

POWER THROUGH LIGHT



**LEDVANCE**

RE **NEW** ABLES



# AUTONOMY

POWERED THROUGH  
PHOTOVOLTAIC

SUMMER 2025

[www.ledvance.com](http://www.ledvance.com)

# 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.



## 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.



## FOR YOUR PROJECTS **TOP SUPPORT**

Whether it's lighting advice, customised 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.



## 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.

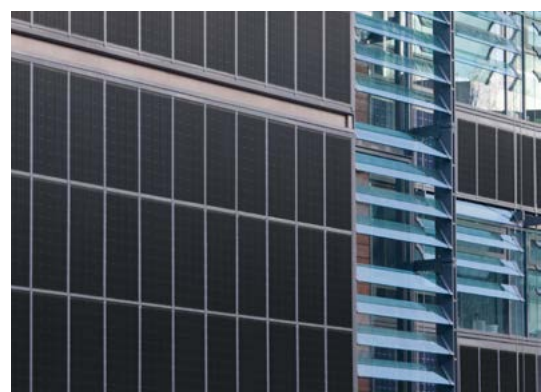
**Learn more on the following pages.**



**MORE INFORMATION:**  
[pv.ledvance.com](http://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

# WHY PHOTOVOLTAICS FROM LEDVANCE?

Here's why. At LEDVANCE RENEWABLES, our one-stop shop for photovoltaic systems, you can get a comprehensive range of products and services for all your needs. Our solutions seamlessly integrate photovoltaic panels, inverters and batteries, all specifically designed for both residential and commercial applications. Another reason is our LEDVANCE RENEWABLES app, developed for your convenience and enhanced user experience, which makes it extremely easy for you to monitor your photovoltaic system at any time and from anywhere. Use this smart tool to stay connected to your energy production and check for optimal performance and efficiency. Well-known for its 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. All these benefits combined mean that you can rely on our all-round offering – from consultation and supply of 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 committed service and top-notch support.





# INVESTING IN YOUR FUTURE RENEWABLE GREEN ENERGY FOR YOUR HOME

## LEDVANCE RENEWABLES: SYSTEM OVERVIEW RESIDENTIAL

### PANELS

- ▶ < 2 m<sup>2</sup> area
- ▶ In silver or black frame and full black colours
- ▶ N-type technologies

### INVERTERS

- ▶ Micro, string or hybrid, 1/3 phase
- ▶ Intelligent monitoring
- ▶ Meter for string and hybrid F2 inverters available

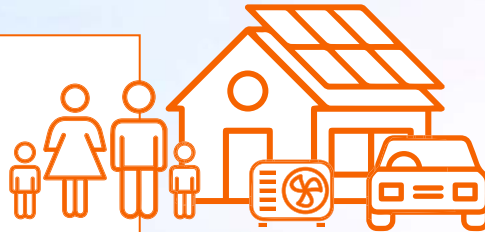
### BATTERIES

- ▶ Low voltage and high voltage stack system
- ▶ Easy to extend
- ▶ Capacity up to 24.5 kWh

## RESIDENTIAL CASE: 4-PERSON HOUSEHOLD WITH E-CAR AND HEAT PUMP

- ▶ Annual consumption: 10353 kWh
- ▶ Roof area: 55 m<sup>2</sup>
- ▶ Number of modules: 6 pcs recommended
- ▶ Installed power:  
26 pcs × 430 Wp = 11 180 kWp
- ▶ Inverter: 1 × 10 kW hybrid inverter 3-phase
- ▶ Battery: 1 × 12 kWh high voltage battery

- ▶ Energy yield p. a.:  
11 521 kWh
- ▶ Self-consumption share: 53%
- ▶ Level of self-sufficiency: 59%



Sources: PVGIS, quickplan\_embed: PLZ 60306 Frankfurt am Main



# USE SPACE RESPONSIBLY AND HELP YOUR BUSINESS REAP THE REWARDS

## LEDVANCE RENEWABLES: SYSTEM OVERVIEW COMMERCIAL

### PANELS

- ▶ <2 m<sup>2</sup> area
- ▶ Bifacial
- ▶ N-type technologies
- ▶ Up to 690 Wp

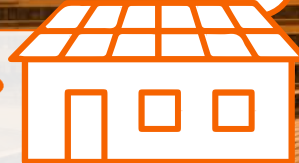
### INVERTERS

- ▶ High efficiency
- ▶ Multi MPPT of up to 8
- ▶ Up to 110 kW power

### BATTERIES

- ▶ Low voltage and high voltage stack system
- ▶ Easy to extend
- ▶ Capacity up to 24.5 kWh in one stack

## COMMERCIAL CASE: SMALL BUSINESS WITH WORKSHOP

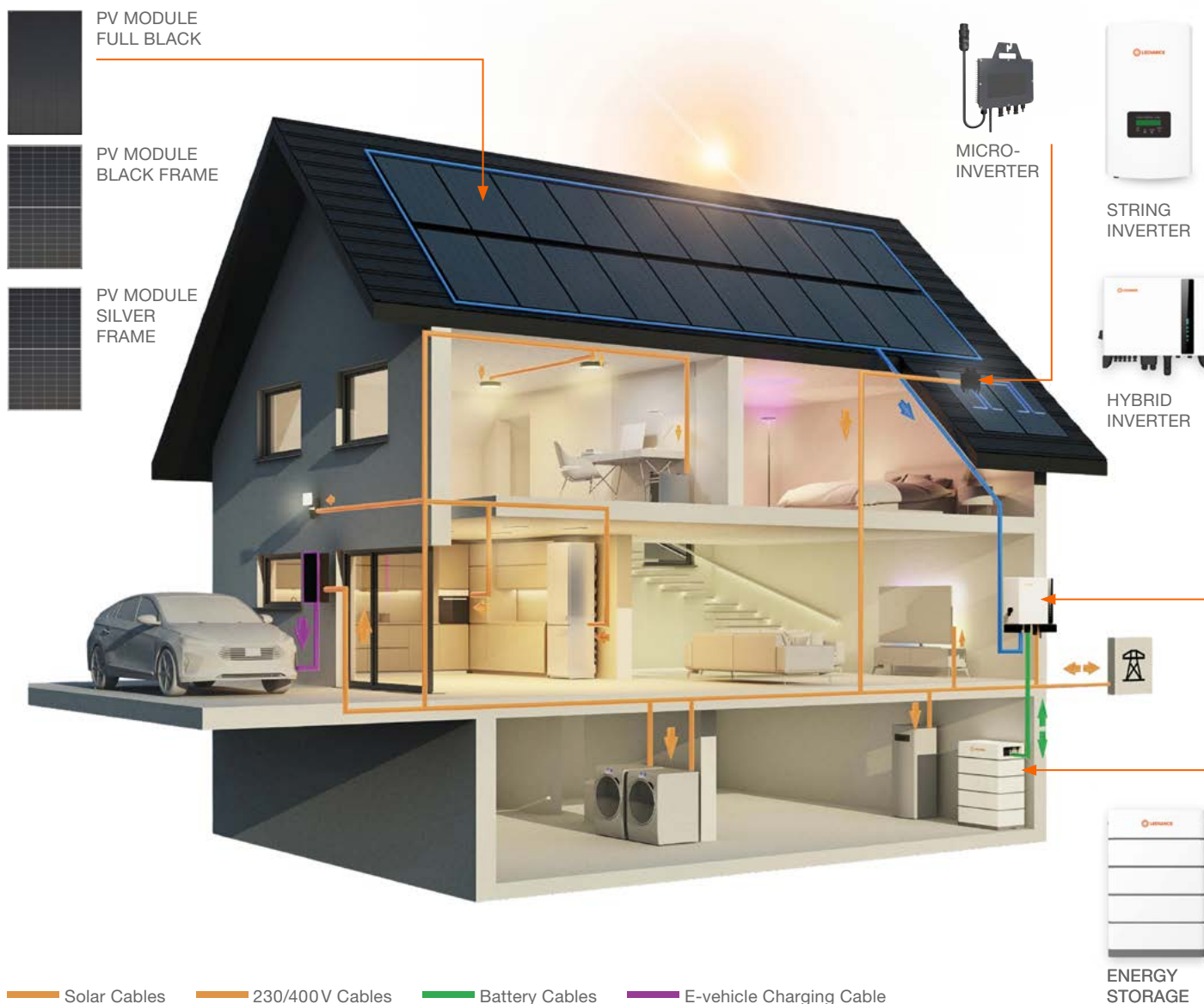


- ▶ Annual consumption daytime: 27 000 kWh
- ▶ Roof area: 300 m<sup>2</sup>
- ▶ Number of modules: 100 pcs recommended
- ▶ Inverter: 1 x 40 kW string inverter 3-phase

