

# HIGH-AMP COMPACT MAGNUM LOW VOLTAGE DISCONNECT

250A • 12 or 24V DC • IP67



## 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. Extends battery life by 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. 250mA 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-173 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).

## 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
- Metric tin-plated copper terminals

## 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>	260A
<b>Ingress Protection:</b>	IP67
<b>Operating Temp Range:</b>	-40° to +85°C (-40° to +185°F)
<b>Dimensions:</b>	6.57" x 4.80" x 2.36"

## Web Resources

Download technical resources at:  
[littelfuse.com/48514](http://littelfuse.com/48514)

## Ordering Information

PART NUMBER	DESCRIPTION
48514	Unit Only
48714	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-640

# HIGH-AMP COMPACT MAGNUM LOW VOLTAGE DISCONNECT

## Electrical Characteristics

CHARACTERISTIC	MIN	TYPICAL	MAX	NOTES
<b>Operating voltage (12V)</b>	9V		16V	If used with 12V DC systems
<b>*Disconnect voltage (+12V)</b>	12.05V	12.1V	12.15V	When voltage drops below 12.1V, system activities the alarm for one minute, then disconnects loads.
<b>*Connect voltage (+12V)</b>	12.95V	13.0V	13.05V	
<b>Operating Voltage (24V)</b>	18V		32V	If used with 24V DC systems
<b>*Disconnect voltage (+24V)</b>	24.1V	24.2V	24.3V	When voltage drops below 24.2V, system activities the alarm for one minute, then disconnects loads.
<b>*Connect voltage (+24V)</b>	26.0V	26.1V	26.2V	
<b>Quiescent Current</b>		1mA	2mA	Circuit operating current
<b>Maximum Rated Current</b>				
<b>*Overcurrent Protection</b>		260A		System will disconnect load and sound alarm after 3 seconds of excessive current.
<b>*Key-Off Timer</b>		15 Mins		Optional feature. After key-off, unit will wait a set time before activating alarm. One minute later, loads are shut off.

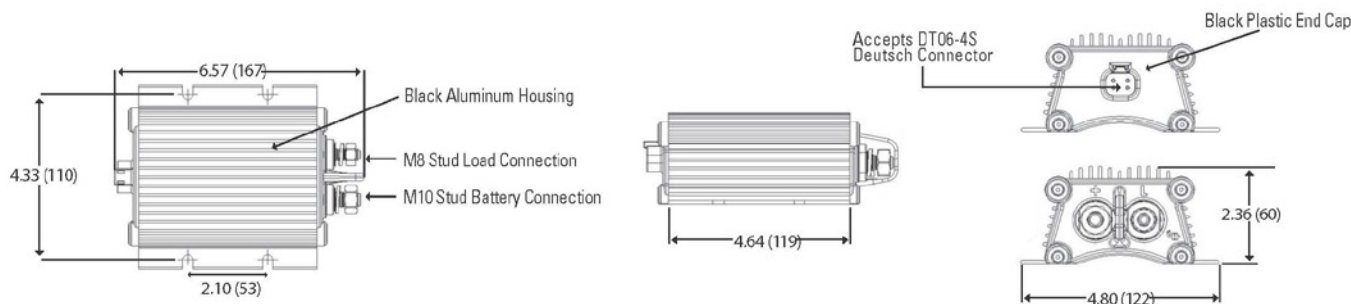
\* These characteristics are programmable in 48713 series LVDs.

## Environmental Specifications

CHARACTERISTIC	PARAMETER	NOTES
<b>Operating Temperature Range</b>	-40° to +85°C -40° to +185°F	250A at 85°C
<b>Ingress Protection Rating</b>	IP67	Per IEC 529
<b>Humidity</b>	0 to 90%RH	
<b>Vibration</b>	10-500Hz	Per SAE J1455
<b>Shock</b>		Per SAE J1455
<b>Thermal Shock</b>		Per SAE J1455
<b>Inductive Transient</b>	+/- 600V	Per SAE J1455
<b>Load Dump</b>	+150V	Per SAE J1455

CHARACTERISTIC	PARAMETER	NOTES
<b>Battery terminals</b>	M10 x 1.5	50 in -lbs (5.78Nm)
<b>Load terminals</b>	M8 x 1.25	-

## Dimensions in Inches



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