

Installation and operation guide

READy Collector

Warning!

Read instructions before installation



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Symbols used in this document



Warning

Indicates a potentially hazardous situation, which if not avoided, could result in death or serious injury.



Caution

Indicates a situation, which if not avoided, could result in damage to equipment, mild injury or loss of data.



Note

Important information, ex. Preconditions, necessary steps before proceeding etc.

Warnings in this document



Warning:

Ensure the power is disconnected before operating inside the READy Collector Base.



Warning:

The power cable must be installed by an electrician or trained personnel with the right qualification.



Warning:

Electric hazard – risk of electric shock



Warning:

Make sure there is no power supply connected when connecting the power cables



Warning:

Working on a live electric installation is not recommended



Warning:

Ensure that the antennas are installed in lightning zone 0B (for further details see section 10)

Call Kamstrup if any questions or need for guidance.

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Contents

1	Abbreviation and explanations	5
2	FCC Cautions	5
3	System introduction	6
4	Before you begin	8
4.1	Precautions	8
4.2	Possible Installation sites	8
4.3	READY Collector Base	8
4.4	READY Collector Top	8
5	Before installing the system	8
5.1	Radio propagation study	8
6	Hardware	9
6.1	READY Collector Base	9
6.2	READY Collector Top	10
6.3	Preconditions for installation	11
6.3.1	Establishing cellular connection	11
6.3.2	Installation location	11
6.3.3	Approved hardware components	11
6.3.4	Configuration	11
6.3.5	Power	11
6.3.6	Ethernet or cellular connection	11
6.4	Preconditions	12
6.5	Installation of READY Collector Top	13
6.5.1	Preconditions	13
6.5.2	Installation steps	14
6.6	Installation of the AMI antennas	16
6.6.1	Preconditions	16
6.6.2	Installation steps	16
6.7	Prepare the connection cables between READY Collector Top and Base	18
6.7.1	Preconditions	18
6.7.2	Installation steps	18
6.8	Installation of READY Collector Base	19
6.8.1	Preconditions	19
6.8.2	Installation steps	19
6.9	Configuration of READY Collector Base	20
6.9.1	Preconditions	21
6.9.2	Installation steps	21
6.9.2.1	Connection of READY Collector Top and Base	21
6.9.2.2	Internet connection	22
6.9.2.3	Mains power connection	25
7	First startup of the READY Collector system	27
7.1	Preconditions	27
7.2	First startup steps	27
8	Test the installation	29
8.1	Precondition	29
8.2	Test steps	29
9	Antenna installation - best practice	30
9.1	Best practice for antenna installation	30
10	Effective Radiated Power	31
11	Service port	31
12	Approvals and markings	31
13	Troubleshooting	32
13.1	Not all LEDs are green in the Status reader tool	32
13.2	READY Collector is not visible in the Status reader tool	32
13.2.1	Possible cause	32
13.2.2	Solution	32
13.3	READY Collector is not visible in READY Manager	33
13.3.1	Possible cause	33
13.3.2	Solution	33
14	List of tables and figures	34

1 Abbreviation and explanations

AMI	Automated meter infrastructure
EIRP	Effective isotropic radiated power
ERP	Effective radiated power or emitted radiated power
RF exposure	Radiofrequency radiation, electromagnetic radiation from the radio
Ethernet cable	Internet cable or cable between READy Collector Base and Top
GPS	Global position system
FCC	Federal Communications Commission
Status reader tool	Status reader. A PC program to check the status of READy Collector Top
MDM	Meter data management system
READy Manager	Kamstrups MDM system
READy App	A part of Kamstrups MDM system. Runs on your android phone and can e.g. be used to configure your Kamstrup smart meters
Frequency Service	The READy Manager service that handles your licensed frequencies to be used in your AMI system.

2 FCC Cautions

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or Kamstrup directly.

3 System introduction

This is the Kamstrup AMI system – READy Collector. This system is used to collect data from Kamstrup smart water meters.

