

MR Building Safety Indicator

URL: <https://nemalux.com/education/use-cases-posts/mr-building-safety-indicator/>

Nemalux builds on its strength in luminaires for safety indication with the new color-changing MR luminaire.

Nemalux's versatile [MR](#) luminaire is available in a color-changing model, called the MR-RGBW. This model uses the staging/architecture DMX lighting protocol to enable color-changing indication applications.



Figure 1: Nemalux MR-RGBW color changing luminaire

We are all familiar with the flashing red lights of passing police, fire, ambulance, or other emergency vehicles. These examples demonstrate the effectiveness of employing noticeable colors to indicate a warning. Similarly, employing a change in color in a work environment can also be an effective way to quickly, visually, and widely indicate an unsafe work condition or incident over a large space.

Potential applications include:

- Parkade distress indicator
- Swimming pool distress/drowning warning indicator
- Street light traffic accident safety indicator
- Warehouse accident indicator

- Factory floor accident indicator
- Pedestrian crosswalk indicator
- Shift finished indicator
- PPM air quality indicator
- Fire indicator
- Ambulance or emergency vehicle approach indicator
- Building terrorist alert/bomb indicator
- Underground mining cave-in or accident indicator
- Critical equipment failure indicator

Nemalux has experience with industrial color-changing indicators. For instance, Nemalux implemented color-changing XCANLED luminaires in compressor stations to warn employees of an H2S leak. Nemalux provided a sophisticated control panel that receives information from the H2S sensors, interprets the readings, and translates the different parts per million levels into pre-programmed light signals. Color-changing flood lights (XCANLED) were installed inside and outside of the facility to provide an advanced warning system for the site operator. The exterior lights were outfitted with a frosted shroud (as can be seen in the following images) to be highly visible to the operator before entering the danger zone.



Figure 3: Color-changing GS Series luminaires left) blue/white, middle) red/white, right) red/white application

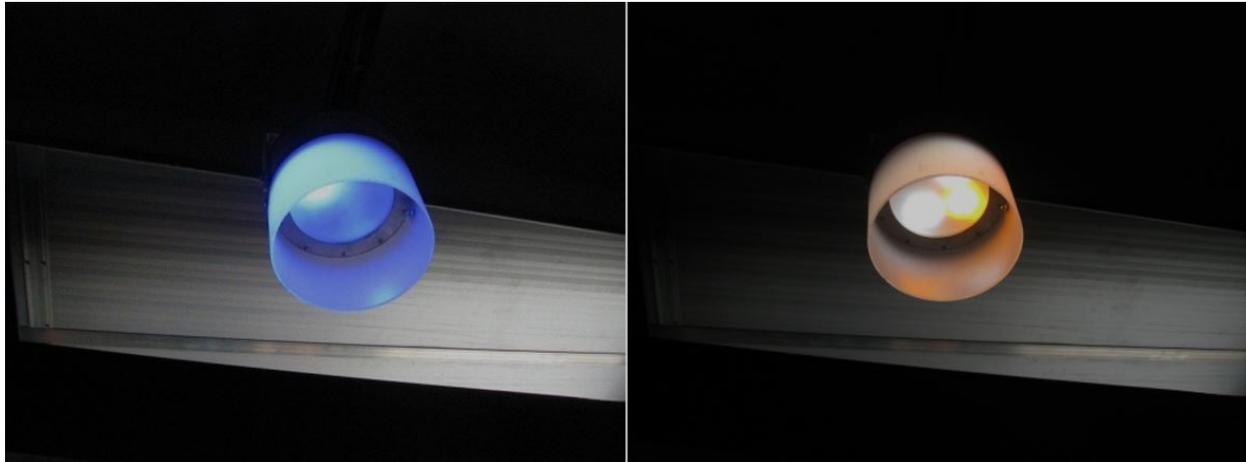


Figure 2: Color-changing XCANLED in compressor station application: Blue indicates normal condition while Y indicates H2S leak.

The customer's alarm outputs are sent to a DMX stage/architecture lighting master controller, which is preprogrammed to send out lighting commands on its RS485/RS422 bus to the MR-RGBW's DMX input. When an alarm condition occurs, the DMX code signals the MR-RGBW to change colors. All other MR device parameters are configured as usual.

Color change indication applications can be useful in application scenarios such as high noise environments where audible warnings cannot be easily heard, where there are deaf people or workers normally wearing ear protection to perform their job task in the work space, or in large spaces where ubiquitous lighting can be seen by many people quickly.