



Origin of your safety.



PRODUCT PORTFOLIO

ABOUT US

Company **ALTPRO** was established in 1994 and has over 20 years of experience in research, development and production of safety and signalling equipment for rolling stock and infrastructure. Based on the company's „know-how“ **ALTPRO** products have been fully developed and produced in-house and have proved their competitiveness on the global market. With its complete safety and signalling product range for rolling stock and infrastructure, **ALTPRO** is one of the few producers of such equipment in the world – products can be seen in operation on railways of more than 47 countries on 6 continents. All **ALTPRO** safety related products have been certified according to EU standards 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 130 experts in the fields of research, development, engineering, production and maintenance.



Testing site



Odra 2



Odra 1

SIGNALLING AND SAFETY SYSTEMS FOR RAILWAY INFRASTRUCTURE

ALTPRO has long-term experience in research, development and production of signalling equipment for railways. Results of the work are seen as the following flagship products:

- Level crossing protection system type **RLC23**
- Outdoor level crossing protection units: Road Signal **CS-LHR**, Half Barrier **PB13**, LED Driver's Indication Signal **KS11**
- **BO23** and **BO23-MT** Axle Counter (**BO23** series axle counting)
- **ZK24-2** Wheel Sensor and **ZK24-M** series wheel sensors
- Train Detection Systems **UTR/ITR** and **TDR14**

All signalling products from **ALTPRO** are tested and certified in independent assessment bodies. Based on the feedback **ALTPRO** values and gathers from its satisfied customers, the Company policy defined 5 key aspects of every signalling product it produces. Expected functionality, independent certification, advanced communication technologies, simple maintenance and detailed diagnostics - mix of these 5 aspects make **ALTPRO** products successful and customers satisfied.

SAFETY SYSTEMS FOR ROLLING STOCK

From its beginnings, **ALTPRO** has accumulated knowledge of railway vehicles from its region and further. As a result of that effort, **ALTPRO** of today has a variety of competences and experiences with INDUSI type ATP systems. The Company can offer a turnkey project, starting from project documentation and management, implementation of INDUSI equipment, commissioning of the vehicle and after-sales support. Flagship products in this production programme are:

- ATP system **RAS8385** based on INDUSI I60 principle
- ATP system **RAS90** based on INDUSI PZB90 principle

■ Dead man's system **SIFA**
Till today, the Company has installed over 300 ATP systems and dead man's systems. Those systems are characterized by robustness and exceptional reliability which results in low maintenance costs. ATP systems are equipped with event recorders and they are designed to be additionally equipped with dead man's system and wheel flange lubrication system. **ALTPRO** complements its ATP systems with the complete set of testing devices developed for the ease of maintenance.

QUALITY

ALTPRO is certified according to the latest ISO 9001:2015 and ISO 14001:2015 quality standards and IRIS certification process is currently

being conducted. As safety is of prime importance in **ALTPRO**, main signalling systems and safety systems for railway vehicles are SIL 4 certified. All

safety tests (SIL, EMC...) are being conducted in accredited European laboratories such as TÜV Rheinland and TÜV SÜD.