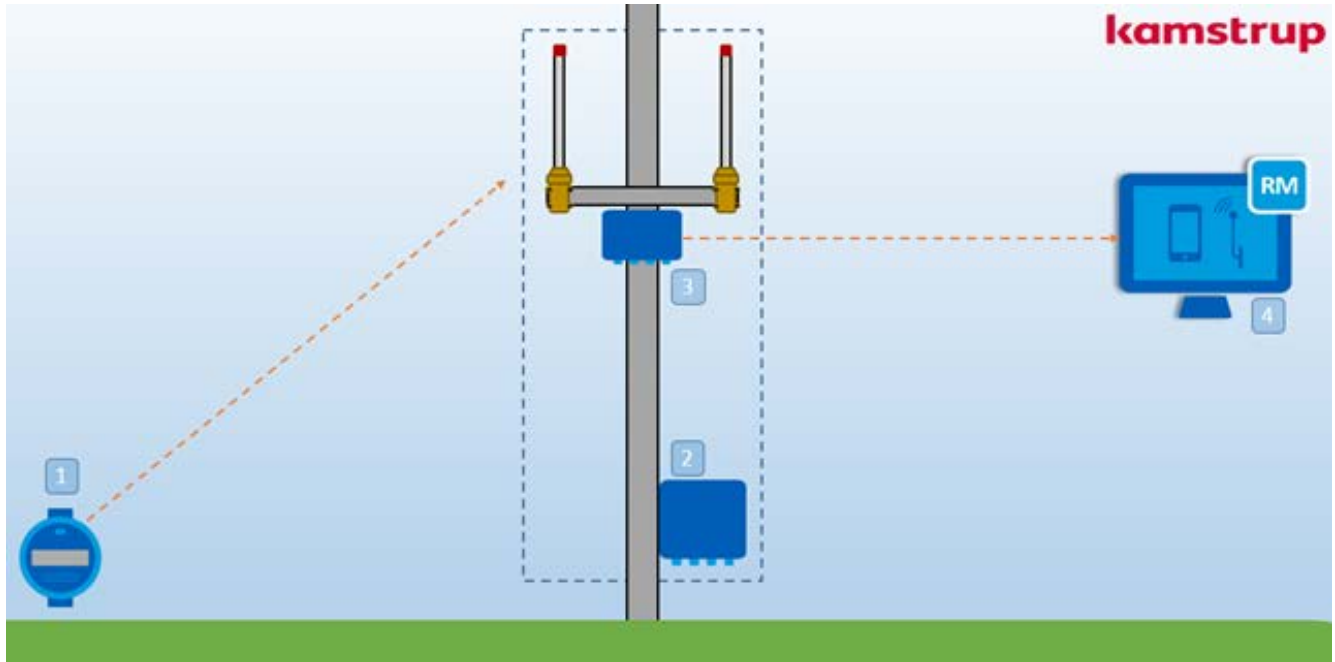


Figure 1 - Kamstrup AMI - READy Collector.

Position	Description
1.	Kamstrup smart water meter
2.	READy Collector Base
3.	READy Collector Top
4.	READy Manager meter data management software

Table 1 - READy Collector system drawing

The system consists of two parts, READy Collector Top and READy Collector Base.



Figure 2 - READy Collector

READy Collector Top and Base

READy Collector Top contains the intelligence and the radio, transmitting and receiving all data to and from the meters.

READy Collector Base provides power and internet connectivity to READy Collector Top.

A single READy Collector Base allows you to connect up to four READy Collector Tops.

READy Collector Base is configurable for either a cellular modem solution or an Ethernet connection to an existing wired internet.

The installation is simple; connect all cables and antennas, power up and the system boots automatically. All configuration is done in READy Manager, including setting of frequencies and maximum allowed transmission power level.

The system operates in a licensed frequency band; 450-470 MHz. This means that you need a frequency license to operate the system.

Kamstrup can support you in your application and with the propagation study needed for the application.

READy Collector supports 2-way communication between meter and collector. This allows you to make changes to the meters configuration. All this is handled in your READy Manager directly from your office.



Figure 3 - READy Collector Top



Figure 4 - READy Collector Base

4 Before you begin

4.1 Precautions

Only trained personnel are allowed to install the READy Collector system.

To become a certified Installer, contact your nearest Kamstrup office for further information.



Note: Clamps, screws and anchors are not included for READy Collector Top and READy Collector Base bracket packages.

4.2 Possible Installation sites

Kamstrup recommends that you consult a qualified engineer to verify load requirements as well as local- and safety regulations.

Furthermore, ensure you have the permission from the site owner to install the system and the permission to operate the system in the specific area.

Kamstrup can't be held responsible for faulty installations, whether the structural support is inadequate or permissions were not given to use the specific site for installation and operation.

4.3 READy Collector Base

We recommend READy Collector Base is installed in areas where it is easy accessible both for installation- and service personal to perform onsite test and inspection of the system.

READy Collector Base is prepared for installation on a flat surface.

You as an Installer, need to supply the needed fasteners, anchors and screws/bolts.

4.4 READy Collector Top

READy Collector Top is designed to be installed close to the antennas. The bracket allows installation on both plain surfaces and a pole larger than 2".

To be able to install the bracket, use appropriate mounting hardware, clamps and screws capable of handling the weight of READy Collector Top with adaptor, bracket and cable weight. For further details, see installation procedure in the guide following the bracket.

You as an installer need to supply the needed fasteners; anchor, screws/bolts or clamps.

5 Before installing the system

5.1 Radio propagation study

Kamstrup READy Collector is utilizing the licensed frequency band 450 – 470 MHz.

To get a permission to operate in this band, you need an FCC license.

Kamstrup will assist you on the application for the FCC License.

Kamstrup will provide you with the Radio Propagation study required in the FCC application.

The Radio propagation study will give a qualified estimate of the coverage zone for Ready Collector and the meters. By doing so, Kamstrup ensures you have the best possible setup to get the most out of your network.

Retrofitting pit antennas on some meters and trimming of the network is to be expected in order to obtain the required meter reading performance.

