DELIOS
SUN NEVER SETS

STORAGE PHOTOVOLTAIC INVERTERS

Storage inverter systems

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THE POWER OF SUN EVEN WHEN IT'S NOT HERE

SUN NEVER SETS

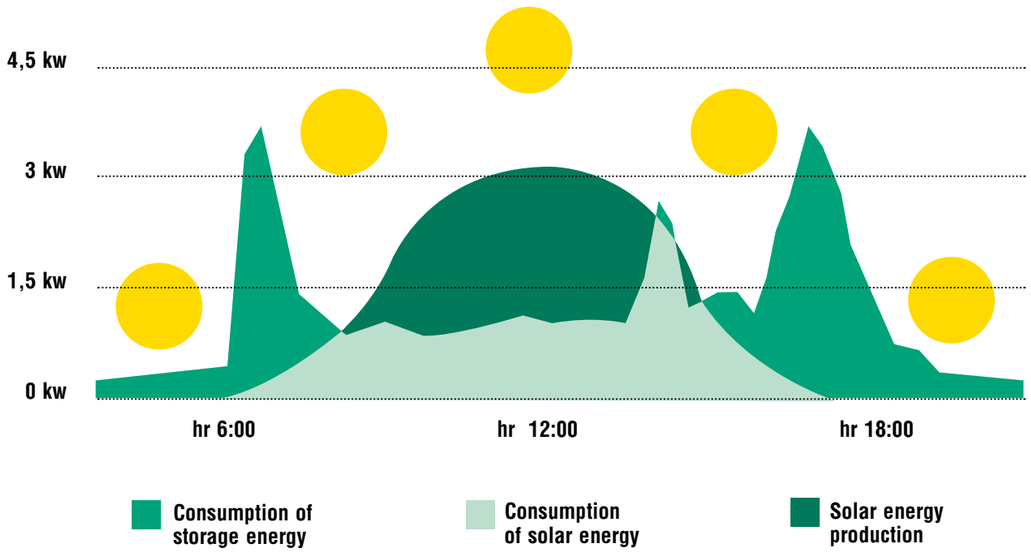
DELIOS vision is a world where clean energy from renewable sources will always be available where and when necessary.

DELIOS: ITALIAN QUALITY

DELIOS is a dynamic young company born from Italian ingenuity.
All the products in the **DELIOS** range are developed and produced in Italy, in Cittadella (Padua) Headquarters.
Nearer and nearer to a future where energy self-sufficiency is no more a dream but a solid reality.
Innovation and continuous improvement drive **DELIOS** activity and make quality the cornerstone of the company. Every process and product undergo continuous quality tests.
From the company site **www.delios-srl.it** it is possible to download the FACTORY INSPECTION certification that ensure the use of Made in Europe components only.

DELIOS SYSTEM: THE HYBRID INVERTER

DELIOS systems are able to remarkably increase the self-consumption of solar energy produced from the photovoltaic plant. **DELIOS** hybrid inverter allows you to store in the battery-storage systems the extra free clean power produced by the sun, making it available for later use.



WHY STORAGE?

01

NO WORRIES ABOUT RISING ENERGY PRICES
DELIOS hybrid inverter helps you cut your energy costs in a considerable way, both for your home and for your business.

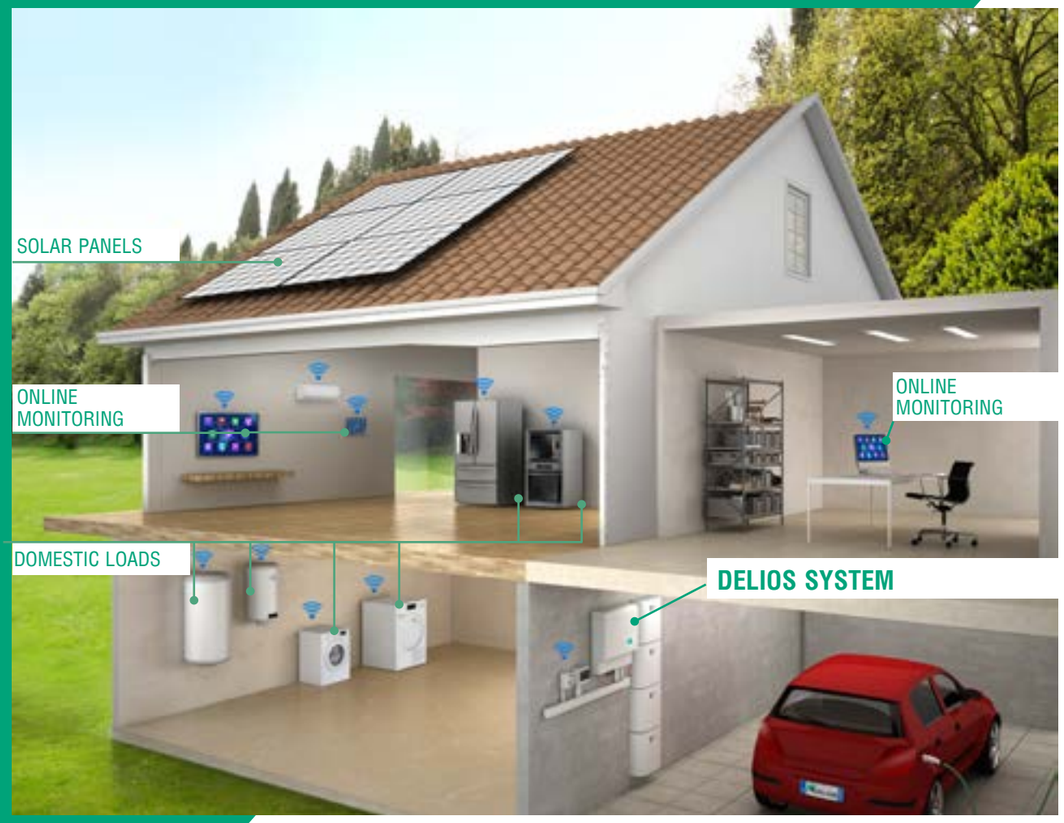
02

MAXIMUM INDEPENDENCE
Gain independence from the grid with **DELIOS** and have plenty of energy for your home even when the power grid fails.

