CAPCONDO
best way to energy quality

Management System ISO 9001:2015 Valid until: 2024-04-29
TÜVRheinland CERTIFIED
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DATA SHEET

AUTOMATIC DE-TUNED CAPACITOR BANKS

With anti-harmonic reactors 14%

Company CAPCONDO S.A.R.L,
Adress : Avenue 14 Janvier 2011 - 8060 - Beni Khiar-Tunisie
Tel/Fax: (+216) 72229800
Site web: www.capcondo.tn
Email: contact@capcondo.tn capcondo1@gmail.com

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AUTOMATIC DE-TUNED CAPACITOR BANKS: p=14%

THDI>70%

400V-50HZ

General characteristics

harmonic pollution rate THDI	>70%
harmonic pollution rate THDV	THDU≤8%
Network pollution level	Very polluted
Network voltage	400/415V
Battery temperature	-5 à 40°C
Maximum current overload	1.3xIn
Maximum voltage overload	1.1xUn
Degrees of protection	IP55 (Cabinet height is equal to 1800 mm) IP33 (Cabinet height is less than 1800mm)
Capacitor voltage rating	**Three-phase capacitors with Un=525V**

Blocking reactors

Blocking factor	p=14%
Nominal voltage	400V
Insulation voltage	3000 VAC/1min
Insulation class	40°C/F
Tuning frequency	135Hz
Dielectric loss (Depends on the power of the steps used)	Self de blocage 10kVAr : 94W Self de blocage 20kVAr : 168W Self de blocage 40kVAr : 192W
Protection against overheating	132°C
Standard	IEC 60076 / EN 61558-2-20

QUALITY AND TEST

Standard(bank)	CEI 60831-1 ; CEI 60831-2 ; UL-810 ; CEI 61921

Cabinet characteristic

Type of mounting
Color
Steel sheet

Interior
RAL 7035 (grey)

- Frame: 1.5mm
- Panel: 1.5mm
- Door: 2mm
- Plinth: 2mm

Other characteristics

(Cabinet height is less than 1800mm)

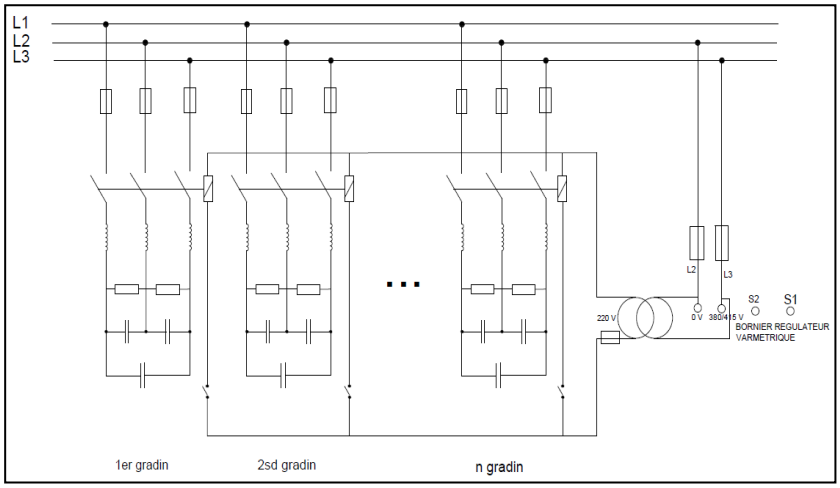
- Welded frame construction
- Closing with three screws
- Foamed in the door

(Cabinet height is equal to 1800mm)

- Welded frame construction
- Foamed in the door / rear panel PU waterproof seal
- Polyamide handle lock (3 point locking, key 333)
- Multiple assembly possible
- Removable side panels

Plinth and cover options

Wiring diagram



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Internal components

Installation	Vertical. Interior installation, in a position favorable to ventilation
Ventilation	Forced ventilation, they are designed to allow the equipment proper ventilation of internal components
Regulator	The automatic correction regulator always maintains the programmed cos φ value.
Fuses	The capacitors are protected by high-speed fuses. (**Other protection is on request**).
Contactor	Each step is connected / disconnected by a contactor (class AC6-b) able to offer a high reliability.

