



# The better 3phase PowerTRIO

## The better flexibility

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

## The better security

Patented AFCI  
Patented RCD (Residual Current Device)

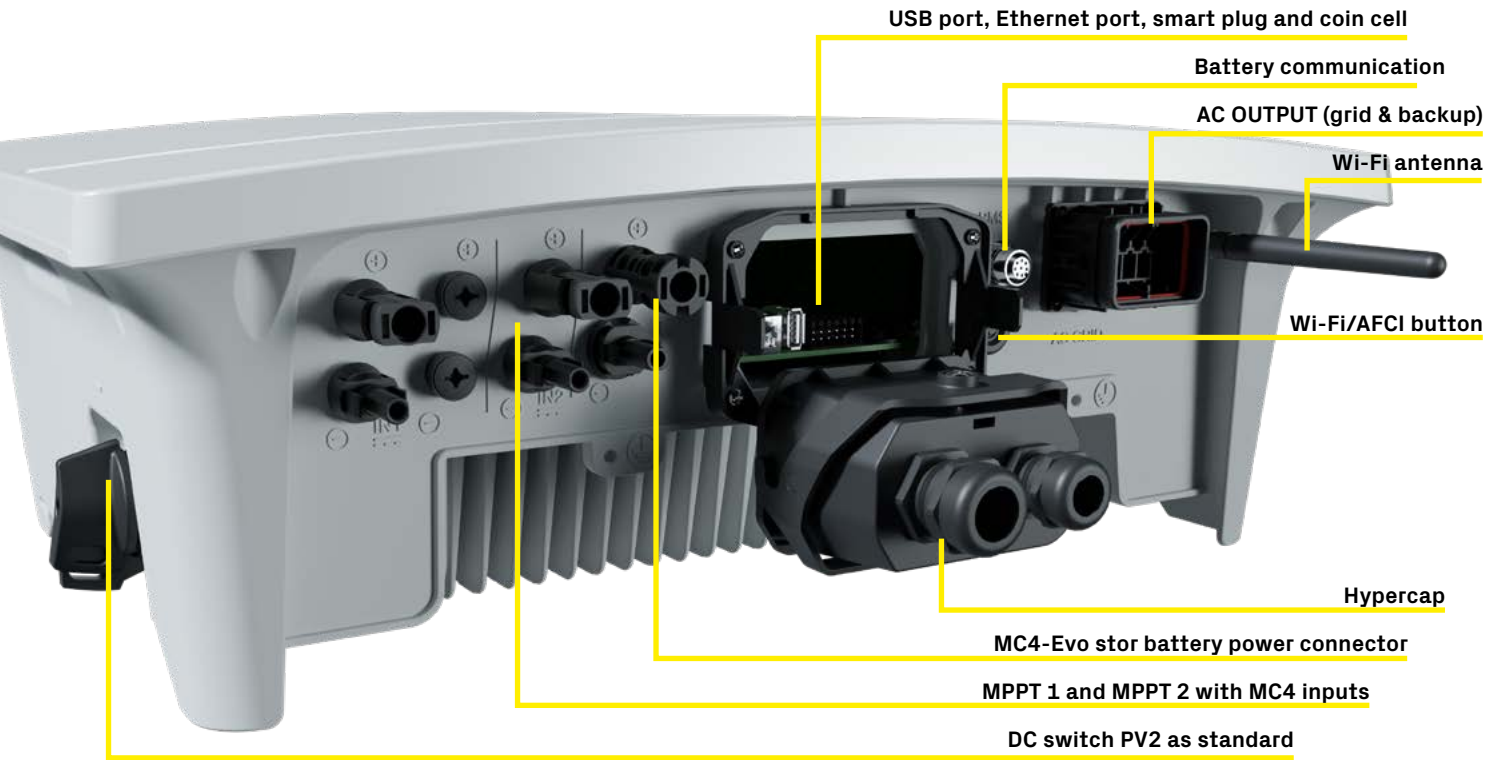
## The better installability

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 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%**

