

PHOENIX^{MDS} DED DRAGGING EQUIPMENT DETECTION

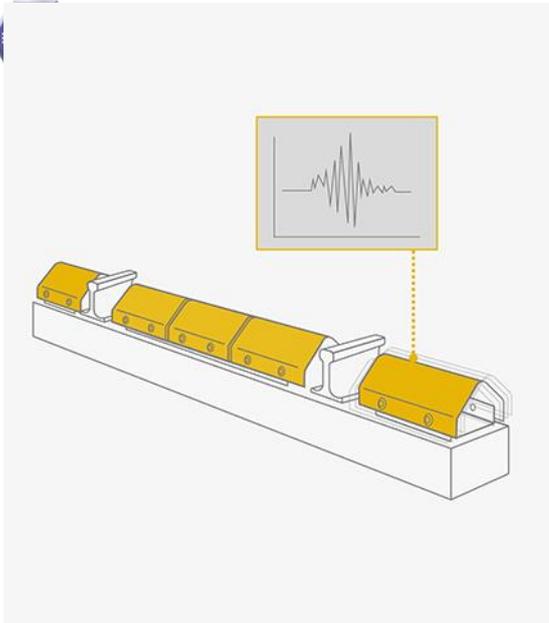


Detection of Dragging Equipment

Train equipment such as couplings, chains or hoses could be dragged under the train damaging the infrastructure. The function Dragging Equipment Detection (PHOENIX^{MDS} DED) protects humans alongside the track, crucial fixed assets such as switches, crossings, ETCS balises or signals against these kind of damages. When components are being dragged with a train, DED generates an alarm to traffic control or to the train driver in real-time to limit consequential damages. Alarms are generated at user-defined tolerance levels. The system provides information about the position of the dragging equipment at the train, the side where the impact was detected and the severity of the strike.

Key Features

- » No mechanical moving parts
- » Low maintenance, durable solution
- » Customized alarm thresholds related to impact level and speed
- » No violation of the clearance gauge
- » Adaptable to any track gauge
- » Wood, concrete and steel sleeper mounting possible
- » No influence on regular track maintenance
- » Fits all rail profiles
- » Asset protection of infrastructure equipment
- » Safety management of railway operations
- » Detection of dragging equipment
- » Increasing availability by mitigating risk of consequential damages



FLEXIBLE SENSOR SYSTEM

DED is built up in individual sections, each capable of registering strikes up to 500 times the gravitational acceleration. When a dragged part hits one of the covers the accelerometers record the resulting vibration. At the same time the covers protect the accelerometers. The measured vibrations are processed and validated against pre-set tolerance levels before generating an alarm. Wheel positions, speed and event triggering are provided by wheel sensors already connected to the Modular

Diagnostic System or by dedicated wheel sensors. Installations are possible in various track set-ups using steel, wooden or concrete sleepers. The function is designed for easy handling and maintenance. Furthermore, all individual cover sections are separated to reduce the risk of damage if they are installed side by side. To remotely validate an alarm, sensors already connected to the Modular Diagnostic System can be equipped with a video system to provide pictures of the impacts.

Technical Specifications

Strike detection: Up to $\pm 500g$
 Ingress protection of sensor housing: IP65
 Measurement signal: 4 to 20mA current loop
 Input voltage: 15 to 35V DC
 Environment: -40 to +70°C
 No influence of the weather conditions on the measurement.

Options and Variants



Video



Inside Detection



Single Contact



Outside Detection