Fuses

Type of fuses	fuses NH00 series gG for each module
Breaking capacity	High capacity 120kA
Operating temperature	-15 à 50°C
Standards	IEC 60269

(Made in Europe)

Control circuit transformer(s)

Primary voltage	400V
Secondary voltage	230V
Standards	EN 60076, EN 61558

(Made in Europe)

Capacitors

Capacitor Technology	Auto healing dry type resin capacitor equipped with an anti burst pressure system and discharge resistor, protected by an inert N2 gas. .
Capacitor voltage rating	**Three-phase capacitors with Un=525V**
Tolerance on the capacitor value	-5 / +10 %
Maximum current overload	1.8 x In
Transient current	250 In
Maximum voltage overload	1.1 x Un - 8 hours per day
Altitude	<4000m
Test voltage (Terminal-terminal)	2.15*Un, AC 2s
Test voltage (Terminal-case)	3.9 KV, AC 2s
Dielectric loss	<0.2 W / kVAR
Min/Max temperature	-40 à 60°C
Maximum humidity	95 % non-condensing
Protection class	IP20
Standards (capacitors)	CEI 60831-1 ; CEI 60831-2 ; UL-810

(Made in Europe)

Contactors

Type	Contactor for capacitive load (AC6b))
Voltage	400-440V
Auxiliary	230V
Maximum operating rate	• 12.5 kVAr /25 kVAr/33.3 kVAr : 240 hours of operation • 40 kVAr /60 kVAr : 100 hours of operation
Lifetime	• 12.5 kVAr /25 kVAr : 200000 operation • 33.3 kVAr /40 kVAr /60 kVAr : 100000 operation
Power (Depends on the power of the steps)	12.5kVAr / 25 kVAr / 33.3 kVAr /40 kVAr /60 kVAr
Standards	IEC 60947-1,2

(Made in Europe)

DISCONNECTORS-SWITCHES (OPTIONAL)

CURRENT (A)	Power	Rated insulation voltage (Ui)	Rated impulse withstand voltage	Presumed short circuit current	Standards
63	30	800	8KV	50KA-eff	CEI 60947-3
80	37	800	8KV	50KA-eff	CEI 60947-3
100	45	800	8KV	25KA-eff	CEI 60947-3
125	55	800	8KV	100KA-eff	CEI 60947-3
160	75	800	8KV	100KA-eff	CEI 60947-3
200	90	800	8KV	100KA-eff	CEI 60947-3
250	115	800	8KV	80KA-eff	CEI 60947-3
315	145	1000	12KV	50KA-eff	CEI 60947-3
400	185	1000	12KV	100KA-eff	CEI 60947-3
500	230	1000	12KV	100KA-eff	CEI 60947-3
630	290	1000	12KV	70KA-eff	CEI 60947-3
800	365	1000	12KV	50KA-eff	CEI 60947-3
1000	460	1000	12KV	100KA-eff	CEI 60947-3
1250	579	1000	12KV	100KA-eff	CEI 60947-3
1800	610	1000	12KV	100KA-eff	CEI 60947-3
2000	745	1000	12KV	100KA-eff	CEI 60947-3
2500	1083	1000	12KV	100KA-eff	CEI 60947-3
3200	1556	1000	12KV	100KA-eff	CEI 60947-3

(Made in Europe)

Regulator	RG-T (STANDARD)	RGI-S (On request)	RG-BS (On request)
Type		Var-métrique	
Dimensions	144*144 mm PR16	144*144 mm	96*96mm PR19
Protection class	IP 40 Front pannel	IP 54 Front pannel	IP 40 Front pannel
Precision		1%±1 digits (V, I, COS) ; 2%±1 digits (W, Var, VA, harmonique)	
Overvoltage setting	475 VAC		0-500 VAC
Current range		50mA-5.5A (other current range on request)	
Measuring range with transformer	50mA-10KA Primairy of transformator 5…10000/5A	50mA-10KA Transformer ratio 1-2000	50mA-10KA Transformer ratio 1-2000
Input load		< 2VA courant, < 3VA Voltage	
Cos_ϕ setting	0.85<cosp<1 inductive	0.8<cosp<1 inductive/capacitive	0.8<cosp<1 inductive/capacitive
Setting of C/K		0.02-1.00	
Delay between steps		2-1800 s a switch for on / off separately	
Interface/Protocole Communication		RS-585 Modbus RTU	RS-585 Modbus RTU
THD- V-Alarm programmable		•	•
Discharge time programmable		•	•
Overvoltage alarm programmable	•	•	•
Automatic calculation of steps		•	•
Energy measurement		•	•
Display of parameters for each phase		•	•
Alarm contact output		•	•
POWER SUPPLY		•	•
Operating voltage	400VAC ±10%	150-525 VAC ±10%	400VAC ±10%
Operating frequency		50HZ/60HZ	
Power consumption	<10 VA	<25VA	<10 VA
Number of steps	6 / 8 / 12	6/9/12	6/8//12
Operating temperature	-5…+55°C	-20…+70°C	-5…+55°C
Ambient humidity	85%	95%	85%
Mounting		Front panel mounting /Socket with screw terminal	
Types of connection	Phase2/phase3, 1 current transformator on phase1	All type of connexion	All type of connexion

