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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 15 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 connection systems guarantee inverter flexibility and make it suitable for both new and existing installations.
This new inverter family guarantees maximum integration with the latest PV technologies, including bifacial modules.

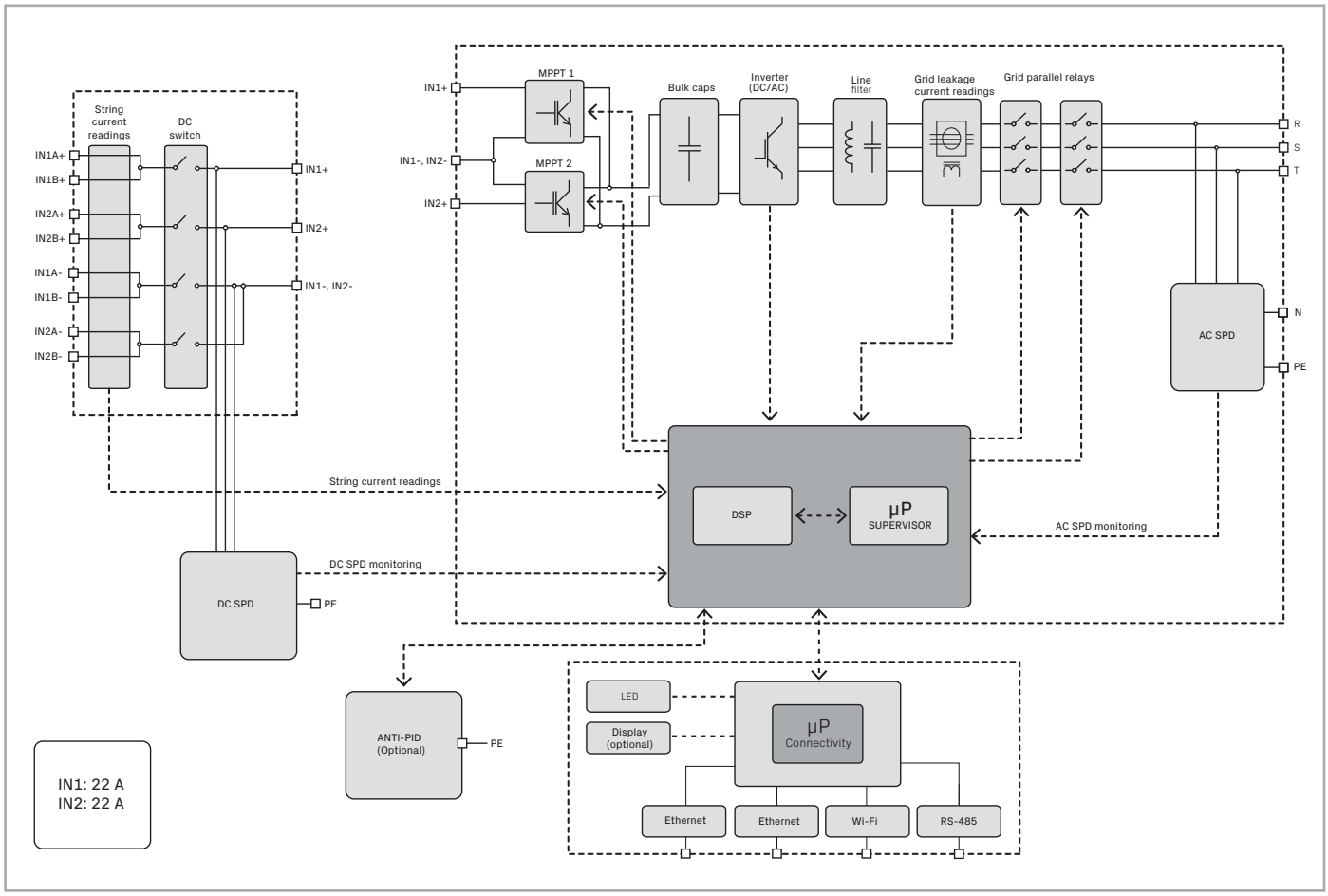
Advanced communication

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.

Highlights

- Compact inverter suitable for vertical installation
- Fuse-free design
- Installation on new and existing plants
- Maximum string voltage 1100 Vdc
- PID prevention function (optional)
- Commissioning through the Solar Inverters installer app
- Integrated Export Limitation function
- Single string current monitoring
- Arc fault detection system (optional)

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 ($V_{max,abs}$)		1100 V	
Start-up DC input voltage (V_{start})		250...500V (default 360V)	
Operating DC input voltage range (V_{dcmin}...V_{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 ($P_{PV,\ max}$)	14500 Wp	18125 Wp	21750 Wp
Maximum DC input power for each MPPT ($P_{MPPT,\ Tmax}$)	7000W	8300W	10000W
MPPT input DC voltage range ($V_{MPPTmin}$ ... $V_{MPPTmax}$) a P_{acr}		460-850V	
Maximum DC input current (I_{dcmax}) for each MPPT	2x17A	2x18A	2x22A
Maximum input short circuit current for each MPPT		30 A	
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 4W+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_{acr} @cosφ=1)	10000 W	12500 W	15000 W
Maximum AC output power (P_{acmax} @cosφ=1)	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 ($V_{ac,r}$)		380V, 400V [1]	
Maximum AC output current ($I_{ac,max}$)	16 A	20 A	23 A
Rated output frequency (f_r)		50 Hz / 60 Hz	
Output frequency range (f_{min}...f_{max})		47...53 Hz / 57...63 Hz [2]	
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	
Local 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
Type code			
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		
Cooling	Natural cooling		
Dimension (H x W x D)	565,7 x 469,8 x 207 mm		
Weight	29,6 Kg		
Mounting system	Mounting bracket		
Safety			
Certificazioni	CE		
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		
Grid standard (check your sales channel for availability)	4K26, IEC 61683, EN 50530, IEC 62116, IEC 61727, AS/NZS 4777.2, VDE-AR-N 4105, VDE-AR-N-4110, DIN VDE 0124-100, DIN VDE 0126-1-1, VFR 2019, UTE C15-712-1, CEI 0-21, CEI 0-16, PEA, MEA, EN 50438 (including Ireland deviation), EN 50549-1/-2, CNS 15382, DRRG, CLC_FprTS50549-1/-2, ÖVE/ÖNORM E 8001-4-712, TOR D4, G98, G99, Synergrid C10/11, RD 413, RD 1565, RD244, NTS 631, UNE 206007 (ITC-BT-40), PPDS-priloha-2018, TR.3.2.2, IRR-DCC-MV, P.O. 12.3/10.06, ABNT NBR 16149, ABNT NBR 16150, Chile LV/MV, NRS-097-2-1, SII, ISO/IEC Guide 67		
Available product variants			
4 inputs with PV quick fit connectors + SPD Type 2 on the DC and AC side	PVS-10-TL-SX	PVS-12.5-TL-SX	PVS-15-TL-SX
4 inputs with PV quick fit connectors + SPD Type 1+2on the DC side and Type 2 on the AC side	PVS-10-TL-SY	PVS-12.5-TL-SY	PVS-15-TL-SY

1) The output voltage range may vary depending on specific country grid standards
2) The output frequency range may vary depending on specific country grid standards

Remark. Features not specifically listed in the present data sheet are not included in the product

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For more information please contact your local FIMER representative or visit:

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