Weighing Terminals

IND9R86

Enhances Operational Safety

Unattended Operation

Powerful Data Management

Increases Productivity

Productivity-Enhancing Solution
Using Dynamic Railcar Weighing

METTLER TOLEDO

Reduce Weighing Time
Increase Productivity and Profits

■ **Weighs railcars in motion - quickly and accurately**
■ **Flexible connectivity options include Wireless Ethernet**
■ **Large bright display eases operator interaction**

Enhance Productivity while Increasing Operational Safety
Traditional static weighing of railcars requires manual uncoupling, positioning and weighing of individual railcars. Not only does this result in potential delays for time sensitive shipments and increase operational costs, it also adds potential hazards due to additional railcar handling required for static weighing operations.

The IND9R86 dynamic weighing controller integrated with a METTLER TOLEDO dynamic rail scale allows for automated weighing of entire trains as they cross the scale at speeds up to 10 km/hour (6 mph). Individual railcar weights are obtained without uncoupling cars, and train total weights are calculated. Railcar identification information from an RFID tag is integrated into the weighing record.

Train crossing scale with tag reader

Screen from IND9R86

Transactional data is stored within the IND9R86 and made available for export to management information systems.

Railcar overloads can be monitored and an automated overload alarm triggered, providing advance warning of potentially dangerous and costly overloads.

Integration with Plant MES or MRP Systems
Many railcar weighing applications provide data that is critical for daily plant operations. The IND9R86 provides simple and flexible access to weighing transactional data through a variety of communication interfaces. Available IND9R86 communication formats include TCP/IP, serial, and PLC fieldbus (EtherNet/IP™, Allen Bradley RIO, ControlNet™, DeviceNet™, Profibus®). Train weight reports can be communicated via cabling, wireless communication, fiber optic links, or through a modem connection for remote installations.

Predictive Maintenance and Asset Management

In conjunction with a METTLER TOLEDO dynamic rail sacle, the IND9R86 provides the ability to automatically detect and notify maintenance personnel in the event of system errors such as load cell failure, scale overloads, and communications loss. Maintenance can be planned via a scheduled interval that is programmed within the controller, providing notice to operational staff that scale maintenance should be performed. System data is available, providing valuable asset utilization information to monitor facility operations.

Operator interface screen

Features, Specifications, and Options

Features

- Certified for use in legal for trade applications per NTEP H-44
- Configurable user software allows for simple customization to meet project requirements
- Expansive system memory and reporting capability allows for thousands of transactions to be saved locally, quickly and simply transferred to other applications, or printed
- Ability to simply verify legal for trade accuracy via pre-configured certification reports
- Fully integrated solution with scale terminal, PC, wheel detector interface, and I/O all in one stainless steel enclosure ready for wall or pole mounting
- Powerful application software running on Windows® XP operating system provides the ability for simple TCP/IP networking and interface to other equipment via USB, serial, or Ethernet connection
- Integrated lightning protection and local or remote scale diagnostics using proven METTLER TOLEDO POWERCELL® technology
- Effective for both new and retrofit applications, with the ability to interface to both POWERCELL® and analog load cells

Options

- PLC interface to plant automation networks using PLC fieldbus connectivity
- Radio communication interface to train engineer, for over-speed or other error conditions
- Intrinsically Safe Barrier for placement of scale in hazardous area
- AEI interface hardware with optically isolated connection and power supply
- Stainless steel junction box for wheel detector termination
- I/O for interface to speed signal lights or other devices
- Additional wheel detectors for dual direction weighing

