

Quick Catalogue



Leaders in Power Factor Correction

All most 40 years of experience in Power Factor Correction, one of leading PFC manufacturing facility in world, focused in innovations and developments of new products range in the sector of electrical energy efficiency, certified by many organizations which guarantee heigh products.

International Presence

The RTR group has a strong international vocation. Since its foundation head office in Spain also has a production facility in Chile and has been opened its own delegations Sales offices in various parts of the world like Russia, South Korea, China, Thailand and Turkey with distribution network over 70 countries.

RTR exports more than 65% of its production worldwide.



Quality and certifications

The quality department of **RTR Energía** ensures that the manufacturing of its products following strictest quality requirements according to international standards.

RTR professional and dedicated team of **R&D (i+D+I) and QC**, allowing us for continuous developments, innovations, safety improvements and various certification for its products and equipment, as recently **V0 self-extinguishing Polyurethane Resin certified under UL94**, certification of Three-phase reactors for harmonic filters by **AENOR**, type tested of three-phase capacitor series DWCAP by L.C.O.E. which gives security and satisfaction disposal to customers.



- Lighting and motor run capacitors, certification by AENOR
- Capacitor for power correction, UL810 certification
- Self-extinguishing resin V0, under standard UL94
- Reactors for Harmonic filters certification, by AENOR
- Capacitor for Power Factor Correction DWCAP by AENOR



Engineering and technology

RTR Energía has the most modern technology for the manufacturing capacitors, harmonic filters, transformers, capacitor banks and polyurethane resin.



Assistance and customized manufacturing

The extensive technical equipment of RTR Energía is specialized in designing, manufacturing and installation of solutions adapted to every needs and provides technical assistance to its customers for any phase of the project.



Innovation and design



Highly qualified specialized technical team, latest technology, new materials with the highest performance and designs allowing RTR Energía for innovation and development the best products to improve electrical energy efficiency. Thanks to this commitments for innovation, RTR Energía has patented its new three phase capacitor model DWCAP and has Quality Certificate ISO 9001 and Enviromental Certificate ISO 14001. Also RTR provides certificates for products as its three phase capacitor under UL810, V0 self-extinguishing resin under UL94; and lighting capacitor, three phase capacitor DWCAP and three phase harmonic filter certified by AENOR.

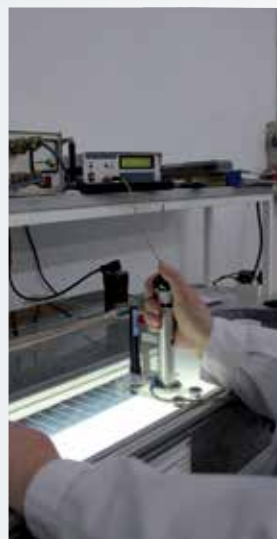


Verification and control laboratories

RTR Energía has laboratories:

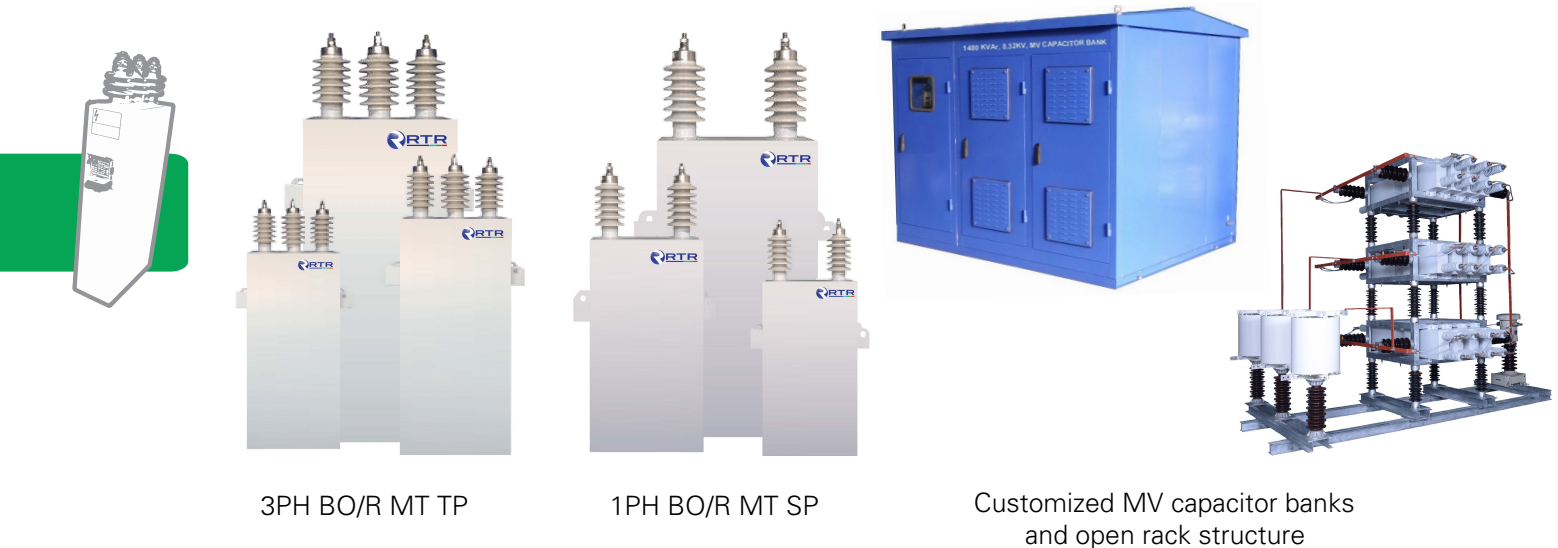
- Low Voltage Laboratory
- High Voltage Laboratory
- Chemical Laboratory

These laboratories allow developing the control of raw material, verification the finished product and development new technologies to deliver high performance product.



MV Capacitors and Banks

MV Capacitor are constituted by elementary units, consisting of aluminum foil windings of high purity and polypropylene film of the highest quality.



LV Capacitors

Power capacitors are manufactured with low loss metallized self-healing polypropylene film. Dry type capacitors are filled with polyurethane self-extinguishing resin V0, developed under standard UL94 with certification number 20141031-E470994.



LV Fixed Capacitors Banks

Three-phase protected power capacitors are specially designed for reactive power factor correction for installations where inductive automatic load is constant and regulation is not required.



LV Automatic Capacitor Banks

These capacitor banks are used in power factor correction for installations where is variable load.



Harmonic Filters and Transformers

Three phase harmonic filters are made of low losses magnetic, copper conductor and 90, 120, 140 and 160°C thermal protection relay. Standard surge factor is 5,67 %, 7% and 14% with 210, 189 and 134 Hz for 50 Hz networks. Single phase transformers are made of low losses magnetic plates, copper conductor.



Automatic Power Factor Controllers



Accessories

The best equipment for the protection and control of our capacitor Banks.



Capacitor duty contactor



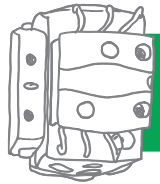
Electronic static contactor



Thyristor switch



MCCB



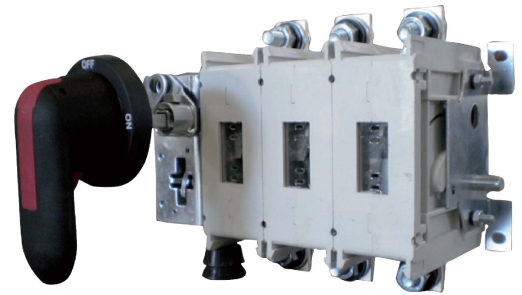
MCB



RCCB



RCBO



On-load break switch



Split Core Current
Transformer



VC



Current
Transformer

[illegible]

Medium Voltage

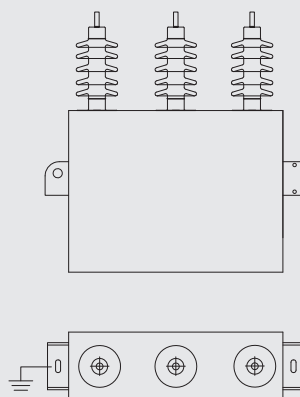
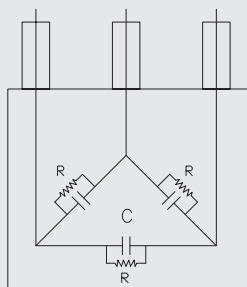


2. 3PH BO/R MT Series. Medium Voltage Three Phase Capacitors

Technical Characteristics	
Standard	IEC 60871-1/2
Voltage	1-12kV
Power	upto 1000kVAr
Frequency	50-60 Hz
Losses	<0.15W/kVAr
Temperature	-50 +55°C
Dielectric Liquid	PXE oil, non PCB, non toxic and biodegradable
Residual Voltage	10% Un after 5min
Dielectric	Hazy polypropylene film
Fuses	Optional. Recommendation: Internal up to 13.8kV External from 13.8kV
Use	Indoor-Outdoor
Altitude	1000m.a.s.l.
Maximum over voltage	1.1xUn
Maximum over current	1.3xIn
Tolerance	-5 +10%
Test voltage between terminals	4.3xUn (10sec)



Drawing

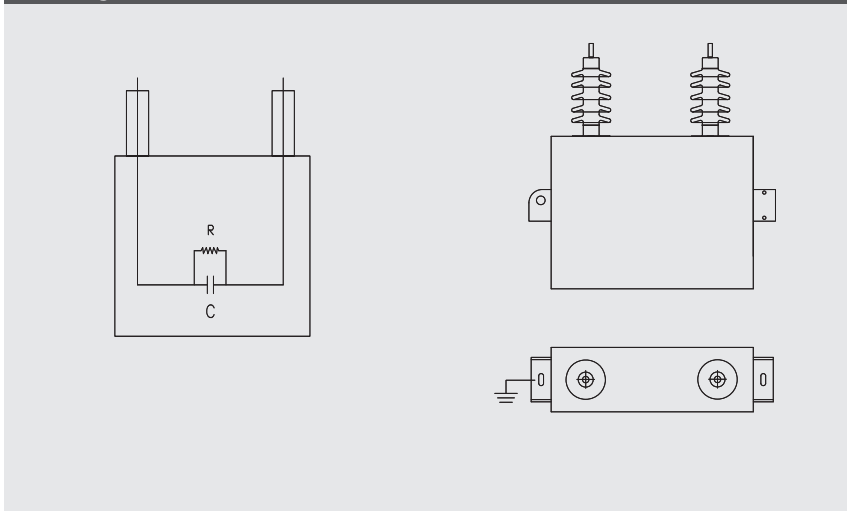


3. 1PH BO/R MT Series. Medium Voltage Single Phase Capacitors

Technical Characteristics	
Standard	IEC 60871-1/2
Voltage	1-24kV
Power	Hasta 1000kVAr
Frequency	50-60Hz
Losses	<0.15W/kVAr
Temperature	-50 +55°C
Dielectric Liquid	PXE oil, non PCB, non toxic and biodegradable
Residual Voltage	10% Un after 5min
Dielectric	Hazy polypropylene film
Fuses	Optional. Recommendation:
Internal up to 13.8kV	
External from 13.8kV	
Use	Indoor-Outdoor
Altitude	1000m.a.s.l.
Maximum over voltage	1.1xUn
Maximum over current	1.3xIn
Tolerance	-5 +10%
Test voltage between terminals	4.3xUn (10sec)



Drawing



Electronic Power Capacitors



EPC Series

RTR Energía, is a worldwide leading manufacturer and offer in wide range of polypropylene special metallized film capacitors (PPM), where we can find, among others, Power Factor Correction, DC-link electronic and Heavy-duty AC filtering capacitors. The capacitors are developed with latest technology machinery, R&D, know-how technology and manufactured with best quality raw materials by following strictest quality and safety controls.

The electronic power capacitors (EPC) are intended to use in power electronics equipment, UPS, AC filtering, wind-power energy, frequency converters, ect.

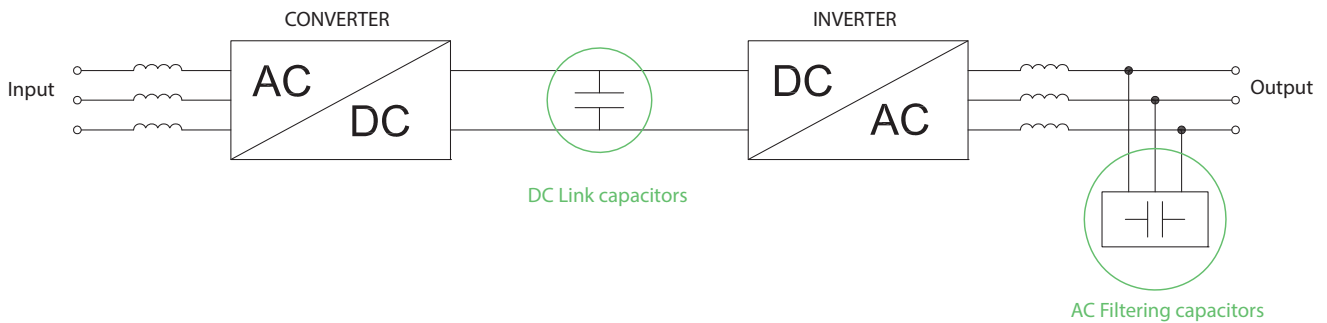
RTR Energía is specialized in manufacturing of self-healing capacitors with metalized dielectric with complying standard UNE-EN 61071 (IEC 61071: 2007).

TERMS AND DEFINITIONS ACCORDING TO IEC 61071

- **Rated AC Voltage (U_{NAC}):** The maximum operating peak recurrent voltage of either polarity of a reversing type wave form, for which the capacitor has been designed.
- **Rated DC Voltage (U_{NDC}):** The maximum operating peak voltage of either polarity but a non-reversing type wave form, for which the capacitor has been designed
- **Ripple voltage (U_r):** The peak-to-peak alternating component of the unidirectional voltage.
- **Non-recurrent surge voltage (U_s):** A peak voltage inducted by switching or any other faults or disturbance of the system, which is allowed for a maximum of 1000 times and for a duration shorter than 50 msec.
- **Maximum peak current ($\hat{I}$):** The maximum current amplitude which occurs instantaneously during continuous operation
- **Maximum current (I_{max}):** The maximum rms value of permissible current in continuous operation.
- **Peak surge current ($\hat{I}_s$):** The admissible peak current inducted by switching or any other faults or disturbance of the system, which is allowed for a maximum of 1000 times and for durations shorter than 50 msec.
- **Resonance frequency (f_r):** The lowest frequency at which the impedance of the capacitor is become minimum.
- **Operating temperature:** Temperature of hottest point on the case of operating capacitor in thermal equilibrium..
- **Lowest operating temperature (θ_{min}):** Lowest permissible case temperature, in thermal equilibrium, at which the capacitor may be used.
- **Maximum operating temperature (θ_{max}):** Highest permissible case temperature, in thermal equilibrium, at which the capacitor may be used.
- **Capacitance losses:** Active power dissipated by a capacitor.
- **Tangent of the loss angle of the capacitor ($\tan\delta$):** Ratio between the equivalent series resistance and the capacitive reactance of capacitor in sinusoidal frequency expressed as tangent loss.
- **Series resistance (R_s):** It is the effective resistance in Ohms of the conductive of a capacitor under specified working conditions.

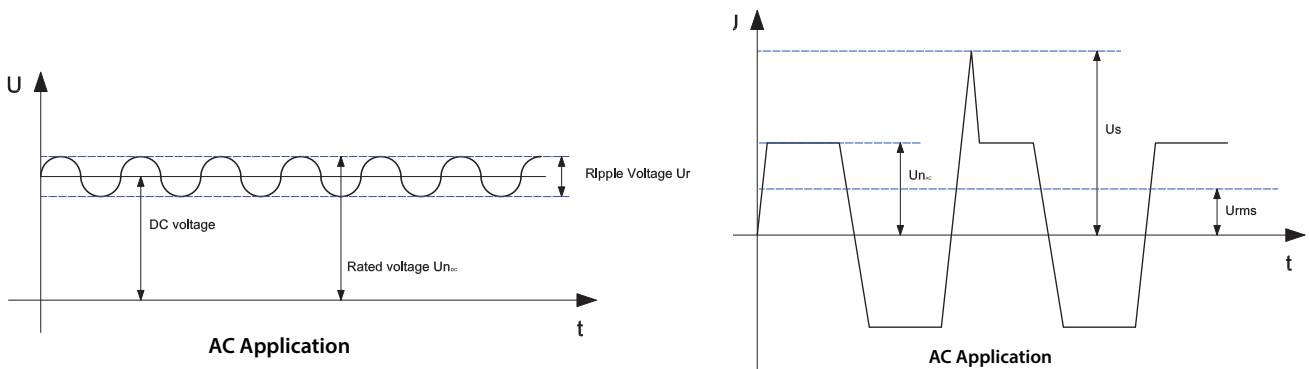
APPLICATIONS

The RTR electronics power capacitors (EPC) cover a wide range of applications since the construction and main parameters allow us for full fill large portfolio of EPC for DC-link capacitors and Heavy-duty AC filter capacitors.



RTR offers the range of capacitors of both types according to application and customer's requirements.

Capacitor	DC-Link	AC Filtering
Application	These ones are designed to use them in Dc power supplies, to protect the net from punctual peaks and spontaneous increased of voltage, as well as to reduce the ripple of the alternative component of the voltage of the direct current.	These capacitors are mounted in series with inductances to result an AC filter and be able to correct the reactive current and harmonics of loads.



ADVANTAGES	APPLICATIONS
• Large ranges of voltages and capacitances • Very low Volume-Capacitance relation • Equivalent series resistance low, ESR. • Series inductance very low, Ls. • High density designed • Very low losses at high frequencies • High values of current RMS • Dry type capacitors • Special and high quality film, self-healing • Reliability and expectancy life high	• Special inverter for renewable energies • Converters • Motor drive • UPS system • Battery chargers • Energy supplies and storage

AC FILTERING EPC CAPACITORS

The AC filtering Electronic power capacitors are used at the output of DC / AC inverters where extreme operating conditions are required with very high AC voltages, such as wind generators, solar inverters, UPS applications, harmonic filtering with unusual levels of harmonic distortions or those cases in which the current is not sinusoidal and with pulses.

The capacitors EPC FT (three-phase AC filter capacitor) and EPC FS (single-phase AC filter capacitor) from RTR Energía offer a very low resistance and inductance, to cover the different needs of the customers.

RTR Energía's manufacturing experience allows to offer a wide range of filter capacitors at different voltages and capacitances made with the best quality materials, and these capacitors also have overpressure disconnection system and

V0 self-extinguishing polyurethane resin, manufactured under UL94 by RTR with certification number: 20141031-E470994.



RTR's technical department offers personalized customer service and tailor made solutions for each customer and project, therefore, we recommending for consult us for define the best solution and price.

Capacitors for power electronic for three phase AC filtering

400/450/530/690/850/1200 V

Characteristics y utility

- Specially designed for filtering applications in power electronics.
- Dry type.
- Connector.
- Indoor mounting.

Safety

- Overpressure disconnection system.

Construction and materials

- Low losses metallized self-healing polypropylene film, high density, high temperatura and greater dielectric resistance Volt/ μ .
- Polyurethane self-extinguishing resin V0, developed under standard UL94 by RTR with certification number 20141031-E470994.
- Aluminium case with botton fixing M12x16.

Standard

- IEC 61071.
- UNE-EN 61071.



Technical Characteristics

Voltage (U_{rms})	Up to 1200VAC
Capacitance (C_n)	Up to 200 μ F
Tolerance	-10% +10%
Dissipation factor (δo) (100Hz)	2x10-4
Max. Over voltage	1.10xUn (30% of load time) 1.15xUn (up to 30min/day) 1.20xUn (up to 5min/day) 1.30xUn (up to 1min/day)
Voltage test between terminals	1.5xUrms 10s
Voltage test between terminals and case	5kV AC for 1min
IP protection	IP-20
Humidity	Max.95%
Life expectancy	>100.000h
Storage temperature	-40°C +85°C
Altitude	≤2000m.a.s.l.
Mounting position	Universal

EPC AC FT SERIES

Capacitance	Voltage sistema	Rated voltage	Peak current	Max. Current	Dimensions
C μF	Uac Vac	Urms Vac	Ipeak A	I _{max} A	DxH mm
3x17,0	565	400	450	20	70x225
3x30,0	565	400	890	25	70x225
3x50,0	565	400	1167	33	85x225
3x66,0	565	400	1336	40	85x225
3x166,7	565	400	1458	54	120x225
3x200,0	565	400	2657	58	136x225
3x50,0	650	450	802	30	85x225
3x80,0	650	450	1467	46	100x225
3x100,0	650	450	2040	56	120x225
3x135,0	650	450	2680	58	136x225
3x150,0	650	450	3060	67	136x225
3x180,0	650	450	2295	45	155x225
3x200,0	650	450	3730	60	155x225
3x5,0	750	530	916	32	100x225
3x66,0	750	530	1547	44	100x225
3x100,0	750	530	1833	58	136x225
3x25,0	975	690	697	29	85x225
3x33,4	975	690	837	36	100x225
3x55,7	975	690	1395	44	136x225
3x66,9	975	690	2070	50	136x225
3x25,0	1200	850	679	30	85x310
3x31,0	1200	850	906	36	100x225
3x55,7	1200	850	1721	49	120x310
3x12,0	1695	1200	1300	56	85x310
3x20,0	1695	1200	3300	56	120x310

Capacitors for power electronic for single phase AC filtering

250/420/480/580/680/700/780/900/1200/1400/1900 V

Characteristics y utility

- Specially designed for filtering applications in power electronics.
- Dry type.
- Connector.
- Indoor mounting.

Safety

- Overpressure disconnection system.

Construction and materials

- Low losses metallized self-healing polypropylene film, high density, high temperatura and greater dielectric resistance Volt/ μ .
- Polyurethane self-extinguishing resin V0, developed under standard UL94 by RTR with certification number 20141031-E470994.
- Aluminium case with botton fixing M12x16.

Standard

- IEC 61071.
- UNE-EN 61071.



