LDM35

RoHS III COMPLIANT 2015/863 CE

Signal-powered RS-232 Line Drivers

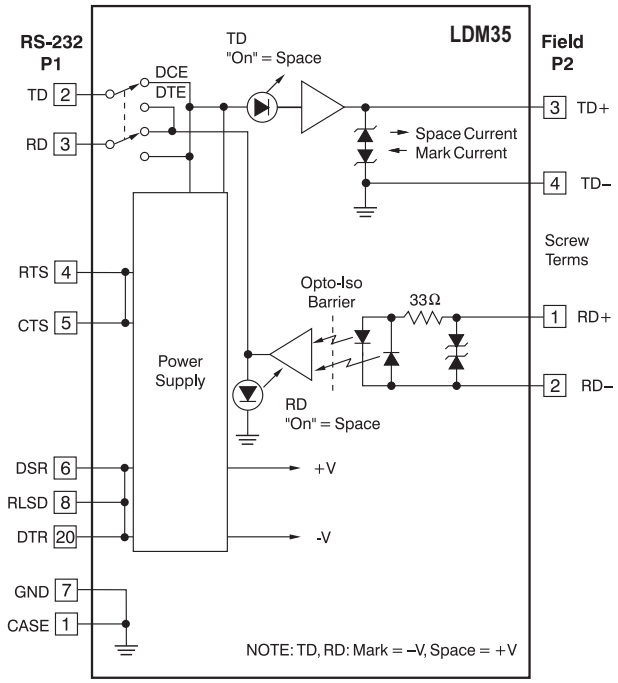
DESCRIPTION

The LDM35 series of products is designed to allow video display terminals (VDTs) and other RS-232 devices to be connected over distances sufficient to cover any industrial or institutional complex of buildings. These line drivers feature a rugged enclosure small enough to mount on the back panel of VDT units, saving valuable desk and floor space.

The LDM35 series does not require a power supply for operation. The use of low-power circuits and a sensitive optical receiver allows the devices to derive all necessary power from the RS-232 data and control signal. They are designed for full-duplex, asynchronous operation over two, DC-continuity, non-loaded, twisted-wire pairs. Two-wire simplex operation may be accomplished over two wires. The line driver circuits — and, consequently, the host device — are protected from electrical transients due to lightning strikes or operation of heavy industrial equipment.

Each device features a convenient Data-communication Equipment (DCE) to Data-Terminal Equipment (DTE) switch which reverses pins 2 and 3 of the RS-232 connector. For installation and troubleshooting, each unit has diagnostic Light-Emitting Diodes (LEDs) on the transmit and receive lines.

The RS-232 connector may be ordered as a male or female 25-pin connector. Field connection is made through a modern, solderless, screw-termination assembly.



LDM35 Block Diagram

FEATURES

- Signal-powered: No Power Source Required
- Optical Isolation: Breaks Ground Loops
- Heavy-duty Surge Protectors: Prevents Lightning Damage
- LED Diagnostic Indicators: Simplifies Installation and System Troubleshooting
- Operation to 2 Miles (3.3km) at 9600bps, 0.5 Miles (0.8km) at 19,200bps, 7 Miles (11.7km) at 1200bps
- Four-wire Full-duplex, Two-wire Simplex
- Selection of Connectors
- Wide Operating Temperature Range, 0°C to +70°C
- Null Modem Switch
- CE Compliant
- Manufactured per RoHS III Directive 2015/863

BENEFITS

- Extends Communication Distances
- Protects Sensitive Communication Ports
- Wide Power Supply Range

APPLICATIONS

- Industrial Building Complex Communications
- Wired Networking
- Data Centers

RS-232 P1 Pin Descriptions	Field P2 Pin Description
Pin 1 CASE Ground Pin 2 TD [3] Transmit Data Pin 3 RD [2] Receive Data Pin 4 RTS [7] Req. To Send Pin 5 CTS [8] Clear To Send Pin 6 DSR [6] Data Set Ready Pin 7 GND [5] Signal Ground Pin 8 RLSD [1] Receive Line Signal Detect Pin 20 DTR [4] Data Terminal Ready	Screw Terms Pin 1 RD+ Pin 2 RD– Pin 3 TD+ Pin 4 TD– RD+ = Receive Data + RD– = Receive Data – TD+ = Transmit Data + TD– = Transmit Data –
Pin Numbers Given are for the 25-pin Connector with the 9-pin Equivalent in [ ].	