03

THE ENERGY REVOLUTION STARTS NOW
Take part in the energy revolution. Choose renewable energy and enter the community that drives the change.

WHY DELIOS: TECHNOLOGY AND ADVANTAGES



TOTAL PROTECTION

DELIOS system fits perfectly to your needs ensuring your home and your business have the power they need:

· EPS SYSTEM (EMERGENCY POWER SUPPLY)

DELIOS protects your home from power-cuts ensuring the power supply that you need. EPS System enables the inverter to work completely off-grid.

· BACK-UP RESERVE FUNCTION

With **DELIOS** you never run out of power, even during a power-cut. The inverter software is tailored to customer needs with a back-up power reserve in the storage system, so that the EPS system can always be activated.

TOTAL EFFICENCY

DELIOS system automatically manages the electricity consumption from the grid and the pv-storage system without any interruption.

DC POWER OVERSIZING

DELIOS Inverters allow you to oversize the PV field having more DC power available. This configuration enables to always have power to charge the storage system even when the AC consumption is maximum.

CONFIGURATION FLEXIBILITY

DELIOS systems allow great flexibility, offering a wide range of configurations (schemes at the end of this catalogue), among which:

· "SMART ISLAND" FUNCTION

Island mode function allows you total independence from public electrical grid combining different energy sources (generator set, power units…)

· "HYBRID-AC" FUNCTION

DELIOS Inverters can be installed to an existing PV-plant in order to add a storage system and eventually to increase the photovoltaic field.

· "BATTERY READY" MODE

You decide whether to connect up the battery at the time of installation or add it later on.

SMART TECNOLOGY

DELIOS systems are designed to provide the best performance of the photovoltaic plant optimising energy self-consumption:

· GRID FEED-IN MANAGEMENT

DELIOS system optimises the feed into the grid through a smart output power management. The feed-in limit can be set by the client considering their needs.

· BATTERY MANAGER AND MANTEINANCE

Self-regulating battery maintenance in case of low level of charge or days of inactivity. Ability to set specific time slots for battery use.

· HIGH PERFORMANCE MPPT-I TRACKER

Optimised management of two independent and separate PV strings that ensure the best PV-panel performance in all conditions.

DLS SINGLE PHASE

The **DLS** single-phase range is the perfect solution for domestic plants. It enables an increase in self-consumption within your home and gain independence from rising energy prices.

EASY TO INSTALL

Easy and quick installation, thanks to the clever design of every component:

- Wide voltage range for MPPT inputs to allow a quick and flexible PV arrays configuration;
- No external switchboards required;
- Different battery brands and types paired with the system.

DLS-C
300 / 450 / 600

The compact **DELIOS** inverter.
This compact version is the perfect solution for the average home needs, with no high energy consumption and / or high-power needs. All the advantages of the **DELIOS** system in a compact and cost-effective product. Perfect for small homes.

PV inverter System with HV battery storage	DLS 300C	DLS 450C	DLS 600C
DC Inputs			
Maximum input power	4.5kW	6kW	8kW
Maximum input voltage		600V	
Minimum input voltage		115V	
Nominal input voltage		400V	
FV MPPT voltage range		100V - 550V	
Maximum power x MPPT	2.25kW	3kW	4kW
DC voltage range - MPPT @ Pdc max	175V - 550V @ 2.25kW	230V - 550V @ 3kW	310V - 550V @ 4kW
Maximum input current x MPPT	13A	20A	20A
Short-circuit current x MPPT	15A	25A	25A
Number of MPPTs		2	
Maximum number of strings x MPPT		1+1	
Battery charger			
Battery type		Litio	
Battery voltage range		40V - 65V	
Max battery current		35A	
Nominal battery voltage		48V	
Max charging power		1.7kW	
Max discharging power		1.7kW	
Communication interfaces		CAN	
AC output			
Grid connection		1P+N+PE	
Sn nominal power	3kVA	4.5kVA	6kVA
P maximum active power	3kW	4.5kW	6kW
AC voltage range		230Vac ± 15% (*)	
Output nominal current	13A	19.6A	26.1A
Grid nominal frequency		50Hz	
Frequency range		47Hz - 53Hz (*)	
Cos ϕ		1 (adj ± 0.80)	
THD		< 3%	
EPS output			
Maximum Smax power (PV + BATT)	3kVA	4.5kVA	6kVA
Maximum Smax power (BATT)		1.7kVA	
AC voltage range		230Vac ± 15% (*)	
Output nominal current	13A	19.6A	26.1A
Grid nominal frequency		50Hz	
Intervention time		< 5 sec (*)	
THD		< 3%	
Operating Performance			
Maximum Effciency		97%	
Weighted effciency (Euro)		96%	
Battery typical effciency		94%	
Protective Devices			
DC polarity reversal		As standard	
BATTERY polarity reversal		As standard	
BATTERY overload protection		As standard	
AC short-circuit protection		As standard	
Isolation monitoring unit		As standard	
Interface protection and anti-islanding		In compliance with local legislation	
RCMU (Residual Current Monitoring Unit)		As standard	
DC Overvoltage protective device (MOV + SURGE PROTECTOR)		As standard	
AC Overvoltage protective device (MOV + SURGE PROTECTOR)		As standard	
BATTERY Overvoltage protection (MOV + SURGE PROTECTOR)		As standard	
Accessories Supplied			
DC connectors		Quick connectors	
AC connectors		Screw contacts terminal strip, M25 cable gland	
BATTERY connection		Screw contacts terminal strip, PG9 cable gland	
DC switch		As standard	
BATTERY automatic switch		Built-in	
User Interface		Graphic Touch Screen 4.3" colour LCD	
Communication interfaces		USB/CAN Bus/RS485/Ethernet/WiFi	
External alarm signal		As standard	
Datalogger		Built-in	
Warranties		5 years (as standard)/10 year (optional)	
Environmental Conditions			
Ambient temperature		-20°C...+60°C	
Power derating temperature range		40°C...+60°C	
Storage temperature		-30°C...+70°C	
Relative humidity		5%...95% without condensation	
Noise levels		< 50 dB(A) @ 1m	
Maximum operating altitude without derating		2000m	
Pollution degree classifcation		PD 3	
Installation environmental category		Indoor, unconditioned	
Physical			
Protection rating		IP 21	
Overvoltage category (IEC 62109-1)		II (DC, BATTERY input) III (AC input & output)	
Cooling concept		I-cool, forced cooling	
Dimensions (W x H x D) mm		480 x 730 x 150	
Weight		21kg	
Fitting system		Wall bracket	
Safety			
Protection class		I	
DC to AC isolation		Transformerless	
BATTERY to AC and DC isolation		HF Transformer	
Certifcations		CE	
EMC and Safety standards		EN61000-6-2 (EMC); EN61000-6-3 (EMC); EN 62109-1 (Safety); EN 62109-2 (Safety)	
Grid codes		CEI 0-21 (IT); VDE 0126-1-1 (DE); VDE AR-N 4105 (DE); G98/G99 (UK); C10-11 (BE)	
Other Features			
BACKUP/OFF-GRID mode operation		Yes, with internal interlock (*)	
ON-GRID/BACKUP/OFF-GRID selection mode		Yes, automatic	
Grid support (grid services)		Yes, if required by the applied grid code	
Residential loads management (OPTIONAL)		Yes, 1 dry contact 4A 250Vac	