- ▶ Energy yield p.a.: 38 427 kWh
- ▶ Self-consumption share: 32 %
- ▶ Level of self-sufficiency: 46 %

Sources: PVGIS, quickplan\_embed: PLZ 60306 Frankfurt am Main

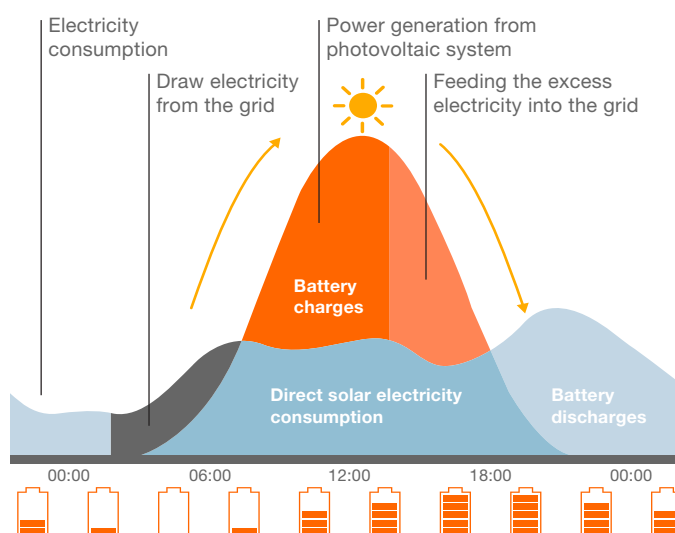
# INTERACTION OF SYSTEM COMPONENTS



## 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.





# LEDVANCE RENEWABLES – SYMBOLS AND ABBREVIATIONS

## LIST OF ABBREVIATIONS

**$W_p$**  Nominal power Watt  
P<sub>max</sub>

**$\eta$  (%)** 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<sub>MPPT</sub> (A)** Max Input Current  
per MPPT

**dB** Noise Emission

**I<sub>MAX</sub> (A)** Max AC Output Current

**V** Nominal Voltage

**kWh** Nominal Capacity



Multi bus bar  
technology



PID resistant



Operating temperature



PV connector  
(Stäubli MC4)



Front/rear side load



1-phase system



3-phase system



Wireless connection



Ethernet



Battery type



String inverter



Hybrid inverter



Short Circuit Current I<sub>sc</sub>  
(STC)



