



CANLink® CL-446-1XX Module Family Master or I/O Module with Software Configurable Inputs

20 Inputs and 8 Outputs including:

- (14) Inputs software configurable as switch to battery, switch to ground or 12-bit analog. 4 can be configured as harness code* inputs.
- (4) Inputs software configurable as switch to battery, switch to ground, 12-bit analog or RTD
- (2) Inputs software configurable as switch to battery, switch to ground, 12-bit analog or frequency
 - Analog standard range is 0-5.5VDC. Other ranges are possible, but are set at HED. Contact HED for info.
 - RTD standard range is 0-1K ohm. Other ranges are possible, but are set at HED. Contact HED for info.
 - Frequency max is 10KHz at 50% duty cycle
- (8) 2A PWM outputs with estimated current feedback
 - or 2.5A digital outputs (software configurable as PWM or Digital)
- (1) 5VDC Regulated Sensor Supply (500mA)
- (2) J1939 CAN ports
- (1) USB port (for interfacing to HED® Orchestra™ software tools)

The CL-446 is a solid-state microprocessor based module and member of the HED® CANLink® multiplexed control family. Delivered in a Deutsch enclosure, this unit provides a high density and flexible I/O count in a compact and economical package.

The CL-446 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-446 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.

Specifications

| | |
|-------------------------------|--|
| Enclosure: | Deutsch standard EEC-5X650 enclosure with 48-pin receptacle. |
| Mating Connectors: Deutsch | DT06-12SA DT06-12SB DT06-12SC DT06-12SD 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 switch to ground inputs used to identify I/O module location and function to the master controller |

CL-446 I/O Module

CL-446 I/O Module Pinout

| Connector A | | Connector C | | Connector D | | Connector B | |
|-------------|------------------------|-------------|---------------------------------------|-------------|-------------------------|-------------|-----------------------|
| Pin | Function | Pin | Function | Pin | Function | Pin | Function |
| 1 | Input STB/STG/VTD/RTD | 1 | BAT(+) Outputs 1-4 | 1 | CAN2-L | 1 | Input STB/STG/VTD |
| 2 | Input STB/STG/VTD/RTD | 2 | Output DOUT(+)(2.5A) / PWM/ECC(+)(2A) | 2 | CAN2-H | 2 | Input STB/STG/VTD |
| 3 | Input STB/STG/VTD/RTD | 3 | Output DOUT(+)(2.5A) / PWM/ECC(+)(2A) | 3 | No Connect | 3 | Input STB/STG/VTD |
| 4 | Input STB/STG/VTD/RTD | 4 | Output DOUT(+)(2.5A) / PWM/ECC(+)(2A) | 4 | No Connect | 4 | Input STB/STG/VTD |
| 5 | BAT(+) Module | 5 | Output DOUT(+)(2.5A) / PWM/ECC(+)(2A) | 5 | USB (Power) | 5 | Input STB/STG/VTD |
| 6 | BAT(-) Module | 6 | 5VDC Sensor Supply (500mA) | 6 | USB (Gnd) | 6 | Input STB/STG/VTD |
| 7 | CAN1-L | 7 | 5VDC Sensor Supply Ground | 7 | USB (DP) | 7 | Input STB/STG/VTD |
| 8 | CAN1-H | 8 | Output DOUT(+)(2.5A) / PWM/ECC(+)(2A) | 8 | USB (DM) | 8 | Input STB/STG/VTD |
| 9 | Input STB/STG/VTD | 9 | Output DOUT(+)(2.5A) / PWM/ECC(+)(2A) | 9 | No Connect | 9 | Input STB/STG/VTD/HID |
| 10 | Input STB/STG/VTD | 10 | Output DOUT(+)(2.5A) / PWM/ECC(+)(2A) | 10 | No Connect | 10 | Input STB/STG/VTD/HID |
| 11 | Input STB/STG/VTD/FREQ | 11 | Output DOUT(+)(2.5A) / PWM/ECC(+)(2A) | 11 | No Connect | 11 | Input STB/STG/VTD/HID |
| 12 | Input STB/STG/VTD/FREQ | 12 | BAT(+) Outputs 5-8 | 12 | Unswitched Battery(+)** | 12 | Input STB/STG/VTD/HID |

Note: Different I/O combinations are available. Please refer to specific CL-446-1XX data sheet for I/O number designations for use within Composer™. Data sheets available on HED® website.

**Unswitched vehicle battery must be connected to properly store data to EEPROM when module is configured as a master module. Module will draw max of 200 micro amps (12V) and 400 micro amps (24V) after turning itself off. This feature is only available on versions of this module that are Master Module capable.

