FIMER

The better 1phase PowerUNO

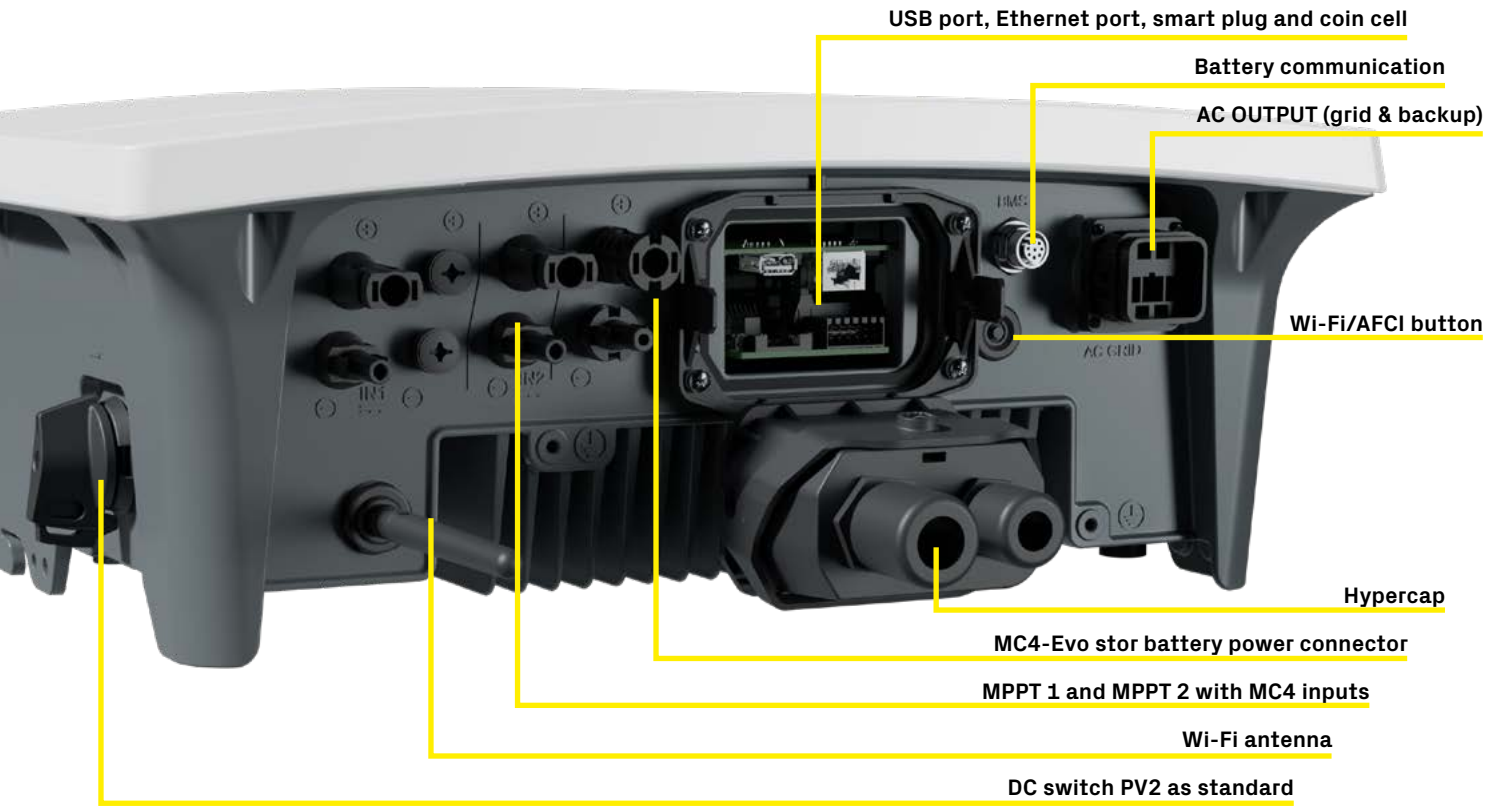
The better flexibility
Battery ready inverter, DC or AC coupled
Backup power up to 6 kW

The better installability
Plug & play connections
Integrated spirit level

The better security
Patented AFCI
Patented RCD (Residual Current Device)

The better connectivity
Embedded Wi-Fi, Ethernet and USB
Modbus TCP (Sunspec)

