

Accessories Type N, NL & TNL

Control relays

7



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 —	— 1	CA5-10 CA5-01
N, NL, NE, TNL (4 pole)	4	—	CA5-40N
	2	2	CA5-22N
	—	4	CA5-04N
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
NE, TNL	On delay 10 – 180s	1	1	TP180DA
	Off delay 0.1 – 40s	1	1	TP40IA
	Off delay 10 – 180s	1	1	TP180IA

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	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
Pack of 50	BA5-50

Accessories

Type N, NL, NE & TNL



ZA16-84



RV5/50



RC5-1/50

Coils

Relay type	Catalog number
N	ZA16-Δ
NE	ZAE16-Δ

Δ Select the coil voltage from the Control Relay Coil Voltage Selection chart and substitute the letter code for the Δ as the last digit in the catalog number.

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							

Surge suppressors — for Type N control relays

Feature	Type	Voltage range	Catalog number
Varistor	N, NE NL, TNL	24 – 50 VAC/DC 50 – 133 VAC/DC 110 – 250 VAC/DC 250 – 440 VAC/DC	RV5/50 RV5/133 RV5/250 RV5/440
RC	N	24 – 50 VAC 50 – 133 VAC 110 – 250 VAC 250 – 440 VAC	RC5-1/50 RC5-1/133 RC5-1/250 RC5-1/440

