



Solar inverter

PVS-10/12.5/15-TL

The PVS-10/12.5/15-TL is the new FIMER three-phase solution, ideal for the optimization of installation and operational costs in commercial and industrial PV plants.

From 10 to 15 kW

This new PVS string inverter family, with power ratings of up to 33 kW, has been designed with the objective to maximize the ROI in commercial and industrial applications such as rooftop plants, carports and trackers.

Ease of installation and maintenance

The compact design of the product allows savings on installation costs. The installation is quick and easy, without the need to open the front cover.

Moreover, being fuse-free, this inverter guarantees further savings on maintenance costs and time, reducing on site interventions to a minimum.

Maximum flexibility and integration

The input voltage range and all DC-side specs as a whole allow for the greatest plant design flexibility within both new and existing installations.

This new inverter family guarantees maximum integration with the latest PV technologies, including bifacial modules.

Advanced communication

Fast commissioning thanks to the Solar Inverters installer app which enable a quick multi-inverter installation, saving up to 70% commissioning time.

The single string current monitoring allows to keep the status of the PV generator under control and to detect potential faults in real time. The built-in FIMER Export Limitation solution allows to comply with any power export constraints established by utilities, without any additional devices to be installed.

Integrated PID recovery function

Inverters equipped with PID (Potential Induced Degradation) recovery function are able to restore the optimal conditions of the PV module in

order to prevent performance losses which could be caused by the PID during standard operation. Such functionality allows to maintain the highest level of performance and to maximize the working life of the plant, hence, optimizing the return on investment.

Integrated Arc Fault Circuit Interrupter

The Integrated Arc Fault Circuit Interrupter allows to recognize and immediately interrupt the electric arcs which may occur on the PV system. Thanks to such functionality the inverter is able to offer a reliable fire prevention mechanism wherever required for roof mounted installations.

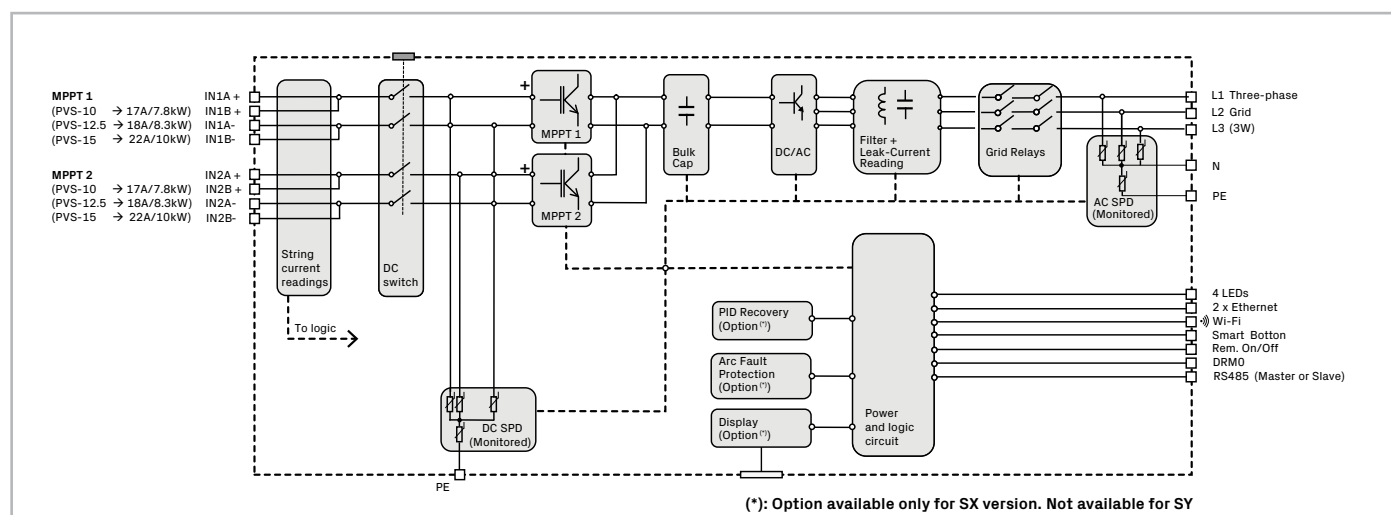
RSD compatibility

PVS-10/33 is tested for operation in PV systems equipped with Rapid Shutdown systems (RSD) and/or with I-V optimizers installed at module level (contact MA Solar Italy for a complete list of compatible systems).

