kamstrup

Solution description
Heat/Cooling

READy

The modern and efficient solution for remote reading of intelligent heat and cooling meters

Contents

Remote reading – your way

READy offers a variety of remote reading solutions ranging from drive-by reading of meters to direct reading from the utility.

READy is a flexible and modular solution for remote reading of meters. It is always possible to expand the selected reading solution or switch to a new one if needed. Current solutions range from semi-automatic (drive-by) remote reading to fully automatic remote reading directly from the utility and include both wireless and wired reading solutions.

The different reading solutions can be combined. For example, you can opt for a drive-by reading solution in general and then supplement it with automatic reading of meters from which you need more frequent data or which are located in areas where drive-by reading is inconvenient (e.g. a few houses located on an island).

READy can be used for remote reading of water, heat and cooling meters, combined heat/cooling meters, electricity meters and Kamstrup pressure sensors.

Heat **Cooling** **Water** **Electricity**

Drive-by reading

Fixed Network reading

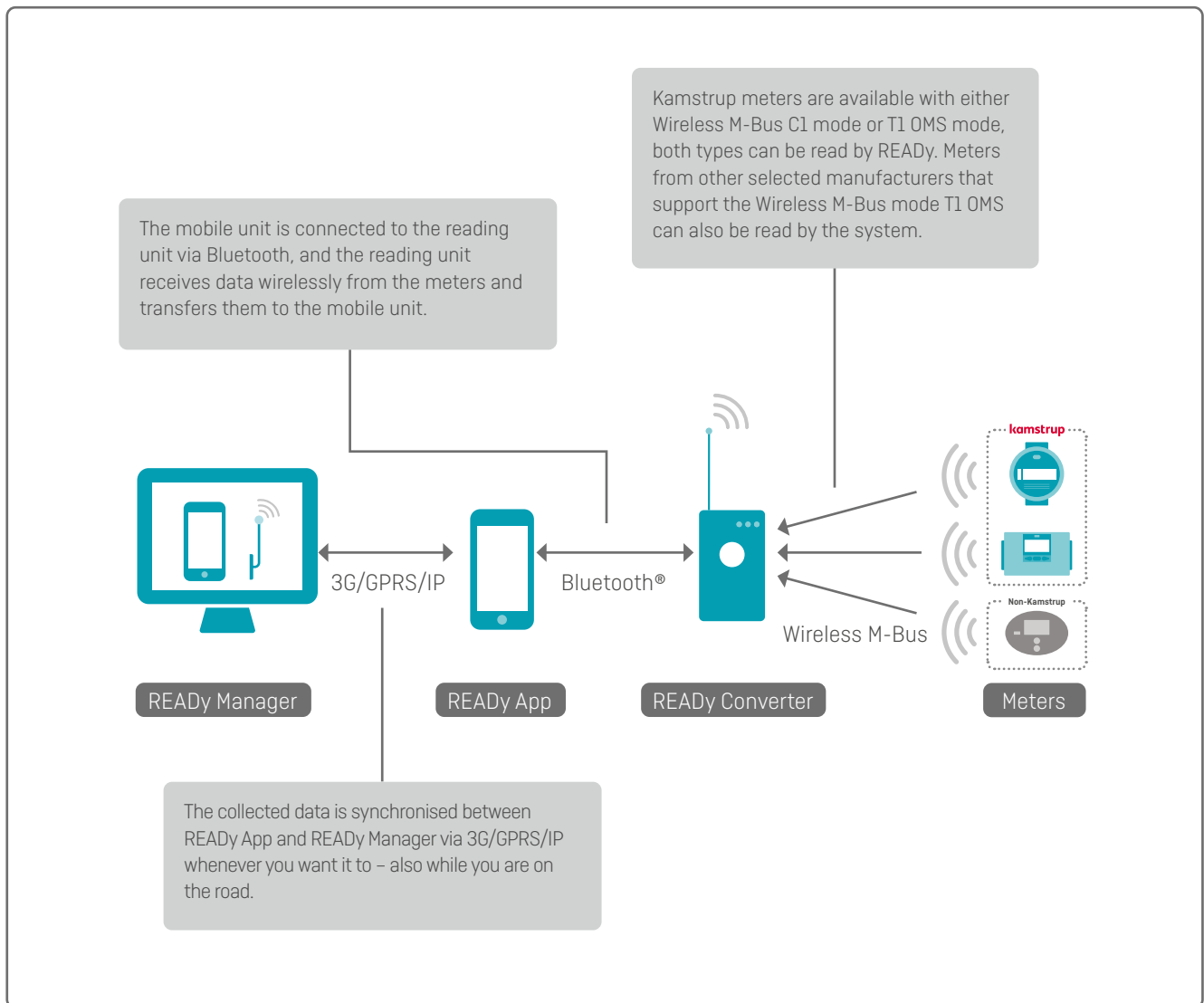**Point-to-point reading**

Wired reading
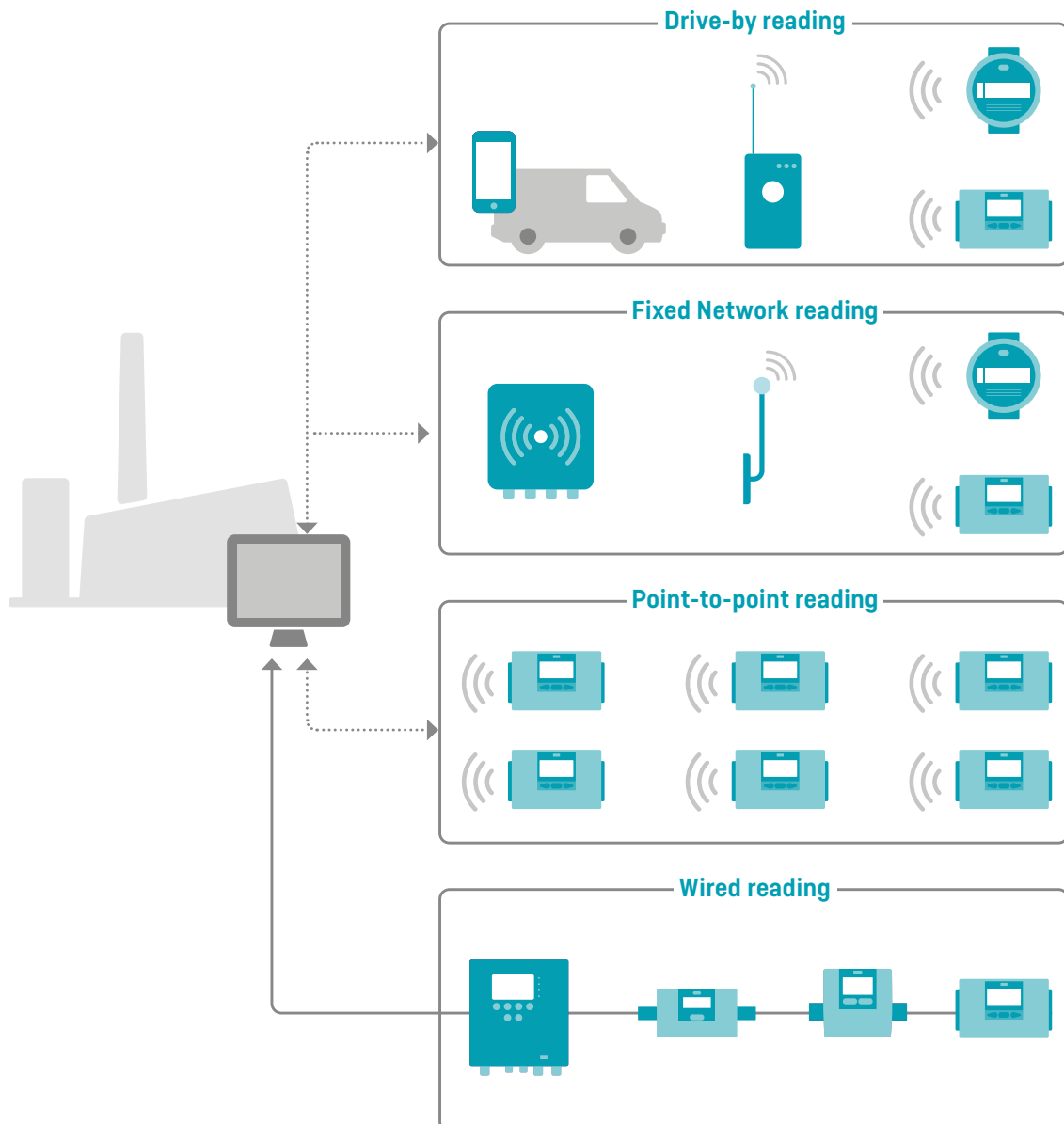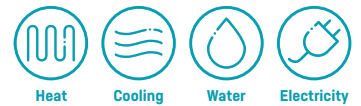
Drive-by reading

With drive-by reading, the meters are read directly from the car by driving around the supply area with an Android mobile unit (smartphone or tablet) and a reading unit (READy Converter). The collection of meter data takes place easily and intuitively via the app READy App.

