

Installation Instructions

FlexMod LVD Low Voltage Disconnect Series

Part Numbers: 48610, 48610-OX, 48710, and 48710-OX



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Specifications Overview

Environmental:	SAE J1455 & J1113 Sealed to IP67
Electrical:	9-32VDC 10A max. Load Circuit Current 200mA max. Alarm Circuit Current 2mA max quiescent current
Accuracy:	+/-50 mV
Operating Temp:	10A at 85°C
Mating Connector:	Deutsch DT06-08S, Amphenol AT06-08S
Blanking Pin:	Deutsch 114017, Amphenol A114017

Connections

Assemble the FlexMod LVD Low Voltage Disconnect in the following sequence (using the 12805 Mating Connector Kit):

Warning: Disconnect the vehicle's battery before installation.

Required Connections:

1. Connect pin 4 (BATT+) to an appropriately sized fuse. Connect the fuse to the positive terminal of the battery.
2. Connect pin 3 (LOAD+) to the positive side of the load.
3. Connect pin 2 (GND) to ground.
4. To ensure proper environmental sealing, all unused connector pins must be sealed with blanking pins (see specifications section). capture the seal and it is seated flush to the seal. If it will not seat, check the locking tabs, as they will prevent the lock from seating.

Optional Connections:

1. Connect pin 5 (OVERRIDE) to a normally open momentary switch. Connect the other side of the switch to BATT+.
2. Connect pin 6 (ALARM) to an audible/visual alarm. Connect the other side of the alarm to ground.

Normal Operation Summary

This summary describes the factory default settings. Programmable units may have different voltage and or time delays.

Note: 24V limits in parentheses

Required Connections:

1. When BATT+ voltage is above 13.0V (26.0V) for 10 seconds, the LVD will automatically connect the loads to the battery.
2. When BATT+ voltage drops below 12.1V (24.2V) for 60 seconds, the Alarm will pulse, warning the user that the loads are about to be disconnected.
 - The operator has the option to Override the imminent disconnect by activating the Override signal (see Additional Operating Detail).
3. After 60 seconds of the alarm pulsing, the loads will disconnect and the alarm will turn off.

Additional Operating Details

Override: The Override signal is activated when the operator momentarily connects pin 5 (Override) to BATT+. This is normally accomplished with a momentary switch. The Override signal serves different functions depending on when it is activated.

- While the Alarm is pulsing, activating the Override signal will delay the imminent disconnect, keeping the loads on for an additional 15 minutes. After the 15 minute time period, the LVD will resume monitoring battery voltage. Activating Override again before the 15 minute timeout will turn the loads off, putting the LVD in storage mode, (see paragraph b.).
- If the operator activates Override while the load is on, the LVD will enter storage mode and turn the load off. The only way to turn on the load from storage mode is to activate Override again. This is often used when storing a vehicle for a long period.
- When Override is activated while the LVD is off due to low battery voltage, the loads will toggle on. After 15 minutes, the LVD will resume monitoring battery voltage. If during the 15 minute period the battery voltage rises above the upper limit for ten seconds, the 15 minute delay is exited and the LVD resumes monitoring battery voltage.

Overcurrent Protection

- If the load current exceeds 31 amps, the load output will be turned off and the alarm will be turned on. To reset from the fault, the LVD's power must be cycled.
- If the load current exceeds 17 amps (and is less than 31 amps) for one second, the LOAD output will be turned off and the alarm will repeat a cycle of pulsing the alarm twice followed by a pause. To reset from the fault, either press manual or cycle power.
- If the load current exceeds 15 amps (and is less than 17 amps) for one second, the load output will be turned off and the alarm will repeat a cycle of pulsing the alarm twice followed by a pause. To reset from the fault, either press manual or cycle power.
- If the COIL+ current exceeds 15 amps (and is less than 17 amps) for one second, the COIL+ output will be turned off and the STATUS output will repeat a cycle of pulsing the STATUS output twice followed by a pause. To reset from the fault, either press BOOST for 10 seconds or cycle power.

Abnormal Voltage

- If the BATT+ voltage is less than 7.5V (16V) or greater than 17V (34V), the load output will be turned off and the alarm will repeat a cycle of pulsing the alarm three times followed by a pause. The LVD will auto-recover when BATT+ returns to normal.

Programmable Versions

- Use Cole Hersee Programmer Kit 48650 using cable assembly 65373 (included in kit).

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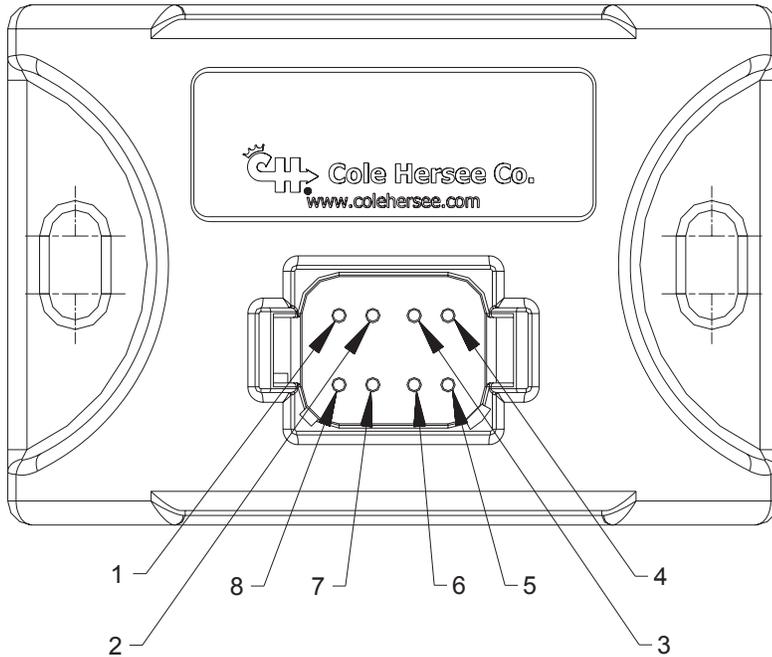
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Connector Pin Descriptions



PIN 1	Not Used
PIN 2	Ground (Battery -)
PIN 3	Load +
PIN 4	Battery +
PIN 5	Override
PIN 6	LED/Alarm
PIN 7	Redundant Ground (Battery -)
PIN 8	Redundant Ground (Battery -)

Wiring Diagram

