

LEDVANCE.COM

LEDVANCE

RE NEW ABLES

#RENEWABLES
#ONESTOPSOLUTION
#SMARTENERGY

ADVANCING SOLAR ENERGY

LEDVANCE RENEWABLES

AUTUMN 2024



POWER THROUGH LIGHT



YOUR GLOBAL PLAYER **LEDVANCE**

Having emerged from the traditional company of OSRAM and with more than 100 years of lighting know-how behind us, we are now the world's second largest market player in general lighting. Together with the MLS Group, of which we have been a member since 2016, we are contributing to a more sustainable world with our advanced and energy-efficient lighting and photovoltaic solutions.



FOR YOUR PROJECTS **TOP SUPPORT**

Whether it's lighting advice, customized solutions, energy analyses or feasibility studies, lighting professionals can always rely on LEDVANCE's support – in over 140 countries and many different sectors, from office, education, sports and hospitality to shop, industrial, logistics and street lighting.



LIGHTING FOR MORE **SUSTAINABILITY**

Our sustainability tagline "From line to loop" makes our vision to contribute to a greener planet and a better life with photovoltaic solutions more real. With LEDVANCE RENEWABLES, we turn our gaze towards the sky, converting solar energy into clean, sustainable power through comprehensive photovoltaic systems. Our mission: to replace traditional energy sources and minimize their impact on the environment.



A FULL RANGE OF LIGHTING **ONE-STOP SHOP**

LEDVANCE offers professional and private users everything from a single source – from lamps, luminaires and LED strips to innovative light management systems and smart home solutions. We have now added pioneering photovoltaic products to our portfolio of all-round excellent lighting solutions.



WE PROUDLY PRESENT OUR **ADVANCING SOLAR ENERGY**

As lighting enthusiasts, we were inspired by the sun on our way to a greener future. The result is LEDVANCE RENEWABLES, an integrated solar energy solution for the building sector that covers not only energy generation but also its storage and use as well as integration into power systems. It enables private and business customers to use the power of the sun to generate their own clean energy, be less dependent on fossil energy sources and minimise their impact on the environment.

Learn more on the following pages.



MORE INFORMATION:
pv.ledvance.com

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The pictures in the brochure are for illustration purposes only. All the technical parameters apply to the entire LED module. In view of the complex manufacturing process for light emitting diodes, the typical values given above for the technical LED parameters are merely statistical values that do not necessarily correspond to the actual technical parameters of an individual product; individual products may vary from the typical values.



**ONE-STOP
SOLUTION
PROVIDER
YOUR RELIABLE
PARTNER**

THE WHOLE PHOTOVOLTAIC SYSTEM FROM A SINGLE SOURCE

LEDVANCE RENEWABLES is the one-stop-shop for photovoltaic systems, offering a comprehensive range of products and services. Our solutions seamlessly integrate photovoltaic panels, inverters and batteries, all specifically designed for both residential and commercial applications. To enhance user experience and convenience, we have developed the LEDVANCE RENEWABLE App, which allows you to monitor your photovoltaic system effortlessly, anytime, anywhere. Stay connected to your energy production and ensure optimal performance and efficiency with this smart tool. With a strong commitment to reliability and excellence, LEDVANCE also offers technical support to help you with any questions you may have regarding our high quality photovoltaic solutions. This way, our comprehensive and integrated approach covers all aspects, from consulting, and supply of the complete photovoltaic systems, to performance and energy monitoring as well as technical support.

Save time and effort with our RENEWABLES one-stop-shop offers, and benefit from reliable service and clear support.



INVESTING IN YOUR FUTURE RENEWABLE GREEN ENERGY FOR YOUR HOME

WHY PHOTOVOLTAIC FOR RESIDENTIAL BUILDINGS?

ACT SUSTAINABLY AND AVOID CO₂:

Generating energy 100 % carbon neutral.

MAKE A SAFE INVESTMENT:

Save on electricity costs and enjoy grid independence.

BENEFIT FROM THE ONE-STOP-SHOP PRINCIPLE:

We ensure consistently high quality standards.

HIGH EFFICIENT PANELS:

Thanks to solar panels that use new cell technology to reach up to max. efficiency up to 23 %.

TAKE ADVANTAGE OF SIMPLICITY:

With our integrated clear app, you can eliminate the need for third-party communication hardware.

RELY ON A FUTURE-PROOF SYSTEM:

With our expandable system, we can meet your energy needs today and for years to come.

USE A MODULAR AND CONSISTENT DESIGN:

Intuitive and user-friendly monitoring via integrated measuring and control devices.

WORK WITH A TRANSPARENT PARTNER:

We find the best system for your individual needs.

TRUST A GLOBAL BRAND:

LEDVANCE, a reliable partner with a strong lighting legacy and a global pre- and post-sales network.

PROFIT FROM OUR LONG-TERM GUARANTEE*:

LEDVANCE
25 year
guarantee

Product
guarantee

LEDVANCE
30 year
guarantee

Linear power
guarantee



IEC 61215: Design suitability and type approval
IEC 61730: Safety qualification
IEC 61701: Salt mist corrosion testing
IEC 62716: Ammonia corrosion testing
IEC 60068: Environmental testing: Dust and sand

* Provides you peace of mind as the purchase is made under European law.

USE SPACE RESPONSIBLY AND HELP YOUR BUSINESS REAP THE REWARDS

WHY PHOTOVOLTAIC FOR COMMERCIAL BUILDINGS?

MAKE EFFICIENT USE OF AVAILABLE SPACE:

By using it to generate electricity.

GAIN PLANNING SECURITY:

Save on electricity cost and enjoy grid independence.

CHOOSE FROM A WIDE RANGE OF PRODUCTS:

From high performance inverters with up to 110 KW capacity and bigger panel sizes for commercial applications.

REDUCE YOUR COMPANY'S CARBON FOOTPRINT:

And benefit from being an eco-player.

PROFIT FROM OUR LONG-TERM GUARANTEE*:



Product guarantee



Linear power guarantee

WORK WITH A TRANSPARENT PARTNER:

We find the best system for your individual needs.

TRUST A GLOBAL BRAND:

LEDVANCE, a reliable partner with a strong lighting legacy and a global pre- and post-sales network.

* Provides you peace of mind as the purchase is made under European law.



IEC 61215: Design suitability and type approval
IEC 61730: Safety qualification
IEC 61701: Salt mist corrosion testing
IEC 62716: Ammonia corrosion testing
IEC 60068: Environmental testing: Dust and sand



LEDVANCE RENEWABLES – SYMBOLS AND ABBREVIATIONS

LIST OF ABBREVIATIONS

W_p	Nominal power Watt Pmax
η (%)	Maximum Efficiency
Input (kW)	Max. DC Input Power
Output (kW)	Rated Output Power
X* MPPT	No. of MPP Trackers
U MPPT (V)	MPP Voltage Range
I_{MPPT} (A)	Max Input Current per MPPT
dB	Noise Emission
I_{MAX} (A)	Max AC Output Current
V	Nominal Voltage
kWh	Nominal Capacity



Operating temperature



PV connector
(Stäubli MC4)



Front/rear side load



Three phase system



Wireless connection



Ethernet



Battery type



Short Circuit Current I_{sc}
(STC)



