

ABB PowerValue 11RT G3 LIB 1-3kVA UPS

Uninterrupted Power. Advanced Lithium-ion Technology. Built for Critical Demands



Ensure uninterrupted power and protect critical equipment with the ABB PowerValue 11RT G3 LIB 1-3kVA UPS, engineered for reliability and adaptability. This advanced system delivers robust surge and outage protection, customizable configurations, and intuitive controls—all while optimizing energy efficiency and minimizing downtime. Trust ABB's expertise to maintain seamless performance for your essential operations.

Always-On Power for Your Most Sensitive Equipment

The ABB PowerValue 11RT G3 LIB UPS delivers flawless, clean energy to safeguard servers, medical devices, industrial systems, and more. With double-conversion online technology and integrated lithium-ion batteries, it continuously filters and stabilizes incoming power, eliminating surges, sags, and noise. When an outage strikes, the transition to battery power is instant—zero downtime, zero disruptions.

Key Features:

- **Lithium-ion Battery:** Provides longer backup time with an inbuilt battery and supports an external lithium-ion battery module.
- **Smart Overload Protection:** Automatically switches to bypass mode during faults and restores inverter power once safe.
- **Low TCO:** 8 years design life and 2,000 battery life cycle
- **Global Accessibility:** Touch-enabled LCD with 7 selectable languages.

Advanced Battery Management

System (BMS): Power with Precision

- **Predictive Battery Health Monitoring:** Detects voltage, current, and temperature (V/I/T) anomalies early. Accurately forecasts state-of-charge (SOC) and state-of-health (SOH) for proactive battery replacement planning.
- **Reliable Battery Management System:** A specially designed BMS optimized for UPS performance.
- **Dual-Layer Protection:** Combines hardware and firmware safeguards for real-time threat response.

Cold Start: Power Up Anywhere, Anytime

Launch the UPS directly from batteries—even during blackouts—to keep critical systems running. This feature also acts as a diagnostic tool:

- If the UPS starts on a battery but fails to switch to online/bypass mode, it confirms a mains power failure, accelerating troubleshooting.

Remote Power Off (RPO): Safety First

- **Full Disconnect:** Instantly cuts AC/DC power to loads for safe maintenance or emergencies.
- **Secure Reactivation:** Reset the RPO connector, clear the status via LCD, and press the power button to restore operations—no accidental restarts.

Constant Voltage & Frequency (CVCF) Mode

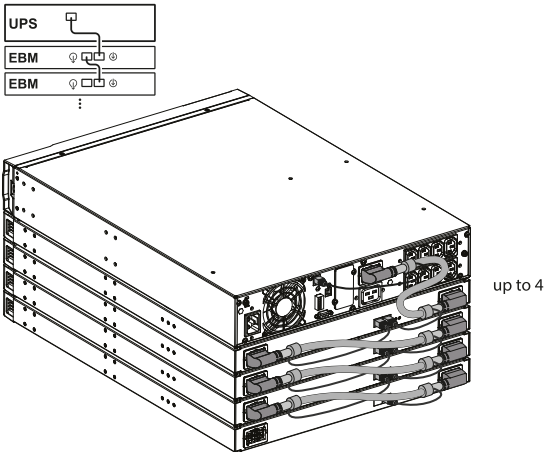
- **Stable Output, Always:** Converts frequencies (50Hz ↔ 60Hz) and locks voltage/frequency to shield equipment from grid instability.
- **Simple Setup:** Activate CVCF via the LCD menu—ideal for regions with erratic power or sensitive lab/industrial environments.

Technical Excellence, Delivered

- **Wide Input and Output Range:** Supports 50Hz/60Hz frequency selection, with an input range of 160V–300V AC and an output of 200/208/220/230/240V AC.
- **High Overload Capability:** Operates continuously at 105% load and sustains 125% overload for up to 5 minutes without switching to inverter mode.
- **Global Safety and Compliance:** Meets strict IEC and UL standards for superior quality and reliability

Battery modules

The ABB PowerValue 11RT G3 LIB 1-3kVA UPS supports battery modules to extend runtime during prolonged outages, ensuring critical operations remain powered. With a compact 1U height, the module minimizes rack space usage, maximizes installation flexibility, and helps reduce overall lifecycle costs. Paired with an intelligent charging system, it optimizes performance and lifespan, delivering adaptable, cost-effective power continuity for demanding environments.



