



# The better 1phase PowerUNO

## The better flexibility

Battery ready inverter, DC or AC coupled  
Backup power up to 5 kW

## The better security

Patented AFCI  
PLC Rapid Shutdown compatibility

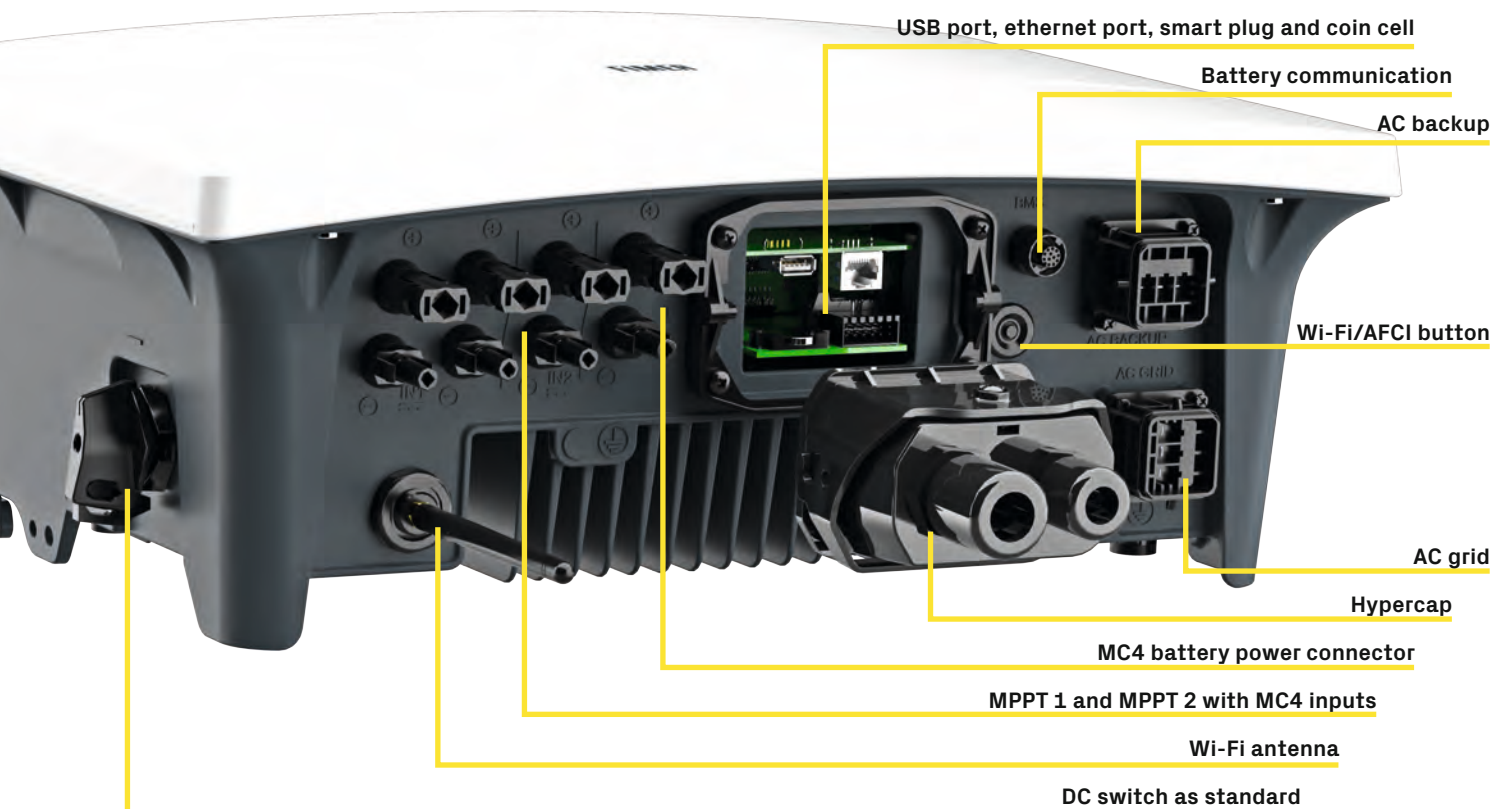
## The better installability

Plug & play connections  
Integrated spirit level

## The better connectivity

Embedded Wi-Fi, ethernet and USB  
Blockchain ready

# Go for the better



**One size for all**

from 2 kW to 6 kW

**X2 faster**

switching frequency

**-20 dB (A)**

noise reduction

**+40%**

time saving  
for commissioning



**24 / 7**

real time monitoring

**Battery**

ready

**100%**



**No tools**

for commissioning

**<2 s**

backup transition

**Patented**

ARC fault detection

**Blockchain**

ready

**+55%**

CPU performance

**Connected**

SG ready & EV charger

**Built-in**

ethernet and Wi-Fi

**Setup**

anytime

## Technical data and types

Inverter	FIM-HY-2.0-SE-A-1PH	FIM-HY-3.3-SE-A-1PH	FIM-HY-4.0-SE-A-1PH	FIM-HY-4.6-SE-A-1PH	FIM-HY-5.0-SE-A-1PH	FIM-HY-6.0-SE-A-1PH
<b>Input side</b>						
Absolute maximum DC input voltage (V <sub>max,abs</sub> )	600 V					
Start-up DC input voltage (V <sub>start</sub> )	150 V adj. 120...350 V	150 V adj. 120...350 V	200 V adj. 150...350 V	200 V adj. 180...350 V	200 V adj. 180...350 V	200 V adj. 200...350 V
Operating DC input voltage range (V <sub>dcmín...V<sub>dcmáx</sub></sub> )	0.7 x V <sub>start</sub> ...580 V (min 90 V)					
Rated DC input voltage (V <sub>dcr</sub> )	390 V					
Rated DC input power (P <sub>dcr</sub> )	2055 W	3074 W	4082 W	4693 W	5102 W	6122 W
DC/AC ratio	Up to 200%, according to location					
Number of independent MPPT	1	2	2	2	2	2
Maximum DC input power for each MPPT (P <sub>MPPT max</sub> )	3000 W Linear derating [500 ≤ V <sub>MPPT</sub> ≤ 570 V]	2305 W Linear derating [500 ≤ V <sub>MPPT</sub> ≤ 570 V]	3061 W Linear derating [500 ≤ V <sub>MPPT</sub> ≤ 570 V]	3827 W Linear derating [500 ≤ V <sub>MPPT</sub> ≤ 570 V]	3827 W Linear derating [500 ≤ V <sub>MPPT</sub> ≤ 570 V]	4592 W Linear derating [500 ≤ V <sub>MPPT</sub> ≤ 570 V]
DC input voltage range with parallel configuration of MPPT at P <sub>acr</sub> , not operative battery	180 ...500 V	135...500 V	165...500 V	180...500 V	180...500 V	200...500 V
Maximum DC input current (I <sub>dcmáx</sub> ) / for each MPPT (I <sub>MPPT max</sub> )	26 A / 13 A	26 A / 13 A	26 A / 13 A	32.5 A / 19.5 A-13 A (MPPT1 - MPPT2)	32.5 A / 19.5 A-13 A (MPPT1 - MPPT2)	32.5 A / 19.5 A-13 A (MPPT1 - MPPT2)
Maximum input short circuit current for each MPPT	20 A	20 A	20 A	24 A	24 A	24 A
Number of DC inputs pairs for each MPPT	1	1	1	2 - 1 (MPPT 1 - MPPT 2)	2 - 1 (MPPT 1 - MPPT 2)	2 - 1 (MPPT 1 - MPPT 2)
