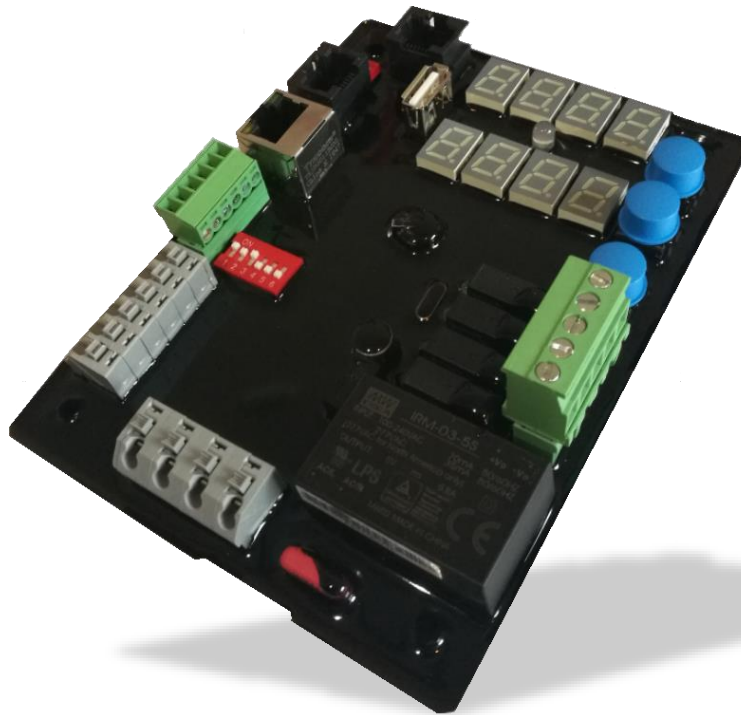


HYBRID BASIC

Diesel Hybrid controllers for cost sensitive applications



HYBRID BASIC for single generator applications

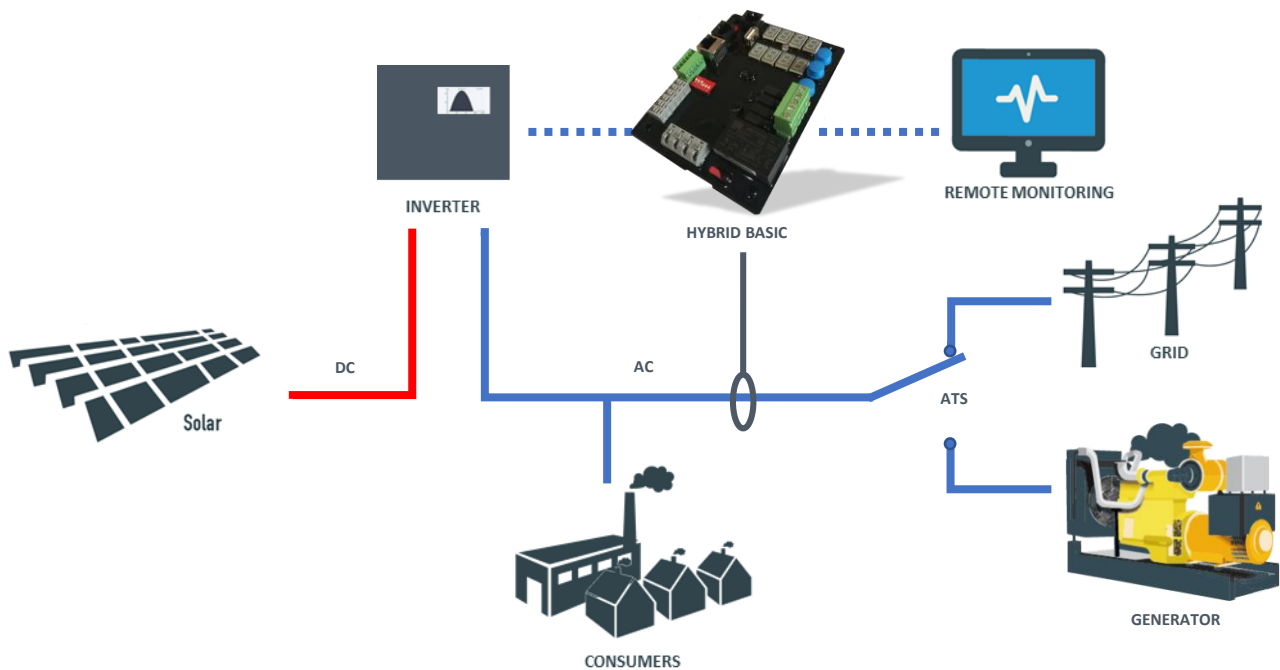
With the HYBRID BASIC controller, elgris offers an easy to use, but high quality control system targeting single generator applications. Not only for prime power generator applications but also grid connected PV systems with a standby generator can benefit of the elgris BASIC controller.