AFCI function



Battery voltage range



Type of protection



Depth of discharge



Cycle life



Scalability  
low voltage battery



Scalability  
high voltage battery



Cooling type



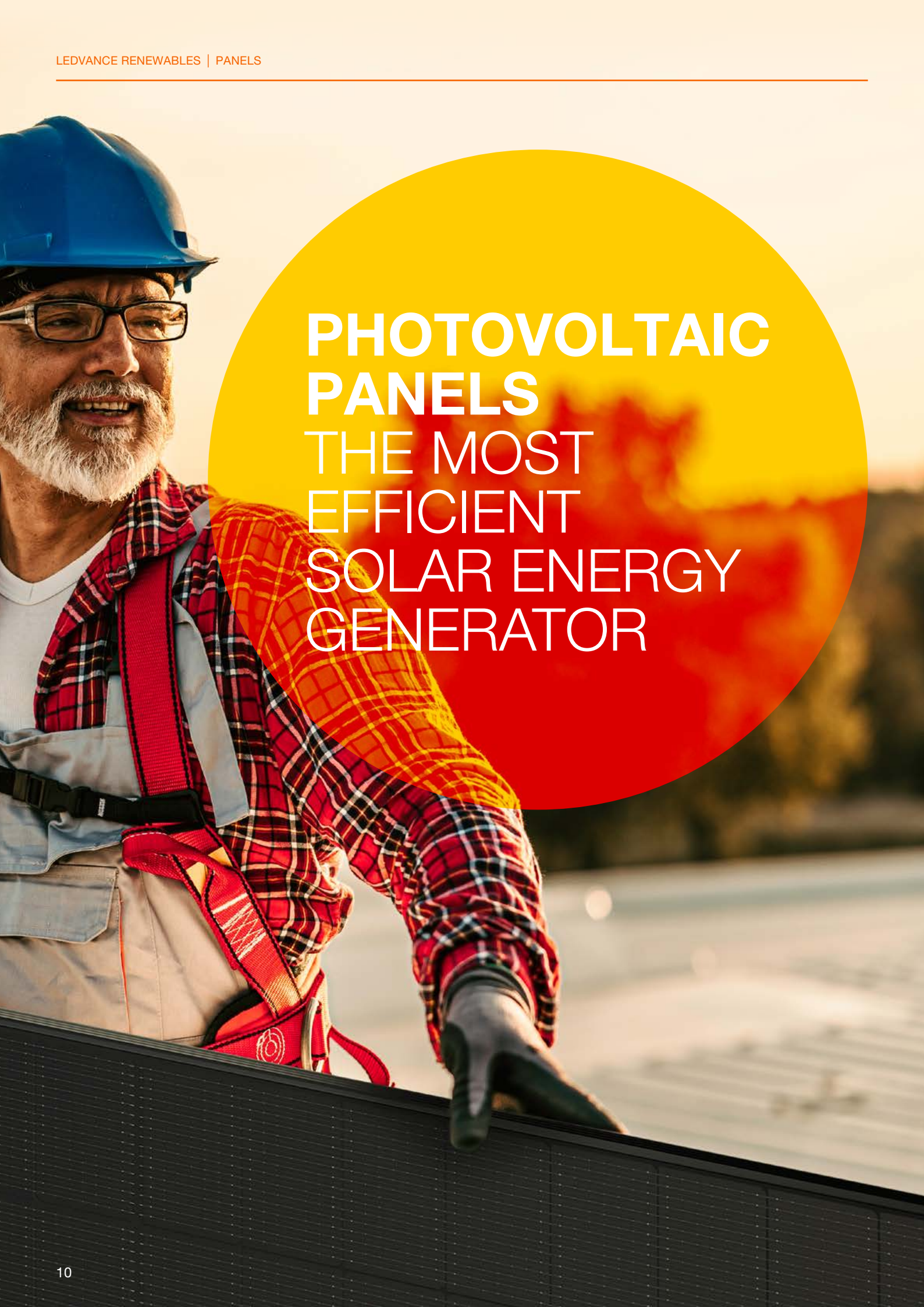
Product guarantee



Linear power guarantee



TÜV Süd certification



# PHOTOVOLTAIC PANELS

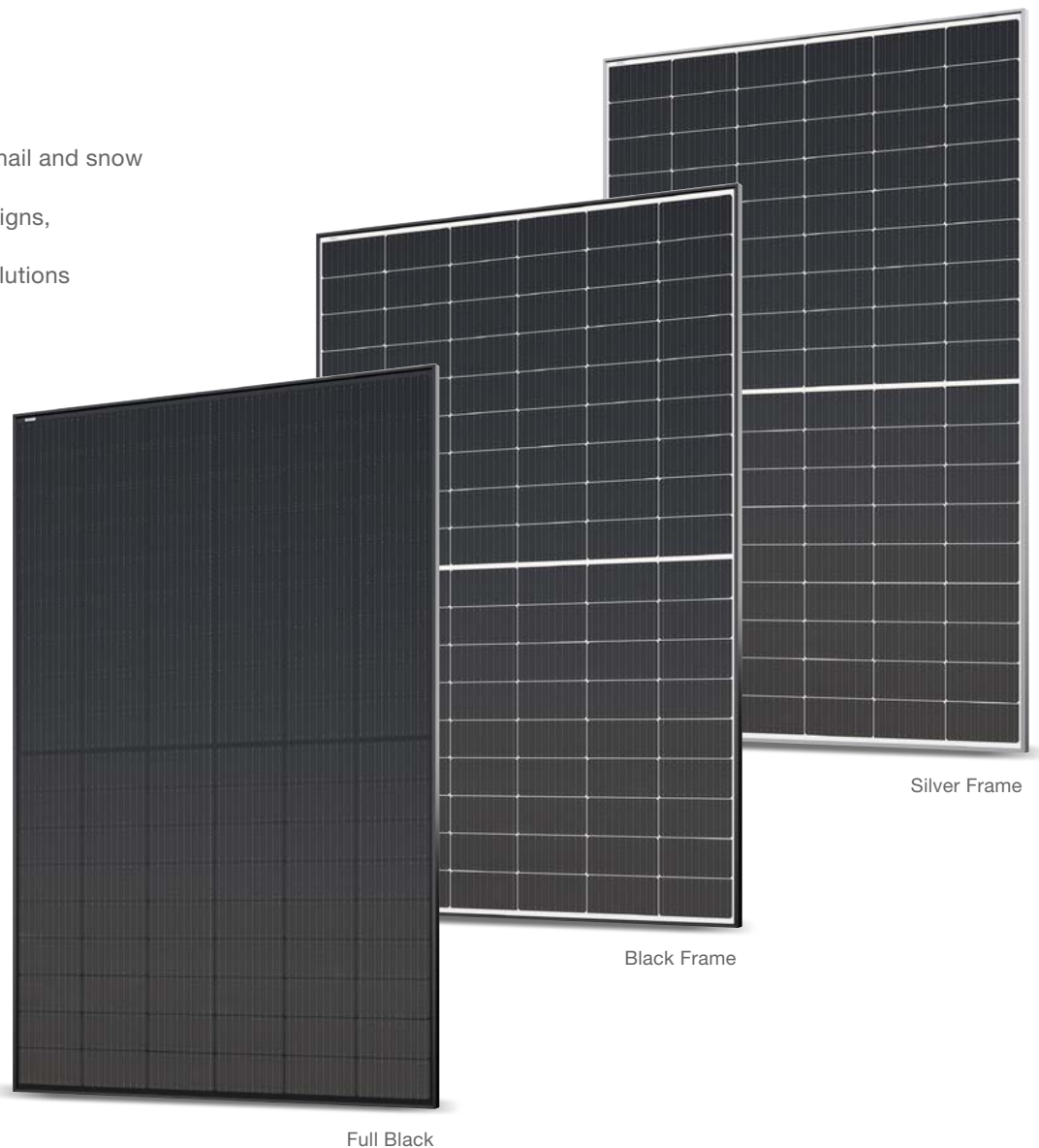
## THE MOST EFFICIENT SOLAR ENERGY GENERATOR



# EFFICIENCY ALL THE WAY TRANSFORMS EVERY RAY OF SUNLIGHT

## PRODUCT HIGHLIGHTS

- Power range: 420–715 Wp
- High efficiency up to 23 %
- Bifacial design (N-types)
- Glass-glass constructions: hail and snow load resistant, fire resistant
- 3 different frame colour designs, including full black version for more design oriented solutions



Multi bus bar technology



PID resistant



Stäubli connector system MC4 EVO2



Product guarantee up to 25 years\*



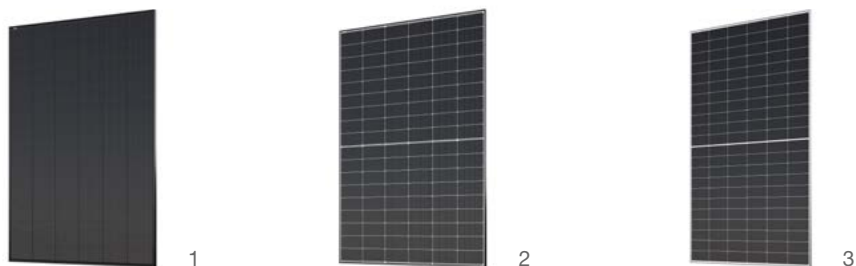
Linear power guarantee up to 30 years\*



Certifications TÜV Süd

## BIFACIAL PANELS

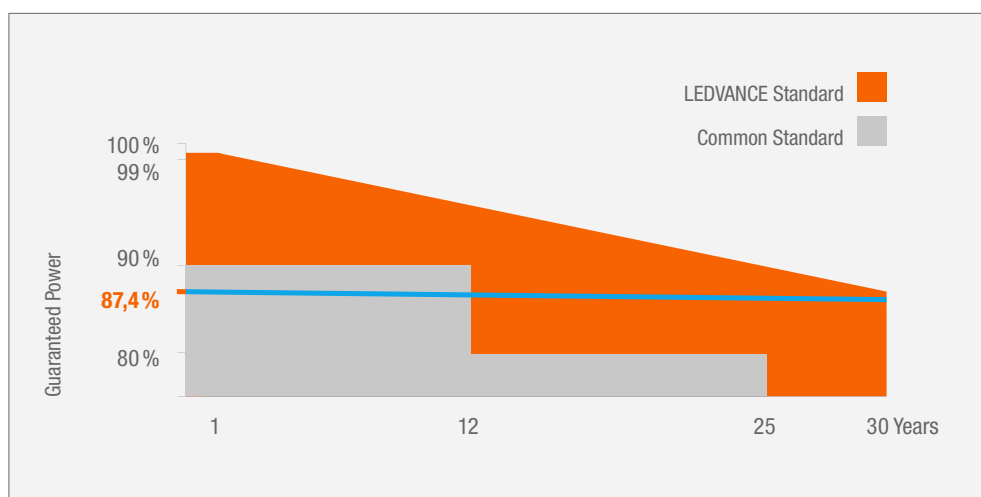
Highly efficient two-sided modules with dual glass protection



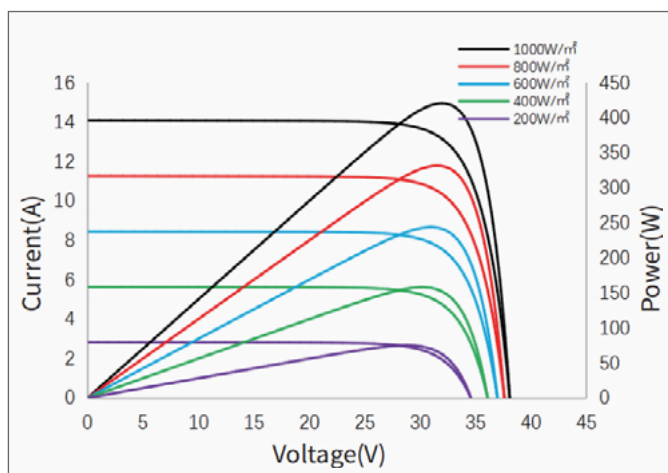
### PRODUCT FEATURES

- High efficiency up to 23 %
- Low light-induced degradation for N-type TOPCon
- Strong response to low sunlight
- Maximum system voltage: 1500 VDC
- PID-resistant
- 2.0 mm tempered glass
- Maximum static load up to 5400 Pa
- Staubli MC4 EVO2 connector system
- 3 types: silver, black frame and full black
- Robust against harsh weather conditions (e.g. snow, hail, fire)