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

Small
High power density

+55%
CPU performance

Integrated
SG ready

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-3.3-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
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	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_{dcmin}...V_{dcmax})	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 95 V)	0.7 x V_{start}...570 V (min 115 V)	0.7 x V_{start}...570 V (min 136 V)	0.7 x V_{start}...570 V (min 136 V)	0.7 x V_{start}...570 V (min 150 V)
Rated DC voltage (V_{dcr})	390 V							
Rated DC power (P_{dcr})	2051 W	3077 W	3385 W	3692 W	4103 W	4718 W	5128 W	6154 W
Suggested maximum DC power [1]	3000 W	4500 W	4950 W	5400 W	6000 W	6900 W	7500 W	9000 W
DC/AC ratio	Up to 150%, according to location							
Number of independent MPPT	1	2	2	2	2	2	2	2
Maximum DC power for each MPPT ($P_{MPPTmax}$)	3060 W [2] Linear derating 500≤V_{MPPT}≤570V	2300 W Linear derating 500≤V_{MPPT}≤570V	2520 W Linear derating 500≤V_{MPPT}≤570V	2755 W Linear derating 500≤V_{MPPT}≤570V	3060 W Linear derating 500≤V_{MPPT}≤570V	3520 W Linear derating 500≤V_{MPPT}≤570V	3820 W Linear derating 500≤V_{MPPT}≤570V	4592 W Linear derating 500≤V_{MPPT}≤570V
DC voltage range of MPPT ($V_{MPPTmin}$ ... $V_{MPPTmax}$) at P_{acr}	135...500 V	135...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 (MPPT1)	32A / 16 A - 16 A (MPPT1 - MPPT2)	32A / 16 A - 16 A (MPPT1 - MPPT2)	32A / 16 A - 16 A (MPPT1 - MPPT2)	32A / 16 A - 16 A (MPPT1 - MPPT2)	32A / 16 A - 16 A (MPPT1 - MPPT2)	32A / 16 A - 16 A (MPPT1 - MPPT2)	32A / 16 A - 16 A (MPPT1 - MPPT2)
Maximum short circuit current per MPPT	20 A							
Number of DC inputs pairs for each MPPT	1 (MPPT1)	1 - 1 (MPPT1 - MPPT2)	1 - 1 (MPPT1 - MPPT2)	1 - 1 (MPPT1 - MPPT2)	1 - 1 (MPPT1 - MPPT2)	1 - 1 (MPPT1 - MPPT2)	1 - 1 (MPPT1 - MPPT2)	1 - 1 (MPPT1 - MPPT2)
DC connection type	Quick fit PV connector [3]							
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	25A / 600 V							
Battery input/output								
Operating DC voltage range (U_{dmin} ... U_{dM})	350...560 V							
Nominal operating DC voltage range (U_{dNmin} ... U_{dNM})	430...460 V							
Nominal operating DC voltage (U_N)	445 V							
Withstand voltage (U_M)	600 V							
PowerX Max. units	2							
Max operating current [4]	17 A							
Maximum charge power from DC side [5]	3060 W	4600 W	5040 W	5510 W	6120 W	7040 W	7040 W	7040 W
Maximum discharge power	2000 W	3000 W	3300 W	3600 W	4000 W	4600 W	5000 W	6000 W
AC Output								
AC Grid connection type	Single-phase							
Rated AC power (P_{acr} @cosφ=1)	2000 W	3000 W	3300 W	3600 W	4000 W	4600 W	5000 W	6000 W
Maximum AC output power (P_{acmax} @cosφ=1)	2000 W	3000 W	3300 W	3600 W	4000 W	4600 W	5000 W	6000 W
Maximum apparent power (S_{max})	2000 VA	3000 VA	3300 VA	3600 VA	4000 VA	4600 VA	5000 VA	6000 VA
Rated AC grid voltage ($V_{ac,r}$)	220 / 230 / 240 V							
AC voltage range [6]	180...264 V							
Rated Output Current at V_{ac} 230 V ($I_{ac,r}$)	8.7 A	13.0 A	14.4 A	15.7 A	17.4 A	20.0 A	21.7 A	26.1 A
Maximum AC current ($I_{ac\,max}$)	10.0 A	14.5 A	16.0 A	16.0 A	19.5 A	22.3 A	22.8 A	27.3 A
Contributory fault current	10.0 A	14.5 A	16.0 A	16.0 A	19.5 A	22.3 A	22.8 A	27.3 A
Rated frequency (f_r)	50 Hz / 60 Hz							
Frequency range (f_{min}...f_{max}) [7]	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 Iac,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	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 [8]							
Efficiency								
Maximum	97.8%	97.9%	97.9%	97.9%	97.9%	98.0%	98.0%	98.0%
Euro efficiency	96.5%	97.4%	97.4%	97.5%	97.5%	97.6%	97.6%	97.6%
MPPT efficiency	99.90 %							
Backup mode [9]								
Voltage waveform	S (sine)							
Dynamic output performance	1 (linear load), 2 (non-linear load)							
Maximum apparent power (S_{max})	2000 VA	3000 VA	3300 VA	3600 VA	4000 VA	4600 VA	5000 VA	6000 VA
Rated AC grid Voltage (V_{acr})	220 / 230 / 240 V							
AC Voltage range	180...264 V							
Maximum AC current ($I_{ac\,max}$)	10.0 A	14.5 A	16.0 A	16.0 A	19.5 A	22.3 A	22.8 A	27.3 A
Rated output frequency (f_r)	50 Hz / 60 Hz							
Frequency range (f_{min}...f_{max})	45...55 Hz / 55...65 Hz							