AFCI function



Battery voltage range



Type of protection



Depth of discharge



Cycle life



Scalability
low voltage battery



Scalability
high voltage battery



Cooling type



Product guarantee



Linear power guarantee

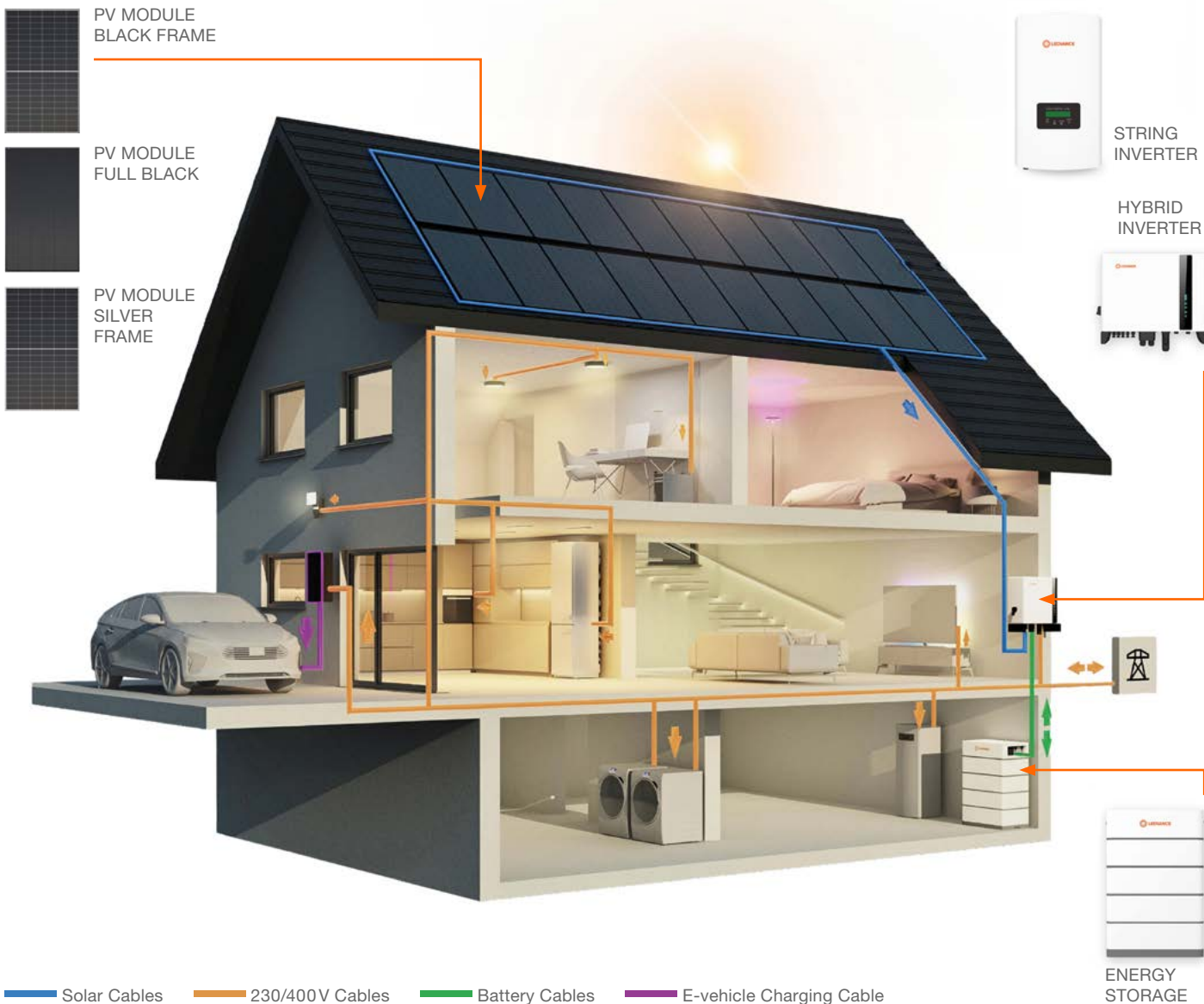


TÜV Süd certification

LEDVANCE RENEWABLES – SYSTEM OVERVIEW

	RESIDENTIAL	COMMERCIAL
PANELS	<ul style="list-style-type: none"> ▶ < 2 m² area ▶ In silver or black frame and full black colors ▶ P- and N-Type technologies 	<ul style="list-style-type: none"> ▶ > 2 m² area ▶ Mono- and bifacial ▶ P- and N-Type technologies ▶ Up to 690 W_p
INVERTERS	<ul style="list-style-type: none"> ▶ Hybrid or string, 1/3 phase ▶ Intelligent monitoring 	<ul style="list-style-type: none"> ▶ High efficiency ▶ Multi MPPT of up to 8 ▶ Up to 110 kW power
BATTERIES	<ul style="list-style-type: none"> ▶ Low voltage and high voltage stack system ▶ Easy to extend ▶ Capacity up to 24.5 kWh 	

