INFO GROUP GLOBAL ENERGY

THE NEW 1-PHASE

MAXIMUM FREEDOM

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OUR CLIMATE IS CHANGING BUT NOT FOR THE BETTER

+27 %

is the expected growth for PV installations in Europe in 2021

43 GW

potential market for Residential installations in Europe till 2024

More and more people want to contribute to revolutionize the energy market and therefore protect our planet for future generations. Hence, it's no surprise that more than

20 Gigawatt

of solar plants have been installed in Europe in 2020.

Steady improvement and decreasing prices of Residential products make the technology accessible for nearly everybody. New innovative features ensure flexibility and the usability of PV systems under various circumstances. The numbers proof these assumptions, as in Germany alone

145,347

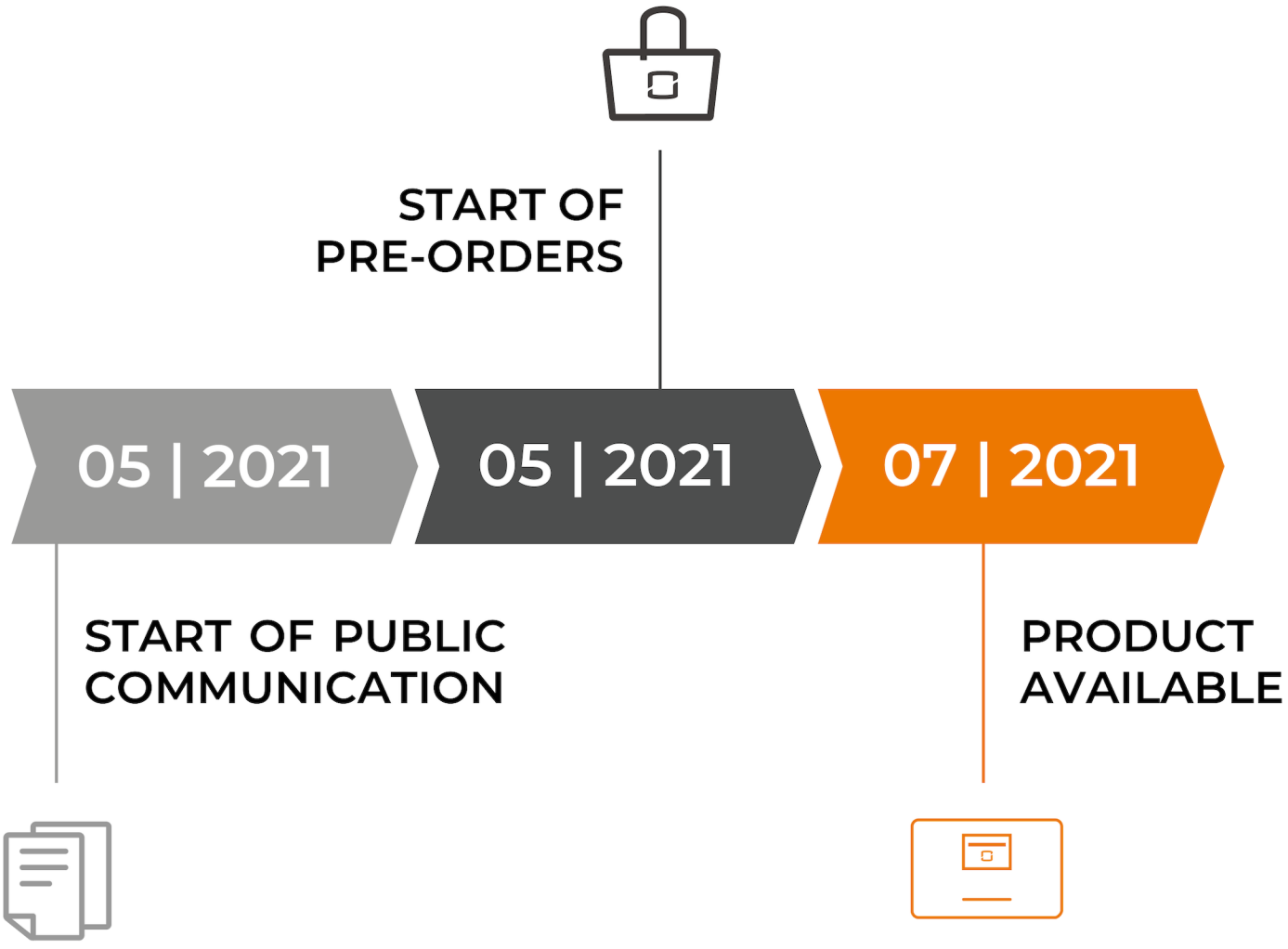
Residential installations have been made in 2020.

