Crew Alertness and Audio Visual Modules

By focusing on the unique needs of each customer, Central Railway Manufacturing has worked with leaders in the rail industry to turn their crew safety requirements into a reality.

Crew Alertness and Audio Visual Modules

Central Railway Manufacturing's equipment portfolio includes the Alerter family of products. The F2518 Alerter is optimized to handle all discrete inputs required to meet the latest FRA crew alertness mandates and supports spare channels for customer-specific options. In conjunction with the F2504 CRM Light Horn Module, a ruggedized, compact, and tamper-resistant high-bright strobe and audible alarm box. With features such as programmable speed-dependent timing and a repetitive reset disable that prevents processing of repetitive periodic manual reset switch activations, the CRM Alerter is part of a flexible and FRA-compliant crew alertness strategy.

Insight into Alerter technology...

The CRM Alerter is designed for standalone crew alertness applications where no alertness system previously existed or the currently installed system is not equipped to meet the latest FRA requirements. The Alerter supports the following types of connections commonly used by crew alertness algorithms:

- Digital inputs (e.g. throttle, sand, reset)
- Air lines (e.g. brake pressure, horn)
- Analog inputs (e.g. dynamic brake)

The F2518 Alerter is also an LDARS, Ethernet enabled device that integrates into the locomotive network, supporting a message-based feature set. By deriving locomotive control state available from LDARS and PTC on-board messaging, the Alerter can be configured to support energy management applications as well as generation of real-time ITC network alerts for user-specified logical conditions.

Energy Management and Alertness...

With a focus on cost reduction and environmental concerns, leaders in the industry have started to deploy locomotive energy management systems that optimize fuel usage and improve train handling. These systems rely on software components such as New York Air Brake's LEADER®, as well has physical throttle interface devices such as the CRM Throttle Assist Gateway, or TAG®, an M-9155 LCCM compliant throttle and dynamic brake interface.

While integrated locomotives can be equipped with these hardware and software components as part of an energy management strategy, performance of existing integrated crew alertness systems can be adversely affected. CRM Alerter systems lead the industry with an embedded communications subsystem specifically designed to account for cruise control or auto-throttle activity, dynamically optimizing the crew alertness algorithm to ensure FRA alertness compliance without compromising crew safety or on-board energy management directives.

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