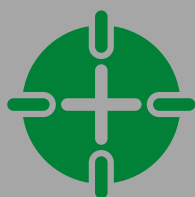




## T-SERIES LIGHT MONITORING SYSTEM



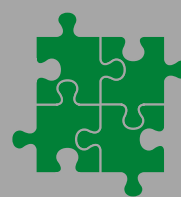
The Light Monitoring Systems can passively monitor up to 10 low power light circuits, alerting the driver in case of a light failure. The system connects in-line with the lighting circuits to monitor the lights by measuring the circuit load. When the load falls below the specified fault threshold, an alert is delivered to the driver



**Calibrated  
System**



**Threshold  
Configurations**



**Compatible with  
other T-SERIES systems**

## 6 Channel Lighting Monitor

### Key Features

- Failure Monitoring of up to 6 individual circuits
- Signal and Emulation Modes
- Configurable Failure Thresholds of 10mA, 25mA and 50mA
- Ideal for Direction Indicators and Marker Lights
- 24VDC Application (other voltages available)
- EMC Approved



### Description

The 6 Channel unit connects in-line with vehicle lighting circuits to passively monitor up to 6 separate low power light circuits. When the load of a circuit falls below a configurable threshold, due to a partial failure or an open-circuit, individual outputs provide failure feedback. The 6 channel unit can be configured to operate in either Signal or Emulation modes – providing a universal solution for the legal requirement of direction indicator monitoring.

### Signal and Emulation Modes

In Signal mode, the feedback output becomes active when a failure has occurred – this mode is ideal for controlling a dedicated warning light or buzzer, or for activating an audible message when connected to one of Nortek's vehicle annunciator products.

In Emulation mode, the feedback output is inverted to provide a ground connection while the circuit is operating correctly – this output can be used to control the connection of a 'bulb emulating' load resistor, when the controlling circuit is configured for a 21W bulb. When a failure is detected, the output becomes open circuit, thus disconnecting the load resistor.

### Configurable Failure Thresholds

The 6 channel unit has three configurable failure thresholds of 10mA, 25mA and 50mA. When the load of the circuit falls below the set threshold, the failure feedback is activated. These low current thresholds allow LED lights as low as 0.25W to be monitored

## 6 Channel 12v Lighting Monitor

### Key Features

- Failure Monitoring of up to 6 individual circuits
- Signal and Emulation Modes
- Protected against reverse polarity and transients
- Ideal for Direction Indicators and Marker Lights
- 12V/24VDC Application (other voltages available)
- EMC Approved



### Description

The 6 Channel 12v monitors the health of up to 6 vehicle circuits. Nominal lamp loads are taught via a calibration procedure during installation. Seven status outputs are provided; these report lamp health and will normally be connected to a vehicle ECU.

### Signal and Emulation Modes

The 6 channel 12v has two operating modes; the required mode is selected during installation.

#### Signalling Mode

A fault output will switch ON when its associated lamp is faulty.

#### Load Emulation Mode

A fault output will be kept switched on for as long as its associated lamp is healthy. Emulation mode is intended to mimic the presence of a filament bulb; the status output being used to switch a load comparable to the lamp being emulated. This is intended for use on vehicles which expect filament bulbs to be fitted. Note that the load resistors will generate a lot of heat.

### How the 6 channel 12v unit works

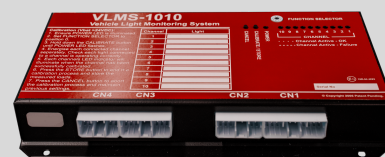
The installer performs a calibration procedure, during which unit learns the feed voltage and current consumption of attached lamps. We refer to these as the nominal feed voltages and currents. During operation, the unit reports a lamp as being faulty if that lamp's current consumption falls below 60% of its normal value.



## 10 Channel Lighting Monitor

### Key Features

- Failure Monitoring of up to 10 individual circuits
- Self-Calibration stores load characteristics of each circuit
- Failure Detection for >40% reduction of stored load
- Optional Pre-Check Function
- 24VDC Application (other voltages available)
- EMC Approved



### Description

The 10 channel unit connects in-line with vehicle lighting circuits to passively monitor up to 10 separate light circuits. When the load of a circuit falls below a configurable threshold, due to a partial failure or an open-circuit, individual outputs provide failure feedback. The 10 channel unit is designed to work with a wide range of lights.

### Self-calibration for Failure Detection

During installation, the 10 channel unit operates a self-calibration cycle where it stores the normal operating load of each monitored circuit – calibration can be repeated at any time. The stored values are used to determine when the circuit load has reduced by 40% or more and a failure has occurred. Alternative failure thresholds can be requested. Under failure conditions, a feedback output becomes active for each affected circuit – this is ideal for controlling a dedicated warning light or buzzer, or for activating an audible message when connected to one of Nortek's vehicle annunciator products.

### Pre-Check

The 10 channel unit includes the facility to provide the driver with an operating check for all connected lights. Within the first 5 minutes after power-up, the driver can energise each light circuit to test its operation and the 10 channel unit provides an output signal if all circuits are operating within the failure threshold. This can interface with one of Nortek's vehicle annunciator products for driver feedback.

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Solution to fit your application, call us on  
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