IXXAT SG-gateway with PROFINET Interface

Remote terminal unit for Smart Grid applications

The SG-gateway with PROFINET implements an isochronous real-time PROFINET device interface with an integrated 2-port switch, allowing seamless network integration regardless of network topology (line, star, bus).

The SG-gateway supports the communication protocols used in the energy sector, e.g. IEC60870-5-104 and IEC61850 and enables connectivity for energy devices to PROFINET-based automation systems.

In addition to PROFINET and IEC protocols, other electric equipment in the field can also be connected via an Ethernet interface and/or a serial port, using the protocols Modbus TCP and RTU. As an option, the SG-gateway can also include a 3G modem for remote connectivity.

Easy WEB-PLC programming

The application logic can be programmed on the device either using the integrated graphical web editor or by using a predefined configuration loaded to the device. The graphical web editor is a very intuitive and easy to use interface to program software applications and configure the gateway. No engineering tools are required and it can easily be accomplished by service technicians.

Features and benefits

- Connects intelligent electrical devices (IED) with IEC protocols to industrial automation systems using PROFINET or Modbus TCP/RTU.
- Easy way to transport I/O data from electrical equipment in the field to SCADA systems
- Connects machines to PLC's and Virtual Power Plant / Demand Response companies
- Supports several communication protocols (IEC61850 client/server, IEC60870-5-104 client/server, Modbus TCP client/server, Modbus RTU master/slave)
- Transmission over *3G (*optional) or over Ethernet
- Connects serial based Modbus RTU electrical equipment over a selectable RS232/RS485 interface
- Easy web based configuration using any standard browser
- Robust metal housing for stand-alone operation with DIN rail mounting
- Global free technical support and consulting services

PROFINET-IO Device/Slave interface

- Complete PROFINET-IO Real-Time (RT) Class 1 & 3 communication V 2.31
- Max 1440 bytes of Input and 1440 bytes of Output data
- Up to 128 modules
- Baud rate 100 Mbit/s fixed
- SNMP-MIBII support
- Generic and PROFINET specific diagnostic support
- Supports PROFIenergy profile
- Supports Media Redundancy Protocol (MRP)
- Device identity customization
- Supports PROFINET Fast Start Up
- PROFINET uplink configuration via .GSDML file
- Integrated switch allowing for a daisy-chain topology
- Dual RJ-45 network ports available simultaneously

Technical specifications

Dimensions (LxWxH)	73 x 46 x 103mm
Weight	320 g
Operating temperature	0 to +55ºC
Enclose material	Continuously hot-dip aluminium-zinc coated steel sheet
Power supply	24 VDC Weidmuller BL 3.50/03
Current consumption (at 24 VDC)	0.2 A Modem version: 0.24A
LED indicators	X5
SD card slot	Supporting micro SD cards up to 32 Gbyte
Ethernet connector	1x 10/100 BaseT RJ45
PROFINET connector	2x 100 Mbit/s BaseT RJ45 available simulraneously
Serial connector	Weidmuller BL 3.50/08
CAN connector	Weidmuller BL 3.50/04
Cellular Modem	3G Tri Band UTMS modem (optional with SIM card slot)
Mechanical rating	IP20, NEMA rating 1
Mounting	DIN-rail (EN 50022 standard)
Supported protocols	IEC61850 Client/Server, IEC60870-5-104 Client/Server, PROFINET-IO Device, Modbus TCP Client/Server, Modbus RTU Master/Slave
Required software	CHIPtool for IP configuration
Config method	Integrated webserver
Certifications	CE