

# General information

## Type N, AC operated

### Description

- AC operated with laminated magnetic circuit.
- 2 versions: 4 pole or 8 pole. The width of 8 pole devices is identical to that of 4 pole devices; only the depth is increased.
- Side by side mounting possible.
- Self cleaning auxiliary contacts.
- Alone or by itself or with a 4 pole CA5 auxiliary contact block, these devices offer "positive safety" between their auxiliary contacts.

### Application

Type N control relays are used for switching auxiliary circuits and control circuits.

Holes for screw mounting (screws not supplied). Distances between holes according to EN50 002.

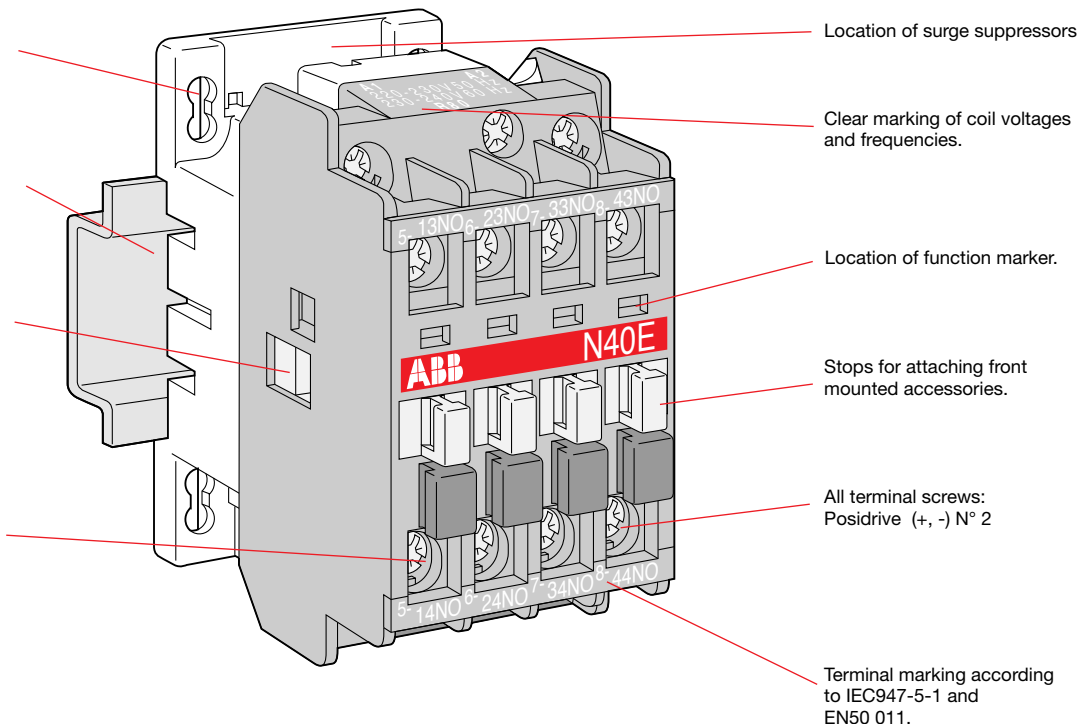
Quick mounting on 35 x 7.5mm DIN mounting rail according to IEC715 and EN50 022.

Location of side mounted accessories: mounting on right or left hand side.

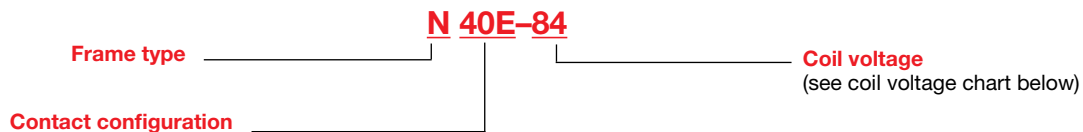
Terminals delivered in open position with captive screws (screws of unused terminals should be tightened).

Screwdriver guidance for all screws makes it possible to use motorized screwdrivers.

All terminals provide protection against accidental direct contact with live parts according to VDE0106 – Part. 100 and offer IP 20 degree of protection according to IEC947-1.