Technical Characteristics

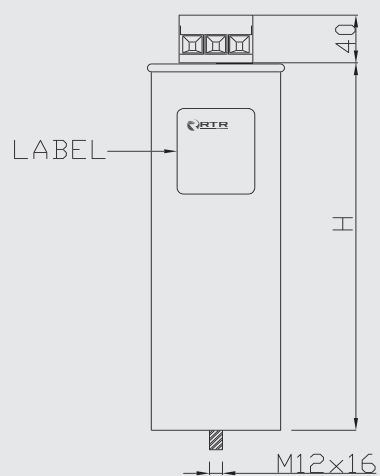
Voltage (U_{rms})	Up to 1400VAC
Capacitance (C_n)	Up to 400 μ F
Tolerance	-10% +10%
Dissipation factor (δ_o) (100Hz)	2x10 ⁻⁴
Max. Over voltage	1.10xUn (30% of load time) 1.15xUn (up to 30min/day) 1.20xUn (up to 5min/day) 1.30xUn (up to 1min/day)
Voltage test between terminals	1.5xUrms 10s
Voltage test between terminals and case	5kV AC for 1min
IP protection	IP-20
Humidity	Max.95%
Life expectancy	>100.000h
Storage temperature	-40°C +85°C
Altitude	≤2000m.a.s.l.
Mounting position	Universal

EPC AC FS SERIES

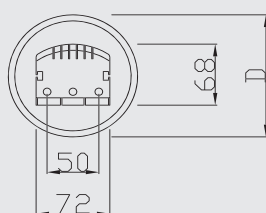
Capacitance	Rated voltage	Rated Rms voltage	Peak current	Max. Current	Dimensions
C μF	Uac Vac	Urms Vac	Ipeak A	I _{max} A	DxH mm
100	350	250	988	20	70x225
150	350	250	1086	22	70x225
200	350	250	1579	25	70x225
400	350	250	2610	40	85x225
50	300	420	570	18	70x225
120	300	420	1043	28	70x225
200	300	420	1385	31	70x225
80	330	460	476	14	70x225
100	330	460	1150	25	70x225
200	330	460	1753	45	70x225
50	400	560	785	29	70x225
100	400	560	2648	41	70x225
200	400	560	3467	49	85x225
350	400	560	3200	68	100x225
70	480	680	4000	50	70x225
100	480	680	3500	80	85x225
160	480	680	3000	36	100x225
300	480	680	2500	78	120x225
33	500	700	75	29	70x225
60	500	700	2953	33	70x225
100	500	700	1047	37	85x225
133	500	700	1392	40	100x225
200	500	700	3800	45	120x225
22	550	780	500	24	70x225
50	550	780	980	34	85x225
100	550	780	3500	50	100x225
133	550	780	4000	55	120x225
15	640	900	350	22	70x225
22	640	900	680	29	70x225
33	640	900	800	33	70x225
68	640	900	1496	45	100x225
50	850	1200	2700	62	100x225
56	850	1200	480	46	100x225
68	850	1200	650	50	120x225
30	1000	1400	650	38	85x225
15	1400	1900	740	35	70x225

Dimensions

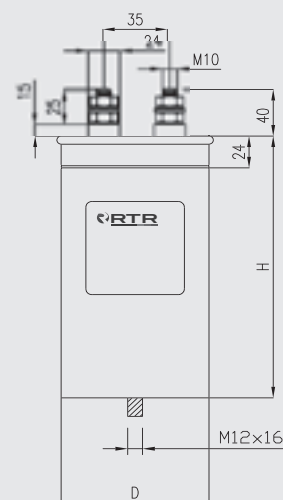
EPC AC FT SERIES



WASHER DIN 6798 A M12
NUT DIN 936 M12 ZNC

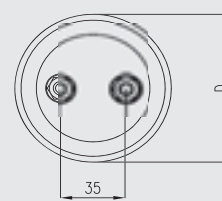


EPC AC FS SERIES



WASHER DIN 6798 A M12

NUT DIN 936 M12 ZNC



DC Link EPC CAPACITORS

DC-Link capacitors are electronic power capacitors which work in DC.

These capacitors are suitable, as long as the intention is to provide a path of low impedance at switching of current of high frequency and provide energy storage. The input phase can be as simple as a rectifier outside of AC voltage input or a power factor correction circuit (PFC) that generates a constant current of high voltage. The DC-link capacitor acts as the phase output filter in the PFC stage that absorbs the switching currents and whose main purpose is to minimize the ripple current due to the alternating component in the direct current.

The output phase should be a converter or a switched-mode inverter that “interrupts” the excessive frequency current from the DC-Link capacitor. The capacitor also has to have the right size to comply the ripple voltage specifications in the DC-Link and energy storage between power grid cycles or when the input power is lost. Therefore, it should have a low equivalent series resistance (ESR) and a minimum series inductance (Ls) and ripple current.

In general there are three types of capacitors for these applications: aluminum electrolytic, ceramic and DC-link film.

The selection is not easy and depends largely on the requirements of the project.

However, although the electrolytic models are more economical and compact than the other models, their durability is much lower and finally translates into a cost similar to other solutions and in major maintenance tasks, being those of film those that offer a better ripple current and durability, in addition to a greater voltage range of up to several kV.

In this sense, RTR Energía has extensive experience in manufacturing and calculating metallized polypropylene film capacitors and

offers a wide range of high quality DC-Link capacitors thanks to the strict manufacturing conditions and the high quality of its materials, which guarantee low inductance, low internal resistance and high reliability.

The coils housed inside an aluminum cylinder are sealed with V0 self-extinguishing polyurethane resin, manufactured under UL94 by RTR Energía. Therefore, the advantage of the use of DC-Link film RTR Energy versus other DC-Link capacitors or polymer or electrolytic capacitors are:

- Longer life
- Great reduction of failures
- Reduction of losses
- Significant reduction of resistance and inductance internal series.
- More exact tolerances
- Thanks to its compact design, it is very practical for electrical and mechanical use.

Compared to polymeric or electrolytic capacitors are:



Capacitors for power electronic DC-Link

600/800/900/1100/1200/1300/1500/2200 V

Characteristics y utility

- Specially designed for filtering applications in power electronics.
- Dry type.
- Connector.
- Indoor mounting.

Standard

- IEC 61071.
- UNE-EN 61071.

Construction and materials

- Low losses metallized self-healing polypropylene film, high density, high temperatura and greater dielectric resistance Volt/ μ .
- Polyurethane self-extinguishing resin V0, developed under standard UL94 by RTR with certification number 20141031-E470994.
- Aluminium case with botton fixing M12x16.



Technical Characteristics

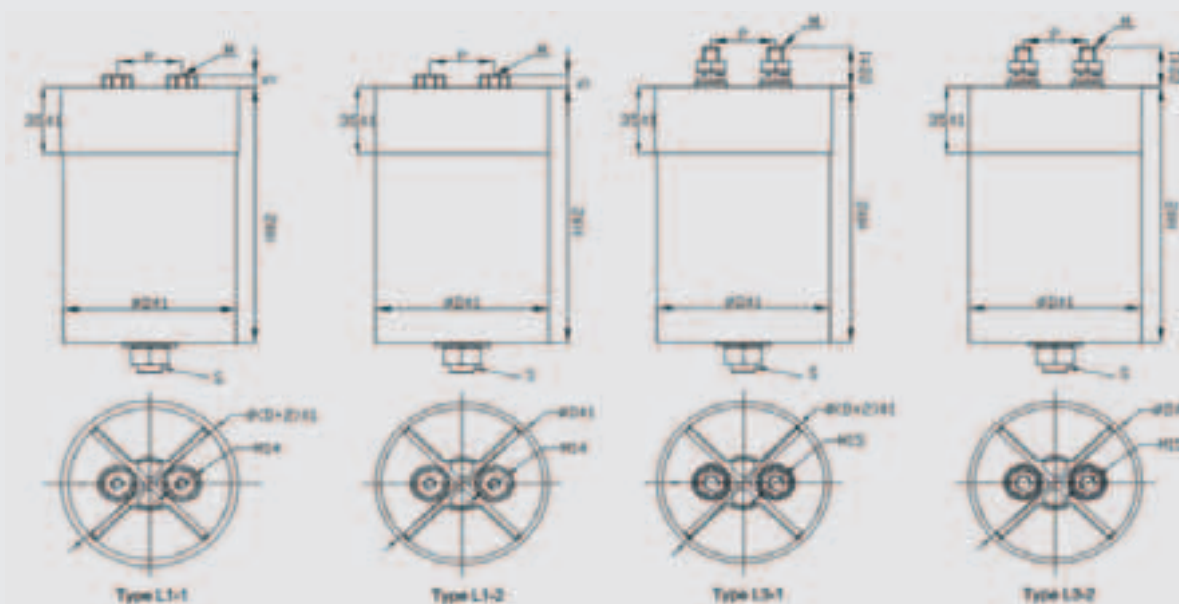
Voltage (U_{rms})	600-2200VDC
Capacitance (C_n)	160-3200 μ F
Tolerance	-10% +10%
Dissipation factor (δ_o) (100Hz)	2×10^{-4}
Max. Over voltage	1.10xUn (30% of load time) 1.15xUn (up to 30min/day) 1.20xUn (up to 5min/day) 1.30xUn (up to 1min/day)
Voltage test between terminals	1.5xUrms 10s
Voltage test between terminals and case	5kV for 1 min AC
IP protection	IP-20
Humidity	Max.95%
Life expectancy	>100.000h
Storage temperature	-40°C +85°C
Altitude	≤ 2000 m.a.s.l.
Mounting position	Universal

SERIE EPC DC-Link

Capacitance	Voltage	Equivalent series resistance	Dimensions
C μF	Udc Vdc	ESR mΩ	DxH mm
650	600	1,20	86x95
950	600	0,99	86x140
1300	600	1,34	86x180
1500	600	1,10	96x180
2350	600	0,70	116x180
100	800	1,40	86x180
700	800	4,20	86x140
1000	800	1,35	96x180
1800	800	1,30	116x180
470	900	39,00	86x125
500	900	60,00	86x136
600	900	53,00	86x150
700	900	62,00	86x180
960	900	62,00	86x230
1000	900	74,00	96x180
900	900	86,00	116x125
1350	900	94,00	116x180
1800	900	93,00	116x230
420	1100	2,05	86x136
650	1100	1,50	86x175
750	1100	1,80	86x230
550	1100	1,70	96x180
900	1100	1,60	96x230
1000	1100	1,18	116x180
1400	1100	1,10	116x230
2000	1100	0,98	136x230
2900	1100	0,78	136x345
330	1200	3,50	86x136
500	1200	1,71	86x180
600	1200	1,20	86x225
680	1200	2,20	86x225
350	1200	0,90	96x136
800	1200	1,52	96x230
900	1200	1,34	116x180
1200	1200	0,96	116x230
1700	1200	1,53	136x230
160	1300	2,90	86x100
330	1300	2,60	86x180
400	1300	1,86	96x180
500	1300	2,90	96x230
600	1300	1,12	116x180
820	1300	1,70	116x230
230	1500	2,50	86x155
420	1500	1,20	116x156
600	1500	0,99	116x230
160	2200	3,74	86x230
385	2200	1,81	116x293

DIMENSIONS						
D	P	Terminal		Fixing nut		Drawing
		M/L	Max T	S/L	Max T	
mm	mm	mm	Nm	mm	Nm	
86	32	M6*10	6	M12*16	10	Plano A-1
96	32	M6*10	6	M16*25	12	Plano A-2
116	50	M6*10	6	M16*25	12	
86	32	M6*20	8	M12*16	10	Plano B-1
96	32	M6*20	8	M16*25	12	Plano B-2
116	50	M6*20	8	M16*25	12	

Dimensions



factor correction



DWCAP Series

Three phase capacitors

230/400/415/440/480/525/690 V, 50 Hz

Characteristics and utility

- Three phase capacitor DUAL WINDING internally delta connected
- Discharge resistors Incorporated
- Reactive power factor correction
- Dry type
- Connector type terminal
- Indoor mounting

Triple safety

- Overpressure disconnection system
- Protection by internal fuses
- DWCAP system (patented) internal windings displacement

Construction and materials

- Low losses metallized self-healing polypropylene film, high density, high temperature and greater dielectric resistance Volt/ μ
- Polyurethane self-extinguishing resin V0 (Flame retardant), developed under standard UL94 by RTR Energía with certification number 20141031-E470994
- Aluminium case with bottom fixing M12x16

Discharge time

- 50V/ 60s

Standards

- IEC 60831-1/2:2014
- UNE-EN 60831-1/2:2014

Certifications



* Certified product up to 525V and 35kVAr

Technical Characteristics

Capacitance tolerance	-5 % +10%
Frequency	50 Hz (60 Hz upon request)
Temperature range	-25°C +55°C (Class D)
Dielectric losses	≤ 0.2 W/KVAr
Total losses	≤ 0.40 W/KVAr*
Over voltage	1.10 x Un (8 h/day) 1.15 x Un (30 min/day) 1.20 x Un (5 min/day) 1.30 x Un (1 min/day)
Over current	1.60xIn
Max. THD in voltage	2 %
Max. THD in current	25 %
Discharge resistance	Incorporated
Connection	Delta
Voltage test between terminals	2.15xUn 10s
Voltage test between terminals and case	5kV AC for 1min
Inrush current	Upto 250 x In
Protection	IP-20
Humidity	Max. 95%
Life Expectancy	130.000h
Altitude	Max. 4000m.a.s.l.
Mounting position	Universal
Min. mounting distance between capacitors	10mm

* Without resistors



Code	Power	Voltage	Frequency	Current	Capacitance	Dimensions
	KVAr	V	Hz	A	μF	mm
D2300255TER0000	2,5	230	50	6,28	3x 50,14	70x260
D2300505TER0000	5	230	50	12,5	3x100,29	85x260
D2300755TER0000	7,5	230	50	18,83	3x150,43	100x260
D2301005TER0000	10	230	50	25,10	3x200,57	120x265
D2301255TER0000	12,5	230	50	31,38	3x250,72	136x265
D2301505TER0000	15	230	50	37,65	3x300,86	136x265

Code	Power	Voltage	Frequency	Current	Capacitance	Dimensions
	KVAr	V	Hz	A	μF	mm
D4000755TER0000	7,5	400	50	10,83	3x49,74	70 x 260
D4001005TER0000	10	400	50	14,43	3x66,31	85 x 260
D4001255TER0000	12,5	400	50	18,04	3x82,89	85 x 260
D4001505TER0000	15	400	50	21,65	3x99,47	100 x 260
D4002005TER0000	20	400	50	28,87	3x132,63	120 x 265
D4002505TER0000	25	400	50	36,08	3x165,79	120 x 265
D4003005TER0000	30	400	50	43,30	3x198,94	136 x 265

Code	Power	Voltage	Frequency	Current	Capacitance	Dimensions
	KVAr	V	Hz	A	μF	mm
D4150755TER0000	7,5	415	50	10,43	3x46,21	70 x 260
D4151005TER0000	10	415	50	13,91	3x61,61	85 x 260
D4151255TER0000	12,5	415	50	17,39	3x77,01	85 x 260
D4151505TER0000	15	415	50	20,87	3x92,41	100 x 260
D4152005TER0000	20	415	50	27,82	3x123,21	120 x 265
D4152505TER0000	25	415	50	34,78	3x154,02	120 x 265
D4153005TER0000	30	415	50	41,74	3x184,82	136 x 265
D4153505TER0000	35	415	50	48,69	3x215,63	136 x 265

Code	Power	Voltage	Frequency	Current	Capacitance	Dimensions
	KVAr	V	Hz	A	μF	mm
D4400755TER0000	7,5	440	50	9,84	3x 41,10	70x260
D4401005TER0000	10	440	50	13,12	3x 54,81	70x260
D4401255TER0000	12,5	440	50	16,40	3x 68,51	85x260
D4401505TER0000	15	440	50	19,68	3x 82,21	85x260
D4402005TER0000	20	440	50	26,24	3x109,61	100x260
D4402505TER0000	25	440	50	32,80	3x137,01	120x265
D4403005TER0000	30	440	50	39,36	3x164,42	120x265
D4403505TER0000	35	440	50	45,93	3x191,82	136x265
D4404005TER0000	40	440	50	52,49	3x219,22	136x265

Code	Power	Voltage	Frequency	Current	Capacitance	Dimensions
	KVAr	V	Hz	A	μF	mm
D4800755TER0000	7,5	480	50	9,02	3x 34,54	70x260
D4801005TER0000	10	480	50	12,03	3x 46,05	85x260
D4801255TER0000	12,5	480	50	15,04	3x 57,56	100x260
D4801505TER0000	15	480	50	18,04	3x 69,08	100x260
D4802005TER0000	20	480	50	24,06	3x 92,10	120x265
D4802505TER0000	25	480	50	30,07	3x115,13	120x265
D4803005TER0000	30	480	50	36,08	3x138,16	136x265
D4803505TER0000	35	480	50	42,10	3x161,18	136x265

Code	Power	Voltage	Frequency	Current	Capacitance	Dimensions
	KVAr	V	Hz	A	μF	mm
D5250755TER0000	7,5	525	50	8,25	3x 28,87	70x260
D5251005TER0000	10	525	50	11,00	3x 38,50	85x260
D5251255TER0000	12,5	525	50	13,75	3x 48,12	85x260
D5251505TER0000	15	525	50	16,50	3x 57,74	100x260
D5252005TER0000	20	525	50	21,99	3x 76,99	120x265
D5252505TER0000	25	525	50	27,49	3x 96,24	120x265
D5253005TER0000	30	525	50	32,99	3x115,49	136x265
D5253505TER0000	35	525	50	38,49	3x134,73	136x265

Code	Power	Voltage	Frequency	Current	Capacitance	Dimensions
	KVAr	V	Hz	A	μF	mm
D6900755TER0000	7,5	690	50	6,28	3x16,71	70x260
D6901005TER0000	10	690	50	8,37	3x22,29	85x260
D6901255TER0000	12,5	690	50	10,46	3x27,86	100x260
D6901505TER0000	15	690	50	12,55	3x33,43	100x260
D6902005TER0000	20	690	50	16,73	3x44,57	120x260
D6902505TER0000	25	690	50	20,92	3x55,71	120x265
D6903005TER0000	30	690	50	25,10	3x66,86	136x265

* Other powers, voltages and frequencies upon request.

Reinforced three phase capacitors

230/400/415/440/480 V, 50 Hz

Characteristics and utility

- Three phase capacitor DUAL WINDING internally delta connected
- Discharge resistors Incorporated
- Reactive power factor correction
- Reinforced design to support over voltage
- Dry type
- Connector type terminal
- Indoor mounting

Triple safety

- Overpressure disconnection system.
- Protection by internal fuses
- DWCAP system (patented) internal windings displacement.

Construction and materials

- Low losses metallized self-healing polypropylene film, high density, high temperature and greater dielectric resistance Volt/ μ
- Polyurethane self-extinguishing resin V0 (Flame retardant), developed under standard UL94 by RTR Energía with certification number 20141031-E470994
- Aluminium case with bottom fixing M12x16

Discharge time

- 50V/ 60s

Standards

- IEC 60831-1/2:2014
- UNE-EN 60831-1/2:2014

Certifications



* Certified product up to 525V and 35kVAr

Technical Characteristics

Capacitance tolerance	-5 % +10%
Frequency	50 Hz (60 Hz upon request)
Temperature range	-25°C +55°C (Class D)
Dielectric losses	≤ 0.2 W/KVAr
Total losses	≤ 0.40 W/KVAr*
Over voltage	1.15 x Un
Over current	1.8xIn
Max. THD in voltage	3 %
Max. THD in current	30 %
Discharge resistance	Incorporated
Connection	Delta
Voltage test between terminals	2.15xUn 10s
Voltage test between terminals and case	5kV AC for 1min
Inrush current	Upto 350 x In
Protection	IP-20
Humidity	Max. 95%
Life Expectancy	150.000h
Altitude	Max. 4000m.a.s.l.
Mounting position	Universal
Min. mounting distance between capacitors	10mm

* Without resistors



Code	Power	Voltage	Frequency	Current	Capacitance	Dimensions
	KVAr	V	Hz	A	μF	mm
D2300255TER0RTF	2,5	230	50	6,28	3x 50,14	70x260
D2300505TER0RTF	5	230	50	12,55	3x100,29	85x260
D2300755TER0RTF	7,5	230	50	18,83	3x150,43	100x260
D2301005TER0RTF	10	230	50	25,10	3x200,57	120x265
D2301255TER0RTF	12,5	230	50	31,38	3x250,72	136x265
D2301505TER0RTF	15	230	50	37,65	3x300,86	136x265

Code	Power	Voltage	Frequency	Current	Capacitance	Dimensions
	KVAr	V	Hz	A	μF	mm
D4000755TER0RTF	7	400	50	10,83	3X 49,74	70X260
D4001005TER0RTF	10	400	50	14,45	3x 66,30	85x260
D4001255TER0RTF	12,5	400	50	18,06	3x 82,90	100x260
D4001505TER0RTF	15	400	50	21,68	3x 99,50	100x260
D4002005TER0RTF	20	400	50	28,90	3x132,60	120x265
D4002505TER0RTF	25	400	50	36,13	3x165,80	120x265
D4003005TER0RTF	30	400	50	43,35	3x198,90	136x265

Code	Power	Voltage	Frequency	Current	Capacitance	Dimensions
	KVAr	V	Hz	A	μF	mm
D4150755TER0RTF	7,5	415	50	10,43	3x 46,21	70x260
D4151005TER0RTF	10	415	50	13,93	3x 61,60	85x260
D4151255TER0RTF	12,5	415	50	17,41	3x 77,00	100x260
D4151505TER0RTF	15	415	50	20,89	3x 92,40	100x260
D4152005TER0RTF	20	415	50	27,86	3x123,20	120x265
D4152505TER0RTF	25	415	50	34,82	3x154,00	120x265
D4153005TER0RTF	30	415	50	41,79	3x184,80	136x265
D4153505TER0000	35	415	50	48,69	3x215,63	136x265

Code	Power	Voltage	Frequency	Current	Capacitance	Dimensions
	KVAr	V	Hz	A	μF	mm
D4400755TER0RTF	7,5	440	50	9,84	3x 41,10	70x260
D4401005TER0RTF	10	440	50	13,12	3x 54,81	85x260
D4401255TER0RTF	12,5	440	50	16,40	3x 68,51	85x260
D4401505TER0RTF	15	440	50	19,68	3x 82,21	100x260
D4402005TER0RTF	20	440	50	26,24	3x109,61	100x260
D4402505TER0RTF	25	440	50	32,80	3x137,01	120x265
D4403005TER0RTF	3	440	50	39,36	3x164,42	120x265
D4403505TER0RTF	35	440	50	45,93	3x191,82	136x265
D4404005TER0RTF	40	440	50	52,49	3x219,22	136x265

Code	Power	Voltage	Frequency	Current	Capacitance	Dimensions
	KVAr	V	Hz	A	μF	mm
D4800755TER0RTF	7,5	480	50	9,02	3x 34,54	70x260
D4801005TER0RTF	10	480	50	12,03	3x 46,05	85x260
D4801255TER0RTF	12,5	480	50	15,04	3x 57,56	100x260
D4801505TER0RTF	15	480	50	18,04	3x 69,08	100x260
D4802005TER0RTF	20	480	50	24,06	3x 92,10	120x265
D4802505TER0RTF	25	480	50	30,07	3x115,13	120x265
D4803005TER0RTF	30	480	50	36,08	3x138,16	136x265
D4803505TER0RTF	35	480	50	42,10	3x161,18	136x265

* Other powers, voltages and frequencies upon request.