We fight for Sungrow's mission every- day, because we want to make it happen: **Clean Power For All.**

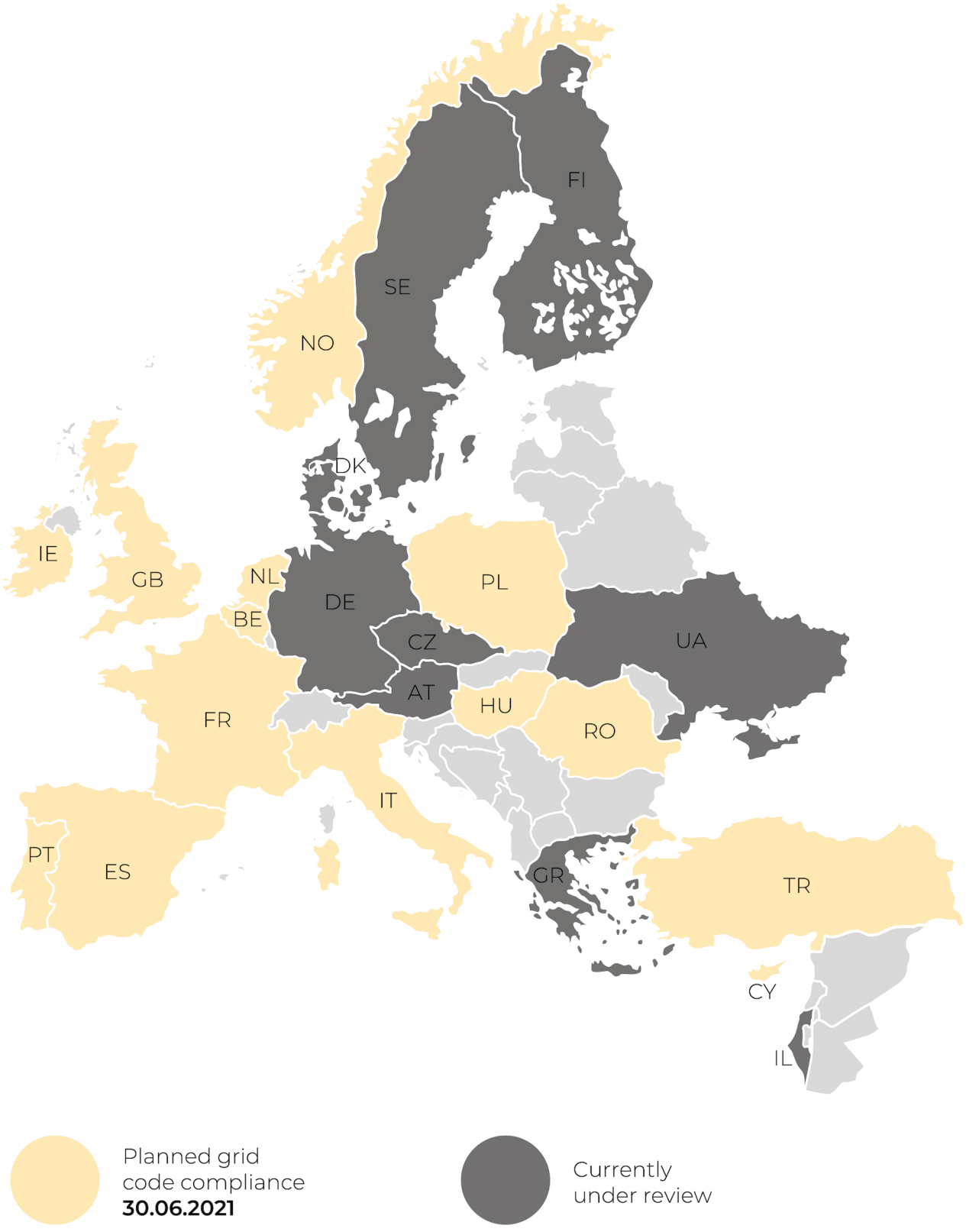
Advanced. Flexible. Safe. Maximum Freedom.

