MK-IV Wheel Impact Load Detector

Prevention of Damage to Wheels, Vehicles, Cargo and Infrastructure

MARKET
Rail Infrastructure

AVAILABLE
Worldwide

L.B. Foster's Wheel Impact Load Detector (WILD) is a hardened electronic data collection device that measures vertical wheel forces via rail-mounted strain gages. The WILD measures impact forces caused by damaged wheels. These high impact forces damage vehicles, cargo, and infrastructure.

The WILD is the most widely used system in the world today, with over 300 installed to date, to detect and alarm on excessive wheel impacts for the targeted removal of defective wheels.

An essential component of any performance-based wheel management program, the WILD continually monitors rail vehicle wheel health to ensure safe and productive train operations.

WILD systems evaluate millions of wheels per day throughout the international rail industry with proven accuracy and reliability.

KEY BENEFITS

Reduces:

- Derailments
- Rail Fatigue
- Bearing Damage
- Track Damage
- Car and Truck Damage
- Concrete Tie Cracking
- Wood Tie Plate Cutting
- Lading Damage

Increases

- Wheel Tread Life
- Fuel Efficiency

KEY FEATURES

- Impact Force Monitoring
- Train, Vehicle and Wheel Information
- Bi-Directional Traffic
- Automatic Car Counting and Identification (With Valid Car Library)
- Self-Diagnostics
- Instrumentation Layout Optimized for Maximum Wheel Coverage
- Automated Alarm Notifications
- The only Hunting Truck Detector that implements AAR Rule 46

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DATASHEET

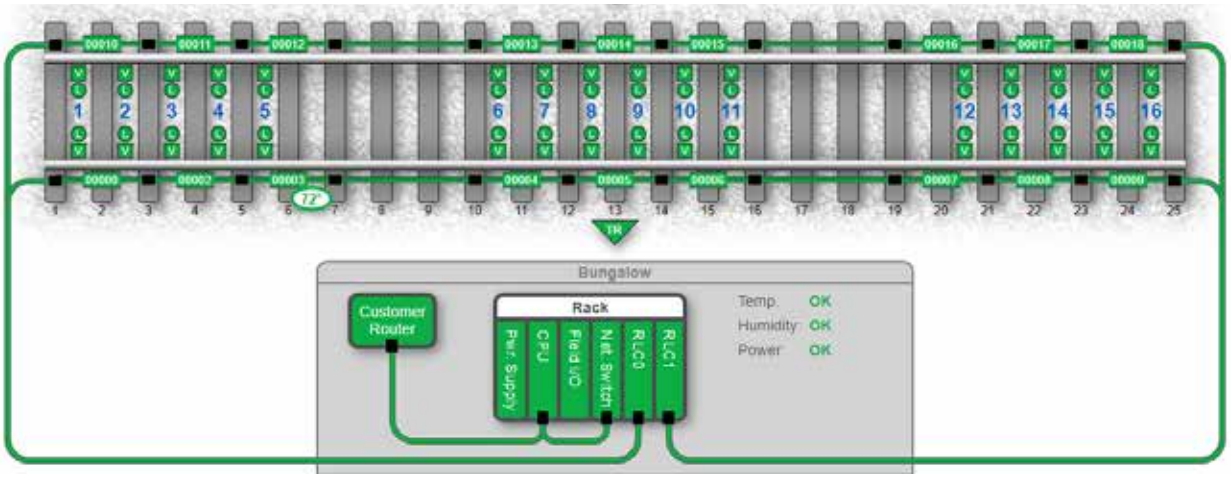
MK-IV Wheel Impact Load Detector (WILD)

FUNCTIONALITY & APPLICATION

A series of strain gage load circuits, micro-welded directly to the neutral axis of a rail, create an instrumented zone for the measurement of vertical forces exerted by each wheel of a passing train.

Rail mounted processors analyze data to detect wheel tread irregularities. If any wheel generates a force that exceeds a customer-configured alarming threshold, a report identifies that wheel for action.

Customers can configure multiple alarm thresholds corresponding to their operating procedures. These reports are distributed in real-time to such interested parties as rail traffic control center and vehicle repair shops.



TECHNICAL SPECIFICATIONS

- Operating Speeds – 30 mph to 180 mph (50 to 300 km/h)
- Resolution – 100 lb. / 445 newtons
- 32 Channel Measurement Zone - 50 feet (16 meters)
- 20 Channel Measurement Zone - 22 Feet (7 meters)
- Hardened Electronics in 19" rack
- Input Voltage - 24 volts DC (120/220 VAC upon request)
- Power - 100 watts (4 amps at 24 volts DC)
- System Operating Temperature -40º to 158º F (-40º to 70º C)
- Bungalow (Inside) Electronic Components -4º to 131º F (-20º to 55º C)

SYSTEM IMPROVEMENTS

> Bungalow equipment connected to track using only two hoses

> Fiber-optic data transfer from rail to bungalow

> Smaller segmented guards held in place by spring clips

> Ballast temperature and rail temperature monitoring

> Plug removable cables simplify hose removal to prepare for tamping operations.

> Graphical web-based user interface with Site-Health Monitor shows detailed status with recommended corrective actions for problems

> Site-Health Monitor provides callouts on a per train basis as well as periodic site-health reporting

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