POWER THROUGH LIGHT

LEDVANCE

RE NEW ABLES


# AUTONOMY

## POWERED THROUGH PHOTOVOLTAIC

SUMMER 2025

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.

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.

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

# CONTENTS



# 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

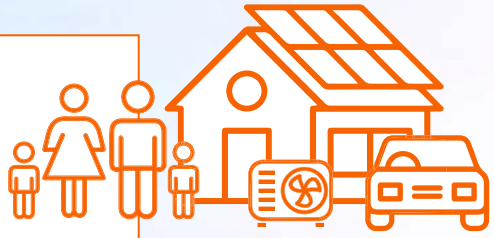
## LEDVANCE RENEWABLES: SYSTEM OVERVIEW RESIDENTIAL

**PANELS**
- < 2 m² 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: 10 353 kWh
- Roof area: 55 m²
- 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 m² 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

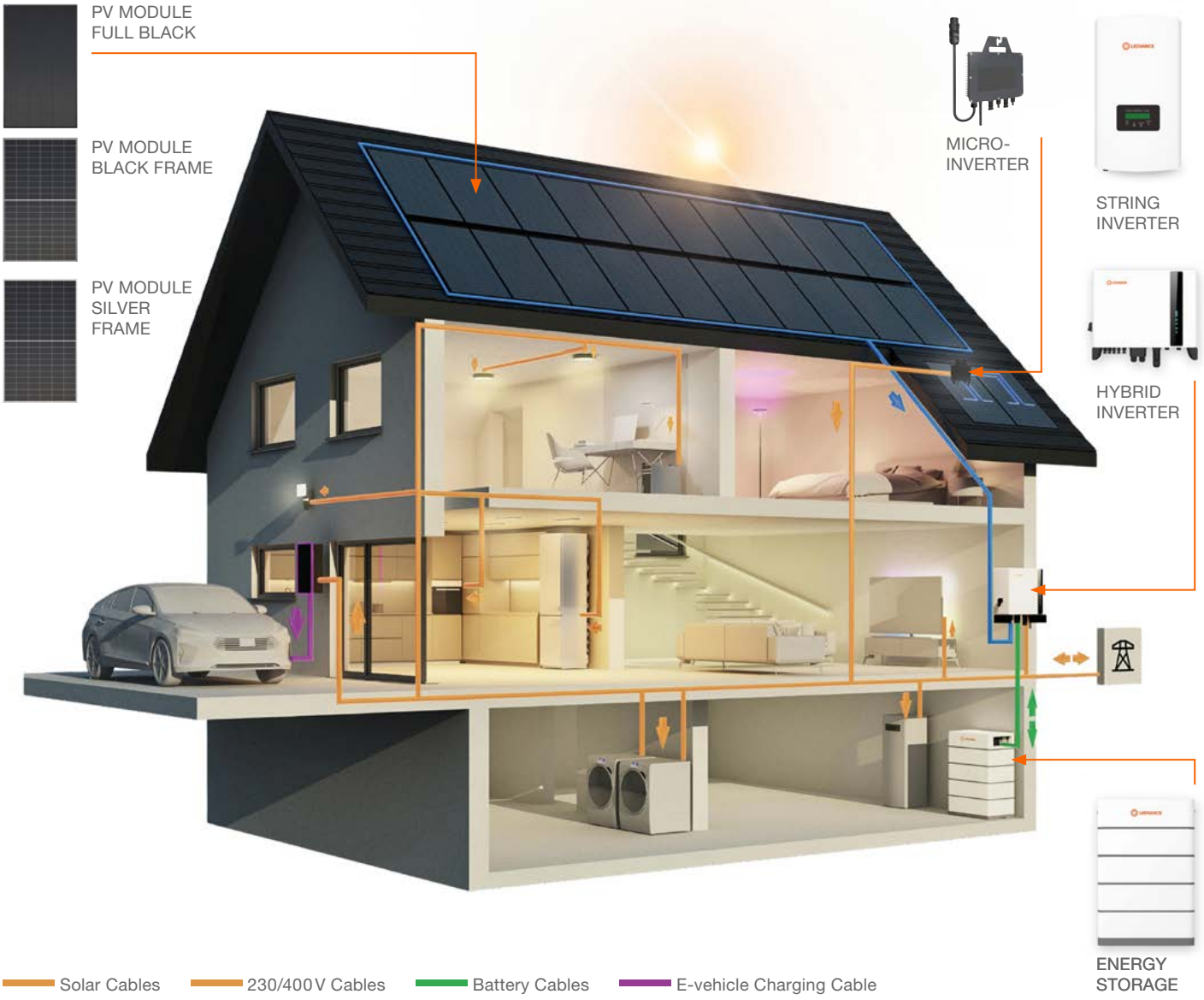
## COMMERCIAL CASE: SMALL BUSINESS WITH WORKSHOP

- Annual consumption daytime: 27 000 kWh
- Roof area: 300 m²
- Number of modules: 100 pcs recommended
- Inverter: 1 × 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

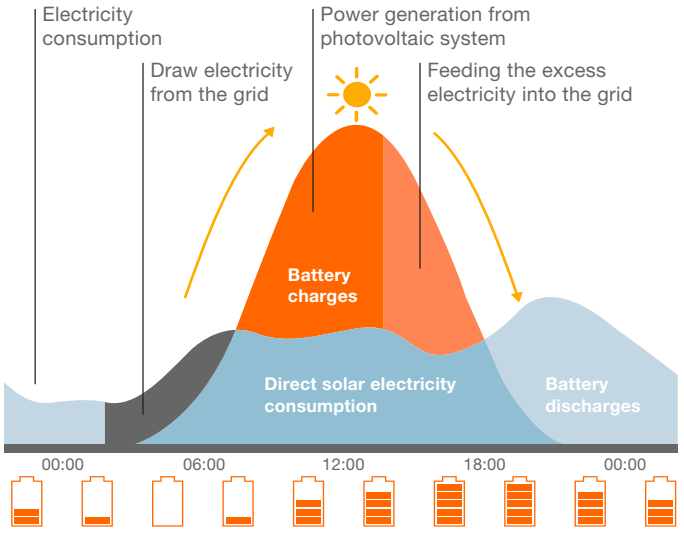
# INTERACTION OF SYSTEM COMPONENTS




## 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 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 |


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 Isc (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