6 Hardware

6.1 READy Collector Base



Figure 5 - READy Collector Base inside view

Position	Description
1.	Power inlet [85 - 264 V, 50/60 Hz]
2.	Surge protection 24VDC
3.	Surge protection 240 / 120 VAC
4.	Power supply
5.	Power switch, 24VDC
6.	Power switch, 120/240 VAC
7.	Ethernet Switch
8.	SIERRA Wireless RV50x Modem [Optional]
9.	Power terminals to READy Collector Top(s)
10.	Ethernet terminal to READy Collector Top(s)
11.	Ground/protective earth connection
12.	Ethernet connection [wired internet connection] GSM/LTE connection [if modem is installed]

Table 2 - READy Collector Base internal design

6.2 READy Collector Top

The intelligence and the radio hardware is placed in the READy Collector Top. These module needs no physical interaction; therefore, **do not open READy Collector Top**. Configuration of the system is done in READy Manager from your computer.

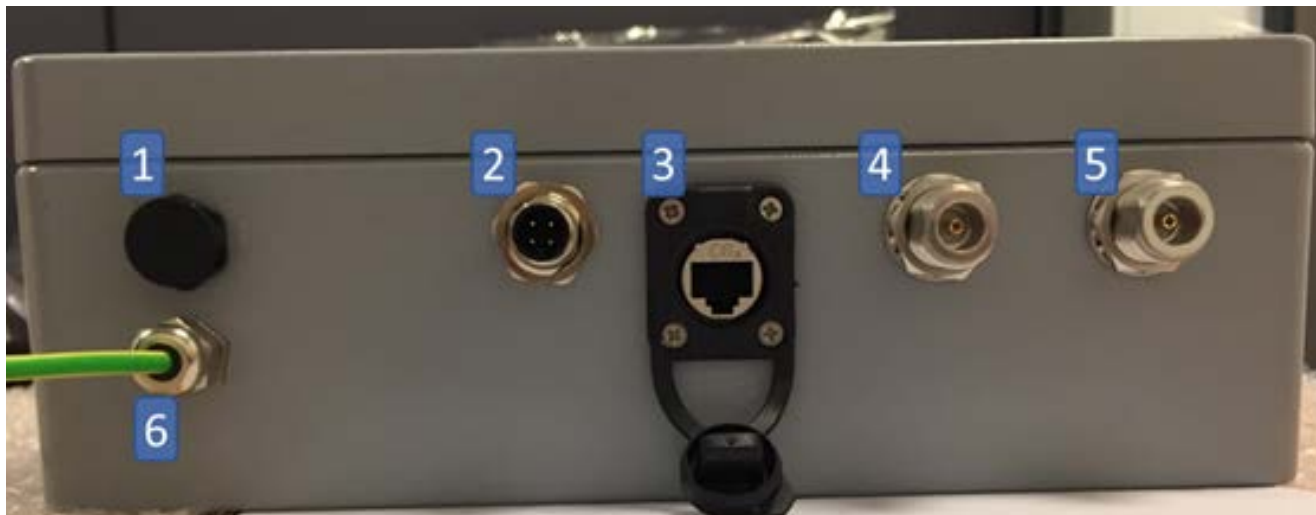


Figure 6 - READy Collector Top, bottom view

Position	Description
1.	Drain/ventilation
2.	24 VDC power connection
3.	Ethernet connection
4.	Antenna terminal 1
5.	Antenna terminal 2
6.	Ground/Protective earth

Table 3 - READy Collector Top bottom view

READy Collector Top and the antennas are designed so they can be installed either inside or outside. The hardware is durable towards harsh conditions such as high temperatures and the enclosure of READy Collector Top is water proof, NEMA 4X.

6.3 Preconditions for installation

6.3.1 Establishing cellular connection

To use a cellular connection, make sure you order the correct hardware, including the Sierra wireless modem. See the datasheet for the Kamstrup READy Collector system for further details.

The antenna for the Sierra wireless modem comes with a 16-foot cable to enable the antenna site to be located higher than the READy Collector Base installation site. This will provide for better cellular coverage.

Install the cellular antenna in an area with cellular coverage, please verify the connection before leaving the area.



Note: You can test the internet connection by connecting a laptop to an Ethernet port on the Sierra wireless modem to verify you have a working internet connection

6.3.2 Installation location

In the meter data management system, READy Manager, the location of the collector can be entered, to make sure it is shown on the map. For this, the exact GPS coordinates need to be entered. Use a GPS or your cellphone with navigation. This location shall be approved by the FCC to use with your frequency license.

Before installation Kamstrup advises you to have a professional advise you regarding the installation site for durability, safety- and local regulations applicable to the specific area.

6.3.3 Approved hardware components

Make sure you only use Kamstrup approved cables.

The hardware has carefully been constructed to be resistant to water, radio interference, surge pulses etc.

Other components might not provide you with the same level of security.

6.3.4 Configuration

The system is directly plug-n-play, meaning no configuration onsite is necessary, except for the configuration of the Sierra wireless modem for GSM/LTE connection. The configuration will be handled from your MDM system, READy Manager.

6.3.5 Power

You will need a power connection (110V) to power your READy Collector system.

6.3.6 Ethernet or cellular connection

You can use your existing internet connection or the optional modem solution to establish internet connection. Installation of READy Collector system



Note: Use only Kamstrup approved hardware in your READy Collector system. Hardware not approved by Kamstrup can cause lower system performance.

