



The better 1phase PowerUNO UL

The better flexibility

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

The better reliability

Diecasted enclosure
Optimized internal layout

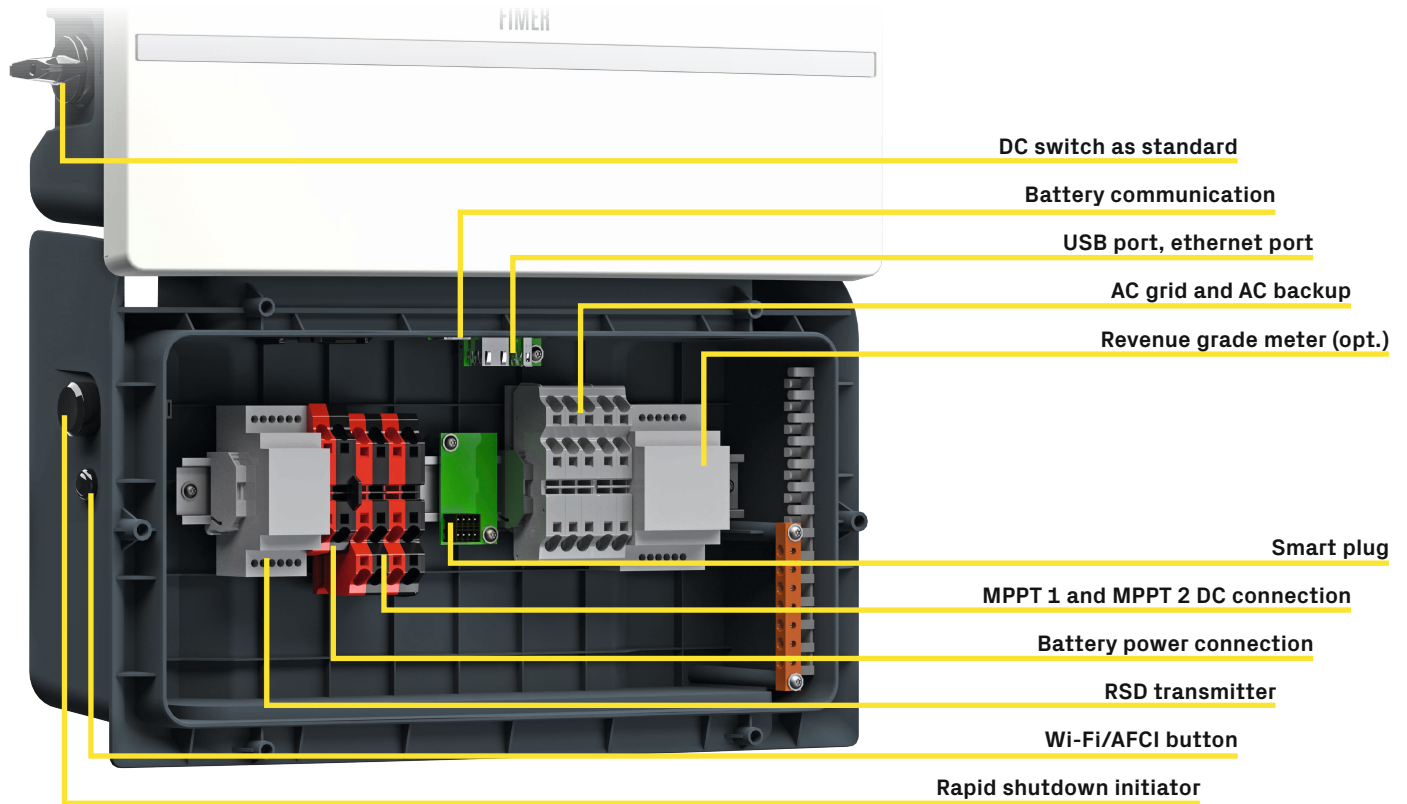
The better security

Patented AFCI
PLC Rapid Shutdown transmitter embedded

The better connectivity

Embedded Wi-Fi, ethernet and USB
Blockchain ready

Go for the better



One size for all

from 3.3 kW to 6 kW

x2 faster

switching frequency

-20 dB (A)

