OPERATING MANUAL

FOR

RS232 TO RS422/RS485 CONVERTOR DISTRIBUTOR (PHONEX)

MODEL LD-104UDP/ LD-108UDP/
LD-112UDP/ LD-116UDP

INTRODUCTION

Milestone model LD-104UDP/LD-108UDP/LD-112UDP/LD-116UDP is a "RS232 to RS422/RS485 Converter- Distributor" is 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.

APPLICATIONS

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

SPECIFICATIONS

Input	One RS232 Input: - TxD, RxD, GND 3 Pin Phonex connector)
Output	**4/8/12/16** RS422/RS485 Outputs:- -Tx/Rx, GRD, +Tx/Rx, (3 Pin Phonex Connectors). Each signal is protected by spike suppressor and has opto-isolation.
Max. Distance	1.2Kms. @ 19,200 bps
Output Cable	Twisted pair cable-90 ohms/km
Transient Protection	2500 V Peak
Front Panel Indications	Power, Tx, Rx1, Rx2, Rx3, Rx4 to Rx8 to Rx16
Power Supply	Mains Input-230V, 50 Hz
Power	Max. 50 VA Built-In Power Supply.

INSTALLATION INSTRUCTIONS

TABLE I: RS 232 Port – 3 Pin Phonex

Pin No.	Signal Name	In/Out
1	Tx Out	Output
2	Rx In	Input
3	Signal Ground	-

TABLE II: Output port-3 Pin Phonex Connector

Line Driver Port	Signal
1	-Tx/Rx (A)
2	GRD
3	+Tx/Rx (B)

TABLE III: RS 232 Cable

Computer End			RS232 Port	
No. (D-25F)	**Pin No. (D-9F)**	**Signal**	**Pin No. 3 Pin Phonex**	**Signal**
2	3	Tx	2	Rx In
3	2	Rx	1	Tx Out
7	5	GND	3	Sig.Gnd

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.

TERMINATING RESISTOR

Terminating Resistor of value 180 Ohms is required for RS-485 configuration at each end between + and – output of the RS-485 port.

TABLE IV: OUTPUT CABLE

3 Pin Phonex	Pin No.	Instrument
-Tx/Rx	1	-Tx/Rx-A
+Tx/Rx	3	+Tx/Rx-B

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