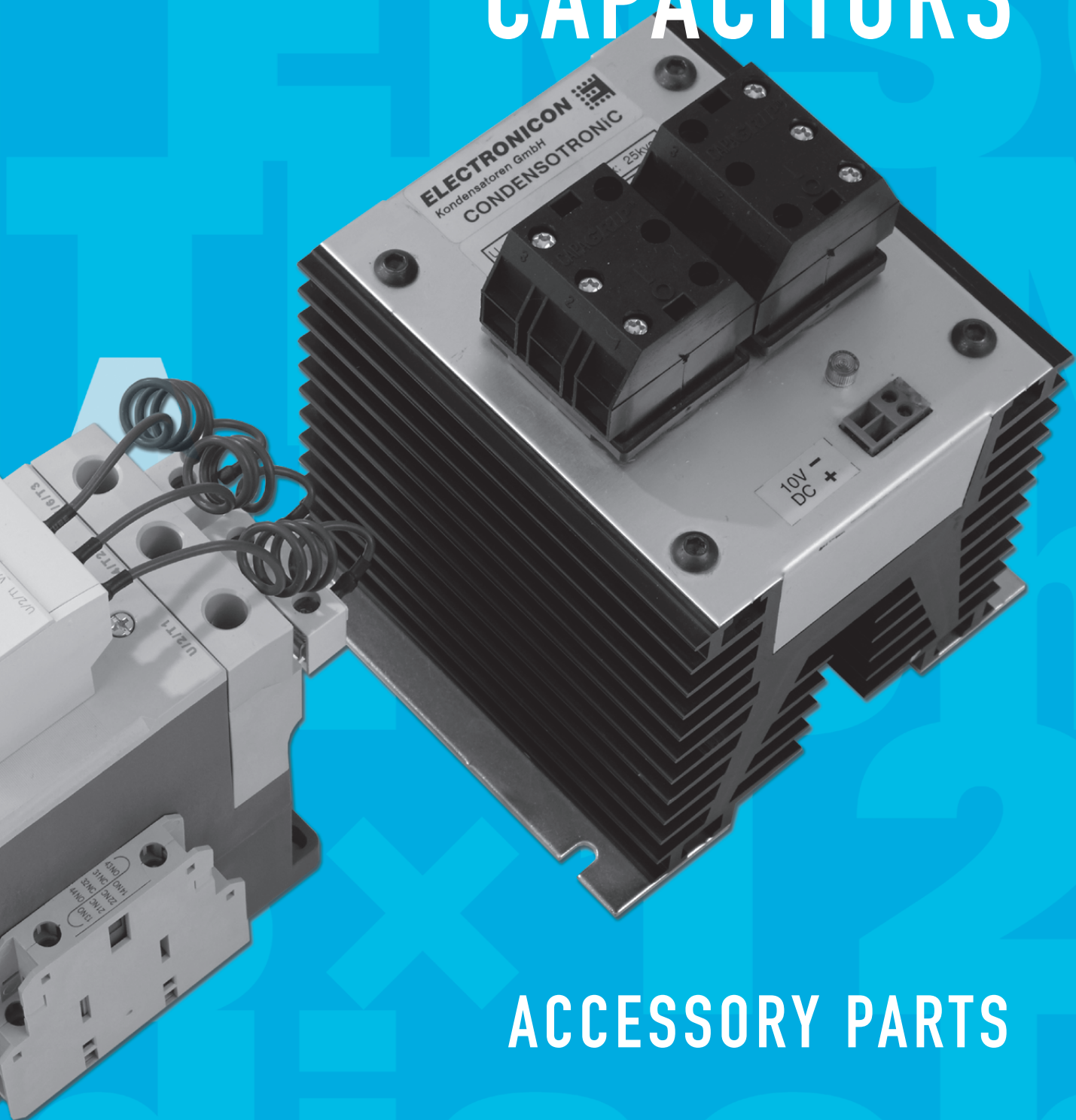
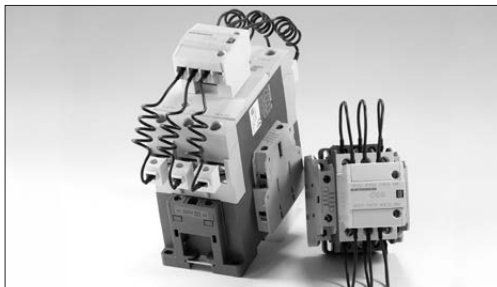


SWITCHING AND DISCHARGING CAPACITORS



ACCESSORY PARTS

CAPACITOR CONTACTORS 1301A SERIES



Power capacitors may enter high-frequency resonances with nearby inductances when being connected to the mains. Though vanishing within a few microseconds, such resonances lead to very high current surges which, if occurring regularly, may damage the capacitor elements. In accordance with IEC EN 60831-1/2, the annual number of switching operations for our standard capacitors is therefore recommended not to exceed 5000...6000 counts p.a. Special capacitors suitable for a higher annual number of switchings are available on request.

For flawless operation of our capacitors, we strongly recommend using special capacitor contactors with inrush-limiting ("leading") contacts. Such devices connect a preload channel several milliseconds prior to closing their main contact. This channel is choked down by special current limiting resistors and substantially softens the initial switching inrush surge, protecting the capacitors from destructive current surges and the contactors from premature deterioration or welding.

Our 1301A contactors are using a mechanical principle for switching the pre-load contacts. The pre-load contacts and damping resistors are supplied as a separate part and are snapped onto the main switch.

As soon as the main switch has been closed, the pre-load contacts are released again and their resistor wires taken out of circuit after no more than 5...10ms of operation. This avoids additional heat losses in the resistor wires during the operation of the capacitor branch, and contributes to the high reliability and long operational life of our contactors.

