AC Back-up Power Systems

Inverter program
UPS program
Diesel Engine Alternator Sets
Photovoltaic Generators
Customer Requirements, UPS

• Capacities 1 - 100 kVA
• Modularity
• Telecom reliability
• WW voltages and frequencies
• Flexibility in battery autonomy
• Battery control and monitoring
• Various optional functions
• Supervision
Detailed Customer Requirements, UPS

- 1 and 3 phase
- Selectable voltages
- Large input window
- Long autonomy
- Quick recharge
- Battery testing
- 10 and 5 y. battery

- Ericsson manual std.
- Remote monitoring
- Galvanic isolation
- THD filter
- Prim/Second AC distr.
- Modularity/Scalability
- 3 year warranty
UPS Program, for short term AC Back-up

- Computer Reliability
- Flexibility in battery autonomy
- Various options, HW and SW
- Field adjustable AC voltages and frequency
- Single- and three-phase versions
- From 1 kVA to 160 kVA
UPS system

Primary source area

Power equipment area

Load area

Service by-pass

AC Loads

(D)
## UPS Characteristics and options

<table>
<thead>
<tr>
<th>Rating kVA</th>
<th>Single phase</th>
<th>Three phase</th>
<th>50/60 Hz</th>
<th>Galvanic isolation</th>
<th>Extended run times</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 - 6</td>
<td>X</td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>8 - 15</td>
<td>X</td>
<td>Three phase in</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>7.5 - 45</td>
<td>X</td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>40 - 150</td>
<td>X</td>
<td></td>
<td>X</td>
<td>X</td>
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</tbody>
</table>
UPS 1, 3 and 6 kVA, BMS 20302+
Single phase in and out

- 3 kVA + batt
- 6 kVA + batt
- 1 kVA + batt
- 1 kVA, int batt
UPS 8 - 15 kVA, BMS 20303+

- Power range 8, 10, 12, and 15 kVA
- Single phase output
- Three and single phase inputs
- Static and manual by-pass switches as standard
- 208/115 V version available
UPS BMS 20303, upgrading

Upgrading with “Magic Number”
  8 to 10 kVA
  8 to 12 kVA
  10 to 12 kVA
Upgrading with “Magic Number” and changing power components
  8 to 15 kVA

no need to oversizing UPS, savings in distribution breaker rating
UPS 7.5 - 45 kVA, BMS 203 04

- Power range 7.5, 10, 15, 25, 30 and 45 kVA
- Three phase input and output
- 400/230 VAC (adjustable - 20/+15 VAC) 50 and 60 Hz
- Extended runtime option
- Static and manual bypass switches as standard
Typical Characteristics, BMS 20304

- Wide input voltage range
  - 294 - 484 V with full load
- Online efficiency 94%
- Input power factor 0.96
  - additional filter option available
- Audible noise <55 dB(A)
- LCD display
UPS BMS 20304, 7.5 - 15 kVA

- Small size and foot print
  - 0.3 m² foot print
- Top access to all components
- Internal batteries available
- Light weight
  - 95 kg without batteries
  - 215 kg (w 48 batteries)
UPS BMS 20304, 25 - 45 kVA

- Small size and footprint
- LCD display as standard
- Allows side to side installation
- Front access to all components
- Battery cabinets as ‘side car’ or separate cabinets
- Light weight
  - 215 kg w/o batteries

Dimensions:
- Height: 1530 mm
- Width: 382 mm
- Depth: 775 mm
UPS 40- 160 kVA, BMS 20305

- Power range 40, 65, 80, 100 and 160 kVA
- Three phase inputs and outputs
- Static and manual by-pass switches as standard
- 400 and 200 V versions
Battery Configurations, 1, 3 and 6 kVA BMS 20302

<table>
<thead>
<tr>
<th></th>
<th>1 kVA</th>
<th>3 kVA</th>
<th>6 kVA</th>
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<tbody>
<tr>
<td>Internal</td>
<td>10 min</td>
<td>6.5 min</td>
<td>7 min</td>
</tr>
<tr>
<td>BKB 102007</td>
<td>40 min</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>BKB 102008</td>
<td>55 min</td>
<td>18 min</td>
<td>N/A</td>
</tr>
<tr>
<td>BKB 102009</td>
<td>N/A</td>
<td>32 min</td>
<td>14 min</td>
</tr>
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</table>
## Battery Configurations
### 8-15 kVA, BMS 203 03

<table>
<thead>
<tr>
<th>Configuration</th>
<th>8 kVA</th>
<th>10 kVA</th>
<th>15 kVA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internal</td>
<td>7 Ah</td>
<td>17 min</td>
<td>13 min</td>
</tr>
<tr>
<td>BKB 104001/1</td>
<td>7 Ah</td>
<td>40 min</td>
<td>30 min</td>
</tr>
<tr>
<td>BKB 104001/2</td>
<td>14 Ah</td>
<td>70 min</td>
<td>50 min</td>
</tr>
<tr>
<td>2 x BKB 104001/2</td>
<td>28 Ah</td>
<td>2h, 15m</td>
<td>1h, 40m</td>
</tr>
</tbody>
</table>
## Battery Configurations
### 7.5-15 kVA, BMS 20304

<table>
<thead>
<tr>
<th></th>
<th>7,5 kVA</th>
<th>10 kVA</th>
<th>15 kVA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internal</td>
<td>7 Ah</td>
<td>18 min</td>
<td>13 min</td>
</tr>
<tr>
<td>BKB 104001/1</td>
<td>7 Ah</td>
<td>44 min</td>
<td>30 min</td>
</tr>
<tr>
<td>BKB 104001/2</td>
<td>14 Ah</td>
<td>75 min</td>
<td>50 min</td>
</tr>
<tr>
<td>2 x BKB 104001/2</td>
<td>28 Ah</td>
<td>2h, 22m</td>
<td>1h, 40m</td>
</tr>
</tbody>
</table>
## Battery Configurations

**25 - 45 kVA BMS 20304**

<table>
<thead>
<tr>
<th></th>
<th>25 kVA</th>
<th>30 kVA</th>
<th>45 kVA</th>
</tr>
</thead>
<tbody>
<tr>
<td>BKB 104001/3</td>
<td>24 Ah</td>
<td>20 min</td>
<td>15 min</td>
</tr>
<tr>
<td>BKB 104001/4</td>
<td>38 Ah</td>
<td>35 min</td>
<td>22 min</td>
</tr>
<tr>
<td>2 BKB 104001/4</td>
<td>2x38Ah</td>
<td>1h 25m</td>
<td>1h 5m</td>
</tr>
<tr>
<td>BKB 104001/5</td>
<td>65 Ah</td>
<td>1h 10m</td>
<td>55 min</td>
</tr>
<tr>
<td>2 BKB 104001/5</td>
<td>2x65Ah</td>
<td>2h 45m</td>
<td>2h 15m</td>
</tr>
</tbody>
</table>