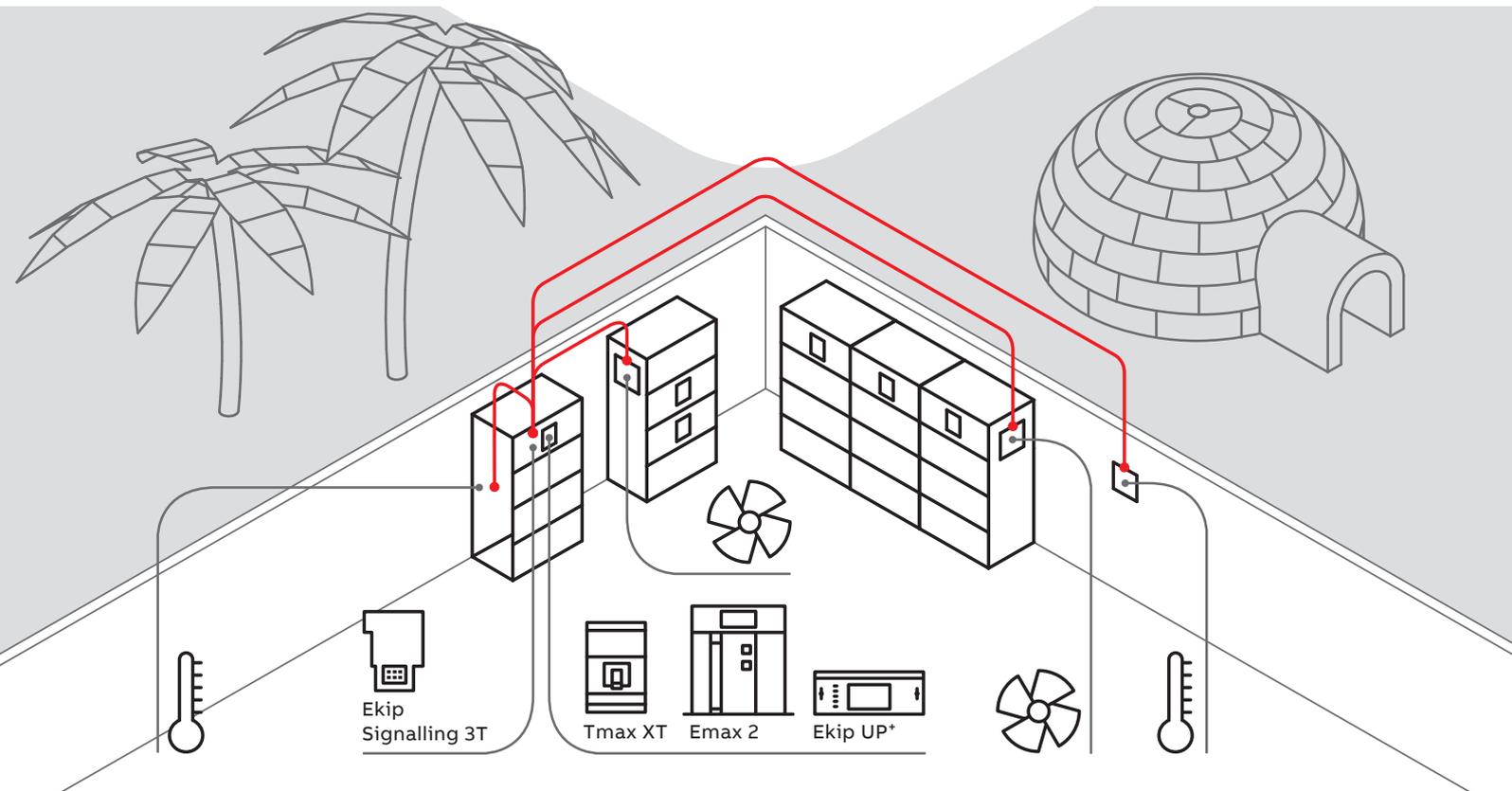


ALL-IN-ONE

# Ekip Signalling 3T

## Temperature monitoring module



01  
Ekip Signalling 3T

Understanding and monitoring environmental parameters is the key to prevent system failures or other unsafe conditions.