6.4 Preconditions

Check and ensure the following before installing the REAdy Collector:

- REAdy Manager and REAdy App are synchronized by scanning the QR code in REAdy Manager and pressing sync in REAdy App
- Frequency service is correctly setup in REAdy Manager
- Ensure you have the proper permission to use the frequency and transmission power at the installation site.
- Check if you have all hardware available before starting the installation process.



Figure 7 - REAdy Collector System

1. REAdy Collector Top
2. Brackets and adaptor plate for REAdy Collector Top
3. REAdy Collector Base
4. Brackets for REAdy Collector Base
5. Power and Ethernet cables in correct length
6. 2 x AMI antennas
7. 2 x antenna cables
8. **Optional:** Antenna Beam with bracket
9. **Optional:** SIERRA Wireless Airlink RV50x modem

6.5 Installation of READy Collector Top

6.5.1 Preconditions

Required Hardware:

- READy Collector Top
- Adaptor plate for READy Collector Top
- Brackets for READy Collector Top
- Bolts, washers and nuts for adapter plate and bracket installation
- Screws, anchors or clamps for fastening the bracket to the intended installation site (Not included)



Figure 8 - READy Collector Top assembly

6.5.2 Installation steps

1. Install the bracket on the adaptor plate

Required (included):

- 2 x countersunk bolts M6 x 25
- 2 x nuts M6
- 2 x washer M6



Note: Tighten to 5-7 ft. lbs. torque.



Figure 9 - READy Collector Top adaptor plate and bracket



Figure 10 - Back of adaptor plate



Figure 11 - Bracket on adaptor plate



Figure 12 - Bracket on adaptor plate

2. Install the adaptor plate on READy Collector Top

Required (included):

- 4 x bolts 5/16" x 7/8"
- 4 x washers 5/16"



Note: Tighten to 10-15 ft. lbs. torque.



Note: Make sure the cable glands on READy Collector Top are facing downward.



Figure 13 - Adaptor plate on READy Collector Top



Figure 14 - Adaptor plate installed on READy Collector Top

3. Complete the bracket assembly

Required (included in bracket packaging):

- 1 x bolt
- 2 x nuts
- 1 x washer
- 1 x mounting plate



Note: Tighten to 10-15 ft. lbs. torque.



Figure 15 - READY Collector Top Bracket assembly



Figure 16 - Bracket mounting plate



Figure 17 - Bracket mounting plate

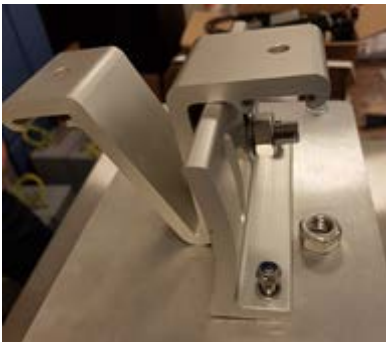


Figure 18 - Bracket assembly, nuts

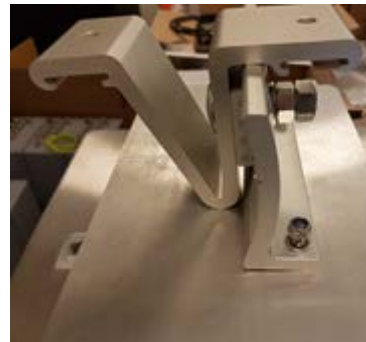


Figure 19 - Complete bracket assembly

The bracket assembly and adapter plate installation is complete.

**4. Install READY Collector Top on the intended installation site/surface.
See the bracket installation guide for further details.**

5. Establish a grounded connection by connecting the protective earth to solid ground


6.6 Installation of the AMI antennas

6.6.1 Preconditions


Check if all hardware is available before starting the installation

- 2 x Antennas with brackets
- 2 x Antenna cables
- Antenna beam (Optional)
- Bracket for Antenna beam including installation instruction (Optional)
- Cable ties (Not included)

 **Warning:** Ensure that the antennas are installed in lightning zone 0B (for further details **see section 10**)

 **Note:** Before installation of the AMI antennas please read section 10. Antenna installation - Good practice in this installation guide.

Ensure the antenna cables can reach REAdy Collector Top.

 **Note:** A minimum distance of 30" between the antennas is required

6.6.2 Installation steps

1. **Install the bracket on the antenna beam, tighten accordingly to installation instruction for the bracket.**



Figure 20 - Antenna beam bracket assembly



Figure 21 - Antenna beam bracket assembly 2



Figure 22 - Antenna beam bracket assembly 3

2. **Install the antenna beam on the installation site, tighten accordingly to the bracket installation instruction.**



Figure 23 - Antenna beam bracket assembly installed

3. Install the antennas on the antenna beam.



Figure 24 - Antenna installation on antenna beam

4. Connect the antenna cables to the antenna and READy Collector Top



Note: A minimum distance of 30" between the antennas is required



Figure 25 - Antenna connection

5. Secure the cables by tightening them to the installation site with cable ties.



Caution: DO NOT try to extend the cable, move READy Collector Top and the antennas closer together if the cable length is inadequate.



Caution: DO NOT use excessive force to bend the cables as this will damage the cable.

