



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

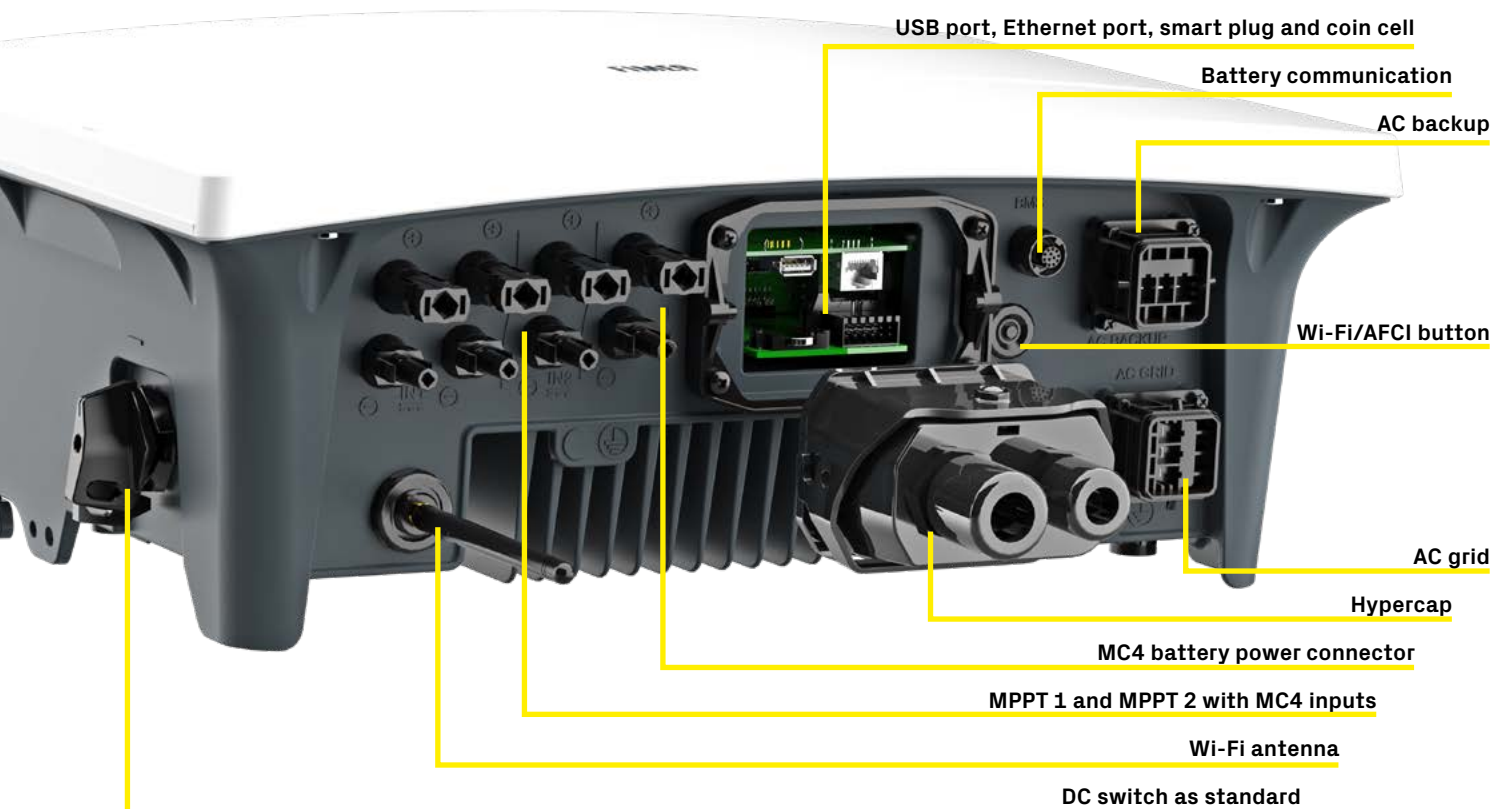
The better installability

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-3.0-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
Input side							
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)	0.7 x V _{start} ...570 V (min 95 V)	0.7 x V _{start} ...570 V (min 95 V)	0.7 x V _{start} ...570 V (min 110 V)	0.7 x V _{start} ...570 V (min 130 V)	0.7 x V _{start} ...570 V (min 130 V)	0.7 x V _{start} ...570 V (min 145 V)
Rated DC voltage (V _{dcr})	390 V						
Rated DC power (P _{dcr})	2055 W	3067 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≤V _{MPPT} ≤570V	2525 W Linear derating 500≤V _{MPPT} ≤570V	2755 W Linear derating 500≤V _{MPPT} ≤570V	3061 W Linear derating 500≤V _{MPPT} ≤570V	3520 W Linear derating 500≤V _{MPPT} ≤570V	3827 W Linear derating 500≤V _{MPPT} ≤570V	4592 W Linear derating 500≤V _{MPPT} ≤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})	16 A	32 A / 16 A - 16 A (MPPT1 - MPPT2)	32 A / 16 A - 16 A (MPPT1 - MPPT2)	32 A / 16 A - 16 A (MPPT1 - MPPT2)	32 A / 16 A - 16 A (MPPT1 - MPPT2)	32 A / 16 A - 16 A (MPPT1 - MPPT2)	32 A / 16 A - 16 A (MPPT1 - MPPT2)
Maximum short circuit current per MPPT	20 A	20 A	20 A	20 A	26 A	26 A	26 A
Number of DC inputs pairs for each MPPT	1	1 - 1 (MPPT1 - MPPT2)	1 - 1 (MPPT1 - MPPT2)	1 - 1 (MPPT1 - MPPT2)	2 - 1 (MPPT 1 - MPPT 2)	2 - 1 (MPPT 1 - MPPT 2)	2 - 1 (MPPT 1 - MPPT 2)
DC connection type ¹⁾	Quick fit PV connector						
Input protection							
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	25 A / 600 V						
Battery input/output							
Operating DC voltage range	330...570 V						
