

# PV Box RT



## Product at a glance

The PV Box is a containerized plug and play power conversion system adapted to customer requirements and local standards. In a PV plant installation, it operates between DC field and AC MV grid connection point. The PV Box performs the DC power concentration, the DC/AC conversion, and the AC voltage elevation to the grid voltage level. The PV Box protects maintenance staff and the installation against electrical faults, such as short-circuit and lightning. The optimized versions of the PV Box reduce the balance-of-systems costs, increase reliability, and improve construction lead times.

## Designed for reliability

- Industrialized solution according to Schneider Electric proven industrial processes
- Equipment and integration made in Schneider Electric factories
- Configurable to withstand severe weather conditions: continental, tropical and desertic environments
- Undergone extensive safety, quality and reliability risk mitigation
- Proven robust design through rigorous Custom Reliability Testing
- Type-tested solution according to IEC-62271-202 including Arc Flash Testing (IAC-A)

## Flexible

- Vast choice of power and AC medium voltage levels
- Suitable for most environmental conditions and local standards
- Configurable to be optimized for specific project needs

## Easy to service

- Fully monitored solution
- Convenient and safe enclosure design for maintenance purposes
- Local Schneider Electric service and maintenance available in 100+ countries

## Easy to install

- Ease in transportation due to its compact and light design (minimized width, height and length for easy shipping by road)
- Solution delivered pre-assembled, configured and tested to reduce on-site labor and project duration
- Integrated concrete basement requiring minimal civil works at site

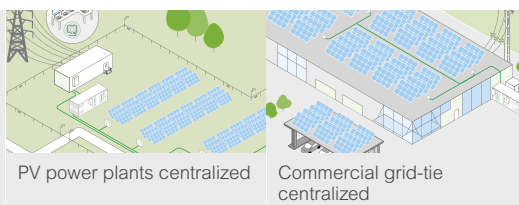
## True bankability

- Warranty from a trusted partner with 180 years of experience
- World leader in industrial power drives, UPS and electrical distribution
- Strong service infrastructure worldwide to support your global needs

## Higher return on investment

- Compressed construction lead-times through factory integrated solution
- Reduced transportation, off-loading and on-site labor costs
- Enhanced uptime thanks to qualified and reliable designs

## Product applications



PV power plants centralized

Commercial grid-tie centralized

Device short name	PV Box RT 1080	PV Box RT 1260	PV Box RT 1360
<b>Electrical specifications</b>			
<b>DC Input</b>			
Voltage range, MPPT	440 - 800 V (at PF=1)	510 - 800 V (at PF=1)	550 - 800 V (at PF=1)
Max. input voltage, open circuit	1000 V	1000 V	1000 V
Max. DC current	2 x 1280 A	2 x 1280 A	2 x 1280 A
<b>AC output</b>			
Nominal power	1080 kVA	1260 kVA	1360 kVA
Nominal voltage	up to 36 kV	up to 36 kV	up to 36 kV
Frequency	50/60 Hz	50/60 Hz	50/60 Hz
Power factor range (PQ dispatch)	0 to 1 leading and lagging	0 to 1 leading and lagging	0 to 1 leading and lagging
<b>Equipment</b>			
Inverters	2 x XC 540	2 x XC 630	2 x XC 680
DC connection	2 x DC Box 6 input or 2 x DC Box 10 input (+/-)		
DC fuse range <sup>m</sup>	DC Box 6: 315 A, 350 A, 400 A / DC Box 10: 160 A, 200 A, 250 A		
Transformer type	Schneider Electric Minera oil type ONAN		
Transformer losses	C0Bk (according to EN 50464-1) or compliant with Ecodesign regulation (depending on geographies)		
Medium voltage switchgear U ≤ 24 kV	Schneider Electric RM6 ring main unit type NE-DI with Sepam 10 protection relay		
Medium voltage switchgear 24 kV ≤ U ≤ 36 kV	Schneider Electric Flusarc ring main unit type CB-C with Sepam 10 protection relay		
<b>Optional content</b>			
Automatic progressive reconnection <sup>n</sup>	MV circuit breaker motorization, configurable timer		
Auxiliary power transformer	10 kVA / 400 V		
DC input measurement	DC Box monitored		
Monitoring and control	Conext Control™ monitoring cabinet with secured power supply		
Safety kit	Fire-extinguisher, insulated MV rod and gloves, insulating stool		
Service kit	Contacts on doors and smoke detector (available with Conext Control option)		
Service contract	Worldwide service team - consult your sales representative for service offer		
<b>External operating conditions</b>			
<b>Temperature</b>			
Standard temperature range	-10°C / +40°C(3)		
Other temperature ranges	Continental (-20°C / +45°C), Desert / Tropical (-10°C / +50°C), Very cold (-35°C / + 45°C)		
<b>Pollution</b>			
Standard low polluted environment (Rural and suburban environment)	G4 filters		
Option polluted environment (desert, urban...) <sup>o</sup>	External filter box (G4 and F9 filters, fans, speed drives)		
<b>Other conditions</b>			
Max. relative humidity	100%		
Max. altitude above sea level <sup>p</sup>	2000 m		
Max. wind speed	123 km / h		
Max. snow load	250 kg / m <sup>2</sup>		
IP grade LV / MV compartment	IP44 / IP54		
IP grade transformer compartment	IP23		
<b>General specifications</b>			
<b>Dimensions and weight</b>			
During transportation (H x W x D)	3.10 x 2.50 x 8.90 (or 9.70 <sup>q</sup> ) m		
Assembled on site (H x W x D)	2.65 x 3.15 x 8.90 (or 9.70 <sup>q</sup> ) m		
Weight approx. with standard content	24 tons		
Material			
Basement	Concrete basement included		
Walls and roof	Sandwich panel with mineral wool (50 mm) EI 30 minutes		
<b>Cooling</b>			
LV and MV switchboard compartment <sup>r</sup>	Ensured by inverter fans		
Transformer compartment	Natural		
<b>Regulatory approval</b>			
Electrical standards	IEC 62271-202, IEC 61439, IEC 62271-200, IEC 60076		
Type-test certification	IEC 62271-202		
Internal arc classification (acc. to IEC 62271-202)	IAC-A		
General ventilation filters standard	EN779:2012		
Building standards	Eurocodes		

Specifications are subject to change without notice.

<sup>m</sup>Fuses may be ordered separately. <sup>n</sup>To avoid simultaneous reconnection of every PV Boxes and for automatic opening and reclosing on grid voltage loss (grid requirement). <sup>o</sup>Derating: See Conext Core XC inverter application note. <sup>p</sup>For dust or sand (IEC 60721-2-5 (\$4.2.4)) size<150 µm and concentration<2 mg / m<sup>3</sup>. <sup>q</sup>Power derating above 1000 m. Above 2000 m special requirements.

<sup>r</sup>In case of filter box option. <sup>s</sup>Extra fans in filter box only for polluted environment.