DC connection type <sup>1)</sup>	PV quick fit connector					
<b>Input protection</b>						
Reverse polarity protection	Yes, from limited current source					
Input over voltage protection for each MPPT - varistor	Yes, TYPE II protection class <sup>2)</sup>					
Photovoltaic array isolation control	According to local standard					
DC switch rating for each MPPT	25A / 600 V					
<b>Battery port</b>						
Operating DC voltage range	350...500 V					
PowerX Max. units	3					
Max. charge power	2000 W	3300 W	4000 W	4600 W	5000 W	6000 W
Max. discharge power	2000 W	3300 W	4000 W	4600 W	5000 W	6000 W
<b>Grid connected output side</b>						
AC Grid connection type	Single-phase					
Rated AC power (P <sub>acr</sub> @cosφ=1)	2000 W	3300 W	4000 W	4600 W	5000 W	6000 W
Maximum AC output power (P <sub>acmax</sub> @cosφ=1)	2000 W	3300 W	4000 W	4600 W	5000 W	6000 W
Maximum apparent power (S <sub>max</sub> )	2000 VA	3300 VA	4000 VA	4600 VA	5000 VA	6000 VA
Rated AC grid voltage (V <sub>acr</sub> )	220 / 230 / 240 V					
AC voltage range <sup>3)</sup>	180...264 V					
Maximum AC output current (I <sub>ac máx</sub> )	9.6 A	15.8 A	19.2 A	22.8 A	22.8 A	27.2 A
Contributory fault current	9.6 A	15.8 A	19.2 A	22.8 A	22.8 A	27.2 A
Rated output frequency (f <sub>r</sub> )	50 Hz / 60 Hz					
Output frequency range (f <sub>min...f<sub>max</sub></sub> ) <sup>4)</sup>	45...55 Hz / 55...65 Hz					
Nominal power factor and adj. range	> 0.995, adj. ± 0.8 - 1 (over/under exited)					
Total current harmonic distortion	< 3 %					
AC connection type	Female panel connector					
<b>Grid connected output protection</b>						
Anti-islanding protection	According to local standard					
Maximum external AC overcurrent protection	16.0 A	20.0 A	25.0 A	25.0 A	25.0 A	32.0 A
Output overvoltage protection - varistor	2 (L - N / L - PE), TYPE II protection class <sup>2)</sup>					
<b>Efficiency</b>						
Maximum efficiency	98.2 %					
MPPT efficiency	99.9 %					
<b>Backup output side</b>						
AC grid connection type	Single-phase					
Maximum apparent power (S <sub>max</sub> )	2000 VA	3300 VA	4000 VA	4600 VA	5000 VA	6000 VA
Rated AC grid Voltage (V <sub>acr</sub> )	220 / 230 / 240 V					
AC Voltage range <sup>3)</sup>	180...264 V					
Maximum AC output current (I <sub>ac máx</sub> )	9.6 A	14.4 A	19.2 A	22.7 A	22.7 A	27.2 A
Rated output frequency (f <sub>r</sub> )	50 Hz / 60 Hz					
Output frequency range (f <sub>min...f<sub>max</sub></sub> ) <sup>4)</sup>	45...55 Hz / 55...65 Hz					
AC connection type	Female panel connector					
<b>Backup output protection</b>						
Maximum external AC overcurrent protection	16.0 A	20.0 A	25.0 A	25.0 A	25.0 A	25.0 A
Output overvoltage protection - varistor	2 (L - N / L - PE), TYPE II protection class <sup>2)</sup>					

