

6 PowerValue 11 RT G2 1-10 kVA IEC

The single-phase UPS for critical applications



ABB's PowerValue 11 RT G2 is a double-conversion online UPS that guarantees up to 10 kW of clean, reliable power for your critical single-phase applications. As well as maintaining power to your servers, point-of-sale terminals, workstation clusters, routers, switches, hubs and sensitive electronic equipment, the PowerValue 11 RT G2 also conditions incoming power to eliminate spikes, swells, sags, noise and harmonics.

The PowerValue 11 RT G2 can be used as a standalone UPS device or installed into a standard 19" rack configuration, with connectivity options available for each.

Three units of the 6 or 10 kW models can be configured in parallel to provide redundancy or to increase the system's total capacity up to 30 kW. All units can be fitted with up to nine battery modules to extend runtime.

High reliability

- Reliable double conversion topology protects load from all input disturbances
- Batteries can be added or replaced easily
- Reduced recovery time from discharge
- Redundant parallel operation available (6 and 10 kW units)

Low cost of ownership

- Unity power factor (kW = kVA)
- Scalable runtime
- High operating efficiency, regardless of loading
- Reduced installation and upgrading costs
- Compact design

Flexible design

- Configurable in tower or rack-mount format
- Rotatable display
- UPS can be connected with up to nine external battery modules (EBMs) for extended runtime
- Long backup models available
- Full set of accessories and connectivity options

Efficient service concept

- Manually operated maintenance bypass switch (optional)
- Easy set-up and maintenance (plug-and-play)
- User-friendly display
- Hot-swap user-replaceable internal batteries

PowerValue 11 RT G2

Product features

Scalable solution

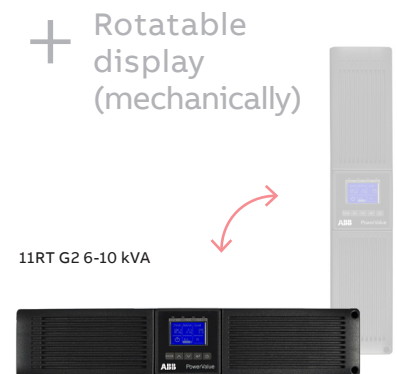
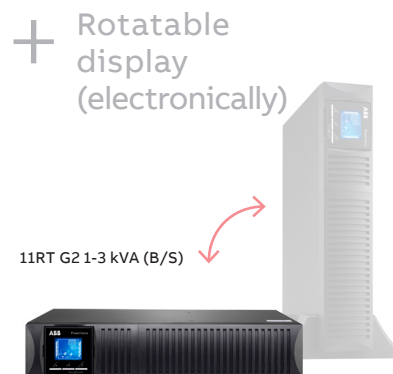
The advanced system architecture guarantees that the user is able to select a system to match their needs. Scalable runtime and the easy introduction of additional batteries make the solution sustainable.

In addition, three PowerValue 11 RT G2 6 or 10 kW UPSs can be connected in parallel to increase total power or to add redundancy. The UPSs are delivered with an installed parallel board and paralleling cables. No additional hardware is required for a parallel installation.

Easy installation and maintenance

Ease of installation and operation is guaranteed. The 1-3 kVA module is a plug-n-play device where all you need to do is to plug it in a wall socket to begin protection. The 6-10 kVA UPS only requires basic electronic competence to properly start up the unit.

Both models have a versatile orientation (rack or tower), just by rotating the display; for 1-3 kVA UPS this is as easy as pushing a button. Mechanical accessories for securing the installation in standard 19" racks or in a vertical position are included in each UPS.



Complete product offering

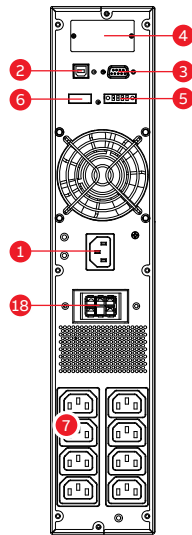
PowerValue 11RT G2 comes as a complete offering. For the range 1-3 kVA, B and S models are available. B models include internal batteries for basic runtime applications; however external battery modules (EBMs) can be plugged in to extend the system backup. S models have no internal batteries but a more powerful battery charger to support runtime-demanding applications; up to nine external battery modules (EBMs) or third-party battery packs (adapter included in the UPS) can be connected to form a personalized battery capacity.

