EGIS MOBILE ELECTRIC

Dual Output Time Delay Relay

Prevents Dead Batteries due to add-on equipment loads left on after engine stops or from multiple systems connected to your battery with independent keep alive power draw, maximizing operational readiness.

Supports On-Board Video Systems when vehicles are not in use allowing lengthy downloading while shutting down less time sensitive equipment sooner.

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

Patent: 11,352,998

Eliminates Dead Start Batteries by sharing charging on either of two batteries and isolating batteries when no charge sources are present.

Simple & Robust Installation: Integrated sealed plug eliminates corrosion, optional Deutsch/Amphenol DT04 connector harness.

Additional Low Amp Output can be used to report device status remotely.

Bullet-proof Construction: Sealed unit, high temperature materials allow mounting anywhere. Integrated thermal overload shutdown protection.

Ultra Low Off-State Current: Compare to typical ACR (7-10 mA) vs 7610 ACR @ 1.3 mA

Adjustable On and Off Voltage Settings allow sharing start battery energy for auxiliary battery while ensuring engine starting ability; or charging start battery before sharing with auxiliary

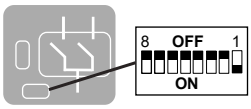
Dual Start/Engine Isolation input option for protecting sensitive electronics or isolating multiple charging sources to optimize overall system performance.

Start Assist input option to ensure maximum cranking amps available.

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***



	TDR1 Switches 3 2 1	TDR2 Switches 6 5 4
		4 HR
		2.0 HR
		1.5 HR
		1 HR
		30 MIN
		15 MIN
		5 SEC
		0 SEC

LVD / HVD Protection — Input Vsense (8, 7): ON / OFF

= Factory Default

1) Use of Ignition Key On signal strongly recommended for all first responded installations to ensure rapid relay ON and maximize vehicle up-time in adverse situations.

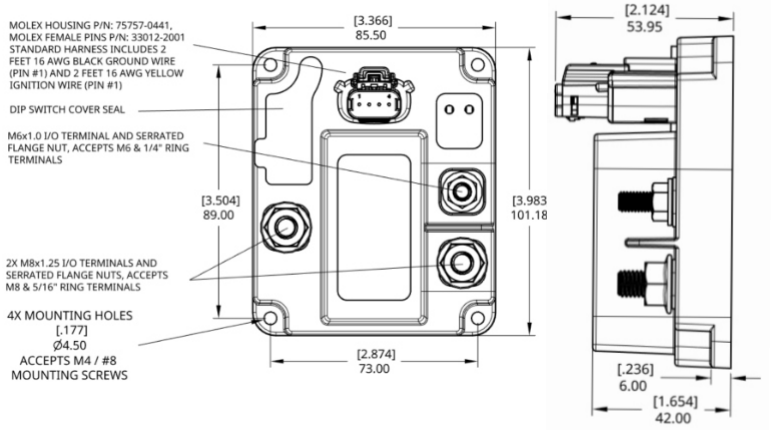
) Output #1 Delay between Off Trigger and Relay OFF set with Dip Switches 1-3. Time Delay per table to the left

3) Output #2 Delay between Off Trigger and Relay OFF set with Dip Switches 4-6. Time Delay per table to the left

4) Input line voltage sense trigger enabled for ON and OFF Time Delay with Dip Switch 7

5) Under-Voltage and Over-Voltage Protection enabled with Dip Switch 8

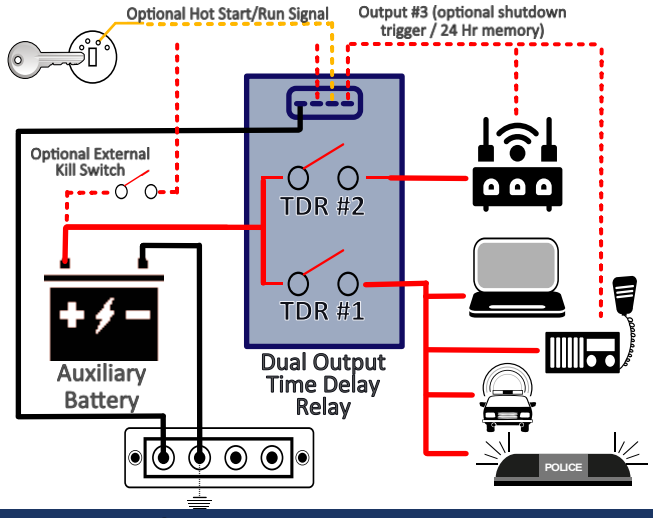
Dimensions



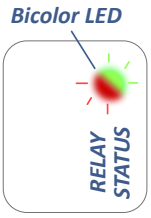
Specifications

Nominal Voltage (Vdc)	12	24
Input Voltage Range (Vdc)	8.0-18.0	
Continuous Current (Per Circuit)	80A / 160 A	
Max 5 Min Current (Per Circuit Total)	120 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	
Low Voltage Protection (15 sec)	10.5 Vdc	
TDR Close / Open Voltage	13.3 / 13.0	
Over Voltage Protection (1 sec)	17.0 Vdc	
Output #3 Max Current	400 ma	
Output #3 Time Off Before #2	60 sec	
Hardware Material	Stainless Steel Self-Locking	
Terminal Stud Torque	80 in-lbs	
Time Delay Range	0 sec - 4 hrs	

System Diagram



Status LED Indicator Functions



Red Solid / Green Flash	Relay Off, Pending Voltage Based On
Red Flash / Green Solid	Relay On, Pending Voltage Based Off
Single Red Flash /No Green	Under-Volt Lockout or Start Isolation Engaged
Single Green Flash	Start Assist Applied
No LED	Unit OFF/Open, voltage below turn ON threshold
Red Rapid Flash	High Current / Temperature OFF/Open

Methods of Operation

Outputs #1- #3 turn ON immediately if:

1) Key Ignition Input > 8 Vdc or

2) Input V_sense = On and Input Stud Voltage > 13.0 Vdc

Outputs #1 & #2 turn OFF after their 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 Input Stud Voltage < 12.7 Vdc

3) Kill Switch Input activated (i.e. > 8 Vdc), NO TIME DELAY

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

1) If Dip Switch #8 = ON, will turn OFF all Outputs if Input Stud Voltage < 10.5 Vdc or > 17.0 Vdc for a short period

2) Will turn OFF outputs regardless of Key ON Accy Signal

Output #3 turns OFF 30 seconds before output #2

*** Custom configuration response for Output #3 available, including 24 Hr keep-alive for memory, other time delays or voltage levels**

Part Numbers

	Resell Pack	Bulk Pack
Dual TDR, Gnd/Ign Harness	7616	7616B
Dual TDR, w/Full Harness		7616-2001B
Dual TDR, no Harness		7616-2002B

***** 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.

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