

# Kit Navy Low Frequency Filter Module

## Installation & User Manual

**EX RT 7/11**



**EATON**

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## 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  $-40\text{ }^{\circ}\text{C}$  to  $+50\text{ }^{\circ}\text{C}$ .

## 1. PRODUCT DEFINITION

This filter module has to be associated with an UPS :

- EX RT 7
- EX RT 11

This complete installation will met 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

Power maxi	11 kVA / 8 kW
Nominal current	50 A
Input voltage	160 - 280 Volts AC – single phase
Output voltage	160 - 280 Volts AC – single phase
Operating temperature	From 0 °C to +40 °C
Max operating rel. humidity	95 %
Derating / altitude	PN – 10 % > 1000 m

## 5. POWER DERATING TABLE WITH EX RT 11

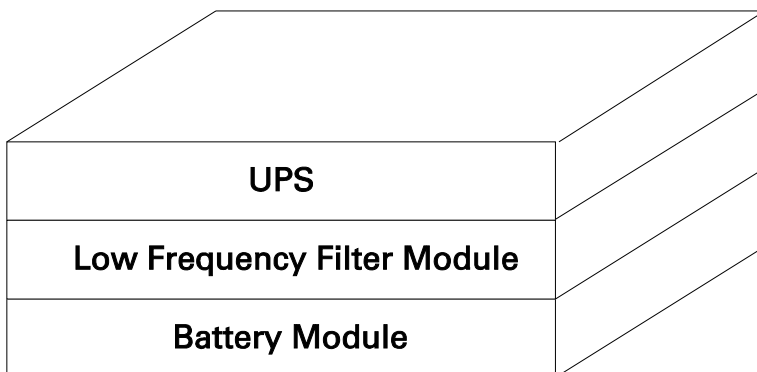
Input Voltage / Ambient Temperature	0 °C – 25 °C	25 °C – 35 °C	35 °C – 45 °C
220 – 280 Volts AC	100 %	100 %	100 %
200 – 220 Volts AC	100 %	95 %	90 %
180 - 200 Volts AC	90 %	85 %	80 %
160 – 180 Volts AC	80 %	75 %	70 %

## 6. DIMENSIONS & WEIGHT

Dimensions (H x W x D)	(3U rack)	131 x 444 x 635 mm
Weight		12 kg

## 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 mm<sup>2</sup>), 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

Nominal power of the UPS	Recommended circuit breaker
7 kVA	D curve – 40 A
11 kVA	D curve – 63 A

## 10. COMMISSIONING

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