Research&Development Company
PROMELECTRONICA

Train car/wheel positioning

Wheel sensors **DKU-02 Koldun, DKT, 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.

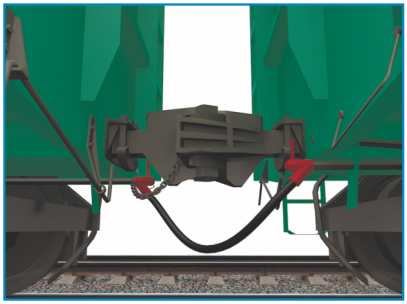
We use the axle counting technology to solve various Customer's tasks. Our equipment is used in information and logistic systems to monitor rolling stock movement, identify types and numbers of the train cars, CTC, etc.

RS-485 SERIAL DIGITAL INTERFACE

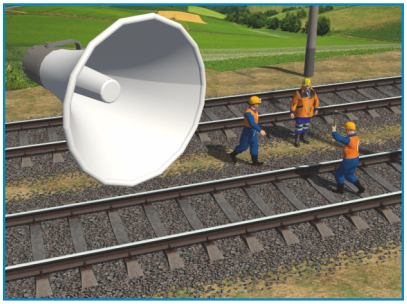
DKU-02 KOLDUN WHEEL SENSOR

Detects wheel presence in the sensor area and passing of a wheel, performs axle counting considering the movement direction, calculates wheel movement parameters, performs self-diagnostics and transmission of received data to the upper-level system.