(*) The specifed range or functionality may vary according to the mains connection standard enforced in the country of installation

DLS
300
450 / 450H
600L / 600

The most powerful version among **DELIOS DLS** range. The **DLS** system is the right choice for medium and large houses, where energy consumption is significant even during night hours.

PV inverter System with HV battery storage	DLS 300	DLS 450 / DLS 450H	DLS 600L / DLS 600
DC Inputs			
Maximum input power	4.5kW	6kW	8kW
Maximum input voltage		600V	
Minimum input voltage		115V	
Nominal input voltage		400V	
FV MPPT voltage range		100V - 550V	
Maximum power x MPPT	2.25kW	3kW	4kW
DC voltage range - MPPT @ Pdc max	175V - 550V @ 2.25kW	230V - 550V @ 3kW	310V - 550V @ 4kW
Maximum input current x MPPT	13A	20A	20A
Short-circuit current x MPPT	15A	25A	25A
Number of MPPTs		2	
Maximum number of strings x MPPT	1+1	2+2	2+2
Battery charger			
Battery type		Lithium	
Battery voltage range		40V - 65V	
Max battery current	66A	66A / 100A	66A / 100A
Nominal battery voltage	48V	48V	48V
Max charging power	2kW	2kW / 3kW	2kW / 3kW
Max discharging power	3kW	3kW / 4.5kW	3kW / 4.5kW
Communication interfaces		CAN	
AC output			
Grid connection		1P+N+PE	
Sn nominal power	3kVA	4.5kVA	6kVA
P maximum active power	3kW	4.5kW	6kW
AC voltage range		230Vac ± 15% (*)	
Output nominal current	13A	19.6A	26.1A
Grid nominal frequency		50Hz	
Frequency range		47Hz - 53Hz (*)	
Cos ϕ		1 (adj ± 0.80)	
THD		< 3%	
EPS output			
Maximum Smax power (PV + BATT)	3kVA	4.5kVA	6kVA
Maximum Smax power (BATT)	3kVA	3kVA / 4.5kVA	3kVA / 4.5kVA
AC voltage range		230Vac ± 15% (*)	
Output nominal current	13A	19.6A	26.1A
Grid nominal frequency		50Hz	
Intervention time		< 5 sec (*)	
THD		< 3%	
Operating Performance			
Maximum Effciency		97%	
Weighted effciency (Euro)		96%	
Battery typical effciency		94%	
Protective Devices			
DC polarity reversal		As standard	
BATTERY polarity reversal		As standard	
BATTERY overload protection		As standard	
AC short-circuit protection		As standard	
Isolation monitoring unit		As standard	
Interface protection and anti-islanding		In compliance with local legislation	
RCMU (Residual Current Monitoring Unit)		As standard	
DC Overvoltage protective device (MOV + SURGE PROTECTOR)		As standard	
AC Overvoltage protective device (MOV + SURGE PROTECTOR)		As standard	
BATTERY Overvoltage protection (MOV + SURGE PROTECTOR)		As standard	
Accessories Supplied			
DC connectors		Quick connectors	
AC connectors		Screw contacts terminal strip, M25 cable gland	
BATTERY connection		Screw contacts terminal strip, M25 cable gland	
DC switch		As standard	
BATTERY automatic switch		Built-in	
User Interface		Graphic Touch Screen 4.3" colour LCD	
Communication interfaces		USB/CAN Bus/RS485/Ethernet/WiFi	
External alarm signal		As standard	
Datalogger		Built-in	
Warranties		5 years (as standard)/10 year (optional)	
Environmental Conditions			
Ambient temperature		-20°C…+60°C	
Power derating temperature range		40°C…+60°C	
Storage temperature		-30°C…+70°C	
Relative humidity		5%...95% without condensation	
Noise levels		< 50 dB(A) @ 1m	
Maximum operating altitude without derating		2000m	
Pollution degree classifcation		PD 3	
Installation environmental category		Indoor, unconditioned	
Physical			
Protection rating		IP 21	
Overvoltage category (IEC 62109-1)		II (DC, BATTERY inputs) III (AC output)	
Cooling concept		I-cool, forced cooling	
Dimensions (W x H x D) mm		710 x 650 x 150	
Weight		30Kg	
Fitting system		Wall bracket	
Safety			
Protection class		I	
DC to AC isolation		Transformerless	
BATTERY to AC and DC isolation		HF Transformer	
Certifcations		CE	
EMC and Safety standards		EN61000-6-2 (EMC); EN61000-6-3 (EMC); EN 62109-1 (Safety); EN 62109-2 (Safety)	
Grid codes		CEI 0-21 (IT); VDE 0126-1-1 (DE); VDE AR-N 4105 (DE); G98/G99 (UK); C10-11 (BE)	
Other Features			
BACKUP/OFF-GRID mode operation		Yes, with internal interlock (*)	
ON-GRID/BACKUP/OFF-GRID selection mode		Yes, automatic	
Grid support (grid services)		Yes, if required by the applied grid code	
Residential loads management (OPTIONAL)		Yes, 1 dry contact 4A 250Vac	