6.7 Prepare the connection cables between READy Collector Top and Base

6.7.1 Preconditions

Check if all hardware is available before starting the installation

- Power cable
- Ethernet cable
- Cable ties

6.7.2 Installation steps

1. Connect the cables to READy Collector Top



Note: Tighten to 0.4-0.6 ft. lbs. torque.



Figure 26 - Power connection installation 1



Figure 27 - Power connection installation 2

2. Start routing the cables from READy Collector Top to the READy Collector Base Installation site



Caution: Do not use excessive force to bend the cables, as this will damage the cable.

3. Secure the cables by tightening them to the installation site.

4. Connect the Ethernet cable using the weather proof connection.

6.8 Installation of READy Collector Base

6.8.1 Preconditions

Check if all hardware is available before starting the installation

- READy Collector Base
- Brackets for READy Collector Base
- Optional: Sierra Wireless modem + Modem antenna
- Anchors, screws for fastening READy Collector Base to the intended installation site (Not included)

6.8.2 Installation steps

1. Install the brackets on the READy Collector Base

Required (included):

- 4 x brackets
- 4 x bolts
- 4 x plastic washer
- Key for opening READy Collector Base



Figure 28 - READy Collector Base mounting bracket



Note: The bracket can be placed on both side of READy Collector Base



Note: DO NOT use excessive force to bend the cables as this will damage the cable.

Insert the bolt and washer inside READy Collector base and adjust the position of the bracket to the desired position.



Figure 29 - READy Collector Base bracket orientation 1



Figure 30 - READy Collector Base bracket orientation 2

2. **Measure the distance between the brackets.**
3. **Transfer this measurement to the wall to drill the holes for fastening.**
4. **Install READy Collector Base on the wall and make sure it is properly supported.**

6.9 Configuration of READy Collector Base



Warning: Ensure the power is disconnected before operating inside the READy Collector Base



Warning: Do not work on the READy Collector Base in bad weather, cover the installation site if possible to ensure no intrusion of water or dirt.

The intended functionality of the cable glands at the bottom of READy Collector Base are as follows:

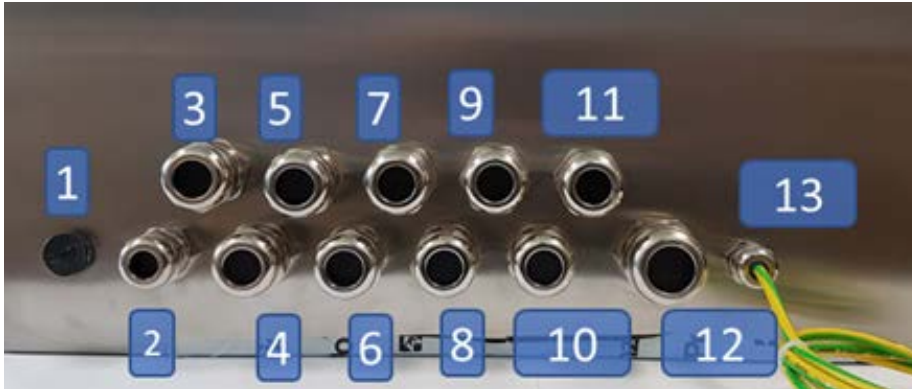


Figure 31 - READy Collector Base bottom view

1. Drain/ventilation
2. Modem antenna (Optional)
3. Ethernet from READy Collector Top 1
4. Power READy Collector Top 1
5. Ethernet from READy Collector Top 2
6. Power READy Collector Top 2
7. Ethernet from READy Collector Top 3
8. Power READy Collector Top 3
9. Ethernet from READy Collector Top 4
10. Power READy Collector Top 4
11. External LAN (internet connectivity)
12. Mains power
13. Protective earth

Table 4 - READy Collector Base bottom view

6.9.1 Preconditions

Required:

- Mains power cord, 110VAC (not included)

6.9.2 Installation steps

6.9.2.1 Connection of READy Collector Top and Base

1. Insert the power and Ethernet cables through the appropriate LAN and power cable glands on the bottom of the READy Collector Base. E.g. cable gland position 3 and 4 for READy Collector Top 1 see figure 31.



Caution: Do not work on the READy Collector Base in bad weather, cover the installation site if possible to ensure no intrusion of water or dirt.

2. Connect the Ethernet cable from READy Collector Top to an available Ethernet port on READy Collector Base.



Note: Do not work on the READy Collector Base in bad weather, cover the installation site if possible to ensure no intrusion of water or dirt.



Figure 32 - READy Collector Base Ethernet connectors

3. Connect the power to the 24 VDC busbar.



Caution: Connect the black wire to the ground (0V) and the red wire to 24V (1)

To install the power cable, use a small nonconductive screwdriver (insulated). Apply pressure on the orange button above, to open the terminal



Figure 33 - READy Collector Base 24VDC connection

4. Insert the cable and remove the screwdriver to fasten the cable into the terminal.
5. Pull the cable gently to ensure the cable is safely connected.

