



RNN55

Network Node

APPLICATION

The network node RNN55 forms the basis of remote meter reading within the Honeywell Home AMR system. It receives the consumption data from the metering devices and distributes them within the network.

The network node works extremely well in more complex building environments and ideally supports the migration of generation 5.5 walk-by systems for remote reading.

The network node RNN55 is available as battery operated (type RNN55-STD) as well as mains operated (type RNN55-230V).

The RNN55 supports the transmission of AES encrypted data telegrams for C-mode metering devices.

APPROVALS

- CE

TECHNICAL DATA

Ambient conditions	
Operating:	-5 °C to +45 °C
Storage:	-5 °C to +45 °C*2
Transport:	-25 °C to +70 °C*2
Use:	-5 °C to +55 °C*2
Radio	
Protocol:	Wireless M-Bus acc. to EN 13757-4
Wireless M-Bus supported mode:	S-Mode and C-Mode
AES encryption:	supported
Frequency band:	S-Mode: (868,3 +/- 0,3) MHz C-Mode: (868,95 +/- 0,25) MHz
Transmission power:	S-Mode: max. 14 dBm / typ. 12,5 dBm C-Mode: -
Duty Cycle:	S-Mode: < 1 % C-Mode: -
Sensitivity:	S-Mode: min. -100 dBm / typ. -105 dBm C-Mode: min. -100 dBm / typ. -105 dBm

*1 Standard application: Readout 4x monthly with RNG5

*2 < 95 % r.H. (without condensation) acc. to EN 60721-3



M-Bus interface	
Current drawn:	1 M-Bus load
Addressing:	RNN55 itself: primary or secondary Stored devices in RNN55: secondary
Baud rate:	auto detection (300, 2400 or 9600 Baud)
Max. permissible readout frequency:	typical 1 times a day
Protocol:	acc. to EN 13757-2/-3, EN 1434-3
Power supply and battery life time	
Type RNN55-STD	
Battery type:	Lithium metal, changeable
Power supply:	DC 3.6 V
Battery service life:	
Main battery:	5 years in standard application*1, plugged in during operation
Backup battery:	10 years in standard operation plus 1 year in active storage or backup mode
Type RNN55-230V	
Rated voltage:	100..240 V AC 50/60 Hz
Battery service life:	10 years in standard operation plus 1 year in active storage or backup mode
Backup battery:	10 years in standard operation plus 1 year in active storage or backup mode

Dimensions	
Dimensions:	203 mm x 203 mm x 58 mm
Weight:	
RNN55-STD:	760 g
RNN55-230V:	750 g
Housing:	ABS + PC
Colours:	RAL9016

CE NORMS AND STANDARDS

EU conformity:	Yes
Directive:	2014/53/EU 2011/65/EU
Protection Rating:	IP20 acc. to EN 60529
Safety class:	
RNN55-STD:	III acc. to EN 61140
RNN55-230V:	II acc. to EN 61140
Interference immunity and emission:	EN 301 489-1 EN 301 489-3
Safety:	EN 62 368-1

Hereby, Ademco 1 GmbH declares that the radio equipment type RNN55-STD and RNN55-230V is in compliance with Directive 2014/53/EU. The full text of the EU declaration of conformity is available at the following internet address: <https://homecomfort.resideo.com/sites/europe>

INTERFACES

Wired Interface

M-Bus Connection

At each network node, the M-Bus can be permanently connected to an M-Bus master. An additional plug connector is available for short-term connections (e.g. for service purposes or to connect an M-Bus mini master WFZ.MBM). The plug is included in the scope of delivery.

8-pin interface

An additional plug connector is available for short-term connections (e.g. service or for connecting an M-BUS master). For service purposes, the USB programming adapter RNN5.USB-1 can be connected to the 8-pin connector provided for this purpose.

Optical IrDA interface

Every network node RNN55 is equipped with an IrDA interface. This is permanently active and used for servicing with commissioning tools or for data exchange with other IrDA-capable Honeywell Home AMR network products.

METHOD OF OPERATION

- Reception and storage of data from the consumption metering devices
- For S-Mode devices the RNN55 stores the month end values as statistical values (max. 18)
- For C-Mode devices, the historical month end values can be formed in the H SMP or by the customer in a billing software
- Automatic set-up of a network comprising up to 12 x network nodes (up to max. 500 consumption metering devices)
- Distribution of consumption values to all network nodes within a network
- Backward compatible (Readout with RNG4 or RNG5): Consumption meters in S-Mode:
 - mixed network with RNN55, RNN5 and RNN4 possible
- Upward compatible (Readout with RNG5): Consumption meters in mixed mode S and C mode or only in C mode:
 - all RNN5 of the network must be updated to RNN55 functionality via firmware update
 - Network nodes RNN4 are to be replaced by RNN55
- Protected installation mode to connect only devices with their own plant identification to the network
- Copy mode to transfer data (device list / user list and statistic values) of a node within a network to a new node
- Delete mode to remove devices to be replaced from the system list
- IrDA teach and delete function to add or remove new devices to or from a system and to synchronise the devices
- Firmware update via USB adapter and RNN5 / RNN55 Update Tool (RNN5.USB-1)
- Further notes about the Network node RNN55 can be found in the installation and operating manual as well as in the AMR system manual.