The facelift of our **1-phase PV inverter** is our next step to further push the en- ergy revolution. It's a tailor made prod- uct to perfectly fit the needs of the installer and the end customer.

TIMETABLE FOR THE 1-PHASE



CERTIFICATION PLAN



THE 1-PHASE

SUNGROW
Clean power for all

THE 1-PHASE

MAXIMUM FREEDOM

ADVANCED

The PID Recovery technology makes sure to get 100 % out of the PV system. No more polarization, no more losses.

FLEXIBLE

The new WiNet module offers maximum flexibility. It combines Ethernet and WiFi and delivers plant data every 10 seconds.

SAFE

The new AFCI technology will shut down the PV system in less than 200 ms in case of an arc fault event, maximum safety.*

DID YOU KNOW?

The 1-phase inverter comes with a smart **LED panel for maximum control**. Check daily energy yield, instantaneous AC power or the working state of the inverter. In case of an error occurring, the error code will be displayed on the screen - for **quick issue solving.**

The **WiNet module** combines Ethernet and WiFi connection in one port. With a **refresh rate of 10 sec.**, data is always accurate and reliable.

MAXIMAL POWERFUL

The 1-phase is **compatible with high wattage modules**. The inverter features a maximum withstand DC short-circuit current of **20 A per MPPT**, being compatible with latest PV modules released on the market.

MAXIMAL SAFE

In case of an arc fault (HF noise) the inverter will be disconnected swiftly from the grid and **interrupt the arc fault circuit in less than 200 ms**. This feature improves personal safety, protects equipment, and prevents damage of the solar system.*

MAXIMAL EASY

Thanks to its compact and light design, the inverter is very easy to handle and install. All **connectors are accessible externally** and are designed in **plug and play style**, for maximum fun during installation.

MORE HARD FACTS

Type designation	SG2 .0RS -S	SG2 .5RS -S	SG3.0RS-S
Input (DC)			
Recommended max. PV input power	3 kWp	3.75 kWp	4.5 kWp
Max. PV input voltage		600 V	
Min. PV input voltage / Start-up input voltage		40 V / 50 V	
Nominal PV input voltage		360 V	
MPP voltage range		40 – 560 V	
No. of independent MPP inputs		1	
Default No. of PV strings per MPPT		1	
Max. PV input current		16A	
Max. DC short-circuit current		20A	
Output (AC)			
Nominal AC output power	2000 W	2500 W	3000 W
Max. AC Output power	2000 VA	2500 VA	3000 VA
Max. AC output current	9.1 A	11.4 A	13.7 A
Nominal AC voltage		220 / 230 / 240 V	
AC voltage range		154 – 286 V	
Nominal grid frequency / Grid frequency range		50 Hz / 45 – 55 Hz, 60 Hz / 55 – 65 Hz	
Harmonic (THD)		< 3 % (at nominal power)	
Power factor at nominal power / Ajustable power factor		> 0.99 / 0.8 leading – 0.8 lagging	
Feed-in phases / Connection phases		1 / 1	
Efficiency			
Max. efficiency	98.0 %	98.0 %	98.0 %
European efficiency	97.3 %	97.5 %	97.5 %
Protection			
Grid monitoring		Yes	
DC reverse polarity protection		Yes	
AC short-circuit protection		Yes	
Leakage current protection		Yes	
Surge Protection		DC type II / AC type II	
DC switch		Yes	
PV string current monitoring		Yes	
Arc fault circuit interrupter (AFCI)		Yes	
PID recovery function		Yes	
General Data			
Dimensions (W*H*D)		320 * 225* 120 mm	
Weight		6 kg	
Mounting method		Wall-mounting bracket	
Topology		Transformerless	
Degree of protection		IP65	
Operating ambient temperature range		-25 to 60 °C	
Allowable relative humidity range (non-condensing)		0 – 100 %	
Cooling method		Natural cooling	
Max. operating altitude		4000 m	
Display		LED digital display & LED indicator	
Communication		Ethernet / WLAN / RS485 / DI (Ripple control & DRM)	
DC connection type		MC4 (Max. 6 mm²)	
AC connection type		Plug and play connector (Max. 6 mm²)	
Grid compliance		IEC/EN62109-1/2, IEC/EN62116, IEC/EN61727, IEC/EN61000-6-2/3, EN50549-1, AS4777.2, UNE 217002:2020, NTS V2 TypeA, CEI 0-21:2019, VDE0126-1-1/A1 (VFR-2019), UTE C15-712, C10/11, G98	
Grid Support		Active & reactive power control and power ramp rate control	