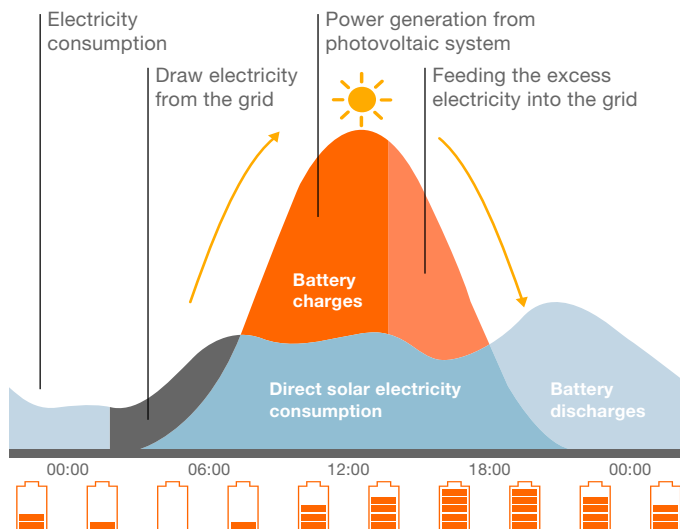
INTERACTION OF SYSTEM COMPONENTS

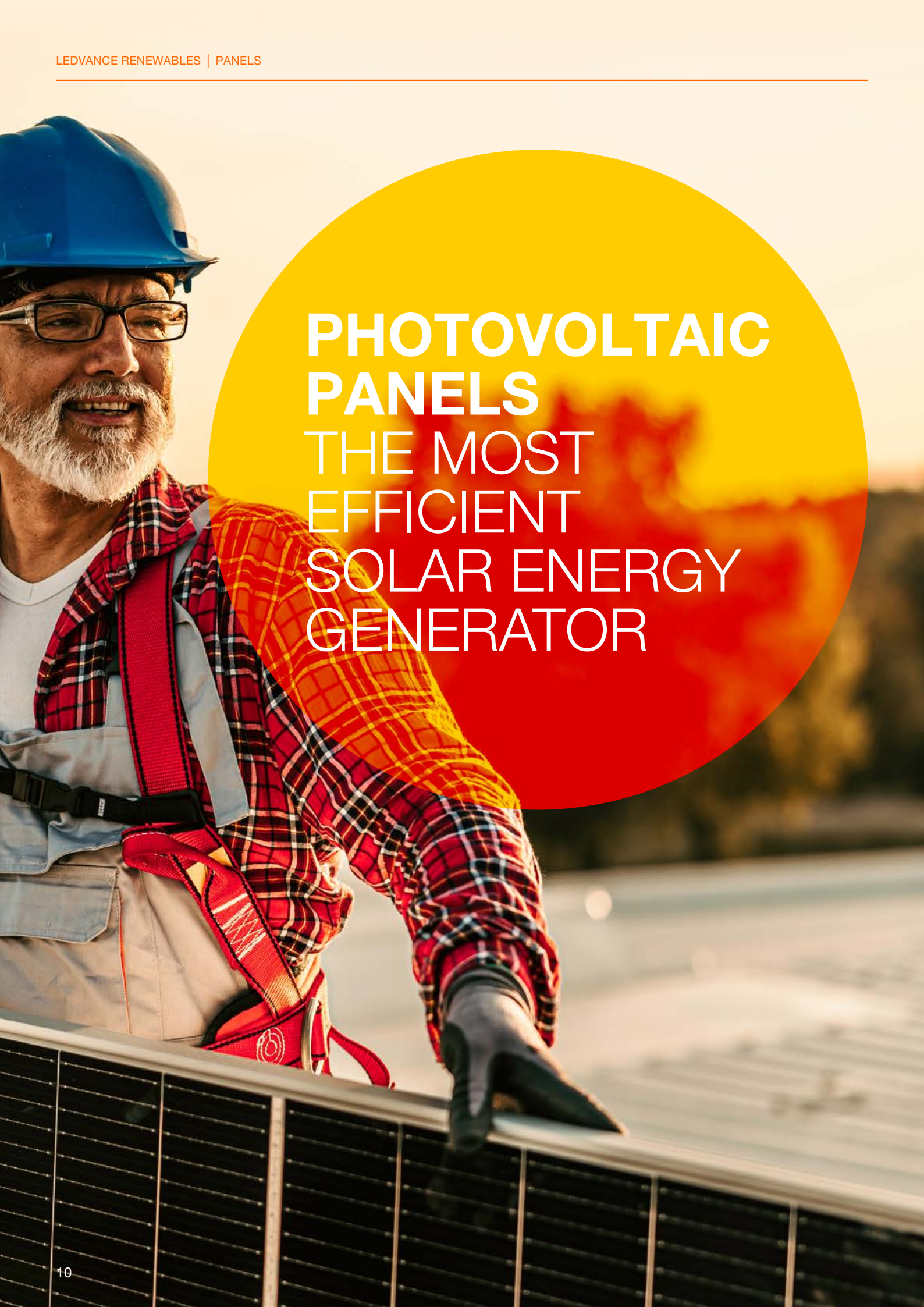


LEDVANCE RENEWABLES – OPERATION OF THE SYSTEM

With LEDVANCE RENEWABLES, you can become almost completely independent of conventional energy sources.

Our system solution has a battery that stores power generated by the photovoltaic system, covering a large portion of your electricity needs – even when the sun is not shining.



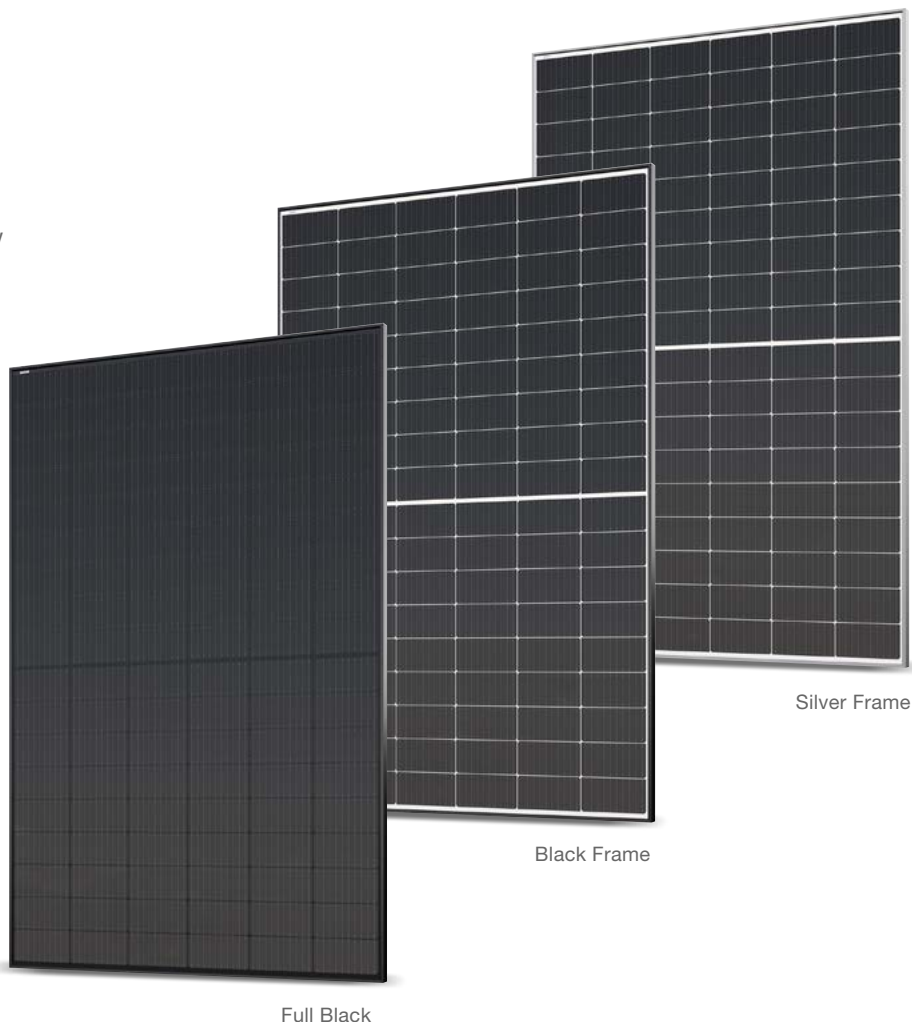


PHOTOVOLTAIC PANELS THE MOST EFFICIENT SOLAR ENERGY GENERATOR

EFFICIENCY ALL THE WAY TRANSFORMS EVERY RAY OF SUNLIGHT

PRODUCT HIGHLIGHTS

- Power range: 440–690 Wp
- High efficiency up to 22.90 %
- Monofacial and bifacial design, including N- and P-Types
- Glass-glass constructions: hail and snow load resistant, fire resistant
- 3 different frame colour designs, including full black version for residential solutions



Multi bus bar technology



PID resistant



Stäubli connector system MC4 EVO2



Product guarantee up to 25 years*



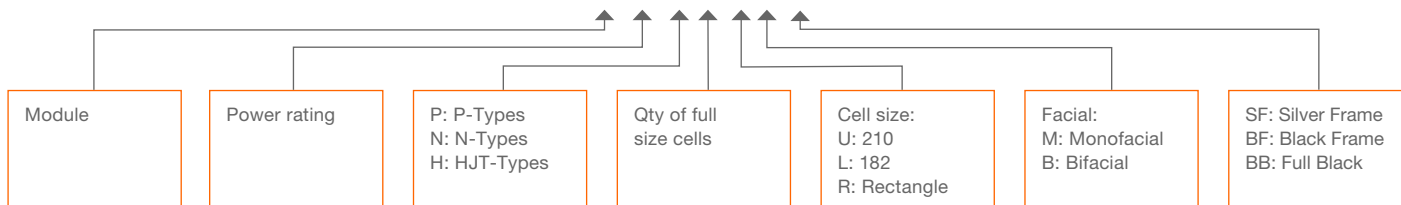
Linear power guarantee up to 30 years*



Certifications TÜV Süd

ORDER REFERENCE (HOW TO READ THE PRODUCT NAME):

