

PRO III FOUR STATION WARNING LIGHT BOX

PART NUMBER: 130-VM-WARN

WARNING MODULE CONFIGURATION SETUP

MODULE TYPE: PROIII_WRN_LITE

SERIAL NUMBER:

Channel 1

CAN ID:

Channel Name: Warning Light #1

Function: _____

Input Channel #1: _____

Low Alarm Limit _____

High Alarm Limit _____

Channel Conditions valid

when channel value falls:

Inside set point window

Outside set point window

Input Channel #2 _____

Low Alarm Limit _____

High Alarm Limit _____

Channel Conditions valid

when channel value falls:

Inside set point window

Outside set point window

Input Channel #3: _____

Low Alarm Limit _____

High Alarm Limit _____

Channel Conditions valid

when channel value falls:

Inside set point window

Outside set point window

Input Channel #4 _____

Low Alarm Limit _____

High Alarm Limit _____

Channel Conditions valid

when channel value falls:

Inside set point window

Outside set point window

Input Channel #5: _____

Low Alarm Limit _____

High Alarm Limit _____

Channel Conditions valid

when channel value falls:

Inside set point window

Outside set point window

Input Channel #6 _____

Low Alarm Limit _____

High Alarm Limit _____

Channel Conditions valid

when channel value falls:

Inside set point window

Outside set point window

Input Channel #7: _____

Low Alarm Limit _____

High Alarm Limit _____

Channel Conditions valid

when channel value falls:

Inside set point window

Outside set point window

Input Channel #8 _____

Low Alarm Limit _____

High Alarm Limit _____

Channel Conditions valid

when channel value falls:

Inside set point window

Outside set point window

Input Channel #9: _____

Low Alarm Limit _____

High Alarm Limit _____

Channel Conditions valid

when channel value falls:

Inside set point window

Outside set point window

Input Channel #10 _____

Low Alarm Limit _____

High Alarm Limit _____

Channel Conditions valid

when channel value falls:

Inside set point window

Outside set point window

Channel Combination Logic:

Warning Light On Delay = _____ seconds

Warning Light Off Delay = _____ seconds

Channel 2

CAN ID:

Channel Name: Warning Light #2

Function: _____

Input Channel #1: _____

Low Alarm Limit _____

High Alarm Limit _____

Channel Conditions valid

when channel value falls:

Inside set point window

Outside set point window

Input Channel #2 _____

Low Alarm Limit _____

High Alarm Limit _____

Channel Conditions valid

when channel value falls:

Inside set point window

Outside set point window

Input Channel #3: _____

Low Alarm Limit _____

High Alarm Limit _____

Channel Conditions valid

when channel value falls:

Inside set point window

Outside set point window

Input Channel #4 _____

Low Alarm Limit _____

High Alarm Limit _____

Channel Conditions valid

when channel value falls:

Inside set point window

Outside set point window

Input Channel #5: _____

Low Alarm Limit _____

High Alarm Limit _____

Channel Conditions valid

when channel value falls:

Inside set point window

Outside set point window

Input Channel #6 _____

Low Alarm Limit _____

High Alarm Limit _____

Channel Conditions valid

when channel value falls:

Inside set point window

Outside set point window

Input Channel #7: _____

Low Alarm Limit _____

High Alarm Limit _____

Channel Conditions valid

when channel value falls:

Inside set point window

Outside set point window

Input Channel #8 _____

Low Alarm Limit _____

High Alarm Limit _____

Channel Conditions valid

when channel value falls:

Inside set point window

Outside set point window

Input Channel #9: _____

Low Alarm Limit _____

High Alarm Limit _____

Channel Conditions valid

when channel value falls:

Inside set point window

Outside set point window

Input Channel #10 _____

Low Alarm Limit _____

High Alarm Limit _____

Channel Conditions valid

when channel value falls: \

Inside set point window

Outside set point window

Channel Combination Logic:

Warning Light On Delay = _____ seconds

Warning Light Off Delay = _____ seconds

Channel 3

CAN ID:

Channel Name: Warning Light #3

Function: _____

Input Channel #1: _____

Low Alarm Limit _____

High Alarm Limit _____

Channel Conditions valid

when channel value falls:

