

Data sheet

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## The intelligent Network

### RF Concentrator

- Handles reading jobs and data of up to 680 energy meters/network units
- No configuration
- Prepared for serial communication – e.g. GSM/GPRS
- Status LEDs
- Optional connection of external antenna
- Optional update of software via radio network
- Handles leak and bursting alarms



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## Application

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RF Concentrator is the central network component used in Kamstrup's intelligent radio networks requiring remote data reading of Kamstrup energy meters.

RF Concentrator sends inquiries to the individual energy meters and saves the read data.

The data to be read from the radio network are specified in the general system software.

An RF Concentrator includes an external antenna in order to secure the best possible working radius between energy meters and network components and when receiving con-

sumption data from the individual meters, it is protected using individual encryption keys located in every meter. This ensures both data security and the customer privacy.

The read energy meter data are transferred to the system software via GSM/GPRS or IP.

RF Concentrator is available for operation in a licence-free frequency band or for chargeable frequencies.

The Kamstrup radio system is robust to other radio systems.

## Network installation

To be able to use below as status indication on the radio network, you must install one or more Kamstrup energy meters and network units in the area.

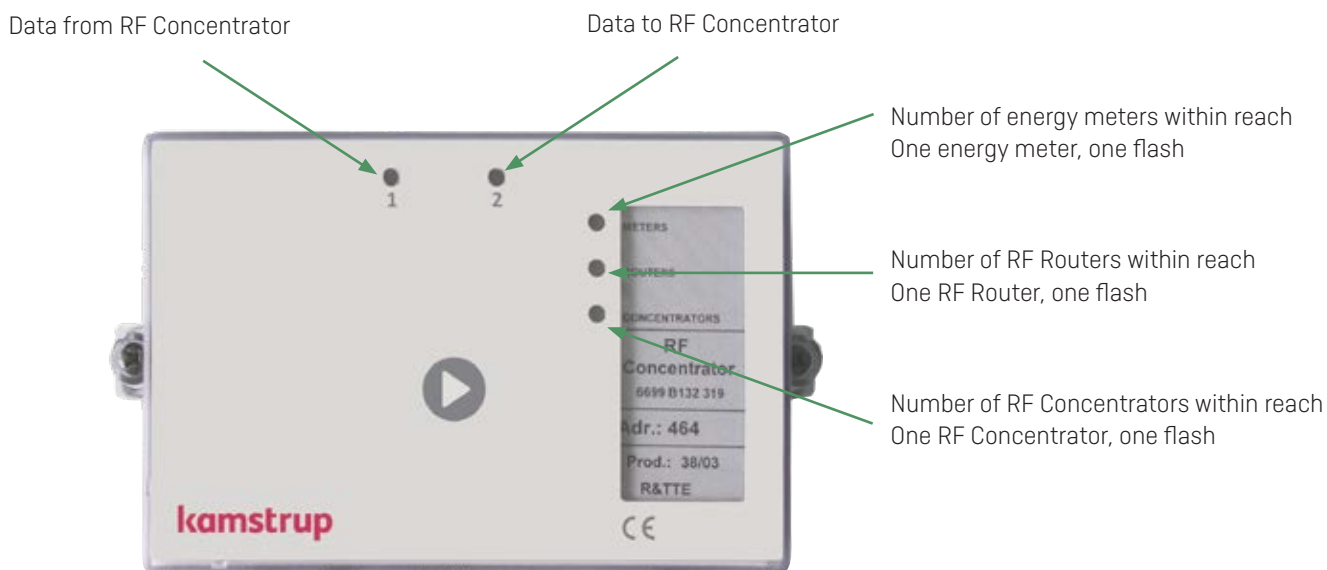
### Installation test

Mount the RF Concentrator top after installation, and keep pressing the front key until the LED turns on in the the right side marked "Meters". Release the front key and the RF Concentrator starts creating its local list via radio communication. The LED's no. 1 and 2 flash on and off for max. 2 minutes.

When the LED's go out the local list has been created and can be read either directly on the RF Concentrator, see "RF Concentrator - Local list test" or via a hand-held terminal with radio flash 6699 161.

### Local list test

Keep pressing the front key until the LED's turn on in the right side marked "Meters", "Routers" and "Concentrators". The local list is displayed when the LED's flash on and off, see next picture.



## Technical data

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### Electrical data

Supply	230 VAC mains
Frequency	433 MHz unlicensed ISM band 444 MHz licensed band
Transmitting power	10 mW @ 433 MHz (typically battery operated meters) 500 mW @ 444 MHz (typically 230 V operated meters)
Range	Urban areas up to 350 meters Rural areas up to 10 kilometers
Consumption	< 1W (without module)

### Mechanical data

Dimensions (w x h x d)	147 x 100 x 45 mm
Ambient temperature	-40 – +60 °C
Mounting	Indoors. External antenna can be mounted outdoors.
Protection class	IP54

### Standards

EN 13757-3 (M-Bus protocol)  
EN 13757-5 (Network relaying)

### Marking/Approvals

Radio Equipment Directive (RED) (2014/53/EU)	EN 300 220 – class 2 EN 301 489, EN 60 950, EN 62 311
CE marking	
RoHS directive (2011/65/EU)	

## Ordering options

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### Battery operated systems – typical heating systems

6699-	X	X	X	X	XXX
<b>Network Components</b>					
RF Concentrator, NET 0	B				
<b>Module</b>					
No module		0			
Data input for GSM 9600		1			
<b>Supply</b>					
230 VAC			3		
230 VAC – High Power			5		
24 VAC			6		
<b>Bracket</b>					
Bracket for thin antenna cable				1	
Bracket for thick antenna cable				2	
Bracket for EVL				3	
<b>Optional frequency code</b>					
EU					319
SE					329

Please contact Kamstrup A/S for further information

## Ordering options

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### 230 V operated /combi systems

6699-	Z	Z	Z	Z	ZZZ
<b>Network Components</b>					
RF Concentrator, NET 0	B				
RF Concentrator, NET 1, Combi	D				
<b>Module</b>					
No module		0			
Data input for GSM 9600		1			
<b>Supply</b>					
230 VAC			3		
230 VAC – High Power			5		
<b>Bracket</b>					
Bracket for thin antenna cable				1	
Bracket for thick antenna cable				2	
<b>Optional frequency code</b>					
EU					319
SE					329

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## Ordering options

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### High power systems

6699-	Y	Y	Y	Y	YYY
<b>Network Components</b>					
RF Concentrator – High Power, NET 1, Combi	K				
RF Concentrator – High Power, NET 0	N				
<b>Module</b>					
No module		0			
Data input for GSM 9600		1			
<b>Supply</b>					
230 VAC – High Power			5		
<b>Bracket</b>					
Bracket for thin antenna cable				1	
Bracket for thick antenna cable				2	
<b>Optional frequency code</b>					
CH					318
SE					327
SE					328
NO					339
DK					349
FI					358
FI					359

Please contact Kamstrup A/S for further information

RF Concentrator

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