(*) The specifed range or functionality may vary according to the mains connection standard enforced in the country of installation

RETROFIT DLS AC
230AC / 300AC / 450AC

DLS-AC will improve your traditional string PV-plant significantly increasing solar self-consumption.
DLS-AC allows you to stop wasting sun power production and to store it for later use.

AC inverter System with HV battery storage	DLS 230AC	DLS 300AC	DLS 450AC
AC output			
Grid connection	1P+N+PE		
Sn nominal power	1.7kVA	3kVA	4.5kVA
P maximum active power	1.7kW	3kW	4.5kW
AC voltage range	230Vac ± 15% (*)		
Output nominal current	7.4A	13A	19.6A
Grid nominal frequency	50Hz		
Frequency range	47Hz - 53Hz (*)		
Cos ϕ	1 (adj ± 0.80)		
THD	< 3%		
Battery charger			
Battery type	Litio		
Battery voltage range	40V - 65V		
Max battery current	35A	66A	66A / 100A
Nominal battery voltage	48V	48V	48V
Max charging power	1.7kW	2kW	3kW
Max discharging power	1.7kW	3kW	4.5kW
Communication interfaces	CAN/RS485		
EPS output			
Maximum Smax power	1.7kVA	3kVA	4.5kVA
AC voltage range	230Vac ± 15% (*)		
Output nominal current	7.4A	13A	19.6A
Grid nominal frequency	50Hz		
Intervention time	< 5 sec (*)		
THD	< 3%		
Operating Performance			
Maximum Effciency	95%		
Weighted effciency (Euro)	94%		
Battery typical effciency	93%		
Protective Devices			
BATTERY polarity reversal	As standard		
BATTERY overload protection	As standard		
AC short-circuit protection	As standard		
Isolation monitoring unit	As standard		
Interface protection and anti-islanding	In compliance with local legislation		
RCMU (Residual Current Monitoring Unit)	As standard		
AC Overvoltage protective device	As standard		
BATTERY Overvoltage protection	As standard		
Accessories Supplied			
AC connectors	Screw contacts terminal strip, M25 cable gland		
BATTERY connection	Screw contacts terminal strip, M25 cable gland		
BATTERY automatic switch	Built-in		
User Interface	Graphic Touch Screen 4.3" colour LCD		
Communication interfaces	USB/CAN Bus/RS485/Ethernet/WiFi		
External alarm signal	As standard		
Datalogger	Built-in		
Warranties	5 years (as standard)/10 year (optional)		
Environmental Conditions			
Ambient temperature	-20°C…+60°C		
Power derating temperature range	40°C…+60°C		
Storage temperature	-30°C…+70°C		
Relative humidity	5%...95% without condensation		
Noise levels	< 50 dB(A) @ 1m		
Maximum operating altitude without derating	2000m		
Pollution degree classifcation	PD 3		
Installation environmental category	Indoor, unconditioned		
Physical			
Protection rating	IP 21		
Overvoltage category (IEC 62109-1)	II (DC, BATTERY inputs) III (AC output)		
Cooling concept	I-cool, forced cooling		
Dimensions (W x H x D) mm	480 x 730 x 150	710 x 650 x 150	
Weight	20kg	30kg	
Fitting system	Wall bracket		
Safety			
Protection class	I		
BATTERY to AC and DC isolation	HF Transformer		
Certifcations	CE		
EMC and Safety standards	EN61000-6-2 (EMC); EN61000-6-3 (EMC); EN 62109-1 (Safety); EN 62109-2 (Safety)		
Grid codes	CEI 0-21 (IT); VDE 0126-1-1 (DE); VDE AR-N 4105 (DE); G98/G99 (UK); C10-11 (BE)		
Other Features			
BACKUP/OFF-GRID mode operation	Yes, with internal interlock (*)		
ON-GRID/BACKUP/OFF-GRID selection mode	Yes, automatic		
Grid support (grid services)	Yes, if required by the applied grid code		
Residential loads management (OPTIONAL)	Yes, 1 dry contact 4A 250Vac		

(*) The specifed range or functionality may vary according to the mains connection standard enforced in the country of installation

DELIOS HOME AUTOMATION DLS

DELIOS system is designed to integrate home automation functionalities that allow the management of the power surplus once the storage system is full.
With Home Automation **DLS** board you can reduce even more fossil fuels consumption, getting the most out of clean sun power:

-SMART LOAD function allows you to schedule electrical appliances to start when more energy is available;

-You can control heat pumps or tanks for domestic hot water, saving on the natural gas bill.

DLX THREE PHASE

The perfect solution for big household PV-plants and also suitable for medium-small businesses and commercial realities.
Governments and corporations are introducing reduced CO2 emissions policies to combat the effects of climate change and customers are more and more aware about companies' carbon footprint.
Moreover, operational expenses are negatively impacted by rising electricity costs. For these reasons, many companies are considering installing storage solar systems.

VERSATILITY AND POWER

- HIGH VOLTAGE BATTERIES: for the best performance and maximum efficiency.
- PARALLEL OPERATION UP TO 10 INVERTERS: to provide all the power that a company could need.
- EMBEDDED LOAD MANAGER: to maximise self-consumption in a smart way.