Inside set point window

Outside set point window

Input Channel #2 _____

Low Alarm Limit _____

High Alarm Limit _____

Channel Conditions valid

when channel value falls:

Inside set point window

Outside set point window

Input Channel #3: _____

Low Alarm Limit _____

High Alarm Limit _____

Channel Conditions valid

when channel value falls:

Inside set point window

Outside set point window

Input Channel #4 _____

Low Alarm Limit _____

High Alarm Limit _____

Channel Conditions valid

when channel value falls:

Inside set point window

Outside set point window

Input Channel #5: _____

Low Alarm Limit _____

High Alarm Limit _____

Channel Conditions valid

when channel value falls:

Inside set point window

Outside set point window

Input Channel #6 _____

Low Alarm Limit _____

High Alarm Limit _____

Channel Conditions valid

when channel value falls:

Inside set point window

Outside set point window

Input Channel #7: _____

Low Alarm Limit _____

High Alarm Limit _____

Channel Conditions valid

when channel value falls:

Inside set point window

Outside set point window

Input Channel #8 _____

Low Alarm Limit _____

High Alarm Limit _____

Channel Conditions valid

when channel value falls:

Inside set point window

Outside set point window

Input Channel #9: _____

Low Alarm Limit _____

High Alarm Limit _____

Channel Conditions valid

when channel value falls:

Inside set point window

Outside set point window

Input Channel #10 _____

Low Alarm Limit _____

High Alarm Limit _____

Channel Conditions valid

when channel value falls: \

Inside set point window

Outside set point window

Channel Combination Logic:

Warning Light On Delay = _____ seconds

Warning Light Off Delay = _____ seconds

Channel 4

CAN ID:

Channel Name: Warning Light #4

Function: _____

Input Channel #1: _____

Low Alarm Limit _____

High Alarm Limit _____

Channel Conditions valid

when channel value falls:

Inside set point window

Outside set point window

Input Channel #2 _____

Low Alarm Limit _____

High Alarm Limit _____

Channel Conditions valid

when channel value falls:

Inside set point window

Outside set point window

Input Channel #3: _____

Low Alarm Limit _____

High Alarm Limit _____

Channel Conditions valid

when channel value falls:

Inside set point window

Outside set point window

Input Channel #4 _____

Low Alarm Limit _____

High Alarm Limit _____

Channel Conditions valid

when channel value falls:

Inside set point window

Outside set point window

Input Channel #5: _____

Low Alarm Limit _____

High Alarm Limit _____

Channel Conditions valid

when channel value falls:

Inside set point window

Outside set point window

Input Channel #6 _____

Low Alarm Limit _____

High Alarm Limit _____

Channel Conditions valid

when channel value falls:

Inside set point window

Outside set point window

Input Channel #7: _____

Low Alarm Limit _____

High Alarm Limit _____

Channel Conditions valid

when channel value falls:

Inside set point window

Outside set point window

Input Channel #8 _____

Low Alarm Limit _____

High Alarm Limit _____

Channel Conditions valid

when channel value falls:

Inside set point window

Outside set point window

Input Channel #9: _____

Low Alarm Limit _____

High Alarm Limit _____

Channel Conditions valid

when channel value falls:

Inside set point window

Outside set point window

Input Channel #10 _____

Low Alarm Limit _____

High Alarm Limit _____

Channel Conditions valid

when channel value falls: \

Inside set point window

Outside set point window

Channel Combination Logic:

Warning Light On Delay = _____ seconds

Warning Light Off Delay = _____ seconds

MODULE DESCRIPTION:

This module is designed to turn on a warning light when any one or combination of parameters monitored by your PROIII system meet or exceed a user programmable range. This module has four separate warning outputs. Each output can supply up to 700 milliamps of current. We recommend using LED style warning lights because of their low current consumption.

MODULE INSTALLATION:

The PRO III warning light box and plug-in warning light modules are designed to interface to RacePak PRO III series data loggers. Each warning light box can contain up to four modules for monitoring any channel being recorded on the PRO III Data Logger.

The PRO III warning light box can be inserted at any location in the VNet2 bus cable in your vehicle. Ensure that a VNet2 terminator cap is placed at the end of the warning light box if it is the last VNet2 component in the system.