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<b>Embedded communication</b>						
Embedded physical interface	Wi-Fi <sup>®</sup> , ethernet, RS-485					
Embedded communication protocols	Modbus TCP (SunSpec), Modbus RTU (SunSpec)					
Datalogger data retention	30 days					
Remote monitoring	Energy Viewer (mobile APP), Energy viewer Web, Plant Portfolio Manager					
Local monitoring	Energy Viewer (mobile APP)					
<b>Environmental</b>						
Ambient temperature range	-25...+60°C with derating above 50°C	-25...+60°C with derating above 50°C	-25...+60°C with derating above 50°C	-25...+60°C with derating above 50°C	-25...+60°C with derating above 50°C	-25...+60°C with derating above 45°C
Relative humidity	4...100 % condensing					
Acoustic noise emission level	< 30 dB (A) @ 1 m					
Maximum operating altitude without derating	2000 m / 6560 ft					
<b>Physical</b>						
Environmental protection rating	IP65					
Cooling	Natural					
Dimension (H x W x D)	330 mm x 470 mm x 182 mm					
Weight	12 kg					
Mounting system	Wall bracket					
<b>Safety</b>						
Isolation level	Transformerless					
Marking	CE, RCM					
Safety and EMC standard	IEC/EN 62109-1, IEC/EN 62109-2, IEC 62477-1, EN 61000-6-2, EN 61000-6-3, EN 61000-3-2, EN 61000-3-3, EN 61000-3-11, EN 61000-3-12					
Grid standards (check your sales channel for availability) <sup>6)</sup>	CEI 0-21, EN 50549-1, DIN V VDE V 0126-1-1, VDE-AR-N 4105, AS/NZS 4777.2, IEC 61727, IEC 62116					
<b>Other features</b>						
Load manager	Yes, with integrated relays					
AC backup output, off grid	Yes					
Battery charge from AC	Yes, using time of usage policy					
AC-coupled mode	Yes, settable during commissioning					