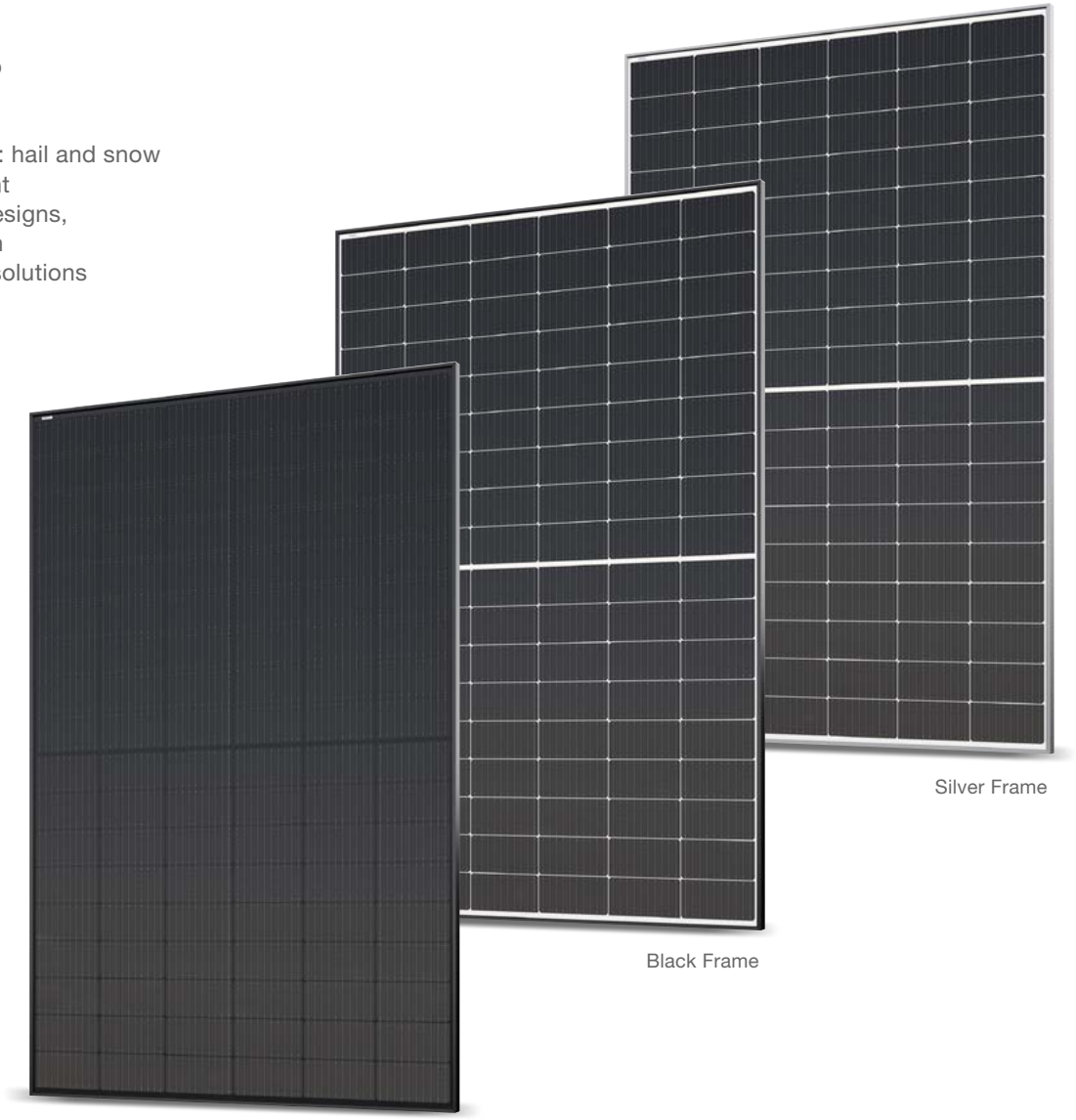

TÜV Süd certification

# 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



Silver Frame

Black Frame

Full Black

MBB
Multi bus bar technology

PID
PID resistant

MC4 EVO2
Stäubli connector system MC4 EVO2

LEDVANCE 25 year guarantee
Product guarantee up to 25 years*

LEDVANCE 30 year linear power guarantee
Linear power guarantee up to 30 years*

TÜV SÜD
Certifications TÜV Süd

* www.ledvance.com/guarantee

# BIFACIAL PANELS

Highly efficient two-sided modules with dual glass protection

1

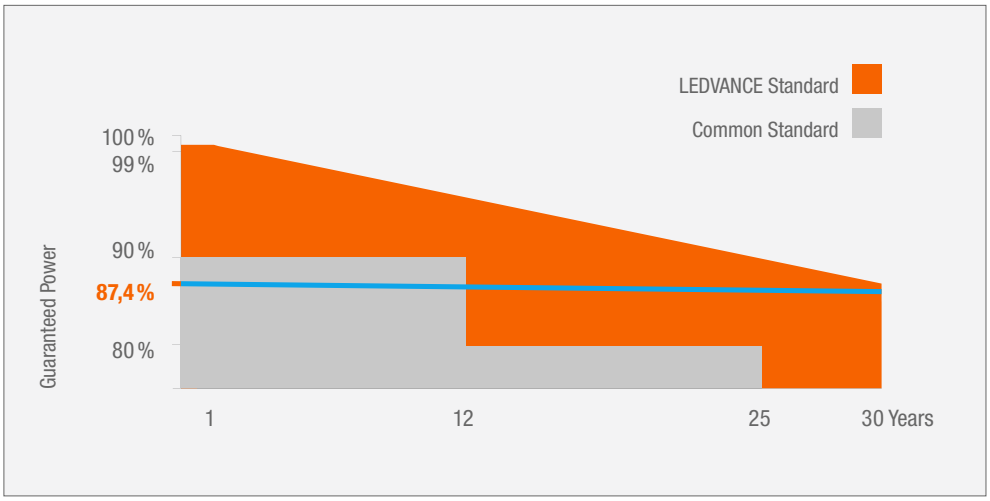
2

3

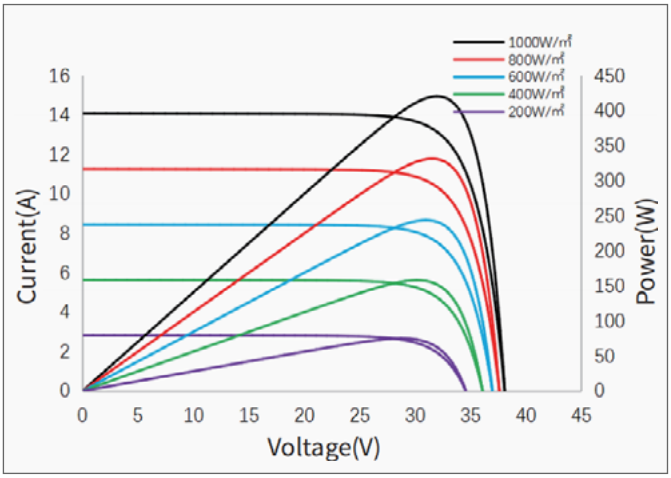
## PRODUCT FEATURES

- High efficiency up to 23 %
- Low light-induced degradation for N-type TOPCon
- Strong response to low sunlight
- Maximum system voltage: 1 500 V DC
- PID-resistant
- 2.0 mm tempered glass
- Maximum static load up to 5 400 Pa
- Staubli MC4 EVO2 connector system
- 3 types: silver, black frame and full black
- Robust against harsh weather conditions (e. g. snow, hail, fire)