MORE HARD FACTS

Type designation	SG3.0RS	SG3.6RS	SG4.0RS	SG5.0RS	SG6.0RS
Input (DC)					
Recommended max. PV input power	4.5 kWp	5.4 kWp	6 kWp	7.5 kWp	9 kWp
Max. PV input voltage	600 V				
Min. PV input voltage / Start-up input voltage	40 V / 50 V				
Nominal PV input voltage	360 V				
MPP voltage range	40 – 560 V				
No. of independent MPP inputs	2				
Default No. of PV strings per MPPT	1				
Max. PV input current	32 A (16 A / 16 A)			40 A (20 A / 20 A)	
Max. DC short-circuit current					
Output (AC)					
Nominal AC output power	3000 W	3680 W		4000 W5000 W1	6000 W
Max. AC Output power	3000 VA	3680 VA		4000 VA5000 VA1	6000 VA
Max. AC output current	13.7 A	16 A	18.2 A22.8 A2		27.3 A
Nominal AC voltage	220 / 230 / 240 V				
AC voltage range	154 – 286 V				
Nominal grid frequency / Grid frequency range	50 Hz / 45 – 55 Hz, 60 Hz / 55 – 65 Hz				
Harmonic (THD)	< 3 % (at nominal power)				
Power factor at nominal power / Ajustable power factor	> 0.99 / 0.8 leading – 0.8 lagging				
Feed-in phases / Connection phases	1 / 1				
Efficiency					
Max. efficiency	98.1 %	98.1 %	98.1 %	98.1 %	98.1 %
European efficiency	97.0 %	97.1 %	97.4 %	97.5 %	97.8 %
Protection					
Grid monitoring	Yes				
DC reverse polarity protection	Yes				
AC short-circuit protection	Yes				
Leakage current protection	Yes				
Surge Protection	DC type II / AC type II				
DC switch	Yes				
PV string current monitoring	Yes				
Arc fault circuit interrupter (AFCI)	Yes				
PID recovery function	Yes				
General Data					
Dimensions (W*H*D)	410* 270* 150 mm				
Weight	10 kg				
Mounting method	Wall-mounting bracket				
Topology	Transformerless				
Degree of protection	IP65				
Operating ambient temperature range	-25 to 60°C				
Allowable relative humidity range (non-condensing)	0 – 100 %				
Cooling method	Natural cooling				
Max. operating altitude	4000 m				
Display	LED digital display & LED indicator				
Communication	Ethernet / WLAN / RS485 / DI (Ripple control & DRM)				
DC connection type	MC4 (Max. 6 mm²)				
AC connection type	Plug and play connector (Max. 6 mm²)				
Grid compliance	IEC/EN62109-1/2, IEC/EN62116, IEC/EN61727, IEC/EN61000-6-2/3, EN50549-1, AS4777.2, ABNT NBR 16149, ABNT NBR 16150, UNE 217002:2020, NTS V2 TypeA, CEI 0-21:2019, VDE0126-1-1/A1 (VFR-2019), UTE C15-712, C10/11, G98/G99				
Grid Support	Active & reactive power control and power ramp rate control				

1: AS 4777.2: 4999W, 4999VA
2: AS 4777.2: 21.7A

THE NEW 1-PHASE COMING SOON...

