CONTROL SWITCH POINT HEATERS FOR SWISS RAILWAY

TBOX
AN OVARRO TECHNOLOGY

THE CHALLENGE

SBB, the Swiss national railway, is one of the most technically advanced rail systems in Europe and is the most heavily frequented rail network in the world; its service transports 441 million passengers along its 3,030km network every year. For a country and population that is so heavily reliant on its rail network, it is vital that SBB has a system in place to keep their trains running and their track operational during the harsh Swiss winters.

The extreme weather means that SBB has to employ a significant workforce, on call around-the-clock, to clear snow and ice from switch points at each of the operator's 700 stations to prevent failure. The business challenge was providing a solution that would increase operational efficiency whilst reducing manpower.

THE SOLUTION

We worked with SBB to install automatically controlled heating systems at all strategic locations to reduce the operator's enormous labour costs. In addition, hundreds of switch points were fitted with small gas or electricity-powered heaters.

©Ovarro. TBox RM2

Communication between the station-based TBox RTU and the substation based TBox RM2, which handles the measurement and control tasks of the individual heating systems, is via a local network that can be up to several kilometres in length.

Despite electrical interference from passing trains, automation and communications remain perfectly stable. Each substation has its own operating console for maintenance and manual control.

TRANSPORT   MONITORING & CONTROL   RTU'S

OVARRO
CONNECTING TECHNOLOGIES

SUCCESS

In the Zürich railway station alone, more than 8,000 I/O points are controlled remotely by TBox RTUs. In every one of the 700 Swiss railway stations you will find an Ovarro TBox RTU remotely monitoring and controlling the network.

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> "Our TBox solution provided extremely fast return on investment thanks to significant savings in electricity and gas consumption."

OPERATIONAL BENEFITS

Aside from improved safety and service for its passengers, our TBox solution provided extremely fast return on investment thanks to significant savings in electricity and gas consumption. Using data from temperature and humidity sensors, ice and snow is now instantly detected and the complex control system automatically starts the heaters to prevent build-up on the switch points.

Other benefits seen are: local data logging of events and recording energy consumption, temperatures and equipment operating time; excellent hardware and software reliability even in extremely harsh environments such as high electrical interference and very low temperatures; and just-in-time refuelling of gas tanks.

KEY DELIVERABLES

- Fast ROI
- Automatic alarm signalling
- Improved operational efficiency
- Complete remote control

- Remote or local visibility of the systems status
- Reduced labour costs
- High-level cyber security tools

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