6.9.2.2 Internet connection

The internet connection can be obtained via a local Ethernet connection to a router or via the optional modem

Ethernet connection (Local internet connection)

1. Insert the Ethernet cable through cable gland 11 on the bottom of the READy Collector Base.
2. Disconnect the Ethernet plug placed in port 5 in the LAN switch (located at position 12) and insert the new Ethernet plug:



Figure 34 - READy Collector Base LAN connection

Sierra Wireless Airlink RV50x Modem (Optional)



Note: When using the SIERRA Wireless Airlink RV50x modem, you need an approved SIM-card provider or an agreement with a CDMA operator, contact your preferred cellular service provider.

Required:

- A SIM card without a PIN code is required
- Sierra Wireless Airlink RV50x modem
- Antenna for the modem

Installation steps

1. Insert a SIM card into the modem.

Unscrew the two screws to remove the plate to the SIM card slot.



Figure 35 - SIERRA Wireless AirLINK RV50x, SIM installation 1



Figure 36 - SIERRA Wireless AirLINK RV50x, SIM installation 2

2. Insert the modem on the DIN bracket in READY Collector Base



Figure 37 - SIERRA Wireless RV50x Installation

3. Connect the power and Ethernet cables to the modem



Figure 38 - LAN and power connection, SIERRA Wireless RV50x

4. Insert the cellular antenna connector through cable gland 2 on the bottom of READY Collector Base

5. Connect the cellular antenna to the left antenna connector (cellular) on the modem



Figure 39 - SIERRA Wireless RV50x Cellular connection

6. Install the cellular antenna outside the READY Collector Base.



Note: Place the cellular antenna high and free from obstacles to ensure a good consistent signal.

Configuration of the Sierra Wireless modem

Please follow the installation guide for the SIERRA Wireless AirLINK RV50x for further information.

6.9.2.3 Mains power connection



Warning: The power cable must be installed by an electrician or trained personnel with the right qualification.



Warning: Electric hazard – risk of electric shock



Warning: Make sure there is no power supply connected when connecting the power cables



Warning: Working on a live electric installation is not recommended



Warning: Make sure the power switch is positioned (230V/120V) correctly before proceeding!



Caution: Make sure that the power switch is positioned (230 V/120 V) correctly before proceeding.



Figure 40 - READy Collector Base 230/120VAC switch



Figure 41 - READy Collector Base 230/120 VAC switch positions



Figure 42 - READy Collector Base power supply

Installation steps

1. **Insert the cable through cable gland 12 in the bottom of the READY Collector Base**
2. **Connect the power cable to the input power terminal (110 – 265 V, 50/60 Hz)**



Caution: Connect to the L and N inputs marked with the red circle!



Caution: Establish a grounded connection by connecting the protective earth to solid ground

To install the power cable, use a small nonconductive screwdriver (insulated)
Apply pressure on the orange button above to open the terminal



Figure 43 - READY Collector Base mains connection

7 First startup of the REAdy Collector system

7.1 Preconditions



Caution: Ensure that all cables are connected and secured.



Caution: Before switching power on, take precautions for incorrectly connected cables.

7.2 First startup steps



Note: To see the entire system work, REAdy Collector must be set up from your REAdy Manager.

The FCC license needs to be approved and stored in the Kamstrup Frequency service to allocate a frequency pair and a maximum power level to the REAdy Collector.

For assistance, please contact your nearest Kamstrup Office.



Note: When powering up for the first time, REAdy Collector will communicate with the Kamstrup service portal and ask for the frequency information. If the information is not accessible, REAdy Collector will not be able to show all green LEDs and the installation cannot be approved.



Note: The installation can be tested with the Kamstrup Collector Status Reader, see "Test the installation", p. 29.

1. Turn on REAdy Collector by flipping the 120 V / 230 VAC and 24 VDC switches.



Figure 44 - REAdy Collector Base 120/230 VAC & 24 VDC power switches

2. Look for the green LED on the power supply.



Figure 45 - REAdy Collector Base power supply

It can take a while before the REAdy Collector system is completely up and running.

8 Test the installation

After the installation has been completed, you can test the installation on site to ensure the functionality of READy Collector.

Kamstrup recommends that you perform this test in order to avoid revisiting the site to check for minor issues that could have been discovered if tested properly before leaving.

Before attempting to run the test, make sure that frequency service is up and running and the Internet connection is available at the site.

8.1 Precondition

Note: You will need a Windows laptop to perform this test.

Download and install the Status reader tool from www.kamstrup.com on your computer.

8.2 Test steps

1. Connect your laptop to an available Ethernet port on READy Collector Base.
2. Open the Status reader tool.
3. Await a status message from READy Collector Top.
4. Confirm that all LEDs are green. If not, see Figure 5.



Caution: Remember to close the lid properly as a mismatch on the sealing will compromise the enclosure class.



Note: If the LEDs are not green, see "Troubleshooting", p. 32.