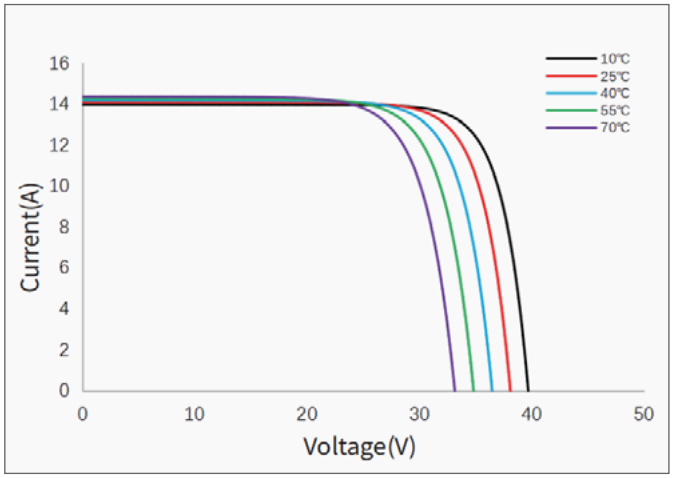
## FURTHER PRODUCT DETAILS




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

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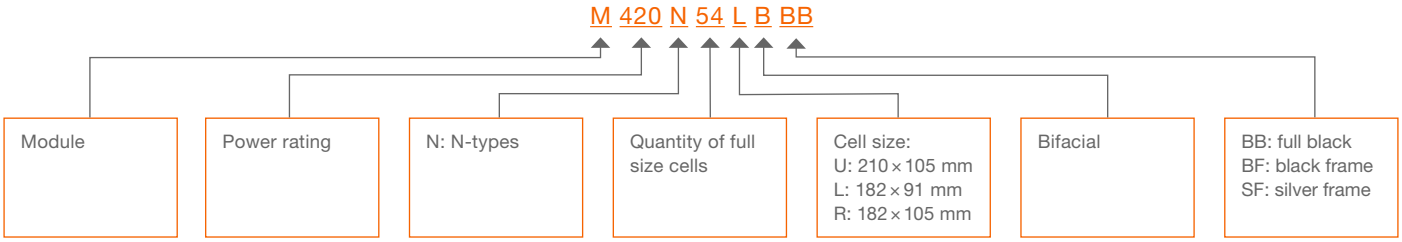
*

| | Product name | EAN | COLOR | Wp | η (%) | Number of cells | Open Circuit Voltage [V] STC | Short Circuit Current $I_{sc}$ [A] STC | L × W × H [mm] | kg | Piece/ Box | Piece/Container (40'HC) | No. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | M420N54LB-BB-F7 | 4099854**277276** | Full Black | 420 | 21.51 | 108 | 37.89 | 13.99 | 1722 × 1134 × 30 | 24.0 | 36 | 936 | 1 |
| | M440N48RB-BB-F7 | 4099854**317521** | Full Black | 440 | 22.02 | 96 | 34.84 | 15.94 | 1762 × 1134 × 30 | 24.5 | 36 | 936 | 1 |
| NEW | M445N48RB-BB-F7 | 4058075**850323** | Full Black | 445 | 22.27 | 96 | 35.20 | 15.99 | 1762 × 1134 × 30 | 24.5 | 36 | 936 | 1 |
| | M445N48RB-BF-F7 | 4099854**317446** | Black Frame | 445 | 22.27 | 96 | 35.20 | 15.99 | 1762 × 1134 × 30 | 24.5 | 36 | 936 | 2 |
| NEW | M450N48RB-BF-F7 | 4058075**850309** | Black Frame | 450 | 22.52 | 96 | 35.20 | 16.04 | 1762 × 1134 × 30 | 24.5 | 36 | 936 | 2 |
| NEW | M470N60LB-BF-F7 | 4099854**317460** | Black Frame | 470 | 21.71 | 120 | 42.35 | 14.16 | 1909 × 1134 × 30 | 25.5 | 36 | 864 | 2 |
| | M475N60LB-BB-F7 | 4099854**372445** | Full Black | 475 | 21.94 | 120 | 42.51 | 14.24 | 1909 × 1134 × 30 | 25.5 | 36 | 936 | 1 |
| | M485N60LB-BF-F7 | 4099854**328633** | Black Frame | 485 | 22.40 | 120 | 42.85 | 14.40 | 1909 × 1134 × 30 | 25.5 | 36 | 864 | 2 |
| NEW | M485N60LB-BB-F7 | 4058075**850286** | Full Black | 485 | 22.40 | 120 | 42.85 | 14.40 | 1909 × 1134 × 30 | 25.5 | 36 | 864 | 1 |
| | M490N60LB-BF-F7 | 4099854**372452** | Black Frame | 490 | 22.63 | 120 | 43.02 | 14.48 | 1909 × 1134 × 30 | 25.5 | 36 | 864 | 2 |
| | M500N54RB-BF-F7 | 4099854**670282** | Black Frame | 500 | 22.48 | 108 | 40.12 | 15.85 | 1961 × 1134 × 30 | 26.5 | 36 | 864 | 2 |
| | M590N72LB-BF-F7 | 4099854**372537** | Black Frame | 590 | 22.84 | 144 | 51.88 | 14.48 | 2278 × 1134 × 30 | 31.2 | 36 | 720 | 2 |
| | M590N72LB-SF-F7 | 4099854**372551** | Silver Frame | 590 | 22.84 | 144 | 51.88 | 14.48 | 2278 × 1134 × 30 | 31.2 | 36 | 720 | 3 |
| NEW | M620N66RB-SF-F7 | 4058075**850262** | Silver Frame | 620 | 22.95 | 132 | 52.02 | 15.17 | 2382 × 1134 × 30 | 32.5 | 36 | 720 | 3 |
| | M690N66UB-SF-F7 | 4099854**593369** | 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):