Environmental conditions affect overall plant performances and device functionalities.

Continuous monitoring systems are required in all the applications where electric devices like motors or transformers could work under overload conditions for a short time.

In case of temperature exceeding a certain value, the supervision system must activate all the prevention systems that have to mitigate and prevent further circuit overheating.

Furthermore, environmental data can be used to calculate the ageing of the electrical devices and keep under control performances and efficiency of the system.

Remote analysis of the devices performances highlight stress conditions and help to schedule maintenance thus avoiding possible downtime.



## Busbar

### Adaptive protection

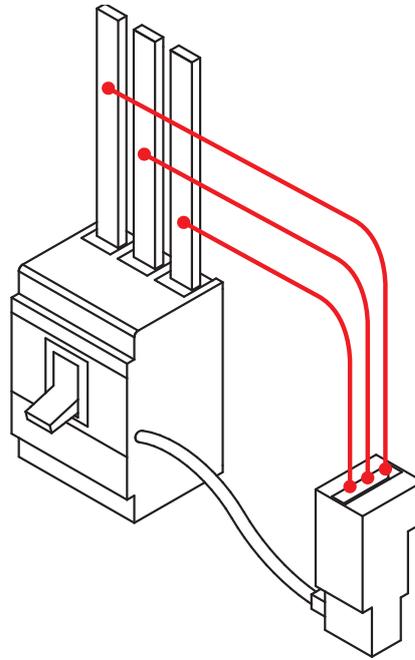
Protection parameters can be changed to prevent system failures

### Easy installation

Ekip Connect software allows easy programming for plug and play installations

### Fan Control

Temperature mitigation is granted by forced ventilation control



## Transformer

### Data acquisition from single winding

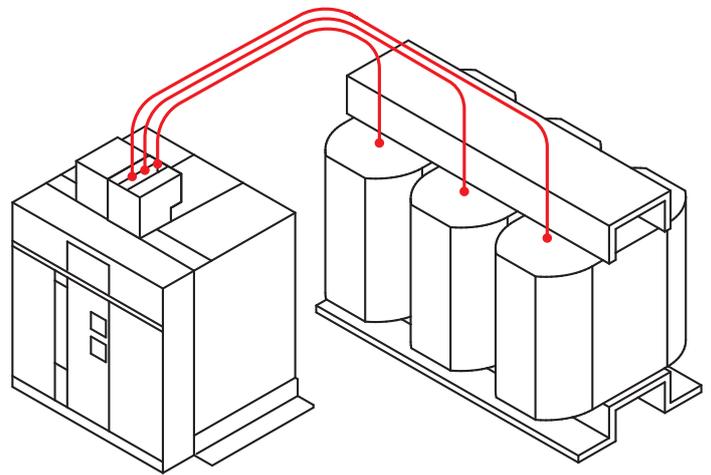
PT1000 can be installed inside the winding using the existing housing

### Embedded compact solution

Ekip 2, Tmax XT or Ekip UP+ can replace the external unit for temperature monitoring

### Transformer automation logics

Digital contacts allow PLC control or enable Ekip 2, Tmax XT or Ekip UP+ built-in logics



## Switchboard

### External Sensor

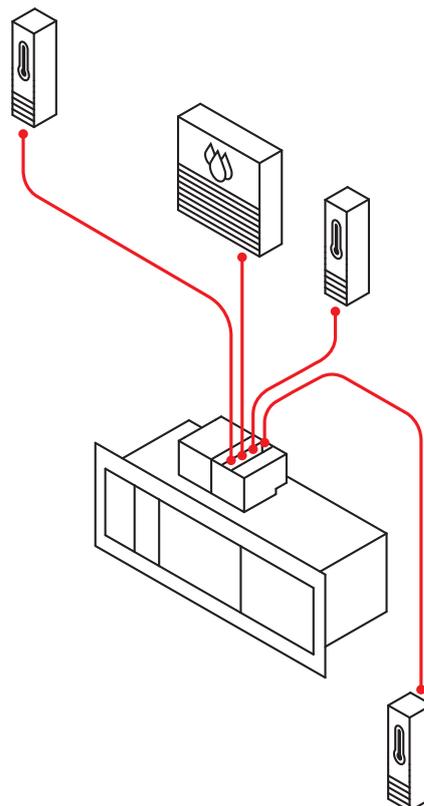
Analog Input acquires relative humidity data inside the installation

### Multi point detection

Different areas can be monitored with thermoresistances

### Environmental condition

External temperature data collection



### Module characteristics

Ekip Signalling 3T acquires signals from 3 thermoresistances PT1000 directly connected to the module. Additional channel 4-20mA is able to collect information from external sensors or equipment.

