



Solar inverter

PVM-75/100/110/125-TL

With four power sizes (75 kW, 100 kW, 110 kW and 125 kW) and up to 12 MPPT, which can be paralleled according to the project needs, this battery ready inverter is designed to offer an innovative and flexible solar solution for commercial & industrial applications.

From 75 to 125 kW

Technical data and types

Type code	PVM-75-TL	PVM-100-TL	PVM-110-TL	PVM-125-TL
Input side				
Absolute maximum DC input voltage ($V_{\text{max,abs}}$)	1100 V			
Start-up DC input voltage (V_{start})	250...500V (default 430V)			
Operating DC input voltage range ($V_{\text{dmin...Vdmax}}$)	200-1000 V			
Rated DC input voltage (V_{dcr})	620 V			
Rated DC input power (P_{dcr})	76500 W	102000 W	112200 W	127500 W
Recommended maximum PV array power ($P_{\text{PV,max}}$)	116000 Wp	155000 Wp	170500 Wp	193000 Wp
Number of independent MPPT	6	8	10	12
Maximum DC input current (I_{dcmax}) for each MPPT	32A			
Maximum DC input power for each MPPT ($P_{\text{MPPT,max}}$)	20000W			
MPPT input DC voltage range ($V_{\text{MPPTmin ... VMPPTmax}}$) at P_{acr}	460-850V			
Maximum input short circuit current for each DC input	32 A			
Maximum input short circuit current for each MPPT	50 A			
Number of DC inputs pairs for each MPPT	2			
DC connection type	PV quick fit connector ¹⁾			
Input protection and fuctions				
Reverse polarity protection	Yes			
Input over voltage protection for each MPPT	SPD Type II / Type I+II (optional)			
Photovoltaic array isolation control	Yes, according local regulation			
Arc Fault detection (AFCI)	Yes			
Single string monitoring	yes			
Output side				
AC Grid connection type	Three-phase (3W+PE or 3W+N+PE)			
Earthing system	TN-S, TN-C, TN-CS, TT and IT			
Rated AC power (P_{acr} @ $\cos\varphi=1$)	75000 W	100000 W	110000 W	125000 W
Rated apparent power (S_r)	75000 VA	100000 VA	110000 VA	125000 VA
Maximum AC output power (P_{acmax} @ $\cos\varphi=1$)	75000 W	100000 W	110000 W	125000 W
Maximum apparent power (S_{max})	75000 VA	100000 VA	110000 VA	125000 VA
Maximum reactive power (Q_{max})	45000 VAR	60000 VAR	66000 VAR	75000 VAR
Nominal power factor and adjustable range	> 0.995; 0.8 ... 1 inductive / capacitive			
Rated AC grid voltage (V_{acr})	380V, 400V ²⁾			
Rated AC Output Current (I_{acr})	108.7 A	145 A	159.5 A	181.2 A
Maximum AC output current ($I_{\text{ac,max}}$)	114 A	152 A	167.2 A	190 A
Rated output frequency (f_i)	50 Hz / 60 Hz			
Output frequency range ($f_{\text{min...fmax}}$)	47...53 Hz / 57...63 Hz ³⁾			
Total current harmonic distortion	<3% (typical 0.25% on sinusoidal voltage reference)			
Maximum DC injection current (% di In)	<0.5%*In			
Maximum AC cable	240 mm² copper and aluminum			
AC connection type	Terminal block			
Output protection				
Anti-islanding Protection	According to local standard ⁴⁾			
Output overvoltage protection	SPD Type II			
Operating performance				
Maximum efficiency (η_{max})	98.8%			
Euro efficiency	98.5%			
Communication				
Embedded communication interfaces	Dual Ethernet port, WLAN, RS-485			
Communication protocols	Modbus TCP Sunspec, Modbus RTU Sunspec			
User interface	Internal Web User Interface (WEB UI)			
Cloud services	Aurora Vision® Plant Management Platform, Rest API			
Advanced features	Embedded Export Limitation Control (in combination with external meter) ⁵⁾ , Embedded Data Logger			
Environmental				
Ambient temperature range	-25...+60°C (-13...140 °F) with derating above 45 °C (113 °F)			
Relative humidity	4...100 % with condensation			
Maximum operating altitude	4000 m (13123 ft) with derating above 3000m (9842 ft)			

