AT-SIGNAL

ELECTRONIC AXLE COUNTING SYSTEM «SIGNAL»
SYSTEM SP-8

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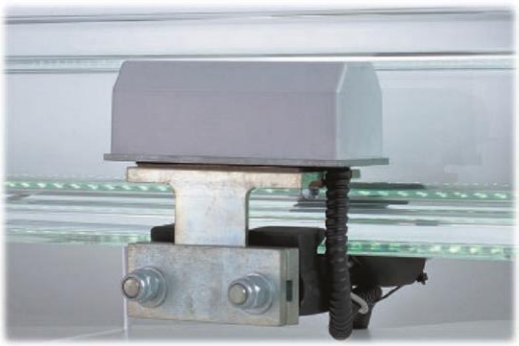

MACS «SIGNAL»

Electronic axle counting system SP-8

It is designed to control the occupancy / non-occupancy of areas using the axle counting method.

The electronic axle counting system "SIGNAL" registers the passage of wheel pairs at a speed of train movement up to 120 km / h and is capable to work with any traction type and any ballast state.

The system can be implemented on existing, newly built or modernized track sections where the rails R50, R65 or R75 are placed.

System SP-8 allows to:

- ✓ monitor up to 16 rail sensors
- ✓ switch on up to 8 track relays
- ✓ use an existing copper or optical cable as a communication line

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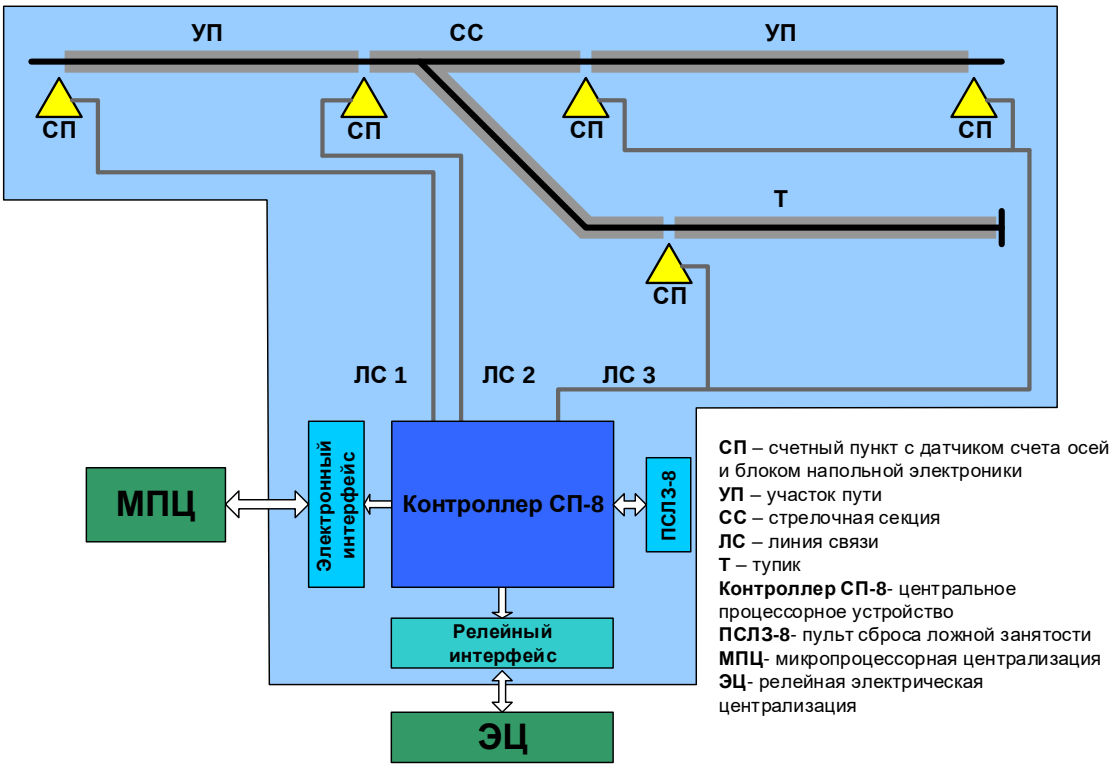
SYSTEM SP-8



SP-8 System architecture

The main functions of MACS «SIGNAL» type SP-8:

- ✓ Counting the number of axles and determining the direction of the train
- ✓ Collection and transmission of information from counting points
- ✓ Formation of a data array on the number of axles counted, non-occupancy/ occupancy of sections and the direction of movement of the train
- ✓ Data processing and transmission to the relay EI or CBI system
- ✓ Control of track relays and indication of the sections condition on the control panel (in case of connection with the EI system)
- ✓ Reset of area fault occupancy
- ✓ Monitoring the system components condition with display of control and diagnostic information on the working place

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SYSTEM SP-8

The main unit of the axle counting system.
Counting controller (SP-8) is designed to collect and process information coming from rail sensors, as well as generate data on the state of controlled sections.

SP-8 hardware features:

- ✓ Possibility of linking both via relay-contact and digital interface
- ✓ Continuous monitoring and diagnostics of equipment faults of counting points, software and hardware of the system
- ✓ Surge protection devices

Counting controller SP-8

Power supply	100-240±10% V
Number of sensors, max	16
Number of switched relays, max	8
Rail-clamp type	DIN rail
Transmission speed via RS-485	9,6; 19,2 kBit/s
Transmission distance	20 km
Temperature	-25…+60 °C
Dimensions (Width, Height, Depth)	150x99x85 mm

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SYSTEM SP-8

Microprocessor controller **MK-SP8** is designed to count the number of axles passing over the rail sensor (taking into account the direction of movement) and transmission of information about their number to the control equipment.

Functions:

- ✓ Converting the analog signal of the axle counter sensor to digital
- ✓ Determination of speed and direction of movement, the number of passed axles
- ✓ Monitoring and diagnostics of the axle counter, self-diagnostics
- ✓ Data transfer to the counting controller

Microprocessor controller MK-SP8

Power supply	15-54 V
Cable type (copper, optic)	SBZPU, ETEH-KMIEKB, OKLB
IP Protection class	IP31
Rail-clamp type	DIN rail
Transmission speed via RS-485	9,6-96,2 kbit/s
Interface	RS-232, RS-422, RS-485
Transmission distance	20 km
Temperature	-60…+85°C (UHL2)
Dimensions (Width, Height, Depth)	105x99x114,5 mm

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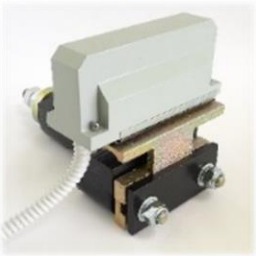
SYSTEM SP-8



The wheel passage sensor of the **RD-03-65** series is designed to record the moment of passage of the wheel axis of a rolling unit of a rail vehicle.

Power supply DC	18 В ±10%
Rail type	R65, R50, R75
IP Protection class	IP67
Rail-clamp type	UK-RD
Speed	0-250 km/h
Weight, max	2 kg
Temperature	-60…+85°C (UHL1)
Dimensions (Width, Height, Length)	182x110x65 mm

Sensor attachment unit **UK-RD** is designed for attaching the axle counting sensor to different types of rails.

Material	Steel
Rail type	R65, R50, R75
Coating	Zinc+ polymer paint
Rail-clamp type	To the rail foot, no drilling
Weight, max	7kg
Dimensions (Width, Height, Length)	318x56x130 mm

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