Emax 2, Tmax XT or Ekip UP<sup>+</sup> can house two modules: Ekip Signalling 3T-1 and Ekip Signalling 3T-2. With the thermoresistances provided by ABB is

possible to mount the probes directly into the busbar thus guaranteeing the correct voltage insulation. Pressure, relative humidity, vibration and further sensors' data monitoring is also possible using the additional input 4-20mA.

Ekip Signalling 3T module is compatible with all Ekip devices with the possibility of sharing data with all the communication protocols available on Ekip architecture.

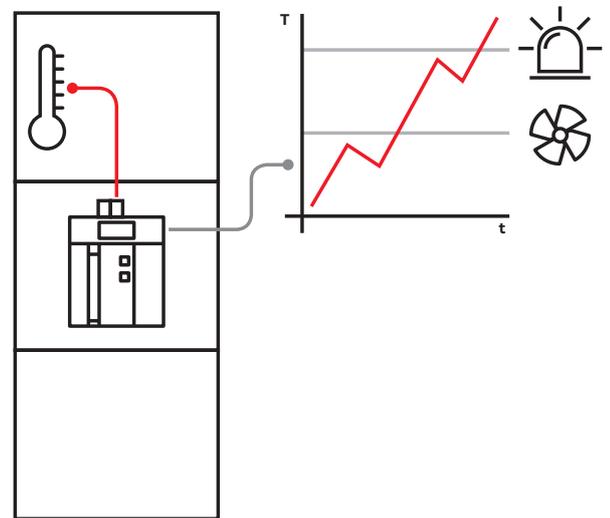
### Application examples

#### Logic

Temperature or external sensor measurements can be used to control an external system. Every input from the sensors can be associated to an event/output command through different thresholds, or linked to an action of the Ekip device, like built-in power management strategies.

The above configuration can be used in all the applications that require temperature control, prevention of freezing or humidity reduction through the activation of an HVAC system, heaters or fans.

Managing three different thresholds is useful in the case of systems that control multiple step units. Setting a correct hysteresis parameter for each threshold prevents multiple on/off switching in a short time.



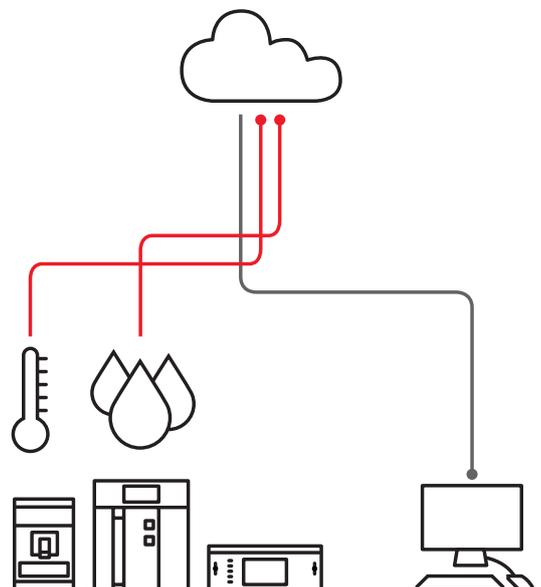
#### Monitor

The data collected by the modules can be shared through all the communication protocols available for Emax 2, Tmax XT or Ekip UP<sup>+</sup>.

Temperatures and external sensors information can be managed in a SCADA system for performance and energy efficiency monitoring.

The innovative cloud computing platform ABB Ability™ Electrical Distribution Control System can collect data from the Signalling 3T modules and allows the creation of customized reports with data trends.

Moreover, it is possible to compare different installations or data from different time intervals. Alarms and events can be set in order to receive feedback on the thermal behavior of the installation.



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