VISONIK®

COM1 communication cards

For basic units PRV2... / BPS1.ECU

Cards with terminal block for the basic units PRV2... or BPS1.ECU, for communication as a VISONIK BPS from DCS V12 or as an EcuBPS from DCS V18.

Three versions with the following communication interfaces:
- Building Level Network (SDLC ring)
- Building Level Network (SDLC) and V.24 on TTY1 and TTY2
- V.24 on TTY1 and TTY2

Use

The COM1 communication cards are used when the BPS or EcuBPS is used as follows:
- As a partner station on a Building Level Network (BLN) or as a ring master and communication device in a separate SDLC ring
- When the BPS or EcuBPS communicates with peripheral devices (modem, printer)
- When the BPS or EcuBPS is to be used as a remote station or ring master via telephony
Functions

Depending on the device type and application, communication cards are used for:

- Communication with the VISONIK Data and Communication Server (DCS) and the VISONIK partner stations via the BLN or via modem/telephony
- Report printout to a connected printer

Type summary

| Communication card with BLN connection (SDLC ring), Terminal block | PVC1.1S |
| Communication card with BLN connection (SDLC ring), Terminal block | PVC1.1ST / BPS1.C1/1ST |
| 2 V.24 connections on TTY1 and TTY2, Terminal block | PVX1.1C |
| Communication card with BLN connection 2 V.24 connections on TTY1 and TTY2 | PVC1.1T |

Note

The BPS1.C1/1ST card is valid only for the BPS1.ECU basic unit. It cannot be used in PRV2… basic units.

Equipment combinations

| Basic unit | PRV2... / BPS1.ECU | Data sheets | N8305/N8307 |
| Program card | PVA3... / BPS1.M/E2... | Data sheet | N8317 |

Technical design

Depending on the type, COM1 communication cards contain the following functional units either alone or in combination:

- Interface converter to Building Level Network (SDLC)
- Interface converter for V.24 communication on TTY1 and TTY2.

The EEPROM stores the manufacturing and configuration data.

Interface specifications: See "Technical data".
Mechanical design

Plug-in cards with connection tabs to the terminal block (except TYP PVC1.1T). The related terminal block is mechanically encoded to only allow for connection at the designated location (III) on the basic unit.

View of card
PVC1.1ST/BPS1.C1/1ST

1 Plug connections to the terminal block III at the basic unit
2 TTY1 connection for modem or local operation, D-sub 25-pin
3 TTY2 connection for printer or local operation, D-sub 25-pin
4 Internal plug connection to the basic unit

Hardware differences
The above two COM1 cards differ as follows from the above illustration in terms of hardware:
- Type PVC1.1S no D-sub connection on pos. 2 and 3
- Type PVC1.1T no plug contacts on pos. 1

Engineering notes

Note the following during engineering:

- Use these cards only for applications as described in the brief description on the title page (bold print) and the section "Use".
- For the connections, the specifications in section "Technical data" apply.
- Conduct all wiring as described in section "Internal diagrams".
- For bus connections in an overall system, read data sheet N8024 "Building Level Network, SDLC ring".

Mounting notes

The communication cards are delivered with mounting instructions. These instructions show where and how to insert the respective cards in the basic unit.

Do not touch electrical contacts or components on the open unit or card, as electrostatic discharges may destroy sensitive components!

When mounting, apply suitable safety measures such as using an earthed antistatic mat connected to your wrist.
Commissioning notes

A program card must be inserted in the VISONIK BPS or EcuBPS to commission and test communications.

Technical data

General data

| CE conformity | In accordance with the European Union directives on electromagnetic compatibility |
| EN 50 081-1 | EN 50 082-2 |
| Weight with terminal block, without packaging | 0.25 kg |

Note

The same environmental and general data as for the PRV2... or BPS1.ECU basic units apply. See "Technical data" in N8305 or N8307.

Building Level Network (SDLC ring) connection

- Interface type: SDLC/FSK (company-specific)
- Interface coupling: electrically isolated
- Rate of transmission (baud rates): 2400, 4800 bps
- BPS factory setting: 4800 bps
- Format: SDLC (synchronous)
- Data bit: 8
- Bit code: NRZI
- Ring cable min. dia. 0.6 mm, 1 x 4, or 2 x 2. screened, 4-core twisted
- Ring cable if field telephone min. dia. 0.6 mm, 2 x 4, or 3 x 2. 8-core or 6-core twisted
- Connection facility: Screw terminals, rear of unit (terminal block III)

SDLC ring data and wiring

Refer to M8017 "Mounting and installation guide" and N8024 "Building Level Network, SDLC ring" for further information on wiring.

