3	2	RX	3	TX
7	5	Sig. Gnd.	7	Sig. Gnd.

The above connections are for Standard PC COM Port.
Please verify these connections for any other system or terminal before making the able.

LONG DISTANCE CABLE LAYING

Long distance cable between two line drivers must be twisted pair shielded cable. The pair should be used for each signal type; Tx+ and –Tx and +Rx and –Rx respectively. This gives high common mode noise rejection. While laying the cable, care should be taken not to lay this cable parallel to power line cables. The cable resistance should not be more than 90 ohms/1000 meters. The cable should be run through conduit pipe for physical protection.

Figure 1

CURRENT LOOP INTERFACE PIN DIAGRAM

D25 MALE

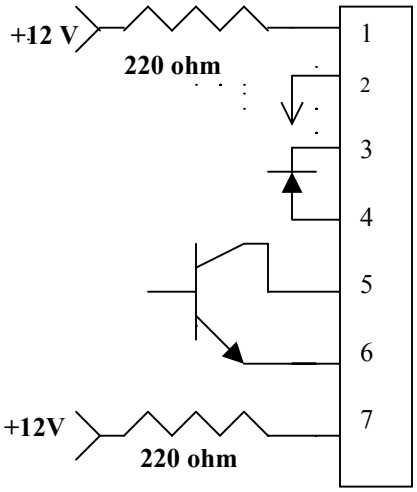

FIGURE-2

1) Tx Active/ Rx Active

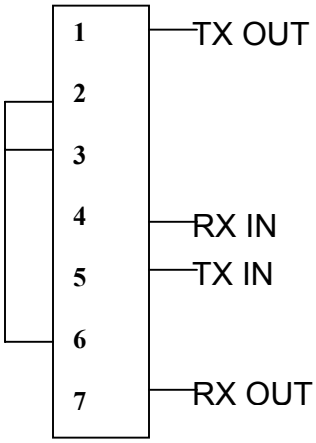

FIGURE-3

2) Tx Passive/ Rx Passive

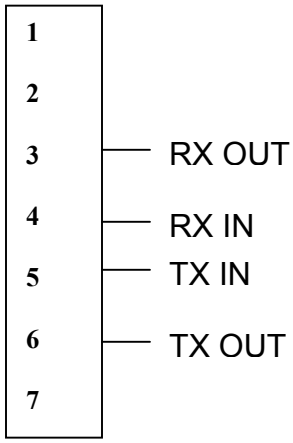

FIGURE-4

3) TX Active / RX Passive

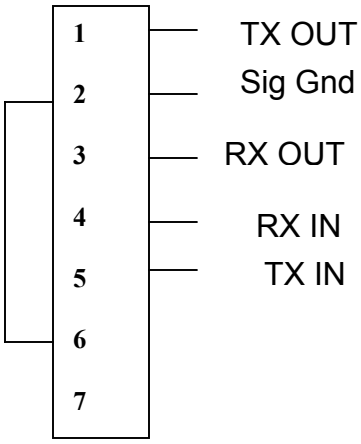

FIGURE-5

4) TX Passive / RX Active