Specifications

- 115VAC or 230VAC, 49 – 61 Hz
- Monochrome 240 x 64 graphical LCD display with 5 navigation push buttons
- Standard Communication Interfaces: Ethernet 10/100 Base-T with standard RJ-45, four (4) RS-232 ports, USB keyboard connection, USB printer connection
- 256MB RAM, Pentium® class processor
- Dimensions: 61 cm (24") H x 46 cm (18") W x 31cm (12"D)
- Scale interface: POWERCELL® or analog load cells, optional dual scale interface for summing of two scale platforms
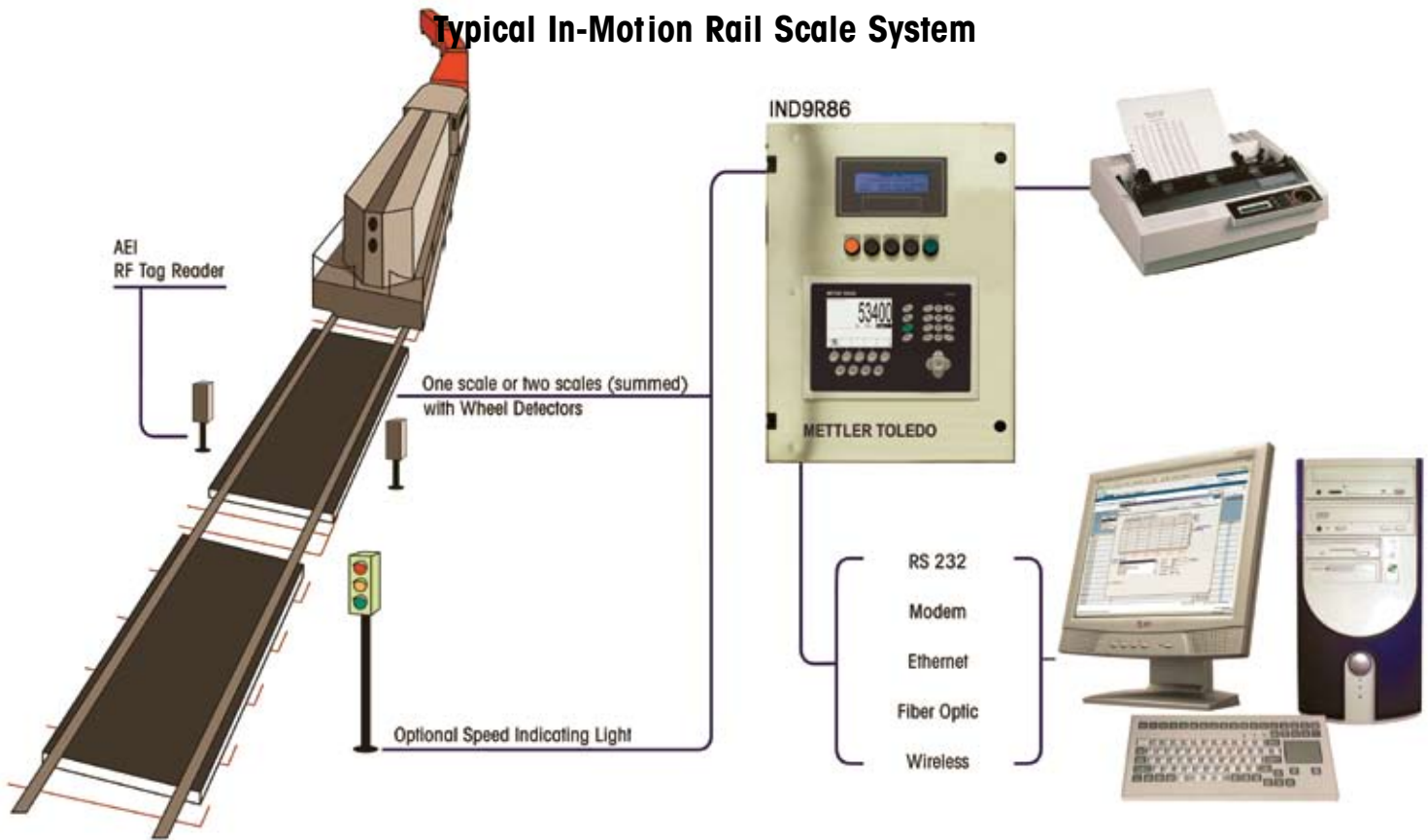- IP54 protection

IND780 Panel Mount

Accurately Weigh a Variety of Materials and Railcar Types

The IND9R86 weighing controller can be used to weigh materials ranging from aggregates, wood pulp, steel, coal, to liquid materials such as chemical intermediates, food stuffs, and petroleum products. The flexibility of the IND9R86 allows for both "dual draft" weighing of each axle set on a single platform, or for "single draft" weighing of both axle sets at once. This provides the ability to achieve legal for trade weighing accuracy while weighing a variety of materials.

Typical In-Motion Rail Scale System

IND9R86

AEI RF Tag Reader

One scale or two scales (summed) with Wheel Detectors

53400

METTLER TOLEDO

Optional Speed Indicating Light

RS 232

Modem

Ethernet

Fiber Optic

Wireless

Unattended Weighing and Data Transfer

The IND9R86 automatically senses that a train is approaching the scale, the direction of travel, and speed of the train. Weighing is started and stopped, RFID tag data is integrated with the weigh record, and train reports are generated all without operator intervention, providing a completely unattended weighing solution. Transactional data can be either reported to a management system in real time, or can be automatically scheduled for daily batch retrieval.

Remote Hut Installation communicates with main office

Train and System Setup Reports can be printed or exported on demand.

Recommendations for best Dynamic Weighing Accuracy

- Use a Mettler Toledo 7260CIM scale, designed to comply with AAR Scale Handbook Requirements.

- A straight and level approach with a maximum grade of 0.2% for an adequate distance proportional to the length of the trains being weighed.

- Three wheel detectors.

- Well-maintained cars.

- Assistance/information from local governing railroad.

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■ Installation and configuration	■ Equipment ready-to-run on schedule ■ Setup optimized to your application ■ Seamless integration with other systems
■ Equipment Qualification	■ Compliance with requirements ■ Quality system documentation
■ Calibration	■ Calibration using factory procedures ■ ISO17025 Accredited Certification ■ Measurement uncertainty determination
■ Proactive Maintenance	■ Control of maintenance budgets ■ Improved equipment performance ■ Asset lifecycle management

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