The 6-10 kVA UPS integrates a max 12 A battery charger to withstand the most demanding scenarios and to support high-capacity battery extensions. A comprehensive set of accessories and options is available, too: External battery modules (EBMs), external maintenance bypass with PDU, 1U automatic transfer switch (ATS), rail kits for rack mounting, relay card with additional I/O potential-free contacts and full connectivity suite are available to complete the installation. Finally, optional yearly warranty extensions to the comprehensive basic warranty of three years allow peace of mind throughout the whole life cycle of the UPS

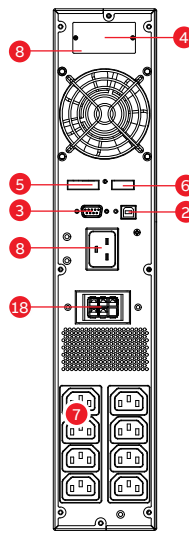
PowerValue 11 RT G2

Available models

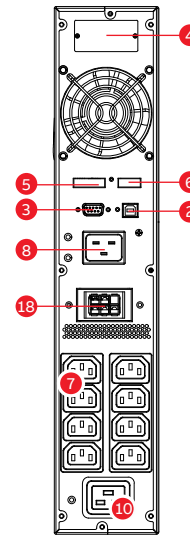
1	AC input 10 A
2	USB port
3	RS-232
4	SNMP / AS400 slot
5	EPO / dry contact input port
6	Dry contact output port
7	AC output 10A
8	AC input 16A
9	AC input 20 A
10	AC output 16A
11	EPO
12	Parallel port
13	Dry in / out
14	MBP connector
15	Output breaker
16	I/O terminals
17	Input breaker
18	EBM connector



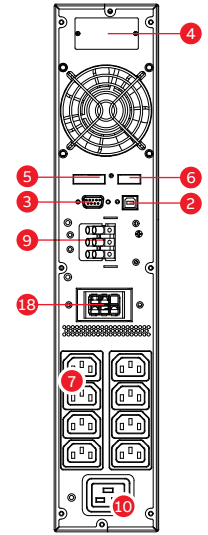
PowerValue
11RT G2 1 kVA B/S



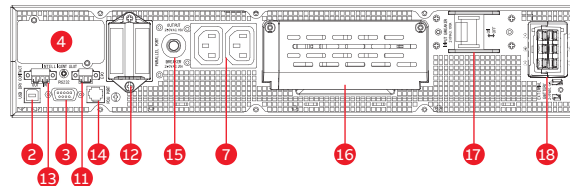
PowerValue
11RT G2 - 2 kVA B/S



PowerValue
11RT G2 - 3 kVA B



PowerValue
11RT G2 - 3 kVA S



PowerValue 11RT G2 - 6-10 kVA

Options

- Rack installation kit allows for easy mounting in standard 19" rack
- Full-range connectivity: SNMP, ModBus (RS-485 and TCP/IP), environmental monitoring probe, relay card with I/O contacts
- External maintenance bypass
- 1U automatic transfer switch (ATS) (PowerValue 11RT G2 1-3 kVA)
- High capacity external battery modules (EBMs) to scale up the system runtime (a plug-and-play cable included to connect UPS and other battery modules)

UPS configuration

- Online double conversion UPS
- Unity power factor (kW = kVA)
- Efficiency in online mode up to 95%
- Efficiency in eco-mode up to 98%
- Configurable in tower format or rack-mount
- Three 6 kVA and 10 kVA UPSs (max 30 kW per system) can be connected in parallel for redundancy or extra capacity
- Cold start
- Frequency-converter operation (50 Hz or 60 Hz)
- Interfaces: USB, RS-232, potential-free contacts, EPO
- Load segmentation (for PowerValue 11RT G2 1-3 kVA)

PowerValue 11 RT G2

Technical specification

GENERAL DATA	1kW B/ S	2kW B/ S	3kW B/ S	6 kW	10 kW
Output rated power	1,000 W	2,000 W	3,000 W	6,000 W	10,000 W
Output power factor	1.0	1.0	1.0	1.0	1.0
Topology	Online double conversion				
Parallel configuration	No	No	No	Yes, up to 3 UPS	Yes, up to 3 UPS
Inbuilt batteries	Yes/No	Yes/No	Yes/No	No	No
INPUT					
Nominal input voltage	208/220/230/240 VAC				
Input voltage tolerance	120-300 VAC (load dependent)			100-276 (load dependent)	
Input current THDi	<5 % with full resistive load			<3 % with full resistive load	
Frequency range	45-55 Hz / 54-66 Hz			45-55 Hz / 54-66 Hz (extendable to 40~70 HZ at load < 60 %)	
Power factor	≥0.99			≥0.995	
OUTPUT					
Rated output voltage	208/220/230/240 VAC				
Voltage tolerance	±1 % (referred to 230V)				
Voltage distortion	< 2 % linear load, <5 % non-linear load			<1 % linear load, <5 % non-linear load	
Overload capacity (linear load) on inverter	60 s: 102-129 % load 10 s: 130-150 % load 300 ms: ≥ 150 % load			10 m: 102-125 % load 30 s: 126 to 150 % load 500 ms: ≥ 150 % load	
Nominal frequency	50 or 60 Hz				
Crest factor	3:1 (load supported)				
EFFICIENCY					
Overall system efficiency	Up to 92 %			Up to 95 %	
In eco-mode	Up to 98 %			Up to 98 %	
ENVIRONMENT					
Protection rating	IP20				
Storage temperature	UPS: -25 °C to 60 °C; batteries: 0 °C to 35 °C				
Operating temperature	0 °C to 40 °C				
Relative humidity	0 % to 95 %				
Altitude (above sea level)	1000 m without derating				
BATTERIES					
Type	VRLA (valve regulated lead-acid)				
Inbuilt batteries	2x9.4 Ah	4x9.4 Ah	6x9.4 Ah	-	-
Max charging current	1.5 A/6 A	1.5 A/6 A	1.5 A/6 A	0-12 A adjustable	
COMMUNICATIONS					
User interface	LCD				
Optional communication cards	SNMP; ModBus; AS400; Environmental monitoring sensor probe				
STANDARDS					
Safety	IEC/EN 62040-1				
EMC	IEC/EN 62040-2				
Performance	IEC/EN 62040-3				
Manufacturing	ISO 9001:2015, ISO 14001:2015, OHSAS 18001				
WEIGHT, DIMENSIONS					
Weight	11.4/5.8 kg	18.1/8.7 kg	27.9/9 kg	13.6 kg	15.5 kg
Dimensions w x h x d	438x86(2U) x309 mm	438x86(2U) x426 mm	438x86(2U) x629 mm	438x86(2U) x573 mm	438x86(2U) x573 mm

