

General information

Type NL & TNL, DC operated

Type NL

Description

- Magnetic circuit variants: NL types: d.c. operated with solid magnetic circuits.
- 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.
- Bifurcated auxiliary contacts.
- Alone or mounted with a 4 pole CA5 auxiliary contact block, these devices offer "positive safety" between their auxiliary contacts.

Application

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

Type TNL

Description

- Magnetic circuit variants
 - NL types: D.C. operated with solid magnetic circuits.
 - TNL types: D.C. operated with solid magnetic circuit and large coil voltage range.
- 2 versions
 - 4-pole/1-stack or 8-pole/2-stack
 - The width of 8-pole devices is identical to that of 4 pole devices; only the depth is increased.
- Double sharp auxiliary contacts.
- Alone or mounted with a 4-pole CA 5 auxiliary contact block, these devices offer "positive safety" between their auxiliary contacts.

Application

Type NL and TNL control relays are used for switching auxiliary circuits and control circuits.

Location of surge suppressors.

Quick mounting on 35 x 7.5mm or 35 x 15mm DIN mounting rail according to IEC947-5-1 and EN50022.

Holes for screw mounting (screws not supplied). Distances between holes according to EN50002.

Terminals delivered in open position with captive screws (screws of unused terminal 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.

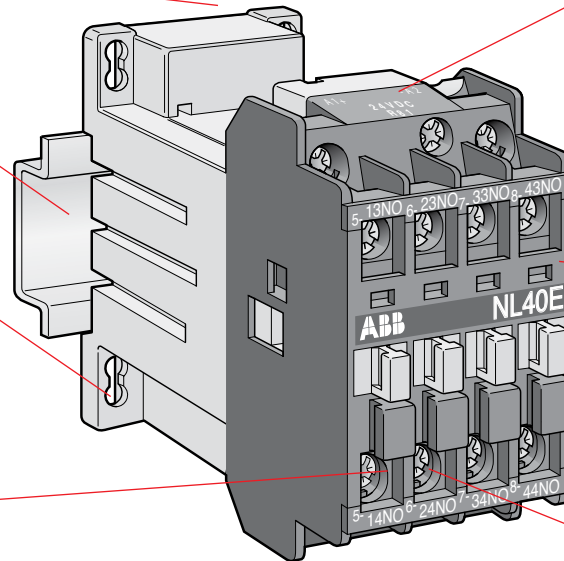
Clear marking of coil voltages.

Terminal marking according to IEC947-5-1 and EN50 011.

Location of function marker and surge suppressor.

Stops for attaching front mounted accessories.

All terminal screws: M 3.5, posidrive (+,-) N° 2



Catalog number explanation

(T)NL 44E-84

Frame type

Coil voltage

(see coil voltage chart below.)

Contact configuration

Coil voltage selection chart

Hz	Relay type	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 N.O.	N.C.	AC inductive current	DC inductive current	Catalog number	List price
4	0	10A	5A	N40E-84	\$ 60
3	1			N31E-84	
2	2			N22E-84	
4	4	10A	5A	N44E-84	120
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

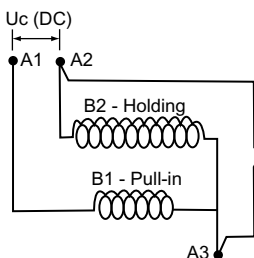
Coil voltage selection chart

Hz	Relay type	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							

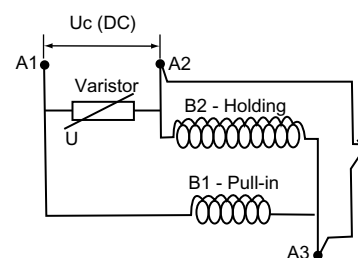
D.C. operated

Contact configuration N.O.	N.C.	AC inductive current	DC inductive current	Catalog number	List price
4	0	10A	5A	NL40E-86	\$ 72
3	1			NL31E-86	
2	2			NL22E-86	
4	4	10A	5A	NL44E-86 ①	144
5	3			NL53E-86 ①	
6	2			NL62E-86 ①	
7	1			NL71E-86	
8	0			NL80E-86	
1	2	10A	5A	NE12E-86	72
2	1			NE21E-86	
3	0			NE30E-86	
4	3	10A	5A	NE43E-86 ①	144
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	List price
	N.O.	N.C.		
N, NE, NL, TNL (front mount)	1 —	— 1	CA5-10 CA5-01	\$ 15
N, NL, NE, TNL (4 pole)	4 2 —	— 2 4	CA5-40N CA5-22N CA5-04N	30
N, NE, NL, TNL (side mount)	1	1	CAL5-11	

Pneumatic timers

	Timing range	Contacts		Catalog number	List price
		N.O.	N.C.		
N, NL	On delay 0.1 – 40s	1	1	TP40DA	\$ 108
N, NL	On delay 10 – 180s	1	1	TP180DA	
NE, TNL	Off delay 0.1 – 40s	1	1	TP40IA	
NE, TNL	Off delay 10 – 180s	1	1	TP180IA	