M 550 P 72 U M-SF



* www.ledvance.com/guarantee

MONOFACIAL PANELS

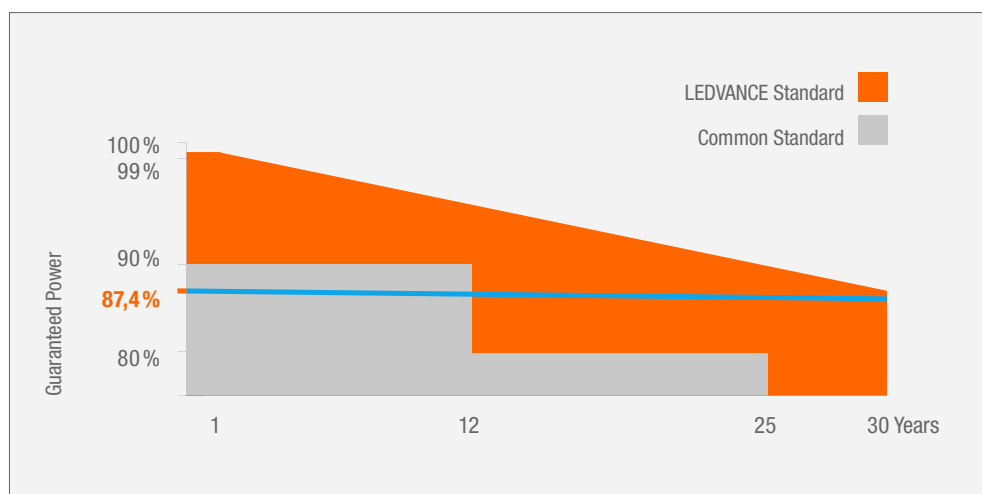
Single glass modules with various frame colours and cell technologies



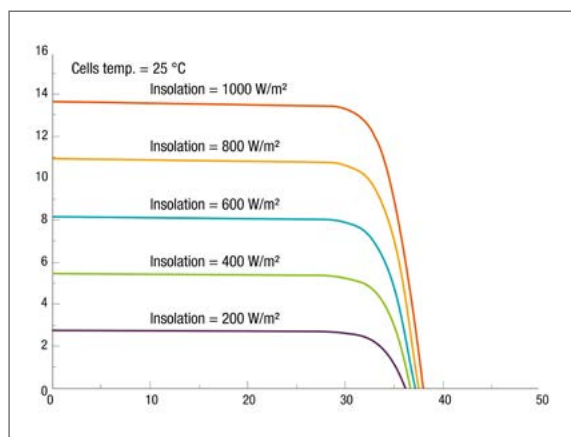
PRODUCT FEATURES

- High efficiency up to 22.53 %
- Low light-induced degradation for N-Type TOPCon
- Strong response to low sunlight
- Maximum system voltage: 1500V DC
- PID-resistant
- 3.2 mm tempered glass
- Maximum static load up 5 400 Pa
- Stäubli MC4 EVO2 connector system
- 3 types: silver, black frame and full black
- Robust against harsh weather conditions (e.g. snow, hail, fire)

FURTHER PRODUCT DETAILS



Degradation for N-Types TOPCon



Current-voltage curve of module M440N54LM-BF-F3

N-TYPE PANELS

Monofacial N-Type TOPCon panels for maximum performance



Product name	EAN	COLOR	Wp	η (%)	Number of cells	Open Circuit Voltage [V] STC	Short Circuit Current I _{sc} [A] STC	L x W x H [mm]	Piece/Box	Piece/Container (40'HC)	Light No.
M440N54LM-BF-F3	4099854 346316	Black	440	22.53	108	38.80	11.67	1722 x 1134 x 30	36	936	2
M485N60LM-BF-F3	4099854 346309	Black	485	22.17	120	40.55	11.56	1909 x 1134 x 30	36	864	2
M470N60LM-BB-F3	4099854 189265	Full Black	470	21.71	120	42.63	14.16	1909 x 1134 x 30	36	864	3
M580N72LM-SF-F3	4099854 173370	Silver	580	22.45	144	51.30	14.43	2278 x 1134 x 30	36	720	1

P-TYPE PANELS

Monofacial P-Type PERC panels with proven state of the art technology



Product name	EAN	COLOR	Wp	η (%)	Number of cells	Open Circuit Voltage [V] STC	Short Circuit Current I _{sc} [A] STC	L x W x H [mm]	Piece/Box	Piece/Container (40'HC)	Light No.
M460P60LM-BF-F7	4099854 330339	Black	460	21.02	120	41.58	14.01	1909 x 1134 x 30	36	864	2
M460P60LM-BF-F3	4099854 137310	Black	460	21.24	120	42.41	13.67	1909 x 1134 x 30	36	864	2
M540P72LM-BB-F7	4099854 277245	Full Black	540	20.90	144	49.61	13.85	2278 x 1134 x 30	36	720	3
M550P72LM-BF-F3	4099854 173349	Black	550	21.29	144	50.32	13.70	2278 x 1134 x 30	36	720	2
M550P72LM-SF-F7	4099854 270802	Silver	550	21.30	144	49.91	14.02	2278 x 1134 x 30	36	720	1
M550P72LM-BF-F7	4099854 270888	Black	550	21.30	144	49.91	14.02	2278 x 1134 x 30	36	720	2
M605P60UM-SF-F3	4099854 137228	Silver	605	21.37	120	41.70	18.54	2172 x 1303 x 35	31	558	1
M605P60UM-BF-F3	4099854 137334	Black	605	21.37	120	41.70	18.54	2172 x 1303 x 35	31	558	2
M660P66UM-SF-F3	4058075 836020	Silver	660	21.24	132	45.20	18.56	2384 x 1303 x 35	31	558	1

Look out for the orange values with the most efficient panels

BIFACIAL PANELS

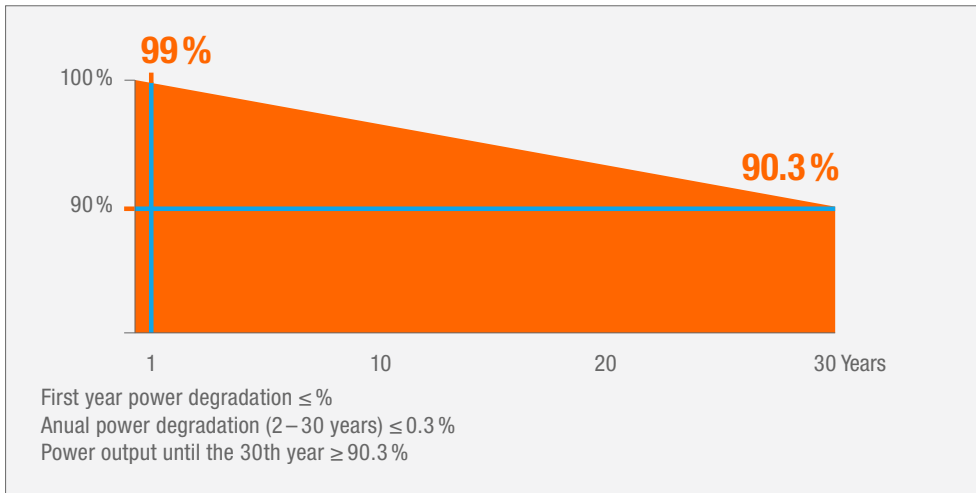
Highly efficient two-sided modules with dual glass protection