SIGNALLING AND SAFETY SYSTEMS FOR RAILWAY INFRASTRUCTURE

LEVEL CROSSING PROTECTION SYSTEM

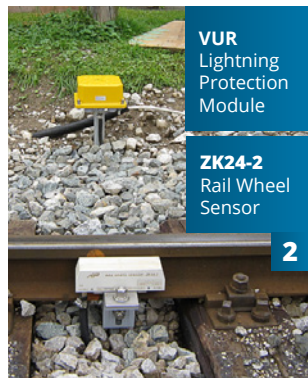
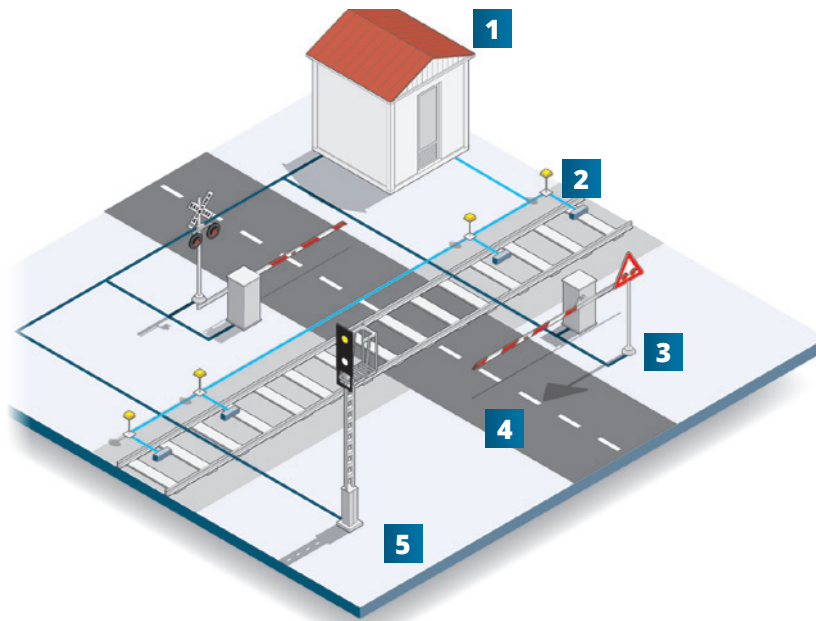
Level crossing protection system

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.



BO23 SERIES AXLE COUNTING

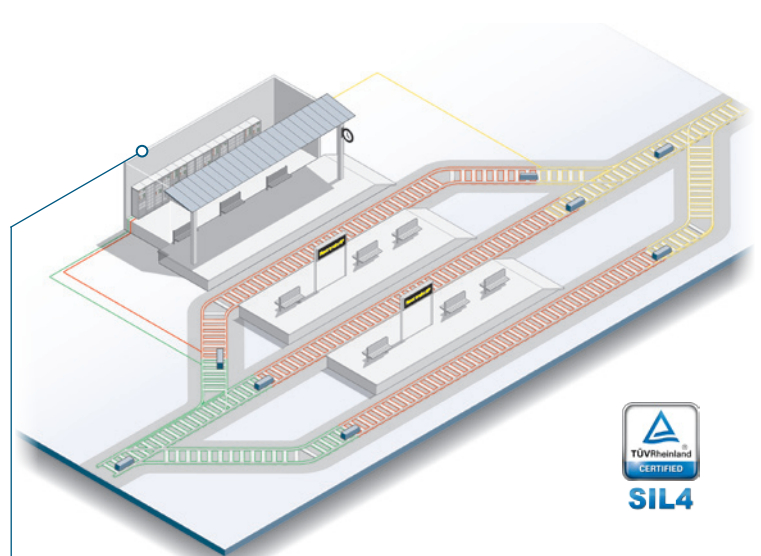
BO23 series (BO23 and BO23-MT) axle counters are well established and recognized axle counters from ALTPRO. Both axle counters are SIL4 certified and conform to all relevant norms according to CENELEC.

BO23 is usually used in pair with wheel sensor **ZK24-2** and they form a robust and reliable combination which is in use in more than 25 countries worldwide. It can be used in various applications on main lines, secondary lines, tram and LRT lines.

BO23-MT is usually used in pair with **ZK24-M sensor series** (ZK24-M, ZK24-M1 and ZK24-M3) for specific train detection purposes. It is ideally used as secondary or primary detection system on APM, rubber tyred metro, regular metro, tram, monorail and similar applications.

