

5. Functional Description and Design

Allgon repeaters work as bi-directional on-frequency amplifiers.

A repeater receives, amplifies, and retransmits signals downlink and uplink simultaneously, i.e. from the base station via the repeater to the mobile stations and from the mobile stations via the repeater to the base station.

The repeater is connected to a BS antenna, directed towards the base station, and to a MS antenna directed towards the area to be covered. These antennas are connected to the repeater with N type male connectors.

To prevent instability due to poor antenna isolation, a built-in antenna isolation supervision feature reduces the gain level automatically when poor antenna isolation is detected.

The Allgon repeaters are controlled by powerful microprocessors.

Alarm and operational LEDs are visible on the repeater front.

The repeater works with convection cooling without fan.

Operational parameters such as gain, power levels, etc. are set using a desktop or notebook and the Allgon OMT32, which communicate, locally or remotely via modem, with the repeater. Remote operation is performed using a telephone line or a built-in mobile phone equipped with a data interface.