



Microprocessor pedestrian crossing system (ASP)

MICROPROCESSOR PEDESTRIAN CROSSING SYSTEM ASP**Technical solution with high level efficiency**

The microprocessor pedestrian crossing system can significantly increase the level of safety when people cross railway tracks in station zones and on the level-crossings. The system includes a control cabinet with an integrated axle counting system.

Microprocessor controller **MC ASP** performs the following functions:

- ❑ Collect data from the controlled objects - contacts, relays, operator panel, wheel sensors etc
- ❑ Execute safe ASP logic algorithm
- ❑ Control the status of ASP sections occupancy by using wheel sensors (track circuits)
- ❑ Send the commands via interface devices to the controlled objects (signals, bells/acoustic devices)
- ❑ Send the status to the CTC (TMS), CBI system via digital and/or analog interface
- ❑ Performs diagnostics of all functional blocks of the system and self-diagnostics





MICROPROCESSOR PEDESTRIAN CROSSING SYSTEM **ASP**

Advantages of the solution:

- ❑ Based on serial programmable controllers
- ❑ Modular design
- ❑ Software according to the standard IEC 61131
- ❑ Industrial communication protocols
- ❑ Flexible architecture
- ❑ Advanced diagnostics
- ❑ Low operating and maintenance costs

MC-ASP system controller, built on off-the-shelf products (COTS), which ensures high economic efficiency of the system.

The functional safety of the **MC-ASP** controller is provided by processing of information in two independent channels with diversified software.

ASP power supply system is equipped with overvoltage protection and ensures uninterrupted operation for at least 4 hours in autonomous mode.

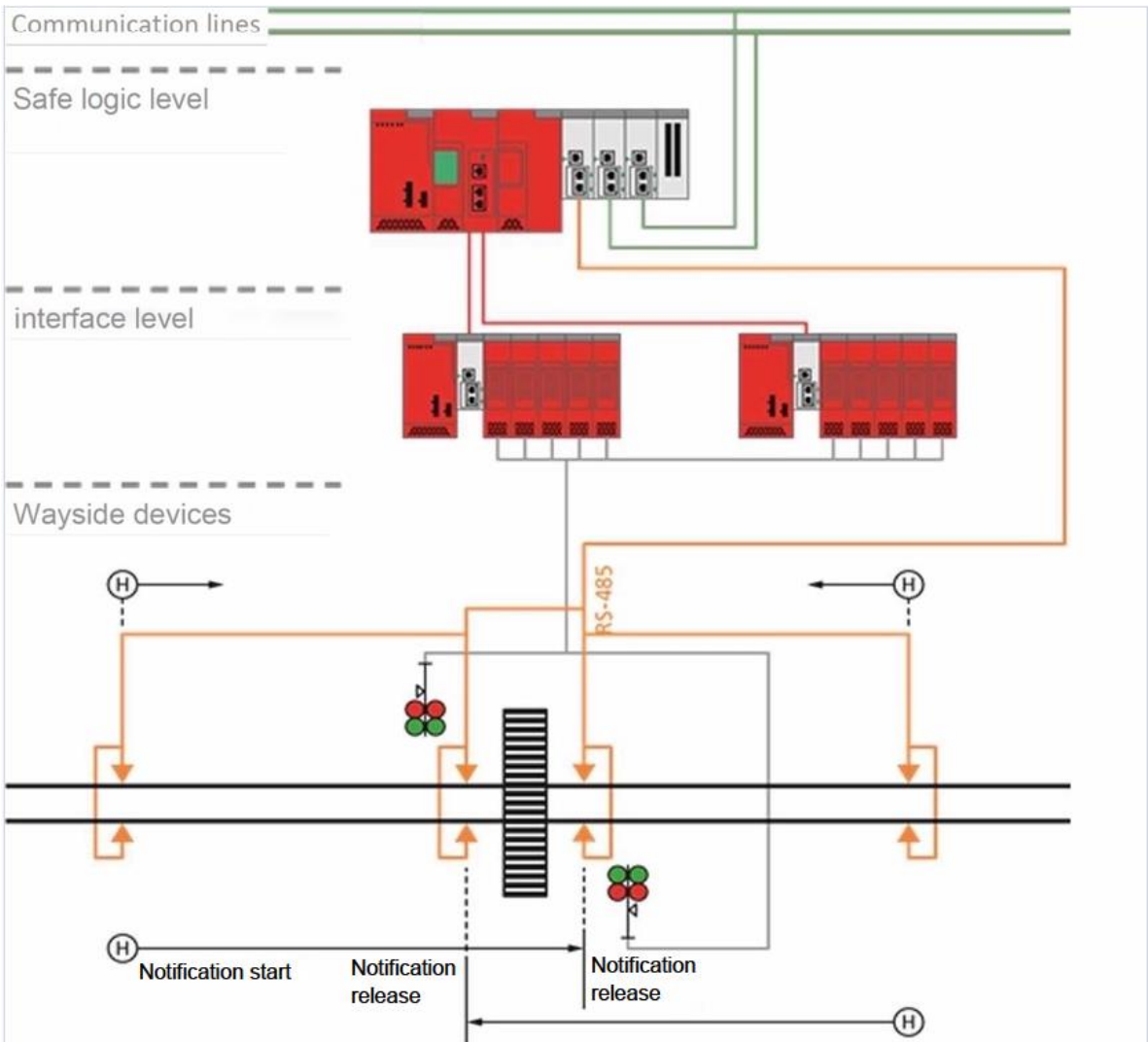
Interface between **ASP** system and other systems is providing via relay-based or digital interface.

Information exchange between **ASP** system and CTC/TMS systems is possible via fiber-optic or copper cable line.

The system has diagnostic panel (HMI panel) or as an option an automated workstation AWP ASP can be used.

Diagnostic system allows operational staff to control the parameters of all system components and carry out predictive system diagnostics.



MICROPROCESSOR PEDESTRIAN CROSSING SYSTEM ASP

MICROPROCESSOR PEDESTRIAN CROSSING SYSTEM ASP ARCHITECTURE


MICROPROCESSOR PEDESTRIAN CROSSING SYSTEM ASP**Functional flexibility**

The start of the notification in the **ASP** system can be given:

- ❑ by the Relay-based interlocking or Compute-based interlocking on the station
- ❑ by the train traffic control system
- ❑ by the integrated system based on axle counters
- ❑ by the track circuits
- ❑ by the Relay-based or Compute-based integrated open-line interlocking with the possibility to allocate each track separately

The basic ASP system provides modular device configuration:

- ❑ Number of the axle counter sensors - 4 per track
- ❑ Number of the pedestrian traffic lights with acoustic devices – 2
- ❑ The number of the interfaces with the automated control system (ASUDP) - 1