TRAIN DETECTION SYSTEMS TDR14 AND UTR/ITR

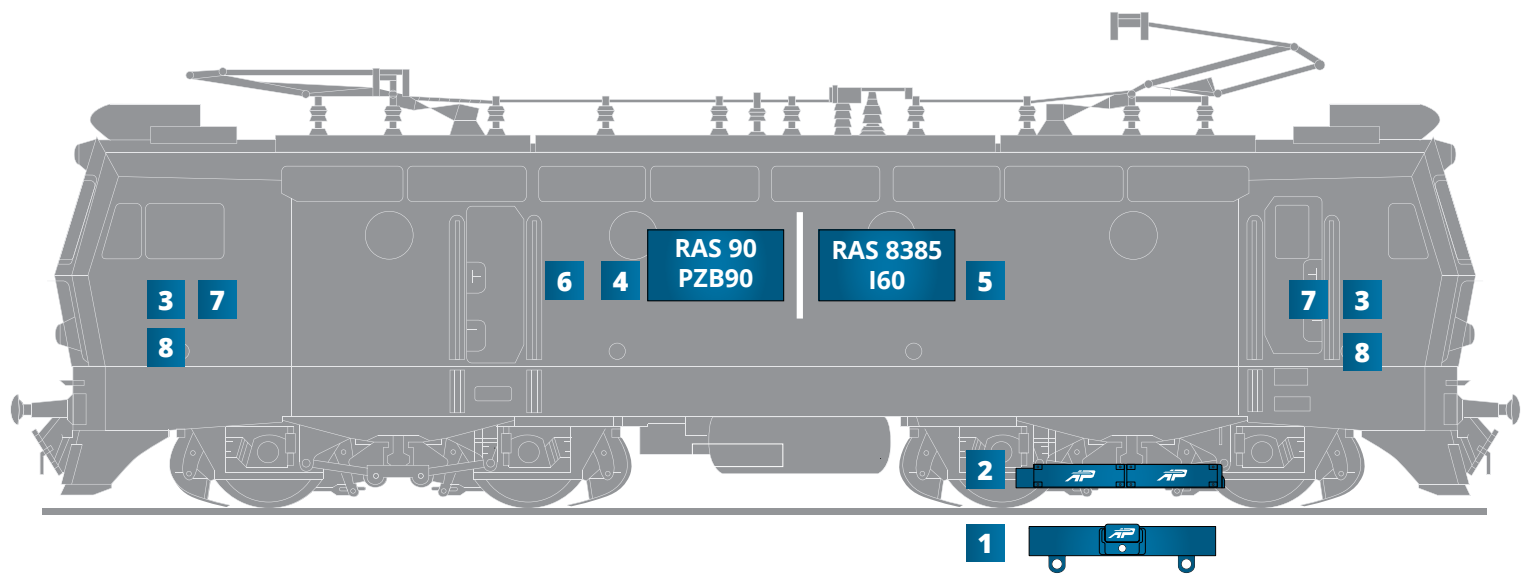
Train detection systems **TDR14** (SIL4 certified) and **UTR/ITR** are used for punctual train detection using **ZK24-2 railwheel sensor**. These train detection systems are ideally used in simple applications where they are able to provide safe and reliable information about the passage of the train. Possible applications include train detection in level crossing protection system, activation and triggering of various systems (HOT BOX, gate control, data for passenger warning) etc.



INDOOR EQUIPMENT



SAFETY SYSTEMS FOR ROLLING STOCK



AUTOMATIC TRAIN PROTECTION SYSTEM

Automatic train protection systems based on INDUSI (PZB) principle are designed in order to increase the safety of railway traffic. If the driver doesn't

comply with the safety regulations, the system activates brakes (initiates automatic braking). ALTPRO specializes in research, development and

production of INDUSI systems based on I60 and PZB90 principle. Along with the basic function of train protection, these systems offer a wide variety of

complementary systems like event recording, train driver activity recording, speed display, wheel flange lubrication, dead man's system...



RAS 90 (PZB90) system consists of central device **RAS90**, locomotive balise, track balises and signalling and operating elements located in the locomotive cabin. The system offers high level of reliability and safety while maintaining the main idea of ALTPRO INDUSI based ATP systems - simplicity, robustness and longevity.

AVAILABLE 2019

AUTOSTOP (I60) system consists of central device **RAS8385**, locomotive balise, track balises and signalling and operating elements located in the locomotive cabin. It is a simple, robust and extremely reliable system. ALTPRO can offer any service/product related to this system from project documentation all the way to system commissioning.

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.

