

# COMPACT LOW VOLTAGE DISCONNECT

100A • 12 or 24V DC • IP67 • **OBSOLETE 2018**

 **Cole Hersee®**  
 A Littelfuse® Brand



## Description

Unit disconnects non-critical loads when battery voltage falls below threshold, reconnects when battery is recharged.

Unit is auto-ranging: identifies whether system is 12V or 24V, and automatically establishes thresholds. One part number; two voltages.

Eliminates dead battery service calls and lost time by extending battery life and preventing irreversible damage due to excessive discharge.

No action is required by vehicle operator to protect the batteries – unit automatically disconnects and reconnects, giving operator a warning one minute before disconnect. 200mA alarm signal can drive audible or visual systems or any large device via a relay. Optional manual override feature.

Electronics are sealed to IP67, see Installation Instructions IF-162 for mounting and wiring details. Solid state reliability and resistance to vibration – replaces vulnerable conventional solenoids. Unit exceeds one million cycles and is protected from overcurrent, overvoltage, and under-voltage. Minimal draw on battery (only 1mA standby).

Protects vulnerable onboard electronics such as GPS, phone, computer. Solid-state switching creates less electrical noise and interference, and eliminates spikes.

## Features and Benefits

- Electronically senses battery level and conserves starting power
- Prolongs battery life by preventing battery damage.
- Unit works with 12V or 24V DC systems

## Specifications Overview

<b>Voltage:</b>	12/24V DC (Auto Ranging)
<b>Operating Voltage:</b>	12V DC: 9V Min, 12V Typical, 16V Max 24V DC: 18V Min, 24V Typical, 32V Max
<b>Disconnect &amp; Connect Voltage:</b>	See table on page 2
<b>Overcurrent Protection:</b>	135A
<b>Ingress Protection:</b>	IP67
<b>Operating Temperature:</b>	-40° to +85°C (-40° to +185°F)
<b>Dimensions:</b>	4.27 x 4.50 x 3.11 (108.6 x 114.3 x 79.0)

## Web Resources

Download technical resources at:  
[littelfuse.com/48513](http://littelfuse.com/48513)

## Ordering Information

PART NUMBER	DESCRIPTION
48513	Unit Only
48513-01-BX	Unit with Harness (p/n 12804)
48513-02-BX	Unit with Harness (p/n 12804) & Rocker Switch (p/n 58326-06)
48513-03-BX	Unit with Harness (p/n 12804) & Toggle Switch (p/n 55088)
48713	Programmable Unit Only

## Associated Items

PART NUMBER	DESCRIPTION
12804	Plug & Harness
58326-06	Rocker Switch
55088	Toggle Switch



12804



58326-06



55088

Datasheet Replaces Hotfeed Number D-619

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## Electrical Characteristics

CHARACTERISTIC	MIN	TYPICAL	MAX	NOTES
Operating voltage (12V)	9V	12V	16V	If used with 12V DC systems
*Disconnect voltage (+12V)	12.05V	12.1V	12.15V	When voltage drops below 12.1V, system activities the alarm for one minute, then disconnects loads.
*Connect voltage (+12V)	12.95V	13.0V	13.05V	
Operating Voltage (24V)	18V	24V	32V	If used with 24V DC systems
Quiescent Current		1mA	2mA	Circuit operating current
Maximum Rated Current				
*Overcurrent Protection		135A		System will disconnect load and sound alarm after 3 seconds of excessive current.
*Key-Off Timer		15 Mins		Optional feature. After key-off, unit will wait a set time before activating alarm. One minute later, loads are shut off.

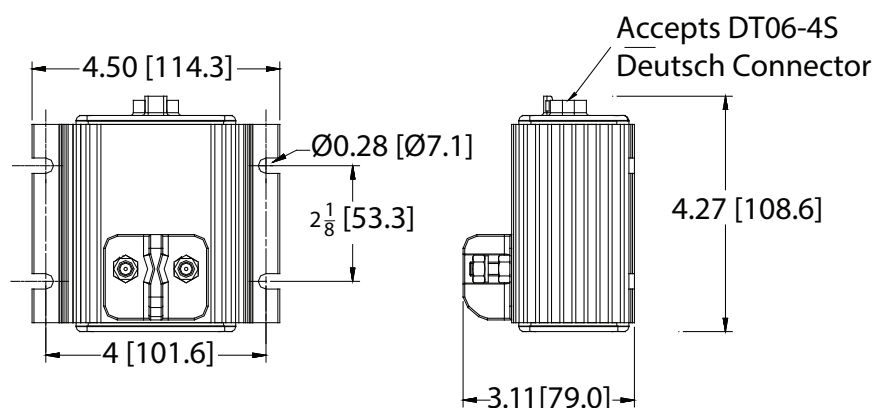
\* These characteristics are programmable in 48713 series LVDs.

## Environmental Specifications

CHARACTERISTIC	PARAMETER	NOTES
Operating Temperature Range	-40° to +85°C -40° to +185°F	100A at 85°C, 125A at 60°C
Ingress Protection Rating	IP67	Per IEC 529
Humidity	0 to 90%RH	
Vibration	10-500Hz	Per SAE J1455
Shock		Per SAE J1455
Thermal Shock		Per SAE J1455
Inductive Transient	+/- 600V	Per SAE J1455
Load Dump	+150V	Per SAE J1455

CHARACTERISTIC	PARAMETER	NOTES
Battery terminals	(1/4"-20)	50 in -lbs (5.78Nm)

## Dimensions



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