When the reading is complete, the meter data is easily transferred to READy Manager which is a program on your PC that keeps track of and stores your meter data.

Communication infrastructure for drive-by reading

Kamstrup meters are available with either Wireless M-Bus C1 mode or T1 OMS mode, both types can be read by READy. Meters from other selected manufacturers that support the Wireless M-Bus mode T1 OMS can also be read by the system.

The mobile unit is connected to the reading unit via Bluetooth, and the reading unit receives data wirelessly from the meters and transfers them to the mobile unit.

READy Manager — 3G/GPRS/IP — READy App — Bluetooth® — READy Converter — Wireless M-Bus — Meters

kamstrup

Non-Kamstrup

The collected data is synchronised between READy App and READy Manager via 3G/GPRS/IP whenever you want it to – also while you are on the road.

How it works

READy App is intuitive and easy to use. Reading meters and synchronising data with READy Manager is a completely smooth process.

Data is synchronised wirelessly between READy App and READy Manager by pressing the "Send/Receive" button in READy App.

The reading of the meters can then be started by pressing "Read meters" on the start page of READy App.

With the addition of T1 OMS to READy Manager and READy App, it is also possible to perform the actions described in the following for non-Kamstrup meters that are T1 OMS compliant and verified by Kamstrup.


During the reading, an integrated Google Maps module (for China Baidu maps) in READy App shows the meters that have not yet been read making the reading very simple and efficient.

As soon as the meters are read, they disappear from the map which provides the operator with a clear picture of the remaining meters' positions. The map serves both as an indicator of the remaining meters and as a navigation help during the reading. The reading continues during conversations, but can also be put on hold and continued later on.
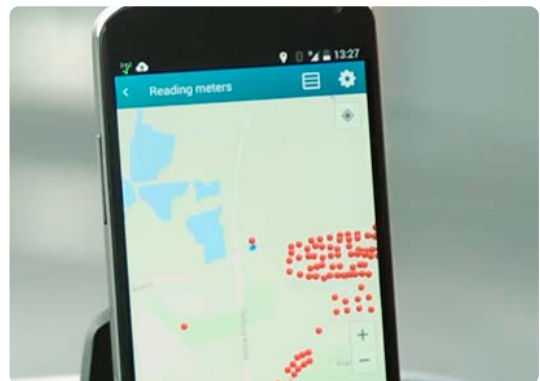
When the meters have been read, a single push on the button "Send/Receive" makes the data available in READy Manager.

This module ensures that the operator reading the meters can continue with other tasks without having to return to the office to transfer data.
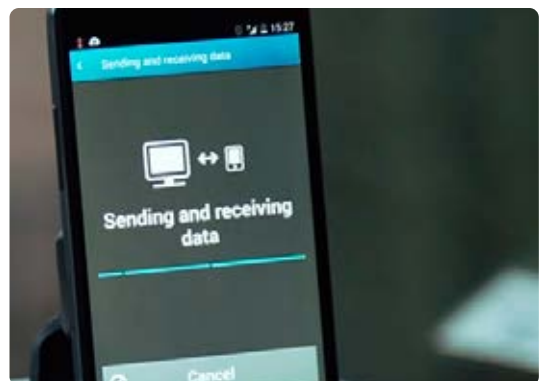
Reading of logged data

In addition to reading meters, READy App can be used together with a Bluetooth®-connected optical read-out head for manual reading of the data logger of a water, heat or cooling meter.

When placing the optical read-out head on the infrared connection port of the meter, the data logger can be accessed from READy App. This makes READy App a very strong tool for entering into a dialogue with the consumer and for clarifying any questions and disputes.

Logger data that has been read with the optical read-out head can be made available in READy Manager by synchronising it in the same way as data read via a mobile unit.

The display of the daily consumption is a useful tool for entering into a dialogue with consumers and for clarifying disputes.

Fixed network reading

By installing one or more fixed data collection units in a supply area, the meters can be read automatically directly from the utility on a daily or hourly basis.

Fixed data collection units are also ideal for commercial buildings or industries where rewiring to meters is not possible.
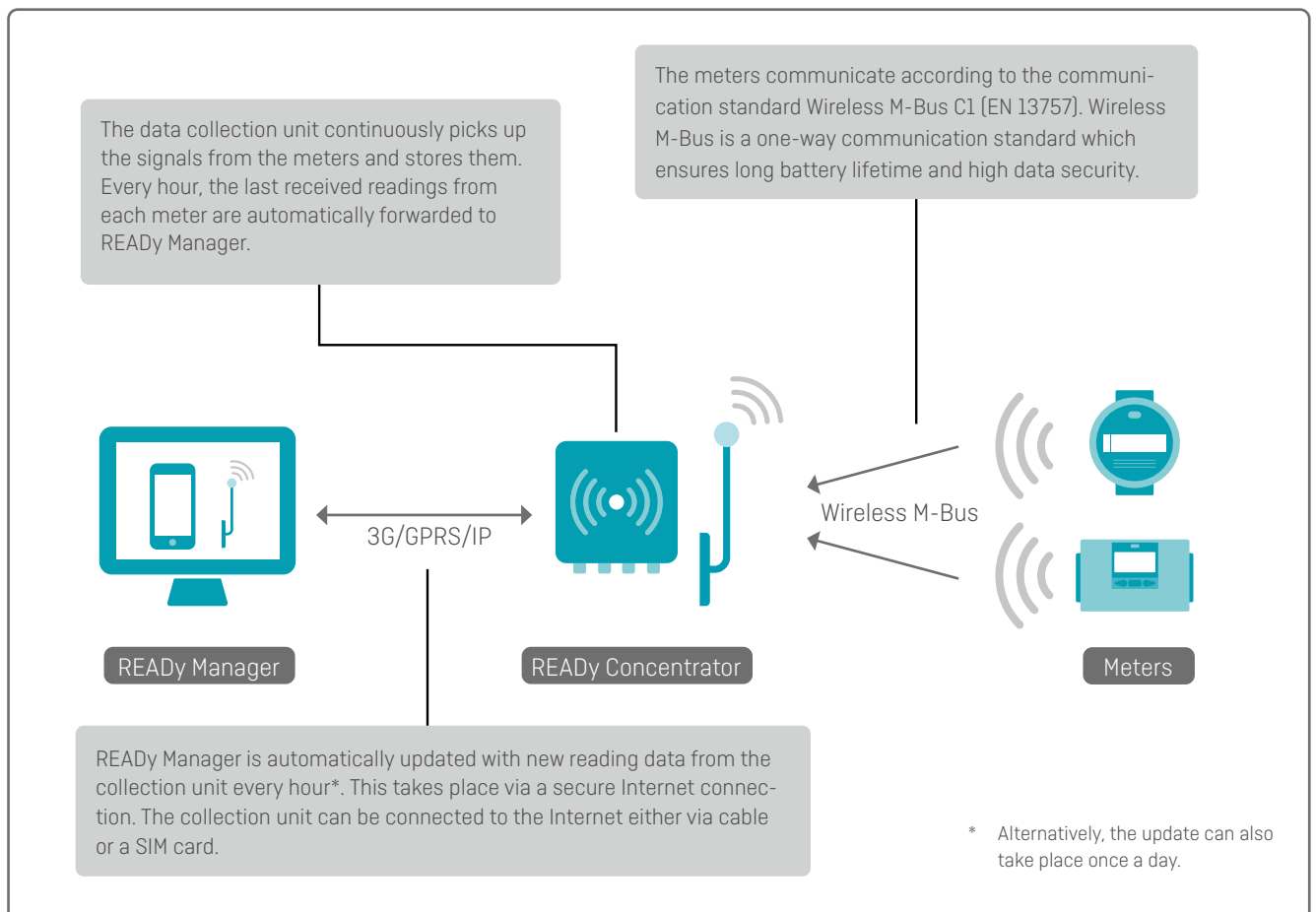
Communication infrastructure for fixed network reading

Two types of communication infrastructures exist: Wireless M-Bus and linkIQ.

