



# TECHMOR

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LD-1

LIDAR DISTANCE MODULE

USER MANUAL

Rev. B 12/31/2018

## Overview

The Techmor LD-1 is a precision LIDAR Distance module that measures distance to a target and outputs digital messages which are transmitted on the CAN bus. The LD-1 is non-contact and works in the IR range of the spectrum. The maximum ranging distance is 40m. The module's CAN ID and CAN Bus Bitrate can be changed via CAN bus programming messages.

## Connections

All connections to the LD-1 are through the multi-conductor cable, or ASL606 Connector.

+V	Red	Pin 1
Ground	Black	Pin 5
CAN High	Blue	Pin 2
CAN Low	White	Pin 4

## Electrical

Supply Voltage	6 - 18	V DC
Current	120	mA

## CAN Bus Message Format

CAN Message Bits

Default CAN Message ID	Bits 0-15	Bits 16-31	Bits 32-47	Bits 48-63
14 (0x00E)	Distance	n/a	n/a	Serial Number

Note: All Messages are Unsigned 16-bit Words (U16)

## CAN Bus Message Decode

$$\text{Distance (cm)} = \text{Counts} * 1$$

## Changing the LD-1 Settings

### CAN ID

The CAN ID of the LD-1 can be set by sending a special CAN programming message to the unit. The message format is as follows:

#### Change CAN ID

Message ID	Bits 0-15	Bits 16-31	Bits 32-47	Bits 48-63
0x7FE	0x9269	0x0000	ID to write (0x0 to 0x7FD)	Serial # of device to program (after the "-")

Note: The serial number engraved on the unit is in decimal form, and may need to be converted to hex, depending on your CAN communication tool.

### CAN Bus Bitrate

The CAN Bus Bitrate of the LD-1 can be set by sending a special CAN programming message to the unit. The message format is as follows:

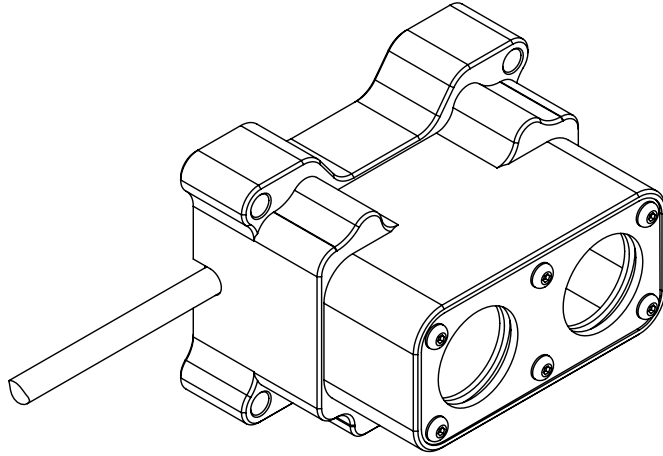
#### Change CAN Bus Bitrate

Message ID	Bits 0-15	Bits 16-31	Bits 32-47	Bits 48-63
0x7FE	0x9269	0x0001	CAN Bus Bitrate Code (see Table below)	Serial # of device to program (after the "-")

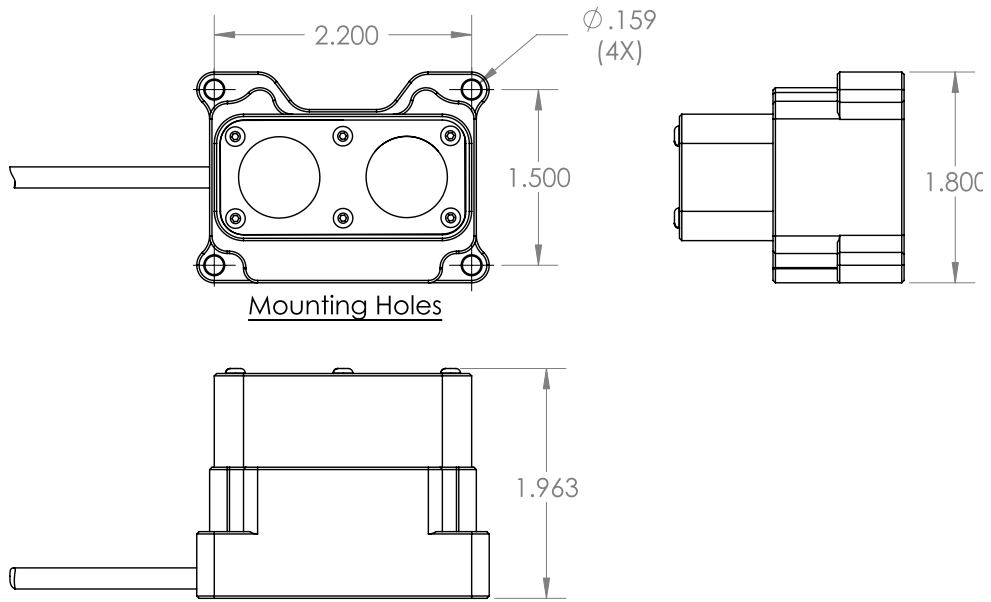
Note: The serial number engraved on the unit is in decimal form, and may need to be converted to hex, depending on your CAN communication tool.

CAN Bus Bitrate	
Bus Bitrate	Code
1Mbit/s	0x0001
500kbit/s	0x0002
250kbit/s	0x0003

**Note: After receiving the CAN Bus Bitrate change message, the LD-1 will immediately restart, using the new CAN Bus bitrate. The communication tool's CAN bitrate must be adjusted accordingly to view the new messages.**



## Dimensions



*All dimensions in inches*

## Ordering and Contact Information

### Ordering Information

LD-1

### Company Information

Techmor, Inc. creates advanced test and measurement equipment. Techmor is a world leader in innovation for aerospace, automotive and industrial systems.

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### Support Information

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