

# g52filter-rack-T

## || 50 kVAr

### Modular Racks with Thyristor insertion and Detuning Chokes 134Hz (p=14%)

Code	CFG52T50/1
Rated voltage	400 ÷ 415 V
Frequency	50 Hz
Capacitors Voltage	525 V
Capacitors Voltage max	580 V
THDi max	≤ 100 %
Power @ 400 V	50 kvar
Power @ 415 V	54 kvar
Rated current	72 A
Banks (400 V)	50
Steps	1 x 50 kVAr
Typology of Capacitors	MKP525G
Dimensions (WxHxD)	695*300*500
Reference standards (PFC unit)	EN61921, EN61439-1/2

	<b>24h</b>	<b>8h</b>	<b>30m</b>	<b>15m</b>	<b>5m</b>	<b>1m</b>	<b>Peak</b>
<b>Vmax</b>	525	580	600		630	680	1600
<b>I<sub>max</sub></b>	3In		4In	5In			10 In



#### Technical Features

**Capacitors** Three-phase metallized polypropylene Capacitors with Nitrogen Gas (N<sub>2</sub>) insulation, “dry type”, MKP480G Series, Rated Voltage 480 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

**Detuning Chokes** made of copper/aluminum 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 134 Hz (p=14%), standard for 5th Harmonic

**The Thyristor** is the intrinsic regulation organ in a Static Module and works in principle as an electronic switch that performs a switching process at each half of the power supply. The thyristors which form part of the module are “triggered” through a gate pulse; the current flows until its value falls below the value of the holding current, which in the alternating current circuits corresponds to the zero crossing of one of the two half-wave in the network. The Module consists of two phase Thyristors (one for the positive half-wave, the other for the negative one) connected in anti-parallel. The insertion of detuning capacitors and ballasts is thus accomplished without moving parts. The thyristors are commanded at the natural passage for the zero of the capacitor current. The capacitors are thus connected to the plant without significant transients; control is also such as to significantly limit harmonic emissions below the regulatory limits.

**Three-Pole Contactors** for capacitor banks, with high number of insertions (>250.000)

– 3-pole mains and 1 built-in auxiliary contact

– block for serial insertion in the circuit of 3 resistors that limit the peak current at the excitation of the condenser battery. Reference standards IEC 60947-1 / 60947-4-1 and EN 60947-1 / 60947-4-1

**Modular Rack in sheet-steel** 15 and 20/10, equipped with an aluminium busbar system (**TELEGROUP's PFCs are Type Tested KEMA ref. 5189-16 Icw 50 kA for 1 sec**). Protection degree IP00. Thanks to the new concept, the access for maintenance is very easy. The wiring is realized through FS17, Standards CEI EN 50575, CEI UNEL 35716, CEI EN 50525 and CPR UE305/11

**NH00 Fuses** 100 kA for the protection of each capacitor bank.