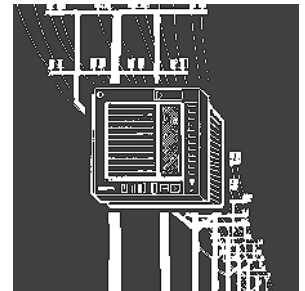


VISONIK®

BPS dial-up communication

Function sheet

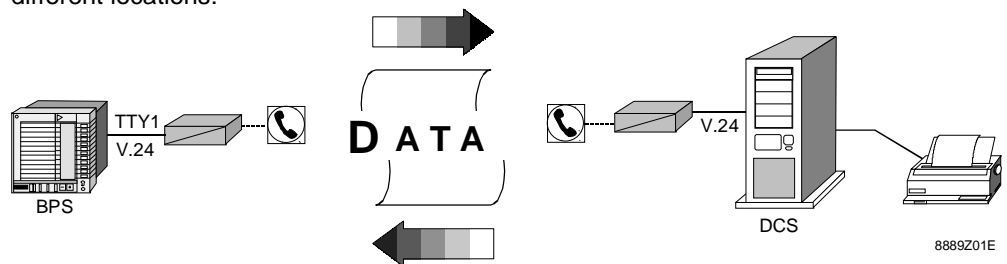


When equipped with a communication card COM1 and a modem on interface TTY1, the VISONIK BPS can communicate via the public telephone network with various partners of VISONIK systems. This document describes the tasks and functions of dial-up communication.

Use

Tasks of dial-up communication

The VISONIK BPS uses dial-up communication to transfer data between partners in different locations:



Features of dial-up communication

The respective partners are connected to the public telephone network by means of their V.24 interfaces and the modems only for the duration of the transfer.

Functions and data

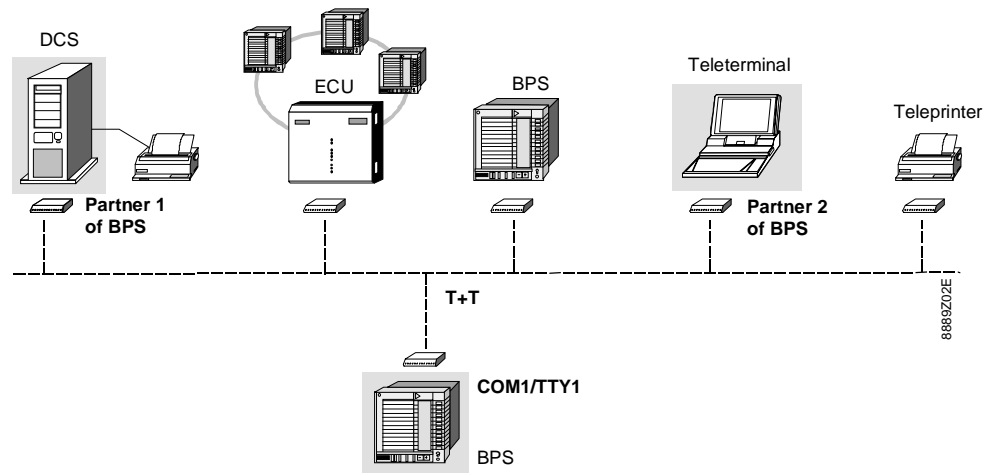
Dial-up communication can be used to execute the following functions and thereby transfer the corresponding data between partners:

Function	Data examples
Signal events	Data from building services plants such as: – Alarm messages on limit value violations – Plant state messages
Collect operating data	Data from building services plants such as: – Temperature values – Operating hours
Transmit process data	Data of the VISONIK BPS such as: – Point information/process image – Program data
Exchange operating data	All data from manual operation (DCS to BPS)

VISONIK BPS dial-up communication partner

Overview

The VISONIK devices shown below can be used as dial-up communication partners for an autonomous BPS. In applications, two devices can be defined as partner 1 and partner 2, for example, DCS and teleterminal:



Partner and functions

The partners shown in the illustration are the following devices with the following functions:

Partner	Explanation/Function
DCS	Data and Communication Server, with or without Insight as a: <ul style="list-style-type: none"> – own DCS with process image of the associated BPS and updated plant images and trend plots, etc. in Insight – foreign DCS without process image of the relative BPS
ECU	Enhanced Communication Unit: Ring master and communication devices of a separate SDLC ring with several process stations. The ECU, for instance, temporarily connects the stations to a higher DCS.
BPS	Another autonomous tele BPS (or PRV1, EKL-X))
Teleterminal	PC with VISOTOOL Editor for remote BPS operation and monitoring
Teleprinter	Separate printer for BPS alarm and error messages

Partner criteria

The following applies to the devices which represent partner 1 and partner 2 of the BPS:

- The devices can either be of the same type or different
- Each device may assume the role of partner 1 or partner 2

The dial-up communication functions that are possible depend on the respective device and are identical for each partner. However:

If one of the partners is a DCS, only **one** of them can serve as its own DCS, i.e., the partner defined as partner 1. Only this partner can save and update the process image of the respective tele BPS.

BPS on SDLC ring

Please note the following:

- If the BPS is autonomous, it can communicate with each partner directly as shown above.
- If the BPS is part of a separate SDLC ring, an ECU must be used for dial-up communication. *Exception:* Teleterminal as a partner.

