

CASE STUDY

E-CON AG, MEMMINGEN



“Finally a radio system that works”

Convenient, fast and wirelessly from the network. This is how the contracting company e-con AG, a subsidiary of Alois Müller Group, accesses thermal energy data remotely. And calculates the actual amount of heat consumed by their residential owners. For that purpose, they opted for a modern radio system of the company merkur Funkssysteme AG.

September 2016, Chantal Colle, merkur Funkssysteme AG

Heating systems cause high investment costs. This is generally known. Therefore, the communal use of a local heating network is meaningful for individual objects: Consumers purchase only as much heat as they need. Cost-effective and convenient. Furnaces or central heating are no longer necessary. Anyone who builds a residential property today, can choose a cost effective heat supply with renewable resources.

As a specialist in energy contracting, the e-con AG is responsible for the heat supply and economic operation of a new construction project in Mindelheim [Germany]. The complex consists of two apartment buildings with nine residential units each, eight houses and three terraced houses. For each unit, the heat is transferred from the district heating network to a transmission station. The heat meter, which is integrated in the transmission station, measures the heat consumed for billing. But the selected method is not quite as simple as that: “The evaluation of the heat meter through the local district heating central was difficult,” says Darko Zanic, project manager

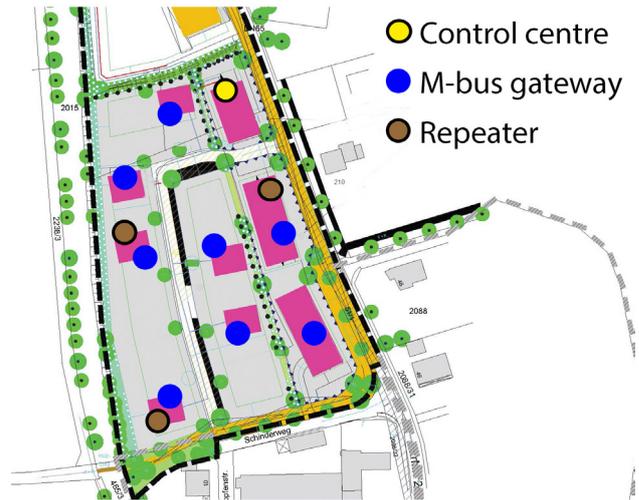
of MCR technology for company e-con AG. “We could not connect the heat quantity meters to the local district heating central via cable. Therefore, wireless radio instead of cable was determined from the outset.”

Greater coverage with merkur Funkssysteme AG

But how can proper operation of a total area of about 9,000 m², equivalent to approximately two football fields, be ensured? “The merkur radio system is the ideal solution,” says Darko Zanic. Despite difficult conditions, such as long distances between the measurement points of the buildings and the local district heating central, or obstacles for the transfer of heat energy data (for example, an intermediate building or a wall made of concrete). The e-con AG required all heat energy data for metering and billing in exactly one central location. Thus, merkur Funkssysteme AG installed an M-bus gateway for data



M-bus master gateway in the basement



Area map Mindelheim

transmission in each building. This had to be installed in each case in the basement, analogous to the heat quantity meters, the radio central and most radio antennas. For optical reasons no visible radio antennas were allowed at the surface. Despite the long range, merkur Funksysteme AG deployed only three repeaters. "And the data transmission via radio works just fine," confirmed Darko Zanic.

"Radio transmission is very reliable"

The merkur radio system for remote reading of heat quantity meters has convinced Darko Zanic in many respects: "The solution is very reliable considering its long-life components. And thanks to the wireless technology, it can be quickly and easily installed - even retrospectively in existing properties."

The consumption data transfer through the merkur radio system is bidirectional and encrypted. Thus, the radio enabled measuring technique leads to high billing quality and safety.

Read heat consumption by radio and initiate billing

Radio for transmission of measurement data will play a crucial role in the future. The advantages are clear: Each user is only billed for what they actually use. And e-con AG eliminates the monthly reading service of thermal energy on site. This saves time and money. The wireless installation makes the radio system especially convenient and interesting. It's a win-win situation for both parties. Darko Zanic is also very happy with the choice of merkur Funksysteme AG: "Finally a radio system that works and a company that provides great support."

8 M-bus gateways

1 Radio control centre

3 Radio repeater

8 Building with multiple floors

1 workday for implementation

