



# 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

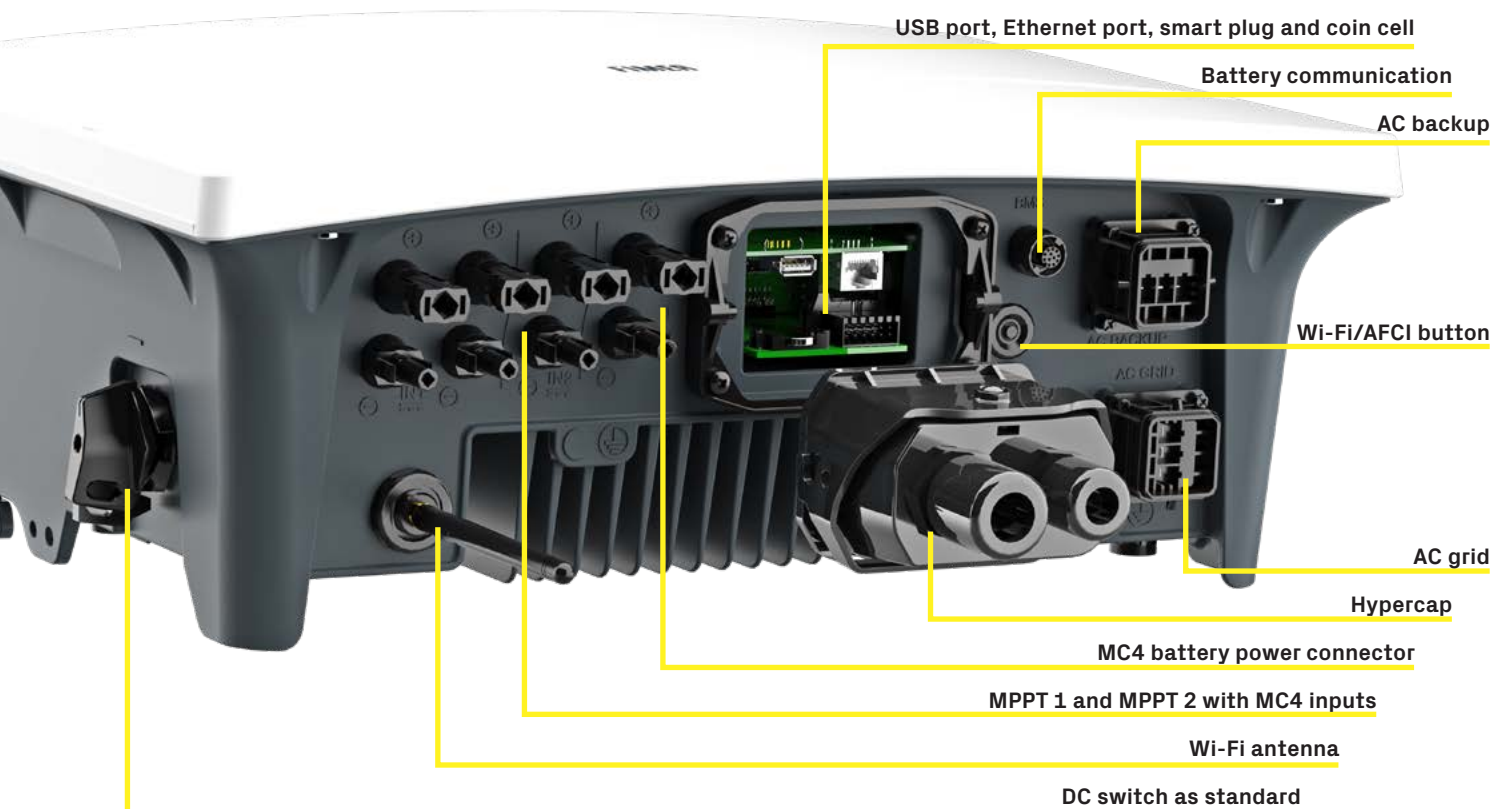
## The better installability

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	FIM-HY-3.3-SE-A	FIM-HY-3.6-SE-A	FIM-HY-4.0-SE-A	FIM-HY-4.6-SE-A	FIM-HY-5.0-SE-A	FIM-HY-6.0-SE-A
<b>Input side</b>							
Absolute maximum DC voltage ( $V_{max,abs}$ )	600 V						
Start-up DC voltage ( $V_{start}$ )	150 V adj. 120...350 V	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 voltage range ( $V_{dmin...V_{dmax}}$ )	0,7 x $V_{start...570 V}$ (min 95 V)						
Rated DC voltage ( $V_{dcr}$ )	390 V						
Rated DC power ( $P_{dcr}$ )	2055 W	3367 W	3674 W	4082 W	4693 W	5102 W	6122 W
Suggested maximum DC power	3000 W	4500 W	5400 W	6000 W	7040 W	7500 W	9000 W
DC/AC ratio	Up to 200%, according to location						
Number of independent MPPT	1	2	2	2	2	2	2
Maximum DC power for each MPPT ( $P_{MPPTmax}$ )	3000 W Linear derating $500 \leq V_{MPPT} \leq 570V$	2525 W Linear derating $500 \leq V_{MPPT} \leq 570V$	2755 W Linear derating $500 \leq V_{MPPT} \leq 570V$	3061 W Linear derating $500 \leq V_{MPPT} \leq 570V$	3520 W Linear derating $500 \leq V_{MPPT} \leq 570V$	3827 W Linear derating $500 \leq V_{MPPT} \leq 570V$	4592 W Linear derating $500 \leq V_{MPPT} \leq 570V$
DC voltage range with parallel configuration of MPPT at $P_{dcr}$ , not operative battery	165...500 V	135...500 V	145...500 V	165...500 V	170...500 V	180...500 V	200...500 V
Maximum DC current ( $I_{dc,max}$ ) / for each MPPT ( $I_{MPPT,max}$ )	13 A	26 A / 13 A	26 A / 13 A	26 A / 13 A	32.5A/(19.5-13A) (MPPT1 - MPPT2)	32.5A/(19.5-13A) (MPPT1 - MPPT2)	32.5A/(19.5-13A) (MPPT1 - MPPT2)
Maximum short circuit current per MPPT	20 A	20 A	20 A	20 A	25 A	25 A	25 A
Number of DC inputs pairs for each MPPT	1	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>	Quick fit PV connector						
<b>Input protection</b>							
Reverse polarity protection	Yes, from limited current source						
Over voltage protection for each MPPT - varistor	Yes						
