

Proposed Inverter:

PVS980 1818 to 2091 kVA



PVS980 inverters feature a proven self-contained cooling system used in other ABB industrial applications. This innovative, truly low-maintenance cooling solution is designed for demanding applications and harsh environments, cutting maintenance costs and ensuring outstanding endurance. PVS980 central inverters are available from 1818 kVA up to 2300 kVA, and are optimized for cost-effective, multi-megawatt power plants.

Technical data and types

Type designation	PVS980-58-1818kVA-I	PVS980-58-1909kVA-J	PVS980-58-2000kVA-K	PVS980-58-2091kVA-L
Input (DC)				
Maximum recommended PV power ($P_{PV,max}$) ¹⁾	2910 kWp	3055 kWp	3200 kWp	3346 kWp
Maximum DC current ($I_{max(DC)}$)	2400 A	2400 A	2400 A	2400 A
DC voltage range, mpp ($U_{DC,mpp}$) at 35 °C	850 to 1500 V	893 to 1500 V	935 to 1500 V	978 to 1500 V
DC voltage range, mpp ($U_{DC,mpp}$) at 50 °C	850 to 1100 V	893 to 1100 V	935 to 1100 V	978 to 1100 V
Maximum DC voltage ($U_{max(DC)}$)	1500 V	1500 V	1500 V	1500 V
Number of MPPT trackers	1	1	1	1
Number of protected DC inputs	8 ²⁾ to 24 (+/-)	8 ²⁾ to 24 (+/-)	8 ²⁾ to 24 (+/-)	8 ²⁾ to 24 (+/-)
Output (AC)				
Maximum power ($S_{max(AC)}$) ³⁾	2000 kVA	2100 kVA	2200 kVA	2300 kVA
Nominal power ($S_{N(AC)}$) ⁴⁾	1818 kVA	1909 kVA	2000 kVA	2091 kVA
Maximum AC current ($I_{max(AC)}$)	1925 A	1925 A	1925 A	1925 A
Nominal AC current ($I_{N(AC)}$)	1750 A	1750 A	1750 A	1750 A
Nominal output voltage ($U_{N(AC)}$) ⁵⁾	600 V	630 V	660 V	690 V
Output frequency ⁵⁾	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz
Harmonic distortion, current ⁶⁾	< 3%	< 3%	< 3%	< 3%
Distribution network type ⁷⁾	TN and IT	TN and IT	TN and IT	TN and IT
Efficiency				
Maximum ⁸⁾	98.8%	98.8%	98.8%	98.8%
Euro-eta ⁸⁾	98.6%	98.6%	98.6%	98.6%
CEC efficiency ⁹⁾	98.0%	98.5%	98.5%	98.5%
Power consumption				
Self consumption in normal operation	≤ 2500 W	≤ 2500 W	≤ 2500 W	≤ 2500 W
Standby operation consumption	235 W	235 W	235 W	235 W
Auxiliary voltage source ¹⁰⁾	External, 1-phase	External, 1-phase	External, 1-phase	External, 1-phase

¹⁾ DC/AC ratio over 1.6 might decrease maintenance intervals

²⁾ As standard

³⁾ At 35 °C

⁴⁾ At 50 °C

⁵⁾ ±10%

⁶⁾ At nominal power

⁷⁾ Inverter side must be IT type

⁸⁾ Without auxiliary power consumption at min U_{DC}

⁹⁾ With auxiliary power included

¹⁰⁾ Internal as option

Proposed Inverter:

PVS980-CS-US Compact skid for US market From 2.0 to 4.4MVA



The ABB compact skid is a cost efficient and robust solution designed for large-scale solar power generation, designed for US markets. It combines PVS980 outdoor inverter and medium voltage ANSI design transformer needed to connect the inverters to the medium voltage network of the photovoltaic plant.

Technical data and types

Compact Skid Type	PVS980-CS-2000kVA-US-K-XX	PVS980-CS-4000kVA-US-K-XX
Inverter Type ¹⁾	PVS980-58-2000kVA-K	2 x PVS980-58-2000kVA-K
Input (DC)		
Maximum DC Voltage	1500 V	
Maximum Combined Input Power	3200 kWp	6400 kWp
Number of Protected DC inputs	24	48
Output (AC)		
Inverter Rated Power (at 50°C/35°C)	2000 kVA / 2200 kVA	4000 kVA / 4400 kVA
Inverter Rated AC Current (at 50°C/35°C)	1750 A / 1925 A	1750 A / 1925 A per inverter
Inverter Rated Output Voltage	660 V	2 x 660 V
Transformer		
Transformer Type ⁴⁾	3-Phase Pad-Mounted, Oil Filled, UL Listed	
Power Rating	2200 kVA	4400 kVA
Winding Configuration	2-winding	3-winding
Cooling Class ²⁾	ONAN	
Fluid ³⁾	Mineral Oil	
Frequency	60 Hz	
Low Voltage	660 V	2 x 660 V
High Voltage	12.47 kV to 34.5 kV	
LV terminals ⁴⁾	6-hole integral spade bushings	6-hole integral spade bushings x 2
HV terminals	600 A dead-break bushings (dead front) x 6	
Fuses	Bay-O-Net with Back-Up Current Limiting	Varies based on high voltage kV rating
Switches	2-position 300A LBOR transformer switch	
Monitoring ⁵⁾	Pressure relief valve, liquid level-, temperature- and pressure gauges with alarm contacts	
Fittings	1" drain valve and sampler located in LV compartment, external drain valve padlockable box	

¹⁾ See inverter data sheet for inverter type options

²⁾ KNAN optional

³⁾ Natural Ester Fluid optional

⁴⁾ Sidewall mounted

⁵⁾ Includes liquid temperature gauge with 2 sets of alarm contacts