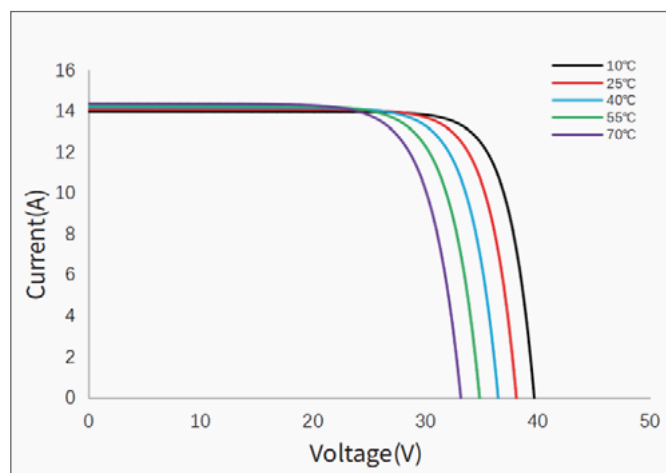
### FURTHER PRODUCT DETAILS



Degradation for N-Types TOPCon



Current-voltage curve of the module by different insolation



Current-voltage curve of the PV module by temperature



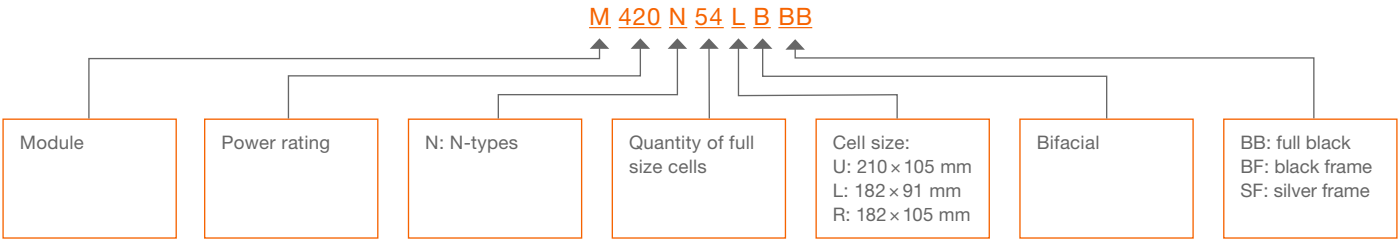
N-TYPE TOPCON

N-type TOPCon panels for maximum performance



	Product name	EAN	COLOR	Wp	η (%)	Number of cells	Open Circuit Voltage [V] STC	Short Circuit Current Isc [A] STC	L × W × H [mm]	kg	Piece/Box	Piece/Container (40'HC)	Light No.
	M420N54LB-BB-F7	4099854277276	Full Black	420	21.51	108	37.89	13.99	1722 × 1134 × 30	24.0	36	936	1
	M440N48RB-BB-F7	4099854317521	Full Black	440	22.02	96	34.84	15.94	1762 × 1134 × 30	24.5	36	936	1
NEW	M445N48RB-BB-F7	4058075850323	Full Black	445	22.27	96	35.20	15.99	1762 × 1134 × 30	24.5	36	936	1
	M445N48RB-BF-F7	4099854317446	Black Frame	445	22.27	96	35.20	15.99	1762 × 1134 × 30	24.5	36	936	2
NEW	M450N48RB-BF-F7	4058075850309	Black Frame	450	22.52	96	35.20	16.04	1762 × 1134 × 30	24.5	36	936	2
NEW	M470N60LB-BF-F7	4099854317460	Black Frame	470	21.71	120	42.35	14.16	1909 × 1134 × 30	25.5	36	864	2
	M475N60LB-BB-F7	4099854372445	Full Black	475	21.94	120	42.51	14.24	1909 × 1134 × 30	25.5	36	936	1
	M485N60LB-BF-F7	4099854328633	Black Frame	485	22.40	120	42.85	14.40	1909 × 1134 × 30	25.5	36	864	2
NEW	M485N60LB-BB-F7	4058075850286	Full Black	485	22.40	120	42.85	14.40	1909 × 1134 × 30	25.5	36	864	1
	M490N60LB-BF-F7	4099854372452	Black Frame	490	22.63	120	43.02	14.48	1909 × 1134 × 30	25.5	36	864	2
	M500N54RB-BF-F7	4099854670282	Black Frame	500	22.48	108	40.12	15.85	1961 × 1134 × 30	26.5	36	864	2
	M590N72LB-BF-F7	4099854372537	Black Frame	590	22.84	144	51.88	14.48	2278 × 1134 × 30	31.2	36	720	2
	M590N72LB-SF-F7	4099854372551	Silver Frame	590	22.84	144	51.88	14.48	2278 × 1134 × 30	31.2	36	720	3
NEW	M620N66RB-SF-F7	4058075850262	Silver Frame	620	22.95	132	52.02	15.17	2382 × 1134 × 30	32.5	36	720	3
	M690N66UB-SF-F7	4099854593369	Silver Frame	690	22.21	132	47.80	18.24	2384 × 1303 × 33	34.5	33	594	3

ORDER REFERENCE (HOW TO READ THE PRODUCT NAME):





# THE INVERTERS TRUSTED POWER CONVERTERS



# YOUR PHOTOVOLTAIC CORE MAKES YOUR GENERATED ELECTRICITY USABLE

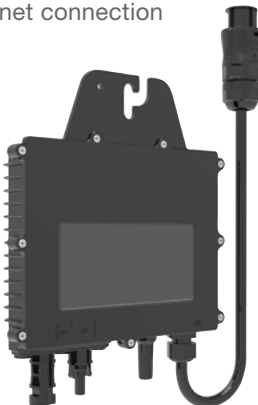
## MICROINVERTERS

- Connect up to 4 modules for maximum flexibility
- Plug-and-play setup for effortless installation
- Top performance even at high temperatures
- High efficiency of over 98.3 % for more power
- Intelligent monitoring thanks to wireless internet connection

WIFI

°C +65  
-40

IP67

LEDVANCE<sup>\*</sup>  
12 year  
guarantee

## STRING INVERTERS

- Support for up to 150 % DC over-sizing for maximum energy yield
- Built-in protections against short circuits and overheating
- Efficiency over 98.3 % for optimal power conversion
- Integrated AFCI and DC switch for enhanced safety
- DC/AC overvoltage protection for system reliability



1-phase



3-phase

WIFI

LEDVANCE<sup>\*</sup>  
10 year  
guarantee

## HYBRID INVERTERS

- Broad compatibility with major energy storage system brands
- Grid- or battery-powered inverter works independently of PV panels
- More efficient charging/discharging than low voltage systems
- Easy connectivity via Bluetooth and WiFi
- Built-in AFCI protection proactively lowers fire risk



1-phase



3-phase



WIFI

°C +60  
-25LEDVANCE<sup>\*</sup>  
10 year  
guarantee

<sup>\*</sup> [www.ledvance.com/guarantee](http://www.ledvance.com/guarantee)

## MICROINVERTERS

Microinverters for residential applications with great adaptativity for specific rooftops



### PRODUCT FEATURES

- Up to 4 modules connectable
- Plug-and-play
- Resistant to high temperatures
- High efficiency >98.3 %
- Wireless communication with the internet
- Wide application for modules
- Online monitoring
- Cooling: Natural convection
- Ideal for compact installations



	Product name	EAN	PV modules outlets	Module power range	Maximum Input Current [A]	Maximum Input Voltage [V]	$\eta$ (%)	Maximum Output Current [A]	Output Power [W]	kg	L x W x H [mm]	No.
NEW	LMS-0.4K F2	4099854 <b>583551</b>	1	400–480	16	60	>99.8	1.9	400	1.6	197 x 195 x 36	1
NEW	LMS-0.8K F2	4099854 <b>583575</b>	2	400–480	2 x 15	60	>99.8	3.7	800	3.0	220 x 220 x 37	2
NEW	LMS-2K F2	4099854 <b>583599</b>	4	500–650	4 x 18	60	>99.8	8.7	2000	6.4	320 x 293 x 48	3

## STRING INVERTERS 1-PHASE

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

Compatible accessories:  
see page 22



### PRODUCT FEATURES

- Suitable for 1-phase operations
- Remote firmware updates
- DC reverse-polarity protection
- Low start-up voltage of 60 V
- Integrated DC switch
- Easy and offline configuration
- Built-in surge protection
- Multiple MPP trackers

### COMFORT VERSION



Product name	EAN	Input (kW)	MPPT (A)	UMPT (V)	X* MPPT	$\eta$ (%)	I <sub>MAX</sub> (A)	Output (kW)	START-UP (V)	dB	kg	L x W x H [mm]	No.
LS-3.6K F2	4099854 <b>168581</b>	5.4	14	90–520	2	97.3	16.0	3.6	120	< 20	11	543 x 160 x 310	1
LS-4K F2	4099854 <b>168611</b>	6.0	14	90–520	2	97.6	21.0	4.0	120	< 20	11	543 x 160 x 310	1
LS-4.6K F2	4099854 <b>168635</b>	6.9	14	90–520	2	97.6	23.8	4.6	120	< 20	11	543 x 160 x 310	1
LS-5K F2	4099854 <b>168673</b>	7.5	14	90–520	2	97.7	25.0	5.0	120	< 20	11	543 x 160 x 310	1
LS-6K F2	4099854 <b>168741</b>	9.0	14	90–520	2	97.7	27.3	6.0	120	< 20	11	543 x 160 x 310	1



## STRING INVERTERS 3-PHASE

Inverters for residential and commercial applications with active arc flash protection

