<u>Microtec Light Activation Box overview (Thiess)</u>

NOTE: The LAB can accept 12V or 24V signal so any reference to 24V in the documentation is interchangeable with 12V depending on the crane system.

Functionality
For the first 10mins of operation of the x-mas lights, when an input for the red light and buzzer is active, the light will go back to green when the input is not active. After this time of 10mins, when an input for the red light and buzzer is active, the red light will 'latch' on. To regain the green light, the input must be inactive and the reset switch must be turned on momentarily.
The test switch will turn on the red light in any condidtion.

Input Connector
   GND = Switch input for test and reset
   1 = Input for Red light & buzzer
   2 = Input for Red light & buzzer
   3 = Input for Amber light
   4 = Input for Red light & buzzer
   5 = Input for Red light & buzzer
   6 = Switch input for test and reset
   +5V = Not used currently

   NOTE: If none of the inputs are activated, the Green Light will turn on.

Setting Input Levels to activate lights
   The Dip switches Labelled "Input Level" controls when an input to the box activates its external warning light colour. Each input Dip switch controls each input from the connector 1 to 5.

   On = Input will activate light when it drops below 3V
   Off= Input will activate light when it is above 3V

Output Connector
   GND = Ground
   +24V = Constant 24V
   1 = Red Light Output
   2 = Amber Light Output
   GND = Ground
   +24V = Constant 24V
   3 = Green Light Output
   4 = Buzzer Output

Setting the Output Polarity to the Lights
   The Dip switches labelled "Output Polarity" control if Voltage or Ground is activated for the external light. Each Dip switch number directly correlates to the O/P connector number. Ie Switch 1 is for the "Red Light".

   On = Sends 24V

Off = Activates a Ground

Programming the Light Box for additional functionality
The light box may be re-programmed to change the Input Level sensitivity to a 1V change, or make the lights flash / remain constant.

1. Write down what position Dip switches are currently: They will be altered temporarily whilst in programming mode.
2. Enter programming mode: Whilst pushing the Red button on the board (located above the "Output Polarity" Dip switches) turn on power to the box. The LED should flash confirming it's in program mode. Release button.

3. Change the appropriate Dip switches to suit as follows:

   Input Level Switches 1-5: Alters the Voltage sensitivity to 1V for the corresponding input pin.
   On = Any 1V change will set the relevant Output off
   Off= Keep standard Voltage threshold of below /above 3V to change.

   Output Polarity Switches 1-4: Alters which light(s) and buzzer to Flash or remain constant.
   On = Output is pulsing On/Off
   Off= Output is constant

4. Save programming: Press the Red button again.   LED should go off.
5. Turn off power and set the Dip switches to what they were initially.
6. Test system.