AREAS OF APPLICATION



Automatic coupling control systems

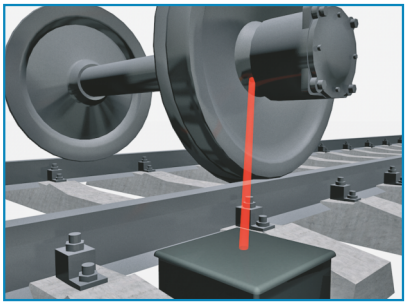


Warning of operating personnel about incoming trains

Rolling stock speed measurement

Train car weighing

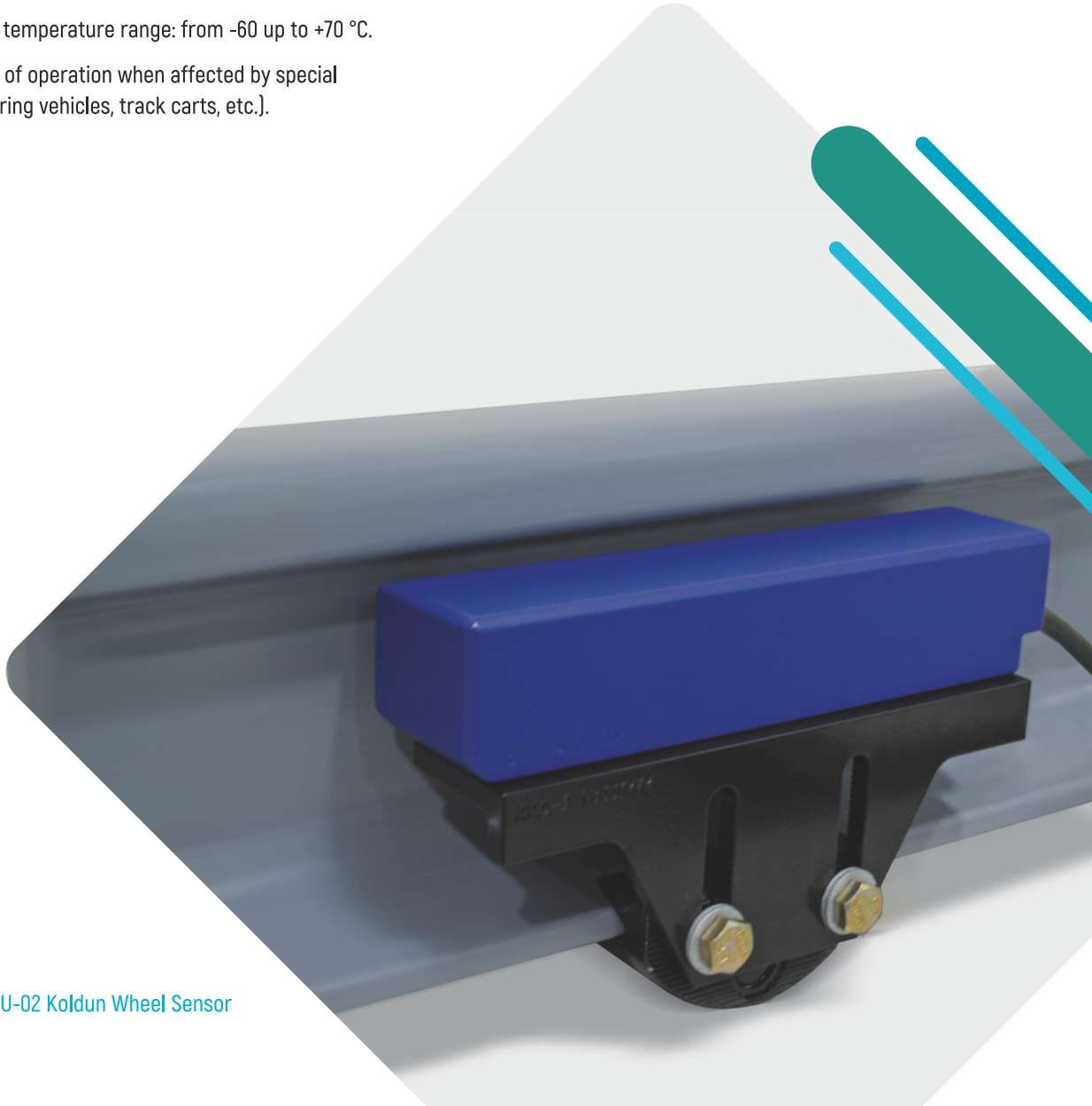
Train car type identification



Positioning in hot box detection systems

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

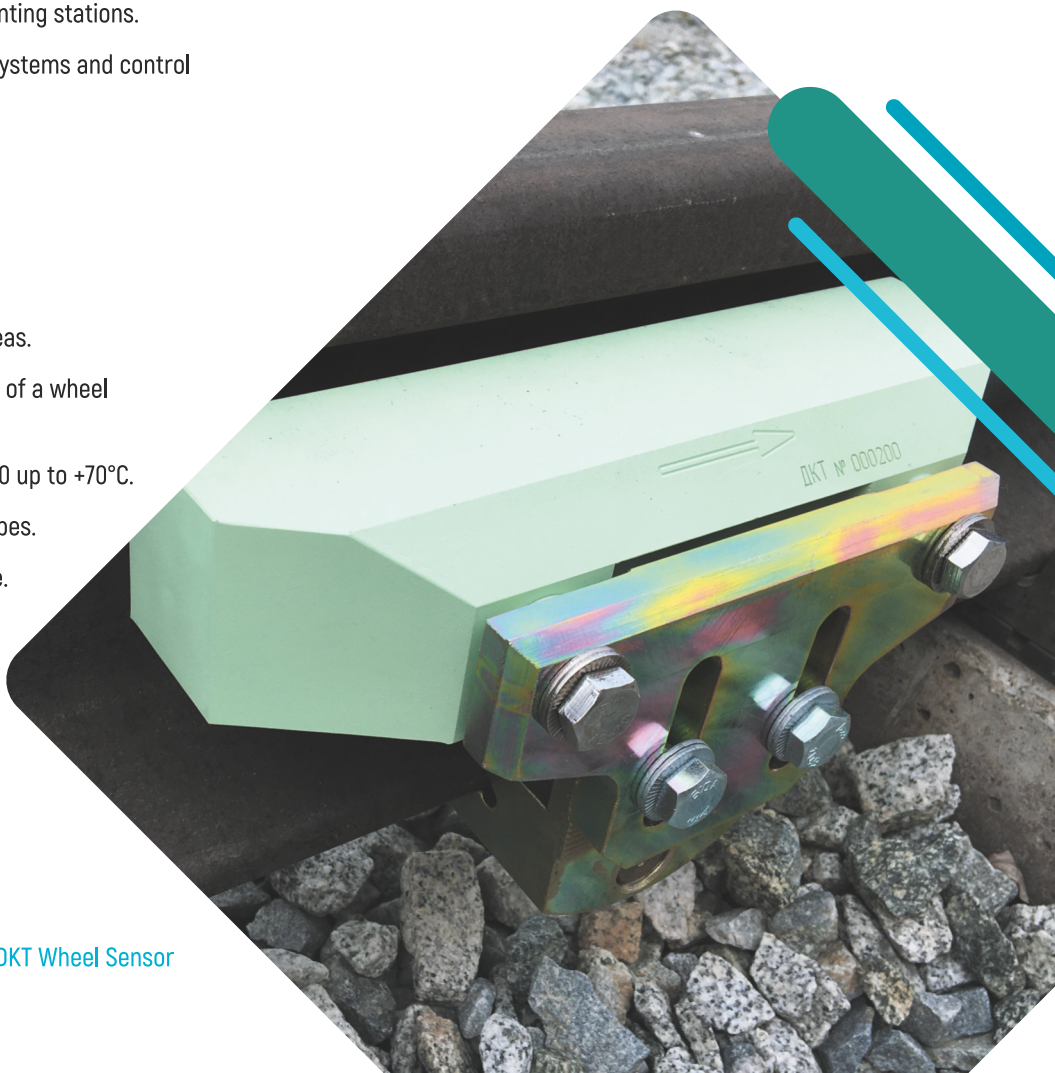
Detects wheel presence within the sensing area, transmits signal on wheel presence and functionality check data to the upper-level system.