Compatible accessories:  
see page 22



### PRODUCT FEATURES

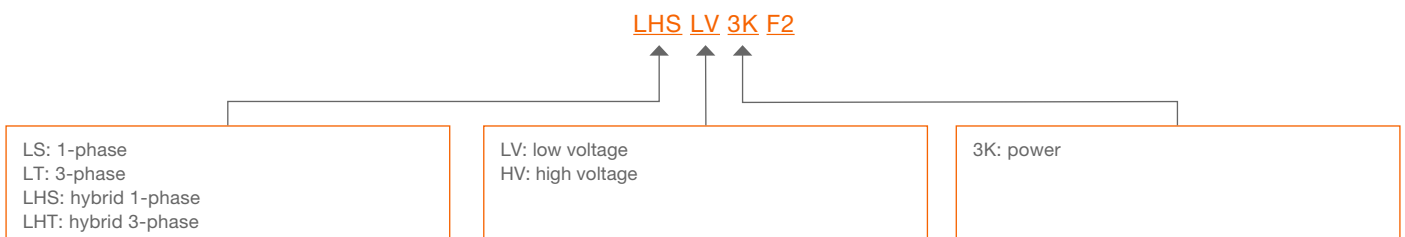
- Wide MPPT voltage range
- Remote firmware update
- Remote change of parameters
- DC reverse-polarity protection
- Integrated DC switch
- Maximum DC input voltage: 1000 V DC
- Easy and offline configuration
- Built-in surge protection
- Multiple MPP trackers
- Anti-PID function (optional)
- AFCI function
- Up to 15 kW intelligent redundant fan cooling

### COMFORT VERSION



Product name	EAN	Input (kW)	MPPT (A)	UMPT (V)	X* MPPT	η (%)	I <sub>MAX</sub> (A)	Output (kW)	START-UP (V)	dB	kg	L × W × H [mm]	Light No.
LT-4K F2	4099854168253	6.0	16	160-1000	2	98.3	6.4	4	180	<20	17.8	563 × 219 × 310	1
LT-5K F2	4099854168277	7.5	16	160-1000	2	98.3	7.9	5	180	<20	17.8	563 × 219 × 310	1
LT-6K F2	4099854168291	9.0	16	160-1000	2	98.3	9.5	6	180	<20	17.8	563 × 219 × 310	1
LT-8K F2	4099854168338	12.0	16	160-1000	2	98.5	12.7	8	180	<30	17.8	563 × 219 × 310	1
LT-10K F2	4099854168437	15.0	16	160-1000	2	98.5	15.9	10	180	<30	17.8	563 × 219 × 310	1
LT-12K F2	4099854168567	18.0	32	160-1000	2	98.6	19.1	12	180	<60	17.8	563 × 219 × 310	1
LT-15K F2	4099854169168	22.5	32	160-1000	2	98.6	23.8	15	180	<60	17.8	563 × 219 × 310	1
LT-17K F2	4099854169212	25.5	32	160-1000	2	98.7	27.0	17	180	<60	17.8	563 × 219 × 310	1
LT-20K F2	4099854169250	30.0	32	160-1000	2	98.7	31.8	20	180	<60	17.8	563 × 219 × 310	1
LT-25K F2	4099854167683	37.5	32	200-1000	3	98.5	41.8	25	180	<60	37.0	629 × 252 × 647	2
LT-30K F2	4099854167706	45.0	32	200-1000	3	98.5	50.2	30	180	<60	37.0	629 × 252 × 647	2
LT-33K F2	4099854167720	49.5	32	200-1000	3	98.6	55.1	33	180	<60	37.0	629 × 252 × 647	2
LT-40K F2	4099854167768	60.0	32	200-1000	4	98.7	66.9	40	180	<60	37.0	629 × 252 × 647	2
LT-50K F2	4099854168062	75.0	32	180-1000	5	98.7	83.6	50	195	<60	54.5	578 × 338 × 691	3
LT-60K F2	4099854168086	90.0	32	180-1000	6	98.7	100.3	60	195	<60	54.5	578 × 338 × 691	3
LT-100K F2	4099854168024	150.0	40	160-1000	8	98.5	167.1	100	180	<60	77.0	585 × 363 × 1183	4
LT-110K F2	4099854168000	150.0	40	160-1000	8	98.5	167.1	100	180	<60	77.0	585 × 363 × 1183	4

### ORDER REFERENCE (HOW TO READ THE PRODUCT NAME):



## STRING INVERTERS 3-PHASE

Inverters for residential and commercial applications with active arc flash protection

Compatible accessories:  
see page 22



### PRODUCT FEATURES

- Wide MPPT voltage range
- Remote firmware update
- Remote change of parameters
- DC reverse-polarity protection
- Integrated DC switch
- Maximum DC input voltage: 1 000 V 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)	START-UP (V)	dB	kg	L × W × H [mm]	No.
LT-5K F1	4058075835221	6.5	20	120–850	2	98.3	8.3	5	140	< 30	10.0	457 × 185 × 330	1
LT-6K F1	4058075835238	7.8	20	120–850	2	98.3	10.0	6	140	< 30	10.0	457 × 185 × 330	1
LT-8K F1	4099854134111	10.4	20	120–850	2	98.3	13.3	8	140	< 30	10.0	457 × 185 × 330	1
LT-10K F1	4058075835245	13.0	20	120–850	2	98.3	16.7	10	180	< 30	10.0	457 × 185 × 330	1
LT-12K F1	4058075835252	15.6	20	200–850	2	98.3	20.0	12	250	< 30	10.0	457 × 205 × 330	1
LT-15K F1	4058075835269	19.5	26	200–850	2	98.5	25.0	15	250	< 40	10.0	472 × 202 × 333	2
LT-20K F1	4058075835276	26.0	32	200–850	2	98.6	33.3	20	250	< 40	20.0	508 × 206 × 330	3
LT-30K F1	4099854138591	39.0	40	200–850	2	98.6	50.0	30	250	< 50	25.5	577 × 215 × 362	3
LT-40K F1	4099854138706	52.0	40	200–850	3	98.7	66.7	40	250	< 50	44.5	537 × 304 × 648	4
LT-50K F1	4099854138775	65.0	40	200–850	4	98.7	83.3	50	250	< 50	44.5	537 × 304 × 648	4
LT-50K F1 VS1	4099854099779	65.0	40	200–850	4	98.7	83.3	50	250	< 50	44.5	537 × 304 × 648	4
LT-60K F1	4099854138867	78.0	40	200–850	4	98.7	100.0	60	250	< 55	44.5	575 × 297 × 700	5
LT-80K F1 VS1	4099854100062	104.0	40	200–850	4	98.7	133.3	80	250	< 55	44.5	575 × 297 × 700	5
LT-100K F1	4058075835344	150.0	40	200–850	6	98.8	166.7	100	250	< 55	81.0	568 × 324 × 838	6
LT-110K F1 VS1	4099854100284	150.0	40	200–850	6	98.8	183.3	110	250	< 55	81.0	568 × 346 × 838	6

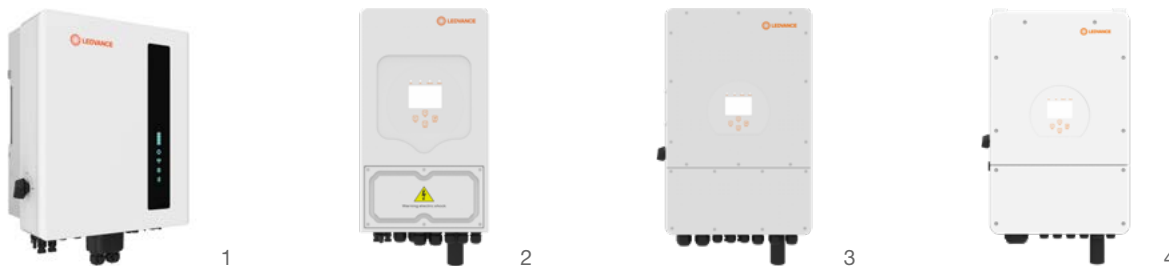




## HYBRID INVERTERS LOW VOLTAGE 1-PHASE

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

Compatible accessories:  
see page 22



### PRODUCT FEATURES

- Max. charging/discharging current of up to 190 A
- Colour LED display
- 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



