



BUKS NO-CONTACT DERAILMENT CONTROL DEVICE

BUKS is a trackside no-contact indestructible derailment control system with extended functionality. The system is related to automatic control of rolling stock condition.

EQUIPMENT

Outdoor units:

- DKS Derailment Detector generates signals of car passing and derailment;
- BOS Signal Processing Unit detects clearance violation, identifies derailment side and car number as well as direction and train speed. BOS ensures self-diagnostic and diagnostic of DKS, sends data to upper-level systems.



BOS Signal Processing Unit

Indoor units:

- BI Interfacing Unit provides connection with electronic signalling systems via digital and relay interfaces, ensures BI diagnostic and power supply of BOS.



BI Interfacing Unit



TECHNICAL DATA

- cable length between DKS and BOS: 3 m;
- BUKS power supply: - 24 V by station in case of centralized power supply, local power supply - 12 V;
- interface: EIA-485 serial interface, relay interface ensured by KVS type relay;
- two-wire line connection of trackside devices with indoor equipment;
- power consumption: max. 10W.



DKS Derailment Detector. Side view



DKS Derailment Detector. Top view

In normal mode BUKS registers train car number and direction of train movement. Data are displayed by BI indicators and sent to upper-level system. In case of lower clearance violation, it generates data on derailment, car number and side of derailment. These data are transmitted to upper-level system and displayed by BI indicators. The 1N-1350 type KVS relay is also activated. Such status is held for 10-20 s required for reliable detection of lower clearance violation by signalling systems. After 10-20 s BUKS is automatically recovered and is capable to detect lower clearance violation.