Hydro Electronic Devices, Inc.

Technical Data Sheet

CANLink® CL-104-104 Module
Master Control Module
w/ Real Time Clock
w/ 2MB of FLASH

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.

Special Features include:

- (2) J1939 CAN ports
- (1) RS232 ports
- (1) USB port
- (1) 0.5A sinking PWM output
- Battery voltage monitoring
- (1) Real Time Clock
- 2MB FLASH (in addition to FLASH internal to processor)
    - Only available using Presto

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.

CANLINK®

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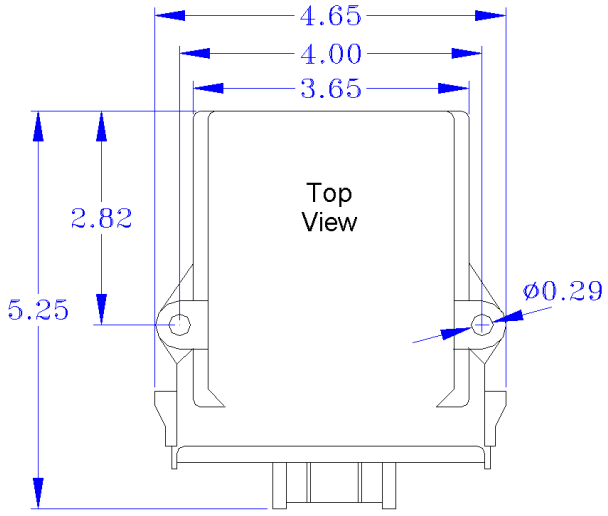
Specifications

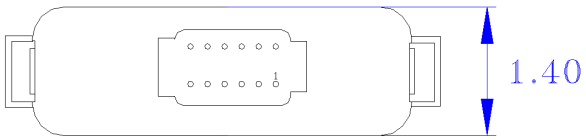
CL-104-104 Master Control Module

DTM13-12PA (Gray)	
Pin	**Function**
1	USB (DM)
2	USB (DP)
`3	Output #1 DOUT(-)/PWM(-)(0.5A)
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 / Input #2 Battery Voltage

Note: Above pinout is for HED® part number CL-104-104.
Additional part number data sheets available on HED® website.

**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.





Front View

Composer Input Assignments for Real Time Clock (RTC) Items		
RTC Item	**Composer Input #**	**Valid Data Range**
Year	Input #3 VTD (0-8000mV)	0 – 255 (2000 – 2199)
Month	Input #4 STG (0-5000mV)	1 – 12
Day of Month	Input #5 STG (0-5000mV)	1 – 31
Day of Week	Input #6 STG (0-5000mV)	1 – 7
Hour	Input #7 STG (0-5000mV)	0 – 23
Minute	Input #8 STG (0-5000mV)	0 – 59
Second	Input #9 STG (0-5000mV)	0 – 59

Note: RTC values are not able to be set (changed) with Ladder Logic.
It is able to be set to with Presto.

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