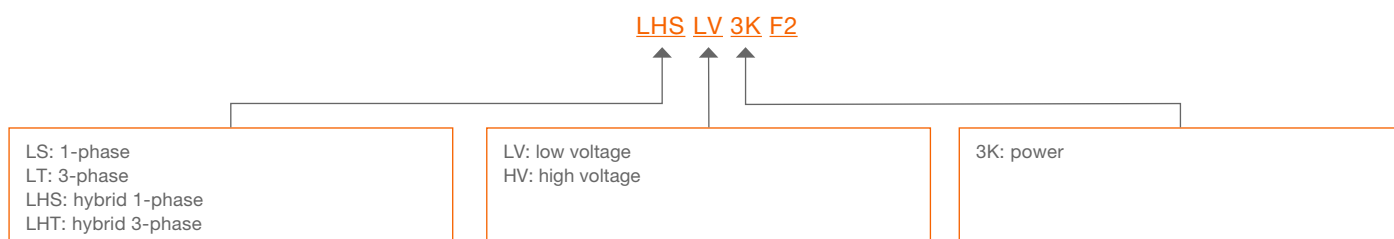
Product name	EAN	Input (kW)	MPPT (A)	UMPT (V)	X* MPPT	η (%)	I <sub>MAX</sub> (A)	Output (kW)	START-UP (V)	dB	kg	L × W × H [mm]	Light No.
LHS-LV-3K F2	4099854168130	4.8	16	90-520	2	97.0	21.8	3.0	90	< 30	24.2	405 × 205 × 480	1
LHS-LV-3.6K F2	4099854168147	5.7	16	90-520	2	97.0	26.2	3.6	90	< 30	24.2	405 × 205 × 480	1
LHS-LV-5K F2	4099854168161	8.0	16	90-520	2	97.5	36.5	5.0	90	< 30	24.2	405 × 205 × 480	1
LHS-LV-6K F2	4099854168178	9.6	16	90-520	2	97.5	40.0	6.0	90	< 30	24.2	405 × 205 × 480	1

### STANDARD VERSION



Product name	EAN	Input (kW)	MPPT (A)	UMPT (V)	X* MPPT	η (%)	I <sub>MAX</sub> (A)	Output (kW)	START-UP (V)	dB	kg	L × W × H [mm]	Light No.
LHS-LV-3.6K F1	4099854147944	4.7	13	150-425	2	97.6	18/17.2	3.6	125	< 30	22.5	330 × 232 × 580	2
LHS-LV-5K F1	4099854147951	6.5	13	150-425	2	97.6	25/23.9	5.0	125	< 30	22.5	330 × 232 × 580	3
LHS-LV-6K F1	4099854220012	7.8	13	150-425	2	97.6	30/28.7	6.0	125	< 30	22.5	330 × 232 × 580	2
LHS-LV-8K F1	4099854220029	10.4	26	150-425	2	97.6	40/38.3	8.0	125	< 30	32.0	420 × 233 × 670	4

### ORDER REFERENCE (HOW TO READ THE PRODUCT NAME):





## HYBRID INVERTER HIGH VOLTAGE 3-PHASE

Enabling high efficiency operation through high voltage battery system

Compatible accessories:  
see page 22



### 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)	IMPPT (A)	UMPT (V)	X* MPPT	η (%)	I <sub>MAX</sub> (A)	Output (kW)	START-UP (V)	dB	kg	L × W × H [mm]	No.
LHT-HV-5K F2	4099854168093	8.0	16	200–850	3	97.9	7.6	5.0	160	< 30	32.6	600 × 230 × 500	1
LHT-HV-6K F2	4099854168109	9.6	16	200–850	3	97.9	9.1	6.0	160	< 30	32.6	600 × 230 × 500	1
LHT-HV-8K F2	4099854168116	12.8	16	200–850	4	98.0	12.2	8.0	160	< 30	32.6	600 × 230 × 500	2
LHT-HV-10K F2	4099854168123	16.0	16	200–850	4	98.0	15.2	10.0	160	< 30	32.6	600 × 230 × 500	2
<b>NEW</b> LHT-HV-12K F2	4099854438479	12.0	20	200–850	4	97.7	30.0	12.0	160	< 65	31.0	599 × 243 × 546	3
<b>NEW</b> LHT-HV-15K F2	4099854438486	15.0	20	200–850	4	97.7	30.0	15.0	160	< 65	31.0	599 × 243 × 546	3
<b>NEW</b> LHT-HV-20K F2	4099854438493	20.0	20	200–850	4	97.7	30.0	20.0	160	< 65	31.0	599 × 243 × 546	3

### STANDARD VERSION



Product name	EAN	Input (kW)	IMPPT (A)	UMPT (V)	X* MPPT	η (%)	I <sub>MAX</sub> (A)	Output (kW)	START-UP (V)	dB	kg	L × W × H [mm]	No.
LHT-HV-5K F1	4099854136689	6.5	20	150–850	2	97.6	8.4	5.0	180	< 55	32.5	408 × 237 × 638	4
LHT-HV-6K F1	4099854136696	7.8	20	150–850	2	97.6	10.0	6.0	180	< 55	32.5	408 × 237 × 638	1
LHT-HV-8K F1	4099854136726	10.4	20	150–850	2	97.6	13.4	8.0	180	< 55	32.5	408 × 237 × 638	1
LHT-HV-10K F1	4099854136733	13.0	20	150–850	2	97.6	16.7	10.0	180	< 55	32.5	408 × 237 × 638	1
LHT-HV-12K F1	4099854136825	15.6	26	150–850	2	97.6	20.0	12.0	180	< 55	32.5	408 × 237 × 638	1
LHT-HV-15K F1	4099854148965	19.5	26	150–850	2	97.6	25.0	15.0	180	< 55	32.5	408 × 237 × 638	1
LHT-HV-20K F1	4099854148972	26.0	26	150–850	2	97.6	33.4	20.0	180	< 55	32.5	408 × 237 × 638	1
LHT-HV-25K F1	4058075838253	32.5	26	150–850	2	97.6	41.7	25.0	180	< 55	32.5	408 × 237 × 638	1
LHT-HV-30K F1	4099854149009	39.0	36	150–850	3	97.6	50.0	30.0	180	< 65	85.0	527 × 294 × 894	5
LHT-HV-40K F1	4099854147968	52.0	36	150–850	4	97.6	66.7	40.0	180	< 65	86.0	527 × 294 × 894	2
LHT-HV-50K F1	4099854147975	65.0	36	150–850	4	97.6	83.4	50.0	180	< 65	87.0	527 × 294 × 894	2

## METER FOR STRING AND HYBRID F2 INVERTERS

### Accessories



1



2



3



4

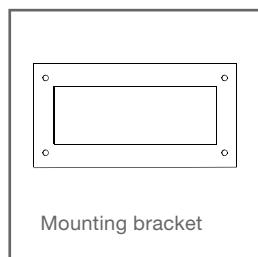


Product name	EAN	Applicable inverters	Installation type	Communication	Supporting connection types	Hz	I <sub>MAX</sub> (A)	Open current transformer model	No.
LAP-MET-10RD16TE-ECT-1P	4058118 <b>299799</b>	F2 string inverter 1-Phase	Rail-type installation	RS485 interface, Modbus-RTU	Direct/via CT	45–65	120	D16-∅16mm, 120A	1
LAP-MET-DTSD1352-ECT-3P	4058118 <b>299782</b>	F2 string inverter 3-Phase	Rail-type installation	RS485 interface, Modbus-RTU	Direct/via CT	50	80	DTSD1352	2
SDM630MCT 40MA F2	4058118 <b>314577</b>	F2 hybrid inverter 3-Phase	Rail-type installation	RS485 interface, Modbus-RTU	via CT	50/60	100	D16-∅16mm, ESCT-T24	3
SDM120CT-M-100MA F2	4058118 <b>314591</b>	F2 hybrid inverter 1-Phase	Rail-type installation	RS485 interface, Modbus-RTU	via CT	50/60	45	D10-∅10mm, ESCT-TU24	4
SDM630-MODBUS V2 F1	4058118 <b>314638</b>	F1 hybrid inverter 3-Phase	Rail-type installation	RS485 interface, Modbus-RTU	Direct	50/60	100	—	3
SDM630MCT 40MA F1	4058118 <b>314614</b>	F1 hybrid inverter 3-Phase	Rail-type installation	RS485 interface, Modbus-RTU	via CT	50/60	100	D16-∅16mm, ESCT-T24	3
SDM120CT-100MA F1	4058118 <b>318315</b>	F1 hybrid inverter 1-Phase	Rail-type installation	RS485 interface, Modbus-RTU	via CT	50/60	45	D10-∅10mm, ESCT-TU24	4

