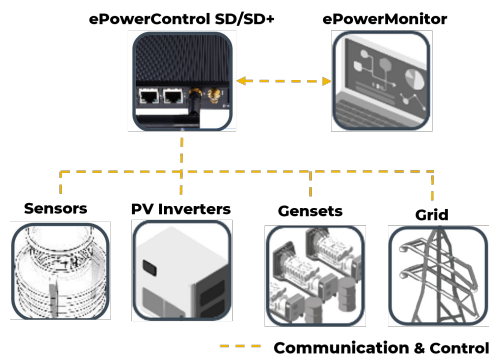# ePowerControl SD/SD+
Solar-Diesel integration controller

PRODUCT DESCRIPTION

ePowerControl SD/SD+ is a solar-diesel integration controller, allowing for a safe, simple, and easy integration of solar plants with a single (SD) or multiple diesel gensets (SD+) and grid systems.

ePowerControl SD/SD+ — ePowerMonitor

Sensors — PV Inverters — Gensets — Grid

- - - Communication & Control

PRODUCT FEATURES

eConf[2] : Intuitive commissioning interface & pre-configured communication drivers library: configuration via any local web browser for quick setup and commissioning, with a drop-down list of common devices for faster configuration.
Log: View and download error logs and setpoints history from the "Logs" page for easy diagnosis.

🟨 **Grid feed-in management**
Optimizes solar power generation to maximize PV production, **while ensuring zero export to the grid**, thereby maintaining compliance with grid operator regulations to avoid penalties.
It also enables **controlled grid feed-in** based on operator-defined targets and grid standards.

🟨 **Minimum genset loading**
It automatically adjusts the PV production to achieve maximum PV penetration while ensuring that the gensets* do not operate below their minimum loading required.
Up to 4 Gensets with SD+

🟨 **Reactive power management** *(SD+ only)*
It enables reactive power management based on power factor. It dynamically controls reactive power to adjust the power factor at PCC or genset level within a given range.

PRODUCT BENEFITS

1. **Guaranteed interoperability:** with a large number of devices (inverters, ev chargers, ESS, gensets controllers, meters, sensors, etc.). Integrates with MODBUS TCP/RTU and offers additional protocol support upon request[1].

2. **Multi-brand compatibility:** ensures a homogeneous and uniform management of your installations by mixing different brands for more flexibility during project design & engineering phases.

3. **Effortless commissioning** reduced commissioning time and cost with an user-friendly configuration interface (eConf[2]).

🟨 **Failsafe strategy**
Includes a fail-safe mode triggered by communication loss with critical components of the plant. This ensures equipment protection and compliance with operational standards until normal communication is restored.

🟨 **Manual setpoint setting**
Efficiently manage your system by dynamically adjusting setpoints manually for all linked devices locally through a single embedded interface.

🟨 **Reliable data logging**
Prioritizing data security, it ensures reliable acquisition and logging from all on-site devices. Secure local storage is complemented by an embedded database, guaranteeing data integrity.

🟨 **Data export & visualisation**
Multiple ways for data export and visualisation available:
- **Locally,** through Elum's eConf[2] platform, via USB or Embedded Modbus Server (to connect to 3rd party Modbus master).
- **Remotely,** using Elum ePowerMonitor[3] or compatible third-party monitoring platforms (FTP push, API integration).

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1. Refer to the compatibility list for more details.
2. is a user-friendly tool for configuring Elum loggers and controllers, find more details here : eConf.
3. is a data-visualization platform for managing multi-energy sites, find more details here : ePM.

ⴹ TECHNICAL SPECIFICATIONS

GENERAL INFORMATION	SD	SD+
Dimensions (mm)	Base module - 101 x 27 x 128 (with casing - 300 x 300 x 150)	
Weight (base module)	224 g	
Capacity max in kWp (indicative)	300	
Max. number of devices PV inverters Genset Meters	**32** 16 1 4	**32** 16 4 4
Standards (base module)	IEC 60068-2-27, IEC 61000-4-2/3/4/6/8, UL 60950-1	
Installation	DIN rail mounting	
Protection class (for optional wall mounting kit)	IP 66	

AMBIENT CONDITIONS		
Temperature	-10°C to 60°C	
Humidity	5% to 95% (non condensing)	

POWER SUPPLY		
Input parameters	12 to 24 VDC, 480 mA @ 12 VDC, 225 mA @24 VDC, without casing 100 - 240 VAC, 50 Hz / 60 Hz, with Elum casing	
Power consumption (max)	20W	
UPS	Optional - 19,2 / 28.8 / 76,8 / 172.8 / 288 Wh (Up to 24h autonomy)	

COMMUNICATION		
Compatible protocols	Modbus TCP/RTU[1] (Other protocols can be configured upon request)	
Available ports	2 x serial (RS485/RS422/RS232); 1 x LAN (RJ45 - 100 Mbps); 1 x USB 2.0-A	
Cellular modem	Optional - LTE/HSPA+/GSM/GPRS/EDGE/EV-DO	
Remote access	eConf[2] / ePowerMonitor[3] / 3rd party Monitoring Platforms (FTP Push)	

OTHER INTERFACES		
Extensions (I/Os, RS485)	Optional - max. 2 modules (8 I/Os per module / 2*RS485 per module)	
Power measurement	From compatible meter models only [1]	

DATA ACQUISITION		
Collected data	Active / reactive power, current, voltage...[4]	
Equipment alarms (with ePowerMonitor[3])	Mail & web notifications, configurable thresholds on all read variables	
Data acquisition granularity	10 minutes for data on ePowerMonitor[3], 5 minutes for data on some third party platforms, real-time for alarms[5]	
Data storage	8GB ->100 days of data stored	
Data Export	USB CSV export/FTP/FTPS standard, EnergySoft, QOS, Meteocontrol	

1. Refer to the compatibility list for more details.
2. is a user-friendly tool for configuring Elum loggers and controllers.
3. is a data-visualization platform for managing multi-energy sites.
4. Sample list. Data will be in accordance with the connected device.
5. Varies based on equipment communication protocols and physical connectivity.

For more information about the product ⬚