

MoTeC

LTCD - DUAL LSU LAMBDA TO CAN



MoTeC's LTCD (Lambda To CAN) is a dual sensor version of the LTC. It monitors, controls and diagnoses two Bosch LSU 4.9 Lambda sensors, transmitting Lambda readings on a CAN bus. When using Dual LTCs, or a mix of singular and Dual LTCs, up to 32 Lambda sensors can be configured on a single CAN bus for simultaneous monitoring by an ECU or logging device.

► FEATURES

- Provides accurate Lambda measurement, even when exhaust gas temperature is changing rapidly (heating or cooling).
- Calibrated by the user for a particular sensor using either the initial sensor factory calibration or the free air calibration.
- Pre-configured to suit a single unit installation. If necessary, the configuration can be adjusted; see the Configuration section for more details.
- Units marked with a 2 or higher under the barcode are able to transmit extended Lambda values (Rich Lambda).

► COMPATIBILITY

MoTeC ECU: M1 Series, M84, M400, M600, M800, M880

MoTeC Display/Loggers: All C Series Display Loggers, ACL, CDL3 (and discontinued models: SDL, SDL3, ADL, ADL2, ADL3)

► PC COMMUNICATIONS

A MoTeC gateway device is required to communicate with the LTC on CAN. Such devices include:

- M1 Series ECUs
- All C Series Display Loggers, ACL, ADL3, SDL3, CDL3
- UTC (USB to CAN) #61059

► SPECIFICATIONS

Inputs/Outputs

- 2 x Bosch LSU 4.9 Lambda sensors
- Power supply voltage for each sensor: 11 V - 16 V
- Power supply current for each sensor: 110 mA typical plus the sensor heater current. Heater current is typically 0.5 A - 1 A and up to 2 A on startup.

Communications

- 1 x CAN - using LTC Manager, configurable to: 125 Kbps, 250 Kbps, 500 Kbps or 1 Mbps

Physical

- Dimensions: 38 x 26 x 23.5 mm, excluding wiring looms and connectors
- Weight: 100 g
- 1 x 4 pin male DTM connector (power/CAN)
- 2 x mating connectors for Bosch LSU 4.9 sensor
- Maximum ambient temperature: 100 °C

► SOFTWARE

For multiple installations, LTC Manager software allows all units to be simultaneously managed and diagnosed.

The software is used to:

- Configure and calibrate all units on the CAN bus
- Display readings and diagnostics
- Configure CAN transmission addresses
- Control free air sensor calibration
- Update unit firmware

► CONFIGURATION

MoTeC LTCDs come pre-configured to suit a single LTCD unit installation. By default, the initial factory sensor calibration is used and the following CAN addresses:

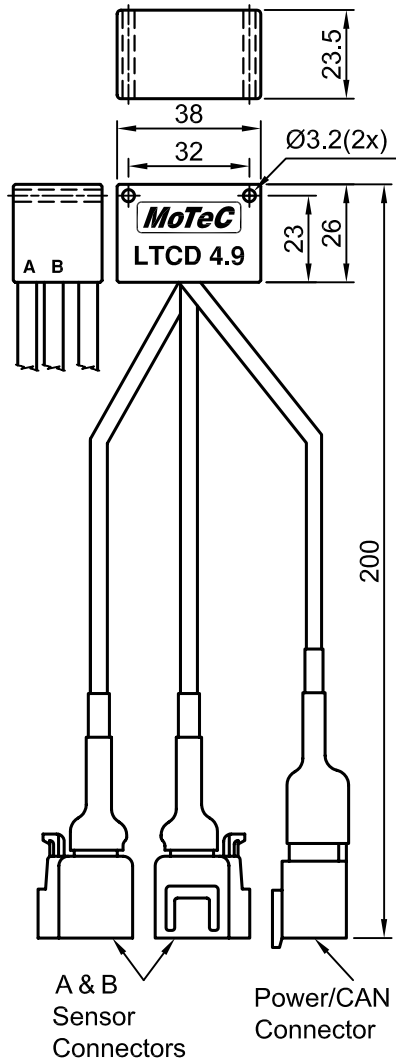
Sensor 1 – 460

Sensor 2 – 461

It is only necessary to use LTC Manager if installing multiple LTC units, or if changes to the default settings are required.

► **DIMENSIONS AND MOUNTING**

All dimensions in mm.



► **CONNECTOR PINOUTS**

Connector A (and B for Dual version)

Bosch LSU 4.9 sensor connector

Mating connector: supplied on sensor

Pin	Wire Colour	Description
1	Red	Ip
2	Yellow	Sensor 0 V
3	White	Heater -
4	Grey	Heater +
5	Green	Ipr
6	Black	Vs

Power/CAN Connector

DTM 4 Pin (M) (#68055)

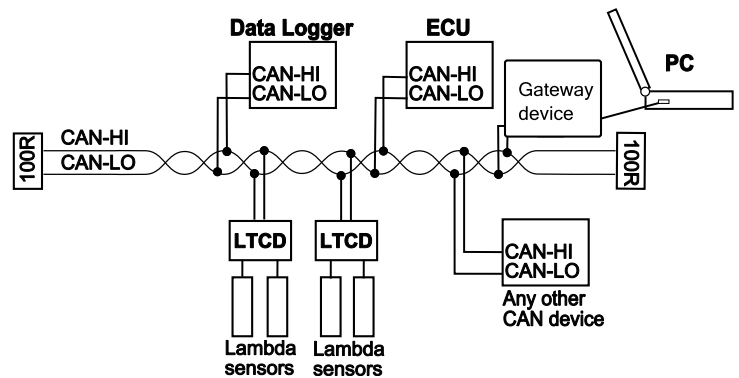
Mating connector: DTM 4 Pin (F) #68054

Pin	Wire Colour	Description
1	Black	Battery -
2	Green	CAN Lo
3	White	CAN Hi
4	Red	Battery +

► **WIRING**

To power the LTC, connect to either the ignition switch for fast sensor startup or the fuel pump relay to prevent accidental battery drainage.

Wiring example



For information on wiring a CAN bus with several LTCs and any number of other CAN devices (as per the example), refer to the relevant device manual.