SUMMARY

1 – PRODUCT DEFINITION
2 – CERTIFICATION
3 – PACKING DESCRIPTION
4 – TECHNICAL CHARACTERISTICS
5 – POWER DERATING TABLE
6 – DIMENSIONS & WEIGHT
7 – INSTALLATION
8 – LOW FREQUENCY FILTER MODULE CONNECTION
   8.1 – EX RT 7 AND EX RT 11
9 – UPSTREAM RECOMMENDED PROTECTION
7 – COMMISSIONING

SAFETY RULES

Safety of persons
- When installing your low frequency filter module, the load circuits are energised as soon as the AC-power source is connected, even if no indicating lights are on.
- Dangerous voltage levels are present within the low frequency filter module. It should be opened exclusively by qualified service personnel.
- The low frequency filter module must be properly earthed.
- Never operate the low frequency filter module if the ambient temperature and relative humidity are higher than the levels specified in the documentation.

Product safety
- A protection circuit breaker must be installed upstream and be easily accessible.
- The low frequency filter module can be disconnected from the AC-power source by opening the input circuit breaker.
- Never install the low frequency filter module near liquids or in an excessively damp environment.
- Never let a liquid or foreign body penetrate inside the low frequency filter module.
- Never expose the low frequency filter module to direct sunlight or a source of heat.

Special precautions
- The low frequency filter module connection instructions contained in this manual must be followed in the indicated order.
- Check that the indications on the rating plate correspond to your AC-power system and to the actual electrical consumption of all the connected equipment.
- If the low frequency filter module is positioned flat, check that not more than 8 modules are stacked on the top of each other.
- If the low frequency filter module must be stored prior to installation, storage must be in a dry place.
- The admissible storage temperature range is –40 °C to +50 °C.
1. PRODUCT DEFINITION

This filter module has to be associated with an UPS:
- EX RT 7
- EX RT 11
This complete installation will meet IEC 60945 standards.

2. CERTIFICATION

The UPS and the filter have the following certificates:
Safety standards: IEC / EN 62040-1-1
EMI standards: IEC 62040-2 and IEC 60945

3. PACKING DESCRIPTION

The low frequency filter module
A set of rail for a rack installation
A sheet metal parts and screws for tower installation
Two plastic parts for tower installation
A set of cabling accessories
An installation & user manual

4. TECHNICAL CHARACTERISTICS

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power maxi</td>
<td>11 kVA / 8 kW</td>
</tr>
<tr>
<td>Nominal current</td>
<td>50 A</td>
</tr>
<tr>
<td>Input voltage</td>
<td>160 - 280 Volts AC – single phase</td>
</tr>
<tr>
<td>Output voltage</td>
<td>160 - 280 Volts AC – single phase</td>
</tr>
<tr>
<td>Operating temperature</td>
<td>From 0 °C to +40 °C</td>
</tr>
<tr>
<td>Max operating rel. humidity</td>
<td>95 %</td>
</tr>
<tr>
<td>Derating / altitude</td>
<td>PN – 10 % &gt; 1000 m</td>
</tr>
</tbody>
</table>
5. POWER DERATING TABLE WITH EX RT 11

<table>
<thead>
<tr>
<th>Input Voltage / Ambient Temperature</th>
<th>0 °C – 25 °C</th>
<th>25 °C – 35 °C</th>
<th>35 °C – 45 °C</th>
</tr>
</thead>
<tbody>
<tr>
<td>220 – 280 Volts AC</td>
<td>100 %</td>
<td>100 %</td>
<td>100 %</td>
</tr>
<tr>
<td>200 – 220 Volts AC</td>
<td>100 %</td>
<td>95 %</td>
<td>90 %</td>
</tr>
<tr>
<td>180 - 200 Volts AC</td>
<td>90 %</td>
<td>85 %</td>
<td>80 %</td>
</tr>
<tr>
<td>160 – 180 Volts AC</td>
<td>80 %</td>
<td>75 %</td>
<td>70 %</td>
</tr>
</tbody>
</table>

6. DIMENSIONS & WEIGHT

<table>
<thead>
<tr>
<th>Dimensions (H x W x D) (3U rack)</th>
<th>131 x 444 x 635 mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight</td>
<td>12 kg</td>
</tr>
</tbody>
</table>

7. INSTALLATION

Installation in rack, we recommend placing the low frequency filter under the UPS. For installation, please refer to the UPS installation and user manual.

8. LOW FREQUENCY FILTER CONNECTION

View of the low frequency filter module terminals:
8.1 EX RT 7 ET EX RT 11
The cable to connect the filter module to the UPS is not provided. Achieve the connections on the different terminals (input and output) of the filter module, comply with the cable capacity as recommended here under. Open the low frequency filter module connection box, Connect on AC input terminals the cable to supply the filter module (recommended cable capability 10 mm²), Lock the presses tow, Close the low frequency filter module connection box, Connect the other extremity of the cable on the UPS input terminals, see section in the UPS installation & user manual, Connect the load on UPS output.

9. UPSTREAM RECOMMENDED PROTECTION

<table>
<thead>
<tr>
<th>Nominal power of the UPS</th>
<th>Recommended circuit breaker</th>
</tr>
</thead>
<tbody>
<tr>
<td>7 kVA</td>
<td>D curve – 40 A</td>
</tr>
<tr>
<td>11 kVA</td>
<td>D curve – 63 A</td>
</tr>
</tbody>
</table>

10. COMMISSIONING
On the filter side, take care to close the input switch. Then follow the UPS user manual, commissioning chapter.