noise reduction

24 / 7

real time monitoring



Built-in

ethernet and Wi-Fi

Spirit

level integrated

Rapid Shutdown

transmitter

Battery

ready

100%



<2 s

backup transition

Patented

ARC fault detection

Blockchain

ready

+55%

CPU performance

Diecast

enclosure

Setup

anytime

Technical data and types

Inverter	FIM-HY-3.3-US-SE-AR-1PH	FIM-HY-3.8-US-SE-AR-1PH	FIM-HY-4.6-US-SE-AR-1PH	FIM-HY-5.0-US-SE-AR-1PH	FIM-HY-6.0-US-SE-AR-1PH					
General specifications										
Rated grid AC voltage (V _{acr})	208 V	240 V	208 V	240 V	208 V	240 V	208 V	240 V	208 V	240 V
Nameplate Apparent Power (S _{max})	3300 VA	3300 VA	3800 VA	3800 VA	4600 VA	4600 VA	5000 VA	5000 VA	6000 VA	6000 VA
Nameplate Output Active Power (P _{max} @ cosφ=1)	3300 W	3300 W	3800 W	3800 W	4600 W	4600 W	4722 W	5000 W	5678 W	6000 W
P _{RATED} : Output Active Power @V _{acr} and cosφ=±0.9	2970 W	2970 W	3420 W	3420 W	4140 W	4140 W	4250 W	4500 W	5110 W	5400 W
PV Input side (DC)										
Number of independent MPPT channels	2									
Rated DC power (P _{dc})	3381 W	3381 W	3893 W	3893 W	4713 W	4713 W	4838 W	5123 W	5817 W	6148 W
DC/AC ratio	Up to 200%, according to location									
Max. power per MPPT channel	2305 W	2305 W	2908 W	2908 W	3521 W	3521 W	3827 W	3827 W	4592 W	4592 W
Max. input voltage (max power)	500 V									
Min. input voltage (max power)	135 V	135 V	165 V	165 V	180 V	180 V	180 V	180 V	200 V	200 V
Absolute maximum voltage (V _{max})	600 V									
Start-up voltage (V _{start})	120 V									
MPPT 1 Input current	13 A	13 A	13 A	13 A	19.5 A	19.5 A	19.5 A	19.5 A	19.5 A	19.5 A
MPPT 1 - number of inputs	1	1	1	1	2	2	2	2	2	2
MPPT 2 Input current	13 A									
MPPT 2 - number of inputs	1									
Operating MPPT voltage range	95...570 V									
Maximum short circuit current for each MPPT	20 A	20 A	20 A	20 A	20 A	20 A	20 A	20 A	24 A	24 A
Array wiring termination	Terminal block, pressure clamp, AWG20-6									
DC Switch Rating for each MPPT	25 A / 600 V									
Battery port										
Operating DC voltage range	350...500 V									
PowerX Max. units	3									
Max. charge power	3300 W	3300 W	3800 W	3800 W	4600 W	4600 W	5000 W	5000 W	6000 W	6000 W
Max. discharge power	3300 W	3300 W	3800 W	3800 W	4600 W	4600 W	5000 W	5000 W	6000 W	6000 W
Grid connected output side (AC)										
Grid connection type	1Φ/2W	Split-Φ/3W	1Φ/2W	Split-Φ/3W	1Φ/2W	Split-Φ/3W	1Φ/2W	Split-Φ/3W	1Φ/2W	Split-Φ/3W
Adjustable voltage range (V _{min} -V _{max})	183-228 V	211-264 V	183-228 V	211-264 V	183-228 V	211-264 V	183-228 V	211-264 V	183-228 V	211-264 V
Grid frequency	60 Hz									
Adjustable grid frequency range	50...64 Hz									
Maximum current (I _{ac,max})	14 A	14 A	19 A	19 A	22.7 A	22.7 A	22.7 A	22.7 A	27.3 A	27.3 A
Power factor	> 0.995, adj. +/-0.8									
Total harmonic distortion at rated power	< 3 %									
Contributory fault current	15 A	15 A	20 A	20 A	25 A	25 A	25 A	25 A	30 A	30 A
Grid wiring termination type	Terminal block, pressure clamp, AWG20-6									
Backup output side										
Rated backup AC voltage (V _{acr})	208 V	240 V	208 V	240 V	208 V	240 V	208 V	240 V	208 V	240 V
Rated backup power	3300 W	3300 W	3800 W	3800 W	4600 W	4600 W	5000 W	5000 W	6000 W	6000 W
Input protections										
Reverse polarity protection	Yes, from limited current source									
Over-voltage protection type	TYPE II protection class ¹⁾									
PV array ground fault detection	Pre start-up RISO and dynamic GFDI									
Output protections										
Anti-islanding protection	Meets UL1741 / IEEE 1547 requirements									
Over-voltage protection type	TYPE II protection class ¹⁾ , 2 (L1 - L2 / L1 - G)									
Maximum AC OCPD rating	20 A	20 A	25 A	25 A	35 A	35 A	35 A	35 A	40 A	40 A
Efficiency										
MPPT algorithm efficiency	99.9 %									
Maximum efficiency	98.2 %									
Environmental										
Ambient air operating temperature range	-25...+60°C / -13...140°F (derating above 45°C)									
Relative humidity	0-100% RH condensing									
Acoustic noise emission level	< 30 dB (A) @1m									
Maximum operating altitude without derating	6560 ft / 2000 m									
Mechanical specifications										
Enclosure rating	Type 4X									
Cooling	Natural									
Dimension (H x W x D)	23.6 " (599 mm) x 18.5 " (470 mm) x 7.2 " (182 mm)									
Weight	33 lb / 15 Kg									
Mounting system	Wall bracket									

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Embedded communication					
Embedded physical interface	Wi-Fi ²⁾ , 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)				
Revenue grade metering	Yes, opt.				
Safety					
Isolation level	Transformerless (floating array)				
Rapid Shutdown	PLC transmitter (NEC 2017 & 2020 (690.12))				
Safety and EMC standard	UL 1741, IEEE 1547.1, CSA-C22.2 N. 107.1-01, UL 1998, UL 1699B Ed. 1-2018, FCC Part 15 Class B				
Grid standard ³⁾	UL 1741, SA (IEEE 1547-2018), Rule 21, Rule 14h (H)				
Other features					
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) As per test defined in EN/IEC 61643-11

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

3) 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 UL: multi-inverter energy management