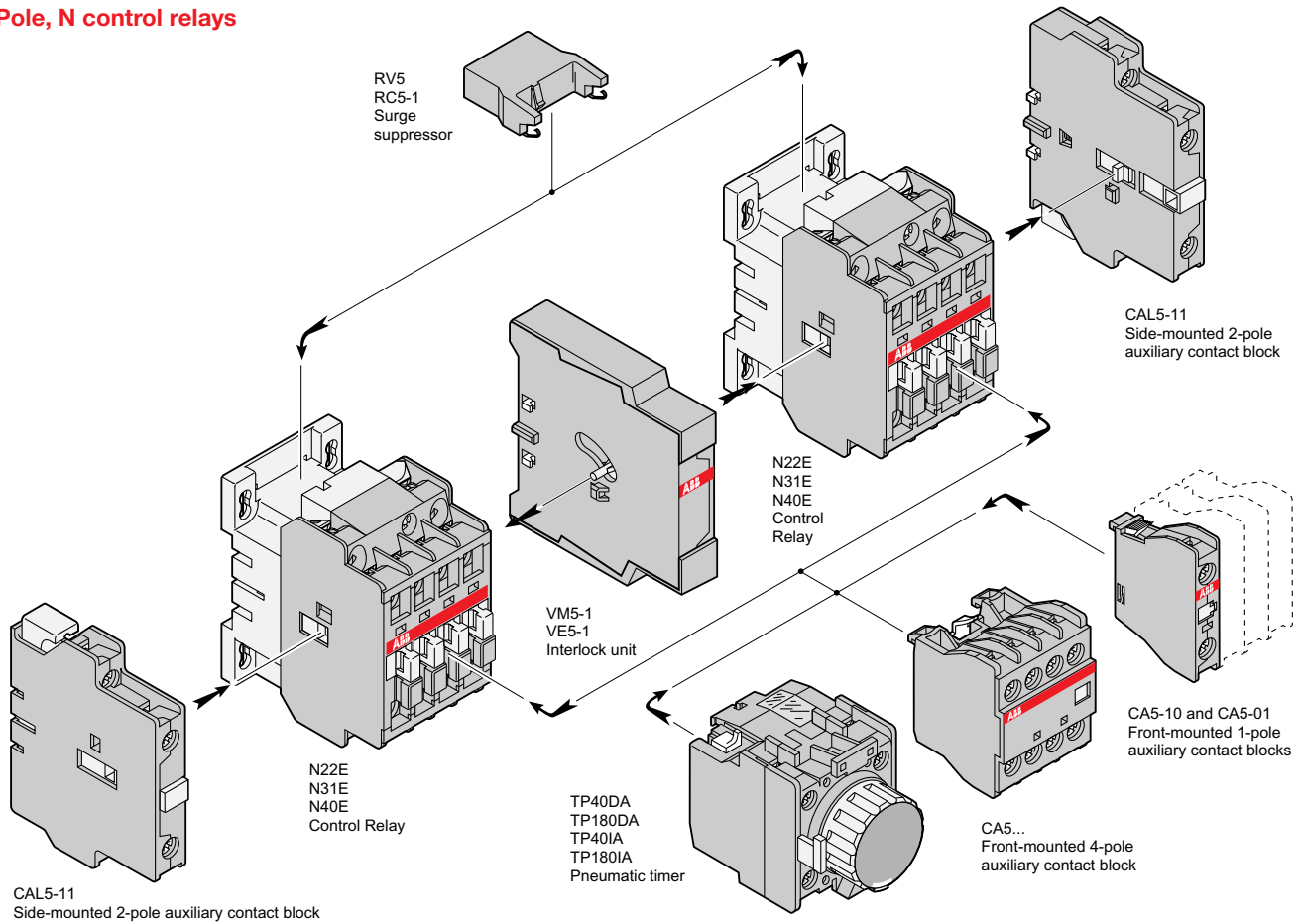
Technical data

Type	Control circuit	Opening time growth factor	Residual overvoltage or clipping voltage	Remarks	
RV5/...ing				Advantages	• Good energy absorption & damp-
50	AC/DC	1.1 to 1.5	132V	Disadvantages	• Unpolarized system
133	AC/DC	1.1 to 1.5	270V		• Clipping from U_{vdr} thus voltage front up to this point
250	AC/DC	1.1 to 1.5	480V		
440	AC/DC	1.1 to 1.5	825V		
RC5-1/... or RC5-2/... RC-EH300/...	AC	1.2 to 3	2 to 3 x U_c	Advantages	• Very fast clipping • Attenuation of steep fronts and therefore, high frequencies • No operating delays

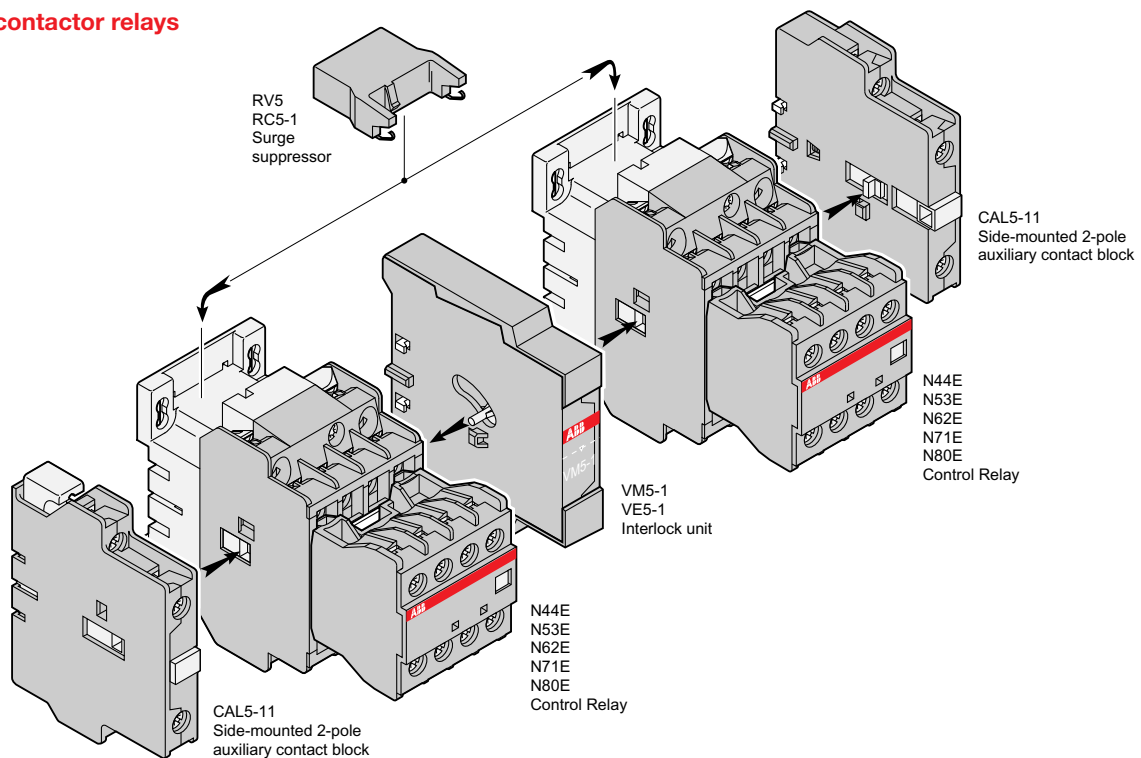
Accessory mounting information Type N, NE, NL & TNL

