

## **Technical Data Sheet**



**Representative Product Photo** 

The CL-104 is a solid-state microprocessor based module and member of the HED® CANLink® multiplexed control family. Delivered in a Deutsch enclosure, this unit provides powerful functionality in a compact and economical package.

Designed as a master control module, the CL-104 includes 3 different communications ports (4 Total). Two J1939 ports enable the module to perform a dual role as a master controller and communications bridge between multiple CAN systems on one vehicle.

The HED® CL-104 can be programmed using HED®'s do-it-yourself CANLink® Composer™ programming tool or directly by HED® engineering, and is designed for use with the CANLink® Conductor™ software tool for diagnostics and field troubleshooting.

# CANLink® CL-104-103 Module Master Control Module

### **Special Features include:**

- (2) J1939 CAN ports
- (1) RS232 ports
- (1) USB port
- Battery voltage monitoring

| Specifications           |   |
|--------------------------|---|
| Enclosure:               | Deutsch standard EEC-325x4 PCB enclosure with 24-pin receptacle.  |
| Connectors:              | DTM06-12SA  |
|                          | WM-12S (wedge)  |
|                          | 0462-201-20141 20AWG sockets  |
|                          | 0413-204-2005 Sealing Plugs – Unused pins are required to be sealed to maintain module sealing                          |
| Operating Voltage Range: | 8 to 32 VDC   |
| Operating Temperature:   | -40°C to 70°C   |
| Storage Temperature:     | -40°C to 85°C   |
| IP Rating:               | IP 67   |
| PC Boards:               | The printed circuit boards designed for high EMI/RFI protection.  |
|                          | The boards are conformal coated with a silicone coating for further water/moisture protection.                          |
|                          | All inputs are protected against shorts to Battery(+) or Battery(-).  |
|                          | 100% of the boards are functionally tested before shipment.   |
|                          | * Harness codes are switch to ground inputs used to identify I/O module location and function to the master controller. |





# Specifications

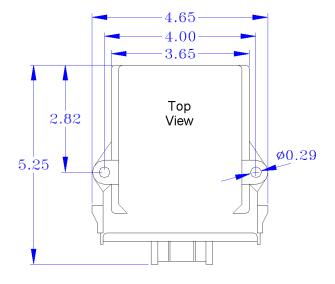
## **CL-104-103 Master Control Module**

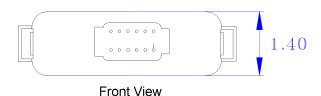
#### **CL-104-103 Master Control Module Pinout**

| DTM13-12PA (Gray) |   |
|-------------------|---|
| Pin               | Function                                    |
| 1                 | USB (DM)                                    |
| 2                 | USB (DP)                                    |
| 3                 | USB / RS232 (GND)                           |
| 4                 | RS232 (Tx)                                  |
| 5                 | RS232 (Rx)                                  |
| 6                 | Unswitched Battery(+)** /                   |
|                   | Input #1 Battery Voltage                    |
| 7                 | CAN2-L                                      |
| 8                 | CAN2-H                                      |
| 9                 | CAN1-L                                      |
| 10                | CAN1-H                                      |
| 11                | BAT(-) Module                               |
| 12                | BAT(+) Module /<br>Input #2 Battery Voltage |

Note: Above pinout is for HED® part number CL-104-103.

Additional part number data sheets available on HED® website.





<sup>\*\*</sup>Unswitched vehicle battery must be connected to properly store data to EEPROM. Module will draw max of 200 micro amps (12V) and 400 micro amps (24V) after turning itself off.