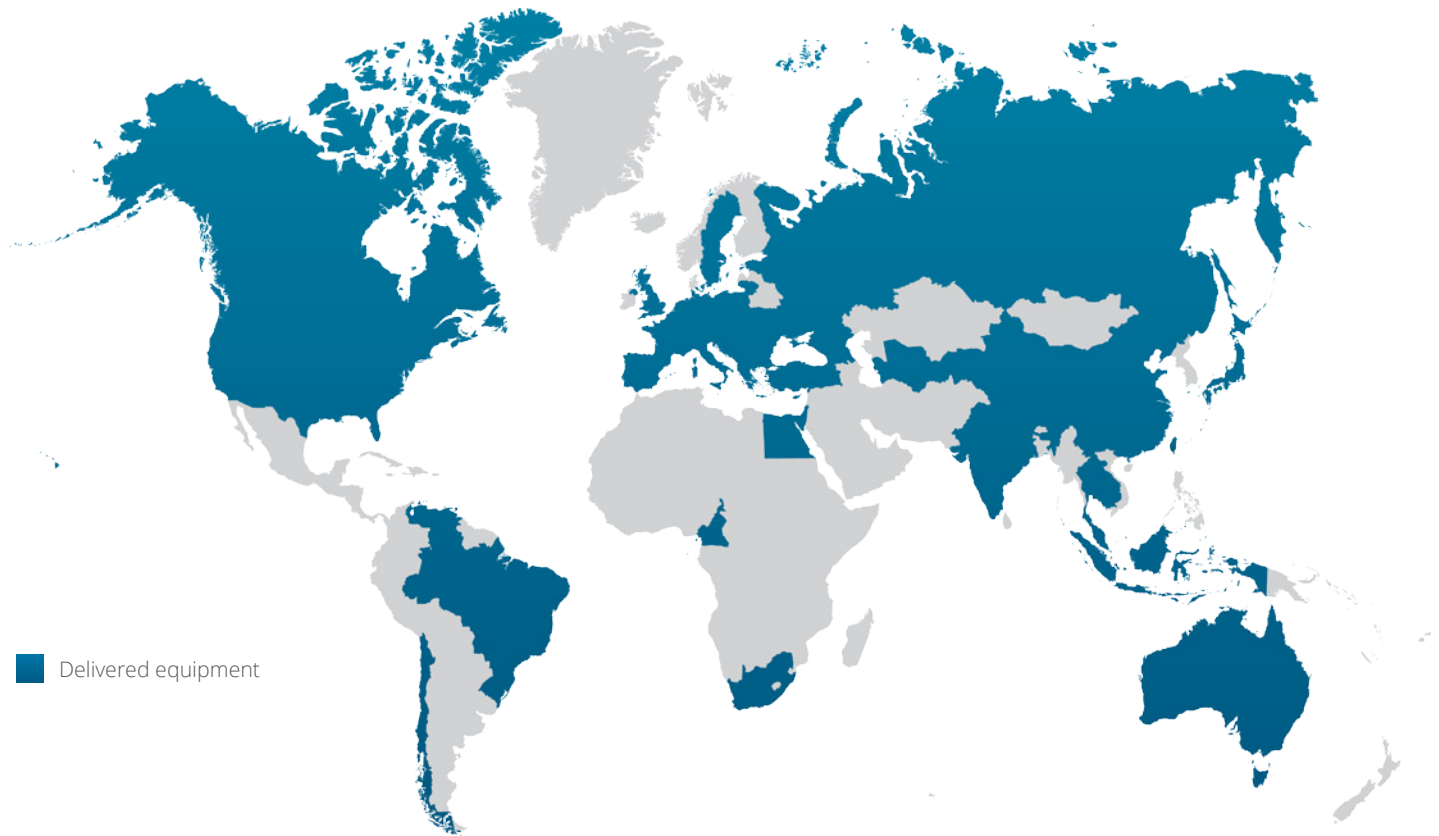
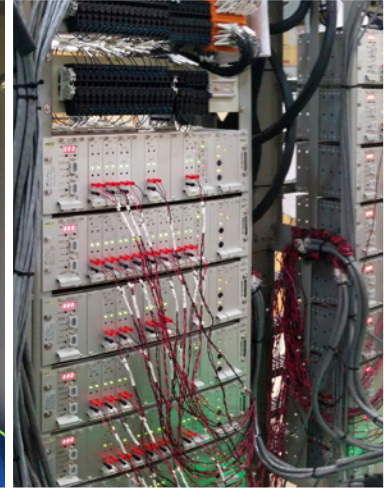
In case that the driver, for whatever reason, is not alert, light and sound signals are produced and eventually the braking process is initiated. SIFA is tested according to EN50155, EN 50121-3 and EN 61373.

UDB1
Electronic Dead Man's Control Unit

ZS
Three-tone Sound Device

UP1-D, UP1
Foot Switch

WORLDWIDE PRESENCE



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