Wireless M-Bus network

The wireless M-Bus network is based on the Wireless M-Bus standard, EN13757-4, mode C, meaning that this network can read all meters that comply with this standard. With a wireless M-Bus network, you are able to establish the network yourself, if desired. Furthermore, you are able to receive high-frequency data in 5-minute intervals.

A data collection unit consists of one or two antennas which pick up the signals from the meters via Wireless M-Bus. An antenna is connected via cables to a concentrator unit which sends data to READy Manager via 3G, GPRS or IP:

The data collection unit continuously picks up the signals from the meters and stores them. Every hour, the last received readings from each meter are automatically forwarded to READy Manager.

The meters communicate according to the communication standard Wireless M-Bus C1 (EN 13757). Wireless M-Bus is a one-way communication standard which ensures long battery lifetime and high data security.

3G/GPRS/IP

Wireless M-Bus

READy Manager

READy Concentrator

Meters

READy Manager is automatically updated with new reading data from the collection unit every hour*. This takes place via a secure Internet connection. The collection unit can be connected to the Internet either via cable or a SIM card.

* Alternatively, the update can also take place once a day.

Note: T1 OMS Wireless M-Bus is not supported by fixed network solutions.
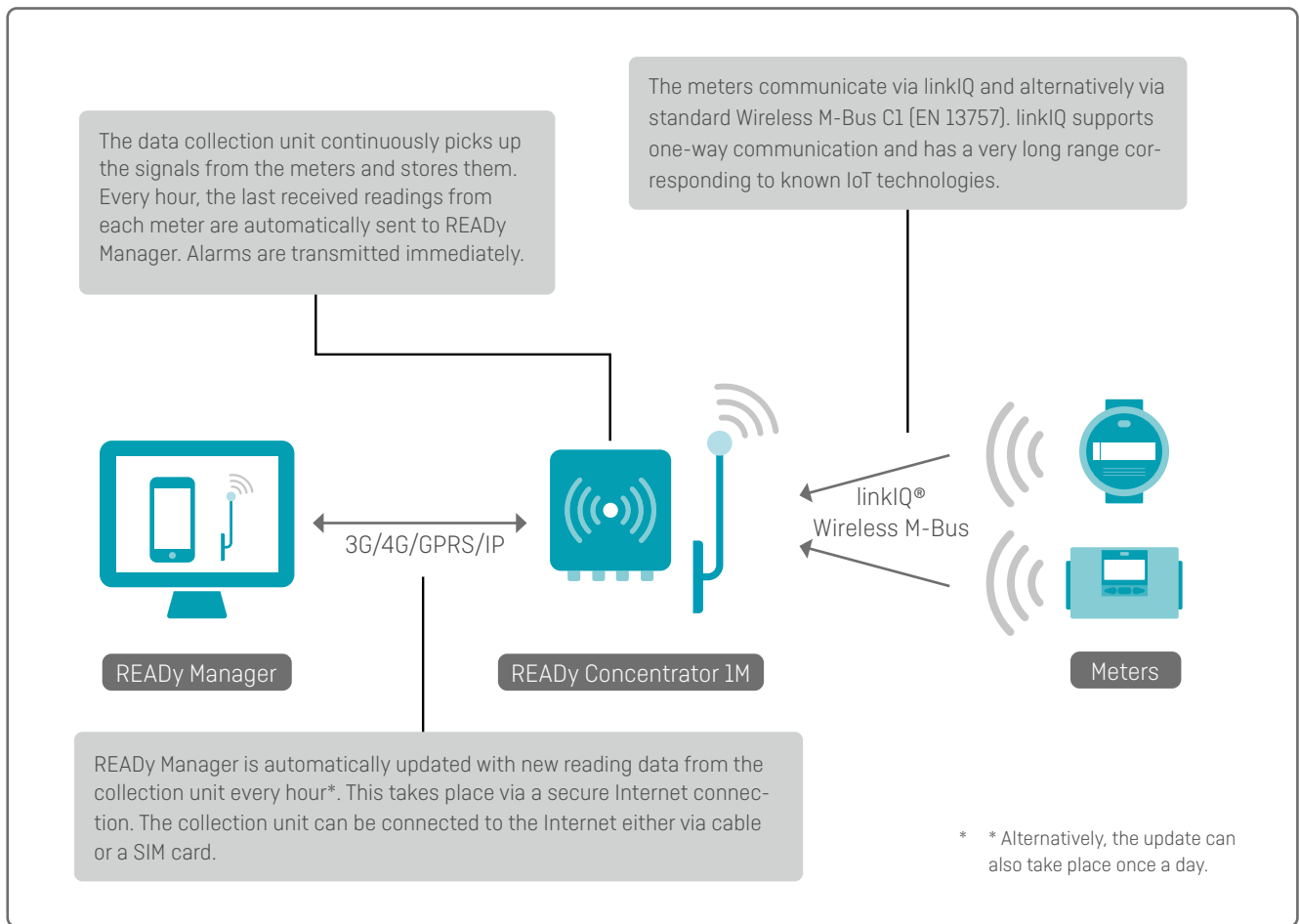
READy Solution description – Heat/Cooling

linkIQ network

A linkIQ network is designed by Kamstrup exclusively for smart metering purposes. This means that the network is designed for network-based remote reading with a high data quality and a low cost per metering point in view. In addition to its own optimised linkIQ protocol, the linkIQ network is also able to read all meters that comply with the Wireless M-Bus standard, EN13757-4, mode C.

The linkIQ network offers improved range and coverage which mean that fewer data collection units are required. Furthermore, linkIQ supports smart data which means that meter data is divided into more packages and sent at different time intervals depending on the type of data (alarms, hourly and daily – or less frequent – values). Data is sent repeatedly to ensure a high level of data redundancy.

A data collection unit consists of a top unit and a base unit. The top unit picks up the signals from the meters via antennas connected to the top unit and sends data to READy Manager via the internet connectivity (3G/4G/GPRS or IP) provided by the base unit.

The data collection unit continuously picks up the signals from the meters and stores them. Every hour, the last received readings from each meter are automatically sent to READy Manager. Alarms are transmitted immediately.

The meters communicate via linkIQ and alternatively via standard Wireless M-Bus C1 (EN 13757). linkIQ supports one-way communication and has a very long range corresponding to known IoT technologies.

3G/4G/GPRS/IP

linkIQ®
Wireless M-Bus

READy Manager

READy Concentrator 1M

Meters

READy Manager is automatically updated with new reading data from the collection unit every hour*. This takes place via a secure Internet connection. The collection unit can be connected to the Internet either via cable or a SIM card.

*   * Alternatively, the update can also take place once a day.

Note: T1 OMS Wireless M-Bus is not supported by fixed network solutions.

READy Concentrator 1M

READy Concentrator 1M is the central data collection unit in a linkIQ network. It is designed to collect data from the latest linkIQ meters and backwards compatible to read wireless M-Bus meters as well. It is able to read up to 10,000 heat and cooling meters.

To ensure a very high reading performance, the collection unit comes with built-in data redundancy and smart data transmission.

READy Concentrator 1M is built to withstand tough weather conditions. It consists of two units: a top unit (READy Concentrator 1M) and a base unit (READy PSU-4). The base unit, supplying power and network for the top unit, is installed close to the ground for easy service.

The collection unit has instant alarm notification, sending alarms to READy as soon as detected and independent of the normal meter reading transmission schedule.

READy Concentrator

READy Concentrator is the central data collection unit in the fixed network reading solution. It can read up to 10,000 meters. The concentrator is available in two versions: one for indoor mounting and one for outdoor mounting. The collection units only require connection to 230 volt and possibly also an IP connection. If IP is not available, the concentrator can be equipped with a GPRS modem and a SIM card for wireless transfer of data.

Antennas for READy Concentrator and READy Concentrator 1M

The antennas are installed as high as possible to pick up the signals from as many meters as possible. Typically, the antennas are installed on the roof of buildings in the area. Normally, an antenna can reach meters in a radius of 500 – 600 m. However, with special antennas placed in, for example, chimneys, it is possible to achieve much larger ranges.

READy Solution description – Heat/Cooling

READy Mini Concentrator

The mini concentrator is a small collection unit designed for indoor installation. It is connected to a power supply and is able to collect readings from up to 25 meters and forward the data to READy Manager via Ethernet, Wi-Fi or GSM.

Used in combination with a drive-by reading solution, the mini concentrator allows you to automatically read meters located in remote areas (where drive-by reading is problematic or inefficient) or meters for which you need more frequent data (down to 5-minute intervals).