Select a location where the warning light box can be mounted safely, and all cables can be routed conveniently. Avoid mounting near heat sources and high voltage ignition wires. In most cases, the warning light box is mounted using the mounting ears on the ends of the housing. After you have mounted the warning light box and connected it into the VNet2 bus, install the warning light modules and connect them to their warning lights accordingly.

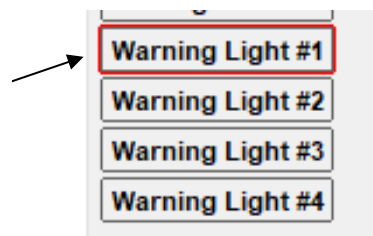


SOFTWARE SETUP AND MODULE CONFIGURATION:

The module has been factory configured as described in the setup boxes located at the beginning of this instruction sheet. All four warning channels are disabled from the factory. You will need to enable and set each channel's parameters to meet your requirements. To perform these steps, you will first need to connect the data logger to your PC using the unit's serial interface cable (see your unit's instruction manual for details). Next, start the RacePak DataLink program. If you selected your car configuration file as the default configuration file, the file will be opened and the file tab for the car configuration file will be selected automatically. If it is not, open your car configuration file by selecting the **Open Car Configuration** menu item located in the **Files** main menu selection.

Next, apply power to your onboard system, wait 10 seconds, and select the **Read VNET Config** menu item located in the **Edit** main menu selection. The DataLink program will read in the configuration of your system. If everything works properly, four new channel buttons will appear in the configuration file representing these modules. The first button will be captioned **"Warning Light #1"**. Buttons two through four will be located directly underneath the first button and will be labeled similarly. An example is shown below.

Right click
to set up the
first warning
light channel



SETTING THE WARNING OUTPUT PARAMETERS:

To edit the setup conditions on this sensor module, position the mouse cursor over the channel button and click the right mouse button. The Warning Output Parameters dialog box will be displayed and the following parameters can be adjusted as required.

Parameter	Option 1	Option 2
Bulb Check on Power Up	DISABLED	ENABLED - warning light turns on briefly at power-up
Output Function	Constant On – when conditions are met, warning light is constantly on.	Flashing – when conditions are met, warning light is flashing.
Missing VNET Message Logic	Condition True - warning condition is always honored, regardless of data status.	Condition False - warning condition is ignored if data is missing.

Next, click “On Condition” to go to the “Conditions for Warning Light #1” input box.

SETTING THE WARNING LIGHT CONDITIONS

The next step is to set the following conditions for the setpoint control channels; operation, true condition, false condition, true delay, and false delay. Note that each setpoint control channel must be an existing data channel of your logger system, and up to 10 channels can be used to control each warning light module with complex AND/OR logic.

OPERATION AND TRUE & FALSE CONDITIONS

To create an individual warning condition, select the desired setpoint control channel from the dropdown list, choose the desired operation, and enter the true/false conditions based on what you are trying to achieve with the warning light. Operations available include Greater than (>), Greater than or equal to (>=), Less than (<), Less than or equal to (<=), Not Equal to (!=), and Equal to (=). The True Condition is when you want the warning light to turn “on,” and the False Condition is when you want the warning light to turn back “off.” A False condition that is slightly different from the True Condition gives you the opportunity to stagger “on”/“off” and ensure the warning light stays on for a suitable period of time.

In the simplest case, the output of the light can be turned on and off via a single channel such as engine RPM exceeding a user programmable limit. In the example below, the first individual warning condition causes the light to go “on” when engine RPM goes higher than 9000, and turn off when engine RPM falls back below 8500. The second condition causes the light to go “on” when DS RPM falls below 1000, and turns off when DS RPM rises back above 1200.

Conditions for Warning Light #1

Setpoint Control Channel	Operation	True Condition	False Condition	True Delay	False Delay
1. Engine RPM (x200)	Greater than	9000	8500	0	0
2. DS RPM (x3b4)	Less than	1000	1200	0	0

Individual Warning Condition set up

TRUE AND FALSE DELAY

In addition to setting the conditions that cause the light to turn on or off, each light can be programmed with an “on” or “off” delay of up to 30 seconds providing added flexibility. This is accomplished by entering values in the condition entry boxes shown below. The times are entered in 1/100 of a second. As an example enter 250 for a 2.5 second delay.