Three phase capacitors for harmonics filter application

230/400/440 V, 50 Hz

Characteristics and utility

- Three phase capacitor DUAL WINDING internally delta connected
- Discharge resistors Incorporated
- Reactive power factor correction
- Special design to install with 210, 189 or 134 Hz three phase harmonic filters
- Dry type
- Connector type terminal
- Indoor mounting

Triple safety

- Overpressure disconnection system
- Protection by internal fuses
- DWCAP system (patented) internal windings displacement

Construction and materials

- Low losses metallized self-healing polypropylene film, high density, high temperature and greater dielectric resistance Volt/ μ
- Polyurethane self-extinguishing resin V0 (Flame retardant), developed under standard UL94 by RTR Energía with certification number 20141031-E470994
- Aluminium case with bottom fixing M12x16

Discharge time

- 50V/ 60s

Standard

- IEC 60831-1/2:2014
- UNE-EN 60831-1/2:2014

Certifications



* Certified product up to 525V and 35kVAr

Technical Characteristics

Capacitance tolerance	-5 % +10%
Frequency	50 Hz (60 Hz upon request)
Temperature range	-25°C +55°C (Class D)
Dielectric losses	≤ 0.2 W/KVAr
Total losses	≤ 0.40 W/KVAr*
Over voltage	1.15 x Un
Over current	1.8xIn
Discharge resistance	Incorporated
Connection	Delta
Voltage test between terminals	2.15xUn 10s
Voltage test between terminals and case	5kV AC for 1min
Inrush current	Upto 350xIn
Protection	IP-20
Humidity	Max. 95%
Altitude	Max. 4000m.a.s.l.
Mounting position	Universal
Min. mounting distance between capacitors	10mm

* Without resistors



Code	Power	Voltage	Frequency	Detuning	Current	Capacitance	Dimensions
	KVAr	V	Hz	Factor	A	μF	mm
D2300255TER7RCT	2,5	230	50	7%	6,28	3x 46,63	70x260
D2300505TER7RCT	5	230	50	7%	12,55	3x 93,27	85x260
D2300755TER7RCT	7,5	230	50	7%	18,83	3x139,90	100x260
D2301005TER7RCT	10	230	50	7%	25,10	3x186,53	120x265
D2301255TER7RCT	12,5	230	50	7%	31,38	3x233,17	136x265
D2301505TER7RCT	15	230	50	7%	37,65	3x279,80	136x265

Code	Power	Voltage	Frequency	Detuning	Current	Capacitance	Dimensions
	KVAr	V	Hz	Factor	A	μF	mm
D2300255TER1RCT	2,5	230	50	14%	6,28	3x 43,12	70x260
D2300505TER1RCT	5	230	50	14%	12,55	3x 86,25	85x260
D2300755TER1RCT	7,5	230	50	14%	18,83	3x129,37	100x260
D2301005TER1RCT	10	230	50	14%	25,10	3x172,49	120x265
D2301255TER1RCT	12,5	230	50	14%	31,38	3x215,62	120x265
D2301505TER1RCT	15	230	50	14%	37,65	3x258,74	136x265

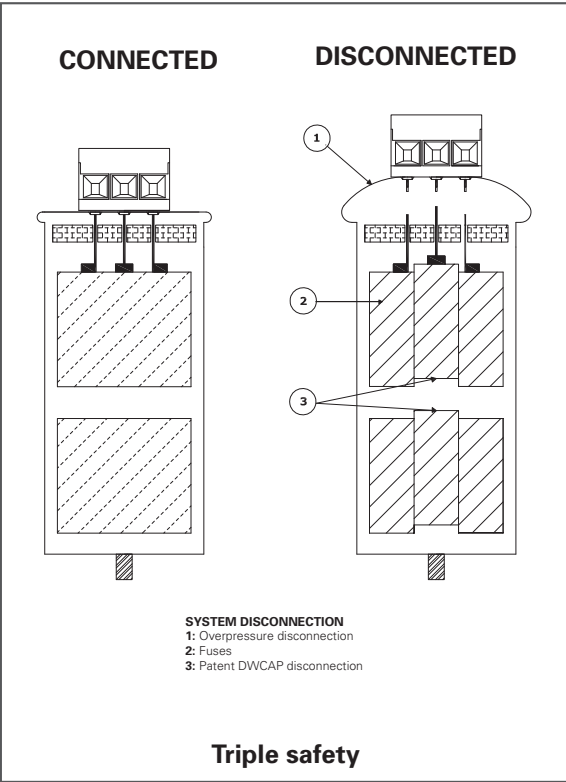
Code	Power	Voltage	Frequency	Detuning	Current	Capacitance	Dimensions
	KVAr	V	Hz	Factor	A	μF	mm
D4000755TER7RCT	7,5	400	50	7%	10,83	3x 46,25	85x260
D4001005TER7RCT	10	400	50	7%	14,43	3x 61,67	85x260
D4001255TER7RCT	12,5	400	50	7%	18,04	3x 77,09	100x260
D4001505TER7RCT	15	400	50	7%	21,65	3x 92,51	100x260
D4002005TER7RCT	20	400	50	7%	28,87	3x123,35	120x265
D4002505TER7RCT	25	400	50	7%	36,08	3x154,18	136x265
D4003005TER7RCT	30	400	50	7%	43,30	3x185,02	136x265

Code	Power	Voltage	Frequency	Detuning	Current	Capacitance	Dimensions
	KVAr	V	Hz	Factor	A	μF	mm
D4000755TER1RCT	7,5	400	50	14%	10,83	3x 42,77	85x260
D4001005TER1RCT	10	400	50	14%	14,43	3x 57,03	100x260
D4001255TER1RCT	12,5	400	50	14%	18,04	3x 71,29	100x260
D4001505TER1RCT	15	400	50	14%	21,65	3x 85,55	120x265
D4002005TER1RCT	20	400	50	14%	28,87	3x114,06	120x265
D4002505TER1RCT	25	400	50	14%	36,08	3x142,58	136x265

Code	Power	Voltage	Frequency	Detuning	Current	Capacitance	Dimensions
	KVAr	V	Hz	Factor	A	μF	mm
D4400755TER7RCT	7,5	440	50	7%	9,84	3x 38,23	85x260
D4401005TER7RCT	10	440	50	7%	13,12	3x 50,97	85x260
D4401255TER7RCT	12,5	440	50	7%	16,40	3x 63,71	100x260
D4401505TER7RCT	15	440	50	7%	19,68	3x 76,45	100x260
D4402005TER7RCT	20	440	50	7%	26,24	3x101,94	120x265
D4402505TER7RCT	25	440	50	7%	32,80	3x127,42	136x265
D4403005TER7RCT	30	440	50	7%	39,36	3x152,91	136x265

Code	Power	Voltage	Frequency	Detuning	Current	Capacitance	Dimensions
	KVAr	V	Hz	Factor	A	μF	mm
D4400755TER1RCT	7,5	440	50	14%	9,84	3x 35,35	85x260
D4401005TER1RCT	10	440	50	14%	13,12	3x 47,13	100x260
D4401255TER1RCT	12,5	440	50	14%	16,40	3x 58,92	100x260
D4401505TER1RCT	15	440	50	14%	19,68	3x 70,70	120x265
D4402005TER1RCT	20	440	50	14%	26,24	3x 94,27	120x265
D4402505TER1RCT	25	440	50	14%	32,80	3x117,83	136x265

* Other powers, voltages and frequencies upon request.

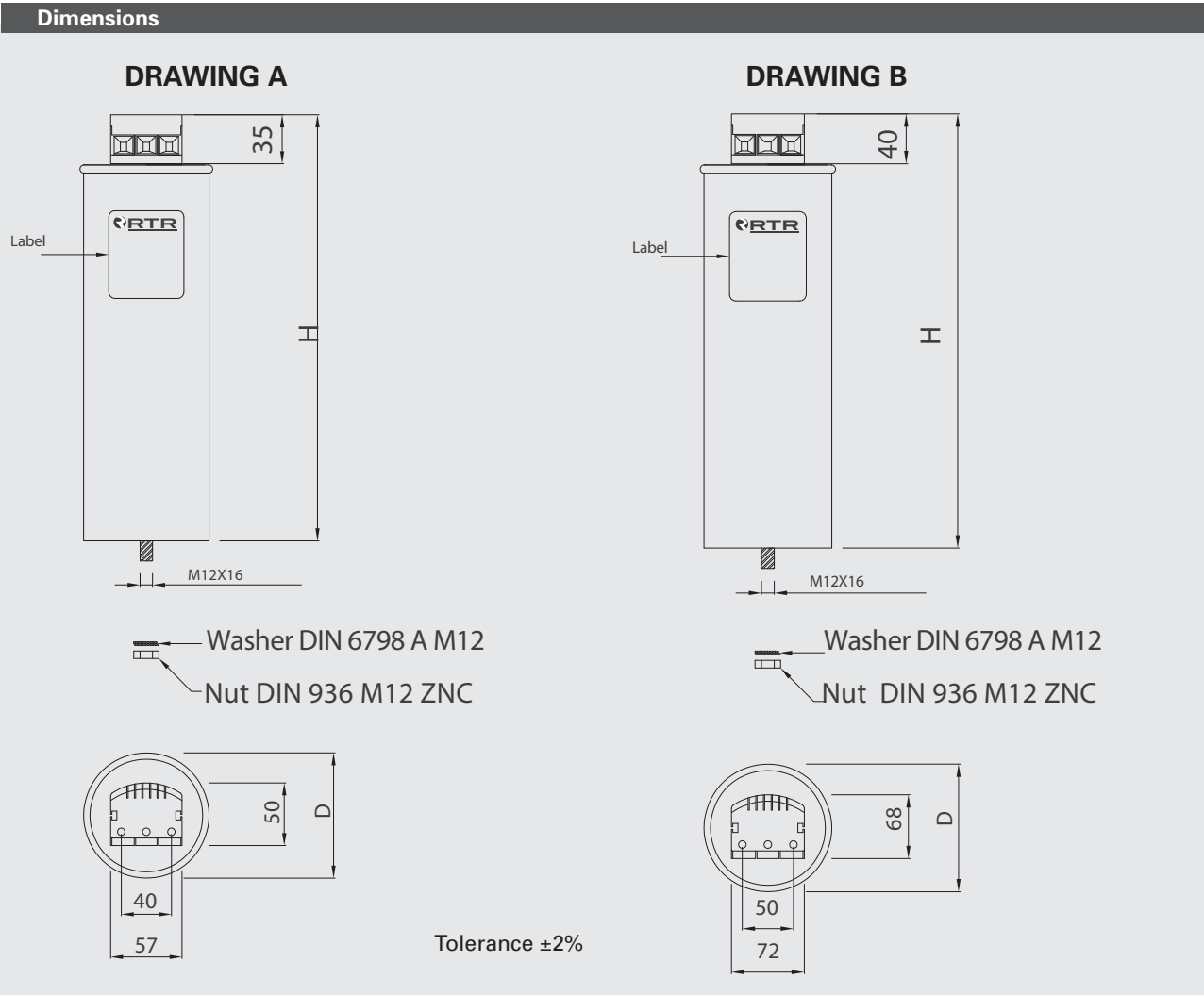


Temperature (IEC 60831-1/2)

Symbol	Ambient temperature °C		
	Maximum	Highest mean over any period of	
		24h	1 year
A	40	30	20
B	45	35	25
C	50	40	30
D	55	45	35

Dimensions

Dimensions	Connection terminal	DRAWING
DxH (mm)	Max. cable section 1 kV-RV (mm²)	
70x260	10	DRAWING A
85x260	10	
100x260	10	
120x265	35	DRAWING B
136x265	35	



Capacitor for power factor correction



SUPER DWCAP Series

SUPER DWCAP SERIES

Three phase capacitors

230/400/440/480/525V, 50Hz

Characteristics and utility

- Three phase capacitor DUAL WINDING internally delta connected.
- Discharge resistors incorporated.
- Reactive power factor correction.
- Dry type.
- Connector type terminal.
- Indoor mounting.

Triple safety

- Overpressure disconnection system.
- Protection by internal fuses.
- DWCAP system (patented) internal displacement.

Construction and materials

- Low losses metallized self-healing polypropylene film, high density, high temperature and greater dielectric resistance V/ μ .
- Polyurethane self-extinguishing resin V0 (Flame retardant), developed under standard UL94 by RTR Energía with certification number 20141031-E470994.
- Aluminium case with bottom fixing M12x16.

Discharge time

- 50V/ 60s

Standards

- IEC 60831-1/2:2014
- UNE-EN 60831-1/2:2014



Technical Characteristics

Capacitance tolerance	-5% +10%
Frequency	50Hz (60Hz Upon request)
Temperature range	-25°C +55°C (Class D)
Dielectric losses	$\leq 0.2\text{W/kVAr}$
Total losses	$\leq 0.40\text{W/kVAr}^*$
Over voltage	1.10xUn (24h) 1.15xUn (30min/day) 1.20xUn (5min/day) 1.30xUn (1min/day)
Over current	2.05xIn
Max. THD in voltage	4%
Max. THD in current	60%
Discharge resistance	Incorporated
Connection	Delta
Voltage test between terminals	2.15xUn 10s
Voltage test between terminals and case	5kV AC for 1min
Inrush current	Up to 350xIn
Protection	IP-20
Humidity	Máx. 95%
Life expectancy	200.000h
Altitude	4000m.a.s.l.
Mounting position	Universal
Min. mounting distance between capacitors	10mm

*Without resistors



Code	Power	Voltage	Frequency	Current	Capacitance	Dimensions
	kVAr	V	Hz	A	μF	mm
S2300255TER0000	2,5	230	50	12,55	3x50,14	85X395
S2300505TER0000	5	230	50	12,55	3x100,29	120X400
S2300755TER0000	7,5	230	50	18,83	3x150,43	136X400

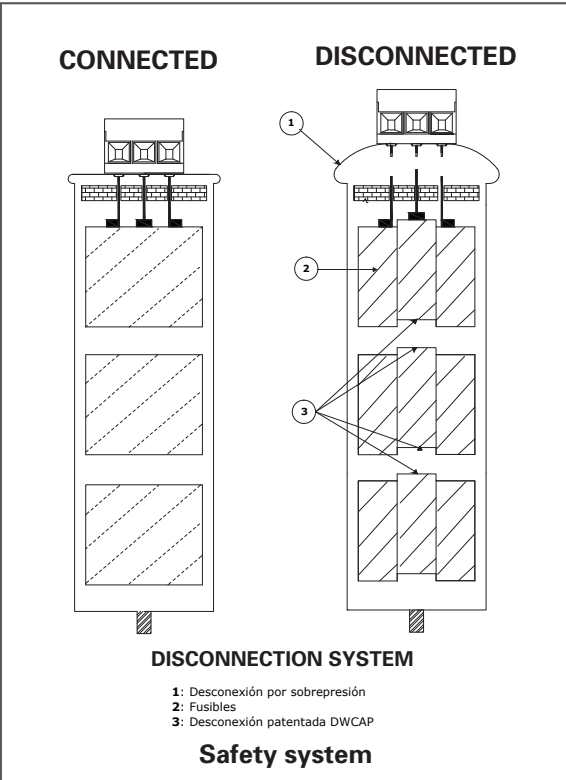
Code	Power	Voltage	Frequency	Current	Capacitance	Dimensions
	kVAr	V	Hz	A	μF	mm
S4000505TER0000	5	400	50	7,22	3x33,16	70x395
S4000755TER0000	7,5	400	50	10,83	3x49,74	85x395
S4001005TER0000	10	400	50	14,43	3x66,31	100x395
S4001255TER0000	12,5	400	50	18,04	3x82,89	120x400
S4001505TER0000	15	400	50	21,65	3x99,47	120x400
S4002005TER0000	20	400	50	28,87	3x132,63	136x400
S4002505TER0000	25	400	50	36,08	3x165,79	136x400

Code	Power	Voltage	Frequency	Current	Capacitance	Dimensions
	kVAr	V	Hz	A	μF	mm
S4400505TER0000	5	440	50	6,56	3x27,40	70x395
S4400755TER0000	7,5	440	50	9,84	3x41,10	85x395
S4401005TER0000	10	440	50	13,12	3x54,81	100x395
S4401255TER0000	12,5	440	50	16,40	3x68,51	100x395
S4401505TER0000	15	440	50	19,68	3x82,21	120x400
S4402005TER0000	20	440	50	26,24	3x109,61	120x400
S4402505TER0000	25	440	50	32,80	3x137,01	136x400
S4403005TER0000	30	440	50	39,36	3x164,42	136x400

Code	Power	Voltage	Frequency	Current	Capacitance	Dimensions
	kVAr	V	Hz	A	μF	mm
S4800505TER0000	5	480	50	6,01	3x23,03	70X395
S4800755TER0000	7,5	480	50	9,02	3x34,54	85X395
S4801005TER0000	10	480	50	12,03	3x46,05	100X395
S4801255TER0000	12,5	480	50	15,04	3x57,56	120X400
S4801505TER0000	15	480	50	18,04	3x69,08	120X400
S4802005TER0000	20	480	50	24,06	3x92,10	136X400
S4802505TER0000	25	480	50	30,07	3x115,13	136X400

Code	Power	Voltage	Frequency	Current	Capacitance	Dimensions
	kVAr	V	Hz	A	μF	mm
S5250505TER0000	5	525	50	5,50	3x19,25	85x395
S5250755TER0000	7,5	525	50	8,25	3x28,87	100x395
S5251005TER0000	10	525	50	11,00	3x38,50	100x395
S5251255TER0000	12,5	525	50	13,75	3x48,12	120x400
S5251505TER0000	15	525	50	16,50	3x57,74	120x400
S5252005TER0000	20	525	50	21,99	3x76,99	136x400

* Other powers, voltages and frequencies upon request.

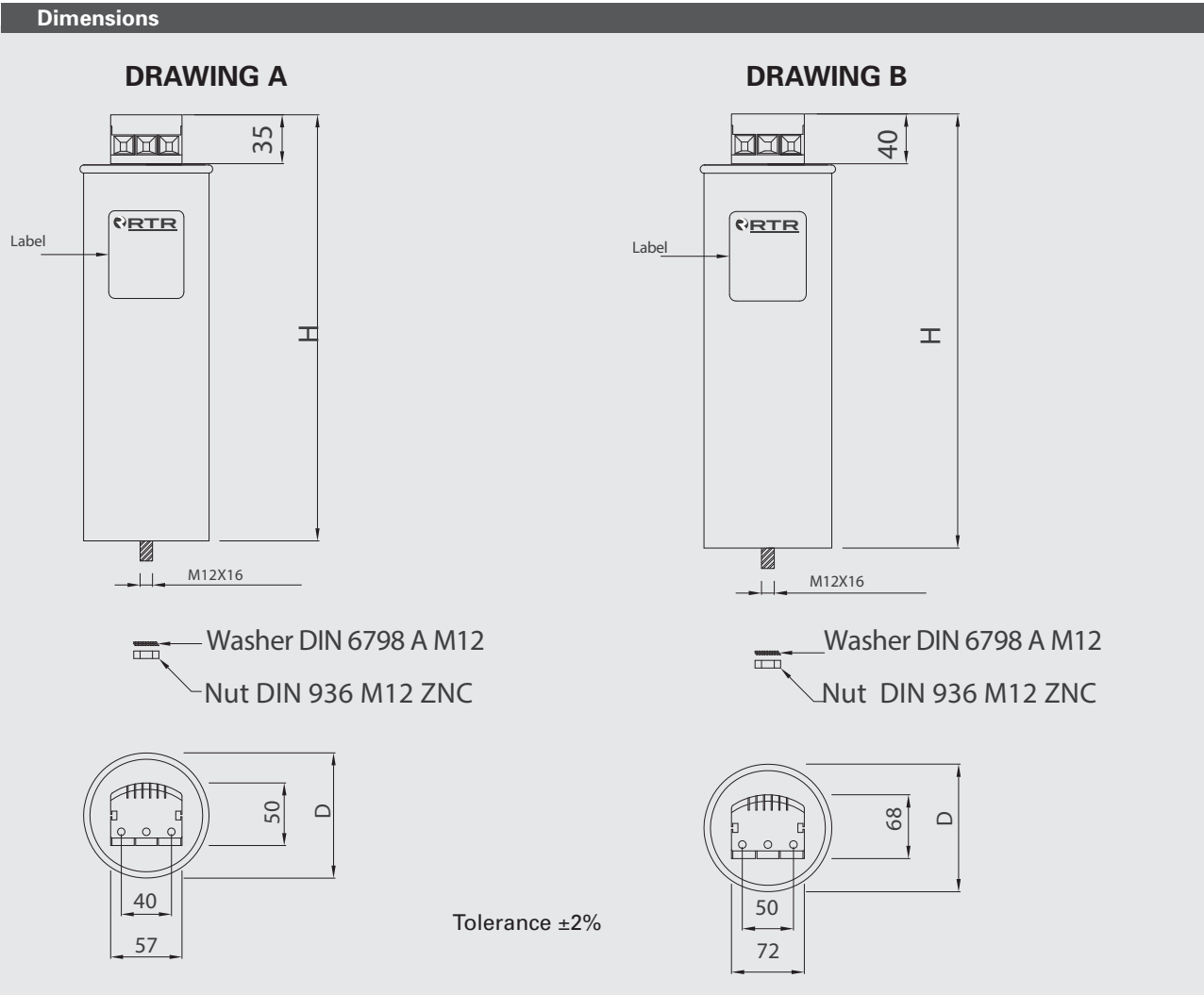


Temperature (IEC 60831-1/2)

Symbol	Ambient temperature °C		
	Maximun	Highest mean over any period of	
		24h	1 year
A	40	30	20
B	45	35	25
C	50	40	30
D	55	45	35

Dimensions

Dimensions	Connection terminal	DRAWING
DxH (mm)	Max. cable section 1 kV-RV (mm²)	
70x395	10	DRAWING A
85x395	10	
100x395	10	
120x400	35	DRAWING B
136x400	35	



Capacitor for power factor correction



MA/C/CE/TER Series

Three phase capacitor with connector

230/400/415/440/480/525 V, 50 Hz

Characteristics and utility

- Three phase capacitor
- Delta connection
- Discharge resistors incorporated
- Reactive power factor correction
- Dry type
- Connector type terminal
- Indoor terminal

Safety

- Overpressure disconnection system
- Protection by internal fuses.