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Specifications

Typical* at T_A = +25°C

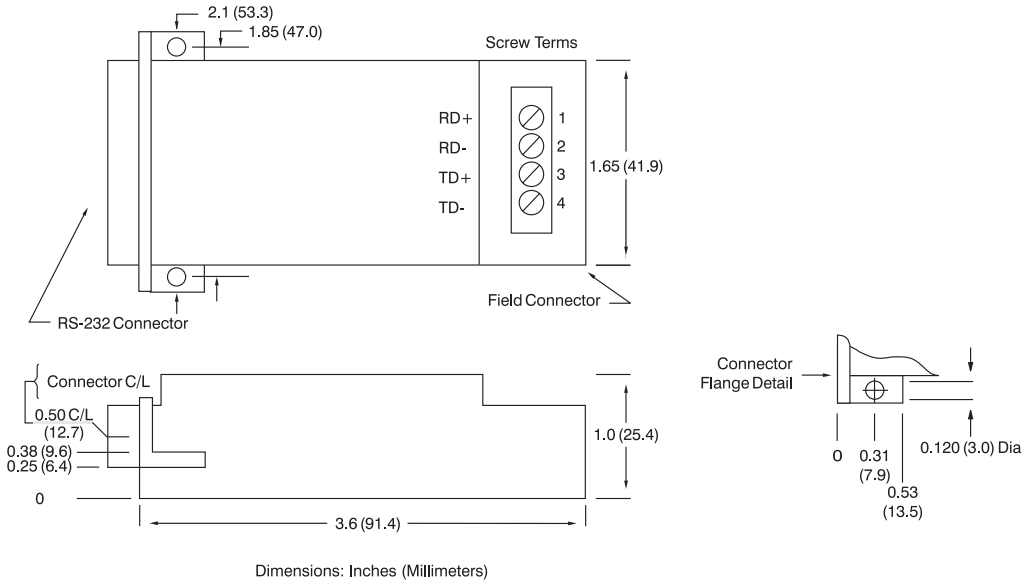
Model	LDM35
Bit Rate (bps) bps vs Distance Distance(miles) Distance(km)	0-19.2k 19.2k 9.6k 4.8k 2.4k 1.2k-0 0.5 2.0 3.0 5.0 7.0 0.8 3.2 4.8 8.1 11.3
Common-mode Isolation Differential-mode Surge Protection (3 devices)	Surge: 500Vp, 1 Minute Continuous: 300Vrms ANSI/IEEE C37.90.1
Modes	Asynchronous 4-wire Full-duplex, 2-wire Simplex
Channel Lines(1) Control Lines(1)	TD, RD RTS, CTS, DTR, DSR, RLSD
Power RS-232 Data RS-232 Control Signals	RS-232 Data and Control Signals ±5V to ±15V, 3.0mA to 10.0mA ±6V to ±15V, 3.0mA to 10.0mA
Environmental: Operating Temperature Range Storage Temperature Range Relative Humidity	 0°C to +70°C –10°C to +85°C 0 to 95% Noncondensing
Dimensions (h)x(w)x(d)	3.6" x 2.1" x 1" (91.4mm x 53.3mm x 25.4mm)
Weight	3.2 oz (91g) (max)
MTTF(2)	>150,000 Hrs

NOTES:
*Contact factory or your local Dataforth sales office for maximum values.
(1) TD = Transmit Data, RD = Receive Data, RTS = Request To Send, CTS = Clear To Send, DTR = Data Terminal Ready, DSR = Data Set Ready, RLSD = Received Line Signal Detect.
(2) Ground-benign environmental conditions (no salt atmosphere, <50°C ambient temperature).

Ordering Information

Model	25-pin Connector	Termination
LDM35-P*	Male	Screw Terminals
LDM35-S*	Female	Screw Terminals

*Last Time Buy



Dimensions: Inches (Millimeters)

LDM35 Dimensions

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