Control relays

4 Pole, N control relays



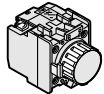
8 Pole, N contactor relays



Possible accessory combinations

Type N, NE, NL, TNL

Configurations of accessories are different depending on whether front or side mounted.

Type	Main poles	Built-in auxiliary contacts	Accessories — Front mounting			Accessories — Side mounting	
			Auxiliary contact blocks 1-pole CA5- 	4-pole CA5- 	TP - A Pneumatic timer block 	Auxiliary contact Blocks 2-pole CAL5-11 	Interlock units 
N	① 2	2 E	1 to 4 CA5- 1-pole blocks	or 1 CA5- 4-pole block	or 1 TP - A block	+ 1 to 2 CAL5-11 blocks	or 1 VM/ε5-1 block + 1 CAL5-11 block
N	① 3	1 E					
N	4	0 E					
N	4	4 E					
N	5	3 E					
N	6	2 E	—	—	—	+ 1 to 2 CAL5-11 blocks	or 1 VM/ε5-1 block + 1 CAL5-11 block
N	7	1 E					
N	8	0 E					
NE	① 2	2 E	1 to 4 CA5- 1-pole blocks	or 1 CA5- 4-pole block	or 1 TP - A block	+ 1 to 2 CAL5-11 blocks	or 1 VM/ε5-1 block + 1 CAL5-11 block
NE	① 3	1 E					
NE	4	0 E					
NE	4	4 E					
NE	5	3 E					
NE	6	2 E	—	—	—	+ 1 to 2 CAL5-11 blocks	or 1 VM/ε5-1 block + 1 CAL5-11 block
NE	7	1 E					
NE	8	0 E					
NL	① 2	2 E	1 to 4 CA5- 1-pole blocks	or 1 CA5- 4-pole block	or —	or 1 CAL5-11 block	or 1 VM/ε5-1 block + 1 CAL5-11 block
NL	① 3	1 E					
NL	4	0 E					
NL	4	4 E					
NL	5	3 E					
NL	6	2 E	—	—	—	or 1 CAL5-11 block	or 1 VM/ε5-1 block + 1 CAL5-11 block
NL	7	1 E					
NL	8	0 E					
TNL	① 2	2 E	1 to 4 CA5- 1-pole blocks	or 1 CA5- 4-pole block	or —	or 1 CAL5-11 block	or 1 VM/ε5-1 block + 1 CAL5-11 block
TNL	① 3	1 E					
TNL	4	0 E					
TNL	4	4 E					
TNL	5	3 E					
TNL	6	2 E	—	—	—	or 1 CAL5-11 block	or 1 VM/ε5-1 block + 1 CAL5-11 block
TNL	7	1 E					
TNL	8	0 E					