Construction and materials

- Low losses metallized self-healing polypropylene film, high density, high temperature and greater dielectric resistance Volt/ μ
- Polyurethane self-extinguishing resin V0 (Flame retardant), developed under standard UL94 by RTR Energia and with certification number 20141031-E470994
- Aluminium case with bottom fixing M12x16

Discharge time

- 50V/ 60s

Standard

- IEC 60831-1/2:2014
- UNE-EN 60831-1/2:2014



Technical Characteristics

Capacitance tolerance	-5 % +10%
Frequency	50 Hz (60 Hz upon request)
Temperature range	-25°C +55 °C (Class D)
Dielectric losses	≤ 0.2 W/KVAr
Total losses	≤ 0.40 W/KVAr*
Over voltage	1.10 x Un (8 h/day) 1.15 x Un (30 min/day) 1.20 x Un (5 min/day) 1.30 x Un (1 min/day)
Over current	1.6xIn
Max. THD in voltage	2 %
Max. THD in current	25 %
Discharge resistance	Incorporated
Connection	Delta
Voltage test between terminals	2.15xUn 10s
Voltage test between terminals and case	5kV AC for 1min
Inrush current	Up to 250 x In
Protection	IP-20
Humidity	Max. 95%
Life Expectancy	130 000h
Altitude	Max. 4000m.a.s.l.
Mounting position	Universal
Min. mounting distance between capacitors	10mm



* Without resistors

Code	Power	Voltage	Frequency	Current	Capacitance	Dimensions
	KVAr	V	Hz	A	µF	mm
C2300255TER0000	2,5	230	50	6,28	3x 50,14	70x260
C2300505TER0000	5	230	50	12,55	3x100,29	85x260
C2300755TER0000	7,5	230	50	18,83	3x150,43	100x260
C2301005TER0000	10	230	50	25,10	3x200,57	100x345
C2301255TER0000	12,5	230	50	31,38	3x250,72	120x345
C2301505TER0000	15	230	50	37,65	3x300,86	120x345
C2302005TER0000	20	230	50	50,20	3x401,15	136x345

Code	Power	Voltage	Frequency	Current	Capacitance	Dimensions
	KVAr	V	Hz	A	µF	mm
C4000255TER0000	2,5	400	50	3,61	3x 16,58	70x260
C4000505TER0000	5	400	50	7,22	3x 33,16	70x260
C4000755TER0000	7,5	400	50	10,83	3x 49,74	85x260
C4001005TER0000	10	400	50	14,43	3x 66,31	85x260
C4001255TER0000	12,5	400	50	18,04	3x 82,89	100x260
C4001505TER0000	15	400	50	21,65	3x 99,47	100x260
C4002005TER0000	20	400	50	28,87	3x132,63	100x345
C4002505TER0000	25	400	50	36,08	3x165,79	120x345
C4003005TER0000	30	400	50	43,30	3x198,94	120x345
C4004005TER0000	40	400	50	57,74	3x265,26	136x345

Code	Power	Voltage	Frequency	Current	Capacitance	Dimensions
	KVAr	V	Hz	A	µF	mm
C4150255TER0000	2,5	415	50	3,48	3x 15,40	70x260
C4150505TER0000	5	415	50	6,96	3x 30,80	70x260
C4150755TER0000	7,5	415	50	10,43	3x 46,21	85x260
C4151005TER0000	10	415	50	13,91	3x 61,61	85x260
C4151255TER0000	12,5	415	50	17,39	3x 77,01	100x260
C4151505TER0000	15	415	50	20,87	3x 92,41	100x260
C4152005TER0000	20	415	50	27,82	3x123,21	100x345
C4152505TER0000	25	415	50	34,78	3x154,02	100x345
C4153005TER0000	30	415	50	41,74	3x184,82	120x345
C4154005TER0000	40	415	50	55,65	3x246,43	136x345
C4155005TER0000	50	415	50	69,56	3x308,04	136x345

Code	Power	Voltage	Frequency	Current	Capacitance	Dimensions
	KVAr	V	Hz	A	µF	mm
C4400255TER0000	2,5	440	50	3,28	3x 13,70	70x260
C4400505TER0000	5	440	50	6,56	3x 27,40	70x260
C4400755TER0000	7,5	440	50	9,84	3x 41,10	70x260
C4401005TER0000	10	440	50	13,12	3x 54,81	85x260
C4401255TER0000	12,5	440	50	16,40	3x 68,51	85x260
C4401505TER0000	15	440	50	19,68	3x 82,21	100x260
C4402005TER0000	20	440	50	26,24	3x109,61	100x345
C4402505TER0000	25	440	50	32,80	3x137,01	100x345
C4403005TER0000	30	440	50	39,36	3x164,42	120x345
C4404005TER0000	40	440	50	52,49	3x219,22	136x345
C4405005TER0000	50	440	50	65,61	3x274,03	136x345

Code	Power	Voltage	Frequency	Current	Capacitance	Dimensions
	KVAr	V	Hz	A	µF	mm
C4800255TER0000	2,5	480	50	3,01	3x 11,51	70x260
C4800505TER0000	5	480	50	6,01	3x 23,03	70x260
C4800755TER0000	7,5	480	50	9,02	3x 34,54	85x260
C4801005TER0000	10	480	50	12,03	3x 46,05	85x260
C4801255TER0000	12,5	480	50	15,04	3x 57,56	100x260
C4801505TER0000	15	480	50	18,04	3x 69,08	100x260
C4802005TER0000	20	480	50	24,06	3x 92,10	100x345
C4802505TER0000	25	480	50	30,07	3x115,13	100x345
C4803005TER0000	30	480	50	36,08	3x138,16	120x345
C4804005TER0000	40	480	50	48,11	3x184,21	136x345
C4805005TER0000	50	480	50	60,14	3x230,26	136x345

Code	Power	Voltage	Frequency	Current	Capacitance	Dimensions
	KVAr	V	Hz	A	µF	mm
C5250255TER0000	2,5	525	50	2,75	3x 9,62	70x260
C5250505TER0000	5	525	50	5,50	3x 19,25	70x260
C5250755TER0000	7,5	525	50	8,25	3x 28,87	85x260
C5251005TER0000	10	525	50	11,00	3x 38,50	85x260
C5251255TER0000	12,5	525	50	13,75	3x 48,12	100x260
C5251505TER0000	15	525	50	16,50	3x 57,74	100x260
C5252005TER0000	20	525	50	21,99	3x 76,99	100x345
C5252505TER0000	25	525	50	27,49	3x 96,24	100x345
C5253005TER0000	30	525	50	32,99	3x115,49	120x345
C5254005TER0000	40	525	50	43,99	3x153,98	136x345
C5255005TER0000	50	525	50	54,99	3x192,48	136x345

* Other powers, voltages and frequencies upon request.

Reinforced three phase capacitor with connector

230/400/440 V, 50Hz

Characteristics and utility

- Three phase capacitor
- Delta connection
- Discharge resistors incorporated
- Reactive power factor correction
- Reinforced design to support over voltage
- Dry type
- Connector type terminal
- Indoor terminal

Safety

- Overpressure disconnection system
- Protection by internal fuses.

Construction and materials

- Low losses metallized self-healing polypropylene film, high density, high temperature and greater dielectric resistance Volt/ μ
- Polyurethane self-extinguishing resin V0 (Flame retardant), developed under standard UL94 by RTR Energia and with certification number 20141031-E470994
- Aluminium case with bottom fixing M12x16

Discharge time

- 50V/ 60s

Standard

- IEC 60831-1/2:2014
- UNE-EN 60831-1/2:2014



Technical Characteristics

Capacitance tolerance	-5 % +10%
Frequency	50 Hz (60 Hz upon request)
Temperature range	-25°C +55°C (Class D)
Dielectric losses	≤ 0.2 W/KVAr
Total losses	≤ 0.40 W/KVAr*
Over voltage	1.15 x Un
Over current	1.8xIn
Max. THD in voltage	3 %
Max. THD in current	30 %
Discharge resistance	Incorporated
Connection	Delta
Voltage test between terminals	2.15xUn 10s
Voltage test between terminals and case	5kV AC for 1min
Inrush current	Up to 350xIn
Protection	IP-20
Humidity	Max. 95%
Life Expectancy	150 000h
Altitude	Max. 4000m.a.s.l.
Mounting position	Universal
Min. mounting distance between capacitors	10mm

* Without resistors



Code	Power	Voltage	Frequency	Current	Capacitance	Dimensions
	KVAr	V	Hz	A	μF	mm
C2300255TER0RTF	2,5	230	50	12,55	3x 50,14	70x260
C2300505TER0RTF	5	230	50	12,55	3x100,29	85x260
C2300755TER0RTF	7,5	230	50	18,83	3x150,43	100x260
C2301005TER0RTF	10	230	50	25,10	3x200,57	100x345
C2301255TER0RTF	12,5	230	50	31,38	3x250,72	120x345
C2301505TER0RTF	15	230	50	37,65	3x300,86	120x345
C2302005TER0RTF	20	230	50	50,20	3x401,15	136x345

Code	Power	Voltage	Frequency	Current	Capacitance	Dimensions
	KVAr	V	Hz	A	μF	mm
C4000255TER0RTF	2,5	400	50	3,61	3x 16,58	70x260
C4000505TER0RTF	5	400	50	7,22	3x 33,16	70x260
C4000755TER0RTF	7,5	400	50	10,83	3x 49,74	85x260
C4001005TER0RTF	10	400	50	14,43	3x 66,31	85x260
C4001255TER0RTF	12,5	400	50	18,04	3x 82,89	100x260
C4001505TER0RTF	15	400	50	21,65	3x 99,47	100x260
C4002005TER0RTF	20	400	50	28,87	3x132,63	100x345
C4002505TER0RTF	25	400	50	36,08	3x165,79	120x345
C4003005TER0RTF	30	400	50	43,30	3x198,94	120x345
C4003505TER0RTF	35	400	50	50,52	3x232,10	120x345
C4004005TER0RTF	40	400	50	57,74	3x265,26	136x345
C4005005TER0RTF	50	400	50	72,17	3x331,57	136x345

Code	Power	Voltage	Frequency	Current	Capacitance	Dimensions
	KVAr	V	Hz	A	μF	mm
C4400255TER0RTF	2,5	440	50	3,28	3x 13,70	70x260
C4400505TER0RTF	5	440	50	6,56	3x 27,40	70x260
C4400755TER0RTF	7,5	440	50	9,84	3x 41,10	70x260
C4401005TER0RTF	10	440	50	13,12	3x 54,81	85x260
C4401255TER0RTF	12,5	440	50	16,40	3x 68,51	85x260
C4401505TER0RTF	15	440	50	19,68	3x 82,21	100x260
C4402005TER0RTF	20	440	50	26,24	3x109,61	100x345
C4402505TER0RTF	25	440	50	32,80	3x137,01	100x345
C4403005TER0RTF	30	440	50	39,36	3x164,42	120x345
C4403505TER0RTF	35	440	50	45,93	3x191,82	120x345
C4404005TER0RTF	40	440	50	52,49	3x219,22	136x345
C4405005TER0RTF	50	440	50	65,61	3x274,03	136x345

* Other powers, voltages and frequencies upon request.

Three phase capacitor with connector for harmonics filter application

230/400/440 V, 50Hz

Characteristics and utility

- Three phase capacitor
- Delta connection
- Discharge resistors incorporated
- Reactive power factor correction
- Special design to install with 210,189 and 134 Hz three phase harmonic filters.
- Dry type
- Connector type terminal
- Indoor terminal

Safety

- Overpressure disconnection system
- Protection by internal fuses.

Construction and materials

- Low losses metallized self-healing polypropylene film, high density, high temperature and greater dielectric resistance Volt/ μ
- Polyurethane self-extinguishing resin V0 (Flame retardant), developed under standard UL94 by RTR Energia and with certification number 20141031-E470994
- Aluminium case with bottom fixing M12x16

Discharge time

- 50V/ 60s

Standard

- IEC 60831-1/2:2014
- UNE-EN 60831-1/2:2014



Technical Characteristics

Capacitance tolerance	-5 % +10%
Frequency	50 Hz (60 Hz upon request)
Temperature range	-25°C +55°C (Class D)
Dielectric losses	≤ 0.2 W/KVAr
Total losses	≤ 0.40 W/KVAr*
Over voltage	1.15 x Un
Over current	1.8xIn
Max. THD in voltage	3 % (Specific design for harmonics)
Max. THD in current	30 %
Discharge resistance	Incorporated
Connection	Delta
Voltage test between terminals	2.15xUn 10s
Voltage test between terminals and case	5kV AC for 1min
Inrush current	Up to 350xIn
Protection	IP-20
Humidity	Max. 95%
Altitude	Max. 4000m.a.s.l.
Mounting position	Universal
Min. mounting distance between capacitors	10mm



* Without resistors

Code	Power	Voltage	Frequency	Detuning	Current	Capacitance	Dimensions
	KVAr	V	Hz	Factor	A	µF	mm
C2300255TER7RCT	2,5	230	50	7%	6,28	3x 46,63	70X260
C2300505TER7RCT	5	230	50	7%	12,55	3x 93,27	85X260
C2300755TER7RCT	7,5	230	50	7%	18,83	3x139,90	100X260
C2301005TER7RCT	10	230	50	7%	25,10	3x186,53	100X345
C2301255TER7RCT	12,5	230	50	7%	31,38	3x233,17	120X345
C2301505TER7RCT	15	230	50	7%	37,65	3x279,80	120X345
C2302005TER7RCT	20	230	50	7%	50,20	3x373,07	136X345

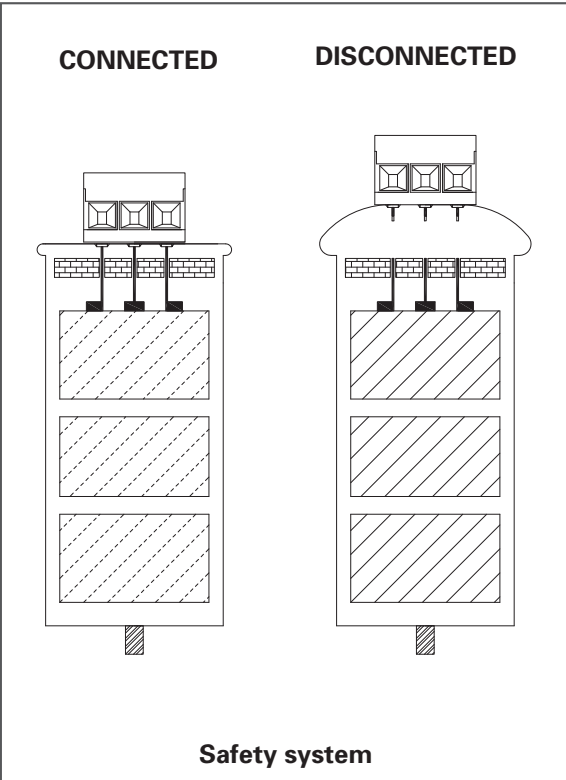
Code	Power	Voltage	Frequency	Detuning	Current	Capacitance	Dimensions
	KVAr	V	Hz	Factor	A	µF	mm
C4000255TER7RCT	2,5	400	50	7%	3,61	3x 15,42	70x260
C4000505TER7RCT	5	400	50	7%	7,22	3x 30,84	70x260
C4000755TER7RCT	7,5	400	50	7%	10,83	3x 46,25	85x260
C4001005TER7RCT	10	400	50	7%	14,43	3x 61,67	100x260
C4001255TER7RCT	12,5	400	50	7%	18,04	3x 77,09	100x260
C4001505TER7RCT	15	400	50	7%	21,65	3x 92,51	100x345
C4002005TER7RCT	20	400	50	7%	28,87	3x123,35	100x345
C4002505TER7RCT	25	400	50	7%	36,08	3x154,18	120x345
C4003005TER7RCT	30	400	50	7%	43,30	3x185,02	120x345
C4003505TER7RCT	35	400	50	7%	50,52	3x215,85	136x345
C0400405TER7RCT	40	400	50	7%	57,74	3x246,69	136x345

Code	Power	Voltage	Frequency	Detuning	Current	Capacitance	Dimensions
	KVAr	V	Hz	Factor	A	µF	mm
C4000255TER1RCT	2,5	400	50	14%	3,61	3x 14,26	70x260
C4000505TER1RCT	5	400	50	14%	7,22	3x 28,52	70x260
C4000755TER1RCT	7,5	400	50	14%	10,83	3x 42,77	100x260
C4001005TER1RCT	10	400	50	14%	14,43	3x 57,03	100x260
C4001255TER1RCT	12,5	400	50	14%	18,04	3x 71,29	100x345
C4001505TER1RCT	15	400	50	14%	21,65	3x 85,55	100x345
C4002005TER1RCT	20	400	50	14%	28,87	3x114,06	120x345
C4002505TER1RCT	25	400	50	14%	36,08	3x142,58	120x345
C4003005TER1RCT	30	400	50	14%	43,30	3x171,09	136x345

Code	Power	Voltage	Frequency	Factor de	Current	Capacitance	Dimensions
	KVAr	V	Hz	SobreVoltage	A	µF	mm
C4400255TER7RCT	2,5	440	50	7%	3,28	3x 12,74	70x260
C4400505TER7RCT	5	440	50	7%	6,56	3x 25,48	70x260
C4400755TER7RCT	7,5	440	50	7%	9,84	3x 38,23	85x260
C4401005TER7RCT	10	440	50	7%	13,12	3x 50,97	85x260
C4401255TER7RCT	12,5	440	50	7%	16,40	3x 63,71	100x260
C4401505TER7RCT	15	440	50	7%	19,68	3x 76,45	100x260
C4402005TER7RCT	20	440	50	7%	26,24	3x101,94	100x345
C4402505TER7RCT	25	440	50	7%	32,80	3x127,42	120x345
C4403005TER7RCT	30	440	50	7%	39,36	3x152,91	120x345
C4403505TER7RCT	35	440	50	7%	45,93	3x178,39	120x345
C4404005TER7RCT	40	440	50	7%	52,49	3x203,88	136x345

Code	Power	Voltage	Frequency	Detuning	Current	Capacitance	Dimensions
	KVAr	V	Hz	Factor	A	µF	mm
C4400255TER1RCT	2,5	440	50	14%	3,28	3x 11,78	70x260
C4400505TER1RCT	5	440	50	14%	6,56	3x 23,57	70x260
C4400755TER1RCT	7,5	440	50	14%	9,84	3x 35,35	85x260
C4401005TER1RCT	10	440	50	14%	13,12	3x 47,13	100x260
C4401255TER1RCT	12,5	440	50	14%	16,40	3x 8,92	100x260
C4401505TER1RCT	15	440	50	14%	19,68	3x 70,70	100x345
C4402005TER1RCT	20	440	50	14%	26,24	3x 94,27	100x345
C4402505TER1RCT	25	440	50	14%	32,80	3x117,83	120x345
C4403005TER1RCT	30	440	50	14%	39,36	3x141,40	120x345
C4403505TER1RCT	35	440	50	14%	45,93	3x164,96	136x345
C4404005TER1RCT	40	440	50	14%	52,49	3x188,53	136x345

* Other powers, voltages and frequencies upon request.



