

## ► BrunataNet RS485 Data Gathering System – System Description

### System

The BrunataNet RS485 system consists of the following core components: consumption meters, radio receivers, data gathering units and optionally a PC.

In this description, at the present time “consumption meters” embrace heat cost allocators, temperature loggers, humidity sensors, and pulse collectors which can be connected to hotwater, coldwater, electricity and gas meters.

### How the system works

The consumption meters transmit data in the form of radio signals to radio receivers. The transmission from heat cost allocators takes place at least once a day.

The radio receivers send the data through the cable network to the Controller Box either directly or via the Repeater Box.

The Controller Box gathers and stores the incoming data. It can be connected to a PC in the heating engineer’s office or relay the data onward to a server.

The connection to the microcomputer input port takes place via a DSUB9 male connector inside the Controller Box.

The microcomputer input port is connected to the five networks “NET1 - NET5” and “Interconnection”.

“Interconnection” is used to expand the system when

- there are more than 40 receivers.
- total cable length exceeds 1200 m.
- supply voltage will be less than 14 V at the receiver.

The internal power supply is 24 VDC 2 A and can typically power up to 40 receivers, each using 50 mA.

### Expansion

System expansion is accomplished via a cable link between the “Interconnection” terminals of the Controller Box and of the Repeater Box.

The Repeater Boxes have their own power supplies which are individually capable of powering five new networks (NET1 - NET5), which in turn can be connected to 40 radio receivers with a 1200 m cable system.

Several cables can be joined to the “Interconnection” terminals of all units for connection of further Repeater Boxes, provided that the above specifications are observed. The Interconnection cable carries only data and communication, not power. If the need arises, more than one cable can also be connected to the NETx terminals.

### Data cable

Use of a twisted pair data cable of the type “BRUNATA PTH 2x2x0.6” is recommended. The colours of the wires correspond to the markings on the terminals.

### 230 V connection

The boxes are supplied with a 1.5 m special AC cable provided with a Danish 3-pole AC earthed connector. There is no device power switch – so a 3-pole earthed and switched outlet must be established as part of the installation.

### Protection

The boxes contain no fuses that can/must be replaced by the user. The power supply unit contains an internal fuse that must NOT be changed by the user. The unit will not be damaged by shortcircuit and/or overload of the 24 V DC supply.

*Brunata is a 100 % Danish owned company. We have more than 90 years of experience within developing and producing heat cost allocators and heating accounts. Brunata als has implemented a quality system in accordance with EN ISO 9001. Please contact us for further information on our products.*