PROTECT 1
THREE PHASE INPUT / SINGLE PHASE OUTPUT UPS SYSTEM

Uninterruptible Power Supply
3-Phase Input; 1-Phase Output
10 – 20 kVA power supply

Online UPS systems for networks and data centers
Protect 1 offers you a high-power UPS system for all critical business applications. Among other fields of use, Protect 1 is suitable for networks, data centers, cash desk systems or building technology.

The VFI topology of Protect 1 protects reliably against all network problems.

Switchable in parallel
A compact parallel switch panel ensures the flexible and easy development of a parallel system.

Up to 3 devices can be switched in parallel. Hence, a power increase up to 60 kVA is possible in addition to the combination of power improvement and redundancy.

Control and monitoring
The clearly structured screen provides detailed information on all important operating conditions and events.

Data is transmitted through an RS232 interface.

With the extension slot, devices such as SNMP (PRO) adapter cards or potential-free contacts can be retrofitted. This supports remote monitoring via web browser and multi-server shutdown.

The special AEG shutdown software “CompuWatch” is included.

Main characteristics
- VFI topology (online/double conversion) protects against all network problems
- Static bypass switch (SBS) and foolproof maintenance bypass
- 10, 15 or 20 kVA with space-efficient, modern design
- n+x technology for active redundancy and/or performance increase
- Performance increase up to 60 kVA through parallel operation of up to 3 devices
- RS232 interface, extension slot e.g. for SNMP adapter card
- Battery systems with an expected lifespan of 10–12 years, according to EUROBAT, are available
- State-of-the-art technology for maximum reliability (DSP, CAN-Bus) and maximum efficiency (high-frequency IGBT)
## Classification VFI SS 111 acc. to IEC 62040-3

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<thead>
<tr>
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<th>Protect. 1.100</th>
<th>Protect. 1.150</th>
<th>Protect. 1.200</th>
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<tbody>
<tr>
<td>n+x - technology scalable (parallel switching capacity up to 3 units)</td>
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<tr>
<td>Power type rating</td>
<td>10 kVA</td>
<td>15 kVA</td>
<td>20 kVA</td>
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<tr>
<td></td>
<td>7 kW</td>
<td>10.5 kW</td>
<td>14 kW</td>
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<tr>
<td>Part number (UPS without battery)</td>
<td>600 000 4434</td>
<td>600 000 4435</td>
<td>600 000 4436</td>
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<tr>
<td>Part number (battery pack 1.100BP)</td>
<td>600 000 5097</td>
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<tr>
<td>Part number (battery pack 1.8P20)</td>
<td>100 000 1991</td>
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### UPS INPUT

- **Input voltage**: 400 / 230 V AC (3 ph~/N/PE)
- **Voltage range without battery mode**: 304 – 478 V AC (Bypass: 176 – 261 V AC)
- **Frequency (automatic selection)**: 50 Hz / 60 Hz ±4 Hz
- **Mains current (system reaction)**: λ ≥0.95
- **Current consumption at nominal load (max.)**: 13 A / 46 A (bypass) 19 A / 68 A (bypass) 25 A / 91 A (bypass)

### UPS OUTPUT

- **Rated output voltage (adjustable)**: 220 V AC / 230 V AC (default) / 240 V AC ±1 %
- **Frequency in battery mode**: 50 Hz / 60 Hz ±0.1 %
- **Output current (at 230 V AC)**: 43.4 A 65.2 A 86.9 A
- **Transfer time at mains outage**: 0 ms (without interruption)
- **Voltage waveform**: Sinusoidal, distortion THD <2 %
- **Overload response**: <130 % for 10 min. / 130 % for 1 s, then automatic transfer to bypass mode: 0 ms (without interruption)
- **Crest factor**: 3 : 1
- **Short circuit response**: Short circuit proof (2.5 x I N for 100 ms)

### BATTERY

- **Rated voltage (linked)**: 240 V DC
- **Charging characteristics**: IU – characteristic curve (charging voltage 274 V DC / charging current max. 4.2 A)
- **Autonomy time**: Expandable with external battery modules
- **Overload / deep discharge protection**: Yes

### COMMUNICATION

- **Interfaces**: RS232 (with status display and data values) Communication slot (for potential free contact, SNMP)
- **Shutdown software (on CD)**: 5 network licenses for all common OS (e.g. Windows, Linux, Mac, Unix, Sun etc.)
- **Failure indicators (acoustic/visual)**: Mains failure, overload, battery charging, battery replacement, failure LED bar graph for summary / battery capacity

### GENERAL DATA

- **Efficiency AC – AC (at nominal load)**: >90 %
- **Audible noise (1 m distance)**: <55 dB(A) <60 dB(A)
- **Operating temperature range**: 0° – 40 °C
- **Humidity**: 0 – 95 % (without condensation)
- **Operation altitude**: Up to 1000 m at nominal load
- **EMC conformity**: EN 62040-2 Class C3
- **Product safety**: EN 62040-1
- **Equipment color**: Blackline
- **Dimensions approx. W x H x D (mm) UPS**: 260 x 720 x 670 plus interception unit (90)
- **Dimensions approx. W x H x D (mm) battery extension unit**: 260 x 720 x 670 (Protect 1.100 BP) 260 x 720 x 810 (Protect 1. BP 20)
- **Weight approx. UPS**: 39 kg 55 kg 55 kg
- **Weight approx. battery extension unit**: 135 kg (Protect 1.100 BP) 170 kg (Protect 1. BP20)
- **Shipment**: Parallel connection cable, communication cable, UPS management software “CompuWatch” (CD), operating instructions
- **Conformity**: CE