

Smartlock 400

New electronic interlocking

Smartlock 400, the latest version of the Smartlock family, was designed to provide higher network availability and optimised lifecycle cost.

Alstom geographical footprint allows high reactivity and fast mobilization of our experts who work closely with our customers, supporting them reaching their business objectives.

GENERAL DESCRIPTION

Smartlock 400 is the latest version of the Smartlock family and benefits from 30 years of worldwide return on experience. Smartlock 400 is adapted to each customer specific need and configuration. It is suited for all railways topologies with a centralized or distributed architecture, for new or existing installations. Smartlock 400 offers very high operational functionality allowing safety and punctuality.

CUSTOMER BENEFITS

Direct trackside interface

Smartlock 400 novelty lies in its capability to interface directly with trackside equipment (point machines, signals...), with no need for intermediate relays. This means maximum network availability as well as minimised trackside footprint (20% less equipment) and maintenance costs.

Open and flexible system

For customers wishing to upgrade their installation, Smartlock 400 can overlay existing trackside objects without modification. It also offers the possibility to plan future evolution to respond to traffic increase for instance, with minimum installation cost. Smartlock 400 supports migration efficiently and quickly.

Seamless integration with ERTMS

Smartlock 400 integrates functions linked to the ERTMS system in order to facilitate network supervision by combining information on the status of objects on the track (point machine, signals, ...) but also on the speed of trains, their location and other information – all of it available via a single interface. This allows high efficiency, short reaction time and user-friendly management.

Optimised maintenance

Smartlock 400 is supported by an efficient remote diagnostic system, available on tablets. The maintainer receives directly the necessary information for maintenance actions: where the object is precisely located, the part or board which needs replacing ...and all via a user-friendly interface to allow high system availability.

HIGHLIGHTS

- Managing up to **1400 routes**
- Smartlock family: **30 years** return on experience, supervising **32 country networks** with different signalling principles each time
- Implementation in Italy, Denmark, Turkey, Romania



MAJOR SMARTLOCK REFERENCES WORLDWIDE :



SIGNALLING FUNCTIONS

- Route setting and signal clearing in automatic mode
- Automatic switch control
- Automatic Line Block direction setting
- Automatic signal clearing, after route locking and verification of all safety requirements (e.g. conflicting routes)
- Automatic downgrading of signal aspect in case of lamps failure
- Progressive route release (train operated route release)
- Management of track crossing and dual gauge
- Management of level crossings - Forced control of the level-crossing to close
- Management of Line Block -Forced reversing of the Line Block direction
- Centralized automatic block management with or without ATP
- Management of point machines (AC-DC)
- Manual route locking and unlocking - Forced (delayed) route unlocking
- Signal management (lamp and LED signals)
- Forced setting of the signal to "stop"
- Management of "calling on" signal
- Individual control of the turnout/derailer
- Juridical Recorder

COMPLIANCE WITH STANDARDS

- Environment - EN 50125
- EMC/EMI - EN 50121
- Electrical - EN 50124
- RAMS - EN 50126
- Sys/HW - EN 50129
- SW - EN 50128
- Safe communications - EN 50159
- Safety Integrity Level - SIL4

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