Since the disconnection of inductive loads is usually accompanied by switch arcs, the pre-load contacts of certain capacitor contactors may often face trouble when used with reactor-capacitor combinations (detuned capacitors) as they are lagging behind the main contact during the switch-off process. The contactors of our 1301A series are not affected by this problem as their pre-load contacts are already out of circuit. Hence they can be used for both detuned and non-detuned capacitor installations. ELECTRONICON strongly recommends the usage of contactors with pre-load contacts even for detuned capacitors in order to assure undisturbed switching and prevent ferro-resonances of the reactor during the start-up period.

The 1301A is enclosed in a compact, finger proof housing (IP20). Its sealed structure prevents the exposure of any arc flashes. The contactors comply with both IEC and UL standards, including UL's type II coordination requirements.

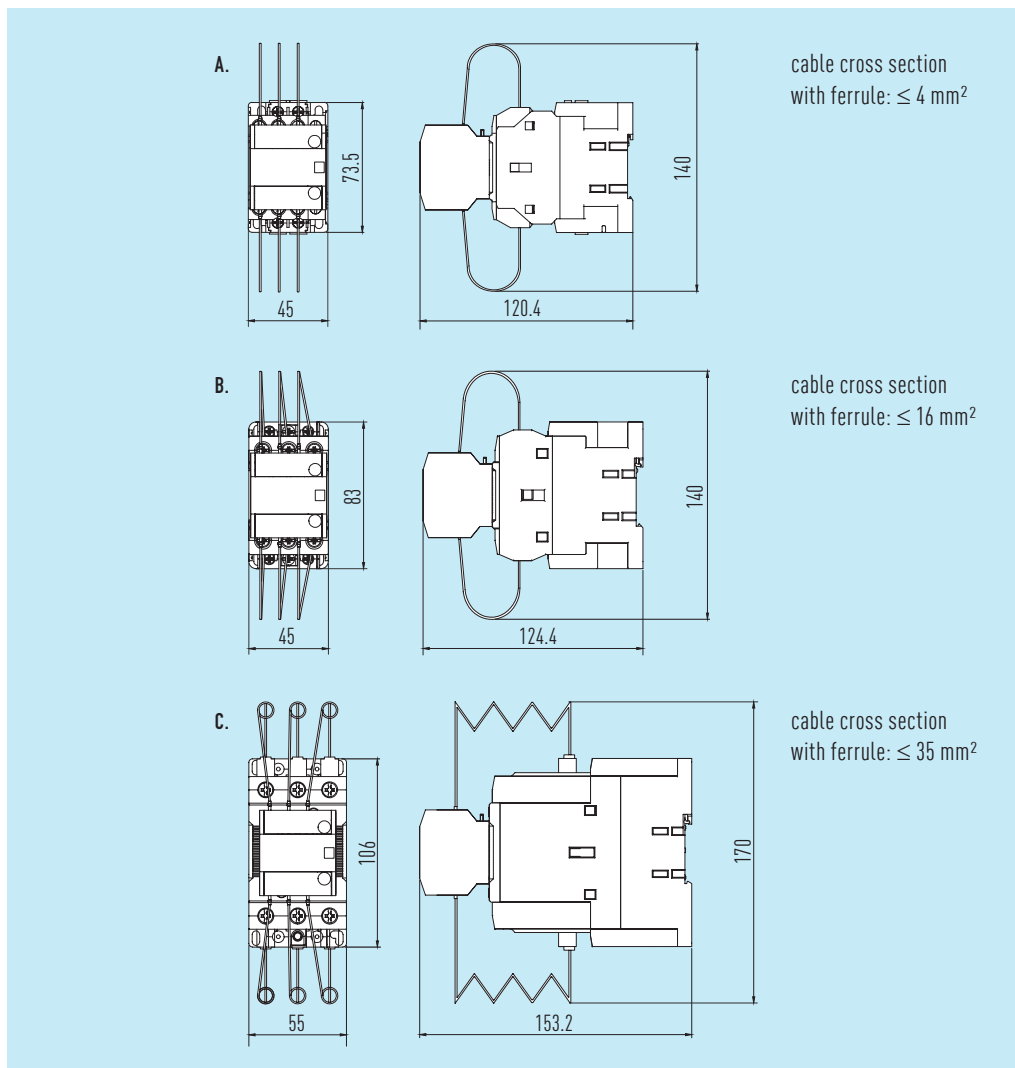
General Technical Data

design	magnetic, three phase, with mechanical pre-load contacts for inrush protection
voltage range	$U_{\text{mains}} = 220 \dots 550 \text{ V}$
control voltage	220...250 Vrms
operating temperature	-40°C/D
mounting	DIN hat rail W x H = 35 x 7.5 mm or base mounting lugs for $\varnothing 5 \text{ mm}$ screws
snap-on auxiliary contacts	available on request
standards	IEC EN 60947-4-1, UL508
approval marks	(available on request) UL, CSA

DIMENSION DRAWINGS

order no.	1301A.C0...			1301A. C7...	
	9-12.5	9-25.0	9-33.3	5-54.0	5-60.0
rated current @50°C	≤18 A	≤36 A	≤48 A	≤87 A	≤92 A
max. kvar 220...240 V	≤6.7	15	20	30	35
max. kvar 400...440 V	≤12.5	25	33.3	54	60
max. kvar 500...550 V	≤18	36	48	78	92
drawing	A	B	B	C	C
permitted switchings/hour	up to 240			up to 100	
contact life (switchings, non-detuned)	200,000			100,000	
preload contacts (obligatory accessory part)	1302A.C09-00.0			1302A.C75-00.0	
permitted operating temperature	-30 ... +60°C				

Type Range



Dimension Drawings