



# RNN5-STD

## NETWORK NODE FOR AMR SYSTEMS

### PRODUCT DATA



### GENERAL

#### Applications

The Honeywell Home RNN5-STD network node is designed to receive and store the data transmitted by the Heat Cost Allocators (HCAs) in an AMR system.

The battery-operated RNN5 network node's powerful radio system works well in complex buildings even when there are fire doors and glass walls.

All RNN5-STD communicate data with each other if they are in the same network. This means that AMR data from all HCAs can be read from any node within the system.

The WTZ.RM PC Radio module can be used with RNN5-STD to wirelessly readout the data from AMR Heat Cost Allocators. It can also be used to measure radio signal strength and so enable the installer to select the optimum position for the network node in any system.

The RNN5.USB-1 USB adaptor allows firmware re-programming and reading of node and network.

Typical applications include:

- Apartment blocks
- Office buildings
- Business Centres

#### Features

- Contemporary styling fits with all modern décor
- Receives and stores data transmitted by HCAs
- Automatic setup of up to 12 nodes in the same network – with a maximum of 500 metering devices
- AMR technology allows reliable and fast data collection with no disturbance to the client
- Five year main battery life as standard
- Backup battery for ten years
- Data stored and protected in the event of battery failure or replacement
- 868MHz radio communications
- Allows building services companies to monitor heat consumption without disturbing customers
- Software suite allows simple product setup and data recording
- Meets all necessary European standards for wireless Heat Cost Allocator systems

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## TECHNICAL DETAILS

### Specifications

<b>Main Battery</b>	Rated at 3.6V, service life: 5 years with factory settings
<b>Backup battery</b>	Rated at 3.6V, service life: 10 years
<b>Radio Frequency</b>	868.00 MHz to 870.00 MHz
<b>Transmitter Power</b>	< 14dBm
<b>Duty Cycle</b>	< 1%
<b>Ambient Conditions</b>	
<b>During Transport</b>	Non-Ventilated Containers: -25°C to +70°C. Maximum Humidity: 95% RH at 40°C
<b>During Storage</b>	-5°C TO +45°C. Maximum 95% RH
<b>During Operation</b>	+5°C TO +55°C. Maximum 95% RH
<b>Dimensions and Weight</b>	
<b>Dimensions</b>	See Dimensional Drawings
<b>Weight</b>	Gross: 0.760kg Nett: 0.648kg

### CE Norms and Standards

<b>Protection Rating</b>	IP20
<b>Protection Class</b>	II
<b>Interference Resistance</b>	EN 301 489
<b>Emitted interference</b>	EN 300 220-1
<b>Security of IT Equipment</b>	EM60950

### Installation

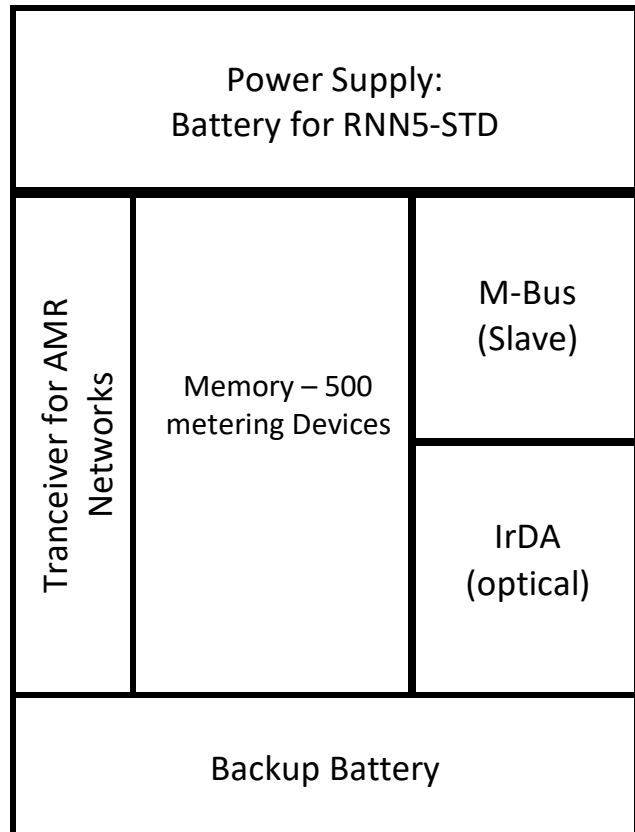
#### Location

RNN5 Network nodes should be located centrally within the building or an individual floor of a building. Care should be taken to ensure that the radio signal strength is adequate to give reliable service. The RF signal strength can be checked using the WTZ.RM PC Radio module.

