

Reference standard – IEC-EN 60831-1:2014

STANDARD Series Capacitors **RCM-1** and **RCM-3** are safe and reliable Singel or Three phase power factor correction components. STANDARD Series have 2 exicutions (Design B & D drawings 1 & 2) developed for Low voltage electrical cirtcuits Free of Harmonic Distortion, where there aren't any Non-Linear Loads ($N_{LL} < 1\%$) and there aren't stress conditions.

NON-LINEAR LOADS

Since the harmonics are caused by non-linear loads, an indicator for the magnitude of harmonics is the ratio of the total power of non-linear loads to the supply transformer rating.

$$N_{LL} = \frac{\text{Total Power Of Non - Linear Load}}{\text{Instaled Transformer Rating}}$$

HARMONICS AND CAPACITORS

Capacitors are strongly sensitive to harmonics and particularly to harmonics currents. Harmonic currents are caused by non-linear loads connected to the distribution system. The presence of harmonics in electrical systems means that current and voltage are distorted and deviate from sinusoidal waveforms.

This phenomenon is particularly dangerous for capacitors since their impedance decreases proportionally to the order of the harmonics present with consequent capacitor overload and shortening steadily the life.

It is always necessary to keep in mind the level of harmonics in your network before choosing any kind of equipment, especially Power Factor Correction one.

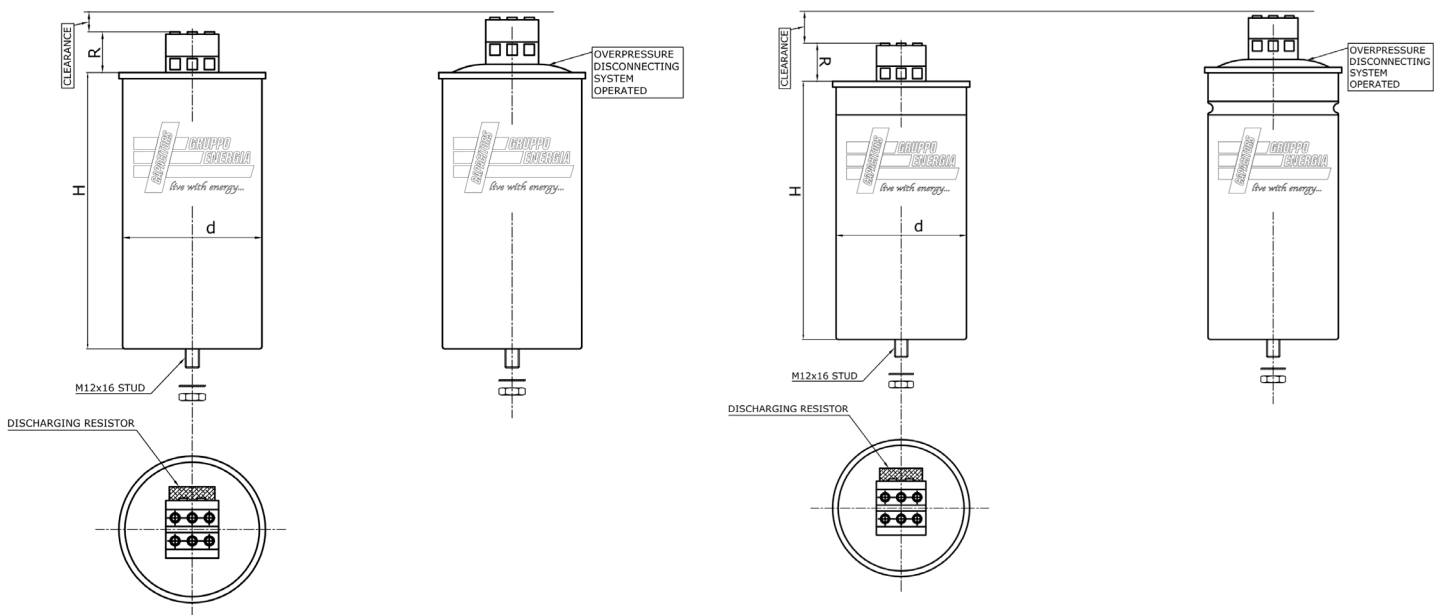


STANDARD Series Capacitors RCM-1 and RCM-3

(Design B & D drawings 1 & 2) are equipped with overpressure disconnectors

DRAWING 1 (DESIGN B)

DRAWING 2 (DESIGN D)



SAFETY FEATURES

Overpressure disconnector on 3 phase + Self-healing + Discharge device

CAPACITORS MUST BE SELECTED IN FUNCTION OF:

- Ambient temperature
- Requested life expectancy
- Maximum number of switching during the year.
- Expected over-current related to voltage disturbances including maximum sustained over voltage,

GENERAL CHARACTERISTICS

Number of phase: Three
Rated Voltage: 415 V
Frequency: 50 Hz

Overvoltage (Industrial Frequency - Without Harmonic Distortions)

It is assumed that the overvoltages dates in the table and having a value higher than 1.15 Un will not occur more than 200 times in the course of the life of the capacitor

According to Reference standard

Un+10% for 8 hours every 24 hours
 Un+15% for 30 minutes every 24 hours
 Un+20% for 5 minutes
 Un+30% for 1 minute

Max current:** Up to 1,1 x In
Max Inrush current*:** 100 x In
Capacitance tolerance: -5% / + 5%
Temperature range: - 25°C / + 55 °C
Cooling: Forced
Protection Degree: IP20
Mounting position: Vertical preferable

Internal dielectric: Polypropylene wave cut film on heavy adge, metallized with Al/Zn slope step profile.
Internal filler: Gel type resin - NON PCB
Insulation level: 3/8 kV
Statistical life time: 80.000 h. at Un voltage and In current, 35 °C ambient temperature

TECHNICAL SPECIFICATION FOR POWER FACTOR CORRECTION CAPACITORS - STANDARD RCM - 3 - 415 V - 50 Hz

Order code:	POWER kVAR	CAPACITY 3 x μ F	CURRENT A	TERMINAL	TYPE	DIMENSIONS* ϕ x H
3PF002,5.415SM0	2,5	15,4	3,5	MT 25	D	70 x 175
3PF005.415SM0	5	30,8	7,0	MT 25	D	70 x 175
3PF007,5.415SM1	7,5	46,2	10,4	MT 25	D	70 x 215
3PF010.415SM1	10	61,6	13,9	MT 25	D	70 x 290
3PF012,5.415SM0	12,5	77	17,4	MT 25	D	70 x 290
3PF015.415SM1	15	92,4	20,9	MT 25	D	95 x 215
3PF020.415SM2	20	123,3	27,8	MT 25	D	100 x 250
3PF025.415SM3	25	154,1	34,8	MT 25	D	100 x 250
3PF030.415SM3V	30	184,8	41,7	MT 25	B	100 x 300
3PF040.415SM0V	40	246,5	55,6	MT 25	B	136 x 300
3PF050.415SM0V	50	308,2	69,6	MT 25	B	136 x 300

(*) DIMENSIONS TO BE CONFIRMED, on request other sizes are available.

(**) Not for continues application, including combined effects of harmonics, overvoltage and capacitance tolerance, the parameter may vary depending on power.

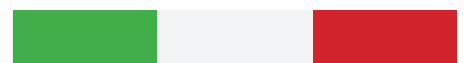
(***) The value may be lower in case of high power.

Not designed for medical, nuclear, military and/or aerospace field

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