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## RUGGEDIZED SHUTDOWN TIMER/RELAY DRIVER

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### *Vehicle Battery Protection on Unit*

The Ruggedized Shutdown Timer (RSDT) protects the automobile battery from over discharge by shutting OFF loads at a preset time after the engine is shut down or when the battery is discharged to a low voltage level. The RSDT also protects radio or computer equipment from damage due to low or high input voltage as experienced with alternator failure or improper voltage jump-starts.

An ignition switch input is provided as an optional activation method. This method is recommended for emergency vehicles or when the vehicle may be idling for long periods with heavy electrical loads. The RSDT is normally activated by sensing the alternator charge voltage level applied to the battery. When the alternator stops charging, the timed sequence is started.



For assistance call Lind Technical Support at (800) 659-5956 or (952) 927-6303.

# SHUTDOWN TIMER START

The timer contacts will close when the engine is started and the alternator is charging the battery (battery voltage exceeds 13.5 [27] volts). Shutdown timing will start when the engine is turned OFF and the battery voltage decreases to below 13 [26] volts.

Optional connection of the IGN terminal will result in the timer starting when the ignition switch is opened.

**NOTE:** If the IGN terminal is connected to the accessories position of the ignition switch, the loads will be energized with the key in the accessories position.

**NOTE:** If the vehicle electrical system does not exceed 13.5VDC with the vehicle running, the "IGN" terminal connection must be used or incorrect timer operation will occur.

# SHUTDOWN TIMER SETTINGS

The RSDT delay time is factory set and is not adjustable. Models with delay times from seconds to hours are available, contact Lind to discuss your needs.

# FEATURES

- Low Voltage Shutdown at 10.5 [21] VDC
- High Voltage Shutdown at 18 [36] VDC (with auto reset)
- Loads up to 20 amps at 12 [24] VDC (higher loads possible with external relay)
- Automatic Activation by Sensing the Battery Voltage (battery not charging = timer ON)
- Optional Activation by Ignition Switch Connection (ignition OFF = timer ON)
- LED Indicator for Timing

# SHUTDOWN TIMER SPECIFICATIONS

|  |                |
|--|----------------|
| Battery Voltage Sensing Turn-on Threshold:     | >13.5 [27] V   |
| Battery Voltage Sensing Timer Start Threshold: | <13.0 [26] V   |
| Ignition ON Threshold (if used):               | >5 [10] V      |
| Ignition OFF Threshold (if used):              | <2.5 [5] V     |
| LED Flash Rate (in timing mode):               | 2 seconds      |
| High Battery Voltage Disconnect Threshold:     | >18 [36] V     |
| Low Battery Voltage Disconnect Threshold:      | <10.5 [21] V   |
| Low Battery Voltage Disconnect Delay:          | >10 seconds    |
| Input Voltage Range:                           | 9-18 [18-36] V |
| Maximum Output Current:                        | 20A            |
| Current Draw in OFF Mode:                      | 6 mA           |
| Current Draw in ON/TIMING Mode:                | 60mA           |

\* Custom units may have different specifications

# SOME SUGGESTED 12V EXTERNAL RELAYS

- 40A TYCO ELECTRONICS, #VF7-11F11  
OMRON, #G8HE-1A7T-R-DC12
- 80A AMERICAN ZETTLER, #AZ979-1A-12D  
WHITE-RODGERS, #70-1112252
- 150A TYCO ELECTRONICS, #V23132-A2001-A100
- 200A WHITE-RODGERS, #586-10511





