

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 ($P_{\text{MPPT,Tmax}}$)	7800W	8300W	10000W
MPPT input DC voltage range ($V_{\text{MPPTmin}} \dots V_{\text{MPPTmax}}$) 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 ($P_{\text{acr}} @ \cos\varphi=1$)	10000 W	12500 W	15000 W
Maximum AC output power ($P_{\text{acmax}} @ \cos\varphi=1$)	10000 W	12500 W	15000 W
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_{acr})	380V, 400V ¹⁾		
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 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 (η_{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, TOR Erzeuger, 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, Chile LV/MV, NRS 097-2-1, SII, ISO/IEC Guide 67, Netherlands Type A, EIFS Type A, Ireland		
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+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
Optional available			
PID recovery	Available for SX version	Available for SX version	Available for SX version
AFCI	Available for SX version	Available for SX version	Available for SX version
Display	Available for SX version	Available for SX version	Available for SX version

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

Type code	PVS-20-TL (2MPPT)	PVS-20-TL (4MPPT)	PVS-30-TL	PVS-33-TL
Input side				
Absolute maximum DC input voltage (V _{max,abs})	1100V			
Start-up DC input voltage (V _{start})	250...500V (default 430V)			
Operating DC input voltage range (V _{d,min} ...V _{d,max})	200-1000 V			
Rated DC input voltage (V _{dcr})	620V			
Rated DC input power (P _{dcr})	20500 W	20500 W	30600 W	33700 W
Maximum photovoltaic power recommended (P _{PV, max})	30000 Wp	34000 Wp	44000 Wp	48000 Wp
Number of independent MPPT	2	4	4	4
Maximum DC input current (I _{d,max}) for each MPPT	2x26A	2x26A + 2x22A	2x26A + 2x22A	2x26A + 2x22A
Maximum DC input power for each MPPT (P _{MPPT,max})	2x12000W	2x12000W + 2x10000W	2x12000W + 2x10000W	2x12000W + 2x10000W
MPPT input DC voltage range (V _{MPPTmin} ... V _{MPPTmax}) at P _{acr}	460-850V			
Maximum input short circuit current for each MPPT	40A ¹⁾			
Number of DC inputs pairs for each MPPT	2			
DC connection type	PV quick fit connector			
Input protection				
Reverse polarity protection	Yes			
Input over voltage protection for each MPPT	SPD Type II / Type I+II (optional)			
Isolation control	Yes, according local regulation			
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	TN-S, TN-C, TN-CS, TT and IT ²⁾
Rated AC power (P _{acr} @cosφ=1)	20000 W	20000 W	30000 W	33000 W
Maximum AC output power (P _{acmax} @cosφ=1)	22000 W up to 30°C ³⁾	22000 W up to 30°C ³⁾	33000 W up to 30°C ³⁾	36300 W up to 30°C ³⁾
Maximum apparent power (S _{max})	22000 VA up to 30°C ⁴⁾	22000 VA up to 30°C ⁴⁾	33000 VA up to 30°C ⁴⁾	36300 VA up to 30°C ⁴⁾
Maximum reactive power (Q _{max})	20000 VAR	20000 VAR	30000 VAR	33000 VAR
Nominal power factor and adjustable range	> 0.995; 0...1 inductive/capacitive			
Rated AC grid voltage (V _{ac,r})	380V, 400V ⁵⁾			
Maximum AC output current (I _{ac,max})	33,4 A	33,4 A	50,1 A	55,1 A
Rated output frequency (f _r)	50 Hz / 60 Hz			
Output frequency range (f _{min} ...f _{max})	47...53 Hz / 57...63 Hz (6)			
Total current harmonic distortion	<3%			
Maximum AC cable	35 mm2 copper/aluminum			
AC connection type	Detachable Terminal Block			
Output protection				
Anti-islanding protection	According to local standard			
Maximum external AC overcurrent protection	63 A	63 A	80 A	80 A
Output overvoltage protection	SPD Type II			
Operating performance				
Maximum efficiency (η _{max})	98,4%	98,4%	98,4%	98,4%
Euro efficiency (η _{EURO})	98,2%	98,2%	98,2%	98,2%
Communication				
Embedded communication interfaces	Dual Ethernet port, WLAN, advanced RS-485 port (optional)			
Communication protocol	Modbus TCP Sunspec, Modbus RTU Sunspec (optional)			
User Interface	LEDs, Web User Interface, Installer APP, Display (optional)			
Cloud services	Aurora Vision® Plant Management Platform, Rest API			
Advanced functions	Embedded export limitation control (in combination with external meter), 24h self consuption monitoring			

Type code	PVS-20-TL (2MPPT)	PVS-20-TL (4MPPT)	PVS-30-TL	PVS-33-TL
Input side				
Environmental				
Ambient temperature range	-25...+60°C (-13...140 °F) with derating above 45 °C (113 °F)			
Relative humidity	4%... 100% condensing			
Maximum operating altitude	4000 m	4000 m	4000 m	4000 m (13123 ft) with derating above 3000 m (9842 ft)
Physical/General				
Inverter typology	Grid connected, double stage, transformerless			
Environmental protection rating	IP65			
Environmental classification	4K26 (IEC 60721-3-4)			
Cooling	Forced air			
Dimension (H x W x D)	675 (799,2 with connection boxes) x 591,8 x 227,5 mm			
Weight	50 Kg			
Mounting system	Single mounting bracket (vertical and 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, TOR Erzeuger, 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, Chile LV/MV, NRS 097-2-1, SII, ISO/IEC Guide 67, Netherlands Type A, EIFS Type A, Ireland			
Available product variants				
8 inputs with PV quick fit connectors + SPD Type 2 on the DC and AC side	PVS-20-TL-SX	PVS-20-TL-SXD	PVS-30-TL-SX	PVS-33-TL-SX
8 inputs with PV quick fit connectors + SPD Type 1+2 on the DC side and Type 2 on the AC side	PVS-20-TL-SY	-	PVS-30-TL-SY	PVS-33-TL-SY
8 inputs with PV quick fit connectors + SPD Type 2 on the DC and AC side for IT system	-	-	-	PVS-33-TL-SI
Optional available				
PID recovery	Available only on the SX version	-	Available only on the SX version	Available only on the SX version
AFCI	Available only on the SX version	-	Available only on the SX version	Available only on the SX version
Display	Available only on the SX version	-	Available only on the SX version	Available only on the SX version

1) 30 A for Australia and New Zealand

2) Available only with a dedicated version called "SI", with 33kW of power

3) Due to country specific regulations this value can be limited to the rated value (20kW for PVS-20-TL, 30kW for PVS-30-TL, 33kW for PVS-33-TL)

4) Due to country specific regulations this value can be limited to the rated value (20kVA for PVS-20-TL, 30kVA for PVS-30-TL, 33kVA for PVS-33-TL)

5) The AC voltage range may vary depending on specific country grid standards

6) The 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