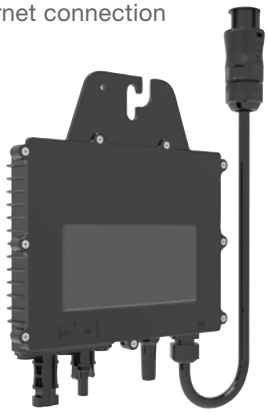

* www.ledvance.com/guarantee


# 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 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 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

MC4 EVO2

WIFI

°C +60 -25

LEDVANCE 10 year guarantee *

* www.ledvance.com/guarantee

# MICROINVERTERS

Microinverters for residential applications with great adaptativity for specific rooftops


1


2


3

## 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

°C +65 -40 | IP67 | LEDVANCE 12 year guarantee *

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


1

## 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

1~ | °C +60 -25 | WIFI | | IP66 | LEDVANCE 10 year guarantee *

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

# STRING INVERTERS 3-PHASE

Inverters for residential and commercial applications with active arc flash protection

Compatible accessories: see page 22


1


2


3


4

## 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
- Up to 15 kW intelligent redundant fan cooling

## COMFORT VERSION

3~ | °C +60 -25 | WIFI | IP66 | LEDVANCE 10 year guarantee *

| Product name | EAN | Input (kW) | $I_{MPPT}$ (A) | $U_{MPPT}$ (V) | X* MPPT | η(%) | $I_{MAX}$ (A) | Output (kW) | START-UP (V) | dB | kg | L × W × H [mm] | No. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LT-4K F2 | 4099854**168253** | 6.0 | 16 | 160–1000 | 2 | 98.3 | 6.4 | 4 | 180 | < 20 | 17.8 | 563 × 219 × 310 | 1 |
| LT-5K F2 | 4099854**168277** | 7.5 | 16 | 160–1000 | 2 | 98.3 | 7.9 | 5 | 180 | < 20 | 17.8 | 563 × 219 × 310 | 1 |
| LT-6K F2 | 4099854**168291** | 9.0 | 16 | 160–1000 | 2 | 98.3 | 9.5 | 6 | 180 | < 20 | 17.8 | 563 × 219 × 310 | 1 |
| LT-8K F2 | 4099854**168338** | 12.0 | 16 | 160–1000 | 2 | 98.5 | 12.7 | 8 | 180 | < 30 | 17.8 | 563 × 219 × 310 | 1 |
| LT-10K F2 | 4099854**168437** | 15.0 | 16 | 160–1000 | 2 | 98.5 | 15.9 | 10 | 180 | < 30 | 17.8 | 563 × 219 × 310 | 1 |
| LT-12K F2 | 4099854**168567** | 18.0 | 32 | 160–1000 | 2 | 98.6 | 19.1 | 12 | 180 | < 60 | 17.8 | 563 × 219 × 310 | 1 |
| LT-15K F2 | 4099854**169168** | 22.5 | 32 | 160–1000 | 2 | 98.6 | 23.8 | 15 | 180 | < 60 | 17.8 | 563 × 219 × 310 | 1 |
| LT-17K F2 | 4099854**169212** | 25.5 | 32 | 160–1000 | 2 | 98.7 | 27.0 | 17 | 180 | < 60 | 17.8 | 563 × 219 × 310 | 1 |
| LT-20K F2 | 4099854**169250** | 30.0 | 32 | 160–1000 | 2 | 98.7 | 31.8 | 20 | 180 | < 60 | 17.8 | 563 × 219 × 310 | 1 |
| LT-25K F2 | 4099854**167683** | 37.5 | 32 | 200–1000 | 3 | 98.5 | 41.8 | 25 | 180 | < 60 | 37.0 | 629 × 252 × 647 | 2 |
| LT-30K F2 | 4099854**167706** | 45.0 | 32 | 200–1000 | 3 | 98.5 | 50.2 | 30 | 180 | < 60 | 37.0 | 629 × 252 × 647 | 2 |
| LT-33K F2 | 4099854**167720** | 49.5 | 32 | 200–1000 | 3 | 98.6 | 55.1 | 33 | 180 | < 60 | 37.0 | 629 × 252 × 647 | 2 |
| LT-40K F2 | 4099854**167768** | 60.0 | 32 | 200–1000 | 4 | 98.7 | 66.9 | 40 | 180 | < 60 | 37.0 | 629 × 252 × 647 | 2 |
| LT-50K F2 | 4099854**168062** | 75.0 | 32 | 180–1000 | 5 | 98.7 | 83.6 | 50 | 195 | < 60 | 54.5 | 578 × 338 × 691 | 3 |
| LT-60K F2 | 4099854**168086** | 90.0 | 32 | 180–1000 | 6 | 98.7 | 100.3 | 60 | 195 | < 60 | 54.5 | 578 × 338 × 691 | 3 |
| LT-100K F2 | 4099854**168024** | 150.0 | 40 | 160–1000 | 8 | 98.5 | 167.1 | 100 | 180 | < 60 | 77.0 | 585 × 363 × 1183 | 4 |
| LT-110K F2 | 4099854**168000** | 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):

LHS LV 3K F2

- LS: 1-phase
  LT: 3-phase
  LHS: hybrid 1-phase
  LHT: hybrid 3-phase
- LV: low voltage
  HV: high voltage
- 3K: power

* www.ledvance.com/guarantee

# STRING INVERTERS 3-PHASE

Inverters for residential and commercial applications with active arc flash protection

