



Research&Development Company
PROMELECTRONICA



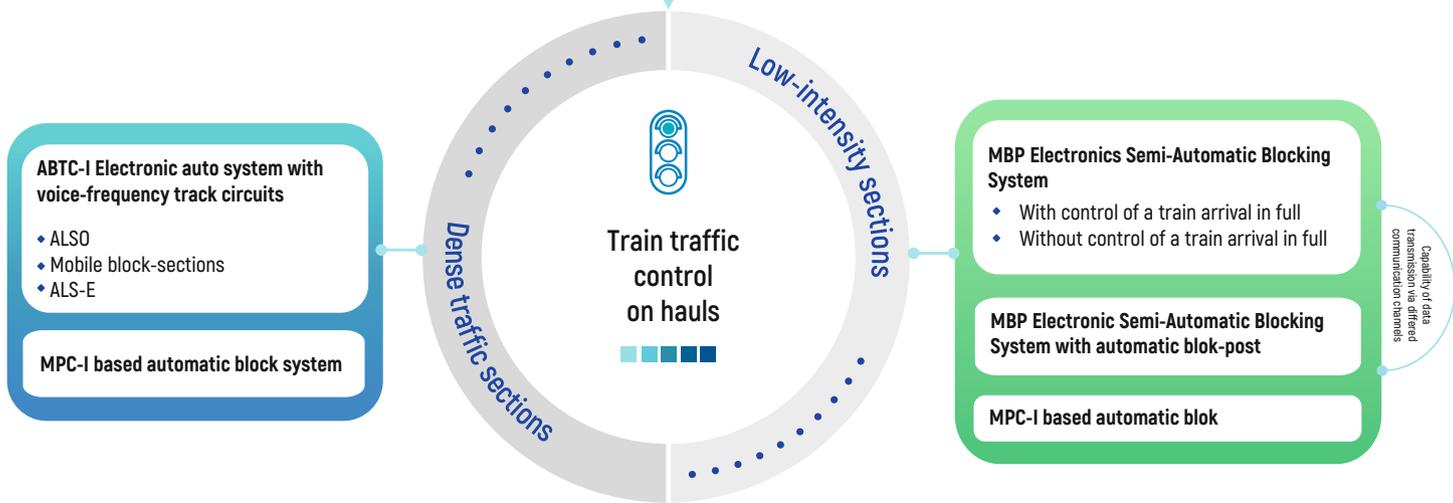
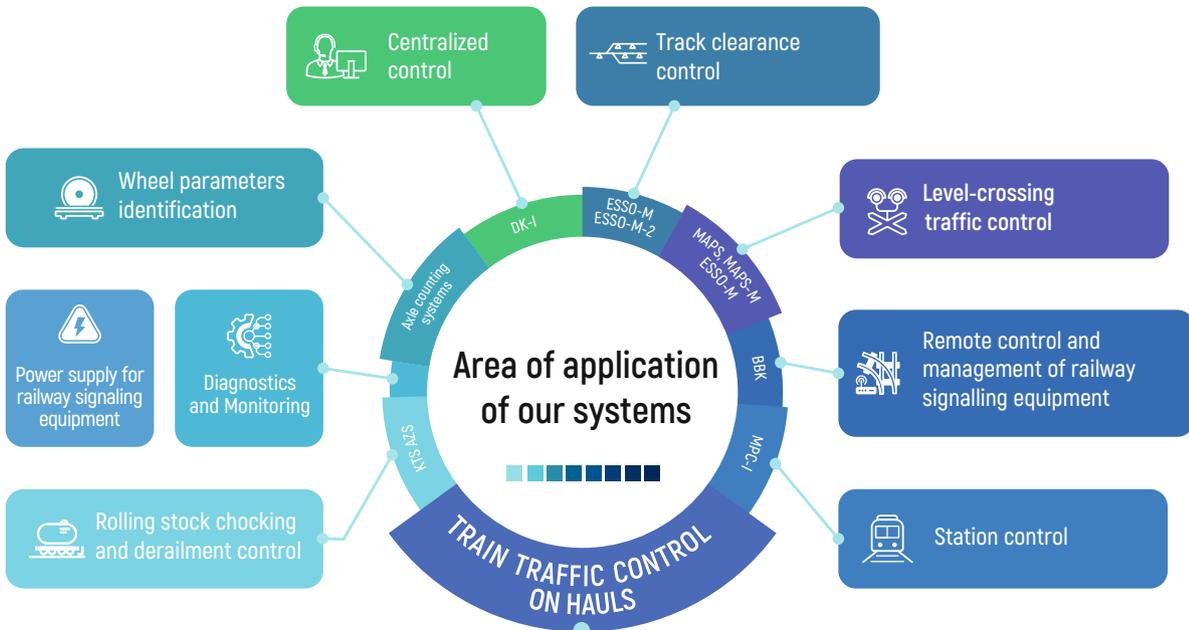
**Train traffic
control on
hauls**