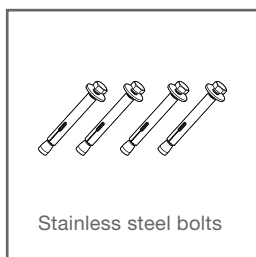


## SCOPE OF DELIVERY

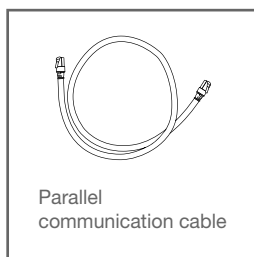
The following items are included in the packaging with your inverters:



→ All types



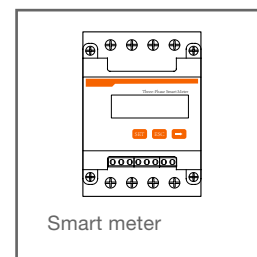
→ F1 inverters



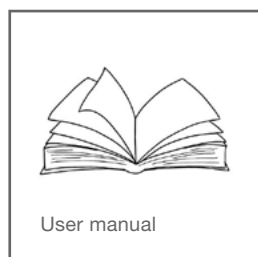
→ Hybrid inverters



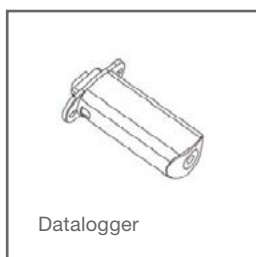
→ F1 inverters



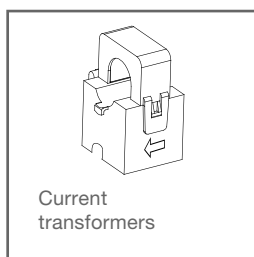
→ F2 hybrid inverters



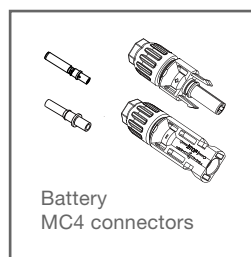
→ All types



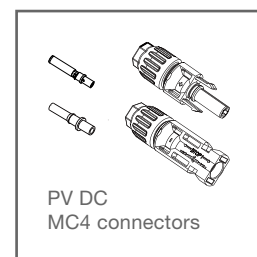
→ All types



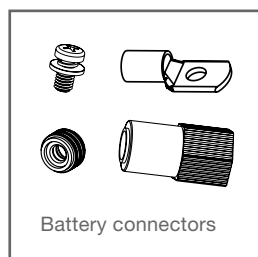
→ F1 hybrid inverters



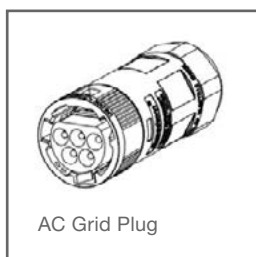
→ Hybrid inverters up to 20 kW



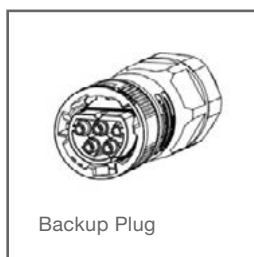
→ All types



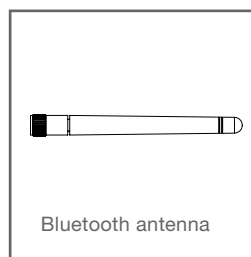
→ Hybrid inverters up to 50 kW



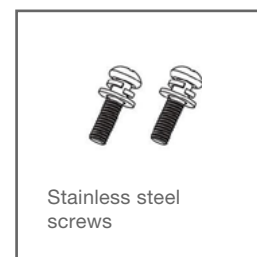
→ F2 hybrid inverters



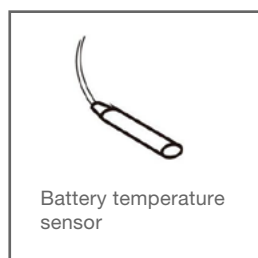
→ F2 hybrid inverters



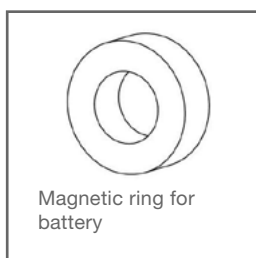
→ F2 hybrid inverters



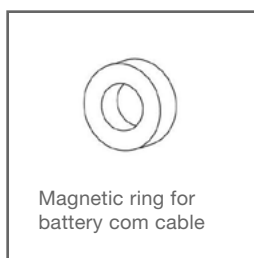
→ F2 inverters



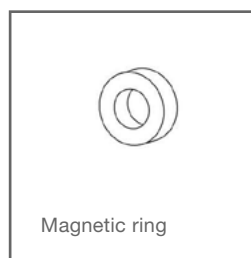
→ F2 hybrid LV inverters



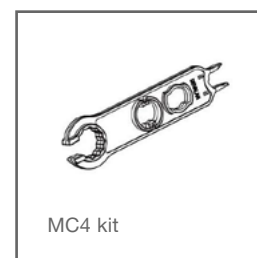
→ F2 hybrid LV inverters



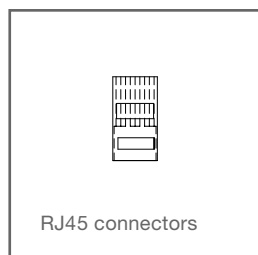
→ F2 hybrid LV inverters



→ F2 hybrid LV inverters



→ F2 hybrid LV inverters



→ F2 hybrid inverters

# 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



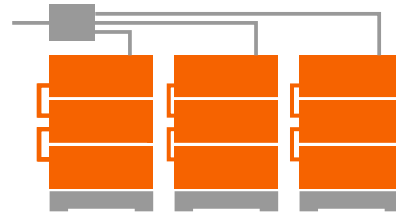
Product  
guarantee\*



### SIMPLE AND FLEXIBLE INSTALLATION OF BATTERIES IN 1-PHASE SYSTEMS



Easy mechanical  
mounting and connection  
cables between batteries



Quick and easy set-up

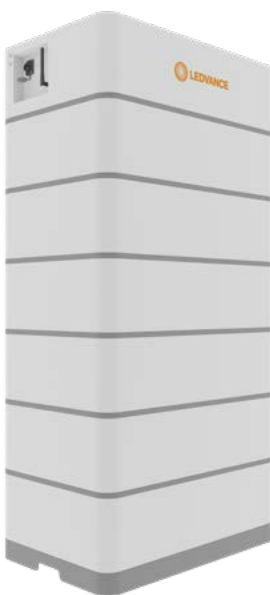


Can be  
extended\*\*

Note: 1 battery minimum per storage column. 4 maximum. 4 columns possible.

## LOW VOLTAGE BATTERY FOR 1-PHASE HYBRID INVERTER

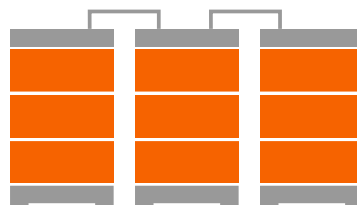
1 to 4 batteries per stack



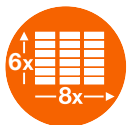
### SIMPLE AND FLEXIBLE INSTALLATION OF BATTERIES IN 3-PHASE SYSTEMS



Easy assembly



Quick and easy set-up



Can be  
extended\*\*

Note: 2 batteries minimum per storage tower. 6 maximum. 8 battery stacks possible.

## HIGH VOLTAGE BATTERY FOR 3-PHASE HYBRID INVERTER

2 to 6 batteries per BMS

\* [www.ledvance.com/guarantee](http://www.ledvance.com/guarantee)

\*\* To optimise your storage system, it is preferable for the battery modules that make it up to have a similar level of service life. In the event of future extensions, do not do so more than 2 months after the first install.