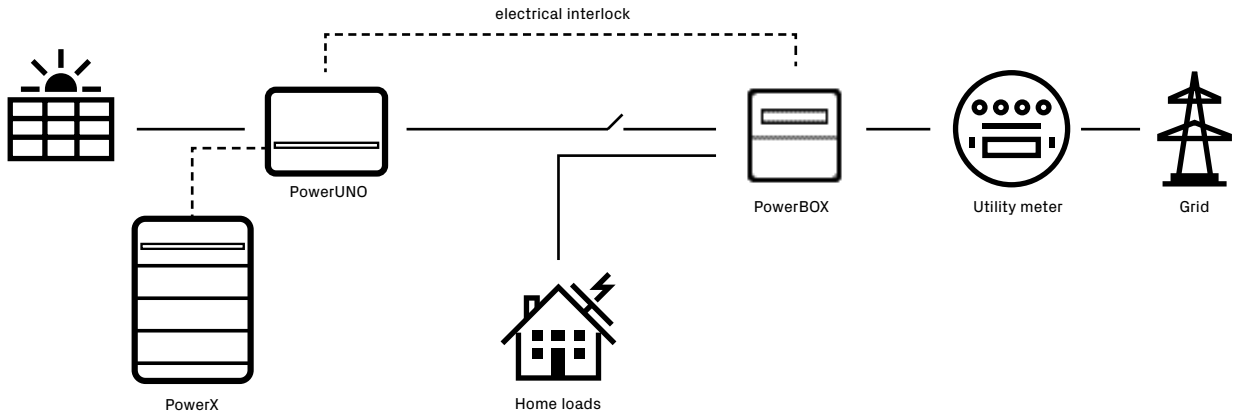
Technical data and types

Inverter	FIM-HY-2.0-SE-A	FIM-HY-3.0-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
Embedded communication								
Embedded physical interface	Wi-Fi [10], Ethernet, RS-485							
Embedded communication protocols	Modbus TCP (SunSpec)							
Datalogger data retention	30 days							
Remote monitoring	Energy Viewer (mobile APP), Energy Viewer Web, Plant Portfolio Manager							
Local monitoring	Energy Viewer (mobile APP) / Internal web server (Web UI)							
Commissioning (Energy policy included)	Internal web server (Web UI)							
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 45°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	-25...+60°C with derating above 40°C
Wet locations	Yes							
Relative humidity	4...100 % condensing							
Acoustic noise emission level (at rated DC voltage V_{dcr})	< 40 dBA @ 1 m							
Acoustic noise emission level (worst case)	< 50 dbA @ 1 m							
Maximum operating altitude	3000 m (9842 ft) with derating above 2000 m (6561 ft)							
Ambient storage/transport temperature	-40 °C...+85 °C							
Humidity storage/transport	4 % ÷ 100 %							
Environmental classification	4K6 (IEC 62477-1:2022) /4K26 (IEC 60721-3-4:2019)							
Physical								
Environmental protection rating	IP65							
Cooling	Natural							
Dimension (H x W x D)	330 mm x 460 mm x 160 mm							
Weight	14.5 kg							
Mounting system	Wall bracket							
Safety								
Isolation level	Transformerless							
Overvoltage category according to IEC 62109-1	OVC III (AC port), OVCII (PV port and Battery port)							
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) [11]	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, off grid	Yes							
Battery charge from AC	Yes, it can be enabled							
AC-coupled mode	Yes, settable during commissioning							