1) Refer to the document "String inverter – Product Manual appendix" available at [www.fimer.com/solarinverters](http://www.fimer.com/solarinverters) to know the brand and the model of the quick fit connector"

2) As per test defined in EN/IEC 61643-11

3) The AC voltage range may vary depending on specific country grid standard

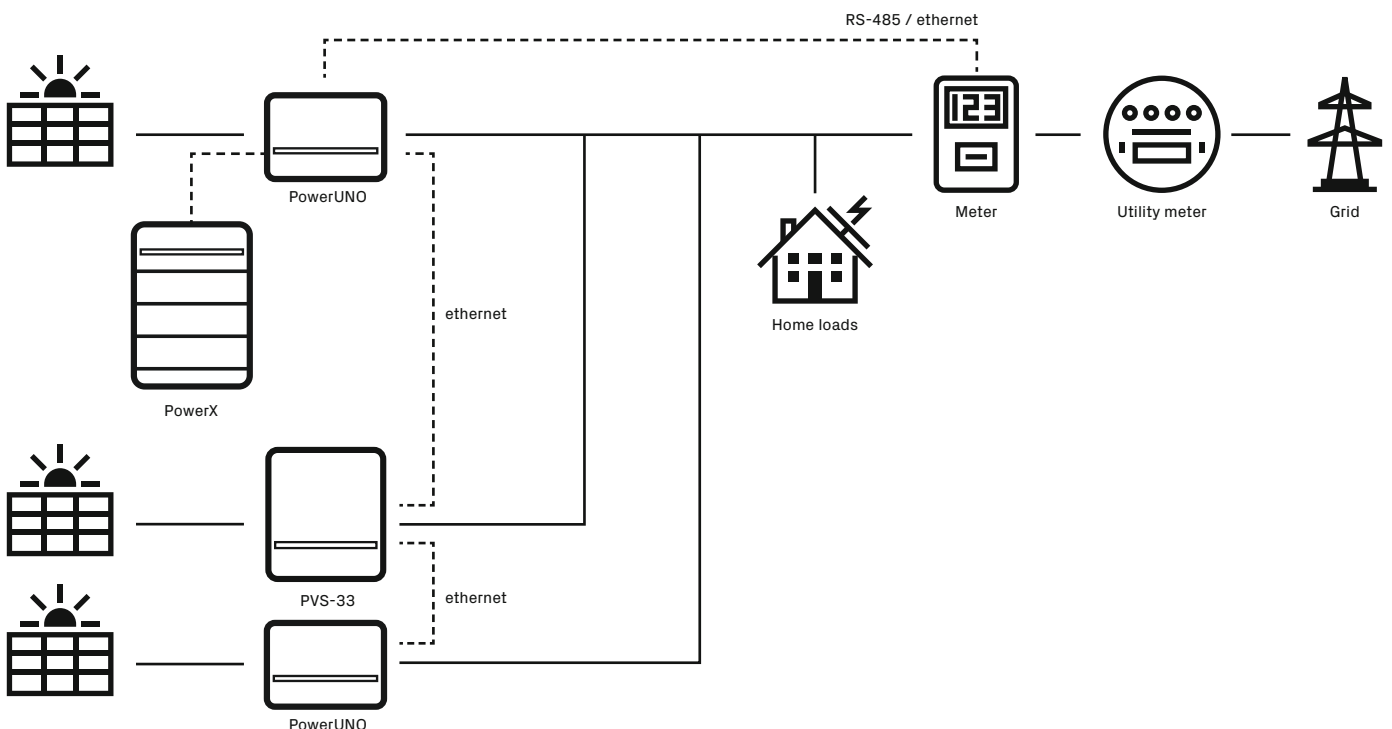
4) The Frequency range may vary depending on specific country grid standard

5) As per IEEE 802.11 b/g/n standard

6) Further grid standard will be added, please refer to FIMER's Solar page for further details

**Remark. Features not specifically listed in the present data sheet are not included in the product**

## PowerUNO: multi-inverter energy management



Preliminary datasheet

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