



The better 3phase **PowerTRIO**

The better flexibility

Battery ready inverter, DC or AC coupled
Full power 100% unbalanced backup

The better security

Patented AFCI
PLC Rapid Shutdown compatibility

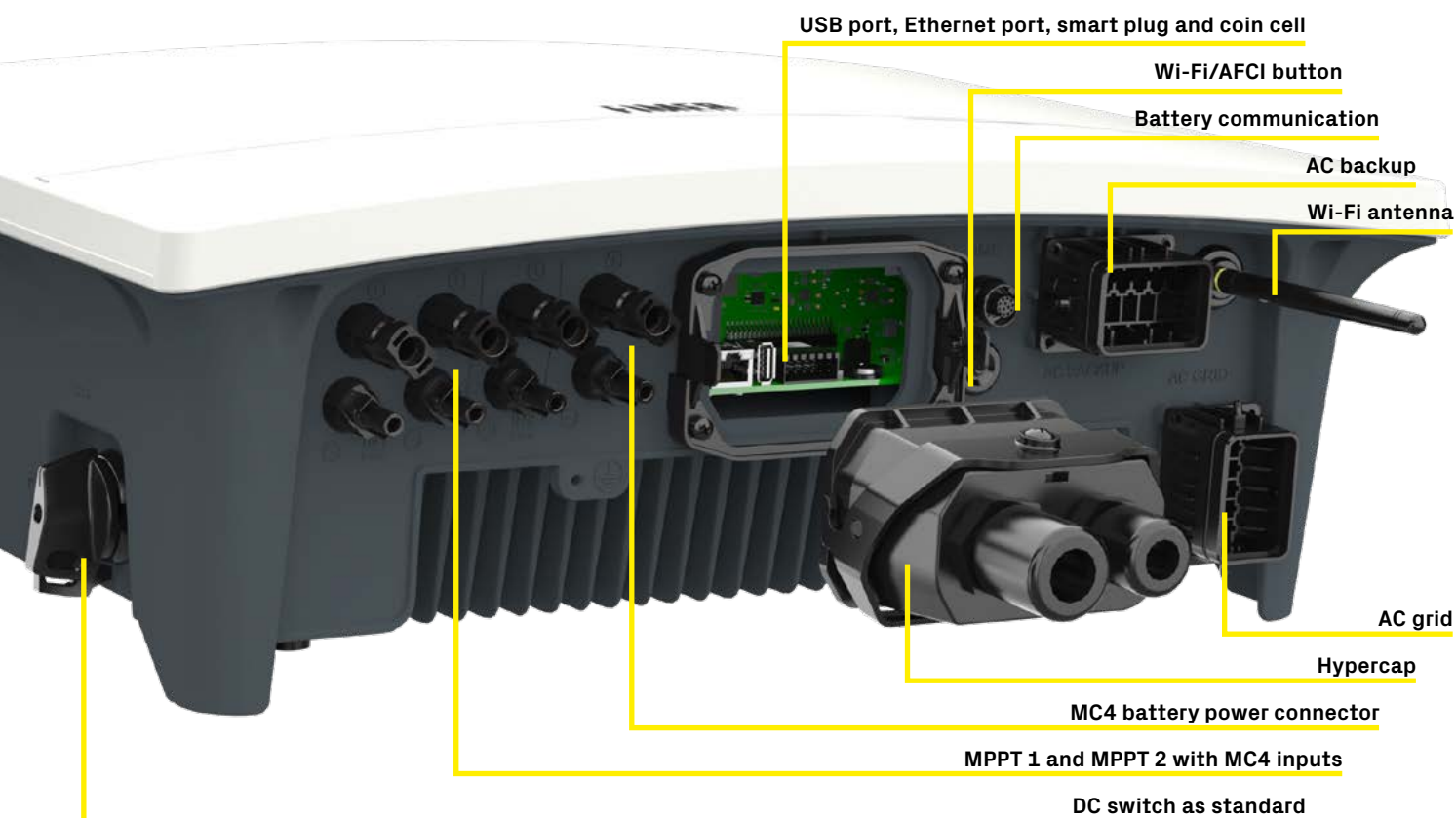
The better installability

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 4 kW to 10.0 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