Temperature (IEC 60831-1/2)

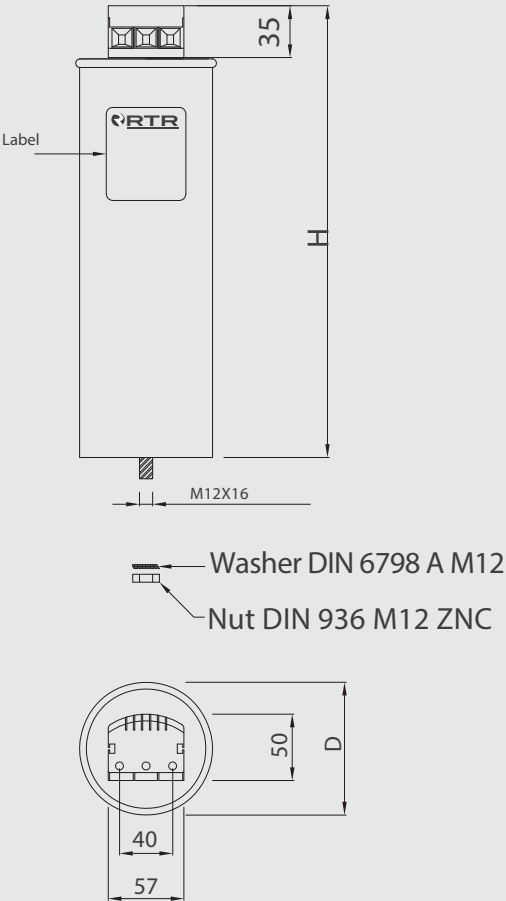
Symbol	Ambient temperature °C		
	Maximum	Highest mean over any period of	
		24h	1 year
A	40	30	20
B	45	35	25
C	50	40	30
D	55	45	35

Dimensions

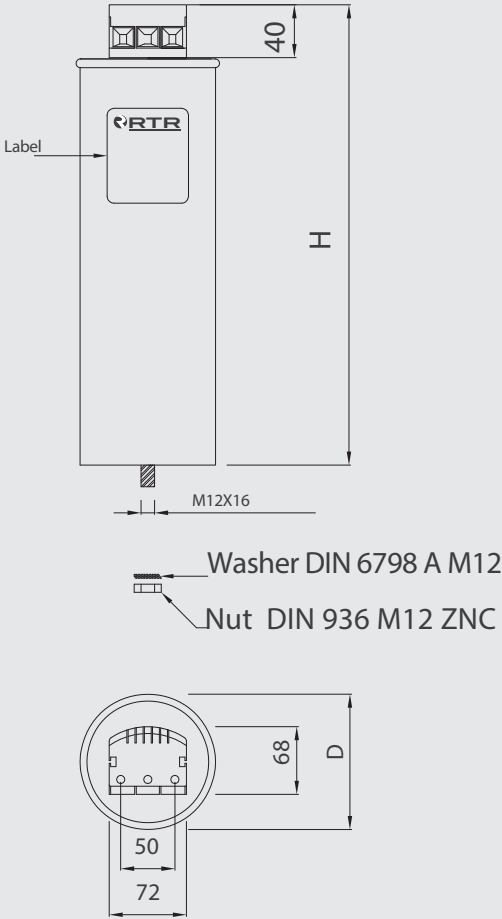
Dimensions	Connection terminal	DRAWING
DxH (mm)	Max. cable section 1 kV-RV (mm²)	
70x260	10	DRAWING A
85x260	10	
100x260	10	
100x345	35	DRAWING B
120x345	35	
136x345	35	

Dimensions

DRAWING A



DRAWING B



Capacitors for power factor correction



MA/C/CE y EA Series

Three phase capacitor with faston terminal

230/400/440/460/525 V, 50Hz

Characteristics and utility

- Three phase capacitor
- Delta connection
- Discharge resistors incorporated
- Reactive power factor correction
- Dry type
- Connector type terminal
- Indoor terminal

Safety

- Overpressure disconnection system
- Protection by internal fuses.

Construction and materials

- Low losses metallized self-healing polypropylene film, high density, high temperature and greater dielectric resistance Volt/ μ
- Polyurethane self-extinguishing resin V0 (Flame retardant), developed under standard UL94 by RTR Energia and with certification number 20141031-E470994
- Aluminium case with bottom fixing M12x16

Discharge time

- 50V/ 60s

Standards

- IEC 60831-1/2:2014
- UNE-EN 30831-1/2:2014



Technical Characteristics

Capacitance tolerance	-5 % +10%
Frequency	50 Hz (60 Hz upon request)
Temperature range	-25°C +55 °C (Class D)
Dielectric losses	≤ 0.2 W/KVAr
Total losses	≤ 0.45 W/KVAr*
Over voltage	1.10 x Un (8 h/day) 1.15 x Un (30 min/day) 1.20 x Un (5 min/day) 1.30 x Un (1 min/day)
Over current	1.5 x In
Max. THD in voltage	2 %
Max. THD in current	25 %
Discharge resistance	Incorporated
Connection	Delta
Voltage test between terminals	2,15 x Un 10 sec.
Voltage test between terminals and case	3kV AC for 1min
Inrush current	Up to 200 x In
Protection	IP-20
Humidity	Max. 95%
Life Expectancy	130 000 h
Altitude	4000m.a.s.l.
Mounting position	Universal
Min. mounting distance between capacitors	10mm



* Without resistors

Code	Power	Voltage	Frequency	Current	Capacitance	Dimensions
	KVAr	V	Hz	A	μF	mm
C23001050000000	1	230	50	3,77	3x20,06	60x200
C23001550000000	1,5	230	50	3,77	3x30,09	60x200
C23002550000000	2,5	230	50	6,28	3x50,14	60x200

Code	Power	Voltage	Frequency	Current	Capacitance	Dimensions
	KVAr	V	Hz	A	μF	mm
C40001050000000	1	400	50	1,44	3x 6,63	60x200
C40001550000000	1,5	400	50	2,17	3x 9,95	60x200
C40002550000000	2,5	400	50	3,61	3x16,58	60x200
C40003050000000	3	400	50	4,33	3x19,89	60x200
C40004050000000	4	400	50	5,77	3x26,53	60x200
C40005050000000	5	400	50	7,22	3x33,16	60x200

Code	Power	Voltage	Frequency	Current	Capacitance	Dimensions
	KVAr	V	Hz	A	μF	mm
C44001050000000	1	440	50	1,31	3x 5,48	60x200
C44001550000000	1,5	440	50	1,97	3x 8,22	60x200
C44002550000000	2,5	440	50	3,28	3x13,70	60x200
C44003050000000	3	440	50	3,94	3x16,44	60x200
C44004050000000	4	440	50	5,25	3x21,92	60x200
C44005050000000	5	440	50	6,56	3x27,40	60x200

Code	Power	Voltage	Frequency	Current	Capacitance	Dimensions
	KVAr	V	Hz	A	μF	mm
C46001050000000	1	460	50	1,26	3x 5,01	60x200
C46001550000000	1,5	460	50	1,88	3x 7,52	60x200
C46002550000000	2,5	460	50	3,14	3x12,54	60x200
C46003050000000	3	460	50	3,77	3x15,04	60x200
C46004050000000	4	460	50	5,02	3x20,06	60x200
C46005050000000	5	460	50	6,28	3x25,07	60x200

Code	Power	Voltage	Frequency	Current	Capacitance	Dimensions
	KVAr	V	Hz	A	μF	mm
C52501050000000	1	525	50	1,10	3x 3,85	60x200
C52501550000000	1,5	525	50	1,65	3x 5,77	60x200
C52502550000000	2,5	525	50	2,75	3x 9,62	60x200
C52503050000000	3	525	50	3,30	3x11,55	60x200
C52504050000000	4	525	50	4,40	3x15,40	60x200
C52505050000000	5	525	50	5,50	3x19,25	60x200

* Other powers, voltages and frequencies upon request.

Single phase capacitor with faston terminal

230/400/440/525/690 V, 50Hz

Characteristics and utility

- Single phase capacitor
- Discharge resistors incorporated
- Reactive power factor correction
- Dry type
- Connector type terminal
- Indoor terminal

Safety

- Overpressure disconnection system
- Protection by internal fuses.

Construction and materials

- Low losses metallized self-healing polypropylene film, high density, high temperature and greater dielectric resistance Volt/ μ
- Polyurethane self-extinguishing resin V0 (Flame retardant), developed under standard UL94 by RTR Energia and with certification number 20141031-E470994
- Aluminium case with bottom fixing M12x16

Discharge time

- 50V/ 60s

Standards

- IEC 60831-1/2:2014
- UNE-EN 30831-1/2:2014



Technical Characteristics

Capacitance tolerance	-5 % +10%
Frequency	50 Hz (60 Hz upon request)
Temperature range	-25°C +55 °C
Dielectric losses	≤ 0.2 W/KVAr
Total losses	≤ 0.45 W/KVAr*
Over voltage	1.10 x Un (8 h/day) 1.15 x Un (30 min/day) 1.20 x Un (5 min/day) 1.30 x Un (1 min/day)
Over current	1.5 x In
Max. THD in voltage	2 %
Max. THD in current	25 %
Discharge resistance	Incorporated
Connection	Single-phase
Voltage test between terminals	2,15 x Un 10 sec.
Voltage test between terminals and case	3kV AC for 1min
Inrush current	Up to 200 x In
Protection	IP-20
Humidity	Max. 95%
Life Expectancy	130 000 h
Altitude	4000m.a.s.l.
Mounting position	Universal
Min. mounting distance between capacitors	10mm



* Without resistors

Code	Power	Voltage	Frequency	Current	Capacitance
	KVAr	V	Hz	A	μF
EA0230083500000	0,83	230	50	3,61	49,94
EA0230167500000	1,67	230	50	7,26	100,49
EA0230250500000	2,5	230	50	10,87	150,43

Code	Power	Voltage	Frequency	Current	Capacitance
	KVAr	V	Hz	A	μF
EA0400083500000	0,83	400	50	2,08	16,51
EA0400167500000	1,67	400	50	4,18	33,22
EA0400250500000	2,5	400	50	6,25	49,74
EA0400333500000	3,33	400	50	8,33	66,25
EA0400417500000	4,17	400	50	10,43	82,96
EA0400500500000	5,00	400	50	12,5	99,47
EA0400660500000	6,60	400	50	16,5	131,30

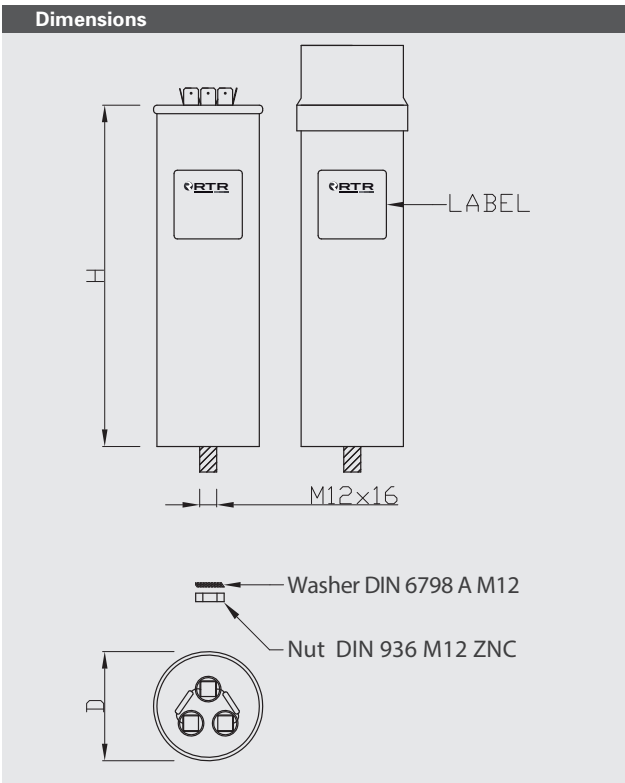
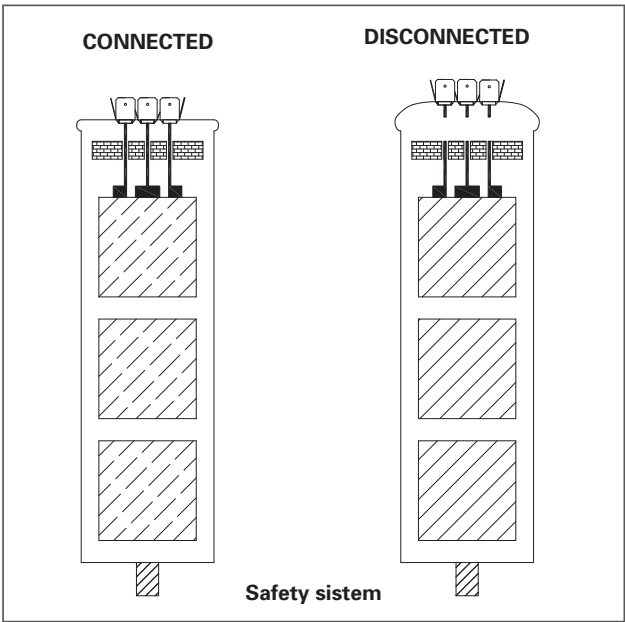
Code	Power	Voltage	Frequency	Current	Capacitance
	KVAr	V	Hz	A	μF
EA0440083500000	0,83	440	50	1,89	13,65
EA0440167500000	1,67	440	50	3,80	27,46
EA0440250500000	2,50	440	50	5,68	41,10
EA0440333500000	3,33	440	50	7,57	54,75
EA0440417500000	4,17	440	50	9,48	68,56
EA0440500500000	5	440	50	11,36	82,21
EA0440660500000	6,6	440	50	15	108,51

Code	Power	Voltage	Frequency	Current	Capacitance
	KVAr	V	Hz	A	μF
EA0525083500000	0,83	525	50	1,58	9,59
EA0525167500000	1,67	525	50	3,18	19,29
EA0525250500000	2,50	525	50	4,76	28,87
EA0525333500000	3,33	525	50	6,34	38,46
EA0525417500000	4,17	525	50	7,94	48,16
EA0525500500000	5	525	50	9,52	57,74
EA0525660500000	6,6	525	50	12,57	76,22

Code	Power	Voltage	Frequency	Current	Capacitance
	KVAr	V	Hz	A	μF
EA0690083500000	0,83	690	50	1,20	5,55
EA0690167500000	1,67	690	50	2,42	11,17
EA0690250500000	2,50	690	50	3,62	16,71
EA0690333500000	3,33	690	50	4,83	22,26
EA0690417500000	4,17	690	50	6,04	27,88
EA0690500500000	5	690	50	7,25	33,43
EA0690660500000	6,6	690	50	9,57	44,13

* Other powers, voltages and frequencies upon request.

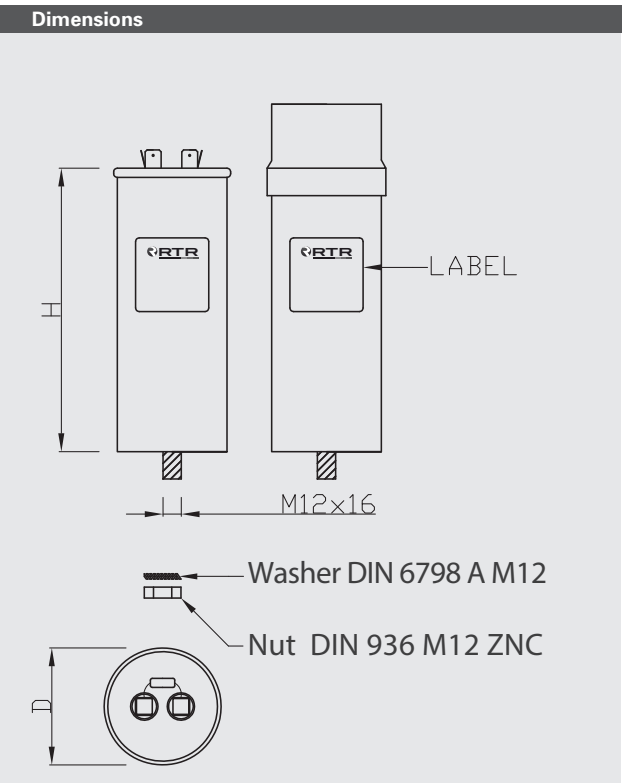
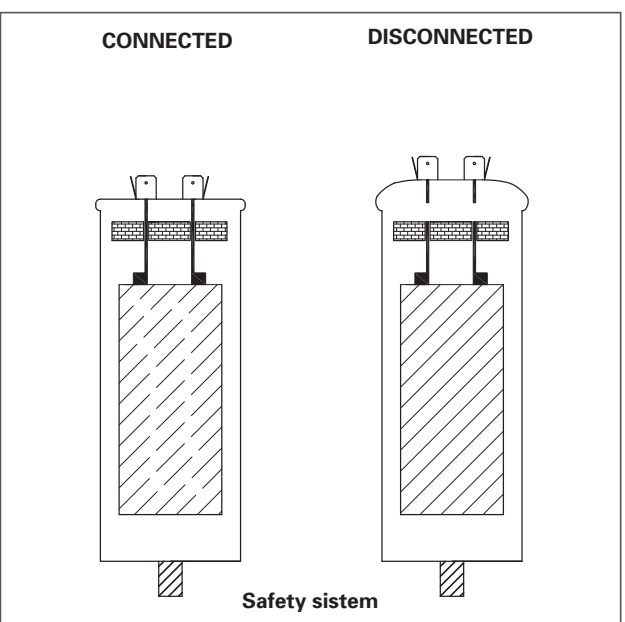
MAC/C/CE SERIES



Dimensions

Dimensions	Connection terminal
DxH(mm)	
60x150	Faston 6,3mm
60x200	Faston 6,3mm

EA SERIES



Temperature (IEC 60831-1/2)

Symbol	Ambient temperature °C		
	Maximun	Highest mean over any period of	
		24h	1 year
A	40	30	20
B	45	35	25
C	50	40	30
D	55	45	35

Capacitor for power factor correction



BO/R TER Series

Three phase Capacitors

230/440/480/525 V, 50Hz

Characteristics and utility

- Three phase capacitor
- DWCAP mounting in metal container
- Delta connection
- Discharge resistors incorporated
- Reactive power factor correction
- Dry type
- Connector type terminal
- Indoor installation

Triple Safety

- Overpressure disconnection system
- Protection by internal fuses.
- DWCAP system (patented) internal windings displacement

Construction and materials

- Low losses metallized self-healing polypropylene film, high density, high temperature and greater dielectric resistance Volt/ μ
- Polyurethane self-extinguishing resin V0, developed under standard UL94 by RTR Energia and with certification number 20141031-E470994
- Metal container with terminal covers and fixing brackets
- RAL 6034

Standard

- IEC 60831-1/2:2014
- UNE-EN 60831-1/2:2014



Technical Characteristics

Capacitance tolerance	-5 % +10%
Frequency	50 Hz (60 Hz upon request)
Temperature range	-25°C +55 °C (Class D)
Dielectric losses	≤ 0.2 W/KVAr
Total losses	≤ 0.45 W/KVAr
Over voltage	1.10 x Un (8 h/day) 1.15 x Un (30 min/day) 1.20 x Un (5 min/day) 1.30 x Un (1 min/day)
Over current	1.6xIn
Max. THD in voltage	2 %
Max. THD in current	25 %
Discharge resistance	Incorporated
Connection	Delta
Voltage test between terminals	2.15xUn 10s.
Voltage test between terminals and case	5kV AC for 1min
Inrush current	Up to 250 x In
Protection	IP-20
Humidity	Max. 95%
Life Expectancy	130.000h
Altitude	Max. 4000m.a.s.l.
Mounting position	Universal

* Without resistors

Code	Power	Voltage	Frequency	Current	Capacitance	Dimensions
	KVAr	V	Hz	A	µF	mm
R023000255TER00	2,5	230	50	6,28	3x 50,14	400x110x110
R023000505TER00	5	230	50	12,55	3x100,29	400x110x110
R023000755TER00	7,5	230	50	18,83	3x150,43	400x110x110
R023001005TER00	10	230	50	25,10	3x200,57	460x170x150
R023001255TER00	12,5	230	50	31,38	3x250,72	460x170x150
R023001505TER00	15	230	50	37,65	3x300,86	460x170x150
R023002005TER00	20	230	50	50,20	3x401,15	460x320x150
R023002505TER00	25	230	50	62,76	3x501,43	460x320x150
R023003005TER00	30	230	50	75,31	3x601,72	460x320x150
R023003505TER00	35	230	50	87,86	3x702,01	600x320x150
R023004005TER00	40	230	50	100,41	3x802,29	600x320x150

Code	Power	Voltage	Frequency	Current	Capacitance	Dimensions
	KVAr	V	Hz	A	µF	mm
R044000505TER00	5	440	50	6,56	3x 27,40	400x110x110
R044000755TER00	7,5	440	50	9,84	3x 41,10	400x110x110
R044001005TER00	10	440	50	13,12	3x 54,81	400x110x110
R044001255TER00	12,5	440	50	16,40	3x 68,51	400x110x110
R044001505TER00	15	440	50	19,68	3x 82,21	400x110x110
R044002005TER00	20	440	50	26,24	3x109,61	400x110x110
R044002505TER00	25	440	50	32,80	3x137,01	460x170x150
R044003005TER00	30	440	50	39,36	3x164,42	460x170x150
R044003505TER00	35	440	50	45,93	3x191,82	460x170x150
R044004005TER00	40	440	50	52,49	3x219,22	460x170x150
R044004505TER00	45	440	50	59,05	3x246,62	460x320x150
R044005005TER00	50	440	50	65,61	3x274,03	460x320x150
R044006005TER00	60	440	50	78,73	3x328,83	460x320x150
R044007005TER00	70	440	50	91,85	3x383,64	460x320x150
R044008005TER00	80	440	50	104,97	3x438,44	460x320x150
R044009005TER00	90	440	50	118,09	3x493,25	600x320x150
R044010005TER00	100	440	50	131,22	3x548,05	600x320x150

Code	Power	Voltage	Frequency	Current	Capacitance	Dimensions
	KVAr	V	Hz	A	µF	mm
R048000505TER00	5	480	50	6,01	3x 23,03	400x110x110
R048000755TER00	7,5	480	50	9,02	3x 34,54	400x110x110
R048001005TER00	10	480	50	12,03	3x 46,05	400x110x110
R048001255TER00	12,5	480	50	15,04	3x 57,56	400x110x110
R048001505TER00	15	480	50	18,04	3x 69,08	400x110x110
R048002005TER00	20	480	50	24,06	3x 92,10	460x170x150
R048002505TER00	25	480	50	30,07	3x115,13	460x170x150
R048003005TER00	30	480	50	36,08	3x138,16	460x170x150
R048003505TER00	35	480	50	42,10	3x161,18	460x170x150
R048004005TER00	40	480	50	48,11	3x184,21	460x320x150
R048004505TER00	45	480	50	54,13	3x207,23	460x320x150
R048005005TER00	50	480	50	60,14	3x230,26	460x320x150
R048006005TER00	60	480	50	72,17	3x276,31	460x320x150
R048007005TER00	70	480	50	84,20	3x322,36	600x320x150
R048008005TER00	80	480	50	96,23	3x368,41	600x320x150
R048009005TER00	90	480	50	108,25	3x414,47	600x320x150
R048010005TER00	100	480	50	120,28	3x460,52	600x320x150

Code	Power	Voltage	Frequency	Current	Capacitance	Dimensions
	KVAr	V	Hz	A	µF	mm
R052500505TER00	5	525	50	5,50	3x 19,25	400x110x110
R052500755TER00	7,5	525	50	8,25	3x 28,87	400x110x110
R052501005TER00	10	525	50	11,00	3x 38,50	400x110x110
R052501255TER00	12,5	525	50	13,75	3x 48,12	400x110x110
R052501505TER00	15	525	50	16,50	3x 57,74	400x110x110
R052502005TER00	20	525	50	21,99	3x 76,99	400x110x110
R052502505TER00	25	525	50	27,49	3x 96,24	460x170x150
R052503005TER00	30	525	50	32,99	3x115,49	460x170x150
R052503505TER00	35	525	50	38,49	3x134,73	460x170x150
R052504005TER00	40	525	50	43,99	3x153,98	460x320x150
R052504505TER00	45	525	50	49,49	3x173,23	460x320x150
R052505005TER00	50	525	50	54,99	3x192,48	460x320x150
R052506005TER00	60	525	50	65,98	3x230,97	460x320x150
R052507005TER00	70	525	50	76,98	3x269,47	460x320x150
R052508005TER00	80	525	50	87,98	3x307,96	600x320x150
R052509005TER00	90	525	50	98,97	3x346,46	600x320x150
R052510005TER00	100	525	50	109,97	3x384,96	600x320x150

* Other powers, voltages and frequencies upon request.

