



Research&Development Company
PROMELECTRONICA



Wheel
parameters
identification

Wheel sensors **DKU-02 Koldun,**
eDKT, DKT, DKR, DKL
ESSO-ILS Axle Counting System


npcprom.ru



R&D Company Promelectronica is an expert in the axle counting systems. Our axle counting systems ensure train traffic safety on all Railways of the JSC Russian Railways and actively used in Indonesia, Bulgaria, Brazil and other countries.

We use the axle counting technology to solve various Customer's tasks. Our equipment is used in information and logistic systems to monitor rolling stock movement, identify types and numbers of the train cars, CTC, etc.

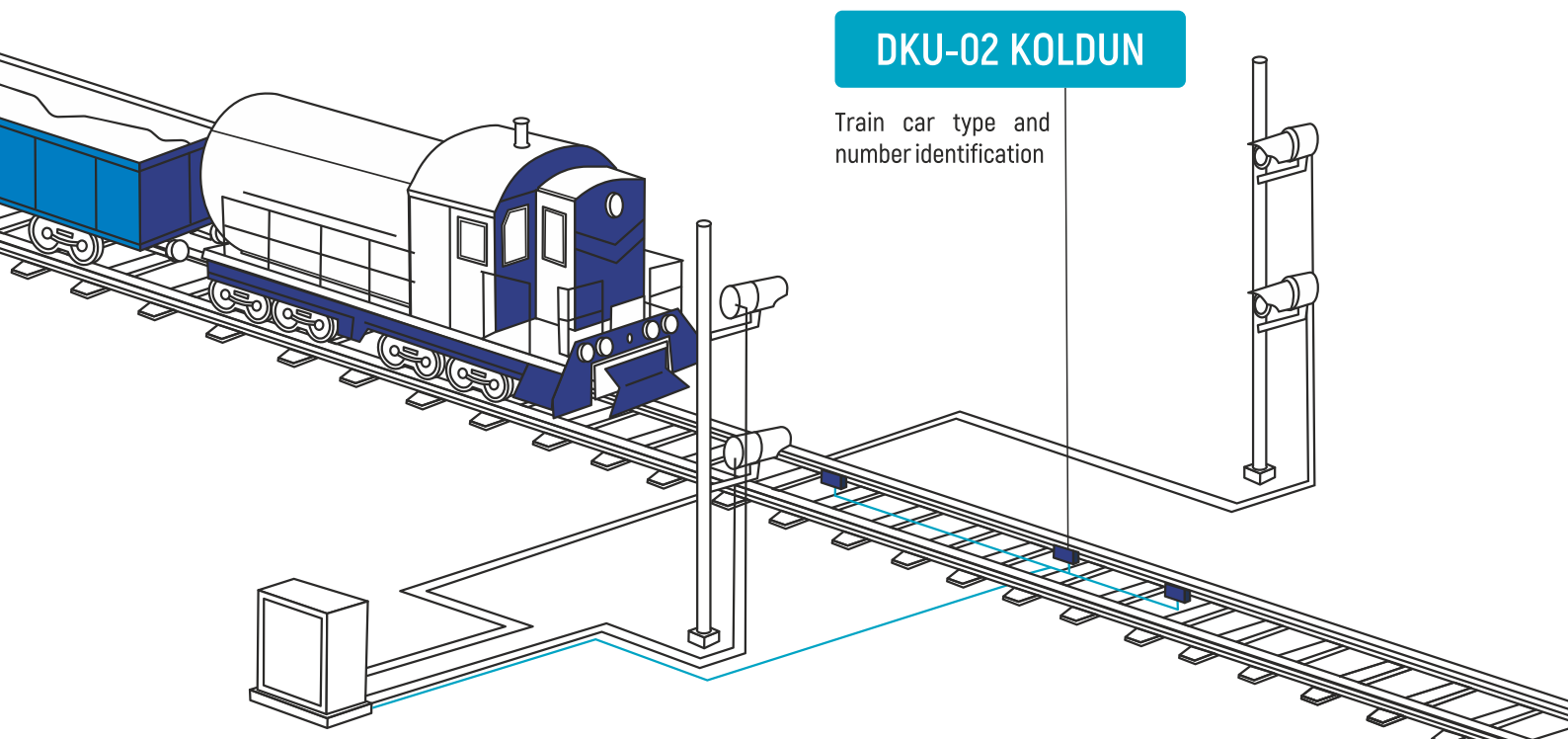
RS485 INTERFACE

DKU-02 KOLDUN WHEEL SENSOR

DKU-02 Koldun detects wheel presence in the sensor area and passing of a wheel, counts axles considering the movement direction, calculates wheel movement parameters, performs self-diagnostics and transmission of received data to upper-level systems.