### Catalog number explanation



### Coil voltage selection chart

Hz	Relay type	Volts															
		12	24	48	110	120	125	208	220	240	277	380	415	440	480	500	600
60	N		81	83	84	84		34	36	80	42		86	86	51	53	55
50	N		81	83	84				80				85	86			55
DC	NE, NL	80	81	83	86		87		88	89							

# Type N & NL AC & DC operated

Control relays



N40E-1



NE12E-1

### A.C. operated

Contact configuration		AC inductive current	DC inductive current	Catalog number
N.O.	N.C.			
4	0	10A	5A	N40E-84
3	1			N31E-84
2	2			N22E-84
4	4	10A	5A	N44E-84
5	3			N53E-84
6	2			N62E-84
7	1			N71E-84
8	0			N80E-84

### Coil voltage selection

All AC operated catalog numbers include a 120VAC coil. All DC operated catalog numbers include a 110VDC coil. To select other coil voltages, substitute the code from the Coil Voltage Selection Chart for the first digit after the last dash in the catalog number.

Ex.: A 240V coil is required for an N80 control relay: N80E-80

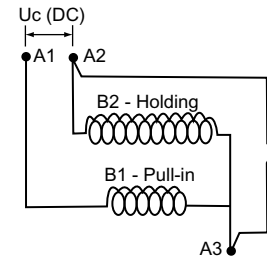
### Coil voltage selection chart

Hz	Relay type	Volts															
		12	24	48	110	120	125	208	220	240	277	380	415	440	480	500	600
60	N	81	83	84	84		34	36	80	42		86	86	51	53	55	
50	N	81	83	84				80				85	86			55	
DC	NE, NL	80	81	83	86		87	88	89								

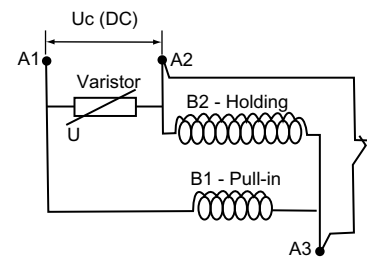
### D.C. operated

Contact configuration		AC inductive current	DC inductive current	Catalog number
N.O.	N.C.			
4	0	10A	5A	NL40E-86
3	1			NL31E-86
2	2			NL22E-86
4	4	10A	5A	NL44E-86 ①
5	3			NL53E-86 ①
6	2			NL62E-86 ①
7	1			NL71E-86
8	0			NL80E-86
1	2	10A	5A	NE12E-86
2	1			NE21E-86
3	0			NE30E-86
4	3	10A	5A	NE43E-86 ①
5	2			NE52E-86 ①
6	1			NE61E-86 ①
7	0			NE70E-86 ①

### Block diagrams for NE... contactor relay coil supply



Coil supply  $U_c < 110$  VDC



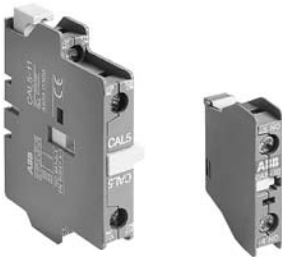
Coil supply via built-in varistor  $U_c \leq 110$  VDC

① NE43 – NE70 and NL44 – NL62 control relays cannot accept any front mounted auxiliary contact blocks.

# Accessories

## Type N, NL & TNL

Control relays



CAL5-11 CA5-10



TP40DA



VE5-1



BA5-50

### Auxiliary contact blocks

Positioning	Contacts		Catalog number
	N.O.	N.C.	
N, NE, NL, TNL (front mount)	1	—	CA5-10 CA5-01
	—	1	
N, NL, NE, TNL (4 pole)	4	—	CA5-40N CA5-22N CA5-04N
	2	2	
	—	4	
N, NE, NL, TNL (side mount)	1	1	CAL5-11

### Pneumatic timers

Timing range	Contacts		Catalog number
	N.O.	N.C.	
N, NL On delay 0.1 – 40s	1	1	TP40DA TP180DA
	1	1	
NE, TNL Off delay 0.1 – 40s	1	1	TP40IA TP180IA
	1	1	

### Interlocks

Feature	Contacts		Catalog number
	N.O.	N.C.	
N, NE, NL, TNL Mechanical/electrical	—	2	VE5-1
N, NE, NL, TNL Mechanical	—	—	VM5-1

### Mechanical latches

Feature	Catalog number
N, NL (4 pole only)	WB75A-Δ

### Coil voltage selection chart – mechanical latches

50 Hz		Voltage code
24	24 – 28	
42	42 – 48	<b>02</b>
48	48 – 55	<b>03</b>
110	110 – 127	<b>04</b>
220 – 230	220 – 255	<b>06</b>
230 – 240	230 <sup>60 Hz</sup> – 277	<b>05</b>
380 – 415	380 – 440	<b>07</b>
415 – 440	440 – 480	<b>08</b>