5. The test is complete and READy Collector is now up and running.

LED	State	Description	Remedy
LED 1	I. Green	Power ON	
LED 2	I. Green II. Yellow III. Red blinking	I. Connection to READy system OK II. IP address assigned, but no connection to READy system III. No IP address assigned or Ethernet interface available	I. II. Make sure that READy Collector is registered in your READy Manager III. Ensure Ethernet connection to the switch
LED 3	I. Green blinking II. Off	I. Application is running II. Application is not running	I. II. Restart READy Collector Top. Turn off the power for 10 seconds.
LED 4	I. Off II. Green III. Green blinking IV. Red blinking	I. Unpaired II. Collector is paired with READy III. Firmware update in progress IV. Malfunction	I. Make sure that READy Collector is registered in READy Manager II. III. Do not turn off the system during update IV. Contact Kamstrup
LED 5	I. Green II. Red blinking	I. Radio has been configured II. Radio has not been configured	I. II. Make sure that the frequency service is up and running

Table 5 - Status reader service table 1

9 Antenna installation - best practice

9.1 Best practice for antenna installation

The antenna placement is critical to the overall performance of the entire READy Collector system. Here are some tips to guide you to the best possible antenna installation for your READy Collector installation.

1. The antenna is omnidirectional, which means that it is radiating equally in all directions around it. It must be installed vertically to function properly.
2. For the best antenna performance, you must ensure that the antenna has a clear unobstructed view 360° around it.
3. If this is not possible, consider moving the antenna as any obstructions will limit the range between READy Collector and the meter.
4. Kamstrup offers an antenna beam for the installation. If the antenna beam is used, keep a minimum distance of 30" between the antennas. The same rules apply if you use a different installation method; keep a minimum distance of 30" to the nearest solid obstacle.



Figure 46 - Antenna distance

5. The placement of the antenna is critical to avoid surge current in case of lightning strikes. Keep the antenna inside a 45° angle from the tip of the mast (you must keep the antennas in lightning zone OB).

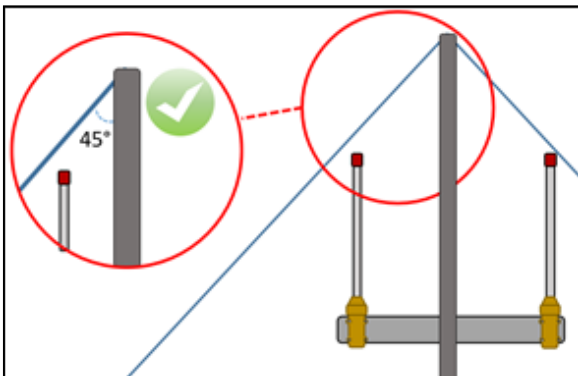


Figure 47 - Lightning zone OB, correct installation

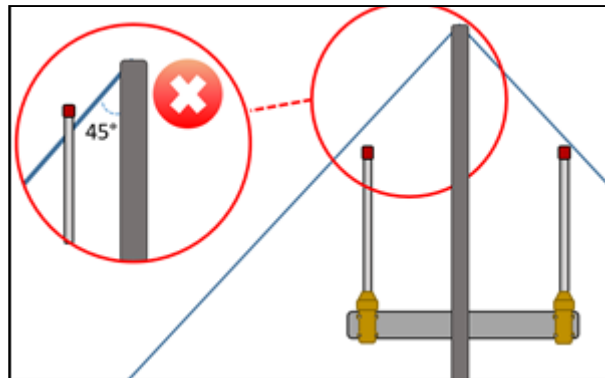


Figure 48 - Lightning zone OB, wrong installation

6. In general, place the antenna high so that the signal has the best conditions.
7. For best performance, the meter and READy Collector must be in line of sight.
8. Use only Kamstrup approved antenna cables. If the cables are switched to non-approved cables, this will affect the radio performance, and the maximum emitted radio power might be exceeded.

To sum up:

- Install the antenna vertically.
- Use only Kamstrup approved antennas.
- Install the antennas up high, but in lightning zone 0B.
- Install the antennas as free of obstacles as possible (minimum 30" free air around the antenna).

10 Effective Radiated Power

As the READy Collector system both transmits and receives data, the transmission power (TX) must be controlled and limited to a maximum allowed level in order not to cross state lines or borders. Your FCC license allows a maximum output effect and a maximum emitted radio power (ERP). In order to have the right ERP, the loss in the antenna cable and the gain from the antennas are calculated into the READy system when setting up the maximum allowed power on READy Collector.

The TX power level can always be reduced.

The ERP is calculated:

ERP = power output from READy Collector top – cable loss + gain from antenna.

This must not exceed the TX power specified in your FCC license.

If an antenna with a stronger gain than specified by Kamstrup is used, your emitted radio power will exceed what is specified from the READy system.

Use only antenna equipment that is tested and approved by Kamstrup.

For further information or questions, please contact Kamstrup.

11 Service port

A service access port is available in READy Collector Top. It can only be accessed by Kamstrup Support.

The access will only be used for support purposes and will not be accessed without your permission.

If you do not want Kamstrup to be able to access this port, please contact your nearest Kamstrup office.