ABTC-I Electronic auto block
system with voice-frequency
track circuits

MPB Electronic
Semi-automatic
Block System



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npcprom.ru



ABTC-I ELECTRONIC AUTO BLOCK SYSTEM WITH VOICE-FREQUENCY TRACK CIRCUITS

- ◆ ABTC-I is designed for train spacing and ensuring train traffic safety at any type of sections, including high-speed ones, with any type of traction on single, double and multitrack railways.
- ◆ The system is based on voice-frequency track circuits without insulating joints. Each of adjacent stations is fitted with ABTC-I subset that manages its part of the line.
- ◆ Indoor equipment can be housed both in a stationary building or MKM Transportable Module.



ALSN/ALS-EN
CODING

SCALABLE DEPARTURE
SECTIONS

MOBILE BLOCK
SECTIONS

TRACK CIRCUIT LENGTH
UP TO 800 M

RAILWAY HAUL LENGTH
WITHOUT CONCENTRATION POINTS

UP TO 30 KM

APPLICATIONS

- ◆ Increasing throughput of hauls.
- ◆ Reduction of capital and running costs.
- ◆ Improvement of control efficiency and personnel work environment.

RELIABILITY AND SAFETY

Increased resistance to impulse, commutation and thunderstorm overvoltages

Confirmed cybersecurity

FSTEK Certificate for protection against undeclared capabilities and unauthorized access

USER ADVANTAGES



Fully non-relay system.



In-built diagnostic and monitoring system, continuous event logging.



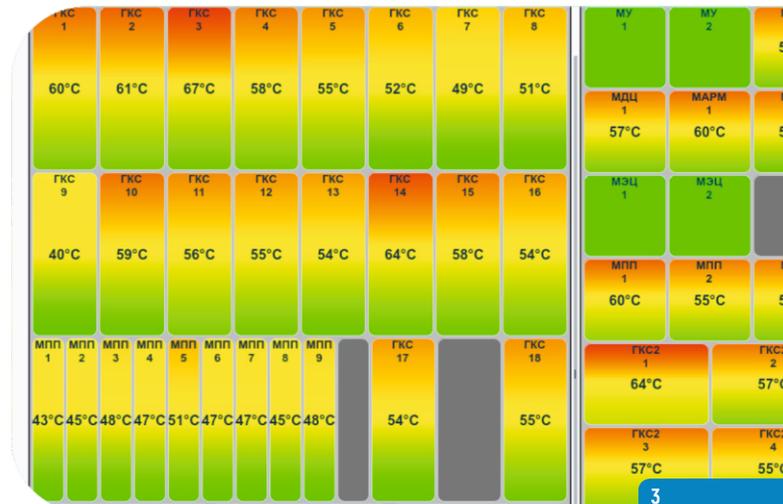
Integration with MPC-I Interlocking via digital interface.



Low maintenance.



Power efficient equipment.



REDUCTION OF RUNNING COSTS

QUALITY OF REALS

up to 90%

EQUIPMENT VOLUME

by 3 times

SIGNALLING CABLE
EXPENDETURE ON HAUL

up to 30%

AVERAGE COST FOR 1 KM BY
1,5-5 TIMES

*in comparison with other automatic block systems

MPB SEMI-AUTOMATIC BLOCK SYSTEM

- ◆ MPB is designed for train spacing on lines with low traffic intensity.
- ◆ MPB can transmit data both through physical communication lines and digital systems, such as voice-frequency channel multiplexing equipment, fiber-optic lines and radio channels.
- ◆ The system is compact and can be housed in a stationary building on a relay rack or MKM equipment module.



IMPLEMENTED ON
>120 HAULS

IMPLEMENTED IN
7 COUNTRIES

CAPABILITY TO
ORGANIZE AUTOMATIC
BLOCK POST

OPERATING TEMPERATURE
**RANGE FROM
-60 UP TO +85°C**

APPLICATIONS

- ◆ Improvement of train traffic safety on low-traffic lines.
- ◆ Increasing of line throughput.
- ◆ Reduction of running costs due to decreased amount of relay equipment.
- ◆ Improvement of equipment reliability due to automatic switching to redundant communication channel.
- ◆ Switching to modern communication means on sections equipped with semiautomatic block systems (transition from aerial communication lines).

