

Compact Solution Allows 24/7 power, ignition switched power, and time delay switched off power for intelligent battery protection. Includes fused wire protection, ground return circuits, and a manual kill switch (TDR only).

Fully Sealed with DT/AT Connectors allow plug and play harnessing to reduce installation time and human error.

Modules Dovetail Mechanically & Connect With Optional Busbars to easily configure system solutions that meet a variety of application needs.

Smart TDR Module Includes Three Flexible Output Groups Can be set to 24/7, ignition switched, or time off delay.

Optional Relay Modules offer additional 60 Amp switched and protected circuits.



**PATENT
PENDING**

Fuses / Circuit Breakers Sold Separately



Related Product: PDM-14 (Screw Terminals)



P/N: 2601B



Ultra Low (1.3 mA) Off-State Current:

Ensures sufficient battery energy after storage.



Optional Under and Over-Voltage Protection

prevents battery and electrical load damage, can optionally be applied to 24/7 configured outputs for additional protection.



Waterproof to IP67 for installation in harsh environments with sealed high and low amp connection.



Ignition or V-Sense trigger options for on/off.



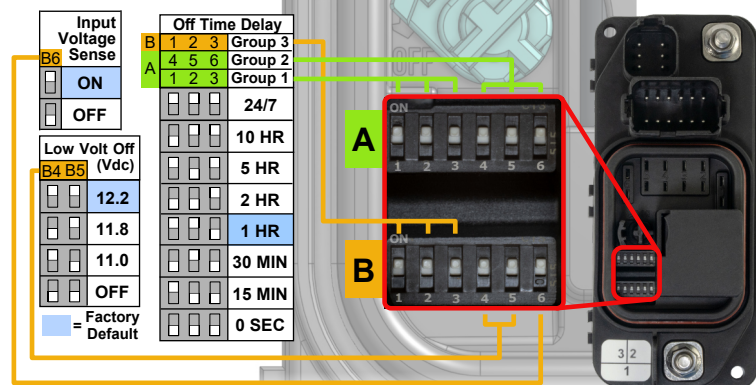
Remote and Local Kill Switch Options:

Provide unique ability to isolate all auxiliary loads, including optionally outputs set to 24/7.

4

4 Year Industry Leading Warranty

Dip Switch Setting Options & Features



Dipswitches A1-A3 set delay between off trigger and Group #1 outputs OFF. 0 SEC provides ignition switched, 24/7 provides constant power.

Dipswitches A4-A6 set delay between off trigger and Group #2 output OFF. 0 SEC provides ignition switched, 24/7 provides constant power.

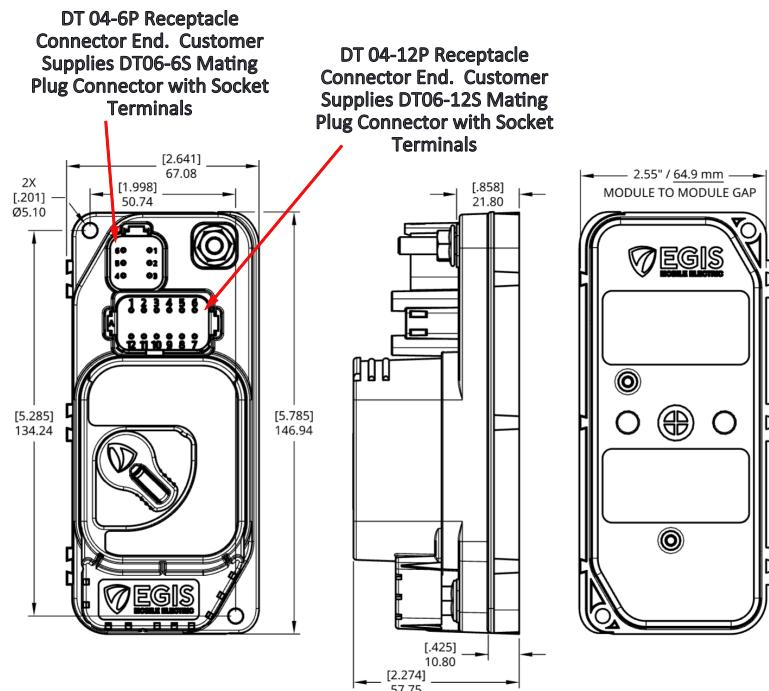
Dipswitches B1-B3 set delay between off trigger and Group #3 output OFF. 0 SEC provides ignition switched, 24/7 provides constant power.

