



# LINE SIGNALLING SYSTEM AHP-03

- Line signalling system of the third category
- Designed for line speed up to 100 km/hour
- Check of the open line section by a single axel counter
- Distance between stations up to 20km (permitted cable loop resistance up to 1000Ω)
- Compatibility with any type of the station interlocking system
- Compatibility with any type of the level crossing system

### General Description

Line Signalling System AHP- 03 is the signalling system of the 3rd category where the axel counters are exclusively used for a detection of track section occupancy.

AHP-03 is the signalling system with relay logic circuits and the relay interface to wayside equipment and other cooperating systems.

AHP-03 has been designed for lines with the line speed up to 100 km/hour and can also be used in open line sections subdivided to the line sections by block sectional signals.

### Basic Technical Description

The concept of AHP-03 safety is based on the application of vital relays of N type according to UIC classification.

The concept of computer control is solved according to Basic Technical Requirements for the Unified Control Place (JOP).

AHP-03 consists of the following parts:

Commanding part has always been a part of the Unified Control Place

of an adjacent station interlocking. It can be implemented either by manual elements (buttons, bulbs) or it can be a part of JOP (Unified Control Place). Vital commands must be adopted only for cancellation of block condition.

Relay part includes logic circuits and interfaces to individual wayside equipment (e.g. electric locks) and to cooperating station interlocking systems. These interfaces can be controlled either by relay circuits or directly by vital computer part.

Wayside part uses means for:

- Signalling - AŽD light signals
- Safeguarding points and derailleurs - electric locks in combination with points and centralized locks
- Detection of track section occupancy - exclusively for axel counters

As a priority the indoor part of AHP- 03 securing lines related to railway stations with track branching is installed into the interlocking room of respective station. On the line it is installed in the prefabricated shed, cabinets or other suitable objects.



AHP-03 equipment complies with ČSN EN 50 125-3 requirements for installation inside the buildings without the climatic regulation.

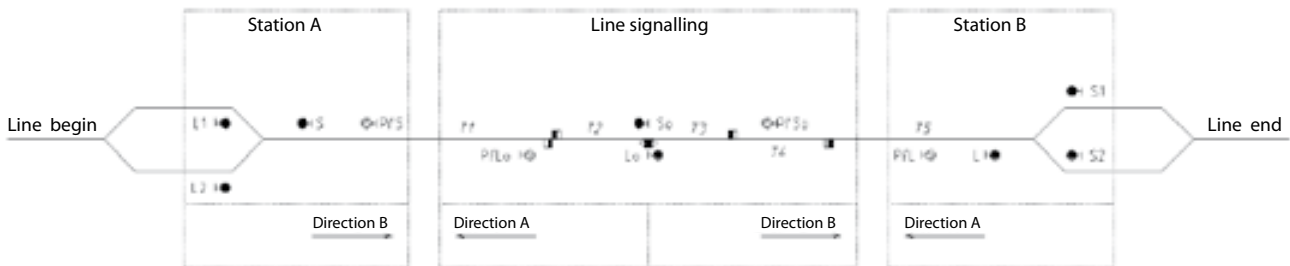


### Basic Technical Parameters

Uninterrupted power supply	24V, +33/-20 %
Uninterrupted power supply	48 V, ± 20 %
Temperature range	- 25 °C to + 70 °C
Humidity	up to 80 %
Service life	identical with service life of NMŠ relays



AHP-03 block diagram for the line section without line signalling



AHP-03 block diagram for the line section with line signalling