AREAS OF APPLICATION

- Automatic Coupling Control Systems.
- Warning of operating personnel about incoming trains.
- Rolling Stock Speed Measurement.
- Train Car Weighing.
- Train Car Type Identification.
- Positioning in hot box detection systems.



DKU-02 KOLDUN

Train car type and
number identification

ADVANTAGES

- Software configurable to the Customer's requirements.
- Autonomous processing of received information.
- Direct connection to information and logistic systems.
- Extended operating temperature range: from -60 up to +70 °C.
- Increased reliability of operation when affected by special vehicles (snow-clearing vehicles, track carts, etc.).



DKU-02 Koldun Wheel Sensor

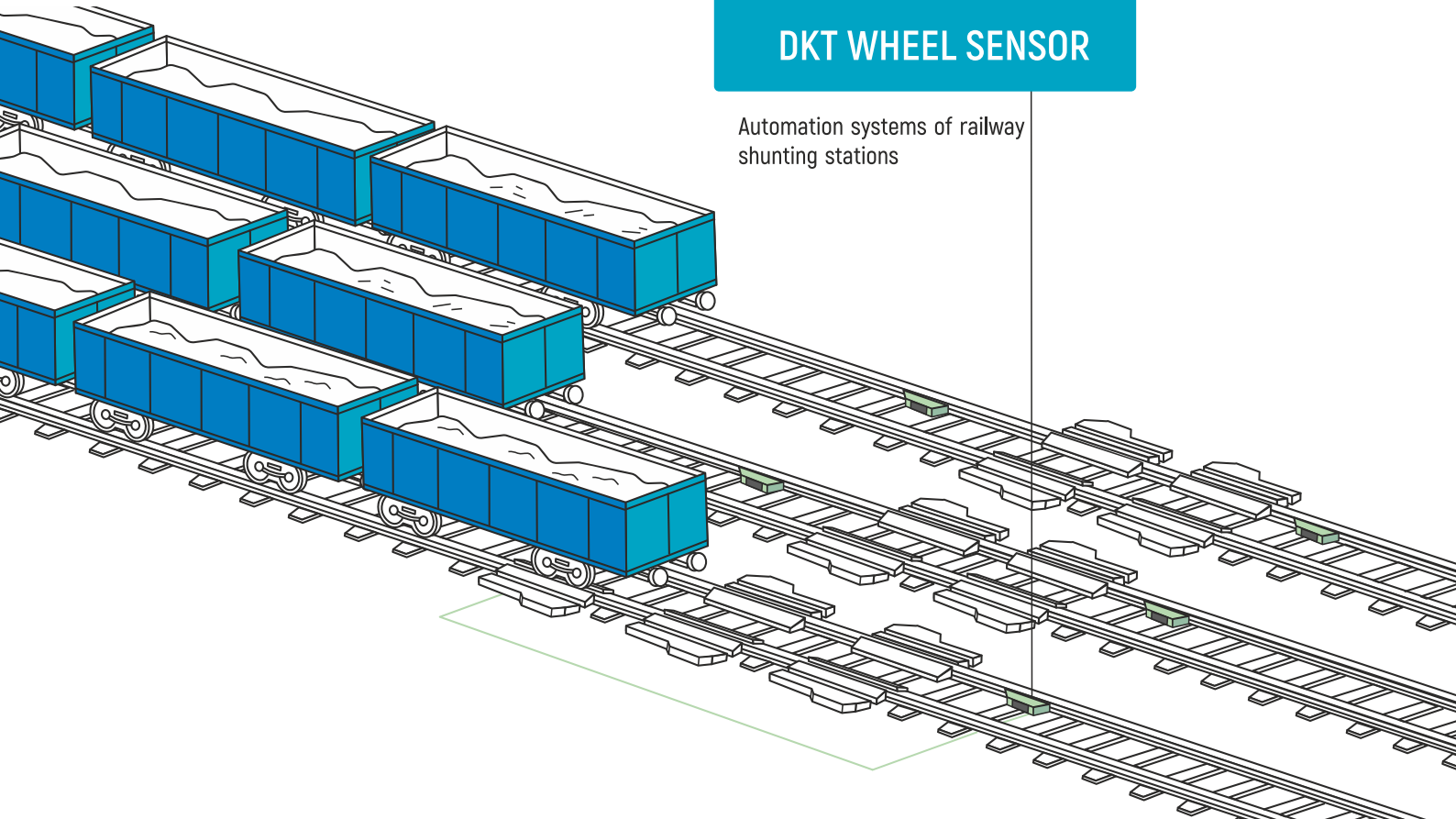
PARALLEL DIGITAL INTERFACE («CURRENT LOOP»)