Reinforced three phase capacitor

230/440 V, 50Hz

Characteristics and utility

- Three phase capacitor
- DWCAP mounting in metal container
- Delta connection
- Discharge resistors incorporated
- Reactive power factor correction
- Reinforced design to support over voltage
- Dry type
- Connector type terminal
- Indoor installation

Safety

- Overpressure disconnection system
- Protection by internal fuses.
- DWCAP system (patented) internal windings displacement

Construction and materials

- Low losses metallized self-healing polypropylene film, high density, high temperature and greater dielectric resistance Volt/ μ
- Polyurethane self-extinguishing resin V0, developed under standard UL94 by RTR Energia and with certification number 20141031-E470994
- Metal container with terminal covers and fixing brackets
- RAL 6034

Standard

- IEC 60831-1/2:2014
- UNE-EN 60831-1/2:2014



Technical Characteristics

Capacitance tolerance	-5 % +10%
Frequency	50 Hz (60 Hz upon request)
Temperature range	-25°C +55 °C (Class D)
Dielectric losses	≤ 0.2 W/KVAr
Total losses	≤ 0.45 W/KVAr*
Over voltage	1.15xUn (30min/day)
Over current	1.80 x In
Max. THD in voltage	3 %
Max. THD in current	30 %
Discharge resistance	Incorporated
Connection	Delta
Voltage test between terminals	2.15xUn 10s
Voltage test between terminals and case	5kV AC for 1min
Inrush current	Up to 350 x In
Protection	IP-20
Humidity	Max. 95%
Life Expectancy	140 000 h
Altitude	Max. 4000m.a.s.l.
Mounting position	Universal

* Without resistors

Code	Power	Voltage	Frequency	Current	Capacitance	Dimensions
	KVAr	V	Hz	A	μF	mm
R023000255TERTF	2,5	230	50	6,28	3x 50,14	400x110x100
R023000505TERTF	5	230	50	12,55	3x100,29	400x110x100
R023000755TERTF	7,5	230	50	18,83	3x150,43	400x110x100
R023001005TERTF	10	230	50	25,10	3x200,57	460x170x150
R023001255TERTF	12,5	230	50	31,38	3x250,72	460x170x150
R023001505TERTF	15	230	50	37,65	3x300,86	460x170x150
R023002005TERTF	20	230	50	50,20	3x401,15	460x320x150
R023002505TERTF	25	230	50	62,76	3x501,43	460x320x150
R023003005TERTF	30	230	50	75,31	3x601,72	460x320x150
R023003505TERTF	35	230	50	87,86	3x702,01	600x320x150
R023004005TERTF	40	230	50	100,41	3x802,29	600x320x150

Code	Power	Voltage	Frequency	Current	Capacitance	Dimensions
	KVAr	V	Hz	A	μF	mm
R044000505TERTF	5	440	50	6,56	3x 27,40	400x110x100
R044000755TERTF	7,5	440	50	9,84	3x 41,10	400x110x100
R044001005TERTF	10	440	50	13,12	3x 54,81	400x110x100
R044001255TERTF	12,5	440	50	16,40	3x 68,51	400x110x100
R044001505TERTF	15	440	50	19,68	3x 82,21	400x110x100
R044002005TERTF	20	440	50	26,24	3x109,61	460x170x150
R044002505TERTF	25	440	50	32,80	3x137,01	460x170x150
R044003005TERTF	30	440	50	39,36	3x164,42	460x170x150
R044003505TERTF	35	440	50	45,93	3x191,82	460x320x150
R044004005TERTF	40	440	50	52,49	3x219,22	460x320x150
R044004505TERTF	45	440	50	59,05	3x246,62	460x320x150
R044005005TERTF	50	440	50	65,61	3x274,03	460x320x150
R044006005TERTF	60	440	50	78,73	3x328,83	460x320x150
R044007005TERTF	70	440	50	91,85	3x383,64	600x320x150
R044008005TERTF	80	440	50	104,97	3x438,44	600x320x150

* Other powers, voltages and frequencies upon request.

Three phase capacitor for harmonic filter application

230/440 V, 50Hz

Characteristics and utility

- Three phase capacitor
- DWCAP mounting in metal container
- Delta connection
- Discharge resistors incorporated
- Reactive power factor correction
- Special design to install with 210,189 and 134 Hz three phase harmonic filters.
- Dry type
- Connector type terminal
- Indoor installation

Safety

- Overpressure disconnection system
- Protection by internal fuses.

Construction and materials

- Low losses metallized self-healing polypropylene film, high density, high temperature and greater dielectric resistance Volt/ μ
- Polyurethane self-extinguishing resin V0, developed under standard UL94 by RTR Energia and with certification number 20141031-E470994
- Metal container with terminal covers and fixing brackets
- RAL 6034

Standard

- IEC 60831-1/2:2014
- UNE-EN 60831-1/2:2014



Technical Characteristics

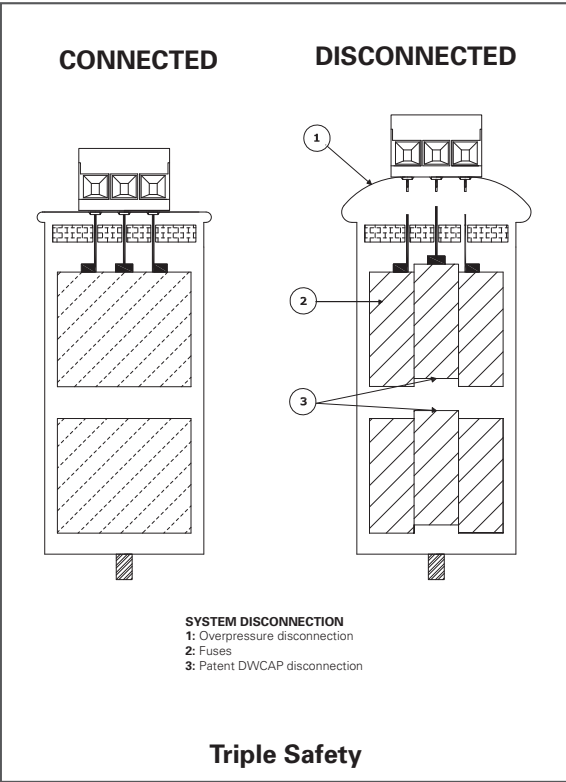
Capacitance tolerance	-5 % +10 %
Frequency	50 Hz (60 Hz upon request)
Temperature range	-25°C +55 °C (Class D)
Dielectric losses	≤ 0.2 W/KVAr
Total losses	≤ 0.45 W/KVAr*
Over voltage	1.15xUn (30min/day)
Over current	1.8xIn
Discharge resistance	Incorporated
Connection	Delta
Voltage test between terminals	2.15xUn 10s
Voltage test between terminals and case	5kV AC for 1min
Inrush current	Up to 350 x In
Protection	IP-20
Humidity	Max. 95%
Altitude	Max. 4000m.a.s.l.
Mounting position	Universal

* Without resistors

Code	Power	Voltage	Frequency	Current	Capacitance	Dimensions
	KVAr	V	Hz	A	μF	mm
R023000255TERCT	2,5	230	50	6,28	3x 46,63	400x110x100
R023000505TERCT	5	230	50	12,55	3x 93,27	400x110x100
R023000755TERCT	7,5	230	50	18,83	3x139,90	400x110x100
R023001005TERCT	10	230	50	25,10	3x186,53	460x170x150
R023001255TERCT	12,5	230	50	31,38	3x233,17	460x170x150
R023001505TERCT	15	230	50	37,65	3x279,80	460x170x150
R023002005TERCT	20	230	50	50,20	3x373,07	460x320x150
R023002505TERCT	25	230	50	62,76	3x466,33	460x320x150
R023003005TERCT	30	230	50	75,31	3x559,60	460x320x150
R023003505TERCT	35	230	50	87,86	3x652,87	600x320x150
R023004005TERCT	40	230	50	100,41	3x746,13	600x320x150

Code	Power	Voltage	Frequency	Current	Capacitance	Dimensions
	KVAr	V	Hz	A	μF	mm
R044000505TERCT	5	440	50	6,56	3x 25,48	400x110x100
R044007505TERCT	7,5	440	50	9,84	3x 38,23	400x110x100
R044010005TERCT	10	440	50	13,12	3x 50,97	400x110x100
R044012505TERCT	12,5	440	50	16,40	3x 63,71	400x110x100
R044015005TERCT	15	440	50	19,68	3x 76,45	460x170x150
R044020005TERCT	20	440	50	26,24	3x101,94	460x170x150
R044025005TERCT	25	440	50	32,80	3x127,42	460x170x150
R044030005TERCT	30	440	50	39,36	3x152,91	460x170x150
R044035005TERCT	35	440	50	45,93	3x178,39	460x320x150
R044040005TERCT	40	440	50	52,49	3x203,88	460x320x150
R044045005TERCT	45	440	50	59,05	3x229,36	460x320x150
R044050005TERCT	50	440	50	65,61	3x254,85	460x320x150
R044060005TERCT	60	440	50	78,73	3x305,81	460x320x150
R044070005TERCT	70	440	50	91,85	3x356,78	600x320x150
R044080005TERCT	80	440	50	104,97	3x407,75	600x320x150

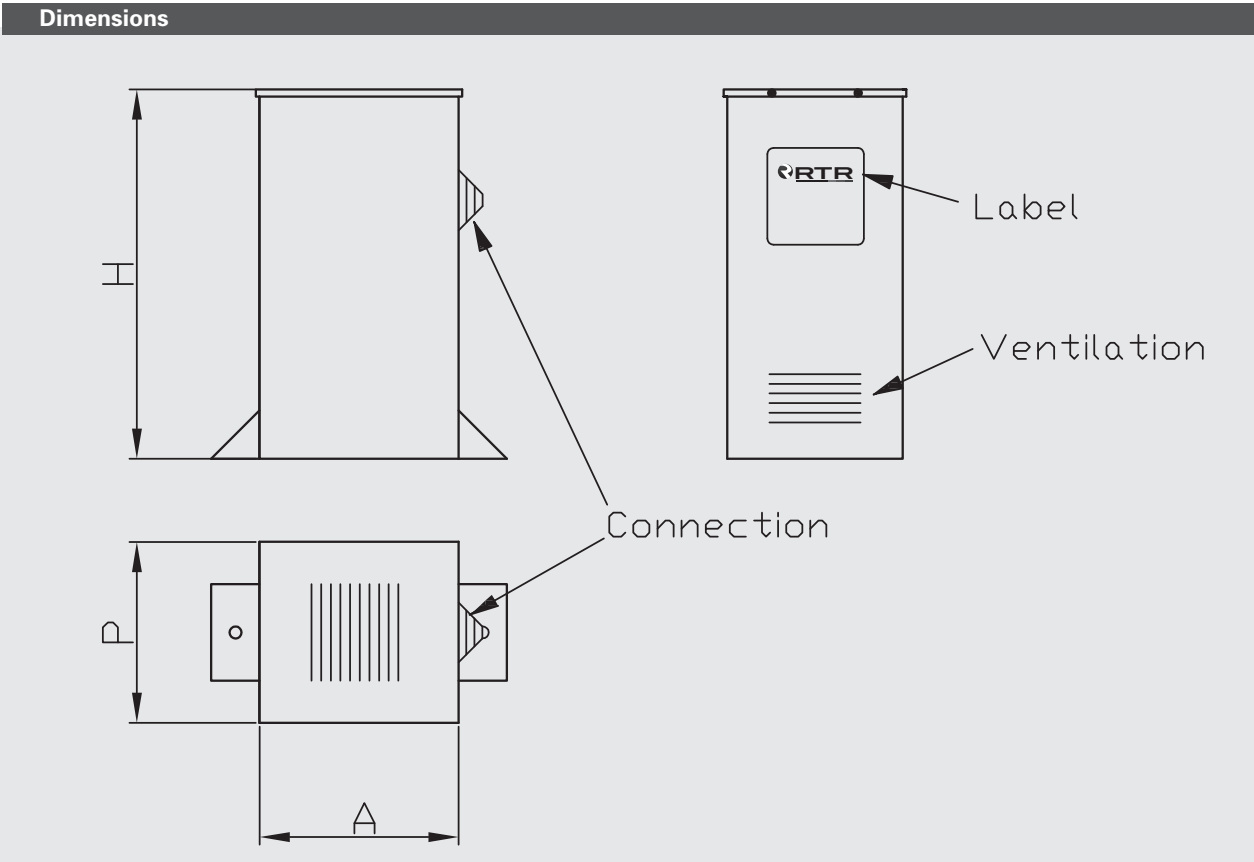
* Other powers, voltages and frequencies upon request.



Temperature (IEC 60831-1/2)

Symbol	Ambient temperature °C		
	Maximum	Highest mean over any period of	
		24h	1 year
A	40	30	20
B	45	35	25
C	50	40	30
D	55	45	35

Dimensions	Brackets
HxAxP mm	
400x110x110	2
460x170x150	2
460x320x150	2
600x320x150	2



Capacitor for power factor correction



BO/R Series

Three phase Capacitors

230/440/690/1100 V, 50Hz

Characteristics and utility

- Three phase capacitor
- Single phase elements connected through threaded stud
- Delta connection
- Discharge resistors incorporated
- Reactive power factor correction
- Dry type
- Indoor installation

Standards

- IEC 60831-1/2:2014
- UNE-EN 60831-1/2:2014

Construction and materials

- Low losses metallized self-healing polypropylene film, high density, high temperature and greater dielectric resistance Volt/ μ
- Polyurethane self-extinguishing resin V0, developed under standard UL94 by RTR Energia and with certification number 20141031-E470994
- Metal container with terminal covers and fixing brackets
- RAL 6034



Technical Characteristics

Capacitance tolerance	-5 % +10%
Frequency	50 Hz (60 Hz upon request)
Temperature range	-25°C +55 °C (Class D)
Dielectric losses	≤ 0.2 W/KVAr
Total losses	≤ 0.5 W/KVAr*
Over voltage	1.10 x Un (8 h/day) 1.15 x Un (30 min/day) 1.20 x Un (5 min/day) 1.30 x Un (1 min/day)
Over current	1.5 x In
Max. THD in voltage	2 %
Max. THD in current	25 %
Discharge resistance	Incorporated
Connection	Delta
Voltage test between terminals	2.15xUn 10s
Voltage test between terminals and case	3kV AC for 1min
Inrush current	Up to 200 x In
Protection	IP-20
Humidity	Max. 95%
Life Expectancy	100 000 h (Temp. type D)
Altitude	Max. 4000m.a.s.l.
Mounting position	Universal

*Without resistors



Code	Power	Voltage	Frequency	Current	Capacitance	Dimensions
	KVAr	V	Hz	A	µF	mm
R02300025500000	2,5	230	50	6,28	3x 50,14	255x210x 70
R02300050500000	5	230	50	12,55	3x 100,29	255x210x 70
R02300075500000	7,5	230	50	18,83	3x 150,43	370x210x 70
R02300100500000	10	230	50	25,10	3x 200,57	370x210x 70
R02300125500000	12,5	230	50	31,38	3x 250,72	370x220x150
R02300150500000	15	230	50	37,65	3x 300,86	370x220x150
R02300200500000	20	230	50	50,20	3x 401,15	520x220x150
R02300250500000	25	230	50	62,76	3x 501,43	520x220x150
R02300300500000	30	230	50	75,31	3x 601,72	620x220x150
R02300350500000	35	230	50	87,86	3x 702,01	620x220x150
R02300400500000	40	230	50	100,41	3x 802,29	750x220x150
R02300450500000	45	230	50	112,96	3x 902,58	750x220x150
R02300505000000	50	230	50	125,51	3x1.002,87	850x220x150

Code	Power	Voltage	Frequency	Current	Capacitance	Dimensions
	KVAr	V	Hz	A	µF	mm
R04400050500000	5	440	50	6,56	3x 27,40	255x210x 70
R04400075500000	7,5	440	50	9,84	3x 41,10	255x210x 70
R04400100500000	10	440	50	13,12	3x 54,81	255x210x 70
R04400125500000	12,5	440	50	16,40	3x 68,51	370x210x 70
R04400150500000	15	440	50	19,68	3x 82,21	370x210x 70
R04400200500000	20	440	50	26,24	3x109,61	370x210x 70
R04400250500000	25	440	50	32,80	3x137,01	370x220x150
R04400300500000	30	440	50	39,36	3x164,42	370x220x150
R04400350500000	35	440	50	45,93	3x191,82	520x220x150
R04400400500000	40	440	50	52,49	3x219,22	520x220x150
R04400450500000	45	440	50	59,05	3x246,62	520x220x150
R04400500500000	50	440	50	65,61	3x274,03	520x220x150
R04400600500000	60	440	50	78,73	3x328,83	620x220x150
R04400700500000	70	440	50	91,85	3x383,64	620x220x150
R04400800500000	80	440	50	104,97	3x438,44	750x220x150
R04400900500000	90	440	50	118,09	3x493,25	750x220x150
R04401000500000	100	440	50	131,22	3x548,05	850x220x150

Code	Power	Voltage	Frequency	Current	Capacitance	Dimensions
	KVAr	V	Hz	A	µF	mm
R06900050500000	5	690	50	4,18	3x 11,14	255x210x 70
R06900075500000	7,5	690	50	6,28	3x 16,71	255x210x 70
R06900100500000	10	690	50	8,37	3x 22,29	255x210x 70
R06900125500000	12,5	690	50	10,46	3x 27,86	370x210x 70
R06900150500000	15	690	50	12,55	3x 33,43	370x210x 70
R06900200500000	20	690	50	16,73	3x 44,57	370x210x 70
R06900250500000	25	690	50	20,92	3x 55,71	370x220x150
R06900300500000	30	690	50	25,10	3x 66,86	370x220x150
R06900350500000	35	690	50	29,29	3x 78,00	520x220x150
R06900400500000	40	690	50	33,47	3x 89,14	520x220x150
R06900450500000	45	690	50	37,65	3x100,29	520x220x150
R06900500500000	50	690	50	41,84	3x111,43	520x220x150
R06900600500000	60	690	50	50,20	3x133,72	620x220x150
R06900700500000	70	690	50	58,57	3x156,00	620x220x150
R06900800500000	80	690	50	66,94	3x178,29	750x220x150
R06900900500000	90	690	50	75,31	3x200,57	750x220x150
R06901000500000	100	690	50	83,67	3x222,86	850x220x150

Code	Power	Voltage	Frequency	Current	Capacitance	Dimensions
	KVAr	V	Hz	A	µF	mm
R11000050500000	5	1100	50	2,62	3x 4,38	255x210x 70
R11000075500000	7,5	1100	50	3,94	3x 6,58	255x210x 70
R11000100500000	10	1100	50	5,25	3x 8,77	255x210x 70
R11000125500000	12,5	1100	50	6,56	3x10,96	370x210x 70
R11000150500000	15	1100	50	7,87	3x13,15	370x210x 70
R11000200500000	20	1100	50	10,50	3x17,54	370x210x 70
R11000250500000	25	1100	50	13,12	3x21,92	370x220x150
R11000300500000	30	1100	50	15,75	3x26,31	370x220x150
R11000350500000	35	1100	50	18,37	3x30,69	520x220x150
R11000400500000	40	1100	50	20,99	3x35,08	520x220x150
R11000450500000	45	1100	50	23,62	3x39,46	520x220x150
R11000500500000	50	1100	50	26,24	3x43,84	520x220x150
R11000600500000	60	1100	50	31,49	3x52,61	620x220x150
R11000700500000	70	1100	50	36,74	3x61,38	620x220x150
R11000800500000	80	1100	50	41,99	3x70,15	750x220x150
R11000900500000	90	1100	50	47,24	3x78,92	750x220x150
R11001000500000	100	1100	50	52,49	3x87,69	850x220x150

* Other powers, voltages and frequencies upon request.