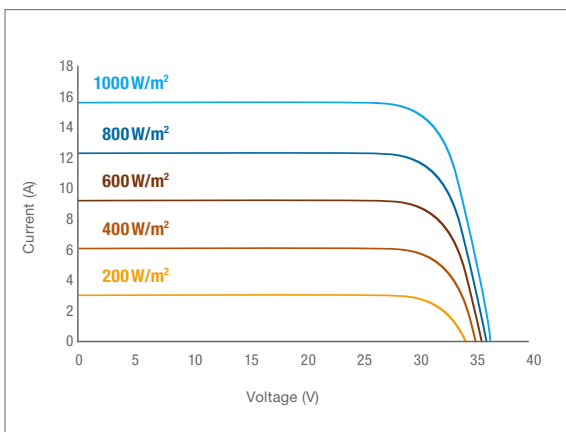
PRODUCT FEATURES

- Absorption of light energy up to 90 % in bifaciality
- Top performance in diffuse light conditions
- Minimizing of degradation over time
- Highest efficiency up to 22.90 % by N-Type HJT modules
- Maximum system voltage: 1500V DC
- PID-resistant
- Glass protection of both sides of the modules, with thickness of 2.0 mm per each
- Maximum static load up 5400 Pa
- Stäubli MC4 EVO2 connector system
- 3 types: silver, black frame and full black

FURTHER PRODUCT DETAILS



Degradation for HJT PV modules



Current-voltage curve of modula
 M455H48RB-BF-F9 4099854349194

N-TYPE PANELS

Bifacial N-Type HJT with highest energy yield



Product name	EAN	COLOR	Wp	η (%)	Number of cells	Open Circuit Voltage [V] STC	Short Circuit Current I_{sc} [A] STC	L x W x H [mm]	Piece/Box	Piece/Container (40'HC)	Light No.
M450H48RB-BB-F9	4099854 346200	Full Black	450	22.50	96	36.72	15.53	1762 x 1134 x 31	36	936	3
M455H48RB-BF-F9	4099854 346194	Black	455	22.80	96	36.82	15.64	1762 x 1134 x 30	36	936	2
M510H54RB-BF-F9	4099854 346217	Black	510	22.90	108	40.98	15.70	1960 x 1134 x 30	36	864	2

N-TYPE PANELS

Bifacial N-Type TOPCon with very high efficiency



Product name	EAN	COLOR	Wp	η (%)	Number of cells	Open Circuit Voltage [V] STC	Short Circuit Current I_{sc} [A] STC	L x W x H [mm]	Piece/Box	Piece/Container (40'HC)	Light No.
M420N54LB-BB-F7	4099854 277276	Full Black	420	21.51	108	37.89	13.99	1722 x 1134 x 30	36	936	3
M420N54LB-BF-F7	4099854 203473	Black	420	21.51	108	37.89	13.99	1722 x 1134 x 30	36	936	2
M425N54LB-BF-F7	4099854 203466	Black	425	21.76	108	38.08	14.07	1722 x 1134 x 30	36	936	2
M430N54LB-BB-F7	4099854 372414	Full Black	430	22.02	108	38.27	14.13	1722 x 1134 x 30	36	936	3
M435N54LB-BF-F7	4099854 372421	Black	435	22.28	108	38.46	14.21	1722 x 1134 x 30	36	936	2
M435N54LB-SF-F7	4099854 372438	Silver	435	22.28	108	38.46	14.21	1722 x 1134 x 30	36	936	1
M440N48RB-BB-F8	4099854 315619	Full Black	440	22.00	96	34.67	15.95	1762 x 1134 x 30	36	936	3
M440N48RB-BF-F7	4099854 317521	Full Black	440	22.02	96	34.84	15.94	1762 x 1134 x 30	36	936	3
M445N48RB-BF-F7	4099854 317446	Black	445	22.27	96	35.02	15.99	1762 x 1134 x 30	36	936	2
M445N48RB-BF-F8	4099854 315602	Black	445	22.30	96	34.85	16.00	1762 x 1134 x 30	36	936	2
M445N48RB-SF-F7	4099854 317460	Black	470	21.71	120	42.35	15.16	1909 x 1134 x 30	36	864	2
M470N60LB-BF-F7	4099854 317460	Black	470	21.71	120	42.35	14.16	1909 x 1134 x 30	36	864	2
M475N60LB-BB-F7	4099854 372445	Full Black	475	21.94	120	42.51	14.24	1909 x 1134 x 30	36	936	3
M485N60LB-BF-F7	4099854 328633	Black	485	22.40	120	42.85	14.40	1909 x 1134 x 30	36	864	2
M490N60LB-BF-F7	4099854 372452	Black	490	22.63	120	43.02	14.48	1909 x 1134 x 30	36	864	2
M490N60LB-BF-F7	4099854 372452	Black	490	22.63	120	43.02	14.48	1909 x 1134 x 30	36	864	2
M580N72LB-BF-F7	4099854 317477	Black	580	21.25	144	51.48	14.36	2278 x 1134 x 30	36	720	2
M580N72LB-SF-F3	4099854 173387	Silver	580	22.45	144	51.48	14.36	2278 x 1134 x 30	36	720	1
M590N72LB-BF-F7	4099854 372537	Black	590	22.84	144	51.88	14.48	2278 x 1134 x 30	36	720	2
M590N72LB-SF-F7	4099854 372551	Silver	590	22.84	144	51.88	14.48	2278 x 1134 x 30	36	720	1
M690N66UB-SF-F7	4099854 230905	Silver	690	22.21	132	47.80	18.24	2384 x 1303 x 35	31	558	1

P-TYPE PANELS

Bifacial P-Type PERC panels with best performance



Product name	EAN	COLOR	Wp	η (%)	Number of cells	Open Circuit Voltage [V] STC	Short Circuit Current I_{sc} [A] STC	L x W x H [mm]	Piece/Box	Piece/Container (40'HC)	Light No.
M550P72LB-SF-F3	4099854 173363	Silver	550	21.29	144	50.32	13.70	2278 x 1134 x 30	36	720	1
M555P72LB-SF-F3	4099854 328640	Silver	555	21.48	144	50.54	13.70	2278 x 1134 x 30	36	720	1
M605P60UB-SF-F3	4099854 199912	Silver	605	21.37	120	41.90	18.44	2172 x 1303 x 35	31	594	1

Look out for the orange values with the most efficient panels



THE INVERTERS TRUSTED POWER CONVERTERS



YOUR PHOTOVOLTAIC CORE MAKES YOUR GENERATED ELECTRICITY USABLE

PRODUCT HIGHLIGHTS

- Product range:
 - single and three phase **string** inverters: 2.5–100 kW
 - single and three phase **hybrid** inverters: 3–50 kW
- Hybrid inverter with On/Off grid function
- Integrated AFCI, DC arcfault circuit protection
- Backup supply
- Smart meter developed for LEDVANCE inverters
- CT clamps included
- Integrated DC switch
- Communication: RS485, WiFi, GPRS
- Compact, silent and lightweight

HYBRID INVERTERS

Single Phase



Three Phase



STRING INVERTERS

Single Phase



Three Phase



DC/AC surge protection



AFCI function



Low start-up voltage



Integrated DC switch



Dataloggers with double communication: WiFi + Ethernet



Type of protection



Product guarantee*

* www.ledvance.com/guarantee

STRING INVERTERS 1-PHASE

Easy to install inverters for use in residential applications with active arc flash protection



PRODUCT FEATURES

- Suitable for single phase operations
- Remote firmware update
- DC reverse-polarity protection
- Low start-up voltage of 60V
- Integrated DC switch
- Easy and offline configuration
- Built-in surge protection
- Multiple MPP trackers
- Anti-PID function (optional)
- AFCI function (optional)
- Natural convection cooling