Dipswitches B4-B5 define low voltage disconnect (LVD) level. If enabled (15 sec OFF delay if $V_{Bat} < \text{setting}$), all outputs turn off including 24/7 configured. Ignition input at +Vdc overrides this function.

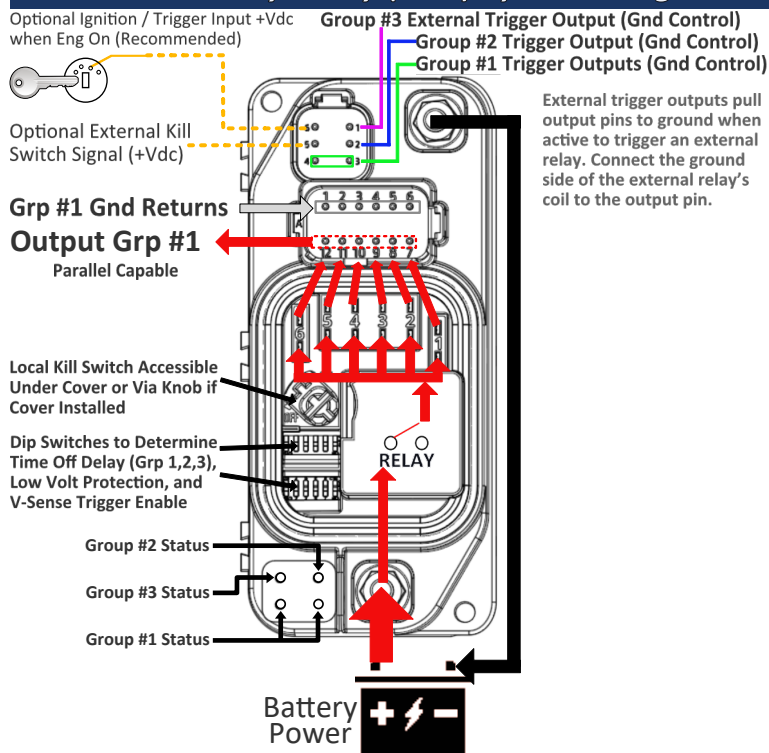
Dipswitch B6 determines whether the output groups utilize input terminal voltage sense (V_{sense}) to turn on or trigger off time delay. This allows TDR operation without external ignition input signal. If DS B6=ON, TDR will turn switched outputs ON if input terminal $V > 13.1$, and trigger OFF time delay if terminal $V < 12.8$.

*** DISCONNECT BATTERY FROM POWER DISTRIBUTION SYSTEM BEFORE INSTALLING PRODUCT TO PREVENT ELECTRICAL SHOCK OR PRODUCT DAMAGE**
*** DIP SWITCH CHANGES TO OFF TIME DELAY TAKE EFFECT AFTER 15 SECONDS IF ANY OUTPUTS ARE ON. OTHER CHANGES TAKE EFFECT IMMEDIATELY.**

Dimensions



2801 Time Delay Relay (TDR) System Diagram



Methods of Operation (Time Delay Relay)

Outputs turn ON immediately (if not already ON) if:

- 1) Key ignition input > 5 Vdc or
- 2) $V_{sense} = \text{ON}$ and battery voltage > 13.1 Vdc.

