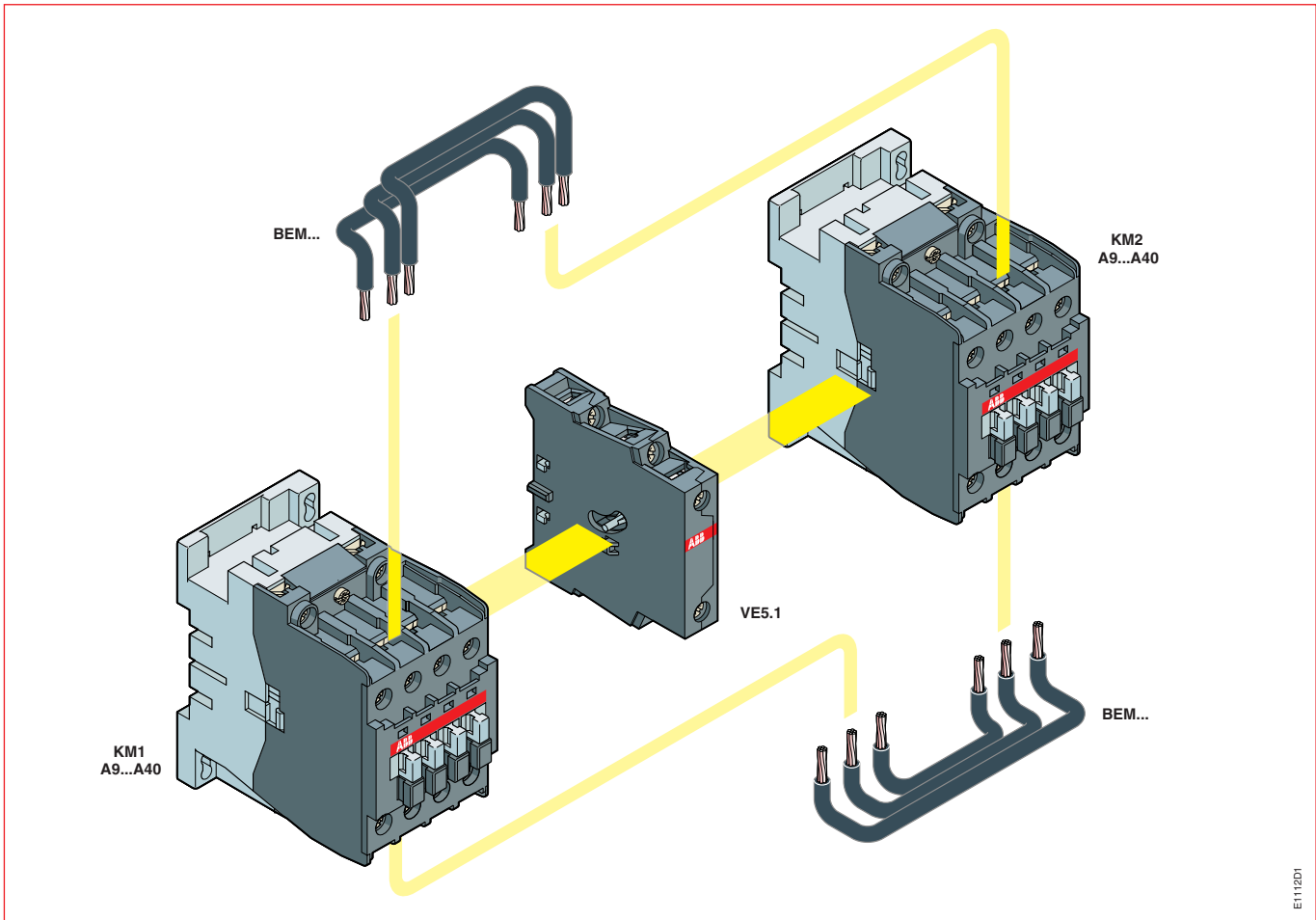


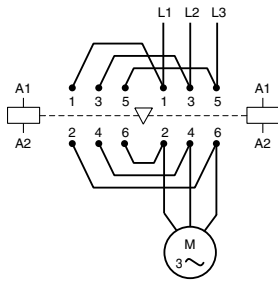
Reversing Contactors Open Type Version



E111201

VOA...-30M version

VOA ...-30M, VNA ...-30M Reversing Contactors Open Type Version

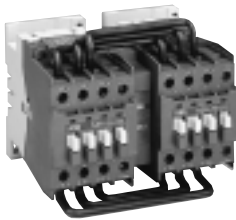


E687101



SE7608S3

VOA 9-30M



SE7607S3

VOA 26-30M



VNA95-30

VNA 95-30M

Application

Reversing contactors for 3-phase asynchronous motors:

- for a maximum operating voltage of 690 V, 50 or 60 Hz,
- for a switching frequency ≤ 600 operations/hour,
- at ambient temperature ≤ 55 °C,
- in conformity with the IEC 947-4-1 standard.

Description, factory-assembled reversing contactors

The reversing contactors are delivered open, wired with their power connections.

The control circuit is to be wired by the customer.

Protection IP20 for the connecting terminals.

The **VOA ...-30M** reversing contactors are provided for fixing on a plate, or rail 35 x 7.5 mm or 35 x 15 mm according to EN 50022, and comprises:

- 2 side-by-side mounted **A 9-30-01 ... A 40-30-01** 3-pole contactors with the same rating, whose N.C. auxiliary contact is intended for electrical interlocking.
- 1 **VM 5-1** mechanical interlocking device, mechanically preventing one of the contactors from closing as long as the other is closed.
- 1 **BEM ...-30** power connection set connecting the main poles of the contactors.

(Technical data according to the table below).

Type	Insulated copper connections	Cross-section	For reversing contactors
BEM 16-30	rigid solid	2.5 mm ²	VOA 9-30M, VOA 12-30M, VOA 16-30M
BEM 26-30	rigid stranded	6 mm ²	VOA 26-30M
BEM 40-30	rigid stranded	10 mm ²	VOA 30-30M, VOA40-30M

The **VNA ...-30M** reversing contactors are supplied on a mounting plate, and comprises:

- 2 side-by-side mounted **A 95-30-00** or **A 110-30-00** 3-pole contactors with the same rating.
- 1 **VE 5-2** mechanical and electrical interlocking device.

This device mechanically prevents one of the contactors from closing while the other contactor is closed. It is also equipped with 2 N.C. auxiliary contacts inserted in the control circuit for electrical interlocking of the contactors.

- 1 **BEM 110-30** power connection set connecting the main poles of the contactors.

Insulated copper bars, cross-section 36 mm².

The hold-in function, if necessary, will be carried out with the help of **CA 5-10** type N.O. auxiliary contacts (1 on each contactor) to be supplied separately (see page 3/2).