READy 4G Bridge

READy 4G Bridge is a battery-powered collection unit that receives wireless M-Bus data from up to 5 meters and sends the data to READy Manager via GSM. It is designed for both indoor and outdoor installation.

Used in combination with a drive-by reading solution, READy 4G Bridge allows you to automatically read meters located in remote areas (where drive-by reading is problematic or inefficient) or meters for which you need more frequent data.

Verification of the connection to the meters

As soon as the concentrator is connected to 230 volt and IP or equipped with a SIM card, it is possible to check which meters can be read by the concentrator via a mobile unit or a PC. This can be used for determining the optimal position for the data collection unit.

Likewise, it is possible to test if an individual meter has established contact with the relevant concentrator – just by entering the meter's serial number on a mobile-friendly website (wireless M-Bus network) or in READy App (linkIQ network). Thus, revisits to the consumers' homes can be avoided as it can be determined during the installation if the meter can be read.
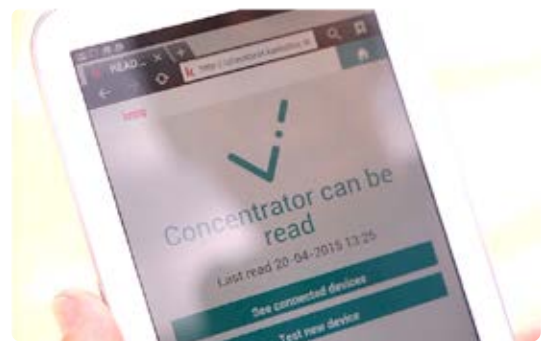
The contact between meter and concentrator can be verified quickly on a mobile-friendly website.

Shared infrastructure for fixed network

With a wireless M-Bus or a linkIQ network, it is possible to share/lease your current infrastructure with others. In general, this means that there is a potential to share concentrators with others, thus reducing the investment cost and making it easier to get onto a fixed network. This solution complies with the new GDPR as you will not be able to see each other's data, but only to share the infrastructure equipment. Sharing the infrastructure is easy and straightforward and can be done by sharing an ID number with anyone who wants to use your infrastructure and vice versa.

The shared infrastructure feature is only available for READy Fixed Network licences. It is not possible to share infrastructure based on READy Drive-by licences.
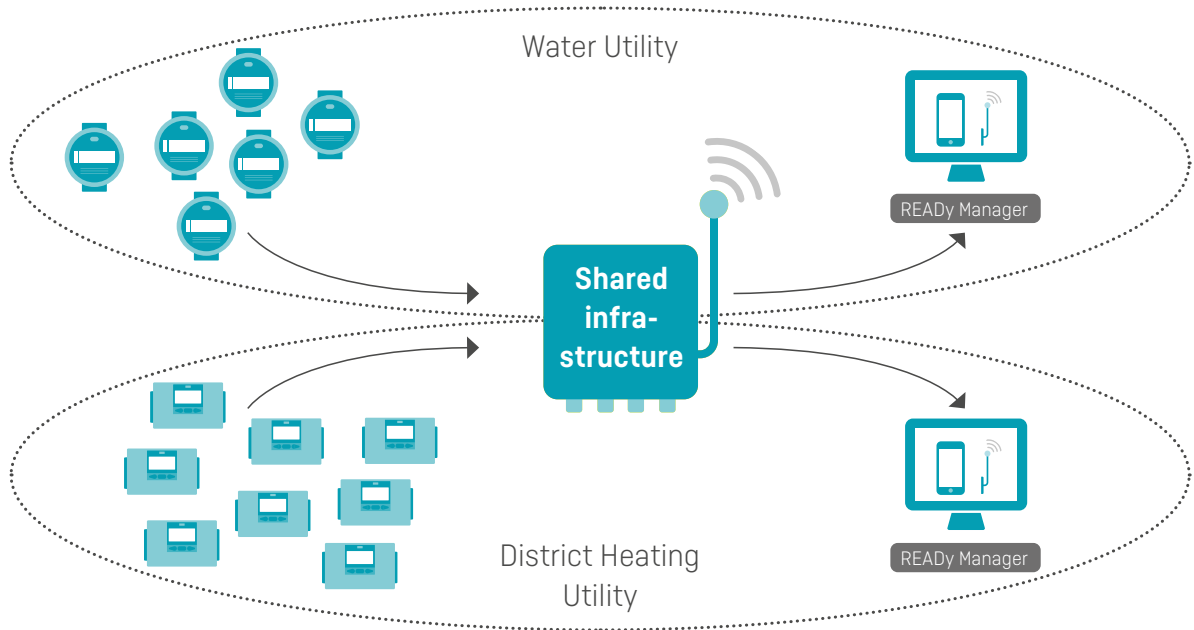
Point-to-point reading

With this reading method, each meter communicates directly with
READy Manager via a point-to-point communication module integrated
in the meter.

The reading takes place automatically on a 15-minute, hourly or daily basis and reading data is
automatically available in READy Manager. Point-to-point reading is ideal as a supplement to a radio
network solution in which single remote meters are hard to reach, or if you prefer an automatic rea-
ding solution without infrastructure responsibilities.

This reading solution only applies to MULITICAL® 403 (NB-IoT network only), 603 and 803 meters..

The communication takes place via
the mobile network using a SIM card
(NB-IoT or 2G/4G network) or via wired
internet connection (Ethernet).

Each meter has an integrated point-to-
point communication module (either
an NB-IoT, 2G/4G or Ethernet Network
Module).

READy Manager

Meters

READy Manager is automatically updated
with new reading data every hour/day.*

*   or every 15 minutes (priority reading in 2G/4G networks only).

Wired meter reading

Existing and new meters with wired M-Bus embedded can be read out by READy Manager via direct wired communication.

A wired communication for both Kamstrup and non-Kamstrup meters is very useful in applications such as high-rise buildings, shopping malls, other commercial buildings, service buildings, etc. where wireless networks are challenged by concrete and heavy traffic on publicly available frequencies. Wired communication will be completely free of disturbances and will ensure full meter readings in tough surroundings.

The meters are interconnected by cable and wired to an M-Bus Master unit. The M-Bus Master is either connected to READy Manager by cable or via a local area network.

READy Manager and M-Bus Master connected by cable.

MOXA
RS232

READy Manager

TCP/IP

Local Area Network (LAN)

Kamstrup
Non-Kamstrup

Non-Kamstrup
Kamstrup
Non-Kamstrup

M-Bus Master
Meters

Important

We do not recommend that the communication is made public on the Internet. We always recommend that a firewall is used. Not following this recommendation is at your own risk.

READy Manager and M-Bus Master connected via a local area network (Kamstrup M-Bus Master at the top and a third-party M-Bus Master below). Note that if a Kamstrup M-Bus Master is used, an RS-232 to TCP/IP converter (e.g. Moxa Nport) is required.

M-Bus Master

M-Bus Master is designed for the connection of up to 250 meters with M-Bus interface. M-Bus Master can be used as a master, a transparent level converter or as a repeater.

The total number of meters in one M-Bus system can be up to 1250 meters. Kamstrup offers two different M-Bus Masters.

MultiPort 250D
With display and interface for Kamstrup optical read-out head

MultiPort 250L
Without display and interface for Kamstrup optical read-out head

Log reading and remote configuration of meters

Meters with built-in two-way communication such as MULTICAL® 403, 603 and 803 can be configured remotely via READy App.

This means that it is possible to update the meters with new settings from the street, completely without having to disturb the consumer and without logistic issues in relation to gaining access to the meter.

It is possible to configure parameters such as tariffs and data logging intervals as well as pulse inputs. Furthermore, the remote configuration can be used to change the information that the meter sends in the Wireless M-Bus data package. Meter settings can thus be adapted to changing needs for data and new invoicing concepts.

In addition, the two-way technology enables remote reading of the meter's log. The logged data can be read from the street by using READy App. Thereby, meters with abnormal consumption patterns can be investigated further without the need for making an appointment and disturbing the consumer unnecessarily.

The two-way communication makes it possible to change the settings to read logs from meters from the street.