PowerValue 11RT G2

Ordering info table

UPS	External battery module (EBM)	Article number	Power (VA/W)	Typical runtime (min)	Dimensions WxHxD (mm)	Weight (kg)
PowerValue 11RT G2 1 kVA B		4NWP100200R0001	1000/1000	13'	438x86 (2RU)x309	11.4
+	EBM 11RT G2 1 kVA	4NWP100203R0001	1000/1000	49'	438x86 (2RU)x309/pc	17.9/pc
+	2xEBM 11RT G2 1 kVA	2x4NWP100203R0001	1000/1000	89'		
+	3xEBM 11RT G2 1 kVA	3x4NWP100203R0001	1000/1000	128'		
+	4xEBM 11RT G2 1 kVA	4x4NWP100203R0001	1000/1000	170'		
PowerValue 11RT G2 2 kVA B		4NWP100201R0001	2000/2000	13'	438x86 (2RU)x426.5	19.1
+	EBM 11RT G2 2 kVA	4NWP100204R0001	2000/2000	50'	438x86 (2RU)x426.5	31.3/pc
+	2xEBM 11RT G2 2 kVA	2x4NWP100204R0001	2000/2000	90'		
+	3xEBM 11RT G2 2 kVA	3x4NWP100204R0001	2000/2000	131'		
+	4xEBM 11RT G2 2 kVA	4x4NWP100204R0001	2000/2000	172'		
PowerValue 11RT G2 3 kVA B		4NWP100202R0001	3000/3000	13'	438x86 (2RU)x629	27.9
+	EBM 11RT G2 3 kVA	4NWP100205R0001	3000/3000	51'	438x86 (2RU)x629	44.9/pc
+	2xEBM 11RT G2 3 kVA	2x4NWP100205R0001	3000/3000	91'		
+	3xEBM 11RT G2 3 kVA	3x4NWP100205R0001	3000/3000	133'		
+	4xEBM 11RT G2 3 kVA	4x4NWP100205R0001	3000/3000	173'		

Table 3: Ordering info (UPS with internal batteries)

UPS	External battery module (EBM)	Article number	Power (VA/W)	Typical runtime (min)	Dimensions WxHxD (mm)	Weight (kg)
PowerValue 11RT G2 1 kVA S		4NWP100200R0007	1000/1000	-	438x86 (2RU)x309	5.8
+	EBM 11RT G2 1 kVA	4NWP100203R0001	1000/1000	29'	438x86 (2RU)x309/pc	17.9/pc
+	2xEBM 11RT G2 1 kVA	2x4NWP100203R0001	1000/1000	71'		
+	3xEBM 11RT G2 1 kVA	3x4NWP100203R0001	1000/1000	109'		
+	4xEBM 11RT G2 1 kVA	4x4NWP100203R0001	1000/1000	152'		
PowerValue 11RT G2 2 kVA S		4NWP100201R0007	2000/2000	-	438x86 (2RU)x426.5	8.7
+	EBM 11RT G2 2 kVA	4NWP100204R0001	2000/2000	30'	438x86 (2RU)x426.5	31.3/pc
+	2xEBM 11RT G2 2 kVA	2x4NWP100204R0001	2000/2000	72'		
+	3xEBM 11RT G2 2 kVA	3x4NWP100204R0001	2000/2000	110'		
+	4xEBM 11RT G2 2 kVA	4x4NWP100204R0001	2000/2000	154'		
PowerValue 11RT G2 3 kVA S		4NWP100202R0007	3000/3000	-	438x86 (2RU)x629	9
+	EBM 11RT G2 3 kVA	4NWP100205R0001	3000/3000	31'	438x86 (2RU)x629	44.9/pc
+	2xEBM 11RT G2 3 kVA	2x4NWP100205R0001	3000/3000	73'		
+	3xEBM 11RT G2 3 kVA	3x4NWP100205R0001	3000/3000	111'		
+	4xEBM 11RT G2 3 kVA	4x4NWP100205R0001	3000/3000	155'		

Table 4: Ordering info (UPS with enhanced battery charger)