100%

unbalanced load backup

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-4.0-SE-A-3PH	FIM-HY-5.0-SE-A-3PH	FIM-HY-6.0-SE-A-3PH	FIM-HY-8.0-SE-A-3PH	FIM-HY-10.0-SE-A-3PH
Input side					
Absolute maximum DC input voltage ($V_{max,abs}$)	850 V	850 V	850 V	1000 V	1000 V
Start-up DC input voltage (V_{start})	200 V (adj. 150...500 V)	200 V (adj. 180...500 V)	200 V (adj. 200...500 V)	215 V (adj. 215...500 V)	215 V (adj. 215...500 V)
Operating DC input voltage range ($V_{dcmin}...V_{dcmax}$)	0.7 x $V_{start}...825$ V (min 105 V)	0.7 x $V_{start}...825$ V (min 125 V)	0.7 x $V_{start}...825$ V (min 140 V)	0.7 x $V_{start}...975$ V (min 150 V)	0.7 x $V_{start}...975$ V (min 150 V)
Rated DC input voltage (V_{dcr})	625 V				
Rated DC input power (P_{dcr})	4082 W	5102 W	6122 W	8143 W	10100 W
Suggested maximum DC input power	6000 W	7500 W	9000 W	11250 W	12750 W
DC/AC ratio	Up to 200%, according to location				
Number of independent MPPT	2				
Maximum DC input power for each MPPT ($P_{MPPTmax}$)	3061 W Linear derating [800 ≤ V_{MPPT} ≤ 850 V]	3827 W Linear derating [800 ≤ V_{MPPT} ≤ 850 V]	4592 W Linear derating [800 ≤ V_{MPPT} ≤ 850 V]	5625 W Linear derating [850 ≤ V_{MPPT} ≤ 1000 V]	6505 W Linear derating [850 ≤ V_{MPPT} ≤ 1000 V]
DC input voltage range with parallel configuration of MPPT at P_{acr} , not operative battery	150...800 V	180...800 V	200...800 V	270...850 V	300...850 V
Maximum DC input current ($I_{dc,max}$) / for each MPPT ($I_{MPPTmax}$)	16 A	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 input short circuit current for each MPPT	20 A	26A / 20A (MPPT1 - MPPT2)			
Number of DC inputs pairs for each MPPT	1	2 - 1 (MPPT1 - MPPT2)	2 - 1 (MPPT1 - MPPT2)	2 - 1 (MPPT1 - MPPT2)	2 - 1 (MPPT1 - MPPT2)
DC connection type ¹⁾	PV quick fit connector				
Input protection					
Reverse polarity protection	Yes, from limited current source				
Input over voltage protection for each MPPT - varistor	Yes				
Photovoltaic array isolation control	According to local standard				
DC switch rating for each MPPT	30A/1000V - 25A/600V (DC-PV2)				
Battery input/output					
Operating DC voltage range	550...750 V	550...750 V	550...750 V	550...850 V	550...850 V
PowerX Max. units	3				
Charge power	4000 W	5000 W	6000 W	8000 W	10000 W
Discharge power	4000 W	5000 W	6000 W	8000 W	10000 W
Grid connected output side					
AC Grid connection type	Three-phase (3W+PE or 4W+PE)				
Rated AC power (P_{acr} @cosφ=1)	4000 W	5000 W	6000 W	8000 W	10000 W
Maximum AC output power (P_{acmax} @cosφ=1)	4000 W	5000 W	6000 W	8000 W	10000 W
Maximum apparent power (S_{max})	4000 VA	5000 VA	6000 VA	8000 VA	10000 VA
Rated AC grid voltage ($V_{ac,r}$)	380 / 400 V				
AC voltage range ²⁾	320...480 V				
Maximum AC output current ($I_{ac,max}$)	6.1 A	7.6 A	9.1 A	11.4 A	12.9 A
Contributory fault current	6.1 A	7.6 A	9.1 A	11.4 A	12.9 A
Rated frequency (f_i)	50 Hz / 60 Hz				
Output frequency range ($f_{min}...f_{max}$) ³⁾	45...55 Hz / 55...65 Hz ³⁾				
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	10 A	10 A	16 A	16 A	16 A
Output overvoltage protection - varistor	2 (L - N / L - PE), TYPE II protection class ⁴⁾				
Efficiency					
Maximum efficiency	98.09 %		98.11%		
Euro efficiency	97.38%	97.45%	97.5%	97.63%	97.7%
MPPT efficiency	99.9 %				
Backup output side ⁵⁾					
AC grid connection type	Three-phase				
Maximum apparent power (S_{max})	4000 VA	5000 VA	6000 VA	8000 VA	10000 VA
Rated AC grid Voltage ($V_{ac,r}$)	380 / 400 V				
AC Voltage range ²⁾	320...480 V				
Maximum AC output current ($I_{ac,max}$)	6.1 A	7.6 A	9.1 A	11.4 A	12.9 A
Rated output frequency (f_i)	50 Hz / 60 Hz				
Output 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	10 A	10 A	16 A	16 A	16 A
Output overvoltage protection - varistor	2 (L - N / L - PE), TYPE II protection class ⁴⁾				