The unique features of the elgris controller define new standards in terms of commissioning time, durability and performance. Based on the inhouse developed HYBRID control algorithm, the elgris controller determines the operating point of a single generator and adjusts the photovoltaic system accordingly.

Due to the universal layout and standardized communication protocols and interfaces, a wide range of inverters are supported.

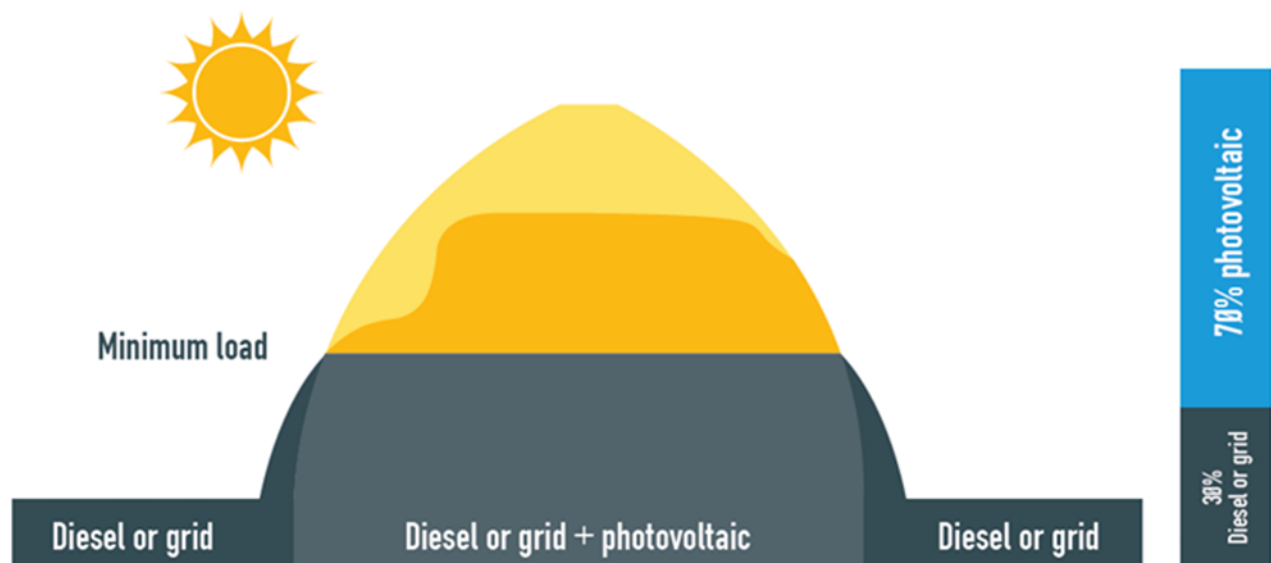
With the elgris HYBRID BASIC controller, almost any generator can be upgraded with any PV-system thus reducing power and safe on fuel.

