

5 PowerValue 11T G2 1-10 kVA

A cost-effective solution for maximum power protection



ABB's PowerValue 11T G2 is a single-phase in/out, double conversion online uninterruptible power supply (UPS) that guarantees up to 10 kW per single UPS of clean, reliable power for your critical single-phase applications. As well as maintaining power to your server room, advertising display, turnstiles, lab equipment, transportation signaling systems, ATM or vending machine, the PowerValue 11T G2 also conditions incoming power to eliminate spikes, swells, sags, noise and harmonics.

Featuring voltage and frequency independent (VFI) topology, the tower-only PowerValue 11T G2 saves costs by minimizing energy losses with its double conversion efficiency of up to 95 percent

High reliability

- Double conversion topology protects the load from all input disturbances
- Parallelable up to three units (6-10 kVA only) to provide system redundancy
- User-replaceable batteries
- Wide input voltage tolerance

Low cost of ownership

- Scalable runtime
- High operating efficiency
- Low installation and upgrading costs
- Compact design
- Output power factor of 1.0 (6-10 kVA only)

(up to 98 percent in ECO mode). Two or three units can be connected in parallel to boost power delivery to a maximum of 30 kW or to provide redundancy.

Simple to install or maintain, inexpensive to run and with the most compact online UPS footprint available on the market, the PowerValue 11T G2 provides stable, regulated, transient-free, pure sine wave AC power with extremely tight output voltage regulation. All units can be fitted with up to four external battery modules (EBMs) to extend runtime to well over two hours. Each EBM is dedicated to its corresponding UPS and setup is easily accomplished via the LCD menu.

Flexible design

- Multiple connectivity options
- Each UPS can be connected with up to four parallel battery modules for extended runtime
- Adjustable DC voltage and battery charger current
- Extended backup time models available
- Best power density available in the market segment

Efficient service concept

- Integrated manually operated maintenance bypass switch (6-10 kVA only)
- Easy setup and maintenance (plug and play)
- User-friendly display
- Remote monitoring options

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Product features

The PowerValue 11T G2 with its cost-effective ABB UPS technology makes a high-performance and is now available to market sectors with lower power requirements: Small server rooms, critical lab or industrial equipment, security installations and applications of a similar power class can now profit from one of 12 PowerValue 11T G2 models.

With the most compact online UPS footprint available, the PowerValue 11T G2 features true on-line double conversion. This provides a flexible output frequency and isolates the UPS from upstream disturbances so that the critical load sees only stable, well-regulated, transient-free, pure sine wave AC power.

A rated output power factor up to 1.0 (kVA = kW) means the PowerValue 11T G2 delivers 11 percent more active power than a UPS with a power factor of 0.9. The UPS is optimized for modern IT loads and helps users reduce their energy budget

with its double conversion efficiency of up to 95 percent (up to 98% in ECO mode).

- Low input line disturbances: input PF \geq 0.995 @ 100 percent linear load – THDi < 3 percent
- Flexible configuration for scalable runtime: UPS and EBMs with and without batteries (long backup)
- Adjustable DC voltage and battery charger current
- Digital charger technology provides accurate charger current setting and reduces charger ripple current
- The UPS is delivered with an inbuilt parallel board and paralleling cables. No additional hardware is required for this installation.

All this with the same guaranteed high availability and quality standards as ABB's higher-power premium UPS models - and at the most attractive entry level price around.

UPS configuration

Standard

- Tower-type, IP20 UPS enclosure
- Single-phase in and out
- Online double conversion UPS
- Paralleling up to three units allows for increase of capacity to 30 kW or redundancy (6-10 kVA only)
- Operator and status LCD
- Wide voltage input frequency range
- Inbuilt batteries (B/B2 versions only)
- Maintenance bypass switch (6-10 kVA only)
- Plug-and-play