DKT WHEEL SENSOR

Detects wheel presence within the sensing area, transmits signal on wheel presence and functionality check data to the upper-level system.

AREAS OF APPLICATION

- In automation systems of railway shunting stations.
- As a part of information and logistic systems and control and measurement systems.



DKT WHEEL SENSOR

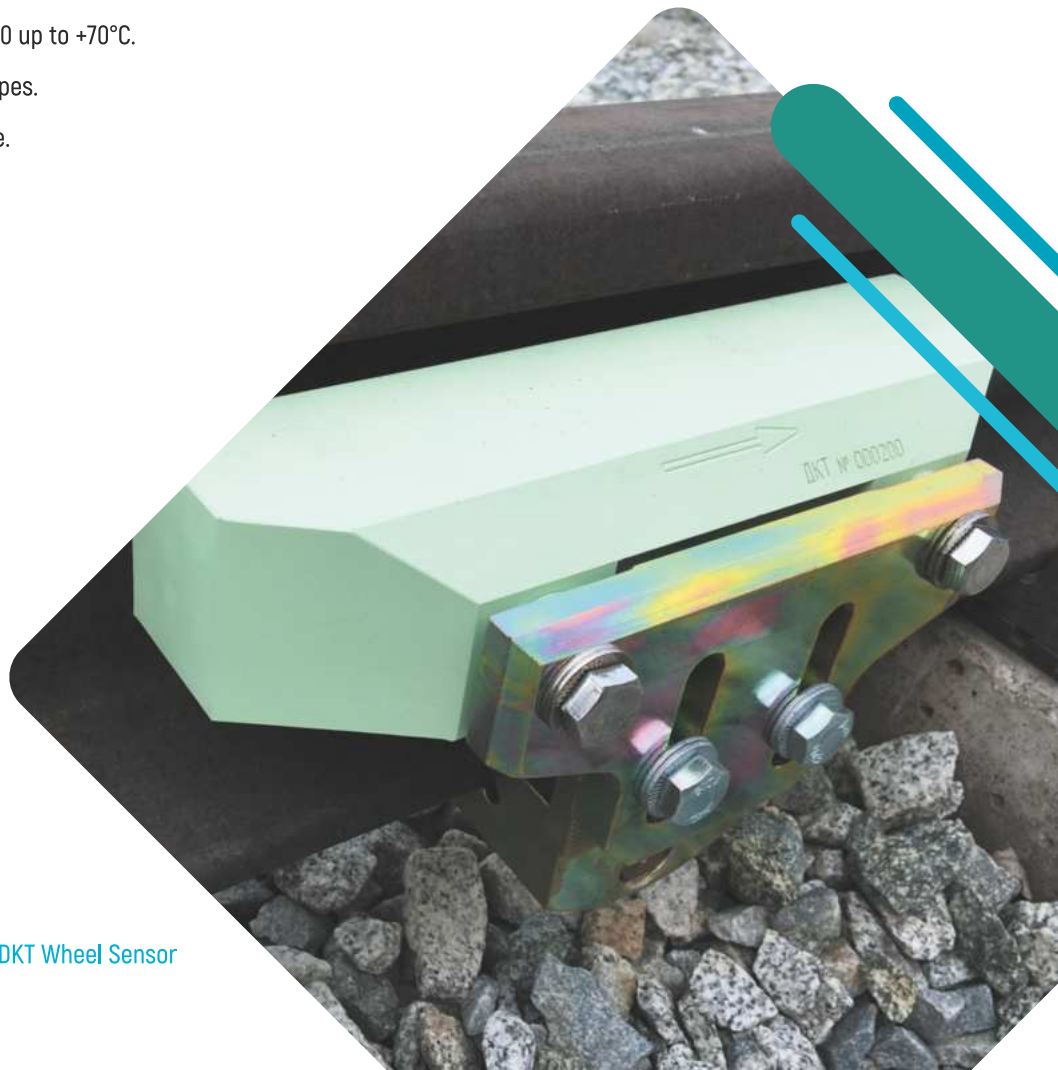
Automation systems of railway shunting stations

