

POLISH BRAND

Contactors and Thermal Relays

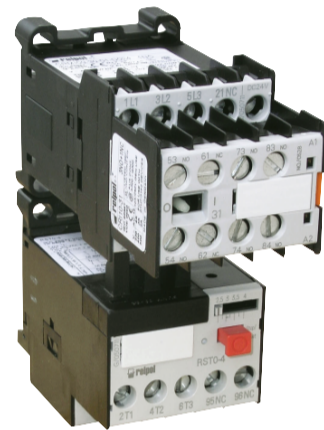


RELPOL S.A., ul. 11 Listopada 37, 68-200 Żary, Poland
 e-mail: relpol@relpol.com.pl
Export Sales Department, phone +48 68 47 90 838
 fax +48 68 47 90 837, e-mail: export@relpol.com.pl
Marketing Department, phone +48 68 47 90 900
 e-mail: marketing@relpol.com.pl
RELPOL ALTERA Kiev / Ukraine, phone +380 44 496 18 88
 e-mail: svaltera@svaltera.kiev.ua

Relpol S.A. which has been present in the Polish market since 1958, supplements the offer with a new series of contactors and thermal relays of the rated switching current from 400A in AC-3 Class.

The new CR... series includes contactors with power from 2.2kW to 200kW at the supply of 380V/AC3. The contactors are divided into three groups due to their current switching capacity and sizes.

contacts or mechanical latches. Both the contactors and the relays may be mounted independently upon TS rails and on mounting panels. The products meet all the application categories provided in IEC/EN 60947 and VDE 0660 Standards.



CRMI mini-contactor



CRNI type contactors

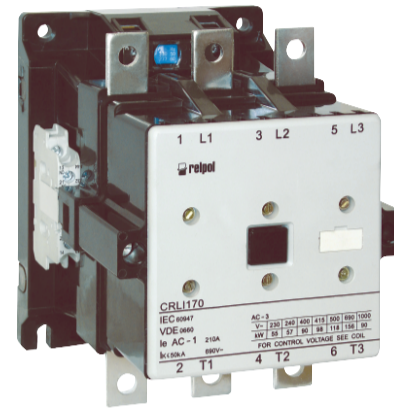
CRMI mini-contactors up to 9A, CRNI contactors up to 100A and CRLI contactors of more than 100A. The products are fitted with a wide range of external accessories such as thermal relays, auxiliary

Mounting manners and application conditions

All the contactors offered by Relpol may be mounted on vertical planes with the maximum inclination of $\pm 22.5^\circ$, with screws or bolts. Moreover, the CRMI and

CRNI contactors up to 38A may be mounted on standard TS35.

The contactors may be applied in diversified climatic conditions (the operating range is from -25°C to $+55^\circ\text{C}$), and they may operate at the altitudes up to 2,000 meters above the sea level.



CRLI series contactors of more than 100A

Standard equipment or a bit more - additional advantages

Most of the contactors offered by the manufacturer have auxiliary contacts mounted as a standard. The contactors from 5A to 12A have one contact (normally open or normally closed) each, whereas the contactors of more than 45A have two normally open and two normally closed contacts as a standard. The offer is supplemented by three mechanical latches for the contactors of 9-38A, 45-110A and 140-400A respectively.

Safe mounting

The newly offered contactors provide the user with safe mounting and service. All the conductive parts of the CRMI and CRNI series contactors are covered, which protects the user on direct contact with the device. The possibility of mounting the series on TS rails provides for quick mounting and disassembly during servicing. The CRNI contactors from 9A to 38A have an additional advantage of mounting auxiliary contacts with no need for disconnecting of the whole system in which the contactor operates.



Auxiliary contacts for the CRNI contactor 9-38A

Thermal relays with contactors only?

Thermal relays of RST... series are another product of add-on blocks of the contactor. The design of the relays is adapted to individual contactors (see Table). The relays operate within the setting ranges from 0.1A (RSTM) to 400A (RSTL4). The offer of the relays includes also additional CRI bases for independent mounting of relays.