STAY UP-TO-DATE WITH
OUR POWER NEWS

CLICK HERE TO JOIN

COMPARISON WITH THE COMPETITION

MORE ADVANTAGES

Huawei
SUN2000-3KTL

1 Lower string input current & DC short circuit current per MPPT
2 Higher start up voltage
3 Heavy product weight
4 No real-time tracking possible. Data gets updated less frequently
5 No integrated PID recovery
6 No AFCI protection
7 No smart LED display for easy O&M

GoodWe
GW3000D-NS

1 Lower string input current & DC short circuit current per MPPT
2 Higher start-up voltage & narrowed MPPT voltage range
3 Heavy product weight
4 No real-time tracking possible. Data gets updated less frequently
5 No integrated PID recovery
6 No AFCI protection
7 Lower Surge Protection: Type III AC/DC

SolarEdge
SE3000H

1 Lower input voltage and max. input current
2 No real-time tracking possible. Data gets updated less frequently
3 No integrated PID Recovery
4 Lower power factor adjustment (0.9 leading - 0.9 lagging)
5 No smart LED display for easy O&M

Fronius
PRIMO 3.0-1

1 Lower string input current & DC short circuit current per MPPT
2 Higher start up voltage and THDi
3 Very heavy product weight and size
4 No real-time tracking possible. Data gets updated less frequently
5 No integrated PID recovery
6 No AFCI protection
7 Lower power factor adjustment (0.85 leading - 0.85 lagging)

Kostal
PIKO MP 3.0-2

1 Lower string input current & DC short circuit current per MPPT
2 Higher start up voltage
3 Heavy product weight
4 No integrated PID Recovery
5 No AFCI protection
6 Lower Surge Protection: Type III AC/DC
7 Only 5 years standard warranty

SMA
Sunny Boy 3.0

1 Higher start-up voltage & narrowed MPPT voltage range
2 Heavy product weight
3 No real-time tracking possible. Data gets updated less frequently
4 No integrated PID Recovery
5 No smart LED display for easy O&M

FREQUENTLY ASKED QUESTIONS

1

Is the new 1-phase inverter compatible with high wattage modules?
Yes, the inverter features a maximum withstand DC short-circuit current of 20 A per MPPT, being compatible with latest PV modules released on the market.

2

How many MPPT trackers and string connectors does the 1-phase inverter have?
1-phase SG2.0/2.5/3.0RS-S: 1 MPPT tracker with 1 connector.
1-phase SG3.0/3.6/4.0/5.0/6.0RS: 2 MPPT trackers each with 1 connector.

3

What happens if the DC connector has been connected incorrectly?
In case of incorrect connection a reverse polarity protection prevents the inverter of being damaged. Maximum safety during installation.

4

Is the DC Switch lockable?
Yes. An integrated mechanism which will lock the DC Switch in OFF position. In addition, the utilization class of our switch is DC-PV2, providing higher breaking capacity compared with common models available on the market (DC-21B).

5

Which over voltage protection does the 1-phase have installed?
Inverter features an integrated DC & AC surge protection devices, type 2.

6

When will the AFCI Technology become available?
The Arc Fault Circuit Interruption will become available Q3 2021 with an Firmware update. Once the firmware update has been conducted, the function can easily be activated in the iSolarCloud App.

7

Which communication device is needed for the 1-phase?
The new Wi-Net module. It combines WiFi and Ethernet connection in one port. The module will be part of the delivery scope of the 1-phase.

8

How accurate is the plant data displayed in the iSolarCloud App?
The new Wi-Net module nearly enables live tracking of the plant as it will refresh the inverter data every 10 seconds and display them in the iSolarCloud App.

9

What are the warranty terms for the 1-phase?
All Sungrow Residential inverters come with 10 years product warranty. With more than 24 years of experience, Sungrow stands for quality and consistency. We want to share this reliability with you!

COMMUNICATION

MORE STORY

WHY?

The needs of the installer's customers are very different in regards to power, space and security issues. It's important for the installer to offer flexible solutions with the latest innovative features.

HOW?

Our products come with the latest innovations and we continuously improve the safety of our products. They are designed to meet different use cases, according to the customers needs.

WHAT?

The 1-phase PV inverter combines advanced features with flexibility and safety. Adding maximum freedom in planning and installation.

Advanced. Flexible.
Save. Maximum
Freedom.

THE NEW 1-PHASE

MAXIMUM FREEDOM

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