Output groups turn OFF individually after respective dip switch time delay setting (DS A1-6 and B1-3) if:

- 1) Key ignition input < 5 Vdc and $V_{sense} = \text{OFF}$ or
- 2) Key ignition input < 5 Vdc and input $V_{sense} = \text{ON}$ and battery voltage < 12.8 Vdc.

Under-voltage / Over-voltage Protection:

- 1) If DS B4 or B5 = ON, will turn OFF ALL outputs if input terminal voltage $< \text{LVD setting}$ or > 17.5 Vdc for 15 seconds.
- 2) Will NOT turn OFF outputs if ignition ON signal input > 5 Vdc.

Kill Switch Functionality

- 1) Output groups ALL turn OFF immediately if external kill input > 5 Vdc or if knob is not in the AUTO position.
- 2) Will turn OFF outputs regardless of ignition ON input signal.

Output ON/OFF & System Error Indicators

- 1) Continuous ON LED: Output ON.
- 2) Continuous OFF LED: Output OFF.
- 3) Slow Double Flash: Output ON but in OFF time delay or over/under-voltage time delay.
- 4) Rapid Double Flash (all LEDs): External kill signal active or knob is not in AUTO position (first 10 seconds after application).
- 5) Slow Double Flash (one LED only): External kill signal active or knob is not in AUTO position (after first 10 seconds).
- 6) Slow Single Flash: Output OFF due to over-voltage.

Part Numbers	Resell Pack	Bulk Pack
Modular PDM - Time Delay Relay	2801	2801B
Modular RDM - High Amp Relay A	2802	2802B
Modular RDM - High Amp Relay B	2803	2803B
Modular RDM - High Amp Relay C	2804	2804B

Specifications

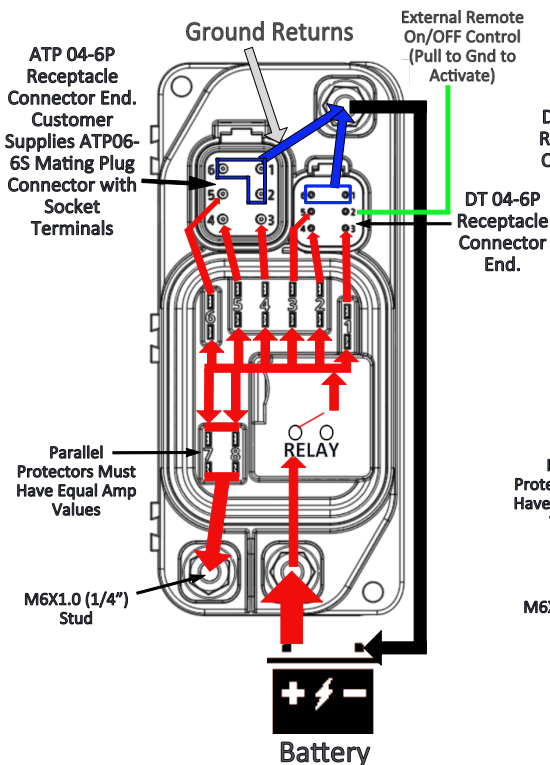
	2801	2802	2803	2804
Nominal Voltage	12 Vdc	12 Vdc	12 Vdc	12 Vdc
Input Voltage Range	9.0 - 18.0 Vdc	9.0 - 18.0 Vdc	9.0 - 18.0 Vdc	9.0 - 18.0 Vdc
Continuous Current, Total	55 A	60 A	60 A	60 A
Continuous Current, DT conn.	55 A	39 A	50 A	50 A
Continuous Current, DT+DTP conn.		50 A		
Continuous Current, per DT pin	13 A	13 A	13 A	13 A
Continuous Current, per DTP pin		25 A		
Continuous Current, Load Stud		50 A	50 A	55 A
Max Ext. Relay Coil Current (Group 1,2,3)	0.5 A per Group			
Operating Current Draw (All Groups On)	170 mA @ 12V	170 mA @ 12V	170 mA @ 12V	170 mA @ 12V
Operating Current Draw (Hibernation)	1.3 mA			
Wire Size to Meet Ratings, Feed Pos/Neg	4 AWG (25 mm ²)	4 AWG (25 mm ²)	4 AWG (25 mm ²)	4 AWG (25 mm ²)
Wire Size to Meet Ratings, Load Stud Output		6 AWG (16 mm ²)	6 AWG (16 mm ²)	6 AWG (16 mm ²)
Wire Size to Meet Ratings, DT Connector	14 AWG (2.5 mm ²)	14 AWG (2.5 mm ²)	14 AWG (2.5 mm ²)	14 AWG (2.5 mm ²)
Wire Size to Meet Ratings, DTP Connector		10 AWG (6 mm ²)		
Maximum Cable Size	2/0 AWG (70 mm ²)	2/0 AWG (70 mm ²)	2/0 AWG (70 mm ²)	2/0 AWG (70 mm ²)
Maximum Ambient Temperature to Meet Ratings	50°C (122°F)	50°C (122°F)	50°C (122°F)	50°C (122°F)
Maximum Absolute External Case Temperature in Worst Case Conditions	70°C (158°F)	75°C (167°F)	75°C (167°F)	75°C (167°F)
Maximum % of Fuse Value to Meet Ratings	80%	80%	80%	80%
Hardware Material	Stainless Steel Self-Locking	Stainless Steel Self-Locking	Stainless Steel Self-Locking	Stainless Steel Self-Locking
Terminal Stud Recommended Torque	60 in-lbs (6.8 Nm)	60 in-lbs (6.8 Nm)	60 in-lbs (6.8 Nm)	60 in-lbs (6.8 Nm)
Terminal Stud Maximum Torque	80 in-lbs (9.0 Nm)	80 in-lbs (9.0 Nm)	80 in-lbs (9.0 Nm)	80 in-lbs (9.0 Nm)

