Switchguard SURELOCK

Points drive system
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Switchguard SURELOCK is an efficient points drive system providing exceptional reliability and ease of maintenance.

The Switchguard SURELOCK point drive system is suitable for use on both metro and mainline infrastructure and can be incorporated into 4 ft or 6 ft applications. The system is based upon proven technology and uses modular construction principles through out the design.

Electrical drive and detection settings are located in the casing of the machine. Tail cables are connected using a plug coupler system, which may be locked by means of a padlock. Ground connections and stretcher bars can be installed either above the bearers, providing Switchguard SURELOCK comprises of a cast iron base module with a lockable flood resistant moulded glass reinforced cover, containing motor, drive, escapement and control modules. Ground connection equipment (drive rod, lock rod, detection rods and stretchers) can be fully adjusted to provide the required movement to suit individual installations.

Throughout Switchguard SURELOCK’s design, the emphasis has been on simplicity and strength.
A universal machine
Switchguard SURELOCK is suitable for all current switch types and for mainlines and metros, providing integrated electrical detection. Switchguard SURELOCK is suitable for bullhead, full or shallow depth and RT60 layouts. Its low profile allows it to be mounted between the running rails for metro applications as well as conventional trackside mounting.

Designed for reliability
Switchguard SURELOCK has a mean time between failures of 39 months and a mean time to repair of only 15 minutes. Throughout Switchguard SURELOCK's design, the emphasis has been on simplicity and strength. Its robust housing and lockable, flood-resistant enclosure contains four independently replaceable modules: motor, drive assembly, escapement and control. Although highly durable, the comparatively light weight of the modules means the total machine weighs only 170 kg, aiding maintenance and handling.
Simplicity and strength
The drive, lock and detection rods offer straightforward, stepless adjustment and the in-out lock mechanism is clearly visible for rapid inspection. The system has a designed-in tolerance of rail creep and vertical (switch roller) movement, while the motor allows constant brush-wear detection and has simple, reliable mechanical motor snubbing, with no need for electric clutches. Lockable, vandal-proof plugcoupled cables are used throughout. An AC-immune machine is available, incorporating a permanent magnet motor.
Switchguard SURELOCK
For metro and mainline infrastructure

Backdrives
Switchguard SURELOCK is compatible with existing conventional supplementary backdrives. Under development is an efficient linear backdrive system compatible with both 6ft and 4ft SURELOCK, incorporating switch rail detection. This will avoid the need for separate supplementary detector units and keeps all equipment on the same side of the track (6ft application). The true linear motion of the connection rodding will allow positive lateral guidance thus eliminating rod buckling.

Primary functions
Switchguard SURELOCK primary functions are:
- To switch the points between LHSC and RHSC positions on demand
- To mechanically lock the points on completion of the switching operation
- To detect points are closed and locked in correspondence

Secondary functions
Switchguard SURELOCK secondary functions are:
- Provide a safe method for hand cranking the machine during maintenance or power failure conditions
- Provide overload protection in the drive module (clutch)
- Provide snubbing of motor circuits (damper pads)
- To prevent ingress of moisture and dust
- To prevent damage occurring to the point machine in the event of flooding
- To provide attachment interfaces for a condition monitoring system
The information in this document contains general descriptions of the technical options available, which do not always have to be present in individual cases. The required features should therefore be specified in each individual case at the time of closing the contract.