Compatible accessories: see page 22


1


2


3


4


5


6

## 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

3~ | °C +60 -25 | WIFI | IP65 | LEDVANCE 10 year guarantee *

| Product name | EAN | Input (kW) | $I_{MPPT}$ (A) | $U_{MPPT}$ (V) | X* MPPT | η (%) | $I_{MAX}$ (A) | Output (kW) | START-UP (V) | dB | kg | L × W × H [mm] | No. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LT-5K F1 | 4058075**835221** | 6.5 | 20 | 120–850 | 2 | 98.3 | 8.3 | 5 | 140 | < 30 | 10.0 | 457 × 185 × 330 | 1 |
| LT-6K F1 | 4058075**835238** | 7.8 | 20 | 120–850 | 2 | 98.3 | 10.0 | 6 | 140 | < 30 | 10.0 | 457 × 185 × 330 | 1 |
| LT-8K F1 | 4099854**134111** | 10.4 | 20 | 120–850 | 2 | 98.3 | 13.3 | 8 | 140 | < 30 | 10.0 | 457 × 185 × 330 | 1 |
| LT-10K F1 | 4058075**835245** | 13.0 | 20 | 120–850 | 2 | 98.3 | 16.7 | 10 | 180 | < 30 | 10.0 | 457 × 185 × 330 | 1 |
| LT-12K F1 | 4058075**835252** | 15.6 | 20 | 200–850 | 2 | 98.3 | 20.0 | 12 | 250 | < 30 | 10.0 | 457 × 205 × 330 | 1 |
| LT-15K F1 | 4058075**835269** | 19.5 | 26 | 200–850 | 2 | 98.5 | 25.0 | 15 | 250 | < 40 | 10.0 | 472 × 202 × 333 | 2 |
| LT-20K F1 | 4058075**835276** | 26.0 | 32 | 200–850 | 2 | 98.6 | 33.3 | 20 | 250 | < 40 | 20.0 | 508 × 206 × 330 | 3 |
| LT-30K F1 | 4099854**138591** | 39.0 | 40 | 200–850 | 2 | 98.6 | 50.0 | 30 | 250 | < 50 | 25.5 | 577 × 215 × 362 | 3 |
| LT-40K F1 | 4099854**138706** | 52.0 | 40 | 200–850 | 3 | 98.7 | 66.7 | 40 | 250 | < 50 | 44.5 | 537 × 304 × 648 | 4 |
| LT-50K F1 | 4099854**138775** | 65.0 | 40 | 200–850 | 4 | 98.7 | 83.3 | 50 | 250 | < 50 | 44.5 | 537 × 304 × 648 | 4 |
| LT-50K F1 VS1 | 4099854**099779** | 65.0 | 40 | 200–850 | 4 | 98.7 | 83.3 | 50 | 250 | < 50 | 44.5 | 537 × 304 × 648 | 4 |
| LT-60K F1 | 4099854**138867** | 78.0 | 40 | 200–850 | 4 | 98.7 | 100.0 | 60 | 250 | < 55 | 44.5 | 575 × 297 × 700 | 5 |
| LT-80K F1 VS1 | 4099854**100062** | 104.0 | 40 | 200–850 | 4 | 98.7 | 133.3 | 80 | 250 | < 55 | 44.5 | 575 × 297 × 700 | 5 |
| LT-100K F1 | 4058075**835344** | 150.0 | 40 | 200–850 | 6 | 98.8 | 166.7 | 100 | 250 | < 55 | 81.0 | 568 × 324 × 838 | 6 |
| LT-110K F1 VS1 | 4099854**100284** | 150.0 | 40 | 200–850 | 6 | 98.8 | 183.3 | 110 | 250 | < 55 | 81.0 | 568 × 346 × 838 | 6 |

* www.ledvance.com/guarantee

# HYBRID INVERTERS LOW VOLTAGE 1-PHASE

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

Compatible accessories: see page 22


1


2


3


4

## PRODUCT FEATURES

- Max. charging/discharging current of up to 190 A
- Colour LED display
- Compatible with a variety of batteries from different manufacturers
- 48 V 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

MC4 EVO2 · LiFePO4 · 40-60 V · 1~ · WIFI · °C +60 -25 · IP66 · LEDVANCE 10 year guarantee *

| Product name | EAN | Input (kW) | $I_{MPPT}$ (A) | $U_{MPPT}$ (V) | X* MPPT | η (%) | $I_{MAX}$ (A) | Output (kW) | START-UP (V) | dB | kg | L × W × H [mm] | No. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LHS-LV-3K F2 | 4099854**168130** | 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 | 4099854**168147** | 5.7 | 16 | 90–520 | 2 | 97.0 | 26.2 | 3.6 | 90 | < 30 | 24.2 | 405 × 205 × 480 | 1 |
| LHS-LV-5K F2 | 4099854**168161** | 8.0 | 16 | 90–520 | 2 | 97.5 | 36.5 | 5.0 | 90 | < 30 | 24.2 | 405 × 205 × 480 | 1 |
| LHS-LV-6K F2 | 4099854**168178** | 9.6 | 16 | 90–520 | 2 | 97.5 | 40.0 | 6.0 | 90 | < 30 | 24.2 | 405 × 205 × 480 | 1 |

## STANDARD VERSION

MC4 EVO2 · LiFePO4 · 40-60 V · 1~ · WIFI · °C +60 -25 · IP65 · LEDVANCE 10 year guarantee *

| Product name | EAN | Input (kW) | $I_{MPPT}$ (A) | $U_{MPPT}$ (V) | X* MPPT | η (%) | $I_{MAX}$ (A) | Output (kW) | START-UP (V) | dB | kg | L × W × H [mm] | No. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LHS-LV-3.6K F1 | 4099854**147944** | 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 | 4099854**147951** | 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 | 4099854**220012** | 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 | 4099854**220029** | 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):

LHS LV 3K F2

- LS: 1-phase
  LT: 3-phase
  LHS: hybrid 1-phase
  LHT: hybrid 3-phase
- LV: low voltage
  HV: high voltage
- 3K: power

* www.ledvance.com/guarantee

# HYBRID INVERTER HIGH VOLTAGE 3-PHASE

Enabling high efficiency operation through high voltage battery system

Compatible accessories: see page 22


1


2


3


4


5

## 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

MC4 EVO2 | WIFI | LiFePO4 | 3~ | °C +60 -25 | IP66 | LEDVANCE 10 year guarantee *

| | Product name | EAN | Input (kW) | $I_{MPPT}$ (A) | $U_{MPPT}$ (V) | X* MPPT | η (%) | $I_{MAX}$ (A) | Output (kW) | START-UP (V) | dB | kg | L × W × H [mm] | No. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LHT-HV-5K F2 | 4099854**168093** | 8.0 | 16 | 200–850 | 3 | 97.9 | 7.6 | 5.0 | 160 | < 30 | 32.6 | 600 × 230 × 500 | 1 |
| | LHT-HV-6K F2 | 4099854**168109** | 9.6 | 16 | 200–850 | 3 | 97.9 | 9.1 | 6.0 | 160 | < 30 | 32.6 | 600 × 230 × 500 | 1 |
| | LHT-HV-8K F2 | 4099854**168116** | 12.8 | 16 | 200–850 | 4 | 98.0 | 12.2 | 8.0 | 160 | < 30 | 32.6 | 600 × 230 × 500 | 2 |
| | LHT-HV-10K F2 | 4099854**168123** | 16.0 | 16 | 200–850 | 4 | 98.0 | 15.2 | 10.0 | 160 | < 30 | 32.6 | 600 × 230 × 500 | 2 |
| NEW | LHT-HV-12K F2 | 4099854**438479** | 12.0 | 20 | 200–850 | 4 | 97.7 | 30.0 | 12.0 | 160 | < 65 | 31.0 | 599 × 243 × 546 | 3 |
| NEW | LHT-HV-15K F2 | 4099854**438486** | 15.0 | 20 | 200–850 | 4 | 97.7 | 30.0 | 15.0 | 160 | < 65 | 31.0 | 599 × 243 × 546 | 3 |
| NEW | LHT-HV-20K F2 | 4099854**438493** | 20.0 | 20 | 200–850 | 4 | 97.7 | 30.0 | 20.0 | 160 | < 65 | 31.0 | 599 × 243 × 546 | 3 |