Transfer and transfer contents

Initiating party and communication trigger

Both the BPS and its partners can be the initiating party:

- The BPS can call up the defined partners
- The defined partners can call up the BPS (exception: teleprinter)

Communication is triggered automatically or manually through:

- Events in the configured data points such as error status changes
- COLBAS task outputs
- Operating command DUS

Calling sequence

If both partners in a VISONIK BPS are defined as the receiver of a message, the following sequence applies:

1. Connection to partner 1
2. Connection to partner 2

Transfer contents

The following table contains a list of data types the BPS and its partners can exchange:

Type of data	Interpretation
BPS event data	If requested by the BPS, its own DCS queries the events (EACQ). In this case, it adopts the dynamic point information of the BPS such as main values (changed, incl. alarms) operating hours, etc..
BPS process image	If requested by the BPS, its own DCS runs a general query (GACQ). In this case, it adopts all point information of the respective BPS.
BPS message buffer	If requested by the BPS, the associated DCS reads its own message buffer (MACQ). This buffer contains fault messages of points, operating hours, temperature values, etc..
BPS data processing buffer	If requested by the BPS (DACQ), the associated DCS reads its own data processing buffer (storage of values (MACQ). This buffer contains the value strings of the defined data points acquired as per the acquisition profile.
Text transfer	When communication is initiated, the BPS sends clear texts to the partner via @pnt.TXC. For example: "Filter change required - call 6329"
Point reports	When communication is initiated, the BPS sends a point report to the partner via PROT @pnt.TA. For example: ML \$d098'020 (1.2 2d20) 18.01.96 12:11:03 DI=0 DI=EST
Manual operation	After establishing connection and entering command DUS, the BPS can exchange manual operating data with all devices. Exceptions: Teleprinter, pager.

Important!

Not all of the above data types can be exchanged with every partner:

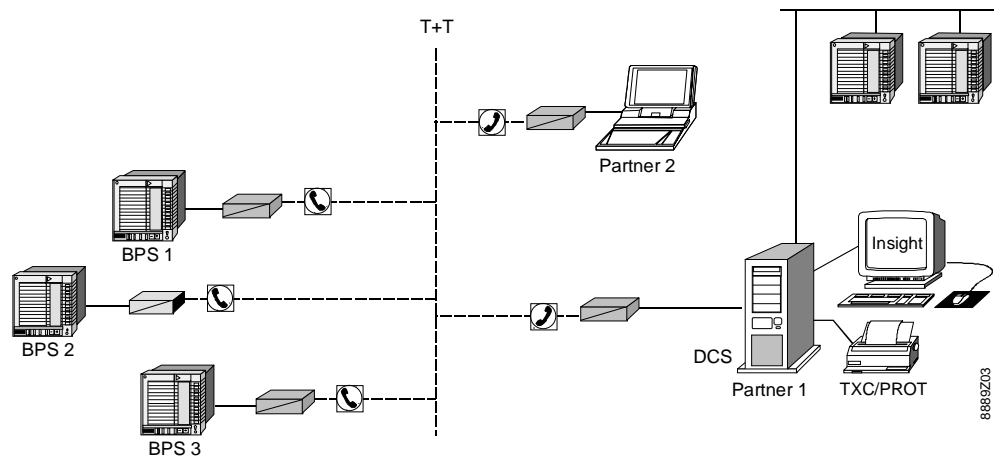
- Event queries EACQ and general queries GACQ of the BPS are executed only by its **own** DCS (partner 1). This ensures that no information is lost to unauthorised partners during transfer.
- MACQ and DACQ are possible only with a DCS (partners 1 and 2).

Example

Topology

The illustration below provides an example for dial-up communication:

- Various plants in different locations with autonomous process stations are administered by a central management station (DCS with Insight and printer).
- Each separate VISONIK BPS (1...3) has a DCS defined as **partner 1**.
- **Partner 2** represents a teleterminal, e.g., the PC of the service crew.



Tasks and functions

This application example may comprise the following tasks and functions:

Tasks	Functions
Plant supervision	Receive fault messages ⇒ Remove fault Receive maintenance messages ⇒ Trigger maintenance jobs
System diagnosis	Interpret messages ⇒ Take appropriate measures
Operation	Operating the plants: – Plant states – Setpoints, timeswitch programs, etc
Save data	Own DCS (partner 1 in each BPS): – Save the process image data of the associated BPS – Download from DCS data to the BPS on loss of data
Energy optimisation	Collect/evaluate energy data ⇒ Optimise use of energy

Potential users

Potential users of the above tasks and functions are organisations with a number of objects located in different locations such as:

- Municipal offices and municipalities (schools, hospitals, public works)
- Banks and insurances (branch offices)
- Wholesalers (sales locations, storage rooms, cooling rooms)
- etc.

Setting up dial-up communication

In order to transmit the above process and system data, dial-up communication must be set up in all partners. In the BPS, this is done by:

- Configuring the dial-up communication parameters
- Defining the message types (type of data to be transferred)
- Making entries in text catalogues (calling sequences, modem type, text to be transferred, etc.)

Refer to the following documents for information on setting up dial-up communication:

Document no.	Title
CM2T8332E	Telephone operation with VISONIK BPS (incl. partner configuration)
CM2T8567E	VISONIK System Basics ("Message buffer BPS")