* Custom product configurations available, contact us at support@egismobile.com for more information.

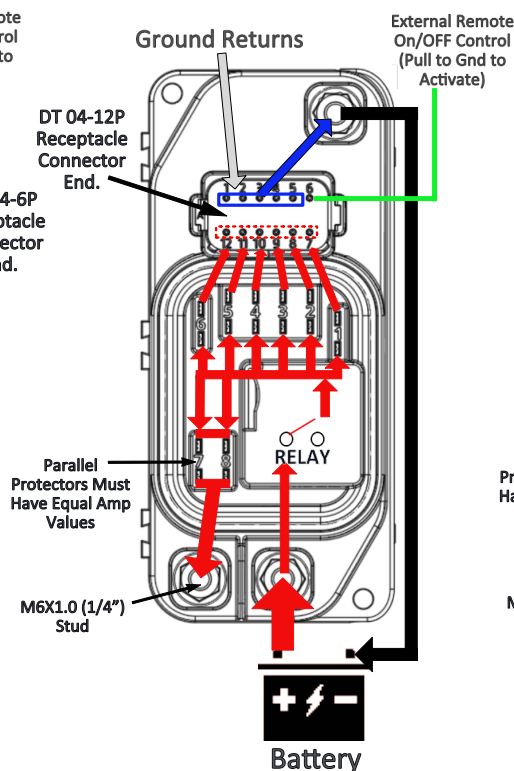
* Continuous current ratings are guidance based on conditions listed. Application should be verified by measuring stabilized maximum external product case temperature, and ensuring it does not exceed listed limit in worst case conditions of maximum ambient temperature, minimum air flow, and maximum loading of all outputs.

Simple Relay Variations (System Diagrams and Input & Output Terminals)

2802 - High-Amp Relay RDM - A



2803 - High-Amp Relay RDM - B



2804 - High-Amp Relay RDM - C

