



Temperature Optimization

Reduces the heat loss with up to 10% and CO₂ emission with 2-5%

Savings and other benefits

Reduction in CO ₂ emission	2-5%
Reduction in Heat Loss	~ 10%
Return On Investment	1-1½ year

Powered by TERMIS

The module uses the TERMIS model.
This ensures:

Correct calculation of **time delays** in the network

Correct calculation of **heat accumulation**, ensuring correct optimization, for example in the morning

Correct calculation of **heat loss**

Possibility of including multiple **heat sources**

Easy, quick and **affordable start-up**

The automatic temperature optimization module from 7-Technologies minimizes heat loss and operational cost in the district heating network. The inlet temperature is adjusted to be as low as possible, taking into account the amount of heat that has to be supplied to the consumers in the net.

The temperature optimization module takes into account the accumulated energy in the net, and the changes that will occur as a result of forecasted outdoor temperature and wind conditions.

Operational stability and cost savings

The automatic temperature optimization will according to experience reduce your heat loss with approximately 10%, improving not only your economy, but also reducing the CO₂ emission.

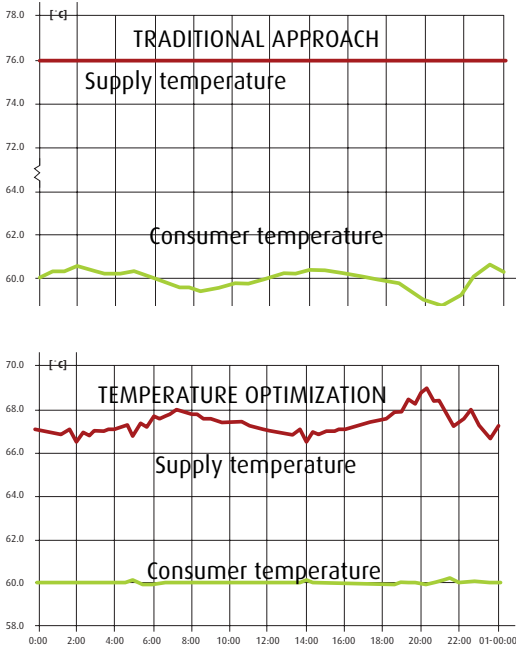
It is embedded in your SCADA system and can be supplied by your usual supplier, ensuring that any support can be provided by the supplier you are accustomed to working with.

The module requires limited or no operation. Training in operating the system is not required. The module is in operation around the clock. Save money all the time – every single day of the year.

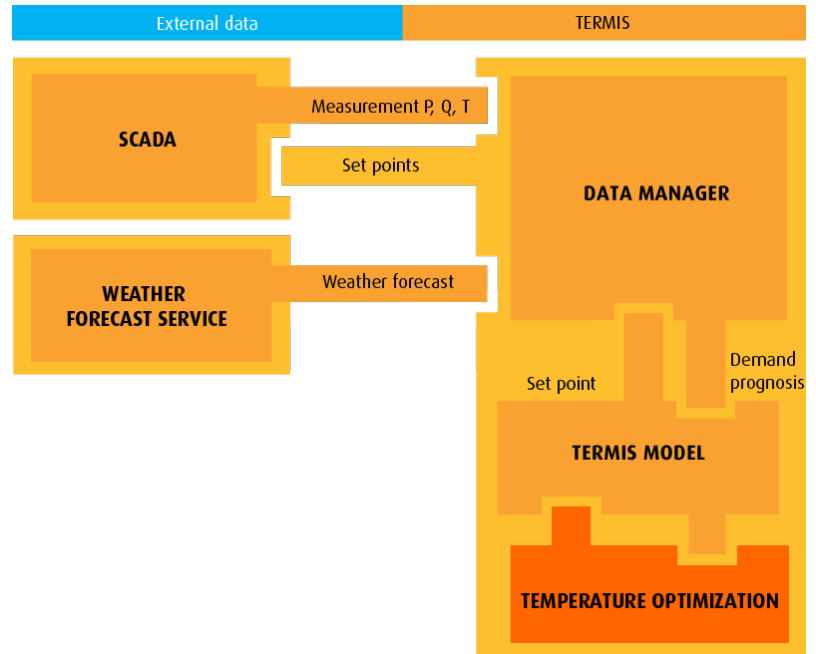
Overview of consumption

The automatic temperature optimization module uses SCADA data from the district heating network, creating the best possible basis for optimization. It takes into account the common operational changes, such as valves being opened or closed, large consumers with varying consumption, and variation at weekends and holi-

SOLUTION BRIEF



Overview



“Temperature optimization has proven a great success for us.

We can document savings of approximately 1½ million DKK per year.”

*Per Sørensen, Managing Director,
Hjørring District Heating,
~ 100 MW max. effect*

“We have saved the environment 215 ton CO₂ annually, since implementing TERMIS Temperature Optimization.”

*Peter Jensen, Operations Manager,
Hørning District Heating,
~ 25 MW max. effect*

“We have not only reduced the supply temperature significantly during extended periods of the year, we have also gained detailed knowledge of our network. This adds more value to my daily work.”

*Allan Scheel, Supervisor,
Suldrup District Heating,
~ 5 MW max. effect*

days. Unusual operational interruptions will also be included in the calculation, giving you the right picture of the operation all the time.

TERMIS Temperature Optimization utilizes consumption data based, for instance, on weather forecasts automatically downloaded via the Internet. This results in very accurate optimization.

TERMIS Real-Time

Your existing TERMIS model can be utilized directly. If you are using an alternative modeling tool, this model can be directly and easily transformed into TERMIS. Implementation of the automatic temperature optimization requires no knowledge about the operation of TERMIS.

The TERMIS Real-Time functionality can be added, enabling a full and dynamical presentation of temperature, pressure and flow in the network. This gives you the perfect overview and tells you a lot about the operation of your network.

The TERMIS Real-Time functionality can also be utilized to send calculated data into the SCADA system. This expands the overview and may postpone or eliminate the requirement for adding new, costly measurement points.

TERMIS is today the most widely used simulation tool for district energy networks – worldwide.