Technical data and types

Type code	PVM-75-TL	PVM-100-TL	PVM-110-TL	PVM-125-TL
Physical				
Inverter typology	Grid connected, Double stage, Transformerless			
Environmental Protection Rating	IP66 (Power Compartment) - IP65 (Wiring Box)			
Environmental classification	4K26 (IEC 60721-3-4)			
Cooling	Forced Air			
Dimension (H x W x D)	700 x 950 x 350 mm			
Weight	83 kg / 183 lbs	87 kg / 192 lbs	90 kg / 198.5 lbs	93 kg / 205 lbs
Mounting system	Single mounting bracket (vertical or horizontal installation)			
Safety				
Marking	CE, RCM			
Safety, EMC and RED standard	IEC/EN 62109-1, IEC/EN 62109-2, EN 61000-6-1, EN 61000-6-2, EN 61000-3-11, EN 61000-3-12, EN 62311, EN 301 489-1, EN 301 489-17, EN 300 328			
Grid standard (check your sales channel for availability)	IEC 61683, EN 50530, IEC 62116, IEC 61727, AS/NZS 4777.2, VDE-AR-N 4105, VDE-AR-N 4110, VDE V 0124-100, DIN VDE V 0126-1-1, VFR 2019, UTE C15-712-1, CEI 0-21, CEI 0-16, PEA, MEA, EN 50438, EN 50549-1/-2, DRRG (DUBAI), CLC/TS 50549-1/-2, G99, Synergrid C10/11, RD 413, RD 1565, RD244, P.O. 12.3 NTS 631, UNE 206006 IN (ITC-BT-40), PPDS-priloha, Denmark Type A/B, IRR-DCC-MV, ABNT NBR 16149, ABNT NBR 16150, NRS 097-2-1, SII, ISO/IEC Guide 67, Netherlands Type A, EIFS Type A, Ireland.			
Available product versions				
Input with quick fit connectors + DC disconnect switches + AC and DC overvoltage surge arresters (Type II) + MPPT level input current monitoring and ARC fault detection	PVM-75-TL-SX	PVM-100-TL-SX	PVM-110-TL-SX	PVM-125-TL-SX
Input with quick fit connectors + DC disconnect switches + AC and DC overvoltage surge arresters (Type II for AC and Type I-II for DC) + MPPT level input current monitoring and ARC fault detection	PVM-75-TL-SY	PVM-100-TL-SY	PVM-110-TL-SY	PVM-125-TL-SY
Input with quick fit connectors + DC disconnect switches + AC and DC overvoltage surge arresters (Type II) + MPPT level input current monitoring and ARC fault detection + ANTI-PID	PVM-75-TL-SX;APID	PVM-100-TL-SX;APID	PVM-110-TL-SX;APID	PVM-125-TL-SX;APID
Input with quick fit connectors + DC disconnect switches + AC and DC overvoltage surge arresters (Type II for AC and Type I-II for DC) + MPPT level input current monitoring and ARC fault detection + ANTI-PID	PVM-75-TL-SY;APID	PVM-100-TL-SY;APID	PVM-110-TL-SY;APID	PVM-125-TL-SY;APID
Additional plug-in option				
PVM-75(100)(110)(125) Negative Grounding Kit	Allow to connect the negative input pole to ground ⁶⁾			
PVM-75/125 String Expander/Combiner	DC Wiring Box to parallel multiple independent MPPT (integrated protection fuses) ⁷⁾			
PVM-75/125 USB to Ethernet Add-on	Accessory board to add 2 additional Ethernet ports for AC Coupled BESS management ⁸⁾			
PVM-75/125 Fan filter	Fan filter sponge			

1) Please refer to the document "String inverters – Product manual appendix" available at www.fimer.com for information on the quick-fit connector brand and model used in the inverter

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

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

4) Nota: for Australian market the PVM-125(110)(100)(75)-TL integrates active anti-islanding protection based on frequency shift in combination with RoCoF technique.

5) Please refer to the document "Meter supported by FIMER string inverters and the VSN700-05 data logger"

6) When grounding-kit is installed, Residual Current Monitoring does not fully operate.