Power (KVA)	Internal battery	Charging current
1 K	1x9 Ah	1.5 A
1.5 K	1x9 Ah	1.5 A
2 K	1x9 Ah	1.5 A
3 K	1x9 Ah	1.5 A



Power	Dimensions (WxHxD) (mm)	Weight (kg)	Battery
1 K	438*43*448	12	1x 12 Ah
1.5 K	438*43*448	12	1x 12 Ah
2 K	438*43*603	17.4	1x 12 Ah
3 K	438*43*603	17.4	1x 12 Ah

Monitoring software

This is an advanced UPS management software suite to allow remote control and monitoring of UPS equipped with network interface cards in a LAN or Internet environment. It can manage a single or multiple UPSs and prevent data loss from a power outage by programming a safe system shutdown. The software is included with the NMC adapter.

Network interface card

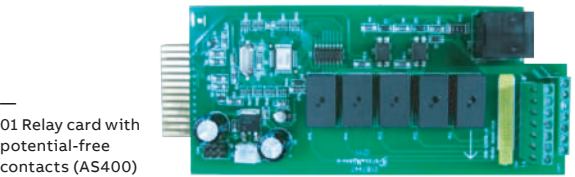
Enables real-time monitoring of your UPS system via a standard web browser or by using the included monitoring software. ABB's monitoring devices provide real-time visibility of the condition of your power equipment and help solve problems before they become critical.

Supported models

Network Management Card (NMC)	Modbus Card (Modbus)	Temperature and humidity sensors (EMP)

Relay interface card

Installable and hot-swappable card providing contact closures for remote monitoring of alarm conditions of PowerValue 11RT G3 LIB 1-3KVA UPS systems.



Models

NMC Card	4NWP100110R0001
Modbus Card	4NWP104039R0001
EMP	4NWP104040R0001
AS400 Card	4NWP100120R0001

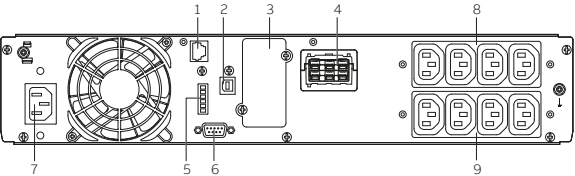
Serial Communication Cable

- RS232 cable

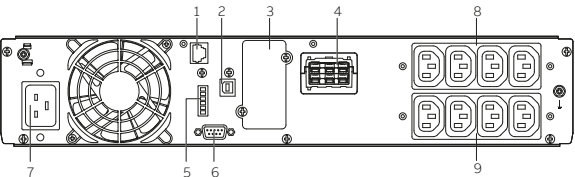


Rear view

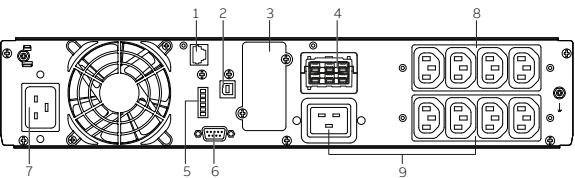
UPS PowerValue 11RT G3 LIB 1/1.5 kVA



UPS PowerValue 11RT G3 LIB 2 kVA



UPS PowerValue 11RT G3 LIB 3 kVA



No.	Description
1	EBM auto detection
2	USB
3	Slot Card Box
4	EBM Connector
5	RPO/Dry in/Dry out
6	RS 232
7	Input socket (1 k/1.5 k: 10A, 2 K/3K: 16 A)
8	Programmable output outlets (1-3 kVA: 10 A)
9	Output outlets (1-2 kVA: 10 A; 3 kVA: 10 A+16 A)