1) Value subject to derating; refer to the product documentation for further details.
2) Extra power available in conjunction with Battery ESS
3) 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
4) The maximum operating current applies to both the charging and discharging cases
5) Also limited by the capability of the installed Battery ESS
6) The AC voltage range may vary depending on specific country grid standards
7) The Frequency range may vary depending on specific country grid standards
8) As per test defined in EN/IEC 61643-11
9) PowerBOX required
10) As per IEEE 802.11 b/g/n standard
11) Further grid standards will be added, please refer to FIMER’s Solar page for further details

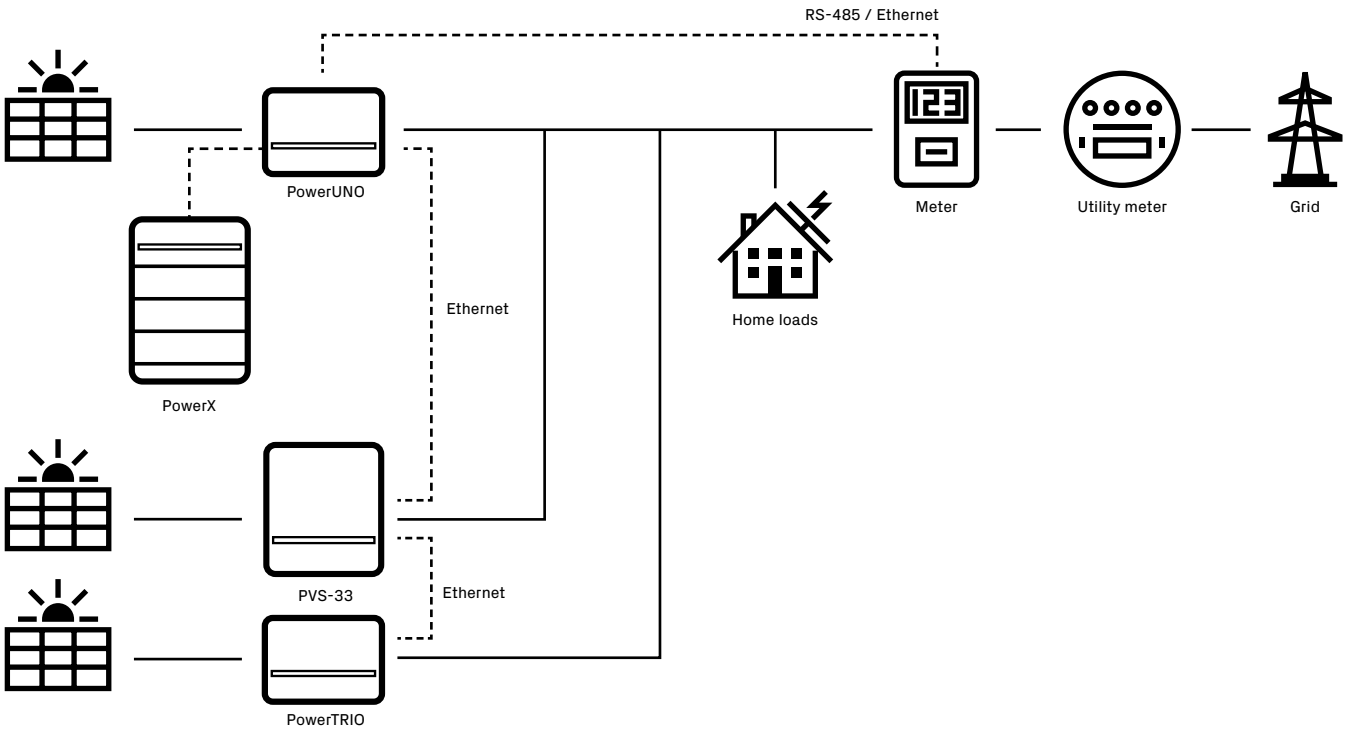
Remarks:
- **Designed and manufactured in Italy**
- **Features not specifically listed in the present data sheet are not included in the product**

PowerUNO: provides protection against blackouts



PowerUNO: multi-inverter energy management

(coming soon)



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PowerUNO - Hybrid string inverter - FIM-HY-2.0/3.0/3.3/3.6/4.0/4.6/5.0/6.0-SE-A-1PH_EN_Rev I 29.01.2025