PARALLEL DIGITAL INTERFACE («CURRENT LOOP»)

DKT WHEEL SENSOR

ADVANTAGES

- The sensor has two wheel sensing areas.
- Data transmission speed on presence of a wheel to evaluator device: up to 8 ms.
- Extended temperature range: from -60 up to +70°C.
- Easy and fast installation on all rail types.
- Does not require routine maintenance.



DKT Wheel Sensor

PARALLEL DIGITAL INTERFACE («CURRENT LOOP»)

DKR WHEEL SENSOR

DKR Wheel Sensor detects wheel presence in the sensing areas and sends data to upper level system which counts passed axles.

ADVANTAGES

- Quick and simple installation on all rail types using clamps or via drilling.
- Does not require maintenance.
- Continuous automatic self-diagnostics.

AREAS OF APPLICATION

- Automatization Systems for stations, level-crossings and hauls.

DKR Wheel Sensor



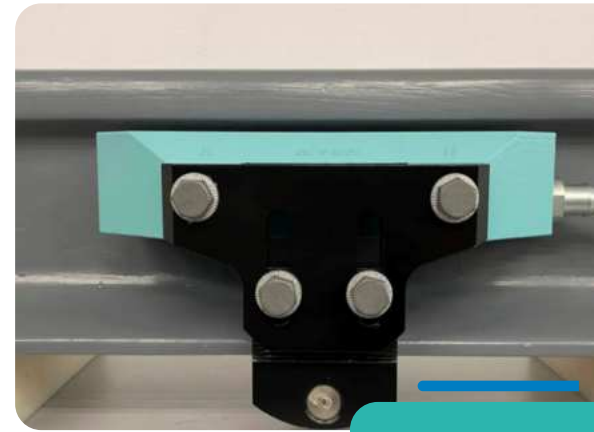
"DRY CONTACT" INTERFACE"