MULTICAL® 803

MULTICAL® 603
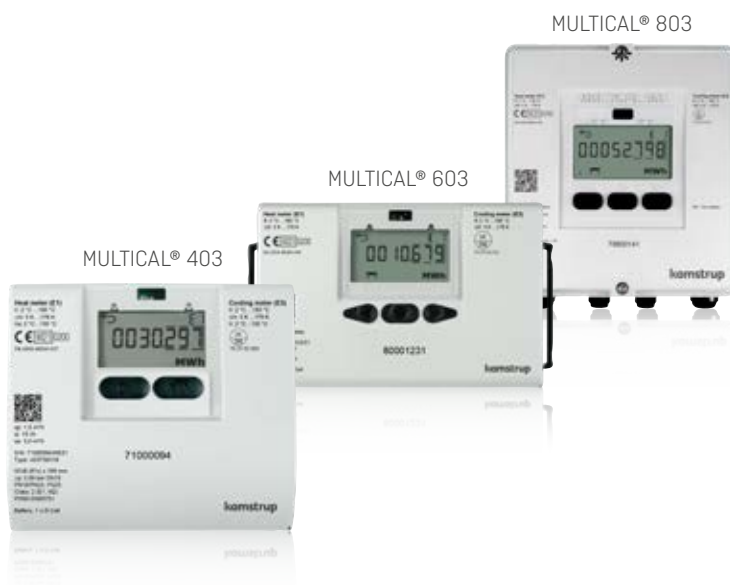
MULTICAL® 403

Remote reading of analog input sensors with MULTICAL® 603 and 803

Sensors such as temperature, pressure, air velocity, air energy content and air humidity sensors can be read remotely in READy via MULTICAL® 603 and 803 meters in all reading networks (drive-by, fixed network, point-to-point and wired meter reading).

The reading takes place by connecting the sensor to a MULTICAL® 603 or 803 meter fitted with an analog input module. Module configuration can be done by using a configuration program and a module programming cable. 1 or 2 external sensors can be connected to each meter. The sensor values are logged in the P1 and P2 registers of the meter.

MULTICAL® 803

MULTICAL® 603

Analog input module
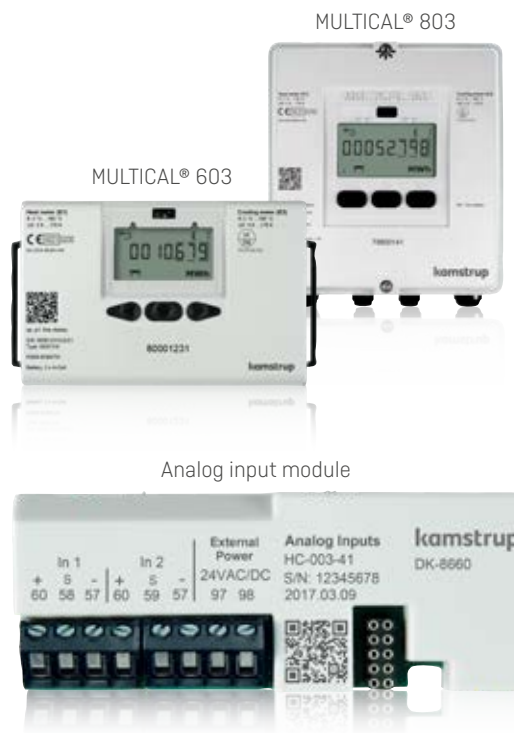
READy Manager – handling and storage of meter data

The handling of meters and meter data takes place in READy Manager. READy Manager has a simple and logical user interface with a start page and icon-based navigation.

This makes the program very intuitive and easy to use. Information about the most basic modules can be found by clicking the help icon on the start page.

Both Kamstrup meters and some non-Kamstrup meters can be read via READy Converter and READy App in drive-by installations.
A number of non-Kamstrup meters have been whitelisted for this purpose.

READy Manager has a simple and logical user interface, making it very intuitive.

READy Manager handles meter encryption keys to support the best security possible. Once your meter encryption keys have been installed, you can read data from your meters.

In the map view, you can see both Kamstrup meters and non-Kamstrup meters, and they are visually differentiated to provide a better overview.

Once meters have been read via READy App, data is synchronized to READy Manager and data is available for further actions.

READy Manager supports up to 100,000 metering points and comes in either a local or a hosted solution. If you choose a hosted solution, meter data is stored and kept safe at Kamstrup. If you choose a local solution, meter data is stored locally on your own computer.

Presentation of meter data

READy Manager gives you access to the consumption history (hourly, daily, monthly or yearly) of a consumer in the desired time interval – displayed in a simple and easy-to-use bar chart.

Tooltips with more details, such as information about meter exchanges, meter rollovers and meter events (info codes), are also available.

The consumption graph makes it a lot easier to deal with billing issues and explain the consumption to consumers. If you need to share the information with your consumer, for example by email, a report with the graph and its data can be created with a single click of the mouse.

READy Solution description – Heat/Cooling

Compare data

It is possible to compare values for different meters. It is also possible to compare different values for the same meter. For example, if you compare the inlet and outlet temperatures for a priority meter (a meter read at 5-minute intervals), you can check that the outlet temperature decreases as the inlet temperature rises to see if the heat is transferred as intended.

Priority meters

If you have established fixed network reading, you quickly discover the benefit of receiving data from the meters frequently. In some cases, it may be desirable to receive data with very short reading intervals. For this purpose, READy Manager offers the functionality Priority meters which enables you to read up to 50 meters at 5-minute intervals.

The short reading interval provides you with a far more varied picture when you need to troubleshoot certain parts of the network. The module is also very useful in relation to pressure monitoring. With a reading interval of 5 minutes, pressure differences as a result of the flow in parts of the network can be mapped and the pressure optimised.

Priority meters and Kamstrup PressureSensor

With priority meters and Kamstrup PressureSensor, it is possible to verify hydraulic pressure losses throughout the distribution network. Pressure information provides you with details about the distribution pumping and knowledge about the pressure losses in your distribution network. This can guide you when creating new distribution networks or expanding a network.

See the meters on a map

The location of each meter is shown directly on a map in READy Manager to ensure the best overview of the installed meters. By clicking a meter on the map, further information about that meter is shown. The map is based on Google Earth (for China Baidu maps), and therefore, it is possible to use the Street View function to see comprehensive details about the installation sites.
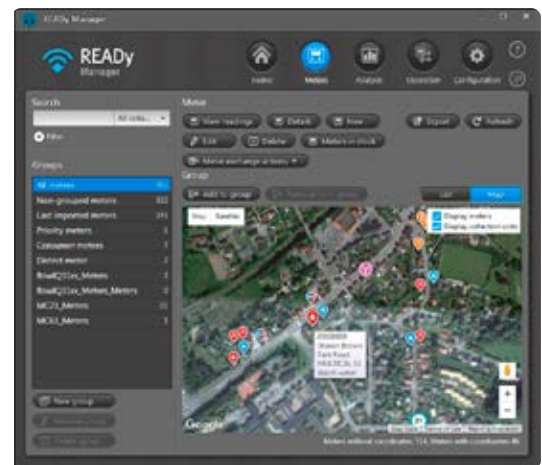
If collection units are installed in your network to collect meter data, they can also be shown on the map. Kamstrup meters are displayed in blue, red or green. Non-Kamstrup meters are displayed in orange. Collection units are displayed in purple.

Grouping of meters

To provide an overview of the meters in your distribution network, you can divide your meters into groups.

Groups can be used to filter out which meters you want to show on the map and in the list in READy Manager. They can also be used to create logical reading groups and groups of meters that need special attention.

You can create as many meter groups as you like, and a meter can be part of more than one group, if required.

Heat reports

It is possible to keep track of inlet temperatures, outlet temperatures and cooling performance (temperature difference).

Three types of heat reports can be generated in READy Manager:

• Cooling performance (temperature difference)
• Inlet temperature
• Outlet temperature
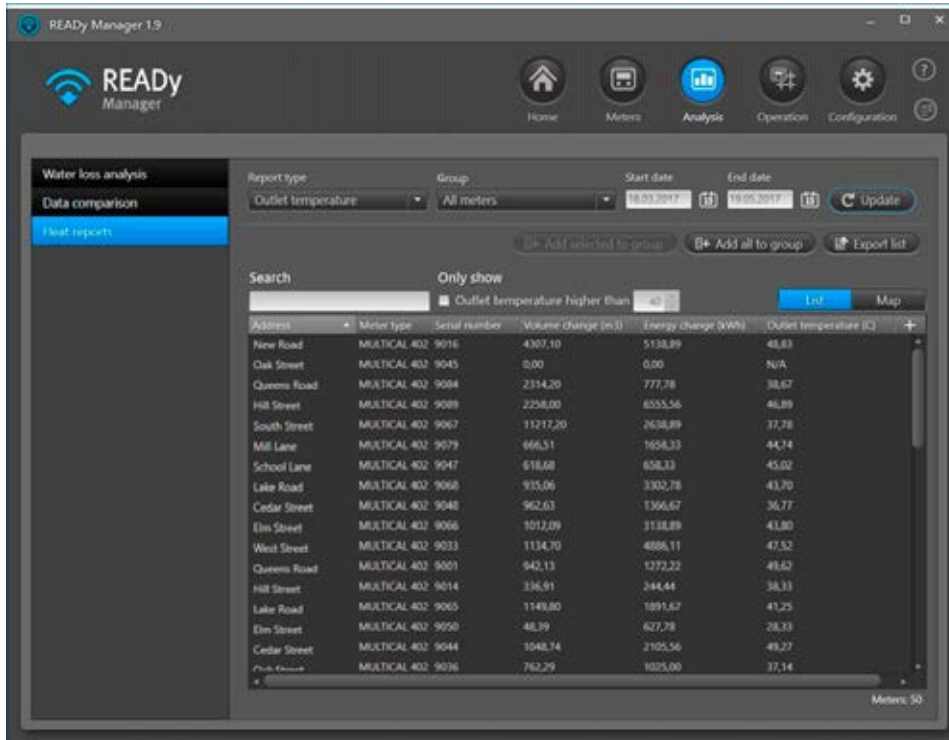
How it works

The reports can be generated for specific meter groups and time intervals.