PowerX Max. units	3						
Charge power	2000 W	3000 W	3600 W	4000 W	4600 W	5000 W	6000 W
Discharge power	2000 W	3000 W	3600 W	4000 W	4600 W	5000 W	6000 W
Grid connected output side							
AC Grid connection type	Single-phase						
Rated AC power (P _{acr} @cosφ=1)	2000 W	3000 W	3600 W	4000 W	4600 W	5000 W	6000 W
Maximum AC output power (P _{acmax} @cosφ=1)	2000 W	3000 W	3600 W	4000 W	4600 W	5000 W	6000 W
Maximum apparent power (S _{max})	2000 VA	3000 VA	3600 VA	4000 VA	4600 VA	5000 VA	6000 VA
Rated AC grid voltage (V _{acr})	220 / 230 / 240 V						
AC voltage range ²⁾	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 frequency (f _i)	50 Hz / 60 Hz						
Frequency range (f _{min} ...f _{max}) ³⁾	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 % of I _{ac,max}						
AC connection type	Female panel connector						
Grid connected output protection							
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	2 (L - N / L - PE), TYPE II protection class ⁴⁾						
Efficiency							
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 %						
Backup output side ⁵⁾							
AC grid connection type	Single-phase						
Maximum apparent power (S _{max})	2000 VA	3000 VA	3600 VA	4000 VA	4600 VA	5000 VA	5000 VA
Rated AC grid Voltage (V _{acr})	220 / 230 / 240 V						
AC Voltage range ²⁾	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 _i)	50 Hz / 60 Hz						
Frequency range (f _{min} ...f _{max}) ³⁾	45...55 Hz / 55...65 Hz						
AC connection type	Female panel connector						
Backup output protection ⁵⁾							
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	2 (L - N / L - PE), TYPE II protection class ⁴⁾						