## STANDARD VERSION

MC4 EVO2 | WIFI | LiFePO4 | 3~ | °C +60 -25 | IP65 | LEDVANCE 10 year guarantee *

| Product name | EAN | Input (kW) | $I_{MPPT}$ (A) | $U_{MPPT}$ (V) | X* MPPT | η (%) | $I_{MAX}$ (A) | Output (kW) | START-UP (V) | dB | kg | L × W × H [mm] | No. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LHT-HV-5K F1 | 4099854**136689** | 6.5 | 20 | 150–850 | 2 | 97.6 | 8.4 | 5.0 | 180 | < 55 | 32.5 | 408 × 237 × 638 | 4 |
| LHT-HV-6K F1 | 4099854**136696** | 7.8 | 20 | 150–850 | 2 | 97.6 | 10.0 | 6.0 | 180 | < 55 | 32.5 | 408 × 237 × 638 | 1 |
| LHT-HV-8K F1 | 4099854**136726** | 10.4 | 20 | 150–850 | 2 | 97.6 | 13.4 | 8.0 | 180 | < 55 | 32.5 | 408 × 237 × 638 | 1 |
| LHT-HV-10K F1 | 4099854**136733** | 13.0 | 20 | 150–850 | 2 | 97.6 | 16.7 | 10.0 | 180 | < 55 | 32.5 | 408 × 237 × 638 | 1 |
| LHT-HV-12K F1 | 4099854**136825** | 15.6 | 26 | 150–850 | 2 | 97.6 | 20.0 | 12.0 | 180 | < 55 | 32.5 | 408 × 237 × 638 | 1 |
| LHT-HV-15K F1 | 4099854**148965** | 19.5 | 26 | 150–850 | 2 | 97.6 | 25.0 | 15.0 | 180 | < 55 | 32.5 | 408 × 237 × 638 | 1 |
| LHT-HV-20K F1 | 4099854**148972** | 26.0 | 26 | 150–850 | 2 | 97.6 | 33.4 | 20.0 | 180 | < 55 | 32.5 | 408 × 237 × 638 | 1 |
| LHT-HV-25K F1 | 4058075**838253** | 32.5 | 26 | 150–850 | 2 | 97.6 | 41.7 | 25.0 | 180 | < 55 | 32.5 | 408 × 237 × 638 | 1 |
| LHT-HV-30K F1 | 4099854**149009** | 39.0 | 36 | 150–850 | 3 | 97.6 | 50.0 | 30.0 | 180 | < 65 | 85.0 | 527 × 294 × 894 | 5 |
| LHT-HV-40K F1 | 4099854**147968** | 52.0 | 36 | 150–850 | 4 | 97.6 | 66.7 | 40.0 | 180 | < 65 | 86.0 | 527 × 294 × 894 | 2 |
| LHT-HV-50K F1 | 4099854**147975** | 65.0 | 36 | 150–850 | 4 | 97.6 | 83.4 | 50.0 | 180 | < 65 | 87.0 | 527 × 294 × 894 | 2 |

* www.ledvance.com/guarantee

# METER FOR STRING AND HYBRID F2 INVERTERS

Accessories

1

2

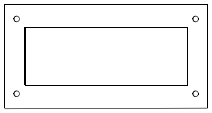
3

4

| Product name | EAN | Applicable inverters | Installation type | Communication | Supporting connection types | Hz | $I_{MAX}$ (A) | Open current transformer model | No. |
|---|---|---|---|---|---|---|---|---|---|
| LAP-MET-10RD16TE-ECT-1P | 4058118**299799** | 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 | 4058118**299782** | F2 string inverter 3-Phase | Rail-type installation | RS485 interface, Modbus-RTU | Direct/via CT | 50 | 80 | DTSD1352 | 2 |
| SDM630MCT 40MA F2 | 4058118**314577** | F2 hybrid inverter 3-Phase | Rail-type installation | RS485 interface, Modbus-RTU | via CT | 50/60 | 100 | D16-Ø16mm, ESCT-T24 | 3 |
| SDM120CT-M-100MA F2 | 4058118**314591** | F2 hybrid inverter 1-Phase | Rail-type installation | RS485 interface, Modbus-RTU | via CT | 50/60 | 45 | D10-Ø10mm, ESCT-TU24 | 4 |
| SDM630-MODBUS V2 F1 | 4058118**314638** | F1 hybrid inverter 3-Phase | Rail-type installation | RS485 interface, Modbus-RTU | Direct | 50/60 | 100 | — | 3 |
| SDM630MCT 40MA F1 | 4058118**314614** | F1 hybrid inverter 3-Phase | Rail-type installation | RS485 interface, Modbus-RTU | via CT | 50/60 | 100 | D16-Ø16mm, ESCT-T24 | 3 |
| SDM120CT-100MA F1 | 4058118**318315** | F1 hybrid inverter 1-Phase | Rail-type installation | RS485 interface, Modbus-RTU | via CT | 50/60 | 45 | D10-Ø10mm, ESCT-TU24 | 4 |