For cooling performance reports, you can filter on performance level and differential temperature. The definition of poor and good performance is customisable.

All reports can be exported for further analysis purposes.
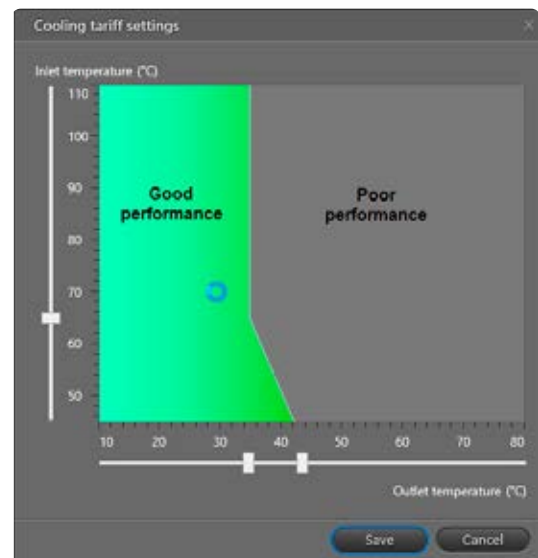
Consumption reports

READy Manager keeps track of the consumption and lets you generate consumption reports that show the total consumption for both individual consumers as well as for all consumers included in the report and in the time interval of your choice.

A filtering option enables you to set up a consumption limit and only include the consumers with a consumption above or below the specified limit in your report, for example if you want to identify consumers with unusually high or zero consumption. If desired you can add them to a group for further investigation.

All reports can be exported for further use.

READy Solution description – Heat/Cooling

If you want to see detailed consumption information for a specific consumer in the report, you can go to the consumption graphs for that particular consumer directly from the consumption report.

Reading performance reporting and visualization

For remote reading networks, the demand for a very high performance is more and more evident. To have the right tool to validate and document the data collection success is therefore necessary. With the performance reading reporting and visualization module, it is hassle-free to get a network performance overview of meters selected.

You define what is good and what is bad performance. With a single setting of a parameter, you determine when meters are performing poorly.

How it works – Performance overview

Meters that are available in READy Manager are listed for an easy overview. Each meter is shown within a user-defined interval, with its percentage of data messages received.

It is possible to create a report that shows the reading performance of a group of meters according to user-defined parameters. It is, for example, possible to retrieve a complete list of all poor-performing meters that are due to further investigation and optimization. If required, you may add comments to the generated report.
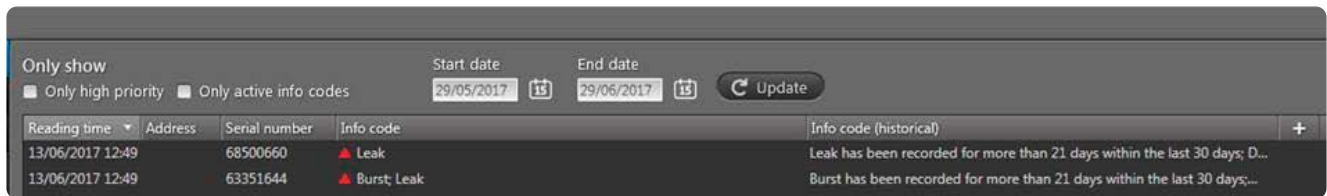
Alarms and other meter notifications

To counter revenue loss and protect your network and your customers, notifications and alarms from the meters in your network such as leaks, bursts, tampering attempts and reverse flow are shown in the overview "Info codes".

Here, alarms can be sorted quickly so that the newest and most important can easily be found. Consumers can individually define which alarms are relevant and can be notified quickly to limit expensive consequential damages.

Once customers with active info codes have been located, it is easy to export the list of info codes if further customer interaction is needed. The export data is defined by the user which ensures flexibility.

To ease the overview, an icon representing the info codes is displayed in the meter overview window. This enables fast identification of customers with active info codes.

Immediately after the synchronisation, the read data is available in READy Manager.
Alarms and other meter notifications are shown under "Info codes".

System notification feature
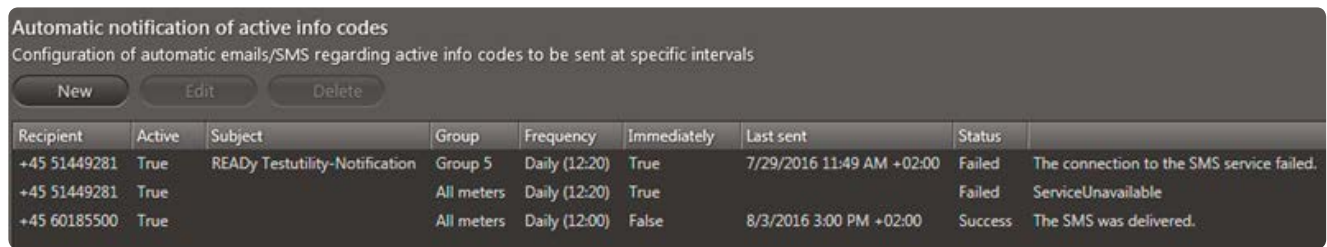
In remote reading networks, it can be quite challenging to keep track of info codes and act accordingly. On the basis of customizable parameters, the Notification feature filters which info codes are relevant and which are not. The Notification feature forwards an info code by text message and/or email to a user-defined number of recipients. Forwarding settings determine if an info code is transmitted or not.

The Notification feature increases the awareness of important info codes, to a large extent giving you full control of meter events.

Monitoring energy usage with consumption alerts

With the consumption alerts in READy Manager, you can monitor the energy usage of a heat instal-lation and detect excessive consumption. You may, for instance, want to offer consumption alerts as a service to your customers to help them control and monitor their energy usage.

How it works

You can set up a consumption limit for a meter and receive an alert in READy Manager if the specified limit is exceeded.

Monitoring of the consumption limit can be active for a specified period of time or be set up without an end date, and you can monitor the consumption of up to 5000 meters at a time.
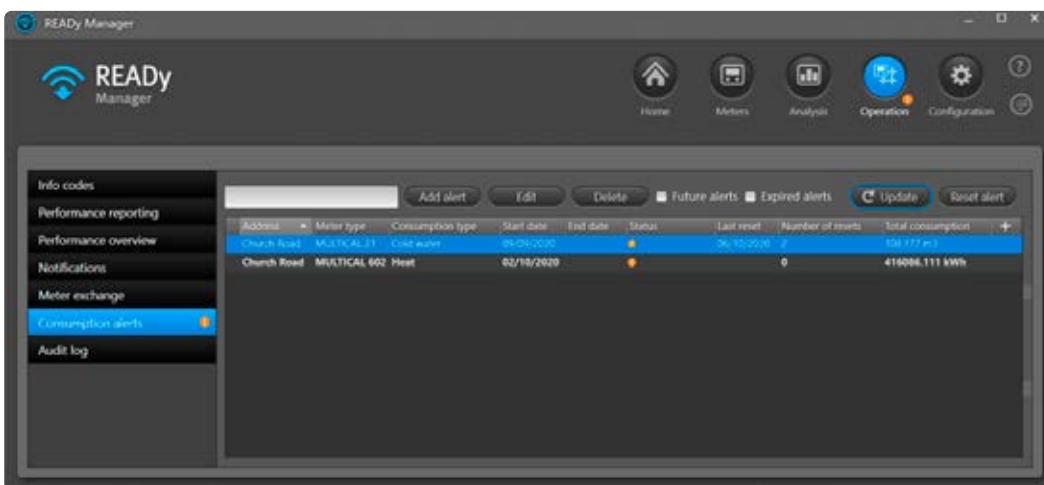
If a consumption alert is triggered, clear and visible alert indications appear in READy Manager. Furthermore, it is possible to reset an alert and receive a new alert if the consumption limit is ex-ceeded again.

