

# r48filter

## 250 kvar at 400 V 50 Hz

<b>Code</b>	TLFR48250/1
<b>Rated Voltage</b>	400 ÷ 415 V ± 10%
<b>Rated Frequency</b>	50 Hz
<b>Capacitors Voltage</b>	480 V
<b>THDi max</b>	100 %
<b>THDv max</b>	≤ 6 %
<b>Power (400 V)</b>	250 kvar
<b>Rated Current</b>	360 A
<b>Banks (400 V)</b>	50-50-50-50-50
<b>Steps</b>	5*50 kVAr
<b>Temperature class</b>	-5 / +52°C
<b>Insulating Voltage</b>	690 V
<b>Max overcurrent</b>	1,3 In
<b>Total losses</b>	< 4 W/kvar
<b>Reference standards</b>	EN61921, EN61439-1



### Capacitors

Three-phase metallized polypropylene Capacitors Oil filled, MKPR Series, Rated Voltage 480 V, Operating Voltage 400 V, Insulation Voltage 690 V, equipped with discharge resistors, overpressure safety device and IP20 terminals. Dielectric losses < 0,2W/kVAr. Reference Standards IEC60831-1/2, UL N.810, CSA

Overvoltage: 480 V (24h), 530 V (8h), 555 V (30m), 585 V (5m), 625 V (1m), 1450 V (Picco)

Overcurrent: 2In (24h), 3In (30m), 4In (15m), 10In (Picco)

### Contactors

Three-pole Contactors for capacitor banks, with high number of insertions (>250.000), with resistors for the limitation of high current from capacitor's insertion (> di 100 In), and auxiliary contact. Reference standard IEC 60947-1 / 60947-4-1 and EN 60947-1 / 60947-4-1

### Detuning Reactors

Detuning reactors made of sheet oriented crystals, placed in series between the contactor and the capacitor bank, with the following features: linearity 1.8 Ip/In, realized in class H, over temperature range: 60°C, complete with thermal probe for switching off Capacitors Banks in case of overtemperature, limit the peak current inrush capacitors, detuning frequency 189 Hz ( $p=7\%$ ), standard for 5th Harmonic

### Microprocessor PFC Controller

PCRL Series, completed with backlit multilingual LCD Display in 6 languages, with the following features: Operation on 4 Quadrants for cogeneration systems, Automatic Recognition of the direction of the current, RMS Voltage and Current, Uniform the use of each Bank / Status of each Bank / Weekly Power Factor, Capacitors overload, Overtemperature, Network THD, AUT / MAN, Protection for overcurrent, overvoltage and overtemperature and micro-interruptions, Setting of Maintenance Program/Advise by month/year

### Switch Disconnecter

N. 1 Switch Disconnectors with door interlock sized 1,5 time the nominal current of PFC Unit as per EN61921, 3\*500 A / each

### Fuses

NH00 Fuses 100 kA for the protection of each capacitor bank. Auxiliary circuits are protected through 10,3 x 38 Fuses

### Transformer

Single phase transformer for separating the power circuit from the auxiliary circuit (230 Vac)

### Cabinet

Sheet-steel enclosure 15 and 20/10, painted with epoxy dust paint, colour RAL7035 (others on request).

Protection degree IP30 external, IP00 internal (IP20 with open doors on live parts).

Internal wiring made with cables are FS17 type, Reference standards CEI EN 50575, CEI UNEL 35716, CEI EN 50525 e CPR UE305/11.

**The configuration is in Modular Racks connected through copper busbar system (Type Tested KEMA ref. 5189-16 lcv 50 kA for 1 sec.).**

### Incoming cables

From the Bottom

### Dimensions / Weight

(W\*H\*D) 600\*1730\*600 mm / 330 Kg

### Ventilation

Ventilation Forced with Fan and PFC Controller's thermostat, for alarm signal and switch off contactors in case of overtemperature (natural operation up to 35°C; forced ventilation from 35°; with a temperature of 50°, the PFC will be switched off)