Inverter must be installed and operate in "restricted areas (access limited to qualified personnel)" according to IEC 62109-2

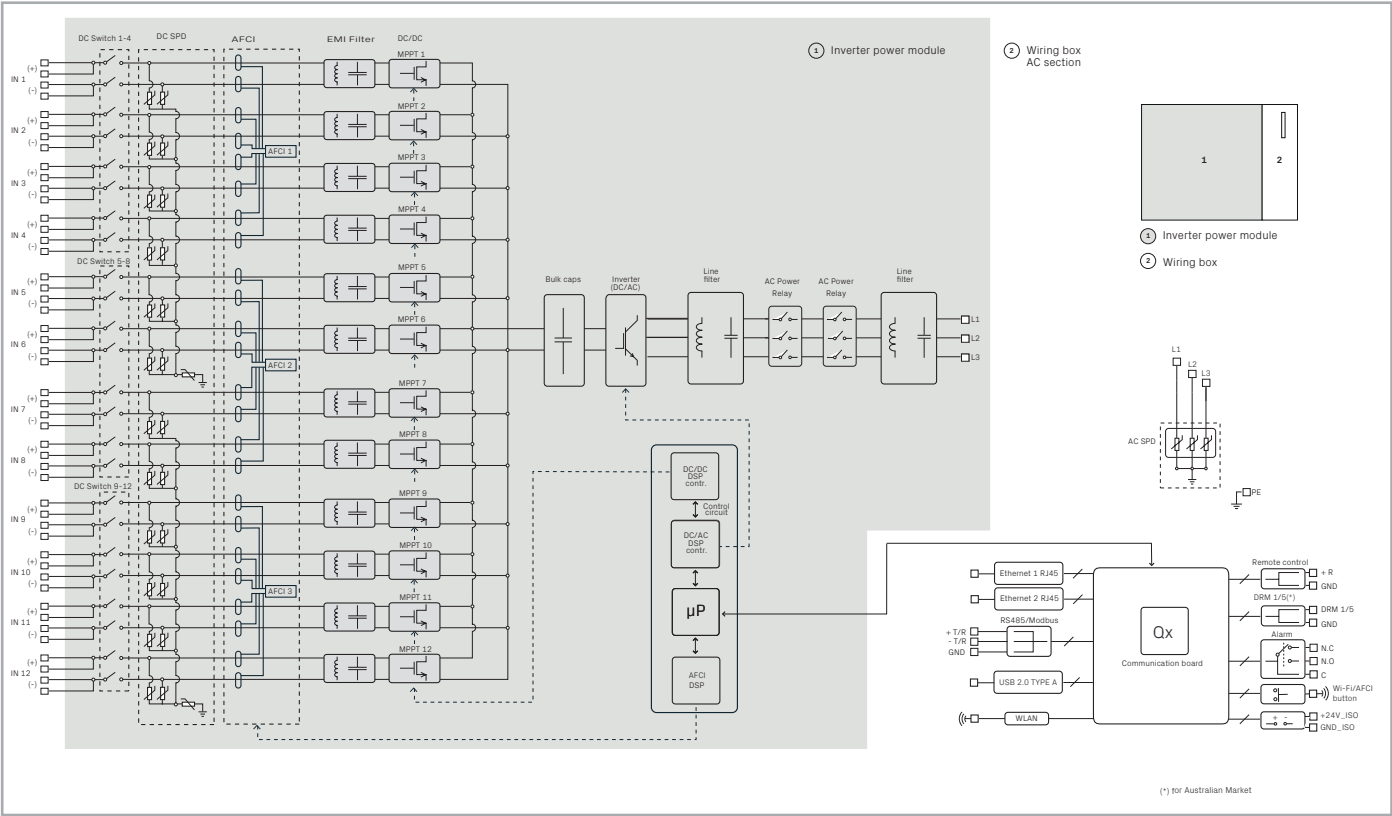
7) For further information refer to PVM-75/100/110/125 String Expander/Combiner manual available at www.fimer.com

8) For further information refer to PVM-75/100/110/125 USB to Ethernet Add-on manual available at www.fimer.com

Remarks:

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

PVM-75/100/110/175-TL block diagram



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