Full backup power  
on unbalanced loads

**Patented**

ARC fault detection

**Blockchain**

ready

**+55%**

CPU performance

**Integrated**

SG ready

**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-7.5-SE-A-3PH	FIM-HY-8.0-SE-A-3PH	FIM-HY-8.5-SE-A-3PH	FIM-HY-10.0-SE-A-3PH
<b>Input side</b>							
Absolute maximum DC voltage ( $V_{max,abs}$ )	1000 V						
Start-up DC 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	215 V adj. 215...500 V	215 V adj. 215...500 V
Operating DC voltage range ( $V_{dcmin}...V_{dcmax}$ )	0.7 x $V_{start}...825$ V (min 110 V)	0.7 x $V_{start}...825$ V (min 130 V)	0.7 x $V_{start}...825$ V (min 145 V)	0.7 x $V_{start}...975$ V (min 155 V)	0.7 x $V_{start}...975$ V (min 155 V)	0.7 x $V_{start}...975$ V (min 155 V)	0.7 x $V_{start}...975$ V (min 155 V)
Rated DC voltage ( $V_{der}$ )	625 V						
Rated DC power ( $P_{dc}$ )	4082 W <sup>1)</sup>	5102 W	6122 W	7143 W	8143 W	8673 W	10256 W
Suggested maximum DC power	6000 W	7500 W	9000 W	11250 W	12000 W	12750 W	12750 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 ( $P_{MPPTmax}$ )	5625 W <sup>1)</sup> Linear derating $800 \leq V_{MPPT} \leq 850$ V	3827 W Linear derating $800 \leq V_{MPPT} \leq 850$ V	4592 W Linear derating $800 \leq V_{MPPT} \leq 850$ V	5625 W Linear derating $850 \leq V_{MPPT} \leq 1000$ V	6122 W Linear derating $850 \leq V_{MPPT} \leq 1000$ V	6505 W Linear derating $850 \leq V_{MPPT} \leq 1000$ V	6505 W Linear derating $850 \leq V_{MPPT} \leq 1000$ V
DC voltage range of MPPT ( $V_{MPPTmin}...V_{MPPTmax}$ ) at $P_{acr}$	150...800 V	180...800 V	200...800 V	270...850 V	285...850 V	300...850 V	320...850 V
Maximum DC current ( $I_{dc,max}$ ) / for each MPPT ( $I_{MPPT,max}$ )	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)	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)
DC connection type	Quick fit PV connector <sup>2)</sup>						
<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	25 A / 750 V - 12 A / 1000 V						
<b>Battery input/output</b>							
Operating DC voltage range	600...850 V	600...850 V	600...850 V	600...980 V	600...980 V	600...980 V	600...980 V
PowerX Max. units	2						
Max operating current	15 A						
Maximum charge power from DC side <sup>3)</sup>	5625 W	7654 W	9184 W	10256 W	10256 W	10256 W	10256 W
Maximum discharge power	4000 W	5000 W	6000 W	7500 W	8000 W	8500 W	10000 W
<b>AC Output</b>							
AC Grid connection type	Three-Phase (3W+PE or 4W+PE)						
Rated AC power ( $P_{acr}$ @ $\cos\phi=1$ )	4000 W	5000 W	6000 W	7500 W	8000 W	8500 W	10000 W
Maximum AC output power ( $P_{ac,max}$ @ $\cos\phi=1$ )	4000 W	5000 W	6000 W	7500 W	8000 W	8500 W	10000 W
Maximum apparent power ( $S_{max}$ )	4000 VA	5000 VA	6000 VA	7500 VA	8000 VA	8500 VA	10000 VA
Rated AC grid voltage ( $V_{ac,r}$ )	380 / 400 V						
AC voltage range <sup>4)</sup>	320 / 480 V						
Maximum AC current ( $I_{ac,max}$ )	6.1 A	7.6 A	9.1 A	11.4 A	12.2 A	12.9 A	15.2 A
Contributory fault current	6.1 A	7.6 A	9.1 A	11.4 A	12.2 A	12.9 A	15.2 A
Rated frequency ( $f_r$ )	50 Hz / 60 Hz						
Frequency range ( $f_{min}...f_{max}$ ) <sup>5)</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	< 3 % of $I_{ac,max}$						
AC connection type	Female panel connector						
<b>Grid connected output protection</b>							
Anti-islanding protection	According to local standard						
Maximum external AC overcurrent protection	10.0 A	10.0 A	10.0 A	16.0 A	16.0 A	16.0 A	20.0 A
Output overvoltage protection - varistor	4 (L1-PE, L2-PE, L3-PE, N-PE), TYPE II protection class <sup>6)</sup>						
<b>Efficiency</b>							
Maximum	98.09 %	99.11 %	99.11 %	99.11 %	99.11 %	99.11 %	99.11 %
Euro efficiency	97.38%	97.45%	97.51%	97.63%	97.63%	97.70%	97.70%
MPPT efficiency	99.9 %						
<b>Backup mode<sup>7)</sup></b>							
Maximum apparent 3-PHASE power ( $S_{max}$ )	4000 VA	5000 VA	6000 VA	7500 VA	8000 VA	8500 VA	10000 VA
Maximum apparent 1-PHASE power ( $S_{max}$ )	1333 VA	1667 VA	2000 VA	2500 VA	2667 VA	2833 VA	3333 VA
Rated AC grid Voltage ( $V_{ac,r}$ )	380 / 400 V						
AC Voltage range	320 ... 480 V						
Maximum AC current ( $I_{ac,max}$ )	6.1 A	7.6 A	9.1 A	11.4 A	12.2 A	12.9 A	15.2 A
Rated output frequency ( $f_r$ )	50 Hz / 60 Hz						
Frequency range ( $f_{min}...f_{max}$ )	45...55 Hz / 55...65 Hz						