COMFORT VERSION



Product name	EAN	Input (kW)	MPPT (A)	U _{MPPT} (V)	X ⁺ MPPT	η (%)	I _{MAX} (A)	Output (kW)	dB	Start-up Voltage [V]	Light No.
LS-2.5K F2	4099854168185	3.75	14	50–450	2	97.3	13.3	2.5	<20	60	1
LS-3K F2	4099854168499	4.50	14	90–520	2	97.3	15.7	3.0	<20	180	1
LS-3.6K F2	4099854168499	5.40	14	90–520	2	97.3	16.0	3.6	<20	120	1
LS-4K F2	4099854168611	6.00	14	90–520	2	97.6	21.0	4.0	<20	120	1
LS-4.6K F2	4099854168635	6.90	14	90–520	2	97.6	23.8	4.6	<20	120	1
LS-5K F2	4099854168673	7.50	14	90–520	2	97.7	25.0	5.0	<20	120	1
LS-6K F2	4099854168741	9.00	14	90–520	2	97.7	27.3	6.0	<20	120	1

METER FOR STRING F2 INVERTERS

Accessories*



Product name	EAN	Applicable inverters	Installation type	Communication	Supporting connection types	Hz	I _{MAX} (A)	Open current transformer model	Light No.
LAP-MET-10RD16TE-ECT-1P	4058118299799	F2 string inverter 1-Phase	Rail-type installation	RS485 interface, Modbus-RTU	Direct/via CT	45–65	120	D16-Ø16mm, 120A	1
LAP-MET-DTSD1352-ECT-3P	4058118299782	F2 string inverter 3-Phase less than 80kW	Rail-type installation	RS485 interface, Modbus-RTU	Direct/via CT	50	80	DTSD1352	2

*Not included in the delivery, to be ordered separately

STRING INVERTERS 3-PHASE

Inverters for residential and commercial applications with active arc flash protection



PRODUCT FEATURES

- Wide MPPT voltage range
- Remote firmware update
- Remote change of parameters
- DC reverse-polarity protection
- Integrated DC switch
- Maximum DC input voltage: 1 000V DC
- Easy and offline configuration
- Built-in surge protection
- Multiple MPP trackers
- Anti-PID function (optional)
- AFCI function
- Up to 15 kW intelligent redundant fan cooling

COMFORT VERSION



Product name	EAN	Input (kW)	MPPT (A)	UMPPPT (V)	X* MPPT	η (%)	I _{MAX} (A)	Output (kW)	dB	Start-up Voltage [V]	Light No.
LT-3K F2	4099854168239	4.5	16	160–1000	2	98.3	4.7	3	<20	180	1
LT-4K F2	4099854168253	6.0	16	160–1000	2	98.3	6.4	4	<20	180	1
LT-5K F2	4099854168277	7.5	16	160–1000	2	98.3	7.9	5	<20	180	1
LT-6K F2	4099854168291	9.0	16	160–1000	2	98.3	9.5	6	<20	180	1
LT-8K F2	4099854168338	12.0	16	160–1000	2	98.5	12.7	8	<30	180	1
LT-10K F2	4099854168437	15.0	16	160–1000	2	98.5	15.9	10	<30	180	1
LT-12K F2	4099854168567	18.0	32	160–1000	2	98.6	19.1	12	<60	180	1
LT-15K F2	4099854169168	22.5	32	160–1000	2	98.6	23.8	15	<60	180	1
LT-20K F2	4099854169250	30.0	32	160–1000	2	98.7	31.8	20	<60	180	1
LT-25K F2	4099854167683	37.5	32	200–1000	3	98.5	41.8	25	<60	180	2
LT-30K F2	4099854167706	45.0	32	200–1000	3	98.5	50.2	30	<60	180	2
LT-50K F2	4099854168062	75.0	32	180–1000	5	98.7	83.6	50	<60	195	3
LT-80K F2	4099854167904	120.0	40	160–1000	6	98.5	133.7	80	<60	180	4
LT-100K F2	4099854168024	150.0	40	160–1000	8	98.5	167.1	100	<60	180	4

STRING INVERTERS 3-PHASE

Inverters for residential and commercial applications with active arc flash protection



PRODUCT FEATURES

- Wide MPPT voltage range
- Remote firmware update
- Remote change of parameters
- DC reverse-polarity protection
- Integrated DC switch
- Maximum DC input voltage: 1 000V DC
- Easy and offline configuration
- Built-in surge protection
- Multiple MPP trackers
- Anti-PID function (optional)
- AFCI function (optional)
- Up to 15 kW intelligent redundant fan cooling

STANDARD VERSION

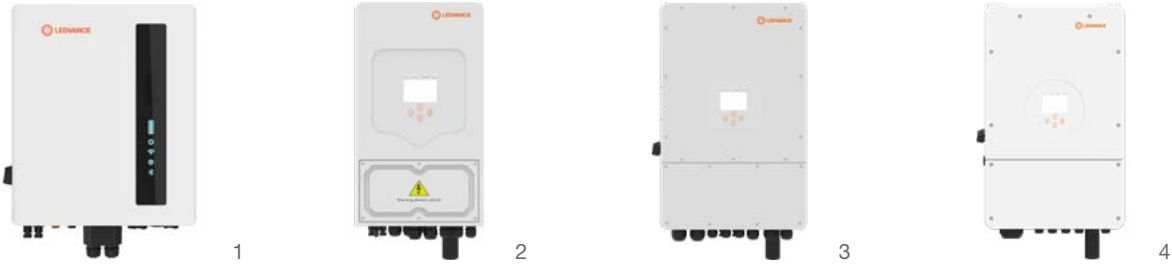


Product name	EAN	Input (kW)	MPPT (A)	UMPP (V)	X* MPPT	η (%)	IMAX (A)	Output (kW)	dB	Start-up Voltage [V]	Light No.
LT-3K F1	4058075835207	3.9	20	120–850	2	98.3	5.0	3	< 30	140	5
LT-4K F1	4058075835214	5.2	20	120–850	2	98.3	6.7	4	< 30	140	5
LT-5K F1	4058075835221	6.5	20	120–850	2	98.3	8.3	5	< 30	140	5
LT-6K F1	4058075835238	7.8	20	120–850	2	98.3	10.0	6	< 30	140	5
LT-8K F1	4099854134111	10.4	20	120–850	2	98.3	13.3	8	< 30	140	5
LT-10K F1	4058075835245	13.0	20	120–850	2	98.3	16.7	10	< 30	180	5
LT-12K F1	4058075835252	15.6	20	200–850	2	98.3	20.0	12	< 30	250	5
LT-15K F1	4058075835269	19.5	26	200–850	2	98.5	25.0	15	< 40	250	6
LT-20K F1	4058075835276	26.0	32	200–850	2	98.6	33.3	20	< 40	250	7
LT-30K F1	4058075835283	39.0	40	200–850	2	98.6	50.0	30	< 50	250	8
LT-33K F1	4099854138638	42.9	40	200–850	2	98.6	55.0	33	< 50	250	8
LT-36K F1	4099854138669	46.8	40	200–850	2	98.6	60.0	36	< 50	250	8
LT-40K F1	4058075835290	52.0	40	200–850	3	98.7	66.7	40	< 50	250	9
LT-50K F1	4058075835306	65.0	40	200–850	4	98.7	83.3	50	< 50	250	9
LT-50K F1	4099854138775	65.0	40	200–850	4	98.7	83.3	50	< 50	250	9
LT-60K F1	4058075835313	78.0	40	200–850	4	98.7	100.0	60	< 55	250	10
LT-80K F1	4058075835337	104.0	40	200–850	4	98.7	133.3	80	< 55	250	10
LT-100K F1	4058075835344	150.0	40	200–850	6	98.8	166.7	100	< 55	250	11
LT-110K F1	4058075835351	150.0	40	200–850	6	98.8	166.7	110	< 55	250	11