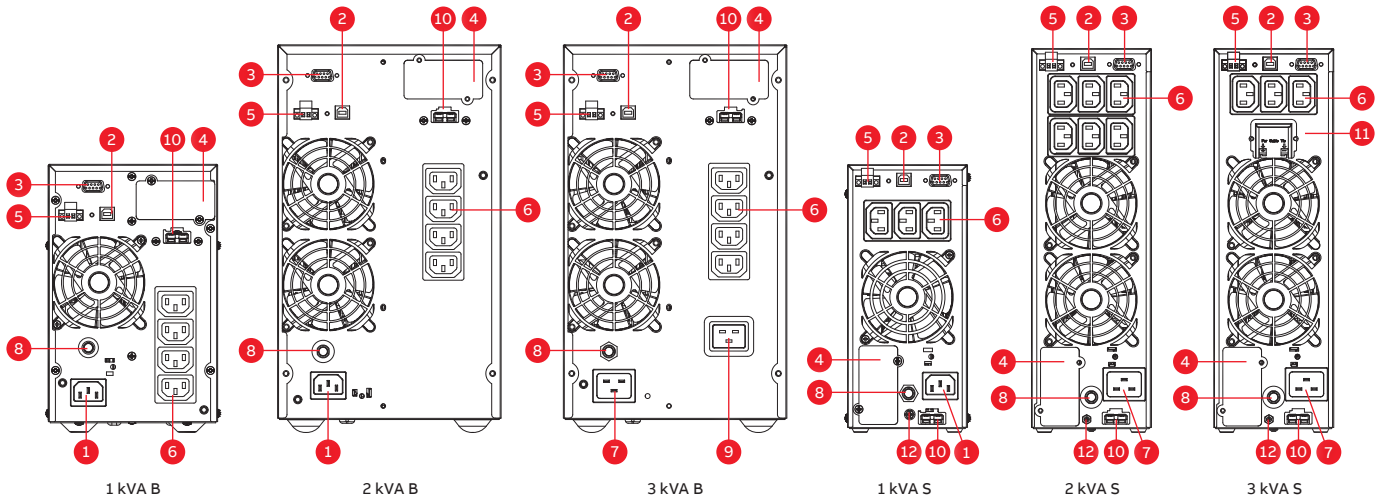
Options

- Additional battery cabinets (EBM) for scaling autonomy time
- SNMP, ModBus and AS400 interface cards for remote control and monitoring of the UPS via a web browser
- Sensors – combined with the network interface card, environmental humidity and temperature sensors can be integrated into the system and monitored remotely
- Connectivity functionality via Winpower SNMP (network management card), mini SNMP, ModBus, mini ModBus, EMP (environmental monitoring probe), AS400 and mini AS400

