mbGate PA

Direct PROFINET PA Segment Integration into Modbus TCP Control Systems

- Re-use of Existing Power Conditioners in Technology Upgrade Projects
- No PROFINET DP Intermediate Segment required
- Prepared for Integration in Standard Engineering and Plant Asset Management Tools
- MODBUS/TCP Redundancy

Key Component for Transition to State-of-the-Art Technology
- Simple replacement of installed PROFINET DP/PA segment couplers
- Re-use of existing PROFINET PA segments without requiring modification

Direct Connectivity to PROFINET Segments
- Acting as Modbus TCP Server and PROFINET PA Master
- Connects up to 4 PROFINET PA Segments to Modbus TCP

Configuration, Parameterization and Plant Asset Management Using Standard Industry Tools
- Supports major Modbus engineering tools such as Schneider Unity Pro or Siemens TIA Portal
- Included CommDTM allowing use in FDT/DTM frame applications
- EDD-based device parametrization using Siemens Simatic PDM

MODBUS/TCP Redundancy
- Supports the use of two redundant PLCs and two redundant gateways
- Easily enabled via licensing
- Full control of redundant operation mode via engineering and PLC
# mbGate PA

## Technical Data

### Hardware
- **Processor**: Altera Cyclone V SoC with dual-core ARM Cortex-A9
- **Status LEDs (Gateway)**: PWR (power supply), RUN (operation), ERR (error), CFG (configuration and update)
- **Status LEDs (Fieldbus)**: SF (system fault), BF (bus fault)

### Interfaces and Connectors
- **Ethernet**: 2 * IEEE 802.3 100BASE-TX / 10BASE-T, managed Ethernet switch for daisy chain topology
- **PROFIBUS PA**: Up to 4 PROFIBUS PA (MBP) segments (refer to the section „Order Numbers“), Bus-powered Medium Attachment Unit (MAU): Fieldbus voltage range: 9 VDC ... 32 VDC, current consumption 10 mA, Connectors: 3-position screw connection, galvanically isolated

### Physical Properties
- **Dimensions (H x W x D)**: 100 mm x 35 mm x 115 mm
- **Weight**: Approx. 0.25 kg
- **Power Supply**: 18 VDC ... 32 VDC; SELV/PELV power supply mandatory
- **Typical Power Loss**: 6 W
- **Operating / Storage Temperature**: -40 °C ... +60 °C / -40 °C ... +85 °C
- **Relative Humidity**: 10 % ... 95 %, non-condensing
- **Cooling**: Convection, no fan
- **Coating**: Conformal coating based on ANSI / ISA-S71.04 G3
- **Mounting**: DIN rail 35 mm
- **Protection Class**: IP20

## Scope of Delivery
- **Hardware**: mbGate PA Gateway
- **Documentation**: On Website

## Order Numbers
- **GCA-EL-024802**: mbGate PA, Modbus TCP to PROFIBUS PA Gateway. Supports up to 2 PA segments (up to 32 PA devices).
- **GCA-EL-024804**: mbGate PA, Modbus TCP to PROFIBUS PA Gateway. Supports up to 4 PA segments (up to 64 PA devices)

## 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-EN-024808**: mbGate PB, Modbus TCP to PROFIBUS Gateway. Supports 2 PA segments (up to 32 PA devices, MBP physical layer) and 1 PROFIBUS DP segment (RS485).
- **GCA-EN-024806**: mbGate DP, Modbus TCP to PROFIBUS DP Gateway. Supports 1 PROFIBUS DP segment (RS485).

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