SAN

Railway Systems

Switch Point Heating

Electrical • Intelligent • Energy Saving

SYSTEM
BLUE POINT

SYSTEM BLUE POINT

Complete energy saving

Switch Point Heating System

to secure reliable railway traffic, through switch points in severe winter weather conditions.

Railways must operate quickly, safely, punctually and economically 24-7. Interruption due to lack of performance on subsystems or components are not acceptable. The economical cost of these interruptions clearly calls for high quality reliable systems and components.

SAN Railway Systems works dedicated to provide complete systems not only components.

System BLUE POINT is a scalable system ranging from small stand-alone installations to large territory solutions.

The product range covers all necessary components from heating elements through special rail brackets to SCADA software.

- **Complete system delivery.**
- **Thousands of installations world wide.**
- **50 years of railway experience.**
- **Save energy – Fast return on investment**
- **High quality components to secure long life time and low maintenance cost.**
- **Save installation cost, compatible with most existing installations.**
- **Standard solution to be customized based on locale conditions and requirements.**

Heating Elements

No switch point heating system is better than the front-end heating element.

SAN heating elements are known for the unique chock absorbent design. The solid heating wire is wrapped with a fibreglass thread and stabilized in Magnesium oxide. Jacket of high grade stainless steel and single ended water proof connection head. A proven design to withstand the extreme railway environment.

The small physical size and the oval shape make it easy to fit even narrow places in a switch point. Can be bended on-site due to its soft flexible design

Length up to 7500 mm, power up to 1000 W/m, supply voltage from 40V to 750V, pre-bended shapes. Size 5,5 x 11mm or 5,5 x 13mm.

Standard or customized heating elements to match any locale demands.

Mounting clips and brackets for almost any rail profile available.

- Specification Sheet: SS-SBP-HEAT-ELEMENTS

Intelligent weather based heat control.

Save up to 60% energy compared to simple thermostat controlled systems. System BLUE POINT is controlling the heat based on multiple input.

- Locale weather station for air temperature, snow fall detection, wind speed and humidity.
- Cold rail temperature and hot rail temperature.
- Season / Calendar.
- Weather forecast feed from metrological organisations

Icons for all controlling modes to ease operation and overview of the system

Snow Warning
The weather forecast feed has predicted snow. Switch points are pre-heated

Snow or Ice rain
Snow or Ice rain detected. Switch points are heated to a higher temperature

Snow Storm
Snow is detected and wind speed is high. Switch point heating is 100%

White Frost Warning
Temperature low, humidity very high Switch points heated to prevent white frost

Heating control

Energy optimized control of the switch point heat to secure operational efficiency at the lowest possible cost.

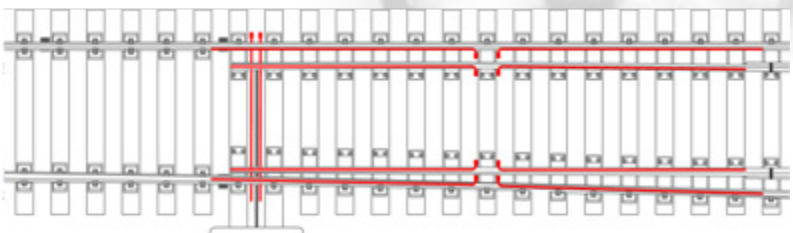
System BLUE POINT offers a wide range of different control cubicles ranging from small stand alone heating systems to large intelligent weather controlled solutions with a complete SCADA Interface.

The heart in all offered control solutions is a rock solid RTU (Remote Terminal Unit). This intelligent device is programmed to control the power based on individually parameter settings and multiple inputs such as the locale weather, weather forecast, rail temperatures etc.

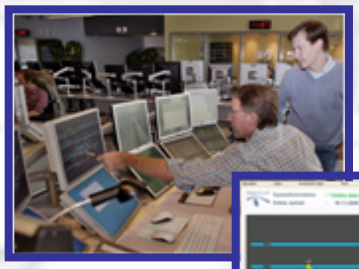
Every control cubicle contains all necessary components to full fill all locale safety regulations.

Built-in self diagnostic to report multiple error situations. Including measurements of current draw for every switch to report heat element errors.

Specification Sheet:
SS-SBP-CONTROL



Heating elements shown on a 1:9 radius:190 Switch point. The illustration shows both Stock rail and switch blade heating. Rod heating is also included.



Supervision software

On-line supervision & control SCADA software to bond all switch points in a territory together.

Traffic Control Department.
Maintenance Department.
Technical Department.

Scalable software package that makes System BLUE POINT to an energy and maintenance cost efficient switch point heating solution.

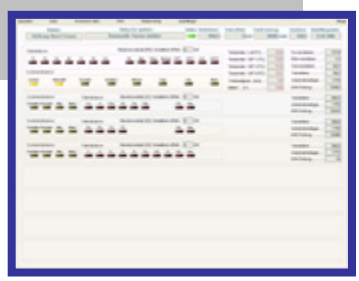
- Complete system overview.
- Instant messages upon heating failures.
- Manage individual control settings down to every station.
- Energy counters and statistics.
- Call for maintenance.
- Monitor locale weather conditions.
- Force individual switches to heat.
- Errors or other malfunctions on-line.
- Centralized update of RTU software

Communication between control cubicles and SCADA can be wired Ethernet, SDHAL or wireless GPRS or GSM.

System BLUE POINT can as an alternative interface almost any existing SCADA system.

SAN Railway Systems also offer the complete software package including a secure GPRS network as a hosted solution.

Specification Sheet:
SS-SBP-SCADA



Railway Systems

Tram Line Switch Point Heating

Designed for the extreme environment. Embedded in the asphalt or concrete.

Diesel-Electric trains - Load Resistors

Generator test. The system includes measurements of electro performance, Ignition pressure, exhaust temperature, oil temperature, etc.

Heating for Train Compartments

Both passenger compartments and drivers cab. Customized designs, voltage up to 2kV.

Catenary wire De-icing

Heating wire for all light rail and trolley systems. 600-1500 V systems. Complete systems incl. controllers and SCADA package for supervision.

3rd Rail De-icing

Heating cable solutions for all light-rail with an open 3rd power rail. Complete systems including controllers and SCADA for supervision.

Safety transformers

Double insulated trans former class II. No earthing needed. Mounted on brackets in ballast. Up to 5,2 kVA

Special locale conditions require special designs

Cover for drifting snow in switch points. Point heating energy saving by insulating the outer side of the rail. Portable GPRS Rail temperature monitor for risk of sun-curves. Extreme 1200 W heating per meter switch point.

SAN Electro Heat A/S (Member of the NIBE group)
(Formerly known as Svend A. Nielsen A/S) a Danish international company offer you more than 50 years of experience in developing and manufacturing of advanced, technical electric heating solutions and components. Not only standard products but also highly optimized customer solutions. Our focus and know-how is divided into four business divisions: Wind Power, Industrial Process, Comfort Heating and Rail Way Systems.

SAN - Railway Systems
(Formerly known as Lübcke Rail) Offer complete systems to secure optimal operation of switch points under any winter weather situations. Our focus is to deliver systems that reduces energy consumption and reduces the total cost of ownership. Our design has proven its reliability trough thousands of installations all over Europe.

Complete system delivery covers everything from the heating elements through intelligent controllers to the advanced server based computer monitor program. Including all necessary fittings, safety and power transformers, weather stations etc.

50 years know-how also gives you access to advisory regarding financial, technical and maintenance issues.

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