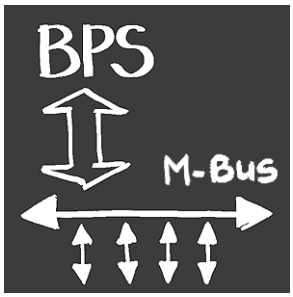
VISONIK®

BPS communication with MONOGYR®

Function sheet



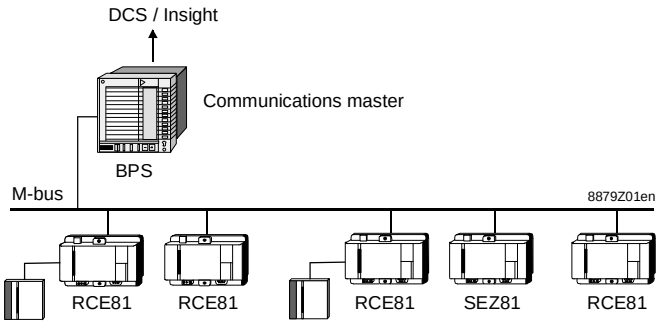
MONOGYR is a communicative individual room control system. The VISONIK building process station (BPS) as the communications master allows for implementing room management functions such as:

- **Central control and supervision of room temperature control circuits.**
- **Central acquisition and statistical evaluation of room control data.**
- **Controlling central energy handling plants according to statistically handled room control data.**

Use

Topology

Communication between the BPS and the MONOGYR RCE81 individual room controllers takes place on the M-bus, short for MONOGYR data bus:



MONOGYR data bus and BPS

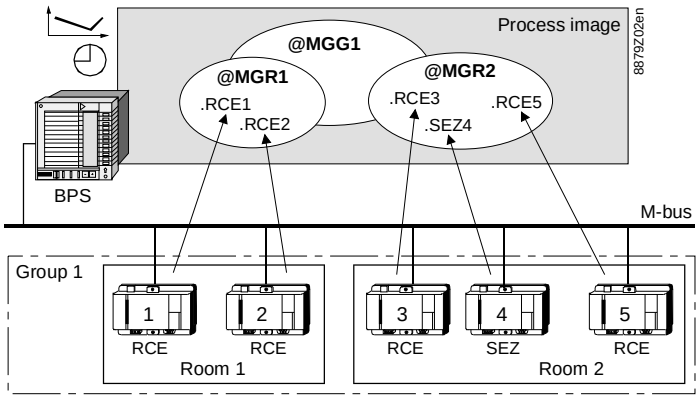
The MONOGYR data bus consists of a two-wire line (max. 2500 m long). The most important features of communication are:

– The M-bus allows for connecting up to 100 individual room controllers and/or switching units.
– A COM2 (PVC2.2M) communication card is necessary to connect the M-bus to the BPS.
– The individual room controllers and switching units are addressed using address plates, and they are generated as MONOGYR data points in the BPS process image upon engineering.
– If the BPS recognizes a MONOGYR data points, the MONOGYR functionality is enabled automatically in the BPS. Afterwards, the individual MONOGYR functions are processed cyclically.
– The BPS is also used for communication with the VISONIK data and communication server (DCS) and VISONIK Insight.

Integration

Principle

The RCE individual room controllers and the SEZ switching units are grouped logically in the BPS process image, and assigned to the @MGR and @MGG point types as follows in accordance with the room distribution in the building:
– MONOGYR rooms (@MGRn) featuring up to 10 controllers and 10 switching units.
– MONOGYR groups (@MGGm) featuring up to 20 MONOGYR rooms @MGR.



Functions

Below is a list of the main functions of the MONOGYR rooms and groups:

Point type	Functions
MONOGYR room @MGR	The point type @MGR helps to directly control one or several RCE individual room controllers or SEZ switching units. Together with those units, the following functions can be implemented: – Heating/cooling. – Heating/cooling with summer/winter changeover. – Heating/cooling in sequence (sequence control) with summer/winter changeover for the second sequence (heating/cooling). – Adding the air speed as an auxiliary variable. – Switching a potential-free relay contact. – Acquiring the signaling contact.
MONOGYR group @MGG	Point type @MGG allows for carrying out the following higher tasks: – Automatic and manual assignment of the operating modes for the MONOGYR rooms (Comfort, Economy, Reduced). – Default setting for corrected setpoints based on the outside temperature. – Calculation of the air volume of MONOGYR rooms. – Statistical values on room occupancy, room temperatures (min., max., and median values), and controller outputs (min., max., and median values). – Switch-on optimization OSC for heating and cooling: – Definition and registration of energy demand for MONOGYR rooms.

Notes

Only the same controller types can be used in a MONOGYR room MGRn.
One master and up to nine slave controllers can be assigned to one MGRn.
No room units must be connected to the slave controllers.

Operation

The above functions can be operated via the BPS as the communications master.
Operation takes place via:
- VISOTOOL Editor
- VISONIK data and communication server DCS / VISONIK Insight.
- POP cards (personal operating process cards).

Additional information

For further information on this topic, refer to "VISONIK system basics", topic 13, "MONOGYR in the BPS".