



The CL-449 is a solid-state microprocessor based module and member of the HED[®] CANLink[®] multiplexed control family. Delivered in a potted enclosure, this unit provides a flexible I/O count in a compact and economical package.

The CL-449 is designed for use as a multi-purpose stand alone unit or as a master controller or I/O module in a distributed system.

The HED[®] CL-449 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-449-103-XX Module

CL-449-103-11 : Master I/O

CL-449-103-21 : Client I/O

CL-449-103-31 : J1939 Client

4 Outputs and up to 8 Inputs (8 total I/O):

- (4) Input software configurable as switch to ground, 12-bit analog, Frequency, PWM, Counter, Quadrature Encoder or 4-20mA.
 - Analog standard range is 0-5.64VDC. Other ranges are possible, but are set at HED. Contact HED for info.
 - Frequency max is 10KHz at 50% duty cycle
- (4) pins software configurable as 2A PWM outputs with estimated current feedback or switch to battery input
 - or 2.5A digital outputs (software configurable as PWM or Digital)
- Client Harness Codes* are set in EEPROM. Default is 0x0F (15)
 - ID can be changed via CAN message (see page 2)
- (1) J1939 CAN port

Specifications

Enclosure:	Noryl plastic enclosure filled with potting
Mating Connectors: Deutsch	DT06-12SA W12S (wedge) – one per connector required 0462-201-16141 16AWG sockets 114017 Sealing Plugs – Unused pins are required to be sealed to maintain module sealing
Operating Voltage Range:	8-32 VDC
Operating Temperature:	-40°C to 70°C
Storage Temperature:	-40°C to 85°C
IP Rating:	IP67
PC Boards:	The printed circuit boards are designed for high EMI/RFI protection. The boards are conformal coated with a silicone coating for further water/moisture protection. All inputs and outputs are protected against shorts to Battery(+) or Battery(-). 100% of the boards are functionally tested before shipment. * Harness Codes are used to identify I/O module location and function to the master controller.

CL-449-103-XX Module

DTF15-12PA	
Pin	Function
1	Input #1 STG/VTD(0-5.64VDC)/FREQ/PWM/Count/Encoder(1A)/20mA
2	Input #2 STG/VTD(0-5.64VDC)/FREQ/PWM/Count/Encoder(1B)/20mA
3	Input #3 STG/VTD(0-5.64VDC)/FREQ/PWM/Count/Encoder(2A)/20mA
4	Input #4 STG/VTD(0-5.64VDC)/FREQ/PWM/Count/Encoder(2B)/20mA
5	CAN1-L
6	CAN1-H
7	Input #6 STB / Output #1 DOUT(+)/PWM(+)/ECC/(+)(2.5A)
8	Input #7 STB / Output #2 DOUT(+)/PWM(+)/ECC/(+)(2.5A)
9	Input #8 STB / Output #3 DOUT(+)/PWM(+)/ECC/(+)(2.5A)
10	Input #9 STB / Output #4 DOUT(+)/PWM(+)/ECC/(+)(2.5A)
11	BAT(-) Module
12	BAT(+) Module and Outputs 1-4 / Input #5 Battery Voltage VTD (0-32.78VDC)

Note: Above pinout is for HED modules with part number formats of CL-449-103-XX.
Additional part number data sheets available on HED® website.

Setting Harness Code in EEPROM:

- Transmit the following message to change Harness Code.
 - KK = old Harness Code
 - HH = new Harness Code
 - MM = Module ID = 0x0123 (291)

00EF0002	MM	MM	KK	00	84	00	00	HH
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To verify new Harness Code has been set:

- Cycle power to module.
- Below message is sent by module on power-up.
 - HH = new Harness Code

00EF0001	--	--	--	HH	--	--	--	--
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J1939 Client:

- Default Node ID is: 0x80
- Reference HED J9193 Document for CAN message used to change Node ID.