The network node RNN55 consists of the following components:

Voltage supply:		
Battery for RNN55-STD		
Mains adapter for RNN55-230V		
Transmitter / receiver for AMR networks	Memory 500 metering devices	M-Bus (Slave)
		IrDa (optical)
		RS232(RNN55-230V)
Backup battery		

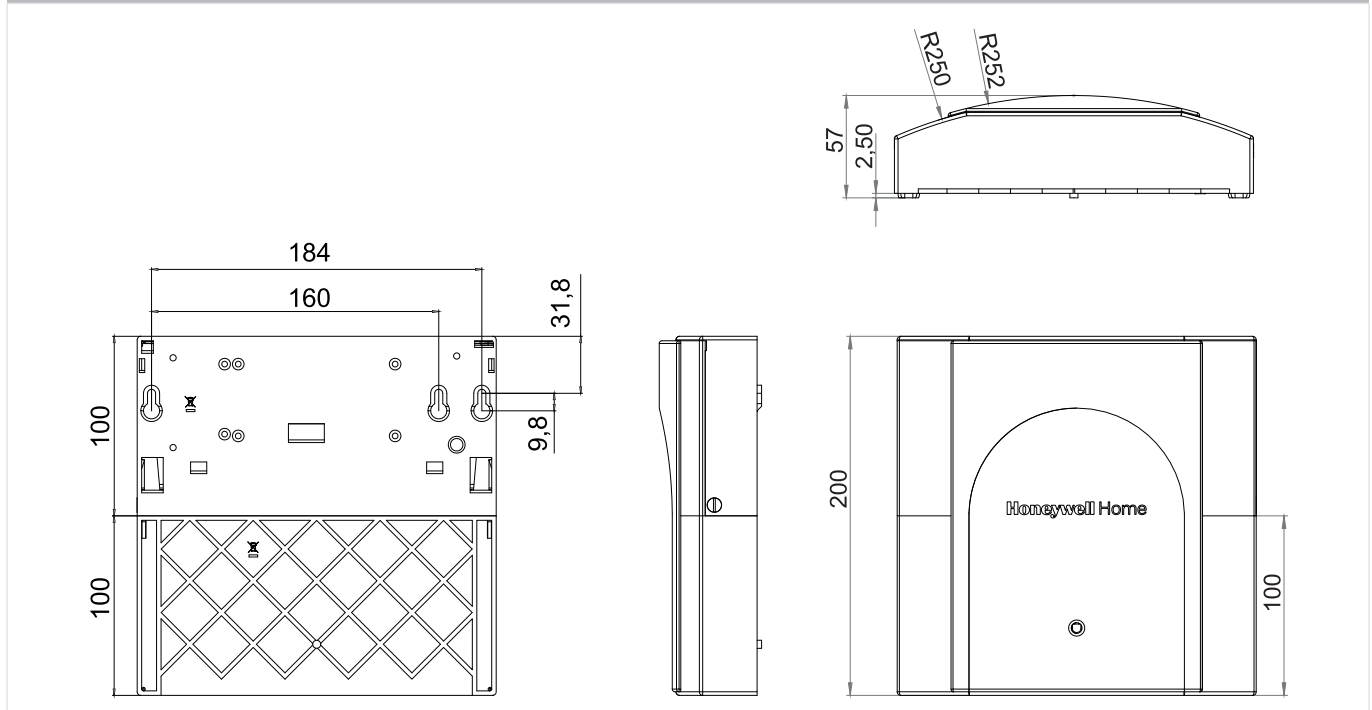
Receivers and transmitters are used for to receive consumption metering devices and forwarding these to other network nodes in the same network.

The data memory contains the measuring data from the consumption metering devices. It is protected against temporary power failure, for instance during mains power failure or replacement of the main battery, by the backup battery.

