

**One Product Handles Two Functions** for both auxiliary battery charge management and timed load shedding for add-on circuits.

**Prevents** add-on equipment from draining batteries / maximizes and extends operational readiness

**Protects** sensitive on-board electronics via optional under/over voltage shutdown and start event isolation.



US 11,352,998 B2



**Monitors battery voltage** and disconnects load from battery to prevent further discharge. Lowest off-state current draw (1.3 mA) available.



**Flexible Control Options** via Ignition Key, alternator voltage sense, or both.



**Simple & Robust Installation:** Sealed plug with optional long wire leads. Single device reduces installation time and costs and points of potential failure

**Kill Switch** control input options for service technicians, emergency OFF



**Adjustable OFF Time Delay & Low Voltage Cut-Off:** 0 Seconds to 4 hours, Switch only mode, LVD only mode, 11.0, 11.5, 12.0 Vdc cutoff levels.



**Remote and on-board diagnosis indicators** and simplify trouble shooting



**Bullet-proof Construction:** Sealed unit, high temperature materials allow mounting anywhere. Internal temperature overload protection



**Start Isolation** input protects sensitive add-on equipment from engine starting event.



**Meets Stringent OEM Standards** for electrical transient self-protection

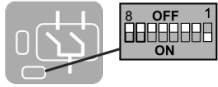


**4 Year Industry Leading Warranty**

# Dip Switch Setting Options & Features

**\* DISCONNECT BATTERY FROM POWER DISTRIBUTION SYSTEM BEFORE INSTALLING PRODUCT TO PREVENT ELECTRICAL SHOCK OR PRODUCT DAMAGE**

**\*\* USE OF IGNITION SIGNAL STRONGLY RECOMMENDED FOR ALL FIRST RESPONDER INSTALLATIONS TO ENSURE RAPID ON & WITHSTAND ADVERSE ELECTRICAL SYSTEM CONDITIONS**



**DS1-DS3** sets delay between Off Trigger and Relay OFF. 0 & 5 SEC is for install testing or pure relay functionality with short or no time delay

**DS4-DS5** defines TDR low voltage protection level/ If DS4ON or DS5=ON, (15 sec OFF delay if V\_Aux < setting, overrides Time Delay or Key On Signal)

**DS6** enables Aux Battery Voltage Sense to trigger Relay ON/OFF events. DS6=ON is Enabled

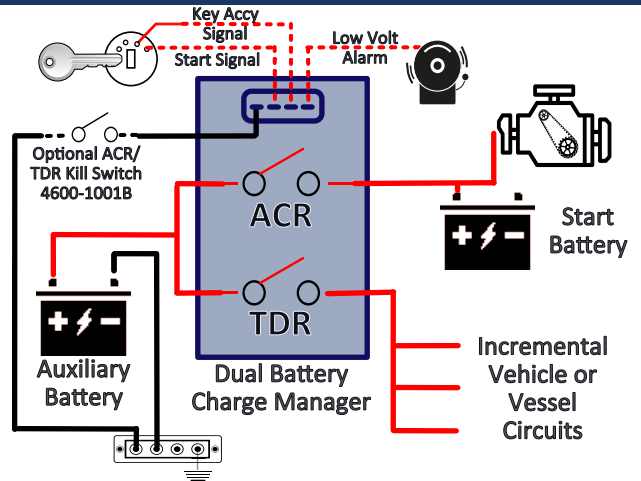
**DS7** enables Aux Battery Priority. if DS7=ON, ACR disconnect voltage reduced from 12.7 to 12.25 V, sharing start battery energy to Aux Battery loads

**DS8** enables Under-voltage ACR Protection. If DS8=ON, ACR will NOT close if Aux or Start battery Voltage is less than 9.6 Vdc

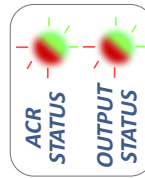
TDR Low Volt Protect	TDR Time Delay
12.0	4 HR
11.5	2.0 HR
11.0	1.5 HR
OFF	1 HR
ACR Under-Volt Protection	30 MIN
ACR Aux Bat Priority	15 MIN
TDR V_sense	5 SEC
ON	0 SEC
OFF	