Reinforced three phase capacitor

230/440 V, 50Hz

Characteristics and utility

- Three phase capacitor
- Single phase elements connected through threaded stud
- Delta connection
- Discharge resistors incorporated
- Reactive power factor correction
- Reinforced design to support over voltage
- Dry type
- Indoor installation

Standard

- IEC 60831-1/2:2014
- UNE-EN 60831-1/2:2014

Construction and materials

- Low losses metallized self-healing polypropylene film, high density, high temperature and greater dielectric resistance Volt/ μ
- Polyurethane self-extinguishing resin V0, developed under standard UL94 by RTR Energia and with certification number 20141031-E470994
- Metal container with terminal covers and fixing brackets
- RAL 6034



Technical Characteristics

Capacitance tolerance	-5 % +10 %
Frequency	50 Hz (60 Hz upon request)
Temperature range	-25°C +55 °C (Class D)
Dielectric losses	≤ 0.2 W/KVAr
Total losses	≤ 0.5 W/KVAr*
Over voltage	1.15 x Un
Over current	1.5 x In
Max. THD in voltage	3 %
Max. THD in current	30 %
Discharge resistance	Incorporated
Connection	Delta
Voltage test between terminals	2,15 x Un 10 sec.
Voltage test between terminals and case	3kV AC for 1min
Inrush current	Up to 200 x In
Protection	IP-20
Humidity	Max. 95%
Life Expectancy	120 000 h
Altitude	Max. 4000m.a.s.l.
Mounting position	Universal

* Without resistors



Code	Power	Voltage	Frequency	Current	Capacitance	Dimensions
	KVAr	V	Hz	A	μF	mm
R023000255RTF00	2,5	230	50	6,28	3x 50,14	255x210x 70
R023000505RTF00	5	230	50	12,55	3x 100,29	255x210x 70
R023000755RTF00	7,5	230	50	18,83	3x 150,43	370x210x 70
R023001005RTF00	10	230	50	25,10	3x 200,57	370x210x 70
R023001255RTF00	12,5	230	50	31,38	3x 250,72	370x220x150
R023001505RTF00	15	230	50	37,65	3x 300,86	370x220x150
R023002005RTF00	20	230	50	50,20	3x 401,15	520x220x150
R023002505RTF00	25	230	50	62,76	3x 501,43	520x220x150
R023003005RTF00	30	230	50	75,31	3x 601,72	620x220x150
R023003505RTF00	35	230	50	87,86	3x 702,01	620x220x150
R023004005RTF00	40	230	50	100,41	3x 802,29	750x220x150
R023004505RTF00	45	230	50	112,96	3x 902,58	750x220x150
R023005005RTF00	50	230	50	125,51	3x1.002,87	850x220x150

Code	Power	Voltage	Frequency	Current	Capacitance	Dimensions
	KVAr	V	Hz	A	μF	mm
R044000505RTF00	5	440	50	6,56	3x 27,40	255x210x 70
R044000755RTF00	7,5	440	50	9,84	3x 41,10	255x210x 70
R044001005RTF00	10	440	50	13,12	3x 54,81	255x210x 70
R044001255RTF00	12,5	440	50	16,40	3x 68,51	370x210x 70
R044001505RTF00	15	440	50	19,68	3x 82,21	370x210x 70
R044002005RTF00	20	440	50	26,24	3x109,61	370x210x 70
R044002505RTF00	25	440	50	32,80	3x137,01	370x220x150
R044003005RTF00	30	440	50	39,36	3x164,42	370x220x150
R044003505RTF00	35	440	50	45,93	3x191,82	520x220x150
R044004005RTF00	40	440	50	52,49	3x219,22	520x220x150
R044004505RTF00	45	440	50	59,05	3x246,62	520x220x150
R044005005RTF00	50	440	50	65,61	3x274,03	520x220x150
R044006005RTF00	60	440	50	78,73	3x328,83	620x220x150
R044007005RTF00	70	440	50	91,85	3x383,64	620x220x150
R044008005RTF00	80	440	50	104,97	3x438,44	750x220x150
R044009005RTF00	90	440	50	118,09	3x493,25	750x220x150
R044010005RTF00	100	440	50	131,22	3x548,05	850x220x150

* Other powers, voltages and frequencies upon request.

Three phase capacitor for harmonic filter application

230/440 V, 50Hz

Characteristics and utility

- Three phase capacitor
- Single phase elements connected through threaded stud
- Delta connection
- Discharge resistors incorporated
- Reactive power factor correction
- Special design to install with 210,189 and 134 Hz three phase harmonic filters
- Dry type
- Indoor installation

Standard

- IEC 60831-1/2:2014
- UNE-EN 60831-1/2:2014

Construction and materials

- Low losses metallized self-healing polypropylene film, high density, high temperature and greater dielectric resistance Volt/ μ
- Polyurethane self-extinguishing resin V0, developed under standard UL94 by RTR Energia and with certification number 20141031-E470994
- Metal container with terminal covers and fixing brackets
- RAL 6034



Technical Characteristics

Capacitance tolerance	-5 % +10 %
Frequency	50 Hz (60 Hz upon request)
Temperature range	-25°C +55 °C (Class D)
Dielectric losses	≤ 0.2 W/KVAr
Total losses	≤ 0.5 W/kVAr *
Over voltage	1.15 x Un
Over current	1.5 x In
Max. THD in voltage	3 % (Special design for harmonics)
Max. THD in current	30 %
Discharge resistance	Incorporated
Connection	Delta
Voltage test between terminals	2,15 x Un 10 sec.
Voltage test between terminals and case	3kV AC for 1min
Inrush current	Up to 200 x In
Protection	IP-20
Humidity	Max. 95%
Altitude	Max. 4000m.a.s.l.
Mounting position	Universal

* Without resistors



Code	Power	Voltage	Frequency	Current	Capacitance	Dimensions
	KVAr	V	Hz	A	μF	mm
R023000255RCT00	2,5	230	50	6,28	3x 46,63	255x210x 70
R023000505RCT00	5	230	50	12,55	3x 93,27	255x210x 70
R023000755RCT00	7,5	230	50	18,83	3x 139,90	370x210x 70
R023001005RCT00	10	230	50	25,10	3x 186,53	370x210x 70
R023001255RCT00	12,5	230	50	31,38	3x 233,17	370x220x150
R023001505RCT00	15	230	50	37,65	3x 279,80	370x220x150
R023002005RCT00	20	230	50	50,20	3x 373,07	520x220x150
R023002505RCT00	25	230	50	62,76	3x 466,33	520x220x150
R023003005RCT00	30	230	50	75,31	3x 559,60	620x220x150
R023003505RCT00	35	230	50	87,86	3x 652,87	620x220x150
R023004005RCT00	40	230	50	100,41	3x 746,13	750x220x150
R023004505RCT00	45	230	50	112,96	3x 839,40	750x220x150
R023005005RCT00	50	230	50	125,51	3x1.002,87	850x220x150

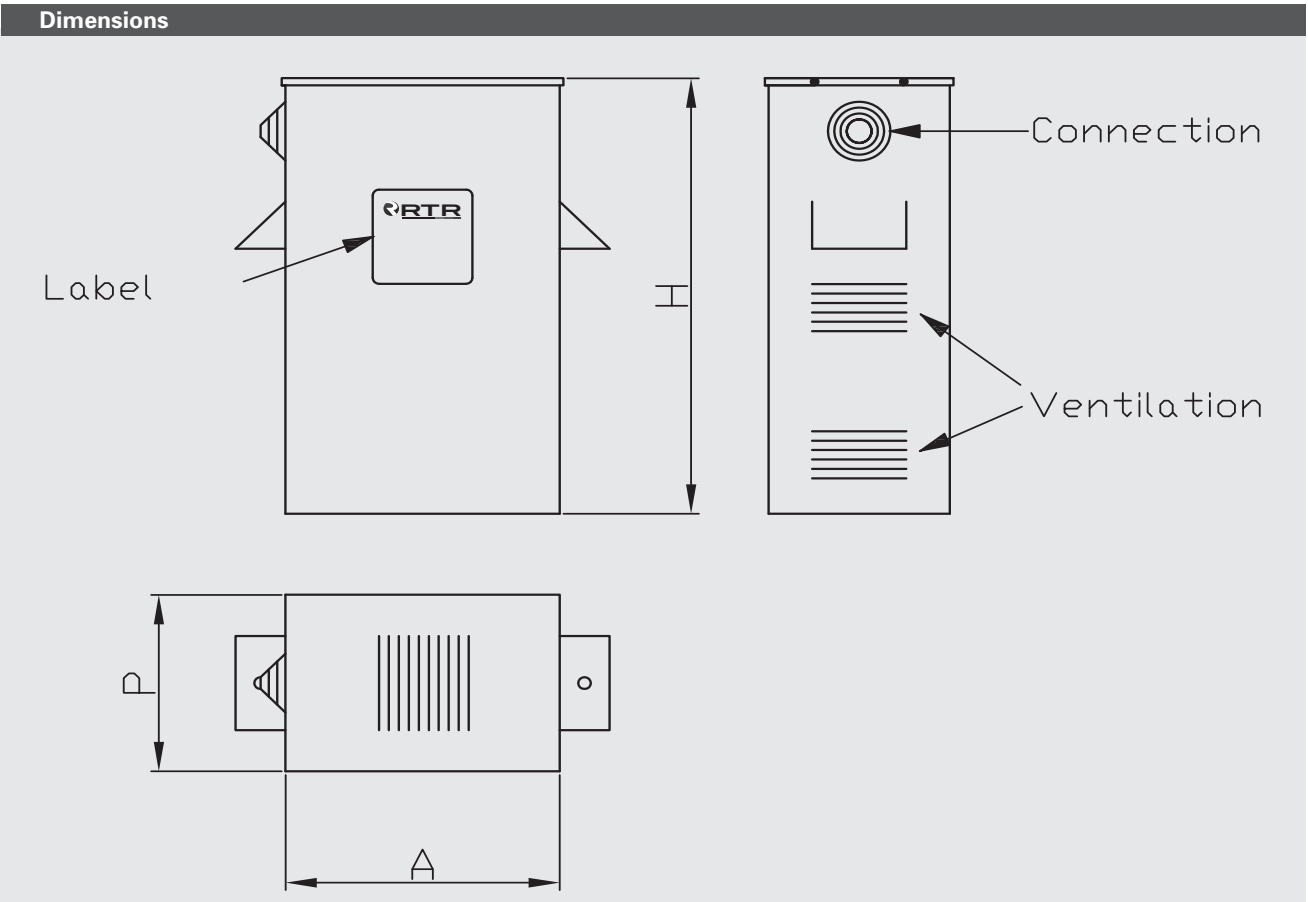
Code	Power	Voltage	Frequency	Current	Capacitance	Dimensions
	KVAr	V	Hz	A	μF	mm
R044000505RCT00	5	440	50	6,56	3x 25,48	255x210x 70
R044000755RCT00	7,5	440	50	9,84	3x 38,23	255x210x 70
R044001005RCT00	10	440	50	13,12	3x 50,97	255x210x 70
R044001255RCT00	12,5	440	50	16,40	3x 63,71	370x210x 70
R044001505RCT00	15	440	50	19,68	3x 76,45	370x210x 70
R044002005RCT00	20	440	50	26,24	3x101,94	370x210x 70
R044002505RCT00	25	440	50	32,80	3x127,42	370x220x150
R044003005RCT00	30	440	50	39,36	3x152,91	370x220x150
R044003505RCT00	35	440	50	45,93	3x178,39	520x220x150
R044004005RCT00	40	440	50	52,49	3x203,88	520x220x150
R044004505RCT00	45	440	50	59,05	3x229,36	520x220x150
R044005005RCT00	50	440	50	65,61	3x254,85	520x220x150
R044006005RCT00	60	440	50	78,73	3x305,81	620x220x150
R044007005RCT00	70	440	50	91,85	3x356,78	620x220x150
R044008005RCT00	80	440	50	104,97	3x407,75	750x220x150
R044009005RCT00	90	440	50	118,09	3x458,72	750x220x150
R044010005RCT00	100	440	50	131,22	3x509,69	850x220x150

* Other powers, voltages and frequencies upon request.

Temperature (IEC 60831-1/2)

Symbol	Ambient temperature °C		
	Maximun	Highest mean over any period of	
		24h	1 year
A	40	30	20
B	45	35	25
C	50	40	30
D	55	45	35

Dimensions	Brackets	Terminal
HxAxP mm		M
255x210x 70	2	M8
370x210x 70	2	M8
370x220x150	2	M12
520x220x150	2	M12
620x220x150	2	M12
750x220x150	2	M12
850x220x150	2	M12



Lighting Capacitors

General Descriptions

Lighting capacitors manufactured with self healing metallized polypropylene film and encapsulated in self-extinguishable and aluminium cans.

Terminals

- 200 mm leads
- Push-wire

Fixing

- Bottom screw M8
- Clip

Standards

- IEC 61048
- UNE-EN 61048
- IEC 61049
- UNE-EN 61049

Certifications



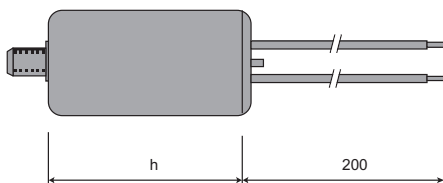
* Consult with us to find models with certification

Technical Characteristics

Dielectric	Metallized polypropylene film
Tolerance	±10%
Frequency	50/60 Hz
Temperature Range	-25 + 85°C
Discharge Resistors	Built-in
Voltage Vca	250 Vac
Insulation resistance	>2000MΩ 500V
Tan Vn50 Hz, 20° C	< 10 · 10 ⁻⁴

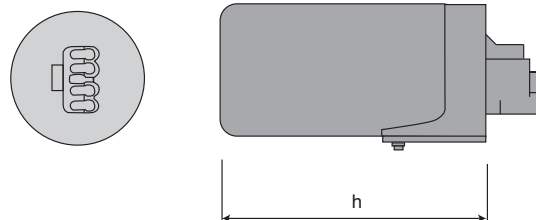
Capacitors in plastic can

RI008HPxxxP25 Series



Capacity: from 2 µF to 60 µF
Voltage: 250 V
Diameter: 25, 30, 35, 40, 50 mm
Lenght (h): 52, 70, 74, 94, 98 mm
Terminal: wire of 200 mm
Fixing: screw M8
Plastic can

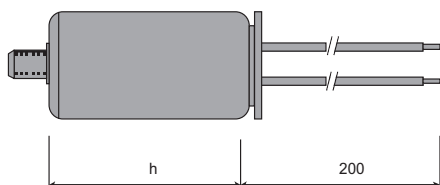
RIFRLCRxxxP25 Series



Capacity: from 2 µF to 25 µF
Voltage: 250 V
Diameter: 25, 30, 35 mm
Lenght (h): 52, 70, 74, 94, 98 mm
Terminal: push-wire
Fixing: snap-In connector
Plastic can

Capacitors in aluminium can

RI008HPxxxA25 Series



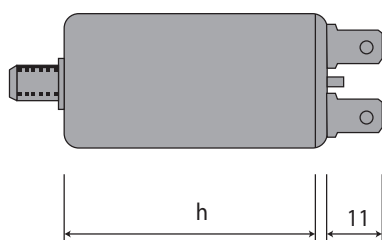
Capacity: from 2 µF to 60 µF
Voltage: 250 V
Diameter: 25, 30, 35, 40, 50 mm
Lenght (h): 58, 76, 100 mm
Terminal: wire of 200 mm
Fixing: screw M8
Aluminium can

Motor run Capacitors

General Descriptions	Terminals	Technical Characteristics	
Motor run capacitors manufactured with self healing metallized polypropylene film and encapsulated in self-extinguishable and aluminium cans.	• Double faston 6.3 mm tags • 2x0.75 of 210 mm twin cable • 200 mm leads	Dielectric	Metallized polypropylene film
		Tolerance	±5%
		Frequency	50/60 Hz
		Temperature Range	-25 + 85°C
		Discharge Resistors	Built-in
		Voltage Vca	400/450 Vac
		Test Voltage between terminals to case	2.4 kV
		Insulation resistance	>2000MΩ 500V
		Tan Vn50 Hz, 20° C	< 10· 10 ⁻⁴
		Can	Aluminium/plastic
Fixing	Standards		
• Bottom screw M8	• IEC 60252 • UNE-EN 60252		

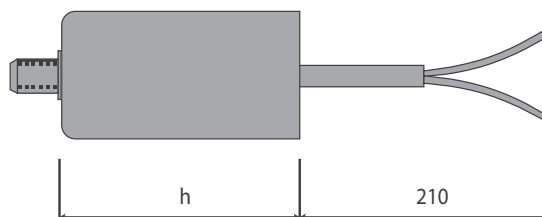
Capacitors in plastic can

RM8FDxxxP45 Series



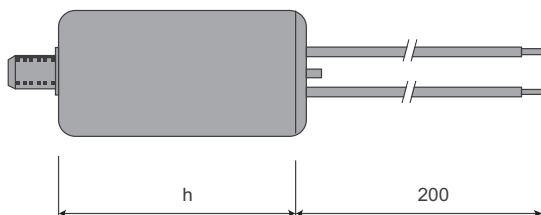
Capacity: from 2 µF to 65 µF
Voltage: 450 V
Diameter: 25, 30, 35, 45, 50 mm
Length (h): 52, 56, 74, 94, 98 mm
Terminal: faston connector 6.3 mm
Fixing: no
Plastic can

RM8MGxxxP45 Series



Capacity: from 2 µF to 65 µF
Voltage: 450 V
Diameter: 25, 30, 35, 40, 45, 50, 55 mm
Length (h): 52, 70, 74, 94, 98 mm
Terminal: twin cable 210 mm
Fixing: Screw M8
Plastic can

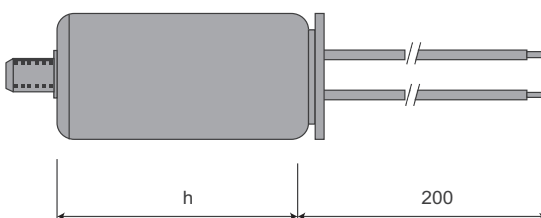
RM8HPxxxP45 Series



Capacity: from 2 µF to 65 µF
Voltage: 450 V
Diameter: 25, 30, 35, 40, 45, 50, 55 mm
Length (h): 52, 56, 74, 94, 98, 120 mm
Terminal: 200 mm wire
Fixing: screw M8
Plastic can

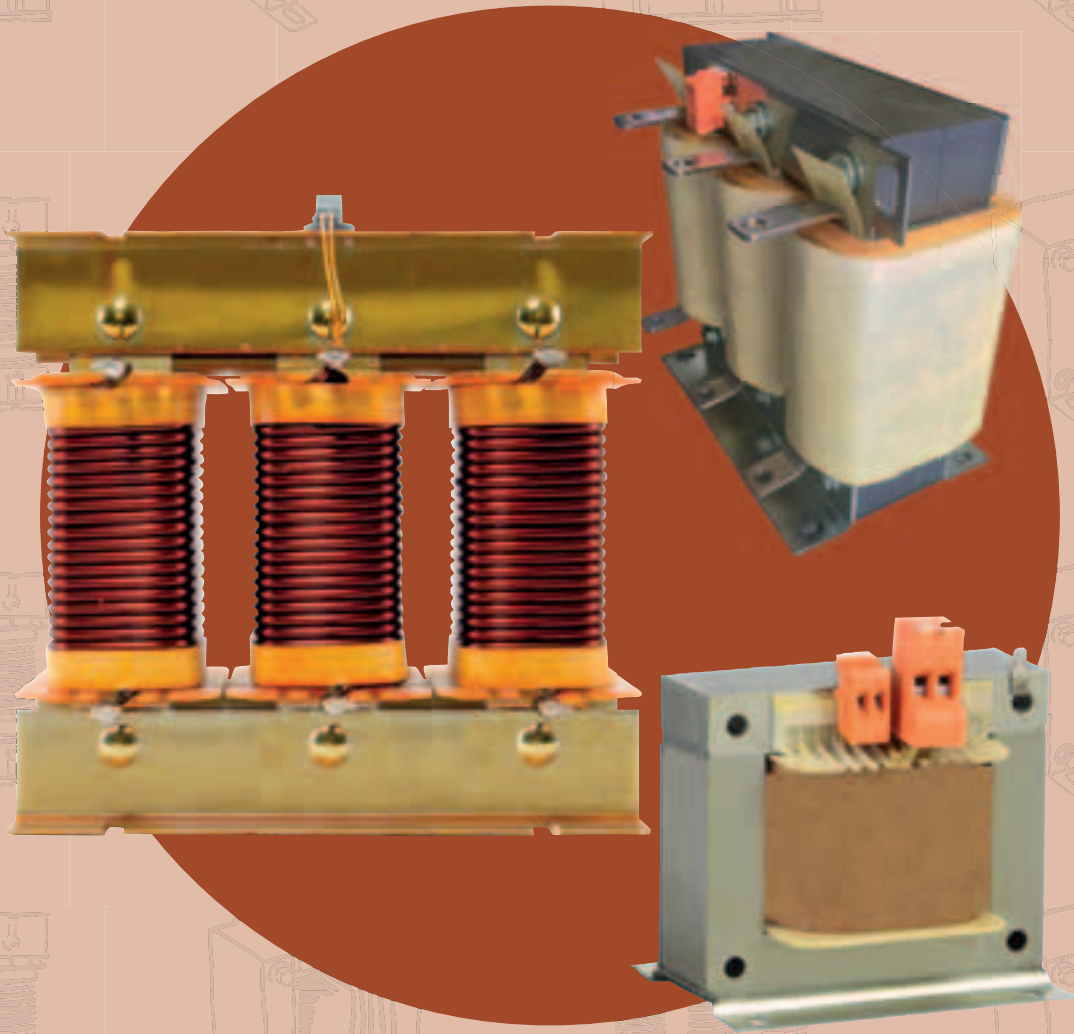
Capacitors in aluminium can

RM8HPxxxA45 Series



Capacity: from 2 µF to 65 µF
Voltage: 450 V
Diameter: 25, 30, 35, 40, 45, 50, 55 mm
Length (h): 58, 76, 100, 127 mm
Terminal: cable 200 mm
Fixing: screw M8
Aluminium can

Filtering Reactors and Transformers



Three Phase Harmonic Filters with wire winding

Characteristics and utility

- Three phase harmonic filter.
- Avoid resonance between inductive impedance and three phase capacitors for power factor correction.
- Detuning with MA/C/CE TER RCT and DWCAP RCT, with resonance frequency 134,189 or 210Hz if nominal frequency is 50Hz and 252, 227 and 160Hz if nominal frequency is 60Hz (other resonance frequency under request).

