LDM30

RoHS III COMPLIANT 2015/863 CE

General-purpose RS-232 Line Drivers

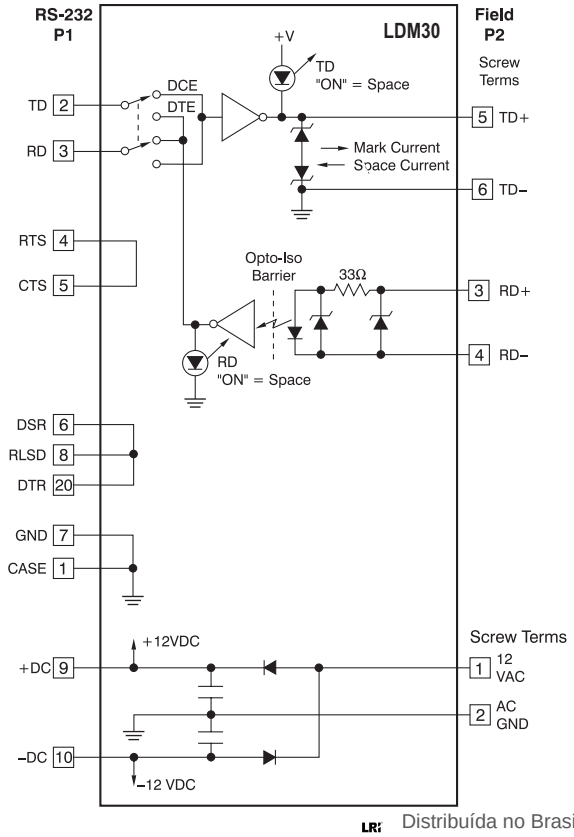
DESCRIPTION

The LDM30 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 aluminum enclosure small enough to mount on the back panel of VDT units, saving valuable desk and floor space.

The LDM30 series is designed for full-duplex, asynchronous operation over two, DC-continuity, non-loaded, twisted-wire pairs. Through special high-speed optically-coupled circuits they may communicate at data rates up to 57,600bps. A self-powered model and a host-powered model are available. The self-powered unit uses 12VAC from a wall-mounted transformer while the host-powered unit takes ±DC power from pins 9 and 10 of the RS-232 connector. 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.



LDM30 Block Diagram

FEATURES

- DC to 57,600bps
- Optical Isolation
- Surge Protectors
- LED Diagnostic Indicators
- Operation to 3 Miles (5km) at 9600bps,
  1 Mile (1.7km) at 19,200bps,
  0.5 Miles (0.8km) at 57,600bps
- Four-wire Full-duplex, Two-wire Simplex
- Self-powered or Host-powered
- Selection of Connectors
- Wide Operating Temperature Range, 0 to +70°C
- 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
				Screw Terms
Pin 1	CASE		Ground	Pin 1 12VAC
Pin 2	TD	[3]	Transmit Data	Pin 2 AC GND
Pin 3	RD	[2]	Receive Data	Pin 3 RD+
Pin 4	RTS	[7]	Req. To Send	Pin 4 RD–
Pin 5	CTS	[8]	Clear To Send	Pin 5 TD+
Pin 6	DSR	[6]	Data Set Ready	Pin 6 TD–
Pin 7	GND	[5]	Signal Ground	
Pin 8	RLSD	[1]	Receive Line Signal Detect	RD+ = Receive Data +
Pin 9	+DC		Positive DC Supply Input	RD– = Receive Data –
Pin 10	–DC		Negative DC Supply Input	TD+ = Transmit Data +
Pin 20	DTR	[4]	Data Terminal Ready	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	LDM30
Bit Rate (bps)	0-57.6k
bps vs Distance	57.6k 38.4k 19.2k 9.6k 4.8k 2.4k 1.2k-0
Distance(miles)	0.5 0.75 1.0 3.0 5.0 7.0 12.0
Distance(km)	0.8 1.21 1.6 4.8 8.1 11.3 19.3
Common-Mode Isolation	Surge: 500Vp, 1 minute
	Continuous: 300Vrms
Differential-Mode Surge Protection (3 devices)	ANSI/IEEE C37.90.1
Modes	Asynchronous 4-wire Full-duplex, 2-wire Simplex
Channel Lines(1)	TD, RD
Control Lines(1)	RTS, CTS, DTR, DSR, RLSD
Power	
AC operation(2)	12VAC at 92mA
DC operation	±9VDC to ±15VDC, 35mA
Environmental:	
Operating Temperature Range	0°C to +70°C
Storage Temperature Range	–10°C to +85°C
Relative Humidity	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	3.5 oz (100g) (max)
PT3	11.0 oz (312g) (max)
MTTF(3)	>150,000 hrs

