Busbar temperature

A busbar is a metallic bar for local high current power distribution. Increased busbar temperature can be an indication of an issue in development or an issue that already had occurred. High temperatures in busbars may lead to fire risk or to the busbar smelting

Challenge

- Busbars conduct very high currents and can in normal operation be quite warm. Both the high current and temperature is a safety hazard when performing manual measurements on the busbar.
- Manual measurements means there is a risk of human failure that leads to reading the wring temperature on some or all measurements.
- Measuring busbar temperature on the outside of the busbar may lead to different measurements on different areas of the busbar based on how much cooling effect there is from surroundings. As an example, draft or wind in one area will cool the outside temperature of the busbar.

Solution

- A temperature sensor that can be attached to the busbar permanently means the measurements will always be done at the same spot on the busbar.
- An IoT temperature sensor will automatically perform measurements at given intervals and transmit the measured temperatures to the software system of choice.
- Alerts can be set when a busbar exceeds a given temperature, which will notify the correct personnel that investigations or actions need to be taken to fix the issue in development that leads to the busbar temperature increase.

What you get

- After drilling a small hole in the busbar, a Neuron PT100 Bolt sensor can be screwed into the hole to continuously measure the internal temperature of the busbar.
- Temperature measurements can be transferred to any software systems using APIs from the Neuron Cloud
- The Neuron system will alert personnel when temperatures reach a user defined threshold. Alerts can be received on e-mail, SMS or as push warnings on a mobile phone.

Products in use

- Neuron PT100 Bolt M6