Upon request

RTR's technical department offers the possibility of manufacturing equipment according to customer application need, different power, voltage, detuning frequency....

Construction and Materials

- Low losses magnetic plates.
- Conductor insulation thermal class H (180°) with permanent regime.
- Thermal protection relay.
- Specially designed to increasing ventilation and improving thermal dissipation.
- Vacuum-varnished dry type to ensure quiet and moisture-resistant operation.

Standards

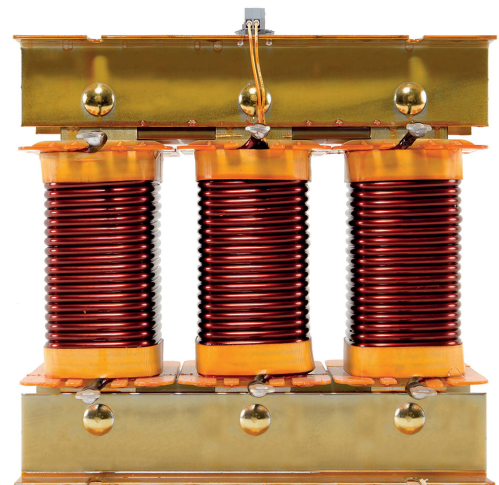
- UNE-EN 60076-6
- IEC 60076-6

Certifications



Technical Characteristics

Tolerance "L"	±5%
Nominal frequency	50Hz (60Hz upon request)
Linearity Inductance	1,8 X In
Detuning factor	5,67%, 7% y 14%
Proof stress	4kV
Thermal protection	95°C, 120°C, 140°C
Permissible Overload	1,07 x In
Protection degree	IP00



Code	Power	Voltage	Nominal	Resonance	Detuning	Capacitance	Current	Inductance
	KVAr	V	Frequency Hz	Frequency Hz	Factor %	µF	A	mH
RTF023000501895	5	230	50	189	7	279,80	12,55	2,53
RTF023001001895	10	230	50	189	7	559,60	25,10	1,27
RTF023001251895	12,5	230	50	189	7	699,50	31,38	1,01
RTF023001501895	15	230	50	189	7	839,40	37,65	0,84
RTF023002001895	20	230	50	189	7	1119,20	50,20	0,63
RTF023002501895	25	230	50	189	7	1399,00	62,76	0,51
RTF023003001895	30	230	50	189	7	1678,80	75,31	0,42
RTF023004001895	40	230	50	189	7	2238,40	100,41	0,32
Code	Power	Voltage	Nominal	Resonance	Detuning	Capacitance	Current	Inductance
	KVAr	V	Frequency Hz	Frequency Hz	Factor %	µF	A	mH
RTF040001002105	10	400	50	210	5,67	187,66	14,43	3,06
RTF040001252105	12,5	400	50	210	5,67	234,58	18,04	2,45
RTF040001502105	15	400	50	210	5,67	281,50	21,65	2,04
RTF040002002105	20	400	50	210	5,67	375,33	28,87	1,53
RTF040002502105	25	400	50	210	5,67	469,16	36,08	1,22
RTF040005002105	50	400	50	210	5,67	938,32	72,17	0,61
RTF040007502105	75	400	50	210	5,67	1407,48	108,25	0,41
RTF040010002105	100	400	50	210	5,67	1876,64	144,34	0,31
Code	Power	Voltage	Nominal	Resonance	Detuning	Capacitance	Current	Inductance
	KVAr	V	Frequency Hz	Frequency Hz	Factor %	µF	A	mH
RTF040001001895	10	400	50	189	7	185,02	14,43	3,83
RTF040001251895	12,5	400	50	189	7	231,27	18,04	3,07
RTF040001501895	15	400	50	189	7	277,53	21,65	2,56
RTF040002001895	20	400	50	189	7	370,04	28,87	1,92
RTF040002501895	25	400	50	189	7	462,54	36,08	1,53
RTF040005001895	50	400	50	189	7	925,09	72,17	0,77
RTF040007501895	75	400	50	189	7	1387,63	108,25	0,51
RTF040010001895	100	400	50	189	7	1850,18	144,34	0,38
Code	Power	Voltage	Nominal	Resonance	Detuning	Capacitance	Current	Inductance
	KVAr	V	Frequency Hz	Frequency Hz	Factor %	µF	A	mH
RTF040001001345	10	400	50	134	14	171,09	14,43	8,29
RTF040001251345	12,5	400	50	134	14	213,86	18,04	6,63
RTF040001501345	15	400	50	134	14	256,64	21,65	5,53
RTF040002001345	20	400	50	134	14	342,18	28,87	4,15
RTF040002501345	25	400	50	134	14	427,73	36,08	3,32
RTF040005001345	50	400	50	134	14	855,46	72,17	1,66
RTF040007501345	75	400	50	134	14	1283,19	108,25	1,11
RTF040010001345	100	400	50	134	14	1710,92	144,34	0,83
Code	Power	Voltage	Nominal	Resonance	Detuning	Capacitance	Current	Inductance
	KVAr	V	Frequency Hz	Frequency Hz	Factor %	µF	A	mH
RTF044001001895	10	440	50	189	7	152,91	13,12	4,64
RTF044001251895	12,5	440	50	189	7	191,13	16,40	3,71
RTF044001501895	15	440	50	189	7	229,36	19,68	3,09
RTF044002001895	20	440	50	189	7	305,81	26,24	2,32
RTF044002501895	25	440	50	189	7	382,27	32,80	1,86
RTF044005001895	50	440	50	189	7	764,54	65,61	0,93
RTF044007501895	75	440	50	189	7	1146,80	98,41	0,62
RTF044010001895	100	440	50	189	7	1529,07	131,22	0,46
Code	Power	Voltage	Nominal	Resonance	Detuning	Capacitance	Current	Inductance
	KVAr	V	Frequency Hz	Frequency Hz	Factor %	µF	A	mH
RTF044001001345	10	440	50	134	14	141,40	13,12	10,03
RTF044001251345	12,5	440	50	134	14	176,75	16,40	8,03
RTF044001501345	15	440	50	134	14	212,10	19,68	6,69
RTF044002001345	20	440	50	134	14	282,80	26,24	5,02
RTF044002501345	25	440	50	134	14	353,49	32,80	4,01
RTF044005001345	50	440	50	134	14	706,99	65,61	2,01
RTF044007501345	75	440	50	134	14	1060,48	98,41	1,34
RTF044010001345	100	440	50	134	14	1413,98	131,22	1,00

*Other voltages and power upon request
 ** consult for dimensions

Three phase Harmonic Filters with aluminium foil

Characteristics and utility

- Three phase harmonic filter.
- Avoid resonance between inductive impedance and three phase capacitors for power factor correction.
- Detuning with MA/C/CE TER RCT and DWCAP RCT, with resonance frequency 134,189 or 210Hz if nominal frequency is 50Hz and 252, 227 and 160Hz if nominal frequency is 60Hz (other resonance frequency under request).

Construction and materials

- Low losses magnetic plates.
- Aluminium foil
- Conductor insulation thermal class H (180°) with permanent regime.
- Thermal protection relay.
- Specially designed to increasing ventilation and improving thermal dissipation.
- Vacuum impregnated varnish to ensure silent and moisture-immune operation.

Upon request

RTR's technical department offers the possibility of manufacturing equipment according to customer application need, different power, voltage, detuning frequency....

Standards

- UNE-EN 60076-6
- IEC 60076-6

Technical Characteristics

Tolerance "L"	±5%
Nominal frequency	50Hz (60Hz upon request)
Linearity Inductance	• 7% linearity= $1,9 \times I_n$ • 14% linearity= $1,7 \times I_n$
Detuning factor	5,67%, 7% y 14%
Proof stress	4kV
Thermal protection	F (155°C)
Permissible Overload	$1,1 \times I_n$
Protection degree	IP00



Code	Power	Voltage	Nominal	Resonance	Detuning	Capacitance	Current	Inductance
	KVAr	V	Frequency Hz	Frequency Hz	Factor %	µF	A	mH
RTF02300050189A	5	230	50	189	7	279,80	12,55	2,53
RTF02300100189A	10	230	50	189	7	559,60	25,10	1,27
RTF02300125189A	12,5	230	50	189	7	699,50	31,38	1,01
RTF02300150189A	15	230	50	189	7	839,40	37,65	0,84
RTF02300200189A	20	230	50	189	7	1119,20	50,20	0,63
RTF02300250189A	25	230	50	189	7	1399,00	62,76	0,51
RTF02300300189A	30	230	50	189	7	1678,80	75,31	0,42
RTF02300400189A	40	230	50	189	7	2238,40	100,41	0,32
Code	Power	Voltage	Nominal	Resonance	Detuning	Capacitance	Current	Inductance
	KVAr	V	Frequency Hz	Frequency Hz	Factor %	µF	A	mH
RTF04000100210A	10	400	50	210	5,67	187,66	14,43	3,06
RTF04000125210A	12,5	400	50	210	5,67	234,58	18,04	2,45
RTF04000150210A	15	400	50	210	5,67	281,50	21,65	2,04
RTF04000200210A	20	400	50	210	5,67	375,33	28,87	1,53
RTF04000250210A	25	400	50	210	5,67	469,16	36,08	1,22
RTF04000500210A	50	400	50	210	5,67	938,32	72,17	0,61
RTF04000750210A	75	400	50	210	5,67	1407,48	108,25	0,41
RTF04001000210A	100	400	50	210	5,67	1876,64	144,34	0,31
Code	Power	Voltage	Nominal	Resonance	Detuning	Capacitance	Current	Inductance
	KVAr	V	Frequency Hz	Frequency Hz	Factor %	µF	A	mH
RTF04000100189A	10	400	50	189	7	185,02	14,43	3,83
RTF04000125189A	12,5	400	50	189	7	231,27	18,04	3,07
RTF04000150189A	15	400	50	189	7	277,53	21,65	2,56
RTF04000200189A	20	400	50	189	7	370,04	28,87	1,92
RTF04000250189A	25	400	50	189	7	462,54	36,08	1,53
RTF04000500189A	50	400	50	189	7	925,09	72,17	0,77
RTF04000750189A	75	400	50	189	7	1387,63	108,25	0,51
RTF04001000189A	100	400	50	189	7	1850,18	144,34	0,38
Code	Power	Voltage	Nominal	Resonance	Detuning	Capacitance	Current	Inductance
	KVAr	V	Frequency Hz	Frequency Hz	Factor %	µF	A	mH
RTF04000100134A	10	400	50	134	14	171,09	14,43	8,29
RTF04000125134A	12,5	400	50	134	14	213,86	18,04	6,63
RTF04000150134A	15	400	50	134	14	256,64	21,65	5,53
RTF04000200134A	20	400	50	134	14	342,18	28,87	4,15
RTF04000250134A	25	400	50	134	14	427,73	36,08	3,32
RTF04000500134A	50	400	50	134	14	855,46	72,17	1,66
RTF04000750134A	75	400	50	134	14	1283,19	108,25	1,11
RTF04001000134A	100	400	50	134	14	1710,92	144,34	0,83
Code	Power	Voltage	Nominal	Resonance	Detuning	Capacitance	Current	Inductance
	KVAr	V	Frequency Hz	Frequency Hz	Factor %	µF	A	mH
RTF04400100189A	10	440	50	189	7	152,91	13,12	4,64
RTF04400125189A	12,5	440	50	189	7	191,13	16,40	3,71
RTF04400150189A	15	440	50	189	7	229,36	19,68	3,09
RTF04400200189A	20	440	50	189	7	305,81	26,24	2,32
RTF04400250189A	25	440	50	189	7	382,27	32,80	1,86
RTF04400500189A	50	440	50	189	7	764,54	65,61	0,93
RTF04400750189A	75	440	50	189	7	1146,80	98,41	0,62
RTF04401000189A	100	440	50	189	7	1529,07	131,22	0,46
Code	Power	Voltage	Nominal	Resonance	Detuning	Capacitance	Current	Inductance
	KVAr	V	Frequency Hz	Frequency Hz	Factor %	µF	A	mH
RTF04400100134A	10	440	50	134	14	141,40	13,12	10,03
RTF04400125134A	12,5	440	50	134	14	176,75	16,40	8,03
RTF04400150134A	15	440	50	134	14	212,10	19,68	6,69
RTF04400200134A	20	440	50	134	14	282,80	26,24	5,02
RTF04400250134A	25	440	50	134	14	353,49	32,80	4,01
RTF04400500134A	50	440	50	134	14	706,99	65,61	2,01
RTF04400750134A	75	440	50	134	14	1060,48	98,41	1,34
RTF04401000134A	100	440	50	134	14	1413,98	131,22	1,00

*Other voltages and power upon request

** consult for dimensions

Accesories



Electromagnetic capacitor duty contactors

Application

In low voltage installations, when a capacitor get connected, a greater transient and inrush phenomena occurs. This has the consequence that the switching of the capacitor results in a high transient and this transient can disturbs the electrical network. A part of the nominal current, occurs an over current higher than $180 \times I_n$ and high frequency (3-15 kHz) while a period of 1-2 ms. This peak currents caused by the connection of capacitors are depend on the following factors:

- Network inductances
- Power transformers and short-circuit voltages
- Fixed or automatic systems for correction power factor
- Presence of harmonics

The peak current for large magnitude is undesirable and it is dangerous for the standard contactors and increases stress on the capacitors. For that reason, we recommend the utilization of specific designed contactors for capacitors switching RTR energia contactors AC-6b class MO C model that ensures proper that ensures proper operation for this application.

Operating system

Contactors for capacitor applications are designed to accomplish special operating requirements.

These contactors incorporate a frontal block with damping resistors to absorb the current peak in the connection of the capacitors.

Auxiliary contacts 2NC or 1NC+1NO.



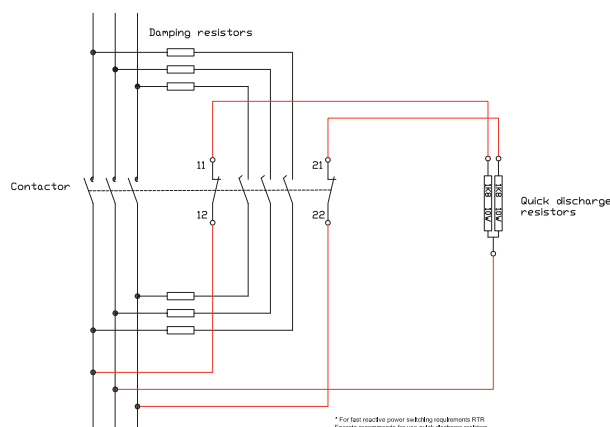
Technical Characteristics		MO 18	MO C12,5	MO C15	MO C20	MO C25	MO C30	MO C35	MO C50	MO C60	MO C70	MO C80	MO C100
Standard		IEC 60947-4-1											
Rated kVAr	230V AC	2.8	7	8.5	11	14	16.5	20	30	33.5	40	45	55
	400-440V AC	5	12.5	15	20	25	30	35	50	60	70	80	100
Rated impulse withstand voltage (kV)		8											
IP protection		IP 20											
Coil operating voltage (V)		240											
Life(operating cycles)	Mechanical	10.000.000											
	Eléctrical	200.000											
Dimensions (HxWxD) (mm)		87x57x89	87x57x133.5				123.5x67x163			174x75.5x163	135x82x175		194x92.5x175

Quick Discharge Resistor

For fast reactive power switching requirements RTR Energia recommends for use quick discharge resistors connected on Contactors through 2NC auxiliary contacts for fast discharging the capacitors for reduce high transient current while connecting again. (ref. the connection diagram)



Connection Diagram



* For fast reactive power switching requirements RTR Energia recommends for use quick discharge resistors connected on contactors through 2NC auxiliary contacts for fast discharging the capacitors for reduce high transient current while connecting again.

Code	Type	Resistance
		Ω
MONTARRESISTCON	RD-1K8	2x1800

Static contactors based on Thyristor switching

RTR's Static contactors based on thyristor switching are designed to compensate reactive power automatically and where an immediate response is needed.

These thyristor modules are designed to switch capacitive loads up to 80kVAr in power factor correction

(PFC) applications. The modules can switch capacitive loads within 10ms of receiving a triggering signal. The microprocessor-based architecture and its algorithm senses the voltage zero crossing, thereby avoiding capacitor abrasion.



Advantage

- Up to 480V
- Triggering is easily performed through power factor correction relays, or PLCs
- Longer life expectancy
- Fast switching performance (less than 10ms)
- Guaranteed minimal voltage or current transients during switching
- State, voltage and temperature control
- RTR's modules can operate with or without a detuned filter reactor
- RTR's modules are equipped with an external thermostat terminal. This terminal can be used to protect the detuned filter reactor from overheating
- RTR's modules are maintenance free
- Silent operation

Technic Characteristics

Model	ST12	ST25	ST50	ST80
Rated power (kVAr)	12.5	25	50	80
Rated voltage (V)	400			
Maximum Operating Current (A)	20	40	80	115
Auxiliary Supply Voltage (V)	230V			
Switching time (ms)	<10			
Triggering voltage (V)	24			
IP class	IP20			
Dimensions (WxHxD) (mm)	Figura 1 144x150x117.5		Figura 2 161x232x197.5	
Weight (kg)	2.2		5.9	
Operating ambient temperature (°C)	-20, +45			



Figure 1

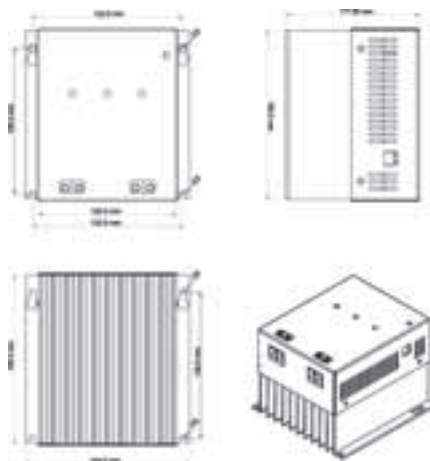
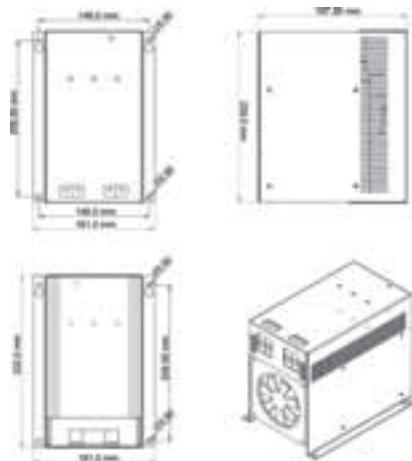


Figure 2



Controllers and Measurement Equipment



Power Factor Regulator

PR-12D three phase remote management



General Characteristics

- Smart Alarm system: advise us when we're getting closer to penalization, if any does not work properly, etc.
- Its information system allows us to know the basic parameters in general and per phase: state of capacitors, temperature, voltage and current....
- Net analyzed: allows us to know THD both voltage and current.
- Interactive menu
- Parameters selection: time of connection / disconnection of capacitors, protection for step.
- Telegestion: Communication accessory for the transmission of information.

Technical Characteristics

Power Supply, Un	230 Vac (Phasel/Neutral)
Vin:	10-300 Vac (L-N) and 15-500 Vac (L-L)
Operation voltage range	(0,8-1,1) x Un
Frequency	50/60 Hz
Current measurement circuit	5/5...10000/5 A
Minimum current value	10 mA
Power consumptions	< 1 VA
Accuracy of measurement	1% ±digit
Display	3,2"
Connection	RS485

Physical Characteristics

Protection degree	IP20
Temperature Range	-5 °C + 50 °C
Humidity	15%-95%
Type of installation	Front panel mounted
Dimensions	144x144x45 mm

Code	Steps	Voltage
		V
REG12DPR1200000	12	220 Vac (Phase/Neutral) 380 Vac (Phase/phase)

Communication accessory for the transmission of information. (optional)

Code
REGCOMCON2RJ450

Automatic power factor controller

PR-15D Series



Technical Characteristics	
Display	Liquid cristal display with backlight (4digits)
Auxiliar supply	90-550V AC
Necessary CT	1 or 3
Wiring input	1P2W, 2P2W, 3P3W, 3P4W
Rated input voltage	11-300V AC (L-N), 50-520V AC (L-L)
Rated input current	5A AC (min 11mA, max 6A)
Frequency range	45-65Hz
Output relays	12 (or 14 without alarm and fan relay)
Power consumption	Max. 15VA
Controlling range	0.800 (ind) to -0.800 (cap)
Alarm	Over voltage, under voltage, over compensate, under compensate, THDI error, THDV error, no voltage, over temperature, over current, CT error, error connection, current absent.
CT secondary	1A or 5A
Communications	RS485
Características Físicas	
Protection class	IP54
Connector protection class	IP20
Operating temperature	0°C +60°C
Storage temperature	-20°C +60°C
Humidity	0-95%
Alarm indication	Red led (off, blinking or fixed)
Mounting	Front panel mounting
Outline dimensions	144x144x63 mm
Panel cutout	138x138 mm

Code	Steps	Voltage
		V
REG12DPR1500000	12 (or 14)	90 to 550V

Automatic power factor controller

PR-14D Series



Technical Characteristics

Display	Liquid cristal display with backlight (4digits)
Auxiliar supply	90-550V AC
Necessary CT	1
Wiring input	2 phases, 2wires (L2L3)
Rated input voltage	50-520V AC (Phase - Phase)
Rated input current	5A AC (min 50mA, max 6A)
Frequency range	45-65Hz
Power consumption	Max. 15VA
Controlling range	0.800 (ind) to -0.800 (cap)
Alarm	• Overtemperature error: horn symbol on the screen • E01: phase current error

Physical Characteristics

Protection class	IP54
Connector protection class	IP20
Operating temperature	0°C +60°C
Storage temperature	-20°C +60°C
Humidity	0-95%
Overtemperature indication	Horn symbol on the display
Mounting	Front panel mounting
Outline dimensions	144x144x50 mm
Panel cutout	138x138 mm

Code	Steps
REG12DPR1400000	12



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