

Cole Hersee Flexmod

Voltage Sensing Relay and Timer Series



Description

The FlexMod electronic voltage sensing relay & timer monitors both battery voltage and ignition status, shutting down non-critical loads when the cutoff voltage is reached, or at the set time after the ignition is turned off. It is a timer and voltage sensor in one easy-to-connect unit. Ideal for use in emergency vehicles, the unit senses both voltage and time; after the vehicle engine is turned off, if either the cutoff voltage or time limit is reached, the Voltage Sensing Relay & Timer FlexMod will shut down the auxiliary loads. The dual technology in package provides double protection. The FlexMod electronic voltage sensing relay & timer opens up options for mounting in a small space, and simplifies wiring and other components.

Features and Benefits

- Protects starting battery from being drained by auxiliary loads
- Compact design (4 x 3 x 1), and solid-state unit is waterproof, dustproof and vibration-proof. Mounts anywhere on a vehicle, even places where road-splash is a problem. Sealed to IP67 standard
- Preserves starting power; eliminates downtime and jump starts due to dead batteries. Simultaneous time and voltage sensing protects starting, even when the vehicle is running "in deficit"
- Monitors voltage and time simultaneously, providing double the protection to batteries. Battery will not be drained if battery voltage gets low before timer has run out.
- 10A rating means it can handle many loads directly or drive a relay or solenoid for higher amperage
- Unit is auto-ranging – senses 12V DC or 24V DC systems
- Unit can be used as-is, with factory-programmed presets, or can be programmed by dealers to a broad scale of values

Applications

Heavy-duty mining and construction vehicles, emergency vehicles, off-road vehicles

Tech Specs

| | |
|--------------------|------------------------------------|
| Voltage | 12-24V DC (Auto Ranging) |
| Humidity | 0 to 90% RH |
| Vibration | 10-500Hz |
| Operating Temp | -40° to +85°C |
| Ingress Protection | IP67 |
| Dimensions (WxHxD) | 4.0x2.70x1.31" (101.6x68.6x33.3mm) |

Electrical Characteristics

| Characteristic | Min | Typical | Max | Notes |
|---|--------|---------|--------|--|
| Operating Voltage (12V) | 9V | 12V | 32V | Operating voltage is the system voltage |
| Factory Standard Disconnect Voltage (12V systems) | 12.05V | 12.1V | 12.15V | When voltage drops below 12.1V, system activates the alarm for one min. and then disconnects loads |
| Factory Standard Disconnect Voltage (24V systems) | 24.1V | 24.2V | 24.3V | When voltage drops below 24.2V, system activates the alarm for one min. and then disconnects loads |
| Quiescent Current | | 1mA | 2mA | Circuit operating current |
| Load Current | | | 10A | |
| Overcurrent Protection | | 15A | | System will disconnect after 1 second of excessive current |
| Factory Standard Key-Off Timer | | 15 min | | After key-off, unit will wait a set time before disconnecting |

Loads less than 10A

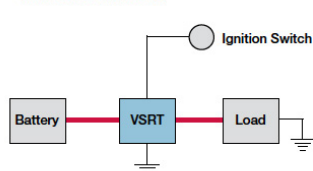


Loads greater than 10A

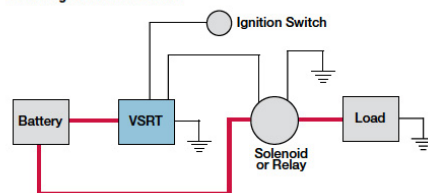


Installation Configuration

Loads less than 10A



Loads greater than 10A



| Parts | Description |
|----------|---|
| 48541 | Voltage Sensing Relay and Timer Unit, Blue Thermoplastic, 10A, 32V DC |
| 48541-01 | Voltage Sensing Relay and Timer Unit with 12805 Harness, Blue Thermoplastic, 10A, 32V DC |
| 48741 | Dealer-programmable Voltage Sensing Relay and Timer Unit, Blue Thermoplastic, 10A, 24V DC |
| 12805 | FlexMod Harness |

Environmental Specifications

| Characteristic | Parameter | Notes |
|-----------------------------|---------------------------------|---------------|
| Operating Temperature Range | -40° to +85°C -40° to +185°F | 10A at 85°C |
| Ingress Protection | 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 |



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