DLX
500 / 600 / 800
1000

The **DELIOS PV** string inverter is perfect to manage big plants, where the storage system is sized only to a part of the whole plant power production.

PV inverter	DLX-500	DLX-600	DLX-800	DLX-1000
DC Inputs				
Maximum input power	7.5kW	9kW	12kW	15kW
Maximum input voltage	1000V			
Minimum input voltage	200V			
Nominal input voltage	720V			
FV MPPT voltage range	150V - 950V			
DC voltage range - independent MPPTs @ Pdc max	385V - 850V @ 5kW	500V - 850V @ 6.5kW	655V - 850V @ 8.5kW	770V - 850V @ 10kW
DC voltage range - MPPT connected in parallel @ Pdc max	290V - 850V	350V - 850V	425V - 850V	460V - 850V
Maximum power x MPPT	5kW	6.5kW	8.5kW	10kW
Maximum MPPT power - Maximum imbalance	5kW @ MPPT1 + 2.5kW @ MPPT2	6.5kW @ MPPT1 + 2.5kW @ MPPT2	8.5kW @ MPPT1 + 3.5kW @ MPPT2	10kW @ MPPT1 + 5kW @ MPPT2
Maximum input current x MPPT	13A			
Short-circuit current x MPPT	15A			
Number of MPPTs	2			
Maximum number of strings x MPPT	1+1			
AC output				
Grid connection	3W+N+PE			
Sn nominal power	5kVA	6kVA	8kVA	10kVA
P maximum active power	5kW	6kW	8kW	10kW
AC voltage range	400Vac ± 15% (*)			
Output nominal current	7.2A	8.7A	11.5A	14.5A
Grid nominal frequency	50Hz			
Frequency range	47Hz - 53Hz (*)			
Cos ϕ	1 (adj ± 0.80)			
THD	< 3%			
PV-EPS output				
Maximum Smax power	5kVA	6kVA	8kVA	10kVA
AC voltage range	400Vac ± 15% (*)			
Output nominal current	7.2A	8.7A	11.5A	14.5A
Grid nominal frequency	50Hz			
Intervention time	< 5 sec (*)			
THD	< 3%			
Operating Performance				
Maximum Effciency	97.6%			
Weighted effciency (Euro)	97%			
Protective Devices				
DC polarity reversal	As standard			
AC short-circuit protection	As standard			
Isolation monitoring unit	As standard			
Interface protection and anti-islanding	In compliance with local legislation			
RCMU (Residual Current Monitoring Unit)	As standard			
DC Overvoltage protective device	As standard			
AC Overvoltage protective device	As standard			
Accessories Supplied				
DC connectors	Quick connectors			
AC connectors	Spring contacts terminal strip, M25 cable gland			
DC switch	As standard			
User Interface	Graphic Touch Screen 4.3" colour LCD			
Communication interfaces	USB/CAN Bus/RS485/Ethernet/WiFi			
External alarm signal	As standard			
Datalogger	Built-in			
Warranties	5 years (as standard)/10 year (optional)			
Environmental Conditions				
Ambient temperature	-20°C…+60°C			
Power derating temperature range	40°C…+60°C			
Storage temperature	-30°C…+70°C			
Relative humidity	5%...95% without condensation			
Noise levels	< 50 dB(A) @ 1m			
Maximum operating altitude without derating	2000m			
Pollution degree classifcation	PD 3			
Installation environmental category	Indoor, unconditioned			
Physical				
Protection rating	IP 21			
Overvoltage category (IEC 62109-1)	II (DC, BATTERY inputs) III (AC output)			
Cooling concept	I-cool, forced cooling			
Dimensions (W x H x D) mm	476 x 735 x 170			
Weight	22Kg			
Fitting system	Wall bracket			
Safety				
Protection class	I			
DC to AC isolation	Trasformerless			
Certifcations	CE			
EMC and Safety standards	EN61000-6-2 (EMC); EN61000-6-3 (EMC); EN62109-1 (Safety); EN62109-2 (Safety)			
Grid codes	CEI 0-21 (IT); VDE AR-N 4105 (DE); G98-G99 (UK); C10-11 (BE)			
Other Features				
BACKUP/OFF-GRID mode operation	Yes, with external interlock			
ON-GRID/BACKUP/OFF-GRID selection mode	Yes, automatic			
Grid support (grid services)	Yes, if required by the applied grid code			
Residential loads management	Yes, 1 dry contact 4A 250Vac			

(*) The specifed range may vary according to the mains connection standard enforced in the country of installation

DLX-HV
500 / 600 / 800
1000

The new **DELIOS** three-phase hybrid inverter.
The **DLX-HV** system is the perfect product for large residential houses with three-phase load network and for medium commercial activities with high electrical consumption even during night time.

