

## 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.



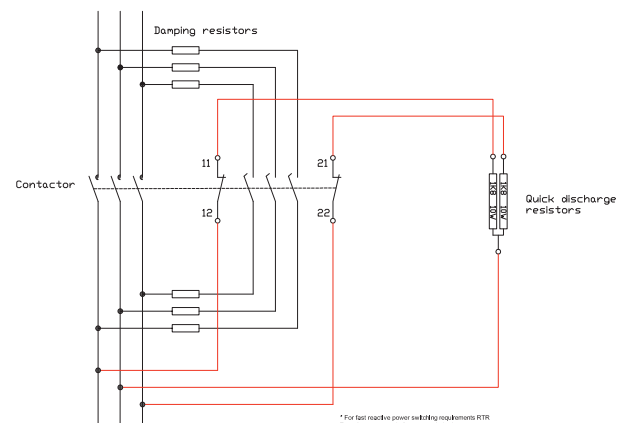
Technical Characteristics		MO 18	MO C12,5	MO C15	MO C20	MO C25	MO C30	MO C35	MO C50	MO C60	MO C70	MO C80	MO C100	
Standard		IEC 60947-4-1												
Rated kVAr	230V AC	2.8	7	8.5	11	14	16.5	20	30	33.5	40	45	55	
	400-440V AC	5	12.5	15	20	25	30	35	50	60	70	80	100	
Rated impulse withstand voltage (kV)		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



Code	Type	Resistance
MONTARRESISTCON	RD-1K8	$2 \times 1800 \Omega$

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