



# **SUPERVISION SOFTWARE (SCADA)**

# **RAILWAY SWITCH POINT HEATING**

# **Reliable Winter Railway Traffic**

Get instant error messages about missing heating in critical switches and react in time.

#### Up to 60% Energy Saving

Heating only when needed - based on latest official meteorological institute weather reports and locale weather stations.

#### Energy management

Energy counters for every switch combined with stored weather information makes optimization easy.

#### **Reduce Maintenance Cost**

Bundle and prioritize service and maintenance calls based on on-line switch point information.

### **Save installation cost**

Use existing communication installations or wire less GPRS. No need for new wire installations.

#### 🔀 Easy adoption

Install as a Stand alone application or make it integrate with the existing Scada system or run it as a WEB application.

On-line Management and Control software to Bond all Heated Switches in a Territory Together. Valuable Information at the Fingertip of:

- Traffic Control Department.
- Maintenance Depertment.
- Technical Department.

System Blue Point is a scalable modular system ranging from small stand alone heating systems to large intelligent weather controlled solutions with scada interface and management of energy & maintenance.

"Management & Remote Control" is the scalable software package that makes System Blue Point to an energy and maintenance cost efficient switch point heating solution.

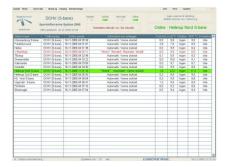
Energy saving without never compromising the track conditions for reliable train operation.

## Get full control over:

- Individual Temp. settings for every station.
- Energy counters and statistics.
- Call for maintenance.
- Read out locale weather conditions
- Force individual switches to heat
- Errors or other mall functions on-line



#### **SCREEN VIEWS**



#### **STATION OVER VIEWS**

Easy over view of all stations in a territory. Information is displayed about locale weather conditions, last update time and information about switch point heating mode is active. Stations with faults and errors changes colour and a small error message is displayed.

This screen also gives access to any of the listed stations for a closer look.



#### **SINGLE STATION - TRACK MAP**

Easy over view of a single station. The track map contains easy to see symbols regarding the switch point heating components. Data about temperature is displayed where they are measured. If an error occur the colour changes and might be flashing in the switch in question.



#### **SINGLE STATION - DATA**

Behind every station (master control cubical + slave cubicals) there is a more detailed information screen. All energy, and mode counters are displayed and light bars is showing status for every switch, weather station, master and slave cubical.

Indicators are showing which kind of error is present and in which switch.



#### **ADVANCED DATA & SETTINGS**

The advanced data & settings screen makes it possible to adjust all triggers that brings the system into the different weather modes.

These settings can be done for the entire system or individually station by station.

Individual settings will optimize the system to match different weather pattern from area to area in the same country.



#### **DATA ANALYSIS**

All data is stored in a database. The "Analysis" tap provides information about how power is distributed in the different weather modes, Historical temperature curves and event log about errors and modes.

These analysis is a great tool to fine tune the system settings for saving energy without compromising traffic interruptions.

The analysis can also show irregularities e.g. manual operation of the heat.



#### **BLUE POINT LITE SOLUTION (SINGLE USER – SINGLE STATION)**



Communication Ethernet (LAN) RS485



## Communication

On-Location-Maintenance,
Direct Ethernet Access

SWITCH POINT INSTALLATION Single station

#### **BLUE POINT TERRITORY SOLUTION (MULTI USER – MULTI STATIONS)**



Traffic Control Department Maintenance Department. Technical Department.

Communication Ethernet (LAN)

# **BLUE POINT SCADA**



Data Data

**Weather Forecast** 

Communication

Ethernet (LAN)
GPRS Wireless
PSTN Wireless
GSM Wireless





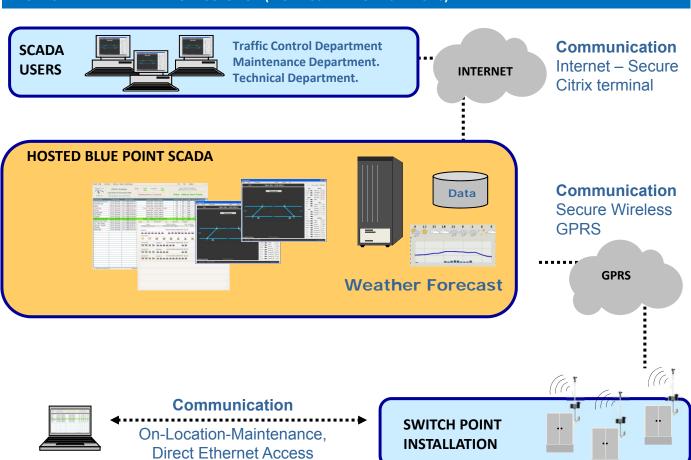
#### Communication

On-Location-Maintenance,
Direct Ethernet Access

SWITCH POINT ...

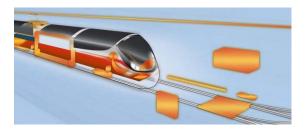


#### **BLUE POINT INTERNET TERRITORY SOLUTION (MULTI USER – MULTI STATIONS)**



#### SAN Electro Heat A/S (Member of the NIBE group)

Danish located international company offering more than 50 years of experience in development and manufacture of advanced technical electric heating solutions and components. Products are highly cost and energy optimized, and developed together with our customers. Our focus and know-how is divided into four business areas: Railway Systems, Wind Power, Process Heating and Heating Cables.



#### SAN Electro Heat - Railway (Part of NIBE Element - Railway Solutions)

Supply of complete systems, which secure optimum operation under any winter weather situations: Switch point heating, overhead wire de-icing and third rail de-icing. Our aim is to supply highly efficient systems that reduce energy consumption as well as the total cost of ownership. From heating elements through intelligent controllers to advanced server based computer monitor program. Including all necessary fittings, power transformers, weather stations etc. Rolling stock comfort heating, door step de-icing, heating of hydraulic systems, toilet/waste water systems and test load resistors.

Our design has proven its reliability through thousands of installations all over Europe.