SG-gateway™ with I/O interface

Anybus SG-gateways make the Smart Grid possible. They have two main application areas. Firstly, to enable remote control and management of electrical equipment in power grids. Secondly, to enable communication between I/O devices and energy protocols (IEC61850 and IEC60870-5-104).

In-short
Smart Grid gateways for remote control and management of electrical systems.

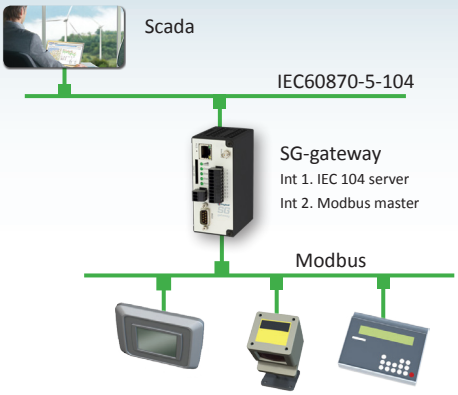
Protocols
IEC61850 client/server, IEC60870-5-104 client/server, Modbus RTU master/slave and Modbus TCP client/server.

Interfaces
3G modem, Ethernet, serial (RS232/ RS485/RS422), 4 digital inputs, 4 digital outputs.

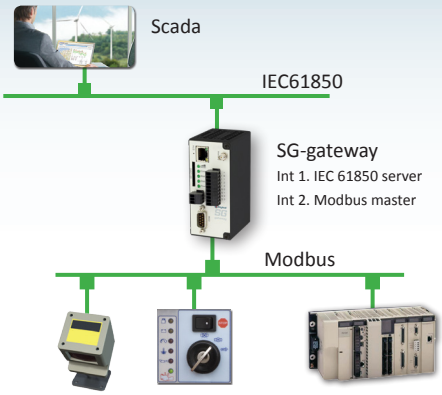
Web editor
Embedded webserver supporting the following functions among others:

- Binary – AND, OR, XOR
- Bits & Bytes – Extract, Pack, Put, Pit, Unpack
- Messages – Send, Receive
- Numerical – Counter, Compare
- Special – Enable/disable, OpenVPN
- Storage and edge detection – RS Flipflop, Trigger
- Timing – TON, TOFF, TP, Timer

EXAMPLE: MODBUS TO IEC60870-5-104



EXAMPLE: MODBUS TO IEC61850



Features and Benefits

- Easy way to transport I/O data from the field to SCADA systems
- Several communication protocols are supported (IEC61850 client/server, IEC60870-5-104 client/server, Modbus TCP client/server, Modbus RTU master/slave)
- Transmission over 3G or Ethernet
- Connecting serial devices over RS232/RS485/RS422
- 4 digital inputs
- 4 digital outputs
- Easy web based configuration using any standard browser
- Robust metal housing for stand-alone operation with DIN rail mounting
- Worldwide technical support and consulting services

Device description

The SG-gateway is a remote terminal unit for the energy market with four digital inputs and four digital outputs for monitoring and controlling the connected devices.

Additionally the SG-gateway includes an optional 3G modem, an Ethernet interface and a serial port.

Custom applications can be easily developed with the embedded Web Editor supporting logical functions (e.g. AND, OR, XOR, FF, TIMER and COUNTER).

TECHNICAL SPECIFICATIONS

Technical Details		Standard
Dimensions (L•W•H)	70•46•105 mm	
Protection class	IP20	IEC 60529
Enclosure material	Continuously hot-dip aluminium-zinc coated steel sheet	DIN EN 10215
Installation position	Vertical	
Mounting	DIN rail	
Certifications		
R&TTE Directive		EN 301 489-1 EN 301 489-7 EN 301 511
CE	2004/108/EC	EN61000-6-4 EN61000-6-2
RoHS/WEEE		
Electrical Characteristics		
Power	24 VDC +/- 15 %	
Current consumption	Max 120mA at 24VDC plus digital outputs	
I/O Characteristics		
Digital inputs	4 x sink (typ. 5 mA), TRUE min. 15 VDC, FALSE max 5 VDC, no potential isolation	
Digital outputs	4 x Transistor (High-Side) 24 VDC, max. 500 mA short-circuit and overload resistant, no potential isolation	
Environmental Characteristics		
Operating temp	0 to 55 °C	
Immunity and Emission for Industrial Environment		
EMC emission		EN 61000-6-4
EMC immunity		EN 61000-6-2
Electrical shock		IEC 61140, class III
Low voltage directive		EN 60950-1
Single Pack Accessories		
• Connector for power supply (Weidmüller BL 3.50/3) • Connector for I/Os (Weidmüller BL 3.50/10)		

NETWORK SPECIFIC FEATURES

INTERFACES	
Ethernet	1x 10/100BaseT, RJ45 connector with traffic and link LED
Serial	1 x RS232, RS485 or RS422 (selectable) with (one) D-SUB 9 connector
3G	Tri Band UMTS modem (850/1900/2100 MHz)
WEB EDITOR	
Functions	Binary: AND, OR, XOR Bits & Bytes: Extract, Pack, Put, Pit, Unpack Messages: Send, Receive Numerical: Counter, Compare Storage and edge detection: RS Flipflop, Trigger Timing: TON, TOFF, TP, Timer Special: Enable/disable, OpenVPN
Cycle time	25 msec
Data	Up to 786 I/Os
Additional features	IEC 60870-5-104 client/server (up to 512 values) Modbus RTU master/slave and TCP client/server (up to 32 devices and 128 values) SNTP time synchronisation OpenVPN Client COM Server (according to RFC 2217) DHCP Server (up to 100 Clients) NAT (up to 500 mappings) Firewall (up to 500 rules) SMS send and receive Event Log with timestamp and message Configuration export

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