Interlocks

Feature	Contacts		Catalog number	List price
	N.O.	N.C.		
N, NE, NL, TNL Mechanical/electrical	—	2	VE5-1	\$ 45
N, NE, NL, TNL Mechanical	—	—	VM5-1	21

Mechanical latches

Feature	Catalog number	List price
N, NL (4 pole only)	WB75A-Δ	\$ 84

Coil voltage selection chart — mechanical latches

50 Hz	60 Hz	Voltage code
24	24 – 28	01
42	42 – 48	02
48	48 – 55	03
110	110 – 127	04
220 – 230	220 – 255	06
230 – 240	230 – 277	05
380 – 415	380 – 440	07
415 – 440	440 – 480	08

Identification markers

Feature	Catalog number	List price
Pack of 50	BA5-50	\$ 15

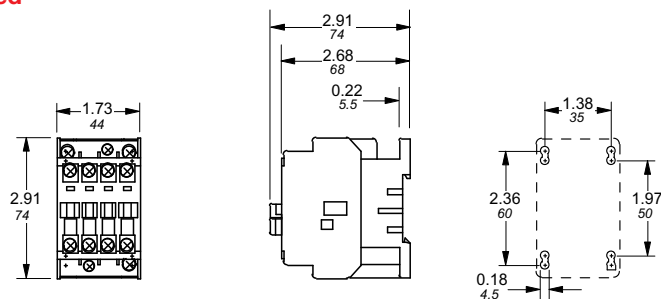
Approximate dimensions

Type N, NE, NL, & TNL

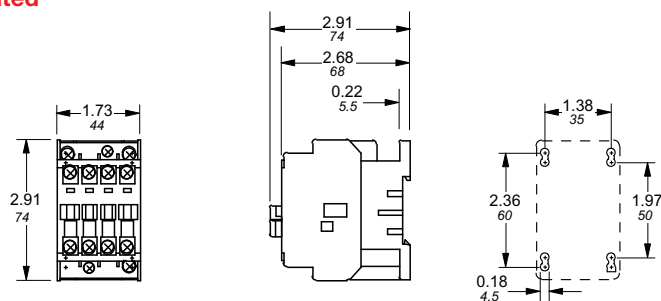
AC & DC operated

00.00 Inches
00.00 [Millimeters]

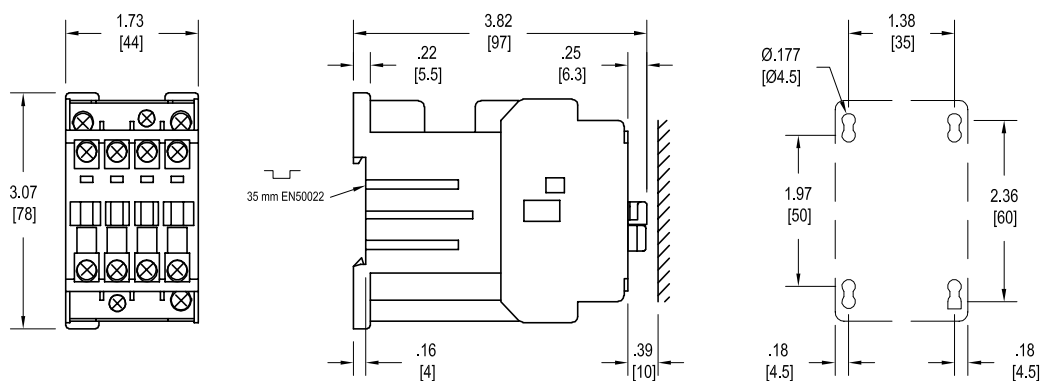
Type N, 4 Pole, AC operated



Type NE, 4 Pole, DC operated



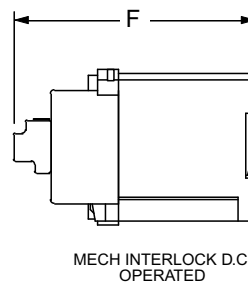
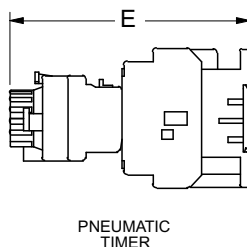
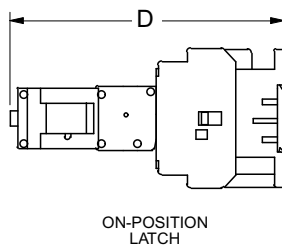
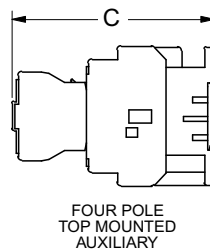
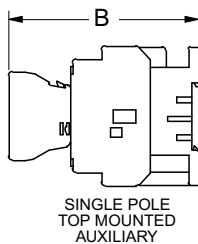
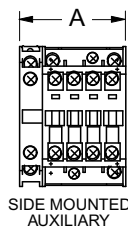
Type NL, TNL



Approximate dimensions

Accessories for Type N & NE

N & NE



Type		A	B	C	D	E	F
N	IN	2.20	3.96	4.21	5.71	5.00	—
	MM	56	100.5	107	145	127	—
NE	IN	2.20	3.96	4.21	5.71	5.00	—
	MM	56	100.5	107	145	127	—