Remote disconnection of heat supply (wired M-Bus reading only)

For MULTICAL® 403, 603 and 803 meters read in a wired M-Bus network, it is possible to remotely disconnect and reconnect the heat supply from READy Manager. This means that if you need to cut off the heat supply due to non-payment, energy saving, maintenance, detection of a leakage, etc., you can do so from the utility.
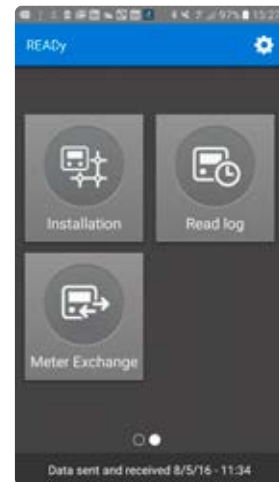
How it works

The heat supply is cut off by remotely operating a normally open or normally closed valve that is connected to the heat meter in your network. In READy Manager, you select the meter and disconnect or reconnect the heat supply with a few clicks. You can also check whether the heat supply is currently connected or disconnected:
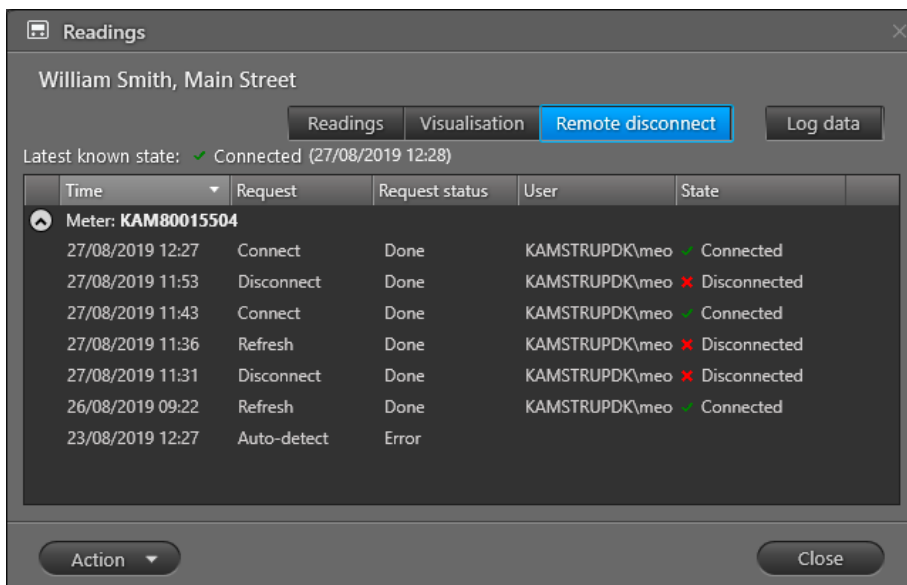
Meter exchange

Many manual tiring processes are involved in the running maintenance of meters and the handling of meter exchanges.

The meter exchange feature in READy Manager and READy App simplifies the handling and maintenance of the meter exchange process which to a very high degree frees human resources to other tasks. In addition, the risk of manually caused errors is reduced to a virtual zero, which adds to the total efficiency of your utility.

How it works

Exchanging a meter is a guided action that is generally performed via READy App, but it is also available in READy Manager. Once the meter is exchanged, READy App is synchronized with READy Manager where the historical data is stored. This flexibility leaves an option for you to perform meter exchange on-site or before the actual customer visit.
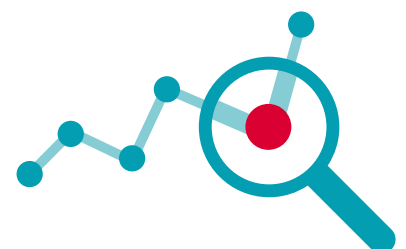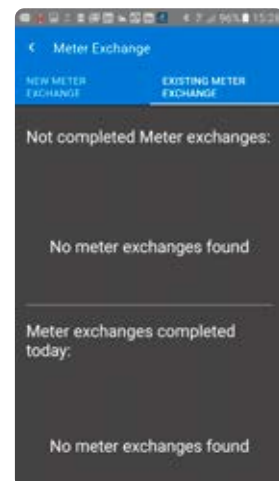
Export of data

To simplify the integration with billing systems, READy Manager makes it possible to export data in flexible export formats. It is possible to generate most formats by selecting the data to export, the order and the separator.

Data can be exported either ad hoc or by creating an automatic job which exports data to a selected location at certain intervals. Alternatively, you can set up READy Manager to automatically send out the read data via email at certain intervals.

Billing systems may require fixed width formats. This is solved with the flexible custom export function that supports both dynamic and fixed export widths together with a long list of data variables that can be exported.

Once the meter reading is received by READy Manager, the data can be exported to other programs for further usage.

Non-Kamstrup metering data is exportable in the same way as Kamstrup metering data. Note that T1 OMS data read from a non-Kamstrup meter, or meters that have been manually read, does not have the same amount of data variables as a Kamstrup heat/cooling or water meter.

For data exports, it is possible to enable the data interpolation feature, which is a tool for digitally enhancing the data quality by filling in missing values using advanced algorithms. Note that this feature applies to water meters only and requires a fixed network reading solution.
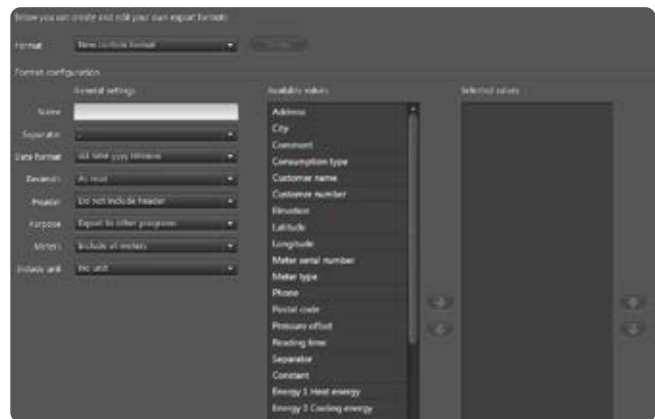

Import of meters and customers

Meters and customers can be easily imported into READy Manager either ad hoc or automatically. Meters are imported automatically from My Kamstrup. Customers are imported automatically by setting up an automatic job that imports data from a selected location at certain intervals.

The import format of customer data is flexible and can be defined by selecting the separator between values and by mapping imported customer values to values in READy.

Import of meter readings

If you have more than one reading system, for example if your heat meters are read via an electricity meter reading system, such as Kamstrup's OMNIA® system, or you are in the process of replacing an old meter reading system, you can import your heat meter readings into READy to keep them all in one place.

Meter readings are imported from a secure FTP server. The readings are imported automatically by setting up an automatic import job.
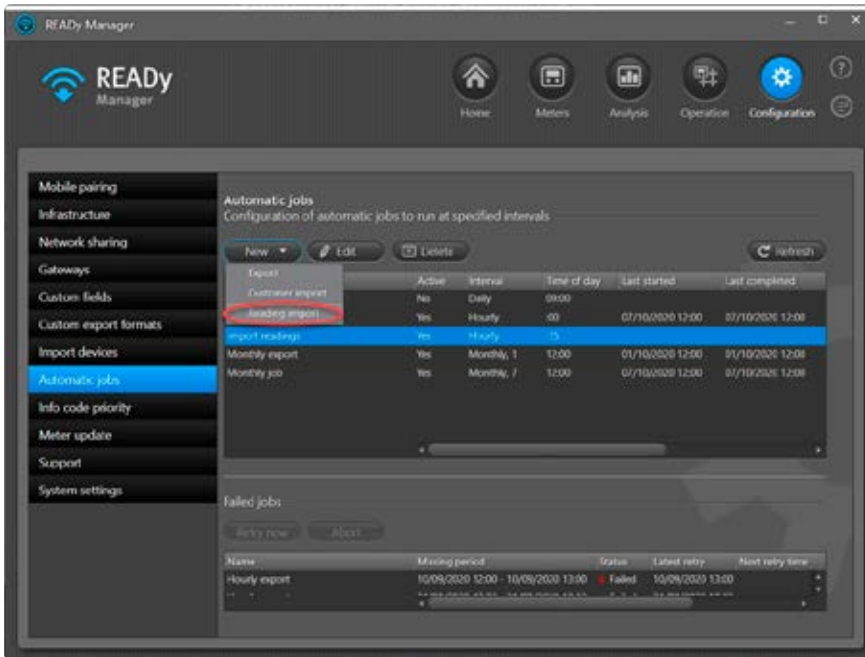
Electricity meters

With fixed network reading and drive-by meter reading, it is possible to read electricity meters. The electricity meter supported in READy Manager is Kamstrup OMNIPOWER®.