Primary interface

TTY1 (modem)

- Signal definition: CCITT V.24 (subset)
- Signal level: CCITT V.28
- Supported signals: RXD, TXD, CTS, RTS, DCD, DTR, and DSR

Format:
- Start bit: 1
- Data bit: 5, 6, 7, or 8
- Stop bit: 1 or 2
- Parity: none, odd, even
- Rate of transmission (baud rate): 300...19,200 bps
- Connection facility: D-sub 25-pin (m) plug

Secondary interface

TTY2 (printer)

- Signal definition: CCITT V.24 (subset)
- Signal level: CCITT V.28
- Supported signals: RXD, TXD, CTS, RTS

Format:
- Start bit: 1
- Data bit: 5, 6, 7, or 8
- Stop bit: 1 or 2
- Parity: none, odd, even
- Rate of transmission (baud rate): 300...19,200 bps
- Connection facility: D-sub 25-pin (m) plug
Internal diagrams

Card for BLN bus (SDLC)

PVC1.1S

PVX1.1C

Card for BLN bus (SDLC) and V.24 on TTY1 and TTY2

PVC1.1ST / BPS1.C1/1ST

PVX1.1C

Card for V.24 on TTY1 and TTY2

PVC1.1T

PVX1.1C connections, terminal block III

<table>
<thead>
<tr>
<th>Terminal</th>
<th>Signal</th>
<th>Designation</th>
<th>Terminal</th>
<th>Signal</th>
<th>Designation</th>
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<tbody>
<tr>
<td>1 A</td>
<td>IN A</td>
<td>SDLC ring</td>
<td>11 A</td>
<td>IN A</td>
<td>SDLC ring</td>
</tr>
<tr>
<td>2 B</td>
<td>IN B</td>
<td>SDLC ring</td>
<td>12 B</td>
<td>IN B</td>
<td>SDLC ring</td>
</tr>
<tr>
<td>3 A</td>
<td>OUT A</td>
<td>SDLC ring</td>
<td>13 A</td>
<td>OUT A</td>
<td>SDLC ring</td>
</tr>
<tr>
<td>4 B</td>
<td>OUT B</td>
<td>SDLC ring</td>
<td>14 B</td>
<td>OUT B</td>
<td>SDLC ring</td>
</tr>
<tr>
<td>5</td>
<td>IN A</td>
<td>PHONE (field telephone)</td>
<td>15</td>
<td>OUT A</td>
<td>PHONE (field telephone)</td>
</tr>
<tr>
<td>6</td>
<td>IN B</td>
<td>PHONE</td>
<td>16</td>
<td>OUT B</td>
<td>PHONE</td>
</tr>
<tr>
<td>7</td>
<td></td>
<td>Cable screen</td>
<td>17</td>
<td></td>
<td>Cable screen</td>
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</table>

Plugs

X2 Primary interface TTY1 Modem connection
X3 Secondary interface TTY2, Printer connection
X5 Internal plug connection to basic unit PRV2... / BPS1.ECU

X2 and X3 pin assignment

<table>
<thead>
<tr>
<th>Signals as per CCITT</th>
<th>Modem</th>
<th>Printer</th>
<th>Pin assignment</th>
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<tbody>
<tr>
<td>TXD</td>
<td>Output</td>
<td>Output</td>
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<tr>
<td>RXD</td>
<td>Input</td>
<td>Input</td>
<td>3</td>
</tr>
<tr>
<td>RTS</td>
<td>Output</td>
<td>Output</td>
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<tr>
<td>CTS</td>
<td>Input</td>
<td>Input</td>
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<tr>
<td>DSR</td>
<td>Input</td>
<td>–</td>
<td>6</td>
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<td>SGND</td>
<td>Ground</td>
<td>Ground</td>
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<td>Input</td>
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<td>DTR</td>
<td>Output</td>
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<td>Shield</td>
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