RSTM-RSTN4. The bases provide the users with mounting of the relays on TS rails, and space saving in switch houses.

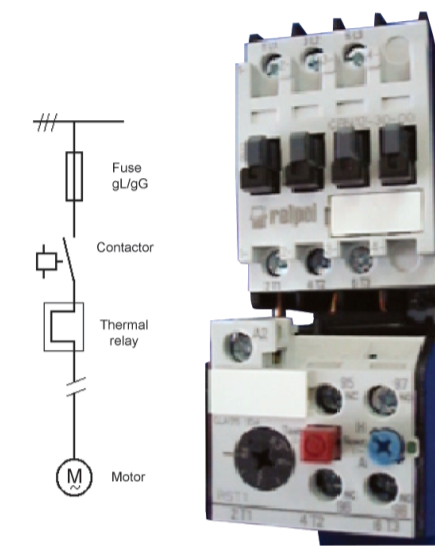
The devices may be mounted in line with other units. A block with lift terminals has been developed for independent operation of the RSTL series thermal relays.

Rated switching current AC-3 (380V)	Rated switching power in AC-3 (380V)	Contactors type	Thermal relay
Mini-contactors CRMI			
5	2,2	CRMI05	RSTM
9	4,4	CRMI09	RSTM
Contactors CRNI up to 100A			
9	4	CRNI09	RSTN1
12	5,5	CRNI12	RSTN1
16	7,5	CRNI16	RSTN2
22	11	CRNI22	RSTN2
32	15	CRNI32	RSTN3
38	18,5	CRNI38	RSTN3
45	22	CRNI45	RSTN4
63	30	CRNI63	RSTN4
75	37	CRNI75	RSTN4
85	45	CRNI85	RSTN4
Contactors CRLI of more than 100A			
110	55	CRLI110	RSTL1
140	75	CRLI140	RSTL2
170	90	CRLI170	RSTL3
205	110	CRLI205	RSTL3
250	132	CRLI250	RSTL4
300	160	CRLI300	RSTL4
400	200	CRLI400	RSTL4

Switching parameters of the contactors

Sample applications of the contactors of RELPOL brand

There are many applications of contactors and relays in everyday life. The contactors and relays with protection may be used for direct start-up of a motor.



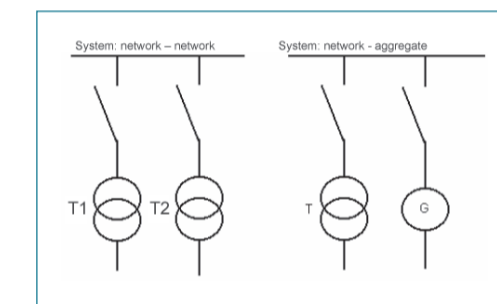
CRNI contactor with RSTN relay

The products of Relpol allow designing direct start-up systems for motors from 2.2kW to 220kW. The systems must only be appropriately protected with fuses (gL/gG) (see Table).

Motor power AC-3 / kW	5.5	22	55	110
Fuse (gL/gG)	25	80	200	315
Contactors	CRNI12	CRNI45	CRLI110	CRLI250
Thermal relay	RSTN1-14V5	RSTN4-57	RSTL1-110	RSTL4-250

Sample applications of the products for direct start-up

The contactors offered by Relpol S.A. may also be applied with mechanical latch and auxiliary contacts in reserve automatic switching system as the parts to switch the main supply tracks on and off.



Furthermore, the CRMI and CRNI series contactors may be used in auto-

matic transfer switches system together with programmable relays (NEED) also manufactured by RELPOL.

You can afford it now - advantages of RELPOL contactors

Relpol provides you with easily mounted products of interesting design, which meet all the European standards. The products are of small sizes, low-noise operation and low power consumption. Their add-on blocks are sophisticated, and they may be used in numerous devices from 2.2kW to 200kW.