HYBRID INVERTERS 1-PHASE LV

Inverters also suitable for connecting battery storage system for your energy independence



PRODUCT FEATURES

- Max. charging/discharging current of up to 190A
- Colour LED display
- IP66 protection
- Compatible with a variety of batteries from different manufacturers
- 48V low voltage battery
- UPS level switching time (< 10 ms) supporting critical loads all the time
- Easy and offline configuration
- Built-in surge protection
- Multiple MPP trackers
- Online monitoring
- Increased battery protection and operation features to extend battery life

COMFORT VERSION



Product name	EAN	Input (kW)	IMPPT (A)	UMPPT (V)	X* MPPT	η (%)	I _{MAX} (A)	Output (kW)	dB	Start-up Voltage [V]	Light No.
LHS-LV-3K F2	4099854168130	4.8	16	90–520	2	97.0	21.8	3.0	< 30	90	1
LHS-LV-3.6K F2	4099854168147	5.7	16	90–520	2	97.0	26.2	3.6	< 30	90	1
LHS-LV-4.6K F2	4099854168154	7.0	16	90–520	2	97.5	33.4	4.6	< 30	90	1
LHS-LV-5K F2	4099854168161	8.0	16	90–520	2	97.5	36.5	5.0	< 30	90	1
LHS-LV-6K F2	4099854168178	9.6	16	90–520	2	97.5	40.0	6.0	< 30	90	1

STANDARD VERSION



Product name	EAN	Input (kW)	IMPPT (A)	UMPPT (V)	X* MPPT	η (%)	I _{MAX} (A)	Output (kW)	dB	Start-up Voltage [V]	Light No.
LHS-LV-3.6K F1	4099854147944	4.7	13	150–425	2	97.6	18.0/17.2	3.6	< 30	125	2
LHS-LV-5K F1	4099854147951	6.5	13	150–425	2	97.6	22.7/21.7	5.0	< 30	125	3
LHS-LV-6K F1	4099854220012	7.8	13	150–425	2	97.6	30.0/28.7	6.0	< 30	125	2
LHS-LV-8K F1	4099854220029	10.4	26	150–425	2	97.6	40.0/38.3	8.0	< 30	125	4

HYBRID INVERTERS 3-PHASE HV

Enabling high efficiency operation through high voltage battery system



PRODUCT FEATURES

- Max. charging/discharging current of up to 50 A
- UPS level switching time (< 10 ms) supporting critical loads all the time
- Colour LED display, IP66 protection
- Compatible with a variety of batteries from different manufacturers
- Automatic UPS switching & supports peak shaving mode
- Easy and offline configuration
- Built-in surge protection
- Multiple MPP trackers
- Online monitoring
- Anti-PID function (optional)
- AFCI function (optional)

COMFORT VERSION



Product name	EAN	Input (kW)	IMPP (A)	UMPP (V)	X* MPPT	η (%)	IMAX (A)	Output (kW)	dB	Start-up Voltage [V]	Light No.
LHT-HV-5K F2	4099854168093	8.0	16	200–850	3	97.9	7.6	5.0	<30	160	1
LHT-HV-6K F2	4099854168109	9.6	16	200–850	3	97.9	9.1	6.0	<30	160	1
LHT-HV-8K F2	4099854168116	12.8	16	200–850	4	98.0	12.2	8.0	<30	160	2
LHT-HV-10K F2	4099854168123	16.0	16	200–850	4	98.0	15.2	10.0	<30	160	2

STANDARD VERSION



Product name	EAN	Input (kW)	IMPP (A)	UMPP (V)	X* MPPT	η (%)	IMAX (A)	Output (kW)	dB	Start-up Voltage [V]	Light No.
LHT-HV-5K F1	4099854136689	6.5	20	150–850	2	97.6	8.4	5	<55	180	3
LHT-HV-6K F1	4099854136696	7.8	20	150–850	2	97.6	10.0	6	<55	180	1
LHT-HV-8K F1	4099854136726	10.4	20	150–850	2	97.6	13.4	8	<55	180	1
LHT-HV-10K F1	4099854136733	13.0	20	150–850	2	97.6	16.7	10	<55	180	1
LHT-HV-12K F1	4099854136825	15.6	26	150–850	2	97.6	20.0	12	<55	180	1
LHT-HV-15K F1	4099854148965	19.5	26	150–850	2	97.6	25.0	15	<55	180	1
LHT-HV-20K F1	4099854148972	26.0	26	150–850	2	97.6	33.4	20	<55	180	1
LHT-HV-25K F1	4058075838253	32.5	26	150–850	2	97.6	41.7	25	<55	180	1
LHT-HV-30K F1	4099854149009	39.0	50	150–850	3	97.6	50.0	30	<65	180	4
LHT-HV-40K F1	4099854147968	52.0	50	150–850	4	97.6	66.7	40	<65	180	2
LHT-HV-50K F1	4099854147975	65.0	50	150–850	4	97.6	83.4	50	<65	180	2

THE BATTERY

SOLAR POWER STORAGE



PROVIDES ENERGY WHENEVER YOU NEED IT

PRODUCT HIGHLIGHTS

- High energy density for low voltage battery 5.12 kWh–20.48 kWh
- High energy density for high voltage battery 8.19 kWh–24.57 kWh
- Remote diagnosis and update
- Highest safety standards
- Compact design



LOW VOLTAGE BATTERY

4 stack module low voltage



HIGH VOLTAGE BATTERY

6 stack module high voltage

SIMPLE AND FLEXIBLE INSTALLATION FOR LOW VOLTAGE BATTERY

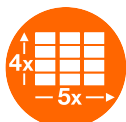
Effortless assembly Simple layout Quick expansion

Note: A minimum of **one** battery module is required and a maximum of **four** modules in one parallel

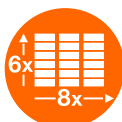
SIMPLE AND FLEXIBLE INSTALLATION FOR HIGH VOLTAGE BATTERY

Effortless assembly Simple layout Quick expansion

Note: A minimum of **two** battery modules are required and a maximum of **six** modules in one parallel



low voltage battery: up to 5 towers in parallel



high voltage battery: up to 8 towers in parallel

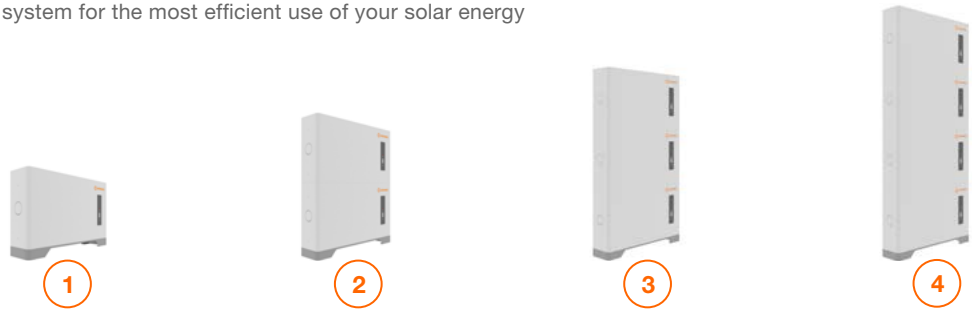


Product guarantee*

* www.ledvance.com/guarantee

LOW VOLTAGE BATTERIES

Modular energy storage battery system for the most efficient use of your solar energy