PV inverter System with HV battery storage	DLX-500HV	DLX-600HV	DLX-800HV	DLX-1000HV
DC Inputs				
Maximum input power	7.5kW	9kW	12kW	15kW
Maximum input voltage	1000V			
Minimum input voltage	200V			
Nominal input voltage	720V			
FV MPPT voltage range	150V - 950V			
DC voltage range - independent MPPTs @ Pdc max	385V - 850V @ 5kW	500V - 850V @ 6.5kW	655V - 850V @ 8.5kW	770V - 850V @ 10kW
DC voltage range - MPPT connected in parallel @ Pdc max	290V - 850V	350V - 850V	425V - 850V	460V - 850V
Maximum power x MPPT	5kW	6.5kW	8.5kW	10kW
Maximum MPPT power - Maximum imbalance	5kW @ MPPT1 + 2.5kW @ MPPT2	6.5kW @ MPPT1 + 2.5kW @ MPPT2	8.5kW @ MPPT1 + 3.5kW @ MPPT2	10kW @ MPPT1 + 5kW @ MPPT2
Maximum input current x MPPT	13A			
Short-circuit current x MPPT	15A			
Number of MPPTs	2			
Maximum number of strings x MPPT	1+1			
Battery charger				
Battery type	Lithium			
Battery voltage range	170V - 500V			
Max charging/discharging current	25A			
Nominal battery voltage	200V	240V	320V	400V
Max charging/discharging power	5kW	6kW	8kW	10kW
Communication interfaces	CAN/RS485			
AC output				
Grid connection	3W+N+PE			
Sn nominal power	5kVA	6kVA	8kVA	10kVA
P maximum active power	5kW	6kW	8kW	10kW
AC voltage range	400Vac ± 15% (*)			
Output nominal current	7.2A	8.7A	11.5A	14.5A
Grid nominal frequency	50Hz			
Frequency range	47Hz - 53Hz (*)			
Cos ϕ	1 (adj ± 0.80)			
THD	< 3%			
EPS output				
Maximum Smax power	5kVA	6kVA	8kVA	10kVA
AC voltage range	400Vac ± 15% (*)			
Output nominal current	7.2A	8.7A	11.5A	14.5A
Grid nominal frequency	50Hz			
Intervention time	< 5 sec (*)			
THD	< 3%			
Operating Performance				
Maximum Effciency	97.6%			
Weighted effciency (Euro)	97%			
Battery typical effciency	96%			
Protective Devices				
DC polarity reversal	As standard			
BATTERY polarity reversal	As standard			
BATTERY overload protection	As standard			
AC short-circuit protection	As standard			
Isolation monitoring unit	As standard			
Interface protection and anti-islanding	In compliance with local legislation			
RCMU (Residual Current Monitoring Unit)	As standard			
DC Overvoltage protective device	As standard			
AC Overvoltage protective device	As standard			
BATTERY Overvoltage protection	As standard			
Accessories Supplied				
DC connectors	Quick connectors			
AC connectors	Spring contacts terminal strip, M25 cable gland			
BATTERY connection	Quick connectors			
DC switch	As standard			
BATTERY automatic switch	Built-in			
User Interface	Graphic Touch Screen 4.3'' colour LCD			
Communication interfaces	USB/CAN Bus/RS485/Ethernet/WiFi			
External alarm signal	As standard			
Datalogger	Built-in			
Warranties	5 years (as standard)/10 year (optional)			
Environmental Conditions				
Ambient temperature	-20°C...+60°C			
Power derating temperature range	40°C...+60°C			
Storage temperature	-30°C...+70°C			
Relative humidity	5%...95% without condensation			
Noise levels	< 50 dB(A) @ 1m			
Maximum operating altitude without derating	2000m			
Pollution degree classifcation	PD 3			
Installation environmental category	Indoor, unconditioned			
Physical				
Protection rating	IP 21			
Overvoltage category (IEC 62109-1)	II (DC, BATTERY inputs) III (AC output)			
Cooling concept	I-cool, forced cooling			
Dimensions (W x H x D) mm	476 x 735 x 170			
Weight	25Kg			
Fitting system	Wall bracket			
Safety				
Protection class	I			
DC to AC isolation	Trasformerless			
BATTERY to AC and DC isolation	Trasformerless			
Certifcations	CE			
EMC and Safety standards	EN61000-6-2 (EMC); EN61000-6-3 (EMC); EN62109-1 (Safety); EN62109-2 (Safety)			
Grid codes	CEI 0-21 (IT); VDE AR-N 4105 (DE); G98-G99 (UK); C10-11 (BE)			
Other Features				
BACKUP/OFF-GRID mode operation	Yes, with external interlock			
ON-GRID/BACKUP/OFF-GRID selection mode	Yes, automatic			
Grid support (grid services)	Yes, if required by the applied grid code			
Residential loads management	Yes, 1 dry contact 4A 250Vac			

(*) The specifed range may vary according to the mains connection standard enforced in the country of installation

RETROFIT
DLX-AC
500 / 600 / 800
1000

The ideal product for an existing PV plant if you are looking to implement energy storage and maximise self-consumption.
If your plant feeds a lot of current into the public grid during daytime, **DLX-AC** is the perfect choice to store energy for night time consumption.

AC inverter System with HV battery storage	DLX-500AC	DLX-600AC	DLX-800AC	DLX-1000AC
AC output				
Grid connection	3W+N+PE			
Sn nominal power	5kVA	6kVA	8kVA	10kVA
P maximum active power	5kW	6kW	8kW	10kW
AC voltage range	400Vac ± 15% (*)			
Output nominal current	7.2A	8.7A	11.5A	14.5A
Grid nominal frequency	50Hz			
Frequency range	47Hz - 53Hz (*)			
Cos ϕ	1 (adj ± 0.80)			
THD	< 3%			
Battery charger				
Battery type	Lithium			
Battery voltage range	170V - 500V			
Max charging/discharging current	25A			
Nominal battery voltage	200V	240V	320V	400V
Max charging/discharging power	5kW	6kW	8kW	10kW
Communication interfaces	CAN/RS485			
EPS output				
Maximum Smax power	5kVA	6kVA	8kVA	10kVA
AC voltage range	400Vac ± 15% (*)			
Output nominal current	7.2A	8.7A	11.5A	14.5A
Grid nominal frequency	50Hz			
Intervention time	< 5 sec (*)			
THD	< 3%			
Operating Performance				
Maximum Effciency	97%			
Weighted effciency (Euro)	96%			
Protective Devices				
BATTERY polarity reversal	As standard			
BATTERY overload protection	As standard			
AC short-circuit protection	As standard			
Isolation monitoring unit	As standard			
Interface protection and anti-islanding	In compliance with local legislation			
RCMU (Residual Current Monitoring Unit)	As standard			
AC Overvoltage protective device	As standard			
BATTERY Overvoltage protection	As standard			
Accessories Supplied				
AC connectors	Spring contacts terminal strip, M25 cable gland			
BATTERY connection	Quick connectors			
BATTERY automatic switch	Built-in			
User Interface	Graphic Touch Screen 4.3" colour LCD			
Communication interfaces	USB/CAN Bus/RS485/Ethernet/WiFi			
External alarm signal	As standard			
Datalogger	Built-in			
Warranties	5 years (as standard)/10 year (optional)			
Environmetal Conditions				
Ambient temperature	-20°C…+60°C			
Power derating temperature range	40°C…+60°C			
Storage temperature	-30°C…+70°C			
Relative humidity	5%...95% without condensation			
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Maximum operating altitude without derating	2000m			
Pollution degree classifcation	PD 3			
Installation environmental category	Indoor, unconditioned			
Physical				
Protection rating	IP 21			
Overvoltage category (IEC 62109-1)	II (BATTERY input) III (AC output)			
Cooling concept	I-cool, forced cooling			
Dimensions (W x H x D) mm	476 x 735 x 170			
Weight	21Kg			
Fitting system	Wall bracket			
Safety				
Protection class	I			
BATTERY to AC isolation	Trasformerless			
Certifcations	CE			
EMC and Safety standards	EN61000-6-2 (EMC); EN61000-6-3 (EMC); EN62109-1 (Safety); EN62109-2 (Safety)			
Grid codes	CEI 0-21 (IT); VDE AR-N 4105 (DE); G98-G99 (UK); C10-11 (BE)			
Other Features				
BACKUP/OFF-GRID mode operation	Yes, with external interlock			
ON-GRID/BACKUP/OFF-GRID selection mode	Yes, automatic			
Grid support (grid services)	Yes, if required by the applied grid code			
Residential loads management	Yes, 1 dry contact 4A 250Vac			

