



RS232-RS485/RS422 PLUG IN TYPE CONVERTOR

Model: LD15PL



INTRODUCTION

Milestone RS232 to RS422/RS 485 converter Model LD-15PL is a low cost **powerless** unit designed for high-speed data transmission between computer system and or peripherals over long distance under high noise conditions. The converter has 2-wire as well as 4- wire mode.

APPLICATIONS

Application for these converters can be for factory automation, programmable logic controllers, attendance recording systems, Barcode Readers, remote data transmission, remote terminals, EPABX etc.

Technical Specifications	
Input RS232	TXD, RXD & Grd. (D-25 MALE Connector)
Output RS485	+Tx ,+Rx, -Tx ,-Rx (D-25 Male Connector)
Wire Selection	2/4 wire selection through front panel jumper setting.
Max. Distance	1.2 Km @ 19,200 bps
Selection Switch	On one side of LD-15PL a 2-way Select Switch is located for selecting 2-Wire or 4-Wire mode in RS422/485 application.
Max. Distance	1.2 Kms. @ 19,200 bps
Output Cable	Shielded twisted pair cable-90 ohms/Km (not supplied)
LED Indication	Power, TX, RX.
Power Supply Options	1. Powerless Mode: Power drawn from RTS and DTS Signal on RS232 Port. 2. With External +5V External Power given between Pin 17 and Pin 18
Size	65 x 55 x 17 (mm)



TABLE I: RS232 PORT (D-25 Male Connector)

Pin No.	Signal Type on Pin	Instrument
1	Earth	
2	RXD	Input
3	TXD	Output
5	RTS	Input
6	DTR	Input
7	Signal Ground	-
17	+5V	Input
18	+5V RET	

TABLE II: RS485 port (D25 male connector)

Output Pin No.	Signal Type on Pin	Instrument
1	Earth	Earth
2	-RX	
3	+RX	
5	+TX	+TX / +RX
6	-TX	-TX / -RX
7	Signal Ground	GND
17	+ 5 V	+ 5 V
18	+ 5 V RET	+ 5 V RET



TABLEIII: RS 232 Cable Diagram

Computer End RS232 Port			Unit RS232 Port	
Pin No. (D-25)	Pin No. (D-9)	Signal	Pin (D-25)	Signal
2	3	TX	2	RX
3	2	RX	3	TX
7	5	GND	7	Signal GND
20*	4	DTR	20	DSR
4	7	RTS	4	CTS

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

LONG DISTANCE CABLE LAYING

Long distance cable between two RS422/RS485 interfaces must be a twisted pair shielded cable. The pair should be used for each signal type + and – signal. 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.



TABLE IV: OUTPUT CABLE – 4 Wire

D 25 Female	Pin No	Instrument
-Rx	3	-Tx
+Rx	4	+Tx
+Tx	5	+Rx
-Tx	6	-Rx

TABLE V: OUTPUT CABLE – 2 wire

D 25 Female	Pin No	Instrument
+TX / + RX	5	+TX / + RX
-TX / - RX	6	-TX / - RX