DIMENSIONS

RNN55-STD / RNN55-230V

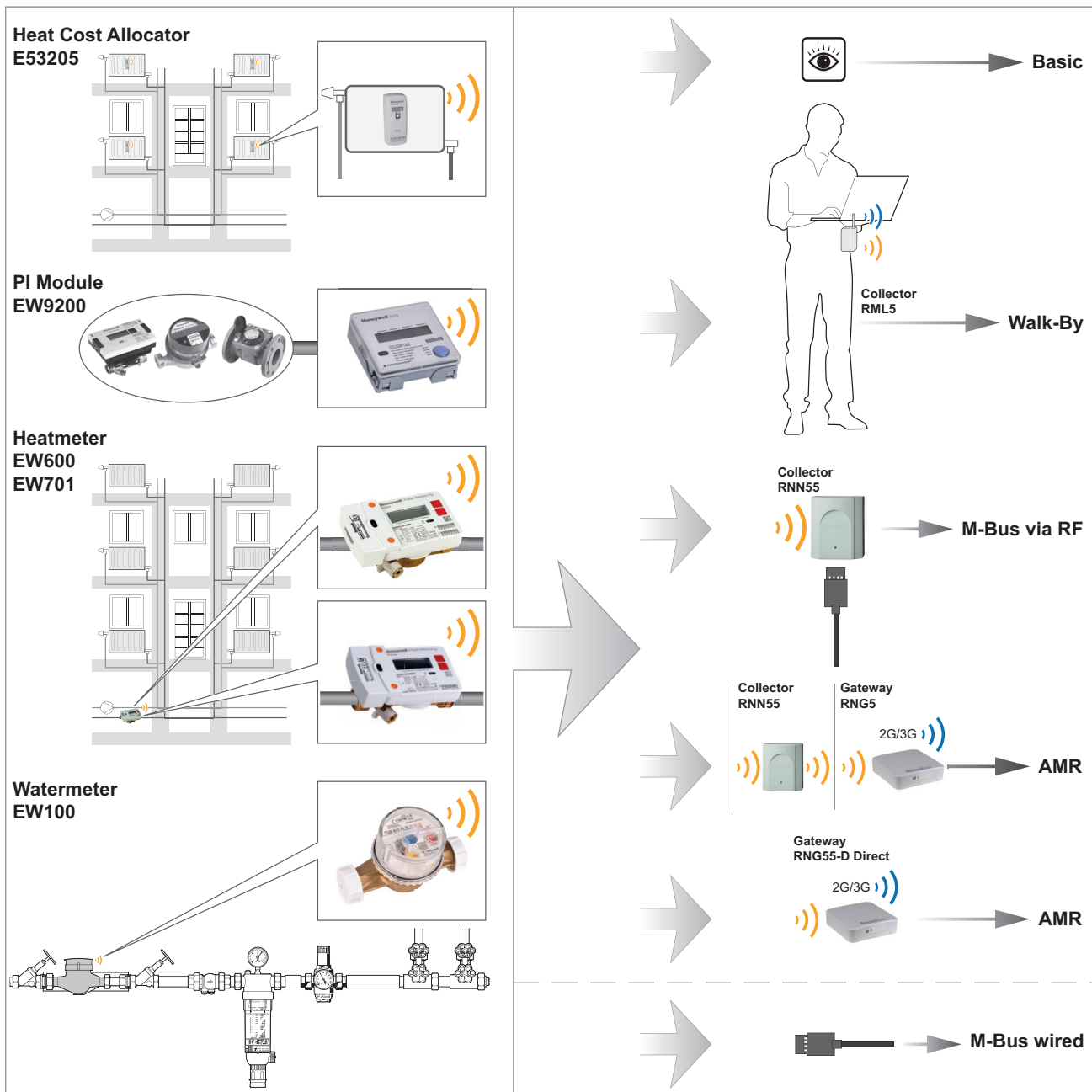
Overview



SYSTEM OVERVIEW

The RNN55 can be integrated into various type of system.

For further variants of systems please contact your account manager.



ORDERING INFORMATION

The following tables contain all the information you need to make an order of an item of your choice. When ordering, please always state the type, the ordering or the part number.

Options

The network node RNN55 is part of the Honeywell Home AMR system and can only be used with this.

OS-No.:	Description:	EAN Code:
RNN55-230V	NETWORK NODE G5.5 C/S - 230V	5059087001733
RNN55-STD	NETWORK NODE G5.5 C/S - STD	5059087001740

Accessories

	OS.-No.:	Description:	EAN Code:
	RNN5.USB-1	USB Adaptor for RNN5 Network Node	5025121381383
	WTZ.RM5S	Data Collector set for G5 AMR systems Including:	4029289081667
	WFZ.PS	Triggering tool RF via IRDA	4024627093999
	WFZ.R5DS	Radio Unit (Emitter)	4029289081629
	WFZ.R5RC	Radio Unit (Receiver)	4029289081636
	RNG5-STD	Network Gateway 2G/3G - Battery powered	4029289081605
	RNG5-230V	Network Gateway 2G/3G - 230V	4029289083050
	WFZ.MBM	Programming adapter for M-Bus Master	4024627093982

For more information

homecomfort.resideo.com/europe



Ademco 1 GmbH
Hardhofweg 40
74821 MOSBACH
GERMANY
Phone: +49 6261 810
Fax: +49 6261 81309

Manufactured for and on behalf of the
Pittway Sàrl, La Pièce 4, 1180 Rolle, Switzerland
by its Authorised Representative Ademco 1 GmbH
EN0H-0450GE23 R1219

Subject to change

© 2019 Pittway Sàrl. All rights reserved.

This document contains proprietary information of
Pittway Sàrl and its affiliated companies and is
protected by copyright and other international laws.
Reproduction or improper use without specific
written authorisation of Pittway Sàrl is strictly
forbidden. The Honeywell Home trademark is used
under license from Honeywell International Inc.

Honeywell Home