

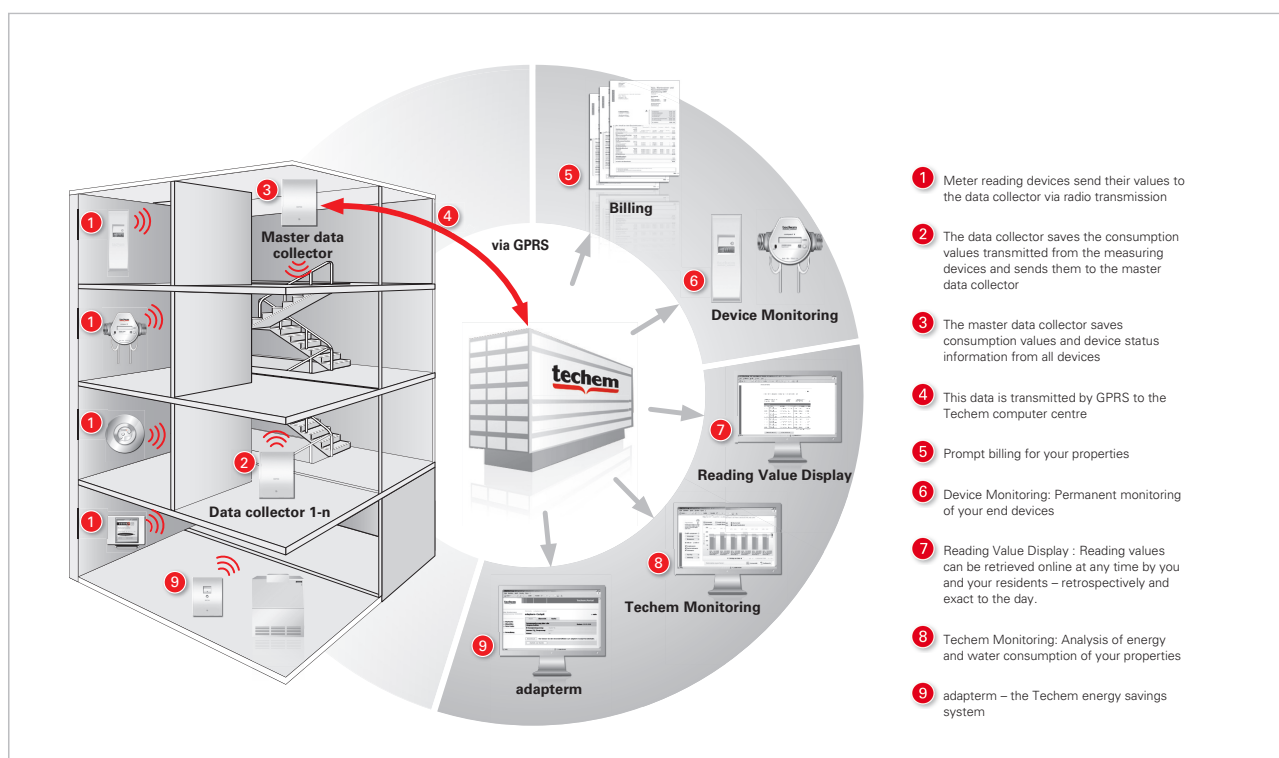
# Techem Smart System

## Product description

Techem Smart System is based on the technology of the tried and tested Techem radio frequency (RF) system. The remote reading system provides you with access to a wide range of general and monitoring services. The prerequisite for this is to equip with the current Techem RF reading device generation (data III). The RF reading devices transmit their data regularly to a data collector. This stores and manages the consumption data and device status information and transmits them to the master data collector. In this way, the complete consumption values and device information of the object's RF reading devices are contained in the master data collector. The consumption data (due dates and intermediate daily values) and the device states are regularly transmitted to the Techem data centre through a secured connection via GPRS. They are further processed here.

Techem Smart System is the basis for innovative value-added services:

- Device Monitoring – continuous, pro-active monitoring of the reading devices and timely replacement in case of defects.
- Reading Value Display - Reading values can be retrieved online at any time by you and your residents – retrospectively and exact to the day.
- Energy and Water Monitoring – for more clarity regarding consumption – based on regularly updated values.
- adapterm – using this energy savings system, save an average of 10% of heating energy.



## Performance features

- Each property can be fitted with the Techem Smart System.
- Properties already fitted with data III devices can easily be retrofitted with the Techem Smart System without having to enter the apartment.
- Battery-operated data collectors avoid the need for electricians and therefore reduce the effort required for installation – low installation costs.
- Clustering of objects with up to 2,000 end devices or 60 data collectors (incl. master data collector) possible – low installation costs.
- Reduction in number of data collectors required due to high ranges – low installation costs.
- Maximum billing quality – the consumption data is taken over automatically, right up to the billing system.
- Low administration requirements – no follow-up appointments and estimations required due to the absence of tenants.
- Less effort required when tenant changes – intermediate unit readings can be made at any time.
- Reduced downtimes – defective devices are detected and replaced early (device monitoring).
- Timely billing – thanks to automated data transfer.
- Prepared for Smart Metering – compliant to the Open Metering Specification (including Wireless M-Bus, EN 13757-4).

## Battery-operated data collector

The battery-operated data collector saves the consumption values and device status information which are transferred to it at regular intervals by the reading devices allocated to it. It is fitted with an integrated transmitter and receiver module to receive the consumption data and for communication between the data collectors. All data is transferred to the master data collector.

## Master data collector

The mains-operated master data collector saves all consumption values and device status information across its entire RF network, which is comprised of reading devices and data collectors. Up to 2000 RF reading devices can be managed in one RF network covering several properties with up to 60 data collectors in total, including the master data collector. It saves the consumption data of each reading device in its network-failsafe, non-volatile memory. Additionally, the master data collector is also responsible for communication with the Techem data centre. This is carried out by means of an integrated GPRS modem that establishes a secure IP-VPN connection.

Technical data	Data collector	Master data collector
Conformity	CE	CE
Dimensions	Approx. 220 x 160 x 45 mm (H x W x D)	Approx. 220 x 160 x 45 mm (H x W x D)
Transmitting power	Max. 250 mW	Max. 250 mW
Type of protection	IP 44	IP 21
Power supply	Battery (10 years + reserve)	100–240 V AC, 50–60 Hz
Transmission frequency	868 MHz	868 MHz
Service interface	Optical	Optical
Error detection	Using CRC	Using CRC
RF conformity	Compliant with R&TTE guideline	Compliant with R&TTE guideline



Data collector  
(battery-operated)



Master data collector  
(mains-operated)