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	330...570 V						
PowerX Max. units	3						
Charge power	2000 W	3300 W	3600 W	4000 W	4600 W	5000 W	6000 W
Discharge power	2000 W	3300 W	3600 W	4000 W	4600 W	5000 W	6000 W
<b>Grid connected output side</b>							
AC Grid connection type	Single-phase						
Rated AC power ( $P_{acr} @ \cos\phi=1$ )	2000 W	3300 W	3600 W	4000 W	4600 W	5000 W	6000 W
Maximum AC output power ( $P_{ac,max} @ \cos\phi=1$ )	2000 W	3300 W	3600 W	4000 W	4600 W	5000 W	6000 W
Maximum apparent power ( $S_{max}$ )	2000 VA	3300 VA	3600 VA	4000 VA	4600 VA	5000 VA	6000 VA
Rated AC grid voltage ( $V_{acr}$ )	220 V / 230 V / 240 V						
AC voltage range <sup>2)</sup>	180...264 V						
Maximum AC current ( $I_{ac,max}$ )	10.0 A	15.9 A	16.0 A	19.2 A	22.3 A	22.8 A	27.2 A
Contributory fault current	10.0 A	15.9 A	16.0 A	19.2 A	22.3 A	22.8 A	27.2 A
Rated output frequency ( $f_r$ )	50 Hz / 60 Hz						
Frequency range ( $f_{min...f_{max}}$ ) <sup>3)</sup>	45...55 Hz / 55...65 Hz						
Nominal power factor and adj. range	> 0.995, adj. $\pm 0.8 - 1$ (over/under exited)						
Total current harmonic distortion @ $P_{acr}$	< 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	20.0 A	25.0 A	25.0 A	25.0 A	32.0 A
Output overvoltage protection - varistor	Yes						
<b>Efficiency</b>							
Maximum	97.97 %	97.97 %	97.96 %	98.01 %	98.08 %	98.07 %	98.09 %
Euro efficiency	97.51 %	97.51 %	97.57 %	97.66 %	97.76 %	97.76 %	97.80 %
MPPT efficiency	99.9 %						
<b>Backup output side</b>							
AC grid connection type	Single-phase						
Maximum apparent power ( $S_{max}$ )	2000 VA	3300 VA	3600 VA	4000 VA	4600 VA	5000 VA	5000 VA
Rated AC grid Voltage ( $V_{acr}$ )	220 V / 230 V / 240 V						
AC Voltage range <sup>2)</sup>	180...264 V						
Maximum AC current ( $I_{ac,max}$ )	10.0 A	15.9 A	16.0 A	19.2 A	22.3 A	22.8 A	22.8 A
Rated output frequency ( $f_r$ )	50 Hz / 60 Hz						
Frequency range ( $f_{min...f_{max}}$ ) <sup>3)</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	20.0 A	25.0 A	25.0 A	25.0 A	25.0 A
Overvoltage protection - varistor	Yes						

