

Automated Vehicle Approach AVADA

Maintenance of railway tracks and support of infrastructures is considered to be one of the most hazardous jobs in the rail industry. Railway maintenance personnel working on the tracks face the danger of fast approaching and other track machinery moving through their worksite



Problem

The people acting as lookouts need to be constantly vigilant about the approaching trains and cannot be distracted, any communication failure from network control to the worksite protection officer can all lead to fatal accidents. False Alarm must be avoided as these will devalue the effect of any alert given.

PreAcc solution: Diaz systems

The PreAcc devices are specifically designed to help prevent accidents. The PreAcc system detects approaching trains and alerts track workers of the incoming trains by sending out an advance warning to the workers in potential danger. The stand-alone devices include the train detection and warning unit with wireless transmission from up to 2 km away and independent from communications network, providing for high reliability.).

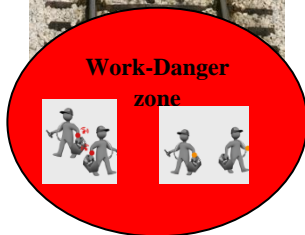


A personal vibrating bracelet alert personally alert track workers enabling them to retreat from the work/danger zone into safety .

Methods of alerting

The alarms can be sent through a personal vibrating bracelet, ultra-bright LED flashes on their helmet, a high-volume audible alarm, a head set to prevent hearing damage with alarm signal or a combination of these.

The system provides for an automatic wireless warning system alerting workers on – or alongside the rail track whenever a train is approaching at high speed. The worker is automatically alerted via his vibrating bracelet or other alert devices already when the train is at a distance of about 2 km from the work zone.



Products:

Diaz-TD train/Vehicle detection and wireless transmitter

- Train/Vehicle detection module with multiple burst radar
- Upon detection of a train, the work zone is automatically set as the danger zone
- External antenna to shoot up to about 2 km
- Train sensor detects train and its travelling direction.
- Power : 12-48 VDC, Operating temperature -40 to +80 ° C

Diaz – WZ (Work-Danger Zone) Mobile Alert Relay Module

- Receive signal from Diaz-TD in case a train/vehicle is detected
- Antenna to establish danger zone and can be set from 10 to 50 meter
- Alert devices are automatically activated (wireless and wired alert devices)
- Upon the train leaving the **Diaz–WZ** the danger zone all alert signals are automatically switched off
- Output Triggers to activate alert devices
- Power: 12-48 VDC, Operating temperature -40 to +80 ° C

Advantages PreAcc EM-5tec system:

- Proprietary unique PreAcc EM-5tec technology makes it possible to adapt to site specific demands
- Works independent from internet, IoT or other network facilities so is not affected by internet or satellite interruptions however expansion with added connectivity is available
- Works in harsh environmental conditions such as, rain, snow, fog, smog, ice, mud, dust, steam, heat, day-night, etc .
- Train detection only covers the designated rail track and will not alert for trains on the parallel track or trains moving away from crew.
- Real time Dead Man type WATCHDOG system will automatically trigger a crew alert in case the DIAZ-TD is not responding due to failure for any reason including power shortage to alert workers that the train detection is off-line and requires attention.

We use Radio frequencies & Electromagnetic fields for detection as well as communications because detection must be immune to work site conditions

Immune to stuff;

- Mud
- Dust
- Sand
- Steam



Immune to the environment;

- Fog
- Rain
- Snow
- Ice



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