eDKT WHEEL SENSOR

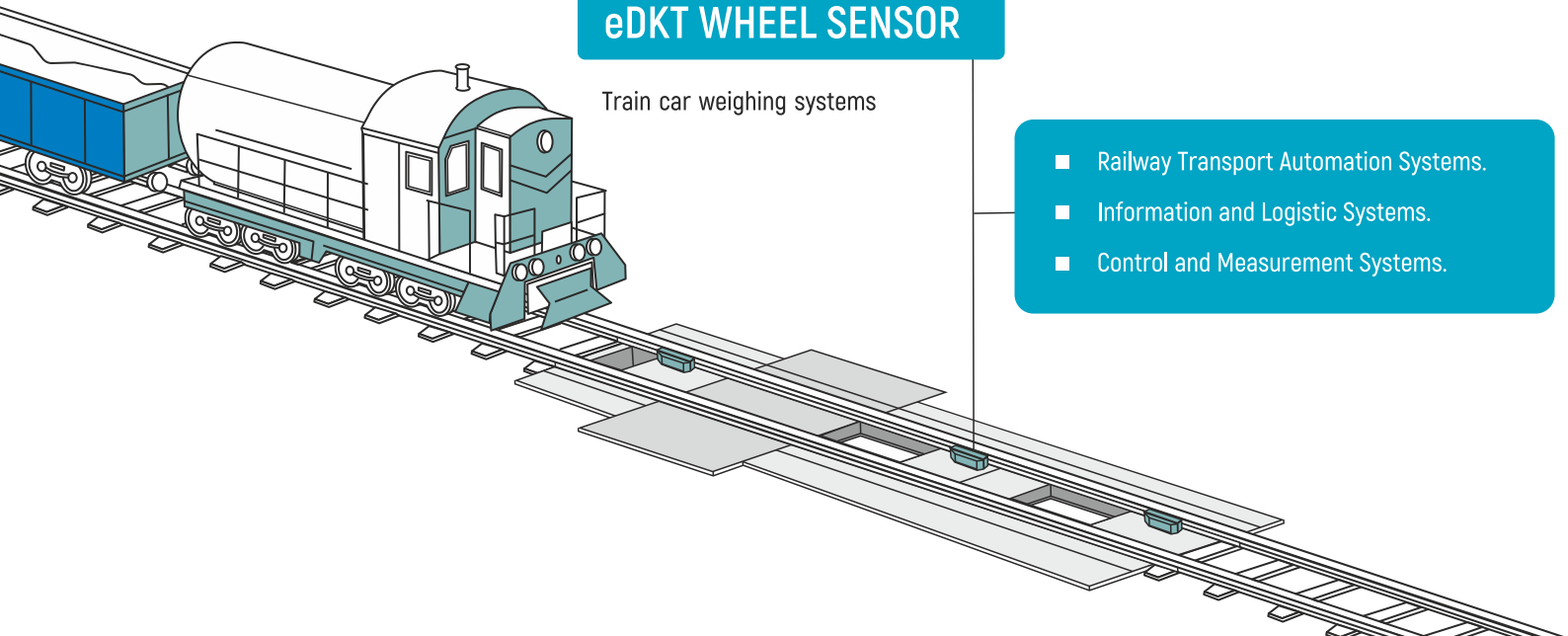
eDKT detects wheel presence within the sensor area, transmits signal on wheel presence to upper level systems.

ADVANTAGES

- Interface: dry contact, RS485.
- Operating temperature range: -60 to +70 °C.
- Functions are configured to customer's needs.
- Easy and fast installation on rails of any type via clamp or drilling.
- Does not require routine maintenance.



AREAS OF APPLICATION



eDKT WHEEL SENSOR

Train car weighing systems

- Railway Transport Automation Systems.
- Information and Logistic Systems.
- Control and Measurement Systems.

POTENTIAL-FREE INTERFACE

DKL RAIL CONTACT SENSOR

Detects train movement. Suitable for mobile solutions, lightweight and compact sensor.