**Factory Default**

# System Diagram



## Status LED Indicator Functions



ACR Status LED		Output Status LED	
No LED	ACR Relay Open	No LED	Output Open
Solid Green	ACR Relay Closed	Solid Green	Output Closed
		Flashing Red	Output Timer Started

## Methods of Operation

**TDR Output turns ON immediately if:**

- 1) Key Ignition Input > 8 Vdc or
- 2) TDR V\_sense = On (DS6) and Aux Battery Voltage > 13.0 Vdc

**TDR Output turns OFF after Time Delay setting if:**

- 1) Key Ignition Input < 8 Vdc and V\_sense = Off or
- 2) Key Ignition Input < 8 Vdc and Input V\_sense = On and Aux Battery Voltage < 13.0 Vdc

**TDR UV / OV Open (Under-voltage / Over-voltage Protection):**

- 1) If DS4 or DS5 = ON, will turn OFF TDR Output if Aux Battery Voltage < LVD Setting or > 17.0 Vdc for 15 seconds
- 2) Will turn OFF TDR output regardless of Key ON Accy Signal

**ACR Relay Connects Batteries after 30 second delay if:**

- 1) DS8=OFF and Aux Battery OR Start Battery Voltage > 13.3 Vdc
- 2) DS8=ON, Aux Battery OR Start Battery Voltage > 13.3 Vdc, AND both Aux and Start Batteries > 9.6 Vdc
- 3) Key Ignition Input > 8 Vdc

**ACR Relay Disconnects Batteries if Key Ignition Input < 8 Vdc and:**

- 1) If DS7=OFF: 30 sec after Aux & Start Battery Voltage < 13.0 Vdc
- 2) If DS7=ON: 30 sec after Aux & Start Battery Voltage < 12.25 Vdc
- 3) Immediately if Engine Start Signal Input (Pin #2) > 8 Vdc

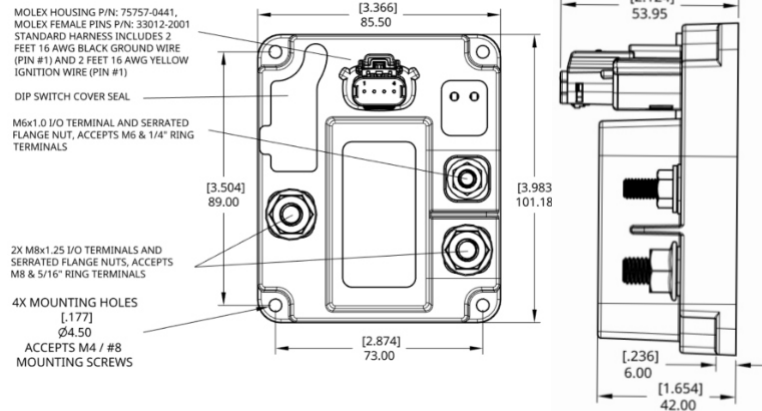
## Part Numbers

Part Numbers	Resell Pack	Bulk Pack
DBCM w/2' Gnd/Start Harness, Bulk Pack	7614	7614B

DBCM w/2' Gnd,Start/Accy/Alarm Harness 7614-1001 7614-1001B

\* Custom product configurations available including stud sizes, control harness wires, time delays, voltage settings, dip switch functionality, and control input functionality. Low minimum quantities and short lead time for samples or production. Contact us at support@egismobile.com for more information

## Dimensions



## Specifications

Nominal Voltage (Vdc)	12
Input Voltage Range (Vdc)	8.0-18.0
Continuous Current (Per Circuit)	80A / 160 A
Max 5 Min Current (Per Circuit Total)	125 A
Operating Current (Per Circuit)	170 mA
Operating Current, Relays Open	1.4 mA
Cable Size to Meet Ratings	2 AWG
Maximum Cable Size	2/0 AWG
Operating Current, Relays Open	1.4 mA
TDR Close / Open Voltage	13.3 / 13.0
Over Voltage Protection (1 sec)	16.5 Vdc
ACR Close / Open Time Delay	30 s / 30 s
ACR Close / Open Voltage	13.1 - 12.8 Vdc
Hardware Material	Stainless Steel Self-Locking
Terminal Stud Torque	80 in-lbs
Time Delay Range	0 sec - 4 hrs



www.egismobile.com  
360.768.1211  
Bellingham, WA U.S.A