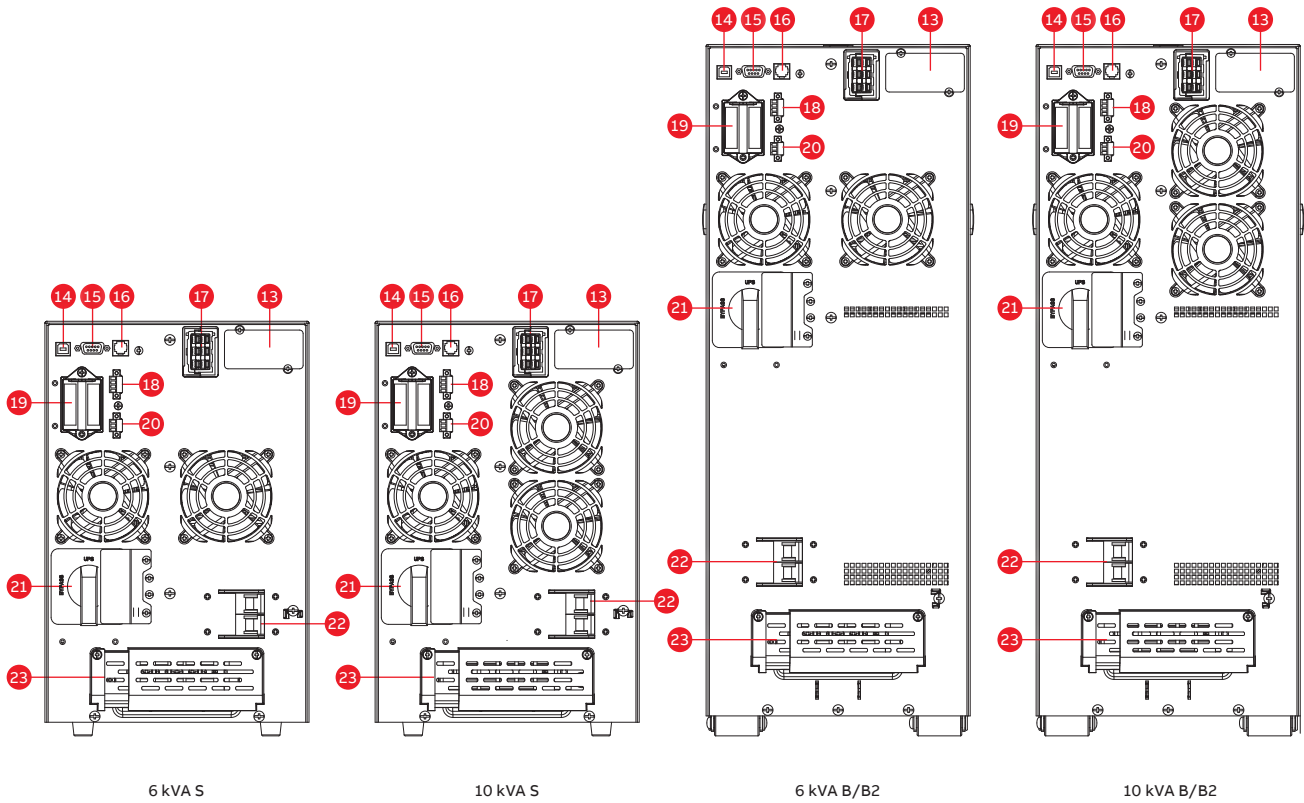


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Available models



| | | | |
|------------------|--|-------------------|-------------------|
| 1. AC input 10 A | 4. Mini SNMP/ Mini ModBus / Mini AS400 | 7. AC input 16 A | 10. EBM connector |
| 2. USB port | 5. EPO / dry input | 8. Output breaker | 11. AC input 20 A |
| 3. RS-232 | 6. AC output 10 A | 9. AC output 16 A | 12. GND contact |



| | | | |
|-----------------------|-----------------------------|-------------------|-------------------|
| 13. SNMP/ModBus/AS400 | 16. Reserved for future use | 19. Parallel port | 22. Input breaker |
| 14. USB port | 17. EBM connector | 20. EPO | 23. I/O terminals |
| 15. RS-232 | 18. Dry in / out | 21. MBP switch | |

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Technical specifications

| GENERAL DATA | G2 1kVA B/ S | G2 2kVA B/ S | G2 3kVA B/ S | G2 6kVA B/ B2 / S | G2 10kVA B/ B2 / S |
|---|--|----------------------------------|----------------------------------|--|--|
| Output rated power | 900 W | 1'800W | 2'700W | 6'000W | 10'000W |
| Output power factor | 0.9 | 0.9 | 0.9 | 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 | Yes/Yes/No | Yes/Yes/No |
| INPUT | | | | | |
| Nominal input voltage | 220/230/240 VAC | | | 208/220/230/240 VAC | |
| Input voltage tolerance | 100-300 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 | | | 45-55Hz / 54-66Hz (extendable to 40~70HZ at load < 60%) | |
| Power factor | ≥0.99 | | | ≥0.995 | |
| OUTPUT | | | | | |
| Rated output voltage | 220/230/240 VAC | | | 208/220/230/240 VAC | |
| Voltage tolerance | ±1% (referred to 230V) | | | | |
| Voltage distortion | <2% linear load, <6% non linear load | | | <1% linear load, <5% non linear load | |
| Overload capacity (linear load) on inverter | 60s: 106-130% load 10s: 131-150% load 300ms: ≥ 150% load | | | 10m: 102-125% load 30s: 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 89% | Up to 91% | Up to 91% | Up to 95% | |
| In eco-mode | Up to 97.5% | Up to 98% | 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 | | | 0°-40°C (up to 50°C at 50% load) | |
| Relative humidity | 0% to 95% | | | | |
| Altitude (above sea level) | 1000m without derating | | | | |
| BATTERIES | | | | | |
| Type | VRLA (valve regulated lead-acid) | | | | |
| Inbuilt batteries | 2x9.4 Ah (B) | 4x9.4Ah(B) | 6x9.4Ah(B) | 16x9Ah(B) 20x9Ah (B2) | 16x9Ah(B) 20x9Ah (B2) |
| Charging current | 1.5A/3-6A adjustable | 1.5A/1.5-6A adjustable | 1.5A/1.5-6A adjustable | 0-4A adjustable (B,B2) 0-12 adjustable (S) | |
| Recharge time (inbuilt batteries) | 4h to 90% | | | | |
| COMMUNICATIONS | | | | | |
| User interface | LCD display | | | | |
| 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 | 9.2/3.9 Kg | 17.4/6.4 Kg | 22.7/6.4 Kg | 61/73/13 Kg | 55.2/65.2/15.2 Kg |
| Dimensions w x h x d | 144x228x356 mm 102x228x346mm | 190x327x399 mm 102x327x390 mm | 190x327x399 mm 102x327x390 mm | B / B2: 225 x 589x 452 mm | B / B2: 225 x 589x 452 mm S: 225x 348 x 452 mm |