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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 45°C				
Relative humidity	4...100 % condensing				
Acoustic noise emission level	< 40 dB (A) @ 1 m				
Maximum operating altitude without derating	2000 m / 6560 ft				
Physical					
Environmental protection rating	IP65				
Cooling	Natural				
Dimension (H x W x D)	550 mm x 460 mm x 160 mm				
Weight	16 kg				
Mounting system	Wall bracket				
Safety					
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, EN61000-3-12				
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 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 to know the brand and the model of the quick fit connector"

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

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

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

5) Will be available as external device

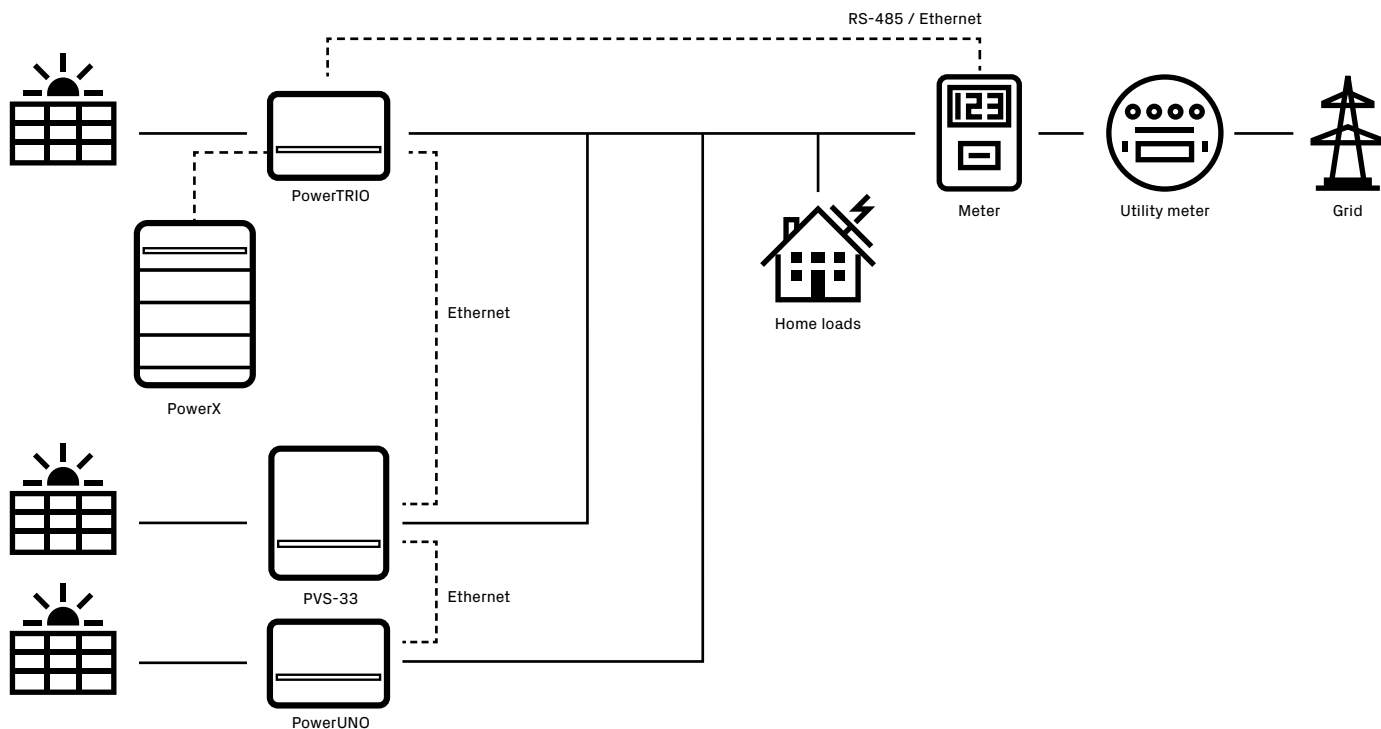
6) As per IEEE 802.11 b/g/n standard

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**

PowerTRIO: multi-inverter energy management



Preliminary datasheet

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