(*) The specifed range may vary according to the Grid connection standard enforced in the country of installation

SMART MONITO-RING AND REMOTE CONTROL

Thanks to the embedded display, it's possible to rapidly consult and set up the system. Moreover, you can always check the performance of the system through the **DELIOS** APP and WEB PORTAL.

INTEGRATED DATA LOGGER

ETHERNET CABLE OR WIFI-CONNECTION

USB-PORT FOR FIRMWARE UPDATE AND SYSTEM DATA DOWNLOAD

KEEP YOUR PV-PLANT ALWAYS UNDER CONTROL

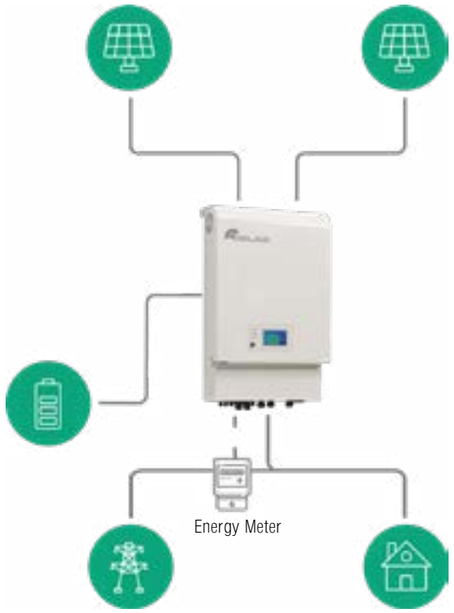
From app homepage (GENERAL) it's possible to have real-time system updates:
-PV production
-Household consumptions
-Grid feed-in and consumption
-Battery charge status

CHECK THE PERFORMANCE OF YOUR PV-PLANT

With CHARTS function from the APP and WEB PORTAL it is possible to analyze in detail the energy flows and data of the system.

