Chloride® FP60Z Uninterruptible Power Supply (UPS) is a true industrial UPS system offering a full-IGBT innovative design and embedding all the latest technologies in power protection.

**Range Overview**

Chloride® FP60Z is available in standard range from 5 to 160 kVA in single-phase or three-phase output configurations and can be adapted to reach up to 250 kVA output power. It offers a wide choice of DC battery voltages (110 V, 220 V or 400 V) and of output voltages (from 1 x 110 V to 3 x 415 V).

The UPS uses patented digital Vector Control technology which increases the UPS performances, enables active conditioning of the load and allows adaptability to different application needs. Chloride® FP60Z features a wide input voltage tolerance, which makes the system compatible with the harshest industrial power grids.

To further improve load availability and process reliability, Chloride® FP60Z is able to operate in dual distributed parallel configuration, with one or two reserve supplies, with single or dual batteries, and can include an AC bus-tie.

**Applications**

- Petrochemical and Chemical
- Minings/Metals
- Power generation plants
- Oil & Gas
- Water and Wastewater
- Transportation (rail, metro, tramway)
- Continuous manufacturing processes

**FEATURES**

- Bidirectional rectifier to perform battery deep discharging tests into the mains
- Ingress Protection IP42 as standard for harsh environmental conditions
- Robust design to continuously operate at full load at 40 °C
- Continuous operation on input phase failure as optional feature
**Technical Data**

### OUTPUT POWER AT COS PHI 0.8 (kVA) VS BATTERY VOLTAGE (Vdc)

<table>
<thead>
<tr>
<th>1-Ph and 3-Ph input</th>
<th>3-Ph input only</th>
</tr>
</thead>
<tbody>
<tr>
<td>110 Vdc 5 10 20</td>
<td>- - -</td>
</tr>
<tr>
<td>220 Vdc - 10 20</td>
<td>30 40 60 -</td>
</tr>
<tr>
<td>400 Vdc - - -</td>
<td>40 60 80 100 120 160 250</td>
</tr>
</tbody>
</table>

### INPUT

- **Input Voltage**: 1-Ph: 230 Vac (220, 240) 3-Ph: 400 Vac (380, 415) ± 10 % (other voltages and tolerances on request)
- **Inrush Current**: ≤ 1 In (without input transformer) ≤ 8 In (with input transformer)
- **Power Factor**: Up to 0.8
- **Frequency Range**: 50 Hz (60 Hz factory setting) ± 5 %

### Embedded input features

- AC input isolator switch
- Surge protection with MOV lightning arrestors

### INTERMEDIATE DC CIRCUIT

- **Nominal DC voltage**: 110 / 220 / 400 Vdc
- **Voltage stability in steady state**: ± 1 % in float mode (input within tolerance)
- **Voltage ripple**: ≤ 1 % RMS (with and without battery connected)
- **Current limitation**: I nominal
- **Charging characteristic**: IU according to DIN 41773

### OUTPUT

- **AC voltage**: 1-Ph: 230 Vac (220, 220, 240) - 110 Vac (115, 120, 127) 3-Ph: 400 Vac (380, 415) / 208 Vac (190, 200, 220)
- **Frequency stability**: With internal oscillator ± 0.1 % With reserve synchronism ± 1 % (1 to 4 % adjustable)
- **Voltage stability**: Static ± 1 % Dynamic VFI SS 111 as per IEC62040-3, class 1
- **Overload inverter**: 150 %/1 min - 125 %/10 min at nominal output voltage
- **Short-circuit clearance**: 1-Ph and 3-Ph: 250 %/100 ms - 150 %/5 s
- **Voltage distortion**: With 100 % linear load < 2 % With 100 % non linear load < 5 % as per IEC62040-3
- **Allowable power factor**: 0.5 lagging to 0.5 leading
- **Allowable crest factor**: 3/1
- **Embedded output features**: Output switch Output isolation transformer class H

### RESERVE LINE

- **Embedded reserve line features**: Integrated manual bypass switch Inbuilt input reserve line switch

### BATTERY

- **Type**: Lead Acid or Nickel Cadmium, vented or recombination
- **Recommended number of cells**: 110 Vdc 54 to 72 108 to 144 192 to 228 2004/108/EC (before April 2016)
- **Battery current limitation**: 0.3 C (Lead Acid) / 0.2 C (Nickel Cadmium)
- **Battery protection box**: Circuit breaker with aux. contact Battery Low Voltage Disconnection (LVD) Battery test, automatic or manual mode Battery room temperature sensor for battery charge compensation

### Compliance

**STANDARDS**

- IEC/EN 62040-1: 2008
- Uninterruptible power systems (UPS) - Part 1: General and safety requirements for UPS
- IEC/EN 62040-2: 2006
- Part 2: Electromagnetic compatibility (EMC) requirements
- IEC/EN 62040-3: 2011
- Part 3: Method of specifying the performance and test requirements
- IEC/EN 60950-1: 2013
- Information technology equipment - Safety - Part 1: General requirements
- AMD2: 2014

**CONFORMITY**

- Low Voltage Directive (LVD) 2006/95/EC (before April 2016)
- 2014/35/EU (after April 2016)
- 2014/30/EU (after April 2016)
- CE Mark

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