And what is crucial: European quality and Polish brand.

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Type	CRMI05	CRMI09	CRNI09	CRNI12	CRNI16	CRNI22	CRNI32	CRNI38
Technical data								
Auxiliary contacts	Mini-contactors				Contactors up to 100 A			
NO NC	NO NC		NO NC		NO NC		NO NC	
Ordering codes	CRMI05-30-10-0-1 CRMI05-30-01-0-1 CRMI05-40-00-0-1	CRMI09-30-10-0-1 CRMI09-30-01-0-1 CRMI09-40-00-0-1	CRNI09-30-00-0-1 CRNI09-30-10-0-1 CRNI09-30-01-0-1 CRNI09-40-00-0-1	CRNI12-30-00-0-1 CRNI12-30-10-0-1 CRNI12-30-01-0-1 CRNI12-40-00-0-1	CRNI16-30-00-0-1	CRNI22-30-00-0-1	CRNI32-30-00-0-1	CRNI38-30-00-0-1
Rated insulation voltage [V]	690	690	690	690	690	690	690	690
Rated operating current (380 V)	AC3 5	9	9	12	16	22	32	38
Rated outputs of three phase motors at 50 Hz [kW]	AC3 230/220 V	1,3	2,4	2,4	3,3	4	5,5	11
	400/380 V	2,2	4	4	5,5	7,5	11	18,5
	500 V	2,9	4	4	5,5	7,5	11	25
	690/660 V	3,8	4	4	5,5	7,5	11	23
	1000 V	-	-	-	-	-	-	-
AC4 400/380 V	0,81	1,10	1,48/1,4	2/1,9	3,5	4	7,5	9
690/660 V	0,86	1,10	2,54/2,4	3,45/3,3	6	6,6	13	15,5
Mechanical life (x 10 ⁶)	AC/DC 10/20	10/20	15/15	15/15	15/15	15/15	10/10	10/10
Electrical life (x 10 ⁶)	AC3	0,8	0,4	1,2	1,2	1,2	1,2	1,2
	AC4	0,2	0,2	0,2	0,2	0,2	0,2	0,2
Maximum switching frequency (1/h)	AC3	1000	1000	1000	1000	750	750	600
	AC4	-	-	250	250	250	250	200
Range of supply coil voltage	(0,8 - 1,1) Us	(0,8 - 1,1) Us	(0,8 - 1,1) Us	(0,8 - 1,1) Us	(0,8 - 1,1) Us	(0,8 - 1,1) Us	(0,8 - 1,1) Us	(0,8 - 1,1) Us
Weight [kg]	AC/DC 0,18/0,22	0,18/0,22	0,37/0,58	0,37/0,58	0,45/0,70	0,45/0,70	0,68/1,25	0,68/1,25
Add-on blocks for independent mounting of thermal overload relays	CRI-310		CRI-320		CRI-330		CRI-340	
Ordering coil codes:	<ul style="list-style-type: none"> ● D024 - 24 V DC; A024 - 24 V AC 50 Hz; A230 - 230 V AC 50 Hz ● D024 - 24 V DC ● A230 - 230 V AC 50 Hz ● D024 - 24 V DC; A230 - 230 V AC 50 Hz ● A024 - 24 V AC 50 Hz; A230 - 230 V AC 50 Hz 		<ul style="list-style-type: none"> ● D024 - 24 V DC; A024 - 24 V AC 50 Hz; A230 - 230 V AC 50 Hz ● D024 - 24 V DC; A230 - 230 V AC 50 Hz ● A024 - 24 V AC 50 Hz; A230 - 230 V AC 50 Hz 		<ul style="list-style-type: none"> ● D024 - 24 V DC; A024 - 24 V AC 50 Hz; A230 - 230 V AC 50 Hz ● D024 - 24 V DC; A230 - 230 V AC 50 Hz ● A024 - 24 V AC 50 Hz; A230 - 230 V AC 50 Hz 		<ul style="list-style-type: none"> ● D024 - 24 V DC; A024 - 24 V AC 50 Hz; A230 - 230 V AC 50 Hz ● D024 - 24 V DC; A230 - 230 V AC 50 Hz ● A024 - 24 V AC 50 Hz; A230 - 230 V AC 50 Hz 	
For other voltages, contact Relpol S.A.								
Thermal overload relays	RSTM for CRMI05, CRMI09		RSTN1 for CRNI09, CRNI12		RSTN2 for CRNI16, CRNI22		RSTN3 for CRNI32, CRNI38	

