LEVEL CROSSING PROTECTION SYSTEM

Level crossing protection system RLC23 is the ideal solution for installation on the existing unprotected or future level crossings on the line with or without any signalling infrastructure; as well as an easy replacement of existing old LC protection systems. Simple configuration of generic RLC23 system is achieved by using PC / Windows configuration wizard. All types of road signals, barriers / half-barriers and train driver's indication signals can be used according to the local national regulations.

Interface with any type of station interlocking system (relay or microprocessor based) is provided in the station, on the remote control unit. The system is certified for SIL4, as well as tested according to EN 50125-3 and 50121-4 (EMC), by independent safety assessor TÜV Rheinland.

Company ALTPRO was established in 1994 and has over 20 years of experience in research, development and production of safety-signalling equipment for rolling stock and infrastructure. Based on the company’s “know-how” ALTPRO products have been fully developed and produced in Croatia and have proved their competitiveness on the global market. With its complete safety-signalling product range for rolling stock and infrastructure, ALTPRO is one of the few producers of such equipment in the world. Through a net of distributors and representatives, ALTPRO products are present on the markets of more than 45 countries on 6 continents. ALTPRO has developed and is currently manufacturing 900 different systems and devices - all its safety products have been certified according to EU standards for SIL4 by the independent assessment bodies such as TÜV Rheinland. Since the very beginning ALTPRO has invested in its most valuable resources - its employees, and today it employs more than 110 experts in the fields of research, development, engineering, production and maintenance.

ABOUT US

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SIGNALLING AND SAFETY SYSTEMS FOR RAILWAY INFRASTRUCTURE
TRAIN DETECTION
Train detection through wheel sensor signals is the safest technology of railway vehicle detection. Depending on application and project, it is possible to use two types of devices for train detection:

- **train detection devices**, which detect the train presence over the counting point i.e. rail wheel sensor (Train Detection System TDR14, Train Detector UTR / ITR).
- **axle counter**, which acquires and stores information about the number of axles that have passed over the counting point, and displays the information about the axle number on each section (Axle Counter BO23). Axle Counter BO23 and Train Detection System TDR14 are certified for SIL4 by independent safety assessor TÜV Rheinland.

**LIGHT RAIL APPLICATION**
Specific conditions of urban rail require specific products. Basic application of Axle Counter BO23-MT is for LRT section occupancy control (Metro, Tram, Monorail, APM) for both block section and station section occupancy control with no trackside electronics. BO23-MT is compatible with standard Rail wheel Sensor ZK24-2 and with ZK24-M series for rubber-tyred metro, monorail and APM vehicles. Sensor installation box SK24-2 for sensor installations in embedded tracks provides mechanical protection for up to 20 tons.
AUTOMATIC TRAIN PROTECTION SYSTEM

**AUTOSTOP** automatic train protection system based on **INDUSI (PZB)** principle is designed in order to increase the safety of railway traffic. If the driver doesn’t comply with safety regulations, the system activates brakes (initiates automatic braking).

Automatic train protection system consists of **central device RAS 8385**, **locomotive and track balises** (magnets) and signalling and operating elements located in the locomotive cabin.

Track and locomotive balises are certified in TÜV Rheinland according to 50121-3, 50121-4 and 50125-3. RAS8385 is tested according to EN50155, EN 50121-3 and EN 61373.

**DEAD MAN’S SYSTEM (SIFA)**

The dead man’s control system is designed for all kinds of rail vehicles and consists of **control unit UDB1**, **foot switch UP1/UP1-D** and **three-tone sound indicator ZS24 / ZS72 / ZS110**. The function of the system is to control the alertness of the locomotive driver. In case that the driver, for whatever reason, is not alert, light and sound signals are produced and eventually the braking process is initiated. SIFA is tested according to EN50155, EN 50121-3 and EN 61373.