DC - system type PC05
24/48/110/220V\textsubscript{DC}

PC05 is a complete system for uninterruptable supply of DC voltage for industrial switchgear, control equipment, process control, etc. where high demands on safe operation is required.

**Plug-in rectifier modules**
Provides flexibility by adjusting the output power, easy maintenance by hot swap and high availability with parallel modules.

**Safe operation and high availability**
We support you with commissioning and service as well as education in handling and maintenance.

**Compact design**
Monitoring unit, rectifier, distribution and batteries up to 110V\textsubscript{DC}/62Ah in the same enclosure.

**System monitoring**
Monitoring of the batteries, rectifier and distribution. Status and alarms distinctly on display, settings via clear menus for easy handling.

**Battery status**
Battery circuit test and symmetry monitoring provides good conditions for early detection of errors in the battery. Battery temperature is monitored and adjusts the float-charging voltage automatically.

**Complete documentation**
Makes construction and maintenance efficiently and can be delivered in electronic format.

www.kraftpowercon.com
DC - system type PC05

General
PC05 is a complete system for uninterruptable supply of DC voltage for industrial switchgear, control equipment, process control, etc. where high demands on safe operation is required. Complete with rectifiers, batteries, battery fuse box, distribution boards, monitoring and documentation.

Enclosure
Type: Floor cabinet with 19” framework
Cable inlet: from bottom or above
Height: 2000 mm
Width: 600 mm
Depth: 400 mm
Color: RAL 7035 light grey
Class of enclosure: IP21
Ventilation: Temperature controlled fans in rectifier modules, otherwise natural

Environment
Ambient temperature: Operation, 0 till +40 °C
Storage, -40 to +70 °C
Humidity: < 90 % RH, non-condensed
Altitude a.s.l.: < 2000 m

Input AC (for rectifier)
Input voltage: 230VAC, 1-phase
Frequency: 50/60 Hz
Power factor 1-phase: > 0.99 at 230VAC, full load
Connection 1-phase: 6 mm², per rectifier module
Other: See table 1 & 2

Output DC
Output voltage, nominal: 24/48/110/220VDC
Connection: 10 mm², disconnect terminal
Voltage regulation: < 0.5 % of nominal output voltage
< 1% within 3 seconds, 0-100/100 10 % load change
Current regulation: < 1 % of rated current
Current limit range: 0 – 100 % of rated current
Ripple voltage: < 0.1 % rms
Other: See table 1 & 2

Nominal data
<table>
<thead>
<tr>
<th>U_{NOM} (V)</th>
<th>I_{RATED} (A)</th>
<th>Maximum number of rectifier modules per module type</th>
</tr>
</thead>
<tbody>
<tr>
<td>24</td>
<td>108</td>
<td>8A 10A 16A 18A 22A 36A 50A 70A</td>
</tr>
<tr>
<td>48</td>
<td>54</td>
<td>3</td>
</tr>
<tr>
<td>110</td>
<td>48</td>
<td>3</td>
</tr>
<tr>
<td>220</td>
<td>30</td>
<td>3</td>
</tr>
</tbody>
</table>

Table 1. Ratings 1-phase system

Output data
<table>
<thead>
<tr>
<th>U_{DC} (V)</th>
<th>I_{RATED} (A)</th>
<th>Output power</th>
<th>Input voltage range</th>
<th>Mains power*</th>
<th>Mains current*</th>
</tr>
</thead>
<tbody>
<tr>
<td>24 (22-33)</td>
<td>36</td>
<td>1000</td>
<td>90-290</td>
<td>1150</td>
<td>6</td>
</tr>
<tr>
<td>48 (42-63)</td>
<td>18</td>
<td>1000</td>
<td>90-290</td>
<td>1150</td>
<td>6</td>
</tr>
<tr>
<td>110 (100-158)</td>
<td>16</td>
<td>2000</td>
<td>90-290</td>
<td>2200</td>
<td>12</td>
</tr>
<tr>
<td>220 (187-292)</td>
<td>10</td>
<td>2475</td>
<td>90-290</td>
<td>2700</td>
<td>14</td>
</tr>
</tbody>
</table>

Table 2. Ratings 1-phase system, * max at 195VAC, ** type at 230VAC

Battery fuse box
Configuration: Blade fuses, 4-7 pole separated groups

Distribution module type DM199
Number of modules: 1 – 7 pcs.
Fuse type: Diazed type DII/DIII or MCB
Groups per module: 9 pcs (DII, MCB), 6 pcs (DIII)
Monitoring: Bipolar zero voltage
Indication: Red/green LED per way

Capacity test
Load: Max 25 A
Connection: 16 mm² screw terminal

Monitoring unit type PCM2
Monitoring of the complete DC system.
Clear graphical display for showing and setting of alarms, operating data, etc.
Remote alarm via 4 freely configurable relays.

Distribution:
- Fuse monitoring, earth fault monitoring, external alarm
- Battery:
  - Temperature monitoring, battery circuit test, battery symmetry monitoring
  - Rectifier: Over/under voltage, rectifier fault, temperature compensated float charge, automatic equalizing charge

Battery Internally:
- Valve regulated, up to 110VDC 62Ah
Externally:
- Any types on battery stand

Options
Remote alarm:
- Relay 5-8
Inverter
- (0.5, 1 or 2 kVA), AC-distribution, DC/DC-converter
- Double systems with input switches, alarm panel and other by agreement

Standards
Safety:
EN 50178
EMC, immunity:
EN 61000-6-2
EMC, emission:
EN 61000-6-4
Battery installations:
EN 50272-2
IP:
EN 60529