



SIG *W*ONT

A FRAUSCHER COMPANY

CBL2010
Digital Line Block System

CBL2010: Enabling the use of modern axle counters

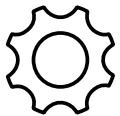
CBL2010 is the commercial name of the Computer – Digital Line Block System. The system was developed on the basis of station computer interfaces (KIS type) and computer line controllers (KSL type).

The CBL2010 system is based on the Rail-Mil components, designed to work with **Frauscher axle counters**. It can work with all types of station interlockings and level crossing protection devices.

CBL2010 USAGE

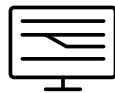
- All types of railways with any number of tracks
- Public railways (e.g. PKP PLK), non-public railways (industrial, factory) and others
- Electrified and non-electrified railways, suburban and long-distance railways, passenger and freight traffic lines without train speed limits

CBL2010: Flexible configuration



CONFIGURATION OF CBL2010

- Single-section line block system
- Multi-section line block system (two-aspects, three-aspects or four-aspects)
- Line block system with an automatic block post



ASSURANCE OF AUTOMATIC BLOCK POST

- Unrestricted division of the route into block sections
- Warning shields support
- Signal repeaters support
- Interface to level crossing systems

CBL2010: Combination with axle counters

Integration with the **Frauscher Axle Counting System ACS2000** provides:

- Indication of vacancy status of block sections
- Indication of dangerous situations:
 - Simultaneous arrival from opposite sides to one block section

Additional information:

- Number of axles within a block section
- Alarm about one axle remaining within a block section
- Direction of passage over a wheel sensor



CBL2010: Design and operation

CBL2010 was designed based on general principles for **line block systems**. Stations adjacent to the route have the ability **to activate, release and change** the block system direction with full control of its state. This is visualized on monitors. The possibility of emergency change of the block system direction as well as to reset individual axle counters detecting the block section vacancy are available as well.

Before displaying a signal allowing for departure of a train, it is necessary to activate the block system direction. With the **multi-section block system**, subsequent trains may depart after the first block section is cleared by the preceding train.

Activation, release and change of the block system direction is possible when the route is clear (unoccupied) and the train route is not determined. In the event of a block system failure, especially damage to any of the block system vacancy detection circuits, the emergency change of the block system direction is possible by a special command.

As a standard **block section vacancy detection** is performed by Frauscher axle counters. Axle counters' circuits can be reset with special commands.

CBL2010: Functionality

- Block section protection by a block section signal
- Setting, change, stopping (cancellation of setting, change, stopping) of the movement direction
- Emergency change of the movement direction
- Release of the set direction
- Reset of individual sections (in case of cooperation with axle counters)
- Signal stopping and cancellation of signal stopping within the automatic block post
- Presentation of the line block system, station signals and sections states
- Presentation of the determined train outgoing route
- Cooperation with level crossing systems within an automatic block post

CBL2010: Diagnostics functions

- Continuous system diagnostics
- Events and commands recording
- System state recording
- Devices state reconstruction in the form of a movie



If you have any questions, contact:

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