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<b>Embedded communication</b>							
Embedded physical interface	Wi-Fi <sup>8)</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 45°C	-25...+60°C with derating above 45°C	-25...+60°C with derating above 45°C	-25...+60°C with derating above 45°C	-25...+60°C with derating above 45°C	-25...+60°C with derating above 45°C	-25...+60°C with derating above 40°C
Relative humidity	4...100 % condensing						
Acoustic noise emission level	< 40 dBA @ 1 m						
Maximum operating altitude <sup>9)</sup>	3000 m / 9842 ft						
<b>Physical</b>							
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						
<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, EN61000-3-12						
Grid standards (check your sales channel for availability) <sup>10)</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, off grid	Yes						
Battery charge from AC	Yes, it can be enabled						
AC-coupled mode	Yes, settable during commissioning						

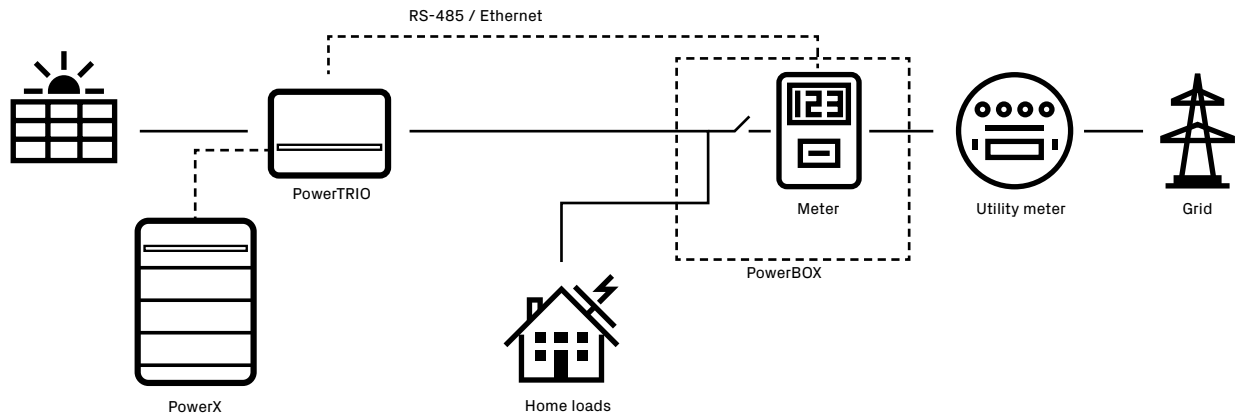
- 1) Extra power available in conjunction with Battery ESS
- 2) Refer to the document "String inverter – Product Manual appendix" available at [www.fimer.com/solarinverters](http://www.fimer.com/solarinverters) to know the brand and the model of the quick fit connector
- 3) Also limited by the capability of the installed Battery ESS
- 4) The AC voltage range may vary depending on specific country grid standards
- 5) The Frequency range may vary depending on specific country grid standards
- 6) As per test defined in EN/IEC 61643-11
- 7) PowerBOX required

