epGate PB

Direct Integration of PROFIBUS DP and PA Segments into EtherNet/IP Control Systems

- Prepared for Integration in Standard Engineering and Plant Asset Management Tools
- Re-use of Existing Power Conditioners in Technology Upgrade Projects
- No PROFIBUS DP Intermediate Segment required
- Simple Integration Through Add-On Instructions

Configuration, Parameterization and Plant Asset Management Using Standard Industry Tools

- Supports major EtherNet/IP engineering tools such as Studio 5000 and AMS Device Manager
- Included CommDTM allowing use in FDT/DTM frame applications
- EDD-based device parametrization using Siemens Simatic PDM

Key Component for Transition to State-of-the-Art Technology

- Simple replacement of installed PROFIBUS DP/PA segment coupler
- Re-use of existing PROFIBUS segments without requiring modification
- Support of common control systems e.g. Emerson DeltaV or Rockwell Control Logix
- Support of DLR for redundant communication in the ring with EtherNet/IP

Direct Connectivity to PROFIBUS Segments

- Single access point to PROFIBUS DP and PROFIBUS PA segments from EtherNet/IP networks
- Acting as EtherNet/IP device (adapter), PROFIBUS PA and PROFIBUS DP Master
- Support of one PROFIBUS DP segment and up to two PROFIBUS PA segments

Simple Integration Through Add-On Instructions

- Data access of PLC program to PROFIBUS devices without requiring detailed PROFIBUS knowledge
- Mapping between the two protocols generated by provided tools
- Use of Add-On Instructions (AOI) containing detailed PROFIBUS data type definitions
- Transparent communication overcoming protocol differences
- Optimized for usage with Allen Bradley controllers
## Technical Data

<table>
<thead>
<tr>
<th><strong>Hardware</strong></th>
<th><strong>Processor</strong></th>
<th>Altera Cyclone V SoC with dual-core ARM Cortex-A9</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Status LEDs (Gateway)</strong></td>
<td><strong>PWR</strong> (power supply), <strong>RUN</strong> (operation), <strong>ERR</strong> (error), <strong>CFG</strong> (configuration and update)</td>
<td></td>
</tr>
<tr>
<td><strong>Status LEDs (Fieldbus)</strong></td>
<td><strong>SF</strong> (system fault), <strong>BF</strong> (bus fault)</td>
<td></td>
</tr>
<tr>
<td><strong>Interfaces and Connectors</strong></td>
<td><strong>Ethernet</strong></td>
<td>2 * IEEE 802.3 100BASE-TX / 10BASE-T, managed Ethernet switch for daisy chain topology</td>
</tr>
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<td></td>
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<td>Connectors: RJ45, Protocol: EtherNet/IP</td>
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<td></td>
<td><strong>PROFIBUS PA</strong></td>
<td>2 * PROFIBUS PA (MBP) segments, Bus-powered Medium Attachment Unit (MAU): Fieldbus voltage range: 9 VDC ... 32 VDC, current consumption 10 mA, Connectors: 3-position screw connection, galvanically isolated</td>
</tr>
<tr>
<td></td>
<td><strong>PROFIBUS DP-V0 / V1</strong></td>
<td>1 Segment with RS485 Physical Layer, Connector: 9-pin Sub-D socket</td>
</tr>
<tr>
<td><strong>Physical Properties</strong></td>
<td><strong>Dimensions (H x W x D)</strong></td>
<td>100 mm x 35 mm x 115 mm</td>
</tr>
<tr>
<td></td>
<td><strong>Weight</strong></td>
<td>Approx. 0.25 kg</td>
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<tr>
<td></td>
<td><strong>Power Supply</strong></td>
<td>18 VDC ... 32 VDC; SELV/PELV power supply mandatory</td>
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<tr>
<td></td>
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<td>Typical input current: 200 mA, maximum input current: 1 A (allowing for in-rush current at switch-on)</td>
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<tr>
<td></td>
<td></td>
<td>No power supply to PROFIBUS PA segments through pnGate PB</td>
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<tr>
<td></td>
<td><strong>Typical Power Loss</strong></td>
<td>6 W</td>
</tr>
<tr>
<td></td>
<td><strong>Operating / Storage Temperature</strong></td>
<td>-40 °C ... +60 °C / -40 °C ... +85 °C</td>
</tr>
<tr>
<td></td>
<td><strong>Relative Humidity</strong></td>
<td>10 % ... 95 %, non-condensing</td>
</tr>
<tr>
<td></td>
<td><strong>Cooling</strong></td>
<td>Convection, no fan</td>
</tr>
<tr>
<td></td>
<td><strong>Coating</strong></td>
<td>Conformal coating based on ANSI / ISA-S71.04 G3</td>
</tr>
<tr>
<td></td>
<td><strong>Mounting</strong></td>
<td>DIN rail 35 mm</td>
</tr>
<tr>
<td></td>
<td><strong>Protection Class</strong></td>
<td>IP20</td>
</tr>
</tbody>
</table>

## Scope of Delivery

**Hardware**
- epGate PB Gateway

**Documentation**
- On Website

## Order Numbers

- **GCA-CN-024708**
  - epGate PB, EtherNet/IP to PROFIBUS Gateway. Supports up to 2 PROFIBUS PA segments (up to 32 PA devices, MBP physical layer) and 1 PROFIBUS DP segment (RS485).

## Additional Products and Services

- **LRL-DY-134501**
  - dataFEED OPC Suite, Version 4.01 and higher, including all supported PLC protocols, support for OPC UA, access for any number of dataFEED OPC Tunnel Clients, for simultaneous access to a total of up to 100 OPC UA Servers, OPC Servers and OPC Tunnel Servers, and many more Functionalities such as Database and File Access, Data Exchange, Optimizer, Concentrator and Bridge

- **GCA-CL-024702**
  - epGate PA, 2 channel, EtherNet/IP to PROFIBUS-PA Gateway. Supports up to 2 PROFIBUS PA segments (up to 32 PA devices).

- **GCA-CL-024704**
  - epGate PA, 4 channel, EtherNet/IP to PROFIBUS-PA Gateway. Supports up to 4 PROFIBUS PA segments (up to 64 PA devices).

- **GCA-CL-024705**
  - epGate PA (for STAHL carrier), EtherNet/IP to PROFIBUS PA Gateway. Supports up to 4 PROFIBUS PA segments (up to 64 PA devices). For reversed mounting position on STAHL backplane

- **GCA-CN-024706**
  - epGate DP, EtherNet/IP to PROFIBUS DP-Gateway. Supports 1 PROFIBUS DP segment (RS485).

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