● Module for RSTM - for installing as a single unit, this module includes screw terminals ● Relay base for RSTN - for installing as a single unit ● Box terminal block for RSTL1 - for installing as a single unit ● Links (set - 3 pieces) for RSTL2, RSTL3

CRNI45	CRNI63	CRNI75	CRNI85	CRLI110	CRLI140	CRLI170	CRLI205	CRLI250	CRLI300	CRLI400
Technical data										
Auxiliary contacts										
NO NC										
CRNI45-30-22-0-2	CRNI63-30-22-0-2	CRNI75-30-22-0-2	CRNI85-30-22-0-2	CRLI110-30-22-0-2	CRLI140-30-22-0-2	CRLI170-30-22-0-2	CRLI205-30-22-0-2	CRLI250-30-22-0-2	CRLI300-30-22-0-2	CRLI400-30-22-0-2
1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
45	63	75	85	110	140	170	205	250	300	400
24	28	34	42	54	68	75	96	110	125	150
15	18,5	22	26	37	43	55	64	78	93	125
22	30	37	45	55	75	90	110	132	160	200
30	41	50	59	76	98	118	145	178	210	284
39	55	67	67	100	100	156	156	235	235	375
7-5	7-5	39	39	65	65	90	90	132	132	250
12,6/12	14,7/14	17,9/17	22/21	28,4/27	36/35	40/38	52/50	61/58	69/66	85/81
21,8/20,8	25,4/24,3	30,9/29,5	38/36	49/46,9	63/60	69/66	90/86	105/100	119/114	147/140
10/3	10/3	10/3	10/3	10/-	10/-	10/-	10/-	10/-	10/-	10/-
1,2	1,2	1,2	1,2	1,2	1,2	1,2	1,2	1,2	1,2	1,2
0,2	0,2	0,2	0,2	0,2	0,2	0,2	0,2	0,2	0,2	0,2
1200	1000	1000	850	1000	750	700	500	700	500	500
400	300	300	250	300	200	200	130	200	130	150
(0,8 - 1,1) Us	(0,8 - 1,1) Us	(0,8 - 1,1) Us	(0,8 - 1,1) Us	(0,8 - 1,1) Us	(0,8 - 1,1) Us	(0,8 - 1,1) Us	(0,8 - 1,1) Us	(0,8 - 1,1) Us	(0,8 - 1,1) Us	(0,8 - 1,1) Us
1,4/1,4	1,4/1,4	2,3/2,3	2,3/2,3	3,3/-	3,3/-	4,8/-	4,8/-	6,2/-	6,2/-	8,5/-
CRI-350				CRI-360		CRI-370		CRI-382		CRI-390
RSTN4 for CRNI45, CRNI63, CRNI75, CRNI85				RSTL1 for CRLI110		RSTL2 for CRLI140		RSTL3 for CRLI170, CRLI205		RSTL4 for CRLI250, CRLI300, CRLI400

- for connections to CRLI140, CRLI170 contactors ● Links (set - 3 pieces) for RSTL3, RSTL4 - for connections to CRLI205, CRLI250 contactors ● Links (set - 3 pieces) for RSTL4 - for connections to CRLI250, CRLI300, CRLI400 contactors