Technical specifications

GENERAL DATA	1 kVA	1.5 kVA	2 kVA	3 kVA
Apparent power	1 kVA	1.5 kVA	2 kVA	3 kVA
Active power	1 kW	1.5 kW	2 kW	3 kW
UPS type	Online double conversion			
Battery	Inbuilt	Inbuilt	Inbuilt	Inbuilt
MECHANICAL				
Dimensions (width×height×depth) [mm]	438 x 85.5 x 445	438 x 85.5 x 445	438 x 85.5 x 600	438 x 85.5 x 600
Weight (with batteries)	14.95 kg	15.2 kg	21.1 kg	21.45 kg
ACOUSTIC NOISE (ISO 7779&At front 1 m distance, without buzzer)				
In normal mode (at <=25 °C) at 100/50% Load	<45 dB	<45 dB	<50 dB	<50 dB
In battery mode (at <=25 °C) at 100/50% Load	<45 dB	<45 dB	<50 dB	<50 dB
SAFETY				
Access	Operator	Operator	Operator	Operator
Degree of protection against hazards and water ingress	IP 20	IP 20	IP 20	IP 20
ELECTROMAGNETIC COMPATIBILITY				
Compliant to IEC 62040-2	Yes	Yes	Yes	Yes
Category Emission/Immunity	C2	C2	C2	C2
ENVIRONMENTAL				
Storage temperature range	-25 to 55 °C (5 to 140 °F) without batteries	-25 to 55 °C (5 to 140 °F) without batteries	-25 to 55 °C (5 to 140 °F) without batteries	-25 to 55 °C (5 to 140 °F) without batteries
Operative temperature range	0 °C – +40 °C (40~50 °C needs to be derated)	0 °C – +40 °C (40~50 °C needs to be derated)	0 °C – +40 °C (40~50 °C needs to be derated)	0 °C – +40 °C (40~50 °C needs to be derated)
Storage (models with batteries)	0 °C – +40 °C	0 °C – +40 °C	0 °C – +40 °C	0 °C – +40 °C
Relative humidity	≤95% (non-condensing)	≤95% (non-condensing)	≤95% (non-condensing)	≤95% (non-condensing)
Operating altitude	0~3000 m (the load derating 1 % every up 100 m @1000~3000 m)			
ADDITIONAL AND USUAL INFORMATION				
Input sockets	1x IEC C14	1x IEC C14	1x IEC C20	1x IEC C20
Output outlets	1 main outlet group (with 4 x IEC C13) 1 programmable outlet group (with 4 x IEC C13)			1 main outlet group (With 1 x IEC C19 + 4 x IEC C13) 1 programmable outlet group (With 4 x IEC C13)
Cable entry	Rear	Rear	Rear	Rear
External battery cable entry	Rear	Rear	Rear	Rear
Accessibility	Front and rear	Front and rear	Front and rear	Front and rear
Air outlet	Rear	Rear	Rear	Rear
OPTIONS				
Network Management Card (NMC)	Yes	Yes	Yes	Yes
Temperature and humidity sensors (cooperate with NMC)	Yes	Yes	Yes	Yes
Modbus card	Yes	Yes	Yes	Yes
Relay card with potential-free contacts (customer outputs)	Yes	Yes	Yes	Yes
RS232 cable	Yes	Yes	Yes	Yes
INCLUDED (DEFAULT)				
Sea freight packaging (pallet, carton box)	Included	Included	Included	Included

Backup time¹

	1 kVA	1.5 kVA	2 kVA	3 kVA
UPS interal batteries	18/24/36/66	12/16/24/44	15/20/29/57	10/13/20/38
UPS + 1 batt module	42/56/84/154	28/37/56/102	35/47/69/134	23/31/46/90
UPS + 2 batt module	66/89/132/242	44/59/88/161	55/73/109/210	36/49/73/142
UPS + 3 batt module	91/121/180/330	60/80/121/220	75/100/148/287	49/66/100/194
UPS + 4 batt module	115/153/228/418	76/102/153/279	95/127/188/364	63/84/127/246

1) Battery autonomy in minutes at 100 / 75 / 50 / 25% load

Given runtimes are estimates and valid at 20 °C.

Actual runtime of the system will depend on many variables, including the age of the batteries and environmental conditions.