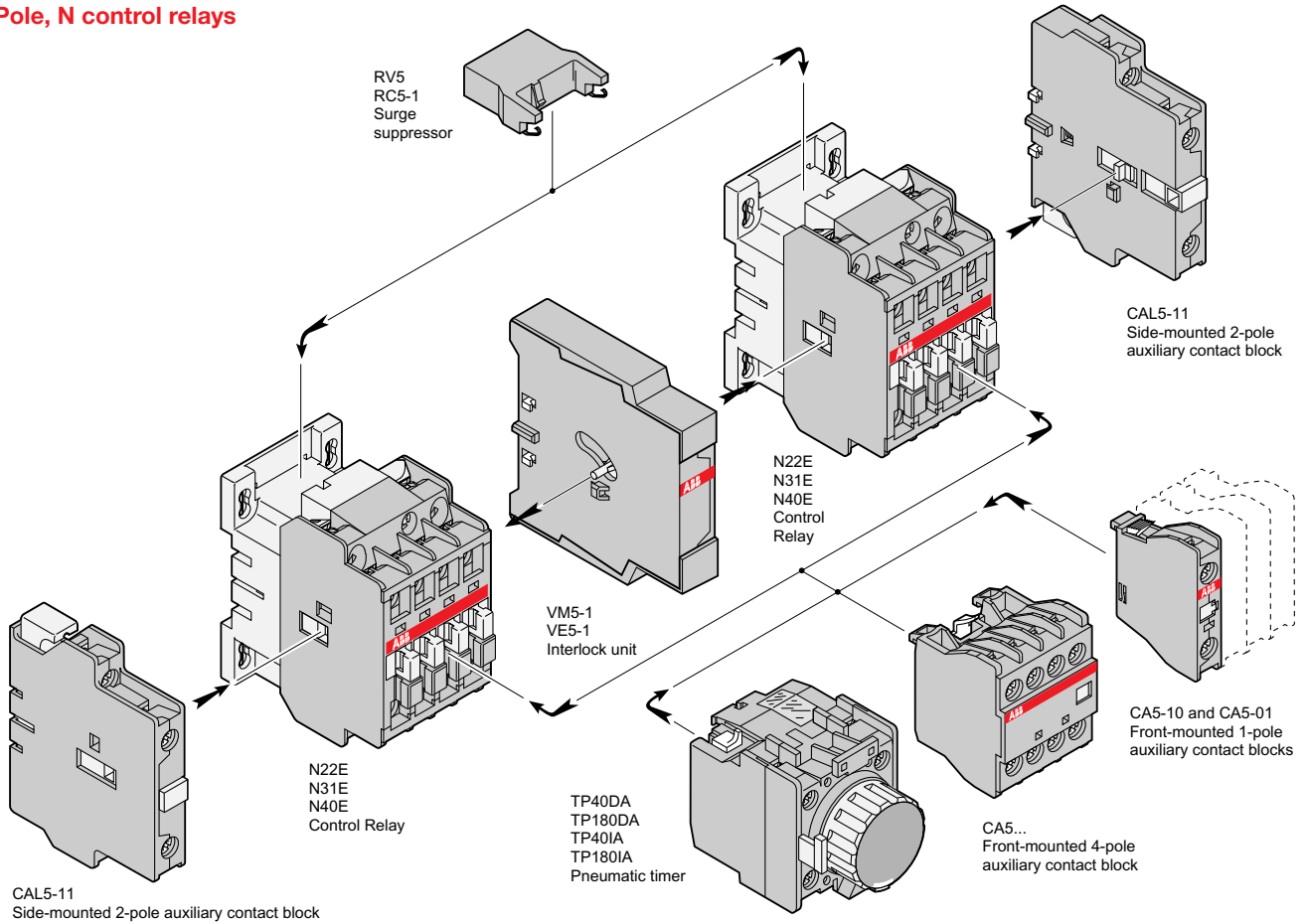
### Identification markers

Feature	Catalog number
Pack of 50	BA5-50

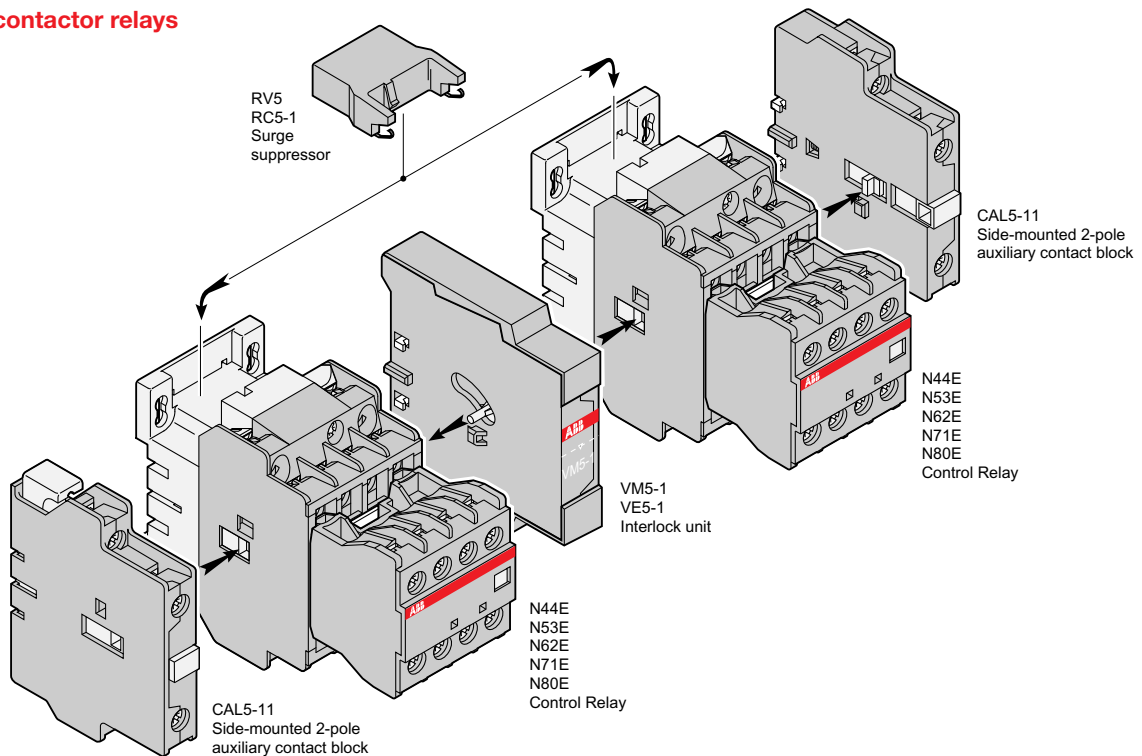
# Accessory mounting information

## Type N, NE, NL & TNL

### 4 Pole, N control relays



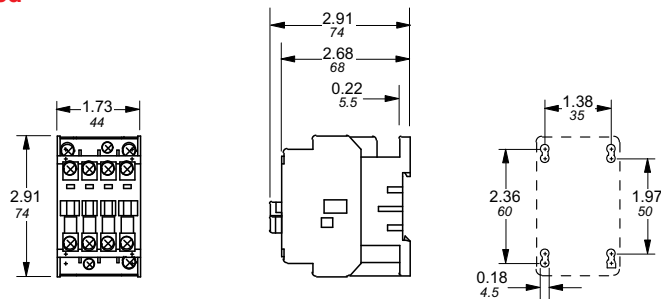
### 8 Pole, N contactor relays



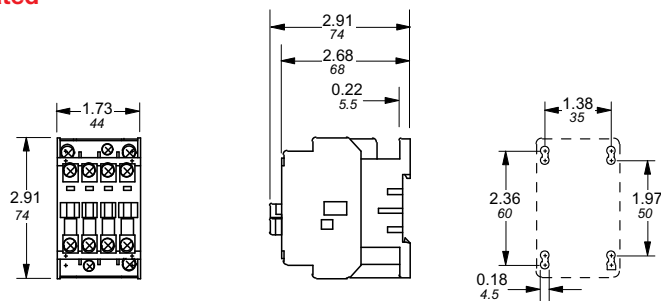
## Approximate dimensions Type N, NE, NL, & TNL AC & DC operated

00.00 Inches  
00.00 [Millimeters]

### Type N, 4 Pole, AC operated



### Type NE, 4 Pole, DC operated



### Type NL, TNL