- 8) As per IEEE 802.11 b/g/n standard
- 9) The output power may be affected by altitude, de-rated over 2000 m
- 10) Further grid standards will be added, please refer to FIMER's Solar page for further details

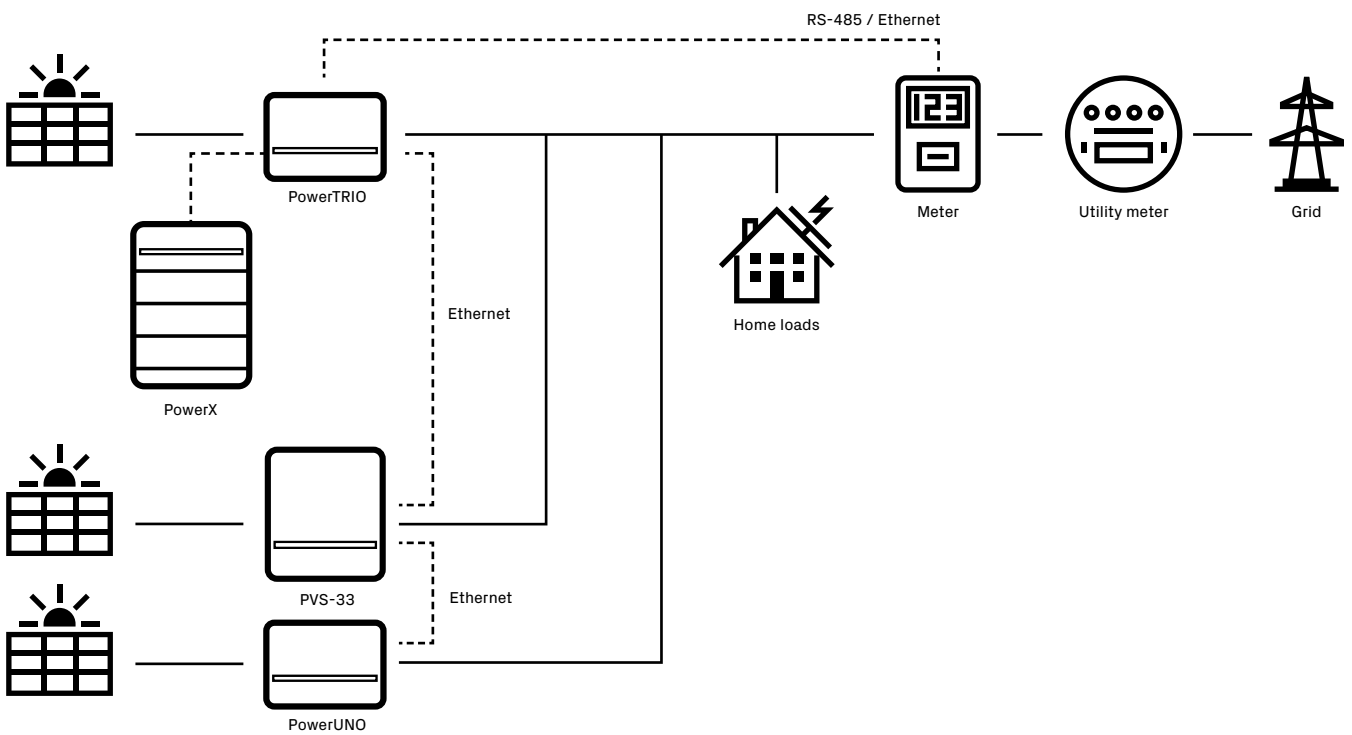
### Remarks:

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

## PowerTRIO: Provides protection against blackouts



## PowerTRIO: multi-inverter energy management





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