DLS CONFIGURATION SCHEMES

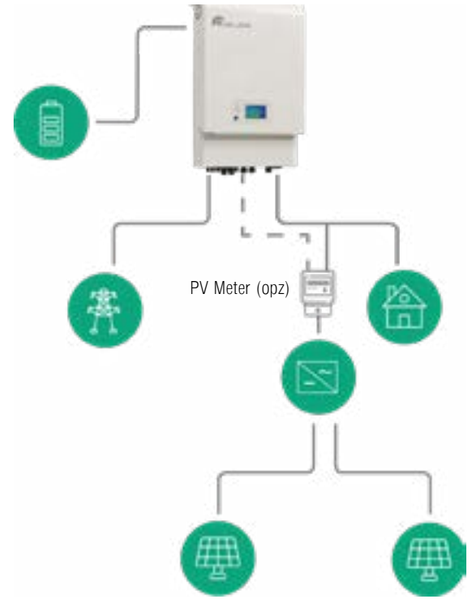
HYBRID DLS



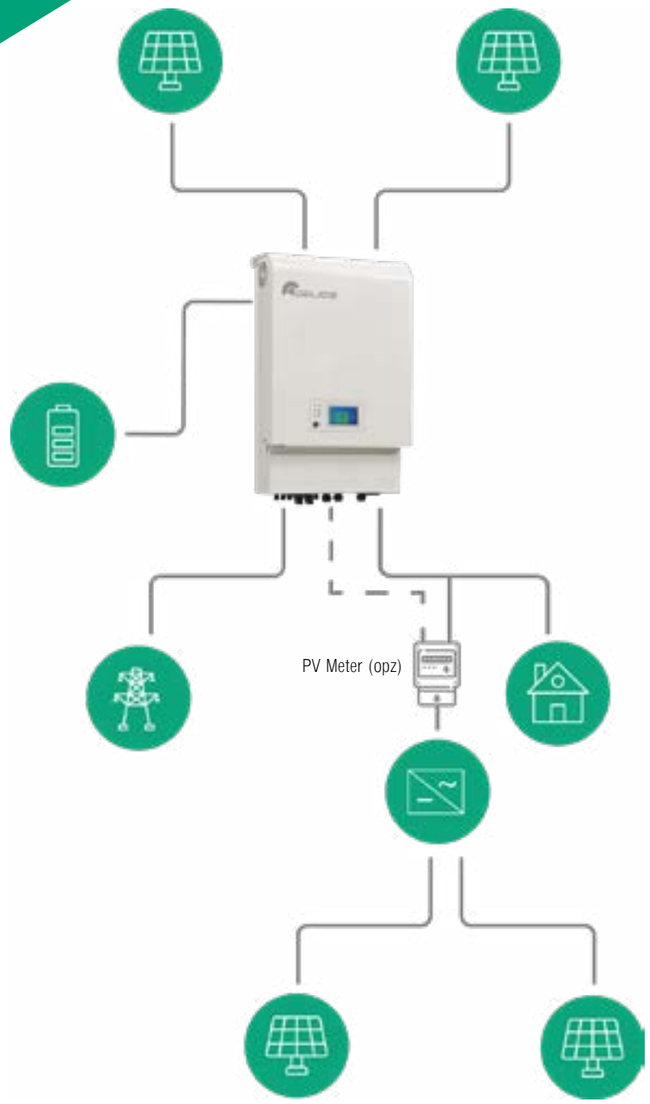
HYBRID DLS WITH EXTER-NAL METER

DLS SMART ISLAND

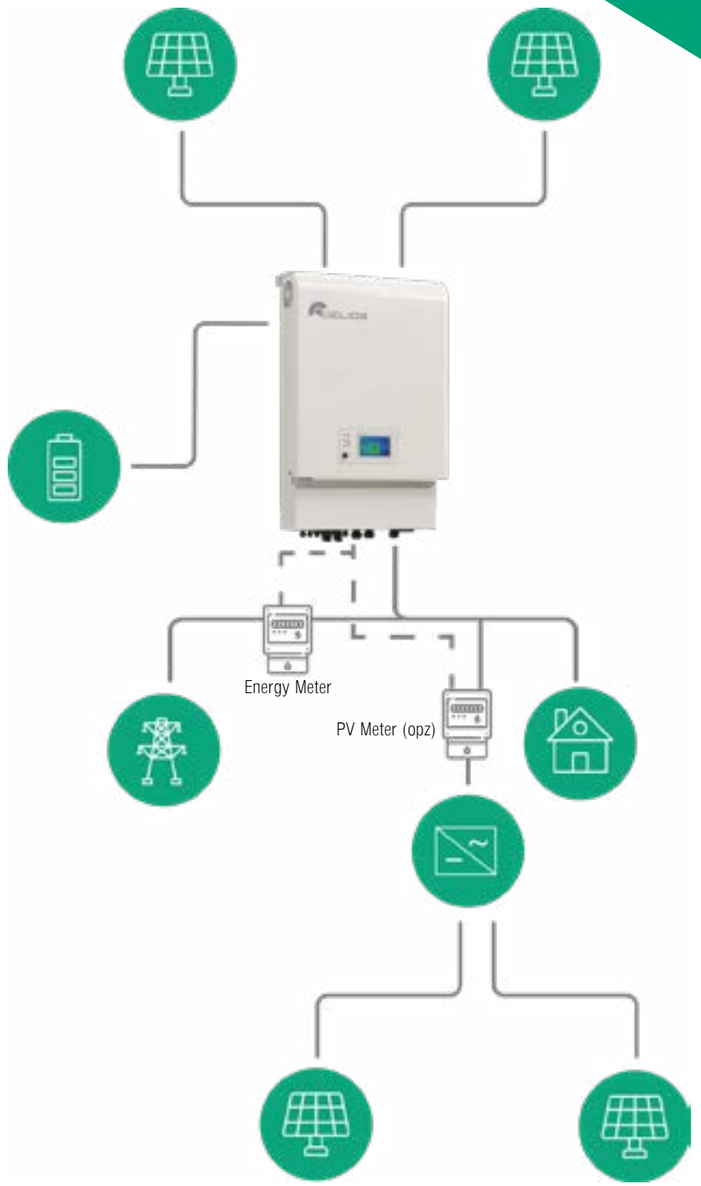
RETROFIT DLS AC



DLS HYBRID AC



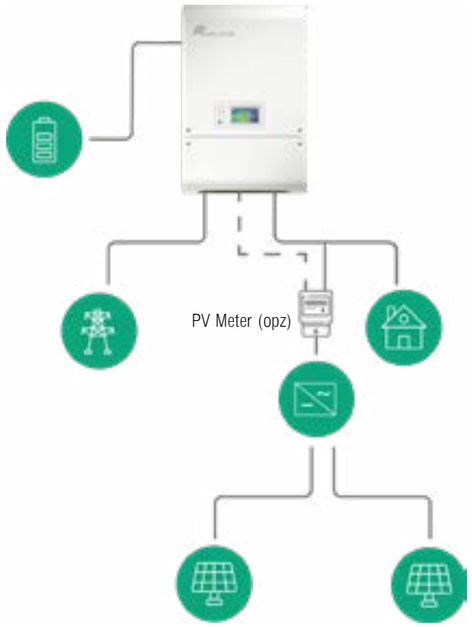
DLS HYBRID AC WITH EXTERNAL METER



DLX CONFIGURATION SCHEMES

DLX WITH EXTERNAL METER

DLX AC WITH EXTERNAL METER



DLX HV WITH EXTERNAL METER

CUSTOMER SERVICE AND WARRANTY

You can contact **DELIOS** Customer Service by telephone:

+39 049 9403206 or **+39 334 1690149** (Mon – Fri: 8.30-12.30 / 13.30- 17.30)

or from our website **www.delios.srl.it.**

Our quality control programme ensures that each **DLS** product is manufactured exactly to specifications and is subjected to exhaustive tests before leaving our factory.

The warranty provided by **DELIOS s.r.l.** lasts for 5 years from the **DSL** system purchase date. For all **DLS** systems, customers can purchase a 5 year extension of the manufacturers' warranty, for a maximum of 10 years.

The warranty extension can only be purchased within 1 year from the **DLS** system delivery date.

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