

TGN FlexControl

Overview

TGN FlexControl is an advanced, highly scalable solution designed for optimal energy regulation and management across various market sectors. FlexControl integrates seamlessly with renewable energy sources and other distributed energy resources (DERs), as well as energy storage systems (ESS), to offer dynamic load control, peak demand management, and market participation services.

Key Features

Behind the Meter Services

TGN FlexControl provides a range of services that enhance energy efficiency and sustainability by managing local generation and consumption. The services include:

- Active Load Control
- Peak Shaving
- Power Limitation
- Energy Arbitrage
- GWP/GHG Optimization*
- Reactive Load Compensation
- EV Charge Boosting

Frequency Market Trading

By participating in various energy trading markets, TGN FlexControl helps maintain grid stability and frequency regulation through:

- FFR (Fast Frequency Response)
- FCR-D (Frequency Containment Reserves - Dynamic, up/down regulation)
- FCR-N (Frequency Containment Reserves - Normal operation)
- aFRR* (Automatic Frequency Restoration Reserves)
- mFRR* (Manual Frequency Restoration Reserves)

Capacity Market Trading

Engaging in optimized participation in capacity markets such as Euroflex, offering grid support and earning revenue by supplying reserve power when needed.

Parameter	Description
General Capabilities	
Auxiliary I/O	10 (upgradable)
Datalogging	Local: 12h @ 0.1s resolution (expandable) Cloud: 30 days @ 1s resolution, >24 months @ 15 min resolution
Physical Specifications	
Operating temperature range	-20°C to 55°C
Storage temperature range	-20°C to 70°C
Humidity range	5-85 % RH, non-condensating
Dimensions	400x300x235 (HxWxD)
Weight	5.5 kg
Cabinet material and finish	Fiberglass polycarbonate composite, Black (RAL9005)
Dependencies	
Power supply	3A, 230V @ 50/60Hz
Internet connection	5 Mbit
Interface	
Display	7" TFT 16:9 LED
Touch	PCAP, Multitouch
Resolution	800x480
Brightness	500 Cd/m2 (Nits)
Digital Communication	
Supported communication protocols	Modbus (TCP/IP, RTU) PROFINET, FieldBUS, EtherCAT, Profibus, BACnet, MQTT, OCPP, IEC 61850 (optional)
Communication interface	Ethernet, RS232, RS485, optical fibre (optional)
Encryption	YES (ISO/IEC 18033-3)
Standards	
Electrical Device	IEEE 1547
System integration	IEC 62485
Communication	IEC 62351-3:2023
Cyber Security	ISO IEC 27001 (compliant)
Approvals	
CE	Electromagnetic Compatibility Directive 2014/30/EU (EMC)
DNV-GL	Low Voltage Directive (2014/35/EU)