Input characteristics

	1 kVA	1.5 kVA	2 kVA	3 kVA
Acceptance voltage (steady-state, r.m.s)	110-300 V AC	110-300 V AC	110-300 V AC	110-300 V AC
Nominal voltage	160-300 V AC	160-300 V AC	160-300 V AC	160-300 V AC
Tolerance	$\begin{aligned} &<110 \text{ V: Go to battery mode} \\ &110 \text{ V}+100 \times (\text{Load\%} - 50\%): 100\% > \text{load} > 50\% \\ &160 \text{ V} \sim 300 \text{ V: } 100\% \text{ load} \\ &300 \text{ V: Go to battery mode} \end{aligned}$			
Frequency, rated	50Hz/60Hz (selectable)	50Hz/60Hz (selectable)	50Hz/60Hz (selectable)	50Hz/60Hz (selectable)
Frequency tolerance	45 Hz – 55 Hz (50 Hz system) / 54 Hz – 66 Hz (60 Hz system)			
Rated Input Current (Input Voltage 230 V)	4.9 A	7.4 A	9.4 A	14.1 A
Maximum current (with charging batt. and input voltage tolerance, continuous over load)	5.6 A	8.2 A	10.8 A	15.7 A
Total harmonic distortion (THDi)	< 5.5 % at 100% R load	< 5.5 % at 100% R load	< 5 % at 100% R load	< 5 % at 100% R load
Power factor	≥ 0.99 @ 100% load	≥ 0.99 @ 100% load	≥ 0.99 @ 100% load	≥ 0.99 @ 100% load
AC power distribution system	IT, TN-S, TT	IT, TN-S, TT	IT, TN-S, TT	IT, TN-S, TT
Phases required	1 phase	1 phase	1 phase	1 phase
Neutral required	Yes	Yes	Yes	Yes
Connection	3 wires: L + N + PE	3 wires: L + N + PE	3 wires: L + N + PE	3 wires: L + N + PE
Cable entry	Rear	Rear	Rear	Rear

Output characteristics

	1 kVA	1.5 kVA	2 kVA	3 kVA
Rated power	1000 W	1500 W	2000 W	3000 W
AC power distribution system	IT, TN-S, TT	IT, TN-S, TT	IT, TN-S, TT	IT, TN-S, TT
Available phases	1 phase	1 phase	1 phase	1 phase
Neutral available	Yes	Yes	Yes	Yes
Rated voltage (steady state, r.m.s.)	200/208/220/230/240 V AC (derating 10% at 208V, derating 20% at 200 V)			
Voltage accuracy	$\pm 1\%$	$\pm 1\%$	$\pm 1\%$	$\pm 1\%$
Total Harmonic Distortion (THDu), 100% Load, Normal Mode				
- Linear	< 1%	< 1%	< 1%	< 1%
- Non-linear (acc. to IEC 62040-3)	< 4%	< 4%	< 4%	< 4%
Total Harmonic Distortion (THDu), 100% Load, Battery Mode				
- Linear	< 1%	< 1%	< 1%	< 1%
- Non-linear (acc. to IEC 62040-3)	< 4%	< 4%	< 4%	< 4%
Voltage Transient And Recovery Time, 100% Step Load				
- Non-linear (acc. to IEC 62040-3)	100 ms	100 ms	100 ms	100 ms
Transfer time normal mode --> battery mode	0 ms	0 ms	0 ms	0 ms
Frequency (steady-state), rated	Synchronized with the input mains: 45–55 Hz for 50 Hz systems 54–66 Hz for 60 Hz systems 40 Hz–70 Hz (CVCF mode, derating to 60%)			
Variation in free-running	± 0.1 Hz	± 0.1 Hz	± 0.1 Hz	± 0.1 Hz
Max synch phase error (referred to a 360° cycle)	$\leq 3^\circ$	$\leq 3^\circ$	$\leq 3^\circ$	$\leq 3^\circ$
Max slew-rate	< 1 ± 0.5 Hz/s	< 1 ± 0.5 Hz/s	< 1 ± 0.5 Hz/s	< 1 ± 0.5 Hz/s
Nominal current (In), r.m.s. rated	4.6 A	6.9 A	9.1 A	13.7 A
Overload on inverter	100%<load≤105% continuous 105%< load ≤125% for 5 minutes 125%<load≤150% for 30 seconds >150% for 500 ms			
Fault clearing capability normal mode and battery mode (100 ms)* default	13 A	20 A	27 A	40 A
Crest factor (Load supported)	3 : 1	3 : 1	3 : 1	3 : 1
Load power factor, rated	1.0	1.0	1.0	1.0
Displacement (permissible lead-lag range)	0.3 lead – 0.3 lag (0.3~0.8: Derating 50%; 0.8~1: No derating)	0.3 lead – 0.3 lag (0.3~0.8: Derating 50%; 0.8~1: No derating)	0.3 lead – 0.3 lag (0.3~0.8: Derating 50%; 0.8~1: No derating)	0.3 lead – 0.3 lag (0.3~0.8: Derating 50%; 0.8~1: No derating)