AREAS OF APPLICATION

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

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

POTENTIAL-FREE INTERFACE

DKL RAIL CONTACT SENSOR

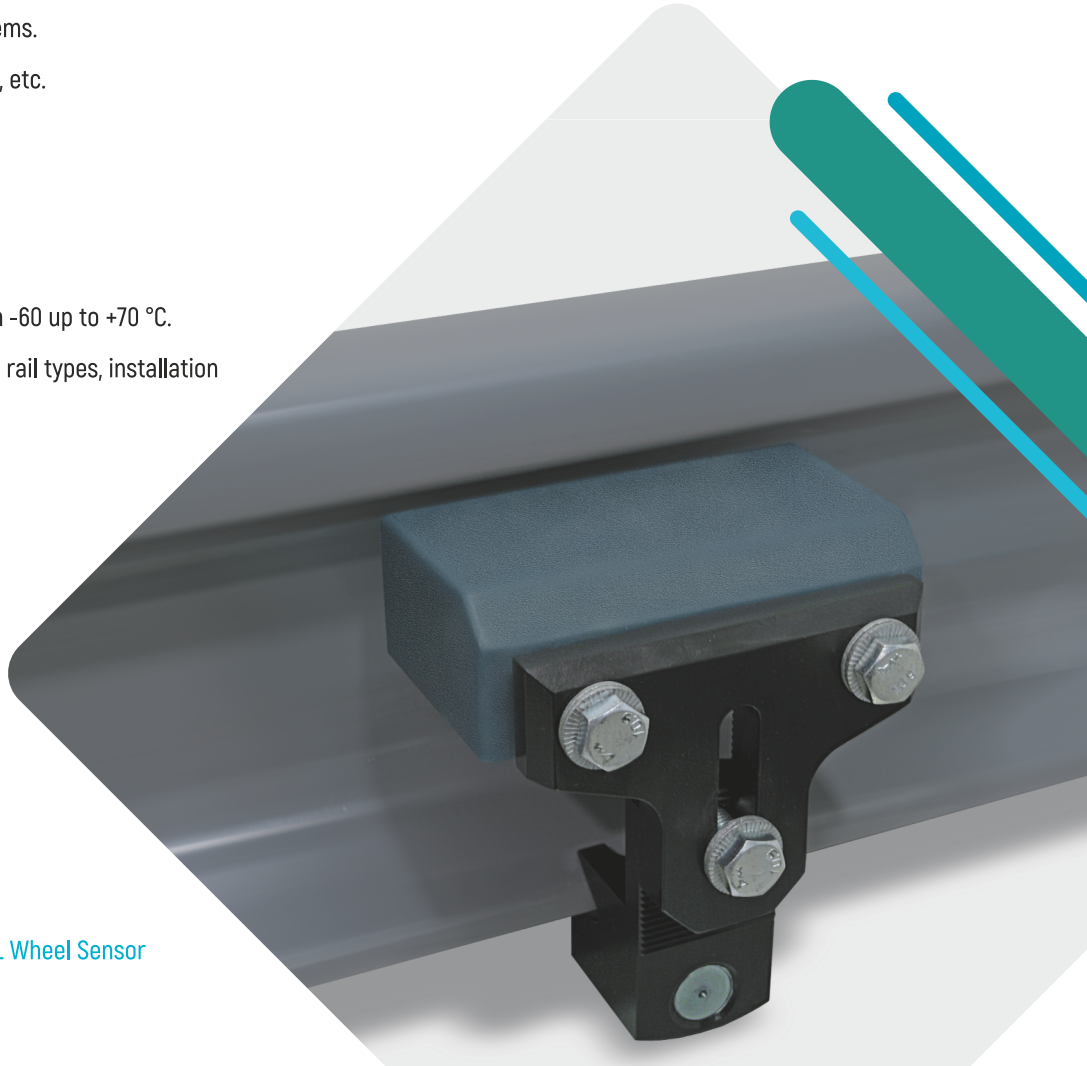
Detects train movement. Suitable for mobile solutions, lightweight and compact sensor.

AREAS OF APPLICATION

- Warning of track maintenance personnel about incoming trains.
- Pedestrian-crossing warning systems.
- Precise wheel positioning systems, etc.

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.



DKL Wheel Sensor

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.

ESSO-ILS Indoor equipment

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