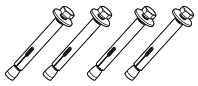
# SCOPE OF DELIVERY

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



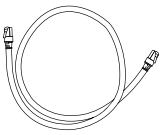
Mounting bracket

→ All types



Stainless steel bolts

→ F1 inverters

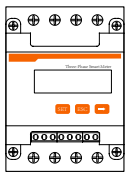


Parallel communication cable

→ Hybrid inverters

L/T-type wrench

→ F1 inverters

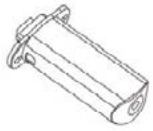


Smart meter

→ F2 hybrid inverters

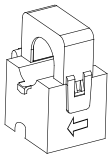
User manual

→ All types



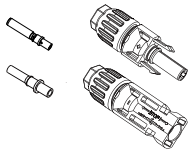
Datalogger

→ All types



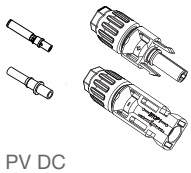
Current transformers

→ F1 hybrid inverters



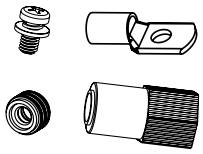
Battery MC4 connectors

→ Hybrid inverters up to 20 kW



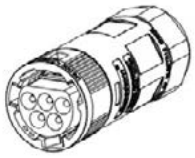
PV DC MC4 connectors

→ All types



Battery connectors

→ Hybrid inverters up to 50 kW

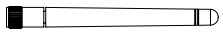


AC Grid Plug

→ F2 hybrid inverters

Backup Plug

→ F2 hybrid inverters



Bluetooth antenna

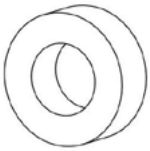
→ F2 hybrid inverters

Stainless steel screws

→ F2 inverters

Battery temperature sensor

→ F2 hybrid LV inverters



Magnetic ring for battery

→ F2 hybrid LV inverters

Magnetic ring for battery com cable

→ F2 hybrid LV inverters

Magnetic ring

→ F2 hybrid LV inverters

MC4 kit

→ F2 hybrid LV inverters

RJ45 connectors

→ F2 hybrid inverters

# THE BATTERY
# SOLAR POWER STORAGE

# PROVIDES ENERGY WHENEVER YOU NEED IT

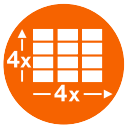
## PRODUCT HIGHLIGHTS

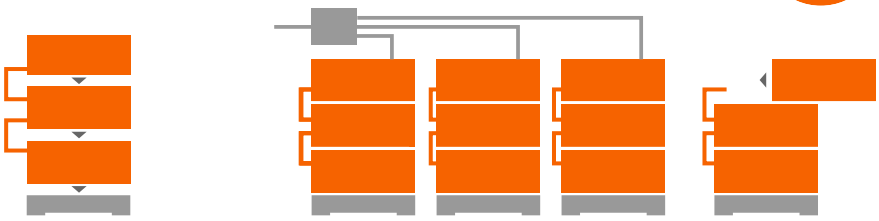
- High energy density for low voltage battery 5.12 kWh – 20.48 kWh
- High energy density for high voltage battery 8.19 kWh – 24.57 kWh
- Remote diagnosis and update
- Highest safety standards
- Compact design

LEDVANCE 10 year guarantee

Product guarantee*

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



Easy mechanical mounting and connection cables between batteries

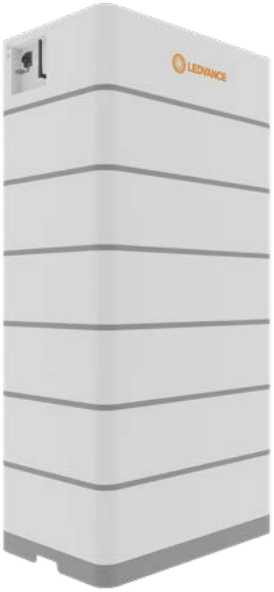
Quick and easy set-up

Can be extended**

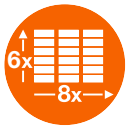
Note: 1 battery minimum per storage column. 4 maximum. 4 columns possible.

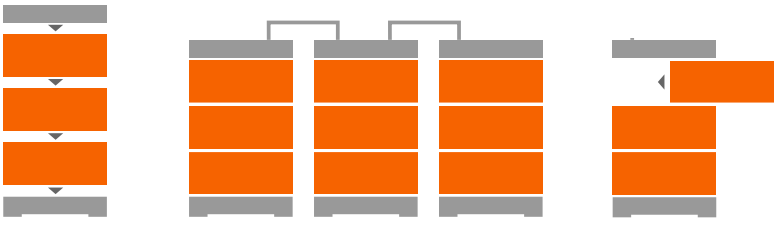
## LOW VOLTAGE BATTERY FOR 1-PHASE HYBRID INVERTER

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.

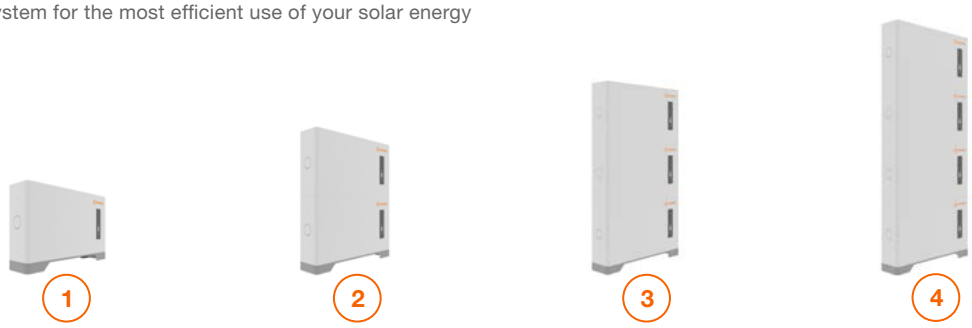
## HIGH VOLTAGE BATTERY FOR 3-PHASE HYBRID INVERTER

2 to 6 batteries per BMS

* www.ledvance.com/guarantee
** 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



Battery Module Quantity → 1 2 3 4

## PRODUCT FEATURES

- Thermal management system
- Anti-corrosion grade ≥ 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 | 4099854**199882** | Low voltage battery module with 5 120 kWh | 100 | 40.0–58.4 | 1 |
| LES-LV-SYS100 | 4099854**199899** | Battery module base with 2 m communication and power cables, for up to 150 A current | | | 2 |
| LES-LV-SYS200 | 4099854**199905** | Battery module base with 2 m communication and power cables, for up to 200 A current | | | 2 |
| LES-LV-PAR100 | 4099854**233906** | Parallel connection accessories – communication cable, battery parallel power cables, for up to 150 A current | | | 3 |
| LES-LV-PAR200 | 4099854**233913** | Parallel connection accessories – communication cable, battery parallel power cables, for up to 200 A current | | | 3 |

* www.ledvance.com/guarantee

# HIGH VOLTAGE BATTERIES

Highly efficient modular energy storage battery system with long cycle life

Battery Module Quantity → 2 3 4 5 6

## 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] | 8.19 | 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 HIGH VOLTAGE BATTERY MODULE