Battery Module Quantity →

PRODUCT FEATURES

- Thermal management system
- Anti-corrosion grade ≥ C2
- SOC LED display for battery energy level status
- Control box included in every stack of the energy storage system
- Easy and offline configuration
- Built-in explosion relief device
- Easy stack expanding without the need for additional configuration
- Environmentally friendly

BATTERY SIZING



Battery Module Quantity	1	2	3	4
Battery System Voltage [V]	51.2	51.2	51.2	51.2
Battery System Capacity [kWh]	5.12	10.24	15.36	20.48
Usable Energy [kWh]	4864	9728	14592	19456
Size W × D × H [mm]	680 × 152 × 430	680 × 152 × 810	680 × 152 × 1190	680 × 152 × 1570
Weight [kg]	48.0	93.5	139.0	184.5



Low voltage battery module



Battery module base, cables with connectors, mounting wall-bracket

PRODUCT DESCRIPTION

Product name	Description	EAN	V	Peak Discharge Current
LES-LV-5K	Low voltage battery module with 5120 kWh	4099854199882	40.0–58.4	100

MANDATORY SYSTEM COMPONENTS*

Product name	Description	EAN
LES-LV-SYS100	Battery module base with 2 m communication and power cables, for up to 150A current	4099854199899
LES-LV-SYS200	Battery module base with 2 m communication and power cables, for up to 200A current	4099854199905
LES-LV-PAR100	Parallel connection accessories – communication cable, battery parallel power cables, for up to 150A current	4099854233906
LES-LV-PAR200	Parallel connection accessories – communication cable, battery parallel power cables, for up to 200A current	4099854233913

* Accessory kit containing base, cables and mounting components

HIGH VOLTAGE BATTERIES

Highly efficient modular energy storage battery system with long cycle life



Battery Module Quantity →

PRODUCT FEATURES

- Thermal management system
- Anti-corrosion grade ≥ C2
- Remote software monitoring
- SOC LED display for battery energy level status
- Easy and offline configuration
- Built-in explosion relief device
- Stacks are connected in series without cable connection
- Easy stack expanding without the need for additional configuration
- Environmentally friendly

BATTERY SIZING



Battery Module Quantity	2	3	4	5	6
Battery System Voltage [V]	204.8	307.2	409.6	512.0	614.4
Battery System Capacity [kWh]	8 192	12 288	16 384	20 480	24 576
Usable Energy [kWh]	7 782	11 673	15 565	19 456	23 347
Size W × D × H [mm]	600 × 400 × 560	600 × 400 × 730	600 × 400 × 900	600 × 400 × 1070	600 × 400 × 1240
Weight [kg]	90.5	127.5	164.5	201.5	238.5



High voltage battery module



Battery module base



High voltage battery cluster control box, mounting wall-bracket, battery module base, communication and power cables with connectors


PRODUCT DESCRIPTION

Product name	Description	EAN	V	Peak Discharge Current
LES-HV-4K	High voltage battery module with 4 096 kWh	4099854199868	102.4	40

MANDATORY SYSTEM COMPONENTS*

Product name	Description	EAN	V
LES-HV-SYS	Cluster control box, battery module base with 2 m communication and power cables	4099854199875	185.6-691.2

*Accessory kit containing control box, base, cables and mounting components

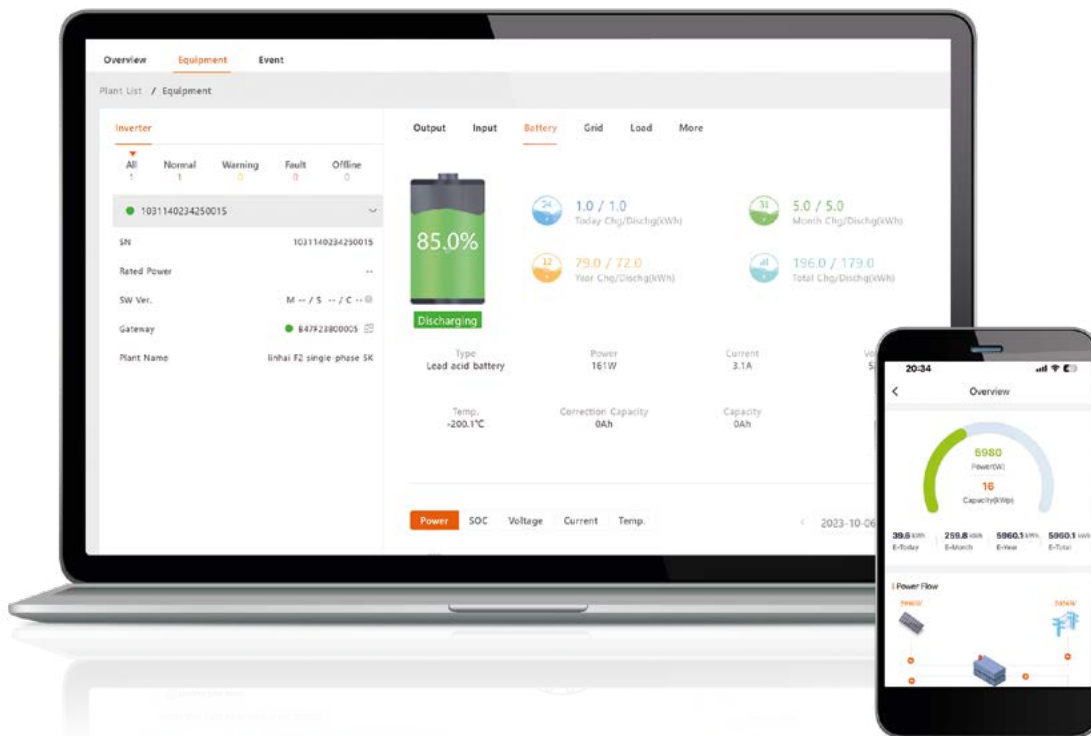


**THE LEDVANCE
RENEWABLES
APP**
REMOTE CONTROL
FOR THE POWER
OF LIGHT

EXPERIENCE SMART SUSTAINABILITY USING A SINGLE APP FOR YOUR ENERGY NEEDS

With our smart solutions you can manage your RENEWABLES photovoltaic system. The app provides a quick overview of all the important data from your energy management – advancing light and solar energy. You get status reports on your system, your batteries and your inverters, even when you are

on the move. By measuring electricity prices online and deciding when it is most profitable to sell electricity back to the grid, you can then use the Renewables app to do this, helping you to get the most out of your photovoltaic system.



THE LEDVANCE CLOUD-BASED PHOTOVOLTAIC MONITORING PLATFORM PROVIDES THE FOLLOWING FEATURES:

- ▶ Control of the system via tablet or smartphone
- ▶ Easy management of multiple installations
- ▶ Effective real-time monitoring
- ▶ Automatic error messages
- ▶ Secure data storage in a European cloud
- ▶ Easy handling thanks to user-friendly interface
- ▶ Protection of sensitive information thanks to access control
- ▶ Integration of weather data to evaluate system performance



POWER THROUGH LIGHT



ABOUT LEDVANCE

With business activities in over 140 countries, LEDVANCE is one of the world's leading general lighting companies. Emerging from OSRAM's general lighting division, LEDVANCE's portfolio includes LED lamps and luminaires, intelligent lighting products, traditional lamps and renewable energy solutions.

#POWERTHROUGHLIGHT



LEDVANCE

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