#### Mounting

The back panel has a choice of mounting holes which allow a drilling distance of 160mm or 184mm. The RNN5 will fit onto the same mounting holes used for previous versions of Honeywell Home nodes.

## Technical Design

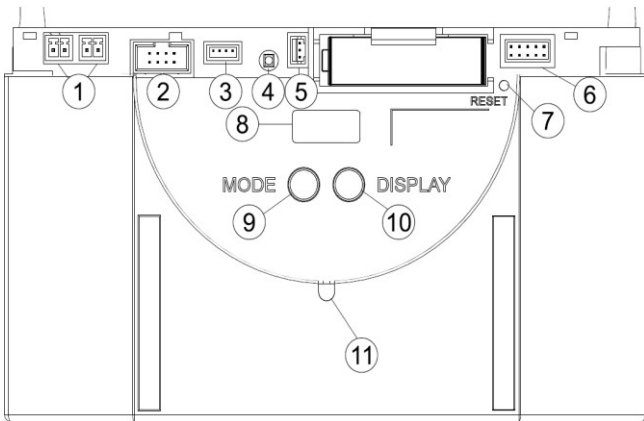


The transmitter and receiver are used to record and transmit data from the HCAs and then to forward this data to other nodes in the same network. Because of the intercommunication between the RNN5 nodes, the data memory contains the measured consumption data gathered from all of the HCAs within the system. The data is protected against loss from the memory by the backup battery.

### Ordering Specification

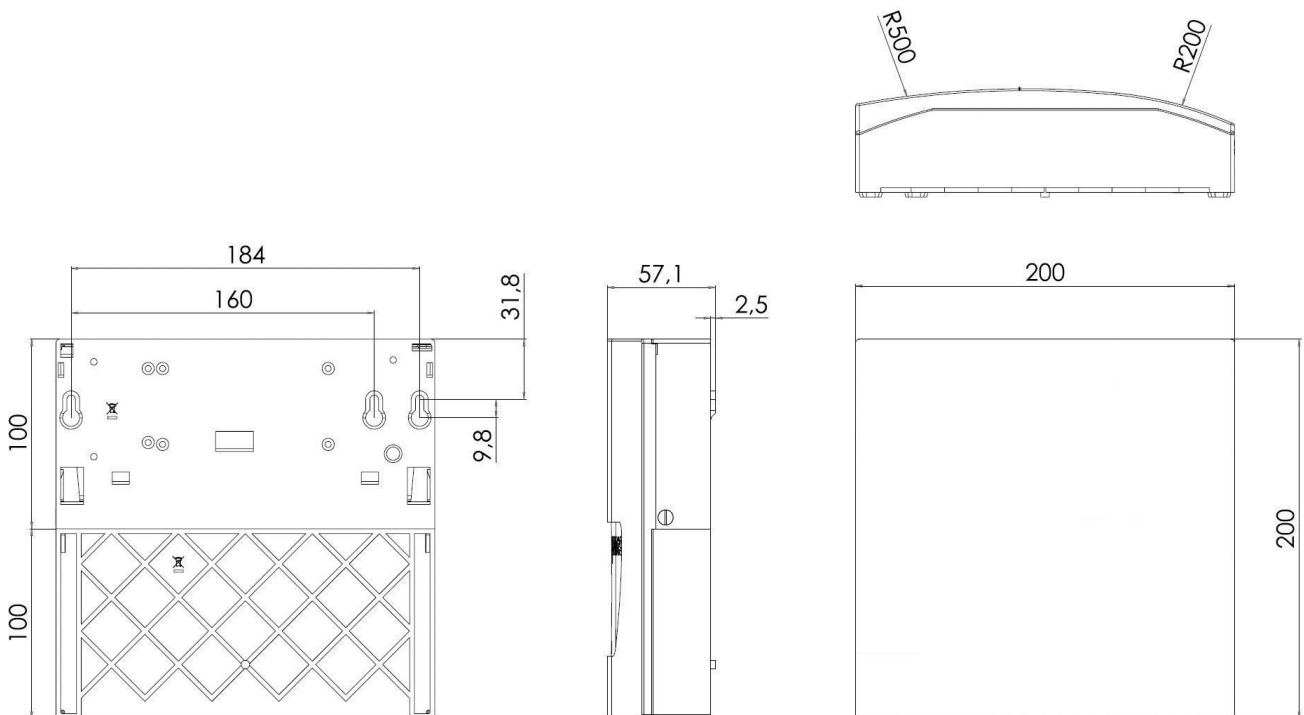
OS Number	Description
RNN5-STD	G5 Network Node
RNN5.USB-1	USB Adaptor for RNN5 Network Node
WTZ.RM	Data Collector set for G5 HCA systems