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TECHNICAL DETAILS

Code Product	Power (kVAr) (400V)	Current (A)	(Power of steps)	Cable entry	Switchs Isolator (A) (Option)	Dimensions		
	Frequency==50HZ					Height	Width	Depth
BS14-20	20	29	2x10 kVAr	Haut	63	750	500	400
BS14-30	30	43	1x10 kVAr+1x20 kVAr	Haut	63	1050	500	400
BS14-40	40	58	2x10 kVAr + 1x20 kVAr	Haut	125	1050	500	400
BS14-50	50	72	1x10 kVAr + 2x20 kVAr	Haut	125	1450	500	400
BS14-60	60	87	2x10 kVAr + 2x20 kVAr	Haut	160	1450	500	400
BS14-65	65	94	1x5 kVAr + 2x10 kVAr + 2x20 kVAr	Bas	160	1800	600	600
BS14-70	70	101	1x10 kVAr +3x20 kVAr	Bas	160	1800	600	600
BS14-75	75	108	1X5 kVAr + 1X10kVAr + 3X20 kVAr	Bas	160	1800	600	600
BS14-80	80	115	2X10 kVAr + 3x20 kVAr	Bas	160	1800	600	600
BS14-85	85	122	1X5 kVAr +2X10 kVAr + 3x20 kVAr	Bas	160	1800	600	600
BS14-90	90	130	1X10kVAr + 4X20 kVAr	Bas	250	1800	600	600
BS14-95	95	137	1X5 kVAr + 1X10 kVAr + 4X20 kVAr	Bas	250	1800	600	600
BS14-100	100	144	2x10 kVAr + 2x20 kVAr + 1x40 kVAr	Bas	250	1800	800	600
BS14-110	110	158	1X10 kVAr + 1X20 kVAr + 2X40 kVAr	Bas	250	1800	800	600
BS14-120	120	172	2X10 kVAr + 1X20 kVAr + 2X40 kVAr	Bas	250	1800	800	600
BS14-130	130	187	1X10 kVAr + 2X20 kVAr + 2X40 kVAr	Bas	315	1800	800	600
BS14-140	140	202	2X10 kVAr + 2x20 kVAr +2x40 kVAr	Bas	315	1800	800	600
BS14-150	150	217	1x10 kVAr + 1x20 kVAr + 3x40 kVAr	Bas	400	1800	800	600
BS14-160	160	231	2X10 kVAr + 1X20 kVAr + 3X40 kVAr	Bas	400	1800	1000	600
BS14-170	170	245	1X10 kVAr + 2X20 kVAr + 3X40 kVAr	Bas	400	1800	1000	600
BS14-180	180	260	2X10 kVAr + 2X20 kVAr + 3X40 kVAr	Bas	400	1800	1200	600
BS14-200	200	289	2x20 kVAr + 4x40 kVAr	Bas	500	1800	1200	600
BS14-250	250	361	1X10 kVAr + 2X20 kVAr + 5X40 kVAr	Bas	630	1800	1200	600
BS14-300	300	433	1x20 kVAr + 7x40 kVAr	Bas	800	1800	1400	600
BS14-350	350	505	1X10 kVAr +1X20 kVAr + 4X40 kVAr+2X80 kVAr	Bas	800	1800	2000	600
BS14-400	400	577	2X20 kVAr + 1X40 kVAr + 4X80 kVAr	Bas	1000	1800	2000	600
BS14-450	450	650	1X10 kVAr +2X20 kVAr + 2X40 kVAr+4X80 kVAr	Bas	1000	1800	2000	600
BS14-500	500	721	1X20 kVAr + 2X40 kVAr+5X80 kVAr	Bas	1000	1800	2400	600
BS14-550	550	793	1X10 kVAr+1X20 kVAr + 5X40 kVAr+4X80 kVAr	Bas	1000	1800	2400	600
BS14-600	600	865	2X20 kVAr + 6X40 kVAr+4X80 kVAr	Bas	1800	1800	3000	600
BS14-650	650	937	1X10 kVAr+6X40 kVAr+5X80 kVAr	Bas	2000	1800	3000	600
BS14-700	700	1009	1x20 kVAr +5X40 kVAr+6X80 kVAr	Bas	2000	1800	3000	600
BS14-750	750	1081	1X10 kVAr+1X20 kVAr + 2X40 kVAr+8X80 kVAr	Bas	2000	1800	3600	600
BS14-800	800	1153	4X40 kVAr + 8X80 kVAr	Bas	2500	1800	3600	600
BS14-850	850	1225	1X10 kVAr+1X40 kVAr+10X80 kVAr	Bas	2500	1800	3600	600

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	Frequency==50HZ					Height	Width	Depth
BS14-900	900	1297	1X20 kVAr +4X40 kVAr+3X80 kVAr +4X120 kVAr	Bas	2500	1800	4000	600
BS14-950	950	1369	1X10 kVAr+1x20 kVAr+2x40 kVAr+3x80 kVAr+5x120 kVAr	Bas	2500	1800	4000	600
BS14-1000	1000	1441	4X40 kVAr + 3X80 kVAr + 5x120 kVAr	Bas	2500	1800	4000	600

NB: Other power on request.

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