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Ordering info table

| UPS | External battery module (EBM) | Article number | Power (VA/W) | Typical runtime (min) | Dimensions WxHxD (mm) | Weight (kg) |
|-----------------------------------|-------------------------------|-------------------|--------------|-----------------------|-----------------------|-------------|
| PowerValue 11T G2 1kVA B | | 4NWP100160R0001 | 1000/900 | 13.5 | 144x228x356 | 9.3 |
| + | EBM 11T G2 1kVA | 4NWP100165R0001 | 1000/900 | 65 | 144x228x356 / pc | 18.4 / pc |
| + | 2xEBM 11T G2 1kVA | 2x4NWP100165R0001 | 1000/900 | 130 | | |
| + | 3xEBM 11T G2 1kVA | 3x4NWP100165R0001 | 1000/900 | 200 | | |
| + | 4xEBM 11T G2 1kVA | 4x4NWP100165R0001 | 1000/900 | 275 | | |
| PowerValue 11T G2 2kVA B | | 4NWP100161R0001 | 2000/1800 | 14 | 190x327x399 | 17.2 |
| + | EBM 11T G2 2kVA | 4NWP100166R0001 | 2000/1800 | 68 | 190x327x399 / pc | 36.2 / pc |
| + | 2xEBM 11T G2 2kVA | 2x4NWP100166R0001 | 2000/1800 | 135 | | |
| + | 3xEBM 11T G2 2kVA | 3x4NWP100166R0001 | 2000/1800 | 210 | | |
| + | 4xEBM 11T G2 2kVA | 4x4NWP100166R0001 | 2000/1800 | 290 | | |
| PowerValue 11T G2 3kVA B | | 4NWP100162R0001 | 3000/2700 | 14 | 190x327x399 | 22.2 |
| + | EBM 11T G2 3kVA | 4NWP100167R0001 | 3000/2700 | 45 | 190x327x399 / pc | 36.2 / pc |
| + | 2xEBM 11T G2 3kVA | 2x4NWP100167R0001 | 3000/2700 | 90 | | |
| + | 3xEBM 11T G2 3kVA | 3x4NWP100167R0001 | 3000/2700 | 135 | | |
| + | 4xEBM 11T G2 3kVA | 4x4NWP100167R0001 | 3000/2700 | 185 | 190x327x399 / pc | 36.2 / pc |
| PowerValue 11T G2 6kVA B | | 4NWP100163R0001 | 6000/6000 | 14 | 225x589x452 | 61.2 |
| + | EBM 11T G2 6-10kVA (16x9) | 4NWP100168R0001 | 6000/6000 | 64 | 225x589x452 / pc | 95.2 / pc |
| + | 2xEBM 11T G2 6-10kVA (16x9) | 2x4NWP100168R0001 | 6000/6000 | 129 | | |
| + | 3xEBM 11T G2 6-10kVA (16x9) | 3x4NWP100168R0001 | 6000/6000 | 204 | | |
| + | 4xEBM 11T G2 6-10kVA (16x9) | 4x4NWP100168R0001 | 6000/6000 | 237 | | |
| PowerValue 11T G2 6kVA B2 | | 4NWP100163R0002 | 6000/6000 | 19 | 225x589x452 | 72.4 |
| + | EBM 11T G2 6-10kVA (20x9) | 4NWP100168R0002 | 6000/6000 | 87 | 225x589x452 | 115.6 / pc |
| + | 2xEBM 11T G2 6-10kVA (20x9) | 2x4NWP100168R0002 | 6000/6000 | 175 | | |
| + | 3xEBM 11T G2 6-10kVA (20x9) | 3x4NWP100168R0002 | 6000/6000 | 276 | | |
| + | 4xEBM 11T G2 6-10kVA (20x9) | 4x4NWP100168R0002 | 6000/6000 | 390 | | |
| PowerValue 11T G2 10kVA B | | 4NWP100164R0001 | 10000/10000 | 7 | 225x589x452 | 60.9 |
| + | EBM 11T G2 6-10kVA (16x9) | 4NWP100168R0001 | 10000/10000 | 31 | 225x589x452 / pc | 95.2 / pc |
| + | 2x EBM 11T G2 6-10kVA (16x9) | 2x4NWP100168R0001 | 10000/10000 | 64 | 225x589x452 / pc | 95.2 / pc |
| + | 3x EBM 11T G2 6-10kVA (16x9) | 3x4NWP100168R0001 | 10000/10000 | 101 | | |
| + | 4x EBM 11T G2 6-10kVA (16x9) | 4x4NWP100168R0001 | 10000/10000 | 143 | | |
| PowerValue 11T G2 10kVA B2 | | 4NWP100164R0002 | 10000/10000 | 9 | 225x589x452 | 70.9 |
| + | EBM 11T G2 6-10kVA (20x9) | 4NWP100168R0002 | 10000/10000 | 43 | 225x589x452 | 115.6 / pc |
| + | 2xEBM 11T G2 6-10kVA (20x9) | 2x4NWP100168R0002 | 10000/10000 | 87 | | |
| + | 3xEBM 11T G2 6-10kVA (20x9) | 3x4NWP100168R0002 | 10000/10000 | 137 | | |
| + | 4xEBM 11T G2 6-10kVA (20x9) | 4x4NWP100168R0002 | 10000/10000 | 194 | | |