12 Approvals and markings

FCC ID: READYAMI

FCC part 15B

FCC part 90

13 Troubleshooting

13.1 Not all LEDs are green in the Status reader tool

Please refer to the table below for an error explanation:

LED	State	Description	Remedy
LED 1	II. Green	Power ON	
LED 2	IV. Green V. Yellow VI. Red blinking	IV. Connection to READy System OK V. IP address assigned, but no connection to READy system VI. No IP address assigned or Ethernet interface available	IV. V. Make sure that READy Collector is registered in READy Manager VI. Ensure Ethernet connection to the switch
LED 3	III. Green blinking IV. Off	III. Application is running IV. Application is not running	III. IV. Restart READy Collector Top. Turn off the power for 10 seconds
LED 4	V. Off VI. Green VII. Green blinking VIII. Red blinking	V. Unpaired VI. Collector is paired with READy VII. Firmware update in progress VIII. Malfunction	V. Make sure that READy Collector is registered in your READy Manager VI. VII. Do not turn off the system during update VIII. Contact Kamstrup
LED 5	III. Green IV. Red blinking	III. Radio has been configured IV. Radio has not been configured	III. IV. Make sure that the frequency service is up and running

Table 6 - Status reader service table 2

13.2 READy Collector is not visible in the Status reader tool

13.2.1 Possible cause

Faulty connection between READy Collector Base and READy Collector top, e.g. Ethernet or power cable.

13.2.2 Solution

1. Check for activity on the Ethernet port to READy Collector Top. Ensure that all cables are inserted properly, both Ethernet and power.
Ensure that there is power on READy Collector Top.
2. Repeat the status reader test.
If the issue persists, please contact Kamstrup for support

13.3 READy Collector is not visible in READy Manager

13.3.1 Possible cause

No Internet connection on READy Collector.



Note: If the LEDs are not green, see "Troubleshooting". p. 32.

13.3.2 Solution

1. Ensure that all connections between READy Collector Top and Base are connected properly.
Check for activity on the Ethernet port to READy Collector Top.
Ensure that there is power on READy Collector Top.
2. Check for activity on the Ethernet port for outgoing data (port 5).
Ensure that the Ethernet cable is properly installed.
Test the connection on a PC. If there is no Internet connection, please contact your Internet service provider.
3. If using the optional SIERRA Wireless modem, check the data activity LED.
Ensure that the cellular antenna is connected properly to the modem and is placed high outside READy Collector.
4. Ensure that Frequency Service is running on READy Manager.
5. Test the installation with the Status reader tool.
6. If the issue persists, please contact Kamstrup for support.

14 List of tables and figures

Tables

Table 1 - READy Collector system drawing	6
Table 2 - READy Collector Base internal design	9
Table 3 - READy Collector Top bottom view	10
Table 4 - READy Collector Base bottom view	20
Table 5 - Status reader service table 1	29
Table 6 - Status reader service table 2	32

Figures

Figure 1 - Kamstrup AMI - READy Collector.	6
Figure 2 - READy Collector	6
Figure 3 - READy Collector Top	7
Figure 4 - READy Collector Base	7
Figure 5 - READy Collector Base inside view	9
Figure 6 - READy Collector Top, bottom view	10
Figure 7 - READy Collector System	12
Figure 8 - READy Collector Top assembly	13
Figure 9 - READy Collector Top adapter plate and bracket	14
Figure 10 - Back of adapter plate	14
Figure 11 - Bracket on adapter plate	14
Figure 12 - Bracket on adapter plate	14
Figure 13 - Adapter plate on READy Collector Top	14
Figure 14 - Adapter plate installed on READy Collector Top	14
Figure 15 - READy Collector Top Bracket assembly	15
Figure 16 - Bracket mounting plate	15
Figure 17 - Bracket mounting plate	15
Figure 18 - Bracket assembly, nuts	15
Figure 19 - Complete bracket assembly	15
Figure 20 - Antenna beam bracket assembly	16
Figure 21 - Antenna beam bracket assembly 2	16
Figure 22 - Antenna beam bracket assembly 3	16
Figure 23 - Antenna beam bracket assembly installed	16
Figure 24 - Antenna installation on antenna beam	17
Figure 25 - Antenna connection	17
Figure 26 - Power connection installation 1	18
Figure 27 - Power connection installation 2	18
Figure 28 - READy Collector Base mounting bracket	19
Figure 29 - READy Collector Base bracket orientation 1	19
Figure 30 - READy Collector Base bracket orientation 2	19
Figure 31 - READy Collector Base bottom view	20
Figure 32 - READy Collector Base Ethernet connectors	21
Figure 33 - READy Collector Base 24VDC connection	21
Figure 34 - READy Collector Base LAN connection	22
Figure 35 - SIERRA Wireless AirLINK RV50x, SIM installation 1	23
Figure 36 - SIERRA Wireless AirLINK RV50x, SIM installation 2	23
Figure 37 - SIERRA Wireless RV50x Installation	23
Figure 38 - LAN and power connection, SIERRA Wireless RV50x	24
Figure 39 - SIERRA Wireless RV50x Cellular connection	24
Figure 40 - READy Collector Base 230/120VAC switch	25
Figure 41 - READy Collector Base 230/120 VAC switch positions	25
Figure 42 - READy Collector Base power supply	25
Figure 43 - READy Collector Base mains connection	26
Figure 44 - READy Collector Base 120/230 VAC & 24 VDC power switches	27
Figure 45 - READy Collector Base power supply	28
Figure 46 - Antenna distance	30
Figure 47 - Lightning zone OB, correct installation	30
Figure 48 - Lightning zone OB, wrong installation	30

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