LOGIC (AND/OR)

Right click in the “LOGIC” section of the Conditions for Warning Light input box to add or remove logic conditions. These logic conditions allow more complex control of the warning light with up to ten channels in combinations using “AND” and “OR” logic. Using “OR”, the light will turn on when the set point conditions on any of the selected control channels is met. Using “AND”, the light will turn on only when the set point conditions of all selected control channels are met.

After right clicking in the LOGIC section, select one or more individual warning conditions and put them in the same box or different boxes. Conditions in the same box work together but independently from other boxes.

The example below shows a warning light that will turn on if Engine RPM is greater than 9000 **OR** if Logger Volts is greater than 18.

Conditions for Warning Light #1

Setpoint Control Channel	Operation	True Condition	False Condition	True Delay	False Delay
1. Engine RPM (x200)	Greater than	9000	8500	0	0
2. DS RPM (x3b4)	Less than	1000	1200	0	0
3. Logger Volts (x7d3)	Greater than	18	17	0	0
4. =Disabled= (x0)	Not Equal to	0	0	0	0
5. =Disabled= (x0)	Not Equal to	0	0	0	0
6. =Disabled= (x0)	Not Equal to	0	0	0	0
7. =Disabled= (x0)	Not Equal to	0	0	0	0
8. =Disabled= (x0)	Not Equal to	0	0	0	0
9. =Disabled= (x0)	Not Equal to	0	0	0	0
10. =Disabled= (x0)	Not Equal to	0	0	0	0

LOGIC - Place cursor inside box and Right-Click to add or remove conditions

(1. Engine RPM > 9000) &

[OR]

(3. Logger Volts > 18) &

[OR]

Right-click in here to select and combine the individual warning conditions

Click here to finalize settings

In the following example, the warning light will turn on if: {Engine RPM is higher than 9000 AND Logger battery volts is more than 18} OR if {DS RPM is lower than 1000}. In other words, the warning light will turn on if DS RPM falls below 1000, regardless of the values of Engine RPM or Logger battery volts.

Setpoint Control Channel	Operation	True Condition	False Condition	True Delay	False Delay
1. Engine RPM (x200)	Greater than	9000	8500	0	0
2. DS RPM (x3b4)	Less than	1000	1200	0	0
3. Logger Volts (x7d3)	Greater than	18	17	0	0
4. =Disabled= (x0)	Not Equal to	0	0	0	0
5. =Disabled= (x0)	Not Equal to	0	0	0	0
6. =Disabled= (x0)	Not Equal to	0	0	0	0

LOGIC - Place cursor inside box and Right-Click to add or remove conditions

(1. Engine RPM > 9000) & (3. Logger Volts > 18) &

[OR]

(2. DS RPM < 1000) &

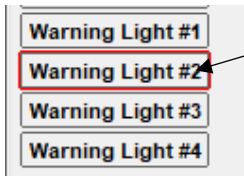
SENDING THE CONFIGURATION TO THE MODULE:

Once you finalize your settings and click OK to save them, you will return to the Warning Output Parameters dialog box. You will now need to send the information to the module. Be sure the serial interface cable is connected to your data logger and power is applied to the system. To send the information, click the Send Configuration button.

Click “SEND Configuration” to save all the settings for the first warning light channel of the 4-Station Warning Light Box.

When finished sending the message, “Device Programmed Successfully” should be displayed at the bottom of the progress box. If you receive an error message, turn power to the system off and then back on and repeat the send configuration process. If problems persist, check the troubleshooting section in your manual and then contact RacePak.

Click OK to close the Warning Output Parameters dialog box to return to the main DataLink screen. Now, proceed to setup the remaining 3 channels in the same manner.



Right click to set up the second warning light channel

Save your configuration file and update the Module Configuration Setup Box on the front of this worksheet with the new setup configuration.

IMPORTANT:

Save this Installation Worksheet in your System Manual in Appendix V. This worksheet is part of your system documentation. You may need this worksheet when modifying or trouble shooting your system.

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