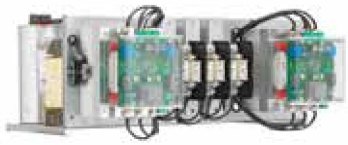
g48 filter-T

Automatic PFC systems with detuning chokes 189 Hz (p=7%) and thyristor modules

	24h	8h	30m	15m	5m	1m	Peak
Vmax	480	530	555		580	625	1450
Imax	3In		4In	5In			10 In

Rated voltage	400 ÷ 415 V
Frequency	50 Hz
Capacitors Voltage	480 V
Capacitors Voltage max	530 V
THDi max	100 %
Typology of Capacitors	MKP480G
PFC Controller	PCRL
Temperature class (PFC unit)	-25 / +65°C
Insulation voltage (PFC Unit)	690 V
Max overload (PFC unit)	1,3 In
Total losses (PFC unit)	< 2 W/kvar
Reference standards (PFC unit)	EN61921, EN61439-1
Reference standards (Capacitors)	IEC60831/1-2



Technical Features

Capacitors Three-phase metallized polypropylene Capacitors with Nitrogen Gas (N2) 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 189 Hz (p=7%), 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.

Automatic PFC Microprocessor Controller PCRJ Series, completed with backlit multilingual LCD Display in 10 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

Sheet-steel enclosure 15 and 20/10, painted with epoxy dust paint, colour RAL7035 (others on request). Internal setting in Modular Racks connected through aluminium busbar system (***Type Tested KEMA ref. 5189-16 Icw 50 kA for 1 sec.***). Protection degree IP30 external (IP54 on request)l, IP00 internal (IP20 with open doors on live parts)

Three-pole Switch Disconnector with door interlock, sized 1,5 time the nominal current of PFC Unit as per EN61921

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

Single phase transformer for separating the power circuit from the auxiliary circuit (220 Vac, others on request).

Ventilation Forced with Fan + Thermostat connected with PFC Controller 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)

Standard configuration

Code	kVAr		Banks							Steps	PCRL	Switch.[1]		Cabinet	Weight
	400 V	415 V	400 V									(A)	Icc (kA)[2]		(Kg)
TLFG48T 75	75	81	12,5	12,5	25	25				6	8	315	15	CR48	290
TLFG48T 87,5	87,5	94	12,5	25	25	25				7	8	315	15	CR48	295
TLFG48T 100	100	108	12,5	12,5	25	50				8	8	315	15	CR48	305
TLFG48T 125	125	135	12,5	12,5	25	25	50			10	8	315	15	CR48	310
TLFG48T 150	150	161	25	25	50	50				6	8	315	15	CR48	315
TLFG48T 150/1	150	161	12,5	12,5	25	50	50			12	8	315	15	CR48	325
TLFG48T 175	175	188	25	50	50	50				7	8	400	15	CR48	320
TLFG48T 175/1	175	188	12,5	12,5	25	50	75			14	8	400	15	CR48	328
TLFG48T 200	200	215	25	25	50	100				8	8	500	15	CR48	325
TLFG48T 200/1	200	215	12,5	12,5	25	50	100			16	8	500	15	CR48	330
TLFG48T 225	225	242	25	50	50	100				9	8	500	15	CR48	330
TLFG48T 225/1	225	242	12,5	12,5	25	25	50	100		18	8	500	15	CR258	420
TLFG48T 250	250	269	25	25	50	50	100			10	8	630	20	CR48	385
TLFG48T 275	275	296	25	50	100	100				11	8	630	20	CR48	395
TLFG48T 300	300	323	25	25	50	100	100			12	8	630	20	CR258	480
TLFG48T 325	325	350	25	50	50	100	100			13	8	800	20	CR258	515
TLFG48T 350	350	377	50	100	100	100				7	8	800	20	CR258	510
TLFG48T 350/1	350	377	25	25	50	50	100	100		14	8	800	20	CR258	515
TLFG48T 375	375	404	25	50	50	50	100	100		15	8	800	20	CR258	525
TLFG48T 400	400	430	50	50	100	100	100			8	8	1000	50	CR258	520
TLFG48T 400/1	400	430	25	25	50	100	100	100		16	8	2x500	15	CR416	700
TLFG48T 450	450	484	50	100	100	100	100			9	8	2x630	15	CR416	720
TLFG48T 450/1	450	484	25	25	50	50	100	100	100	18	10	2x630	15	CR416	730
TLFG48T 475	475	511	25	50	100	100	100	100		19	8	2x630	15	CR416	725
TLFG48T 500	500	538	50	50	100	100	100	100		10	8	2x630	20	CR416	732
TLFG48T 525	525	565	25	50	100	100	100	100	100	21	10	2x630	20	CR416	738
TLFG48T 550	550	592	50	100	100	100	100	100		11	8	2x630	20	CR416	742
TLFG48T 600	600	646	50	50	100	100	100	200		12	8	2x630	20	CR416	750
TLFG48T 650	650	699	50	100	100	100	100	200		13	8	2x800	20	CR508	780
TLFG48T 700	700	753	50	50	100	100	200	200		14	8	2x800	20	CR508	790
TLFG48T 750	750	807	50	100	100	100	200	200		15	8	2x800	20	CR508	800
TLFG48T 800	800	861	50	50	100	200	200	200		16	8	2x1000	50	CR508	815
TLFG48T 850	850	915	50	100	100	200	200	200		17	8	3x630	20	CR758	910
TLFG48T 900	900	968	50	50	100	100	200	200	200	18	8	3x630	20	CR758	925
TLFG48T 950	950	1022	50	100	200	200	200	200		19	10	3x800	20	CR758	935
TLFG48T 1000	1000	1076	100	100	200	200	200	200		10	8	3x800	20	CR758	950

Other technical features and otpional please check pag. 36-37