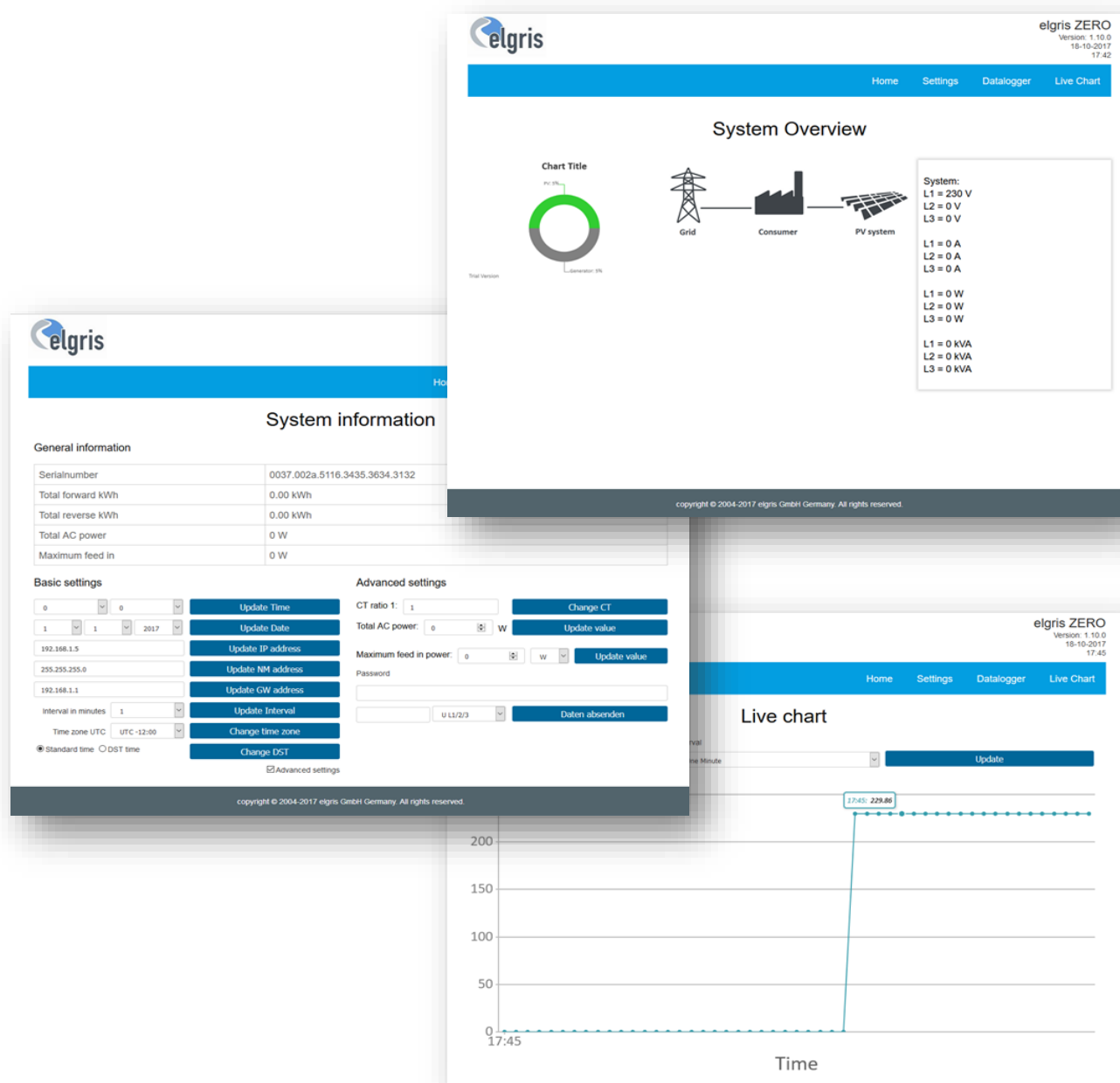
Typical application



The elgris BASIC controller measures the power from the grid or generator. In applications where the load is relative constant and equally divided over the three phases, a single phase measurement on the lowest phase is a good solution.

The controller reduce the output of the solar system by adjusting the set point of the inverter. When the generator is not running, the feed in protection is triggered and becomes active. When the generator is running and powering the load, the controller prevents the generator from running in a non optimum point of load and thus from high fuel consumption and avoids serious damages due to the low load.





- Customizable General overview page with all information about the site.
- Settings page where all settings can be changed.
- Live chart page where real time data is shown. This is very help full to see the performance of the solar system and see load changes based on human interface.
- Datalogger page where the historical information is being displayed. All information is stored locally on an USB stick and can also be downloaded with a FTP server for further analysis.

Technical overview

GENERAL DATA

AC power supply	80 – 250 V
Data interfaces	RS-485 (RJ45) and Ethernet (RJ45) for inverter control and internet connection
Energy measurement	3 current inputs 0 – 5 A 4 voltage inputs (L1, L2, L3 N) 0 – 250 Vac Measurement interval: 1Hz
USB interface	Datalogging, Firmware update
Enclosure	DIN rail mounting, PUR protection
Dimensions W x H x D	90 x 80 x 45 mm
Weight	200 g
Protection degree	IP20
Ambient temperature range	-25 – 60 °C

FEATURES

Settling rate	20 ms
Sampling rate	8 kHz
Datalogging	Storage of measurement values each minute on USB stick USB memory usage: ~150kB/day Connection to monitoring portal Automatic internet time via SNTP protocol
Integrated web pages	Graphic of solar power vs. Grid consumption Graphic of actual values (solar power, grid consumption) Configuration page
Certificates	CE

	CONTROL SCHEME WITH GENERATOR OFF	CONTROL SCHEME WITH GENERATOR ON
Night	Load is powered by the grid.	Load is powered by the generator.
Morning	Load is partially powered by the PV, and the remaining power comes from the grid.	Load is partially powered by the PV, and the remaining power comes from the generator and the grid.
Noon	Load is fully powered by the PV. When the consumption from the grid is positive (i.e. feed in), the output of the PV will be reduced.	Load is fully powered by the PV. When the load on the generator become slower than the predefined set point, the output of the PV will be reduced.
Afternoon	Load is partially powered by the PV, and the remaining power comes from the grid.	Load is partially powered by the PV, and the remaining power comes from the generator and the grid.