2 HIGH VOLTAGE BATTERY SYSTEM COMPONENTS

## MANDATORY SYSTEM COMPONENTS

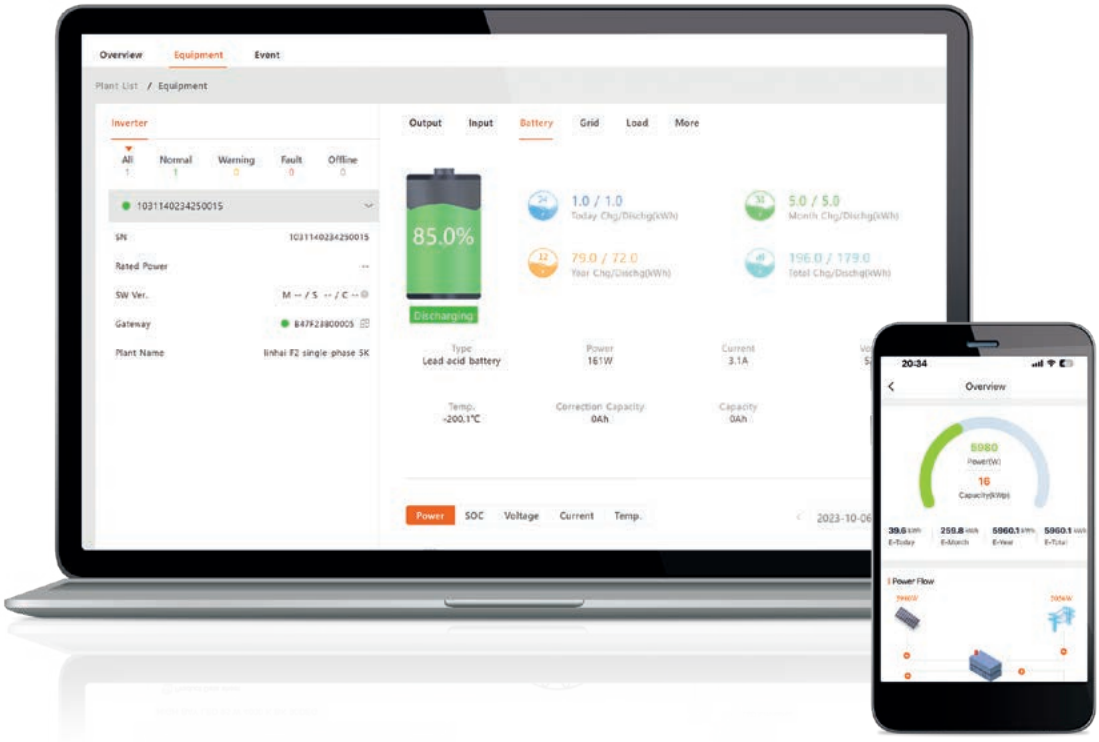
| Product name | EAN | Description | Peak Discharge Current | V | No. |
|---|---|---|---|---|---|
| LES-HV-4K | 4099854**199868** | High voltage battery module with 4 096 kWh | 40 | 102.4 | 1 |
| LES-HV-SYS | 4099854**199875** | KIT BMS:<br>– high voltage battery cluster control box<br>– mounting wall-bracket<br>– battery module base<br>– 2 m communication and power cables with connectors | | 185.6~691.2 | 2 |

* www.ledvance.com/guarantee

# 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.




Download on the App Store

GET IT ON Google Play

## 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."

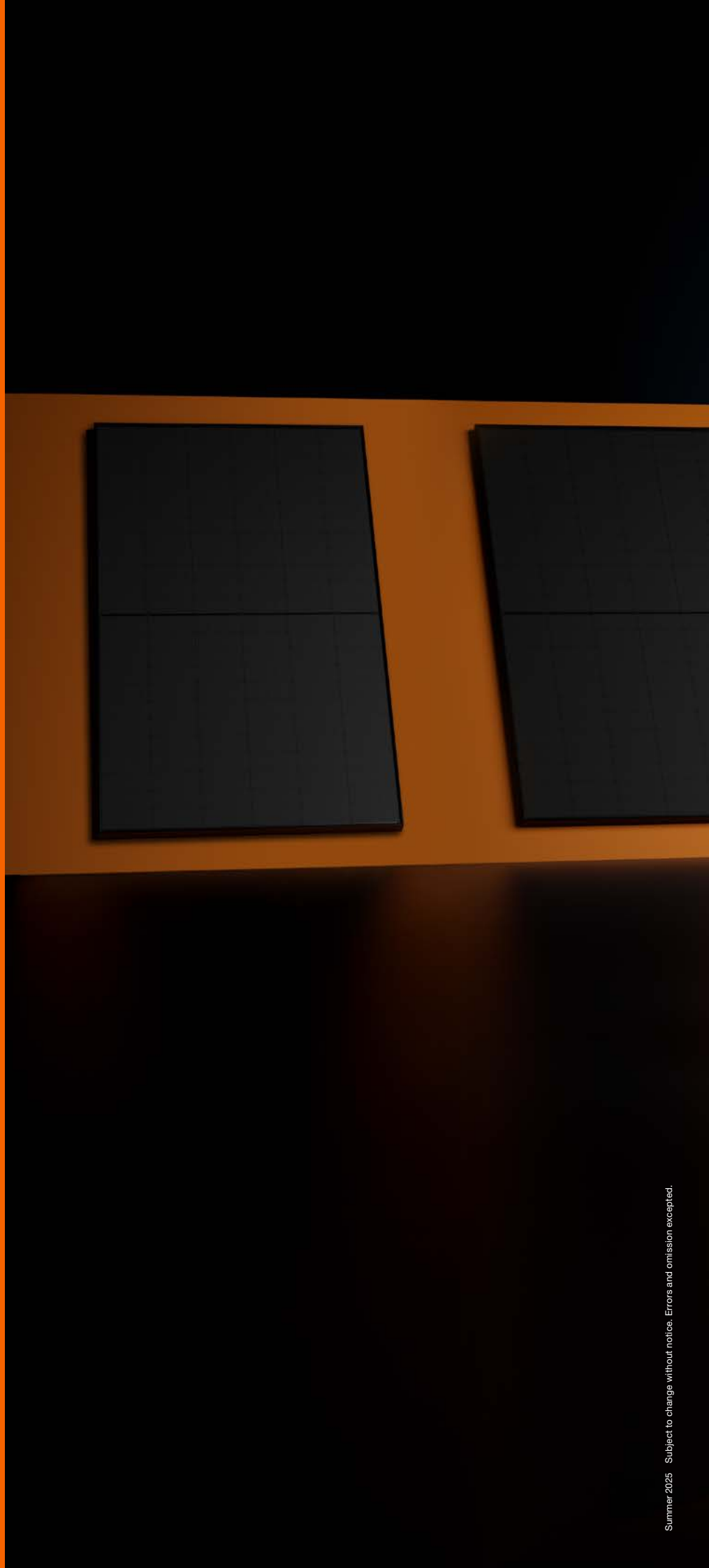
Paola Minelli

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



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