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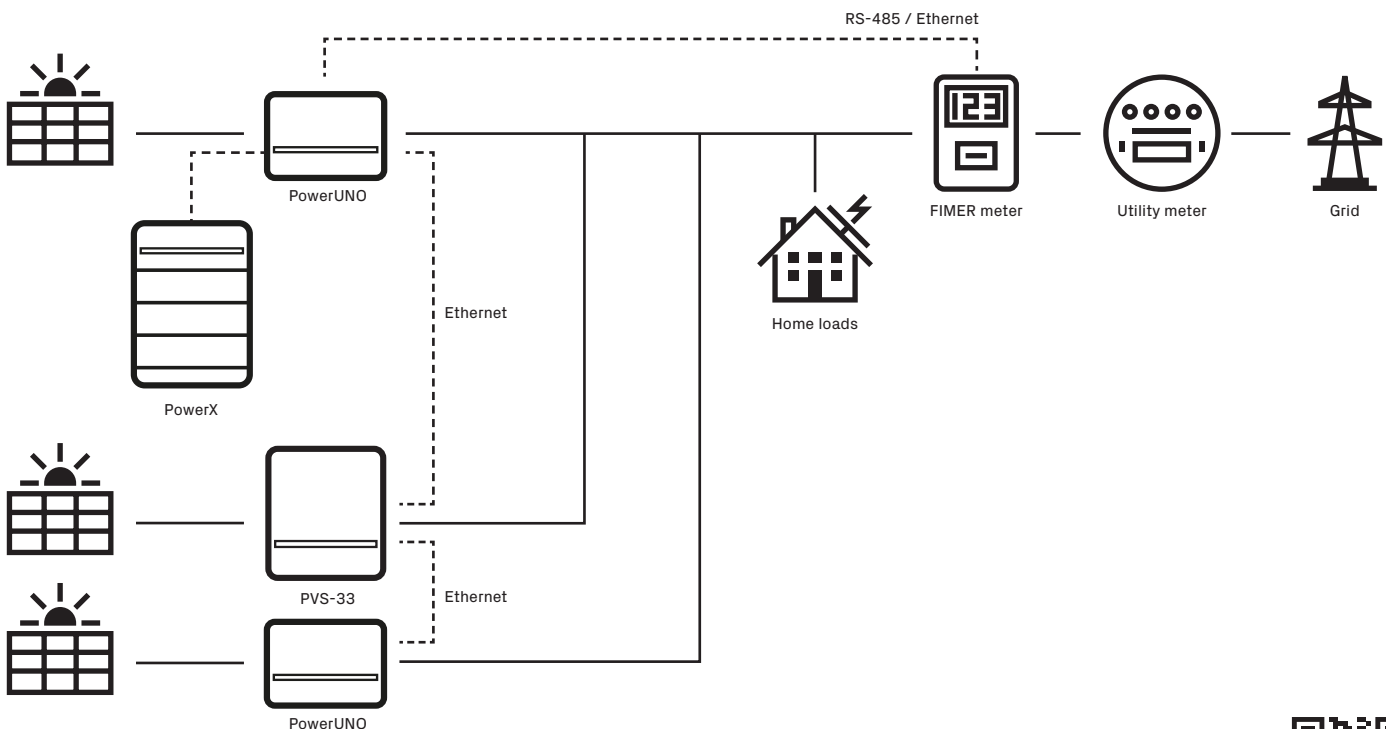
Inverter	FIM-HY-2.0-SE-A	FIM-HY-3.3-SE-A	FIM-HY-3.6-SE-A	FIM-HY-4.0-SE-A	FIM-HY-4.6-SE-A	FIM-HY-5.0-SE-A	FIM-HY-6.0-SE-A
<b>Embedded communication</b>							
Embedded physical interface	Wi-Fi <sup>4)</sup> , Ethernet, RS-485						
Embedded communication protocols	Modbus TCP (SunSpec), Modbus RTU (SunSpec)						
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 50°C	-25...+60°C with derating above 45°C
Relative humidity	0...100 % condensing						
Acoustic noise emission level	< 40 dBA @ 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 460 mm x 160 mm						
Weight	14 kg						
Mounting system	Wall bracket						
<b>Safety</b>							
Isolation level	Transformerless						
Marking	CE, RCM						
Safety and EMC standards	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>5)</sup>	CEI 0-21, DIN V VDE V 0126-1-1, VDE-AR-N 4105, G83/2, G59/3, G98-1, G99-1, RD 413, ITC-BT-40, AS/NZS 4777.2, C10/11, IEC 61727, IEC 62116						
<b>Other features</b>							
Load manager	Yes, with integrated relay						
AC backup output, off grid	Yes						
Battery charge from AC	Yes, it can be enabled						
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) The AC voltage range may vary depending on specific country grid standards
- 3) The Frequency range may vary depending on specific country grid standards
- 4) As per IEEE 802.11 b/g/n standard
- 5) Further grid standards will be added, please refer to FIMER's Solar page for further details

#### Remarks:

- **Designed and manufactured in Italy**
- **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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