Table 1: 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 11T G2 1kVA S | | 4NWP100160R0002 | 1000/900 | | 102x228x346 | 3.8 |
| + | EBM 11T G2 1kVA | 4NWP100165R0001 | 1000/900 | 48 | 144x228x356 / pc | 18.4 / pc |
| + | 2xEBM 11T G2 1kVA | 2x4NWP100165R0001 | 1000/900 | 100 | | |
| + | 3xEBM 11T G2 1kVA | 3x4NWP100165R0001 | 1000/900 | 155 | | |
| + | 4xEBM 11T G2 1kVA | 4x4NWP100165R0001 | 1000/900 | 195 | | |
| PowerValue 11T G2 2kVA S | | 4NWP100161R0002 | 2000/1800 | | 102x327x390 | 6.0 |
| + | EBM 11T G2 2kVA | 4NWP100166R0001 | 2000/1800 | 48 | 190x327x399 / pc | 36.2 / pc |
| + | 2xEBM 11T G2 2kVA | 2x4NWP100166R0001 | 2000/1800 | 110 | | |
| + | 3xEBM 11T G2 2kVA | 3x4NWP100166R0001 | 2000/1800 | 165 | | |
| + | 4xEBM 11T G2 2kVA | 4x4NWP100166R0001 | 2000/1800 | 210 | | |
| PowerValue 11T G2 3kVA S | | 4NWP100162R0002 | 3000/2700 | | 102x327x390 | 6.0 |
| + | EBM 11T G2 3kVA | 4NWP100167R0001 | 3000/2700 | 28 | 190x327x399 / pc | 36.2 / pc |
| + | 2xEBM 11T G2 3kVA | 2x4NWP100167R0001 | 3000/2700 | 70 | | |
| + | 3xEBM 11T G2 3kVA | 3x4NWP100167R0001 | 3000/2700 | 110 | | |
| + | 4xEBM 11T G2 3kVA | 4x4NWP100167R0001 | 3000/2700 | 140 | | |
| PowerValue 11T G2 6kVA S | | 4NWP100163R0003 | 6000/6000 | | 225x352x452 | 14.0 |
| + | EBM 11T G2 6-10kVA (20x9) | 4NWP100168R0002 | 6000/6000 | 49 | 225x589x452 | 115.6 / pc |
| + | 2xEBM 11T G2 6-10kVA (20x9) | 2x4NWP100168R0002 | 6000/6000 | 133 | | |
| + | 3xEBM 11T G2 6-10kVA (20x9) | 3x4NWP100168R0002 | 6000/6000 | 237 | | |
| + | 4xEBM 11T G2 6-10kVA (20x9) | 4x4NWP100168R0002 | 6000/6000 | 358 | | |
| PowerValue 11T G2 10kVA S | | 4NWP100164R0003 | 10000/10000 | | 225x352x452 | 16 |
| + | EBM 11T G2 6-10kVA (20x9) | 4NWP100168R0002 | 6000/6000 | 23 | 225x589x452 | 115.6 / pc |
| + | 2xEBM 11T G2 6-10kVA (20x9) | 2x4NWP100168R0002 | 6000/6000 | 64 | | |
| + | 3xEBM 11T G2 6-10kVA (20x9) | 3x4NWP100168R0002 | 6000/6000 | 114 | | |
| + | 4xEBM 11T G2 6-10kVA (20x9) | 4x4NWP100168R0002 | 6000/6000 | 172 | | |

Table 2: Ordering info (UPS with enhanced battery charger)