RELIABILITY AND SAFETY

Recommended for application on
the **Russian Railways network**

Automated communication
channel redundancy

Award of the Russian Railways
for the best quality of complex
technical equipment

USER ADVANTAGES



Operation without adjustments.



Improvement of work environment due to logging of all personnel actions and command automation.

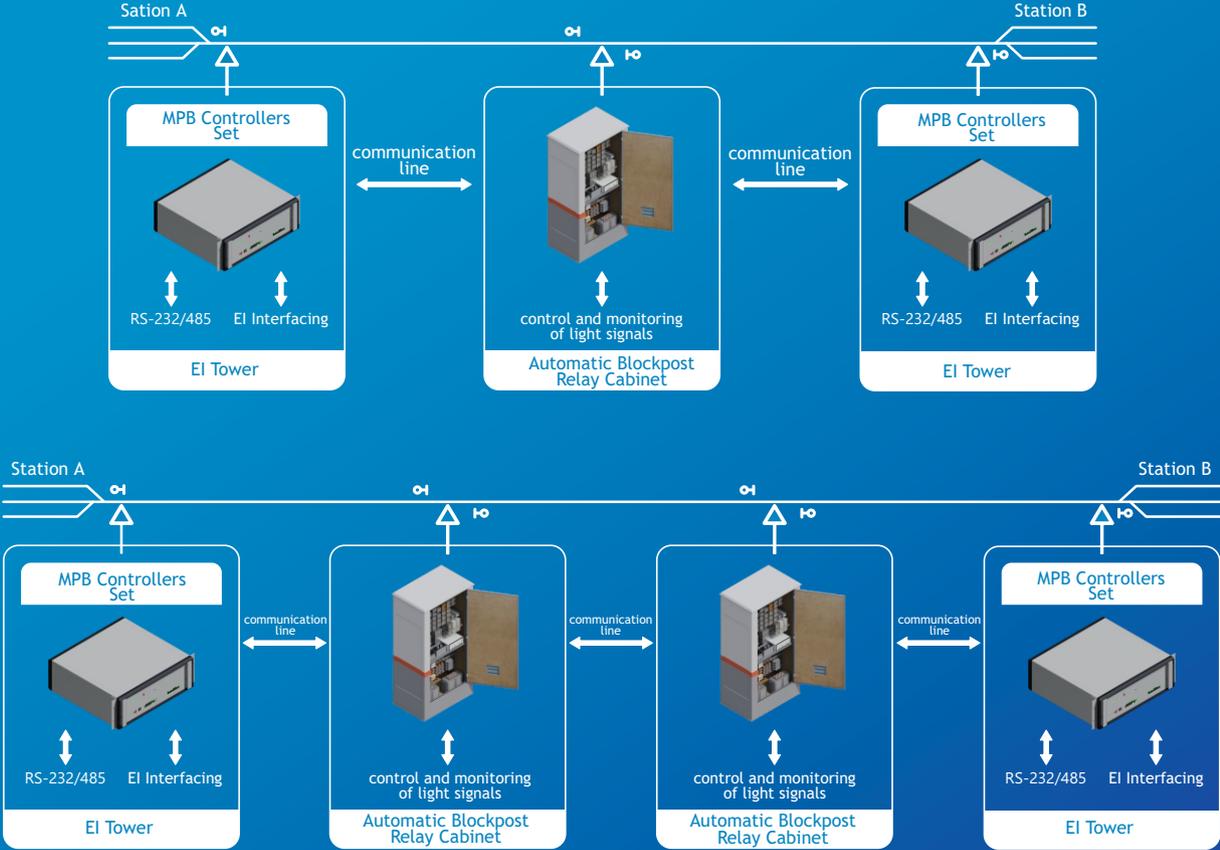


In-built diagnostics, event logging.



ULIS MPB Lab Set is available for personnel training.

MPB ARCHITECTURE



MPB COST EFFICIENCY

REDUCTION OF RELAY QUANTITY

**INCREASED SERVICEABILITY
AND DECREASED REPAIR COSTS**

POWER COST REDUCTION

TRANSFER TO CTC

**TRANSFER TO DIGITAL
COMMUNICATION LINES**

**YEARLY ECONOMIC BENEFIT
FROM INVESTMENT COSTS**

≈20%



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Watch the video about
solutions for railway hauls



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