Application Spotlight

Improving Hazard Awareness on Plant Floor with Balluff SmartLights

A large automotive engine plant utilizes several RGVs (Rail Guided Vehicles) for transporting pallets between stations or across the plant floor. These RGVs have generic stack light with red and amber color lights with alarm indicating that they are in motion. When these RGVs are docked and about to start their motion, they sound alarm and blink their amber lights. Given the busy environment it was always difficult to identify which RGV is impending motion. The stack lights used on the RGVs are not prominent enough to distinguish itself from the background visual clutter. This scenario created a hazardous situation in the plant.

A maintenance team at the plant designed an innovative solution using Balluff SmartLights. SmartLights were selected because they are designed with multiple LED segments, shaped differently than generic stack lights and are fully programmable for customizable multiple color segments, brightness and various modes of operations.

The team mounted SmartLights high above on the RGV mast. When the RGVs are docked and stationary, the SmartLights would show steady green color. The SmartLights would flash yellow and red - indicating RGVs at that station are about to move. When RGV motion starts, the SmartLights would change color to either red indicating forward motion or green indicating RGV reversing into the docking station.

Because of the high visibility installation, programmable LED colors, the engine plant was able to improve hazard awareness throughout the plant with an innovative solution.
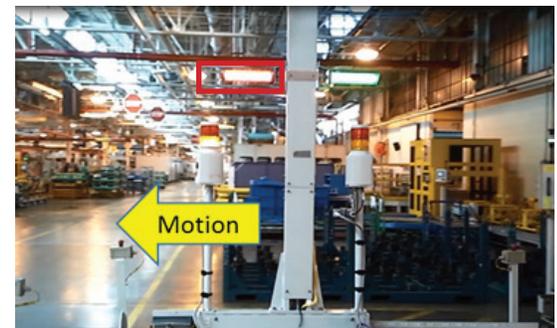
Balluff SmartLight Advantages:

- Adaptable to any industrial network or fieldbus with IO-Link communication. Add-On-Instructions or function blocks supplied for ease of programming.
- Programmable for three modes of operations: multicolor stack light, run light or level indication.
- Difficult to ignore in the plant with customizable colors and brightness -- models with 95dB programmable buzzer also available.
- Utilizes standard M12 sensor cable for connection - eliminates complex wiring or assembly.
- Fit for harsh environment with IP67 protection rating and mounting option for wall, column or ceiling.

RGV Stack lights are difficult to locate in the plant

Steady green on SmartLights indicating docked RGVs

SmartLight red color indicating forward motion of RGV

Order Code	Part Number	Description	#
BNI0085	BNI IOL-802-102-Z037	SmartLight 5-segment with buzzer	1
BNI0082	BNI IOL-802-102-Z036	SmartLight 5-segment	not shown
BNI008A	BNI IOL-801-102-Z037	SmartLight 3-segment with buzzer	not shown
BNI0088	BNI IOL-801-102-Z036	SmartLight 3-segment	2
BNI0087	BNI IOL-800-000-Z037	SmartLight 1-segment with buzzer	not shown
BNI007T	BNI IOL-800-000-Z036	SmartLight 1-segment	3
BAM026L	BAM MB-NI-017-400-1	Pedestal mounting for SmartLight	4
BAM0255	BAM MB-NI-016-800-1	Right angle wall mount bracket	5
BCC05M1	BCC M415-M414-3A-304-EX44T2-05	Standard M12 5m sensor cable (high flex)	6