### User Interface & Connections



Number	Component
1	Plug connector for M-Bus service connection
2	Plug connector for extension module
3	Plug connector for electrical 3.6VDC supply
4	LED for network voltage display with external supply (only lit during when mains is connected)
5	Plug connector for backup battery 3.6VDC
6	Connector outlet
7	Recessed Reset Key
8	Display
9	Operating mode key – MODE – Red
10	Display switchover key – DISPLAY – Blue
11	IrDA optical interface point

### RNN5-STD Dimensions




## RNN5-STD Display


-	InSt	Current Operating mode
A	A 01 2432	RNN5 – Primary address and alternate network number
B	b 03	Number of RNN5 on the network
C	C 123	Number of Heat Cost Allocators on the network
D	d060	Remaining battery capacity of the RNN5 in %
E	EC23	Error code – three groups


## Operating Mode

Idle-mode	IdLE	Delivery mode – Switch to install mode by pressing the MODE button for >2 seconds.
Standard mode	Std	This is the normal operating mode of the data collector: Telegrams from the HCAs can be received, stored and handled by the network.
Extended standard mode <sup>1)</sup>	Std <sub>W</sub>	The receiver is always active to ensure fast communication. This mode is started using the ACT26 service tool.
Installation mode <sup>2)</sup>	InSt	In installation mode, the radio network will be built up automatically. HCAs that transmit installation telegrams in this mode will be registered in the network. This mode is started by pressing the MODE button for < 2 seconds.
Extended installation mode <sup>2)</sup>	InSt <sub>W</sub>	Extended installation mode will register all HCAs that transmit either installation or data telegrams. This mode is useful if the network is extended at a later date. A network is not built up in this mode.
Protected installation mode <sup>2) 3)</sup>	Prot	Same as installation mode, except that connections are only made to devices with the same network signature.
Search mode	Flnd	This mode restores radio connection to lost or manually registered HCAs. This mode starts automatically.
Extended search mode <sup>2)</sup>	Flnd <sub>W</sub>	This search run is used to restore the radio connection to lost or manually registered HCAs. This mode can also be started manually with a Jumper in 1 (connector outlet) and by a long press on the MODE
Delete mode <sup>2) 3)</sup>	dEL	This is the same as installation mode, except that all registered HCAs which transmit data telegrams are deleted, not registered (for HCA replacement).

## Operating Modes and System States

Remote access 

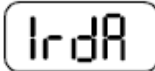
If a Network Node is accessed by a master, the symbol  will appear on the display

High-speed mode  example

If all network nodes are switched on constantly to allow immediate transfer of data within the network, two dots will appear in the upper section of the display.

Bus connection  example

If a connection is set up to the bus, the bus number is displayed briefly (0=M-Bus) as well as the primary address for this bus. In this example, the node with primary address 03 was connected to the M-Bus.

IrDA-Master mode 

Enter this mode by pressing the MODE button briefly (<0.5 sec.). Other IrDA devices can now be connected (in IrDA slave mode). The node exits this mode after 10 seconds.

Add  example

If a non-registered IrDA-capable HCA is connected in IrDA-Master mode, this can be added to the network node. The display corresponds to the last 4 digits of the HCA, for example: 20000123.

Delete  example

If an IrDA capable HCA that has already been registered is connected in IrDA-Master mode, this can be removed from the network node. The display corresponds to the last 4 digits of the HCA, for example: 20000123.

The DISPLAY button must be pressed for confirmation when this message appears on the display.

The device is then deleted and the search mode ended if appropriate.

Copy  example

If a new network node is connected in IrDA-Master mode (in idle mode!) all network data can be copied into the new node. The DISPLAY button must be pressed for confirmation when this appears on the screen. The protected installation node is automatically started in the network. Depending on the data contents, copying can take up to 20 minutes. At the end of the process, "StArt Prot" is shown on the display of the new node for 1 hour. After installation, the protected installation mode is started on the new network node as well by pressing the DISPLAY button. The new node is then integrated into the network and the search run will start automatically.

### For more information

[homecomfort.resideo.com/europe](http://homecomfort.resideo.com/europe)