Data available in READy Manager: A+; A-; P+, P-.

# Flexible access to data in READy with API Access

READy's API (Application Programming Interface) provides a flexible access to data in READy and enables you to share it more easily with other applications and services such as billing systems and customer portals.

This makes it possible for you to build the desired solutions based on READy data continuously made available as soon as they are received in READy and not according to a fixed export schedule.

Use case examples

The API can be used to develop new services and create internal tools to improve manual processes and workflows at the utility. For example:

- If you perform meter exchanges via your billing system, you can use the API to automatically update READy with meter exchange information.
- If you have or develop a consumer prepayment app, you can use the API to continuously retrieve consumption data to the prepayment app. If the payment decreases below a certain limit, the heat supply can be disconnected via the API.
- If you have or develop a consumption app, the API can be used to continuously send updated consumption data to the consumer.
- If you have or develop an alarm app, you can use the API to send info codes directly to the consumer as soon as they arrive in READy.
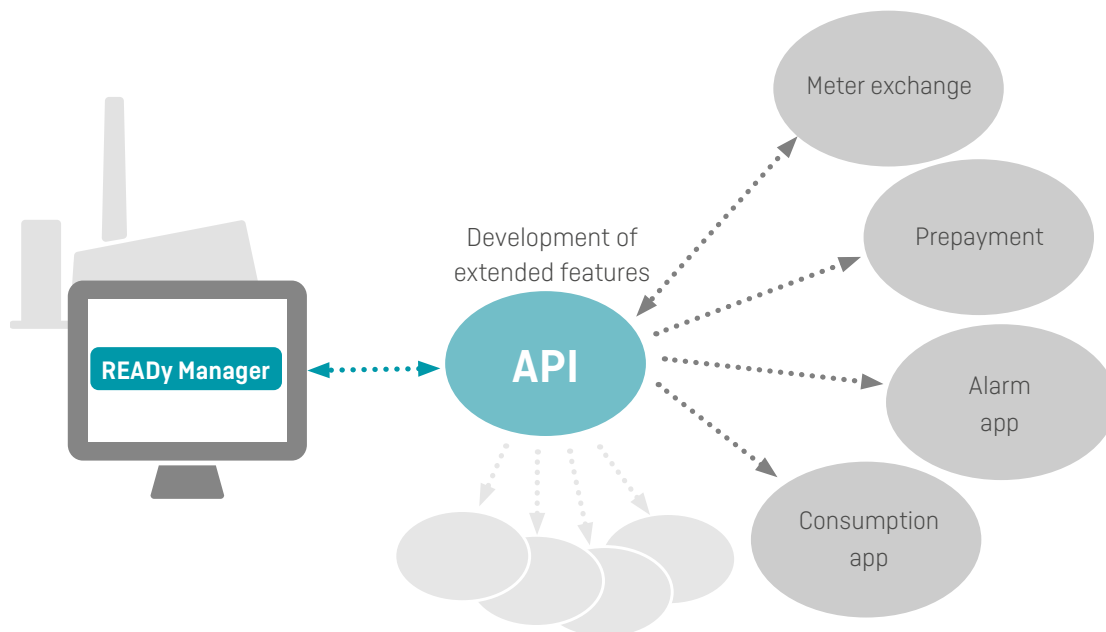
Data security

To ensure a very high degree of data security, the data communication from each Kamstrup wireless M-Bus meter is encrypted with an individual AES 128-bit encryption. This means that consumption data from the meter can only be decrypted by the associated READy Manager and by the mobile units authorised by READy Manager.

Encryption keys are automatically loaded into READy Manager via direct connection to My Kamstrup which ensures that you receive the correct keys – in this way, new meters are automatically available in READy Manager, shortly after having purchased them from Kamstrup. Furthermore, meter and reading data are stored safely at Kamstrup via our hosting solution. We have ISO 27001 certification within IT security.

Data thinning

Readings collected via your network will be reduced according to the following rules: The first 13 months all readings are stored. After 13 months, only one reading per day will remain. After 5 years, no readings will remain in the database (no matter how they were collected).

Audit logging

Managing the who, what, and when of user actions in READy Manager

An audit log of user actions is available in READy Manager. For each event, you can see:

- the date and time of the event
- the type of event
- the name of the user who triggered the event
- the computer name of the user who triggered the event.

You can select the log period that interests you and see more technical details about an event.
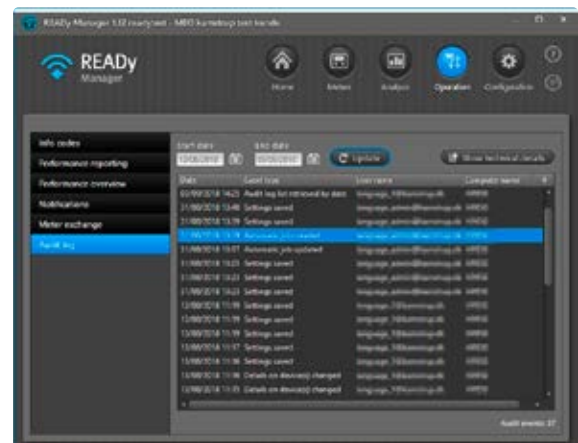
Role-based access control

To protect your meter, reading and customer data from potentially unwanted operations, such as delete, edit or rename, the permission to perform certain operations in READy Manager can be restricted by user roles. Three types of user roles exist: user, superuser and administrator.

With the user roles and permission setup in READy Manager, you are able to control access to various operations in READy Manager and to change the permissions of user roles in the future.

How it works

Your access to features in READy Manager is restricted by your user role. For example, the role "user" allows you to view meters and other data and to export information from READy Manager. However, you are not allowed to import, configure, create, edit or delete data.

Your READy Manager user role is attached to the login information you use when you log in to READy Manager.

Users with the role "administrator" can change the permissions of the "user" and "superuser" roles.
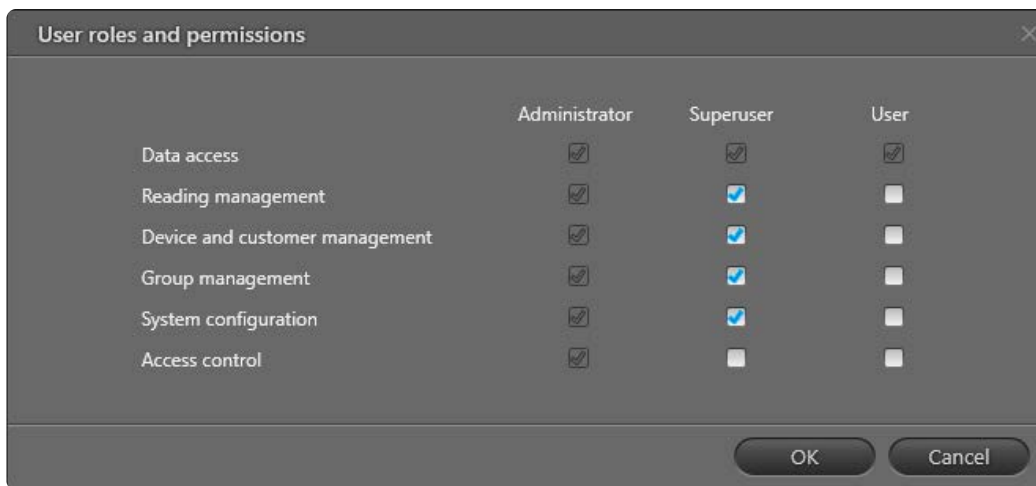
General Data Protection Regulation

At Kamstrup, we strive to protect your data and ensure that you can focus on what is important, rather than worrying about protecting your data.

To comply with the General Data Protection Regulation (GDPR), each user has her/his own personal login. This means that you use your My Kamstrup login credentials to get access to our products.

Furthermore, to comply with GDPR article 17 "Right to erasure" (or "right to be forgotten"), meter readings can be deleted if former residents ask for the deletion of their consumption data when they no longer live at an address.

Remember that customer data you enter or import into READy must comply with the General Data Protection Regulation (GDPR).