Technical data and types

Inverter	FIM-HY-2.0-SE-A	FIM-HY-3.0-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
Embedded communication							
Embedded physical interface	Wi-Fi [®] , 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)						
Environmental							
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	4...100 % condensing						
Acoustic noise emission level	< 40 dBA @ 1 m						
Maximum operating altitude without derating	2000 m / 6560 ft						
Physical							
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						
Safety							
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) ⁷⁾	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						
Other features							
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 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 test defined in EN/IEC 61643-11

5) Will be available as external device

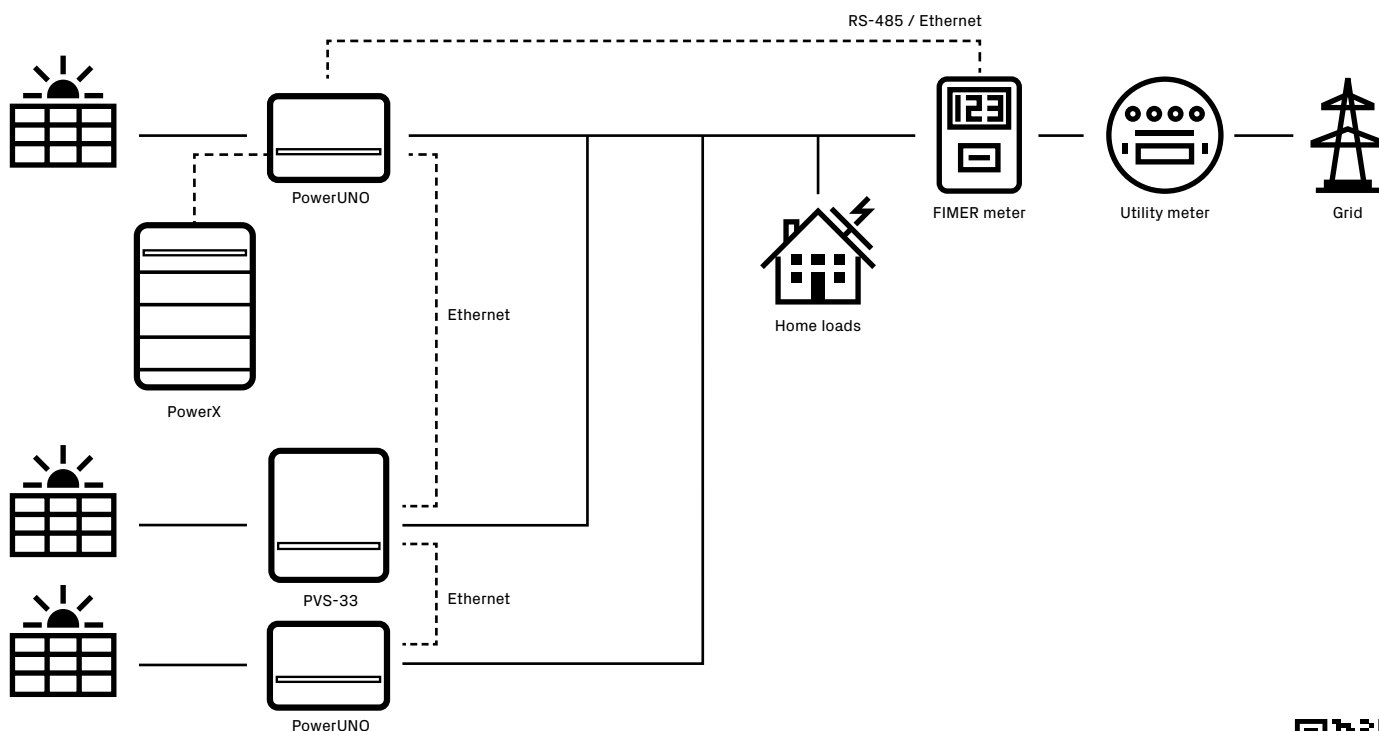
6) As per IEEE 802.11 b/g/n standard

7) 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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