ADVANTAGES

- Extended temperature range: from -60 up to +70 °C.
- Simple and quick installation on all rail types, installation time – less than 5 minutes.
- Does not require maintenance.

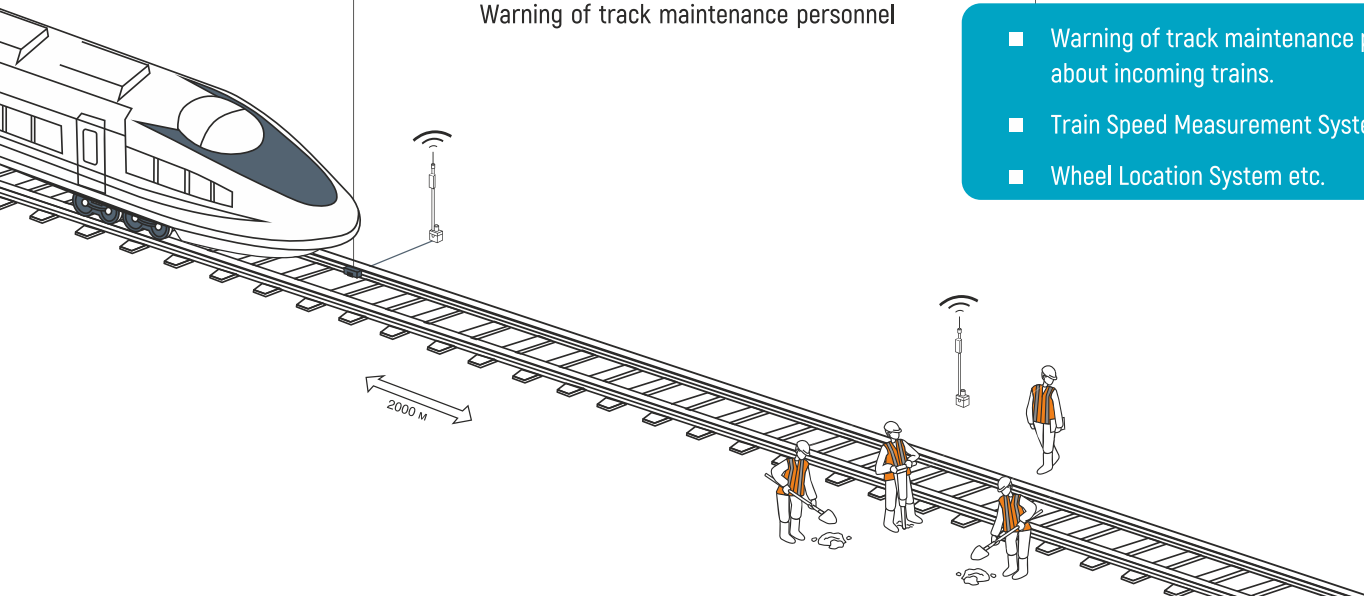


AREAS OF APPLICATION

DKL WHEEL SENSOR

Warning of track maintenance personnel

- Warning of track maintenance personnel about incoming trains.
- Train Speed Measurement Systems.
- Wheel Location System etc.



ESSO-ILS AXLE COUNTING SYSTEM

The system is used as a part of information and logistic systems to track locomotive and train car movement on the station.

ADVANTAGES

- High reliability of the system, counting error probability does not exceed $1,0 \cdot 10^{-6}$.
- The system uses safe DKU-M wheel sensors without additional electronic equipment on the track. The sensors are connected by a pair-wire to a distance up to 5 km.
- Data is fed to the upper-level system via standard ModBus TCP protocol.
- The system provides power supply for the sensors, gathering of data and protection against lightning and surge overvoltages.
- Independent of trackside equipment, the indoor part of the system can be upgraded to ESSO-M or ESSO-M-2 system and connected to an interlocking system.
- The system does not require routine maintenance.






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Watch the video
about wheel sensors



Watch the video
about ESSO-ILS