Highlights

- Communication active during the night
- High DC/AC power oversizing capability
- Compact inverter suitable for vertical and horizontal installation
- Fuse-free design
- Installation on new and existing plants
- Maximum string voltage 1100 Vdc
- PID recovery function (optional)
- Commissioning through the Solar Inverters installer app
- Integrated Export Limitation function
- Single string current monitoring
- Arc fault circuit interrupter (optional)
- Energy community ready

Block diagram PVS-10/12.5/15-TL



Technical data and types

Type code	PVS-10-TL	PVS-12.5-TL	PVS-15-TL
Input side			
Absolute maximum DC input voltage ($V_{\text{max,abs}}$)	1100 V		
Start-up DC input voltage (V_{start})	250...500V (default 360V)		
Operating DC input voltage range ($V_{\text{dcmin}}...V_{\text{dcmax}}$)	200-1000 V		
Rated DC input voltage (V_{dcr})	620V		
Rated DC input power (P_{dcr})	10200 W	12760 W	15300 W
Number of independent MPPT	2		
Maximum photovoltaic power recommended ($P_{\text{PV,max}}$)	14500 Wp	18125 Wp	21750 Wp
Maximum DC input power for each MPPT ($P_{\text{MPPT,Tmax}}$)	7800 W	8300 W	10000 W
MPPT input DC voltage range ($V_{\text{MPPTmin}} ... V_{\text{MPPTmax}}$) a P_{acr}	460-850V		
Maximum DC input current (I_{dcmax}) for each MPPT	17A	22A	22A
Maximum input short circuit current for each MPPT	30 A		
Maximum backfeed current (AC side vs DC side)	Negligible in normal operating conditions ¹⁾		
Number of DC input pairs for each MPPT	2		
DC connection type	PV quick fit connector		
Input protection			
Revers polarity protection	Yes, from limited current source		
Input over voltage protection for each MPPT	SPD Type II / Type I+II (optional)		
Isolation control	According to local standard		
Output side			
AC grid connection type	Three-phase (3W+PE or 3W+N+PE)		
Earthing system	TN-S, TN-C, TN-CS, TT	TN-S, TN-C, TN-CS, TT	TN-S, TN-C, TN-CS, TT
Rated AC power ($P_{\text{acr}} @ \cos\varphi=1$)	10000 W	12500 W	15000 W
Maximum AC output power ($P_{\text{acmax}} @ \cos\varphi=1$)	10000 W	12500 W	15000 W
Rated apparent power (S_n)	10000 W	12500 W	15000 W
Maximum apparent power (S_{max})	10000 VA	12500 VA	15000 VA
Maximum reactive power (Q_{max})	6000 VAR	7500 VAR	9000 VAR
Nominal power factor and adjustable range	> 0.995; 0.8...1 inductive/capacitive		
Rated AC output voltage ($V_{\text{ac,r}}$)	380V, 400V ²⁾		
Rated AC output current ($I_{\text{ac,r}}$)	14,45 A	18 A	21,65 A
Maximum AC output current ($I_{\text{ac,max}}$)	16 A	20 A	23 A
Rated output frequency (f_r)	50 Hz / 60 Hz		
Output frequency range ($f_{\text{min}}...f_{\text{max}}$)	47...53 Hz / 57...63 Hz ³⁾		
Total current harmonic distortion	<3%		
Maximum AC cable	16 mm ² copper		
AC connection type	AC quick fit connector		
Output protection			
Anti-islanding protection	According to local standard		
Maximum external AC overcurrent protection	25 A	32 A	32 A
Output overvoltage protection	SPD Type II		
Operating performance			
Maximum efficiency (η_{max})	98,4%	98,5%	98,5%
Weighted efficiency (EURO)	98,1%	98,2%	98,2%
Communication			
Embedded communication interfaces	Double Ethernet port, WLAN, RS485 port		
Communication protocol	Modbus TCP Sunspec, Modbus RTU Sunspec		
User interface	LEDs, Web User Interface, Installer APP, Display (optional)		
Cloud services	Aurora Vision® Plant Management Platform, Rest API		
Advanced features	Embedded export limitation control (in combination with external meter), 24h self-consumption monitoring		

Technical data and types

Type code	PVS-10-TL	PVS-12.5-TL	PVS-15-TL
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 2000 m (6561 ft)		
Physical			
Inverter type	Grid connected, double stage, transformerless		
Environmental protection rating	IP65		
Environmental classification	4K26 (IEC 60721-3-4)		
Cooling	Natural cooling		
Dimension (H x W x D)	568,2 x 473,6 x 207		
Weight	29,6 Kg		
Mounting system	Mounting bracket		
Safety			
Marking	CE, RCM		
Safety and EMC standards	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		
Certificates and compliance (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, G98, 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			
Inverter equipped with SPD Type 2 on the DC and AC side	PVS-10-TL-SX	PVS-12.5-TL-SX	PVS-15-TL-SX
Inverter equipped with SPD Type 1+2 on the DC side and Type 2 on the AC side	PVS-10-TL-SY	PVS-12.5-TL-SY	PVS-15-TL-SY
Available ordering options			
PID recovery	Only for SX version	Only for SX version	Only for SX version
AFCI (Arc Fault Circuit Interrupter)	Only for SX version	Only for SX version	Only for SX version
Display	Only for SX version	Only for SX version	Only for SX version

- 1) In the event of a fault, limited by the external protection envisaged on the AC circuit
- 2) The output voltage range may vary depending on specific country grid standards
- 3) The output frequency range may vary depending on specific country grid standards

Remarks:

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



For more information please contact your local MA Solar Italy representative or visit:

fimer.com

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