## LOW VOLTAGE BATTERIES

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



### PRODUCT FEATURES

- Thermal management system
- Anti-corrosion grade  $\geq$  C2
- SOC LED display for battery energy level status
- Control box included in every stack
- Easy and offline configuration
- Built-in explosion relief device
- Stacks are connected in parallel without cable connection
- 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
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



1

LOW VOLTAGE BATTERY GEN 1



2

LOW VOLTAGE BATTERY SYSTEM COMPONENTS



3

LOW VOLTAGE BATTERY SYSTEM CABLES

### MANDATORY SYSTEM COMPONENTS

Product name	EAN	Description	Peak Discharge Current	V	No.
LES-LV-5K	4099854199882	Low voltage battery module with 5 120 kWh	100	40.0–58.4	1
LES-LV-SYS100	4099854199899	Battery module base with 2 m communication and power cables, for up to 150A current			2
LES-LV-SYS200	4099854199905	Battery module base with 2 m communication and power cables, for up to 200A current			2
LES-LV-PAR100	4099854233906	Parallel connection accessories – communication cable, battery parallel power cables, for up to 150A current			3
LES-LV-PAR200	4099854233913	Parallel connection accessories – communication cable, battery parallel power cables, for up to 200A current			3

## HIGH VOLTAGE BATTERIES

Highly efficient modular energy storage battery system with long cycle life



2



3



4



5



6

Battery Module Quantity →

### PRODUCT FEATURES

- Thermal management system
- Anti-corrosion grade  $\geq$  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]	8.19	12.29	16.38	20.48	24.58
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



1




2

HIGH VOLTAGE BATTERY MODULE

HIGH VOLTAGE BATTERY SYSTEM COMPONENTS

### MANDATORY SYSTEM COMPONENTS

Product name	EAN	Description	Peak Discharge Current	V	No.
LES-HV-4K	4099854199868	High voltage battery module with 4 096 kWh	40	102.4	1
LES-HV-SYS	4099854199875	KIT BMS: — high voltage battery cluster control box — mounting wall-bracket — battery module base — 2m communication and power cables with connectors		185.6–691.2	2



# THE LEDVANCE RENEWABLES APP

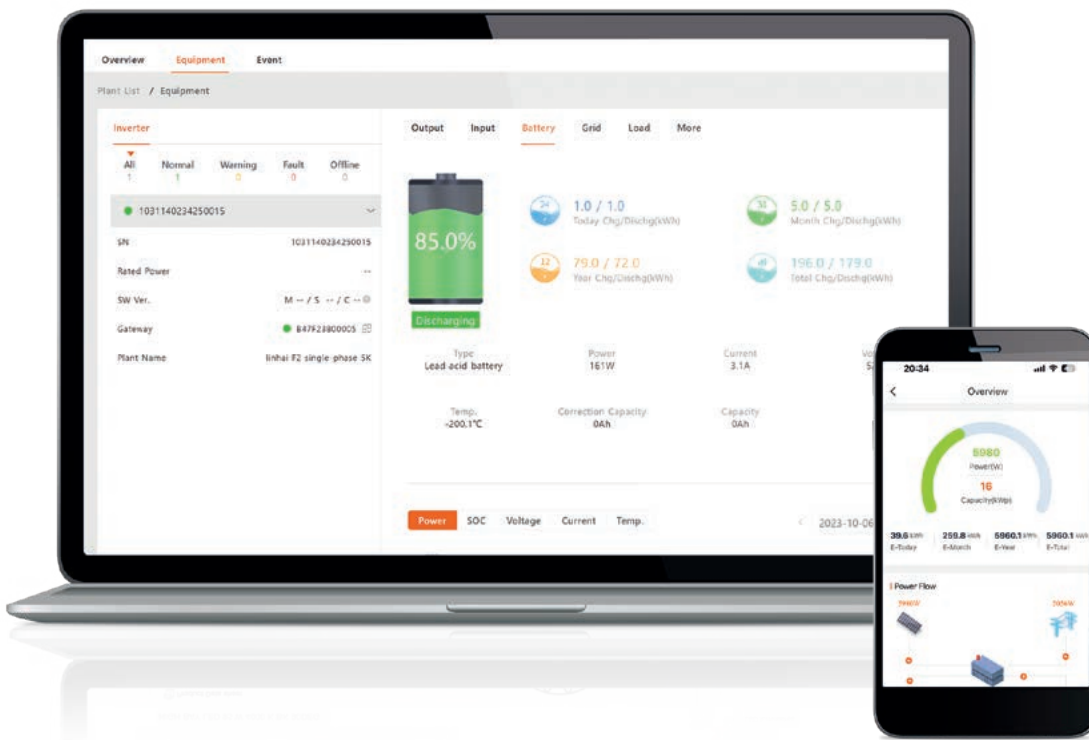
REMOTE CONTROL  
FOR THE POWER  
OF LIGHT



# 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

CASE STUDY



# WITH ALL THE POWER OF THE SUN

RESIDENTIAL PV SYSTEM IN  
MARINA DI SAN NICOLA,  
ROME AREA, CENTRAL ITALY



## KEY FACTS

### HIGHEST QUALITY FOR THE LONG TERM

Optimised resistance to high temperatures and strict controls during panel production reduce the annual degradation of the PV cells to a minimum.

### RELIABLY HIGH PERFORMANCE

A stable panel TOPCon technology and the highest production standards enable the system to operate safely in the long term significantly better than conventional modules.

### TOGETHER FOR THE FUTURE

The successful sale of the entire system was made possible through the partnership between LEDVANCE and the general contractor ENERGETICA+. The reliability of ENERGETICA+ installers hold through certification the LEDVANCE PARTNER PROGRAM.

### LONG-TERM POWER

Product guarantees of 15 years on PV panels and 10 years on inverters and battery modules reduce maintenance costs.



# ENVIRONMENTALLY FRIENDLY WITH PHOTOVOLTAIC SYSTEMS FROM LEDVANCE

In Marina di San Nicola, Rome Area, Central Italy, LEDVANCE is developing a purpose-made PV solution for a residential building which, with optimised efficiency, low degradation and low maintenance costs, offers a perfect introduction to sustainable decentralised energy generation.

## THE CHALLENGE

Especially in sunny regions, photovoltaic systems are an attractive way for private households to reduce rising energy costs and at the same time meet the ecological challenges of climate change. The owner of a house in Marina di San Nicola on the Lazio coast decided to have a photovoltaic system installed on his property for sustainable, environmentally friendly and more independent power generation.

## THE SOLUTION

The customer asked LEDVANCE and the ENERGETICA+ team to plan, construct and install a photovoltaic solution. One of the key factors was LEDVANCE's well-known position as an internationally renowned provider of high-quality lighting solutions. Accordingly, LEDVANCE developed a photovoltaic system precisely matched to the customer's needs.

In addition to twelve PV panels and an inverter, this also includes two battery modules with a capacity of 10 kWh, which ensure efficient storage of waste energy and enable greater energy self-sufficiency. In addition, the installation of the system by ENERGETICA+ meets the highest standards in terms of safety and performance.

## THE BENEFITS

The customer benefits from the new photovoltaic system in several ways: thanks to the integrated TOPCon technology,

the photovoltaic panels used convert sunlight better than conventional modules and offer a significantly higher level of efficiency. In addition, the panels exhibit very low annual degradation of the cells due to strict controls in the production process and optimised resistance to high temperatures. A particularly stable design and the highest production standards guarantee long-term operational reliability.

The inverter impresses with a practical selection of different operating modes and proactively reduces the risk of fire with its integrated AFCI function. And product guarantees of 15 years on the PV panels and 10 years each on the inverter and battery modules reduce the costs and effort involved in maintaining the system.

## SUMMARY

Together with ENERGETICA+, LEDVANCE provided and installed a modern photovoltaic system on a residential building in Marina di San Nicola in Rome Area, Lazio coast. The system comprises 12 PV panels, an inverter and two battery modules and sets standards for independent, innovative and sustainable energy generation in several aspects with its efficient conversion of sunlight, extremely low cell degradation, long-term product quality and thanks to long product guarantees low maintenance costs.

Customer: Paola Minelli  
Electric Installation: ENERGETICA+  
Photographer: Christian Invidia



“ The planning and installation of the system went perfectly and to our complete satisfaction thanks to the expert advice of the LEDVANCE team. We are delighted that we can now generate our own electricity independently and in a sustainable way with the photovoltaic system. ”

Paola Minelli





# LEDVANCE

RE **NEW** ABLES

## 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 GmbH  
Parkring 1–5  
85748 Garching  
Germany

**LEDVANCE.COM**