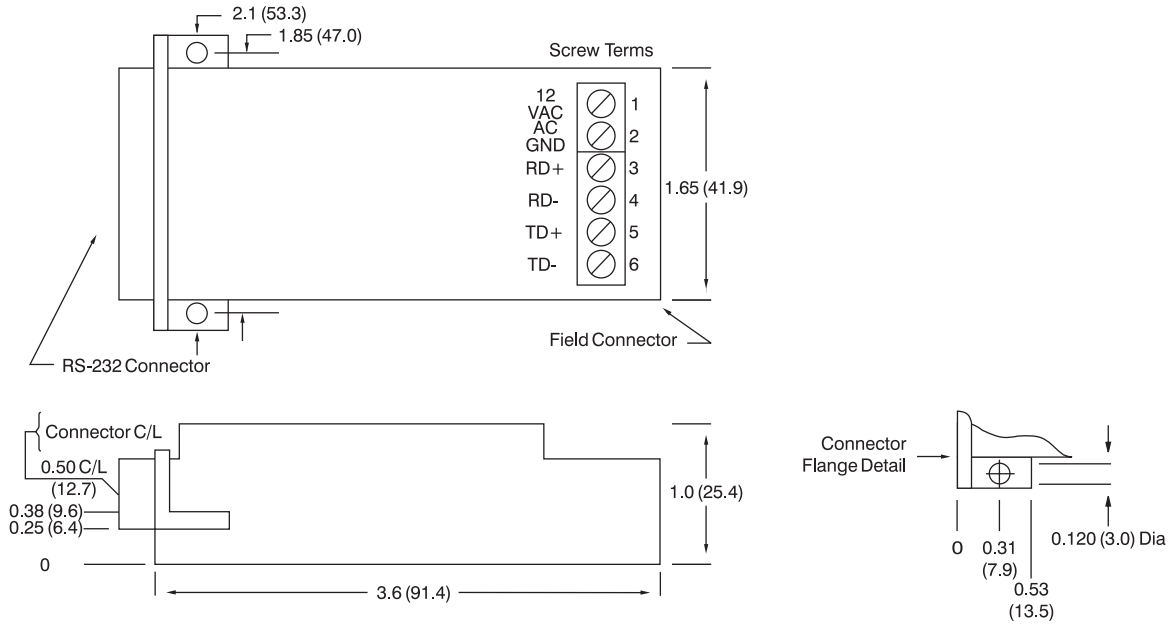
NOTES:
*Contact factory or your local Dataforth sales office for maximum values.
(1) TD = Transmit Data, RD = Receive Data, RTS = Request To Send, CTS = Clear To Send, DTR = Data Terminal Ready, DSR = Data Set Ready, RLSD = Received Line Signal Detect.
(2) 120VAC and 220VAC power transformers are available.
(3) Ground-benign environmental conditions (no salt atmosphere, <50°C ambient temperature).

Ordering Information

Model	Type	Power	Termination
LDM30-P*	Male	Host-Powered	Screw Termination
LDM30-S*	Female	Host-Powered	Screw Termination
LDM30-PT*	Male	U.S. Transformer	Screw Termination
LDM30-ST*	Female	US. Transformer	Screw Termination

*Last Time Buy

Model	Description
PT3	U.S. Style Wall Mount Transformer, 120VAC



Dimensions: Inches (Millimeters)

LDM30 Dimensions

SECTION 8 - Data Comm

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