

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

Voltage:	12/24V DC (Auto Ranging)
Operating Voltage:	12V DC: 9V Min, 12V Typical, 16V Max 24V DC: 18V Min, 24V Typical, 32V Max
Disconnect & Connect Voltage:	See table on page 2
Overcurrent Protection:	260A
Ingress Protection:	IP67
Operating Temp Range:	-40° to +85°C (-40° to +185°F)
Dimensions:	6.57" x 4.80" x 2.36"

Web Resources

Download technical resources at:
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

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Electrical Characteristics

CHARACTERISTIC	MIN	TYPICAL	MAX	NOTES
Operating voltage (12V)	9V		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		32V	If used with 24V DC systems
*Disconnect voltage (+24V)	24.1V	24.2V	24.3V	When voltage drops below 24.2V, system activities the alarm for one minute, then disconnects loads.
*Connect voltage (+24V)	26.0V	26.1V	26.2V	
Quiescent Current		1mA	2mA	Circuit operating current
Maximum Rated Current				
*Overcurrent Protection		260A		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.

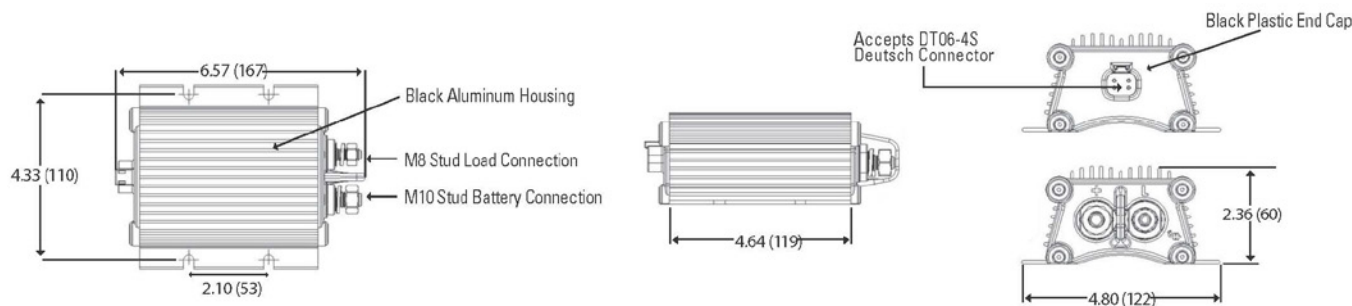
* These characteristics are programmable in 48713 series LVDs.

Environmental Specifications

CHARACTERISTIC	PARAMETER	NOTES
Operating Temperature Range	-40° to +85°C -40° to +185°F	250A at 85°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	M10 x 1.5	50 in -lbs (5.78Nm)
Load terminals	M8 x 1.25	—

Dimensions in Inches



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