VOA ..-30M, VNA ..-30M Reversing Contactors Open Type Version



Ordering details

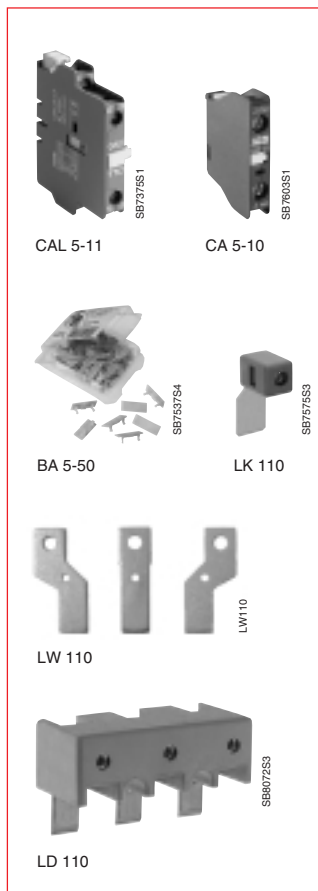
Rated operat. current AC-3 400 V A	Power AC-3 4-pole motor - 50/60 Hz 380 V 400 V 415 V 690 V			Type	Order code	Weight in kg
	kW	kW	kW			
9	4	4	5.5	VOA 9-30M <input type="checkbox"/>	1SBK 141 600R8 <input type="checkbox"/> 00	0.940
12	5.5	5.5	7.5	VOA 12-30M <input type="checkbox"/>	1SBK 161 600R8 <input type="checkbox"/> 00	0.940
17	7.5	9	9	VOA 16-30M <input type="checkbox"/>	1SBK 181 600R8 <input type="checkbox"/> 00	0.940
26	11	11	15	VOA 26-30M <input type="checkbox"/>	1SBK 241 600R8 <input type="checkbox"/> 00	1.470
32	15	15	18.5	VOA 30-30M <input type="checkbox"/>	1SBK 281 600R8 <input type="checkbox"/> 00	1.710
37	18.5	18.5	22	VOA 40-30M <input type="checkbox"/>	1SBK 321 600R8 <input type="checkbox"/> 00	1.720
96	45	55	55	VNA 95-30M <input type="checkbox"/>	1SFK 431 702R8 <input type="checkbox"/> 00	6.800
110	55	59	75	VNA 110-30M <input type="checkbox"/>	1SFK 451 702R8 <input type="checkbox"/> 00	6.800

Control voltage code

Voltage V 50 Hz	V 60 Hz	Code
		8 <input type="checkbox"/>
24	24	1
42	42	2
48	48	3
110	110 ... 120	4
110 ... 115	115 ... 120	9
220 ... 230	230 ... 240	0
230 ... 240	240	8
380 ... 400	400 ... 415	5
400 ... 415	415 ... 440	6
415 ... 440	440	7

Ordering details, contactors accessories

Description	Type	Order code	Packing	Weight in kg
Function markers (50 pieces)	BA5-50	1 SBN 11 0000 R1000	box	0.017
1 x "N.O." auxiliary contact block	CA5-10	1 SBN 01 0010 R1010	10	0.014
1 x "N.C." auxiliary contact block	CA5-01	1 SBN 01 0010 R1001	10	0.014
"N.O."+"N.C." side-mnted cont. blk	CAL5-11	1 SBN 01 0020 R1011	2	0.050
Control lead terminals (A 95, A 110) Right/left connection	LK 110	1 SFN 07 4352 R1000	2	0.010
Add. terminal block (A 95 / A 110)	LD 110	1 SFN 07 4308 R1000	1	0.150
Terminal enlargement pieces (set of 3 bars) for A 95 / A 110	LW110	1 SFN 07 4307 R1000	1	0.100



>> Reversing contactors in kit form page 3/6
>> Wiring diagrams page 3/3

>> Dimensions page 3/4

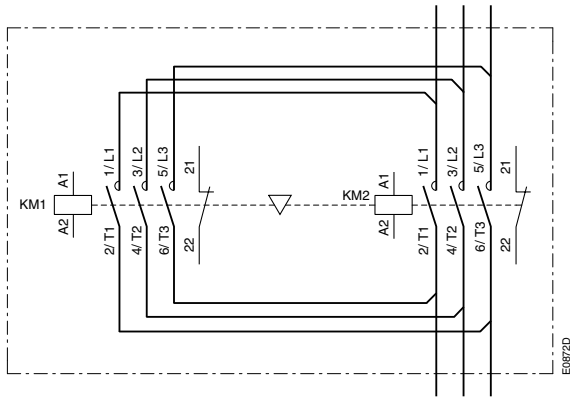
VOA ..-30M, VNA ..-30M Reversing Contactors Open Type Version



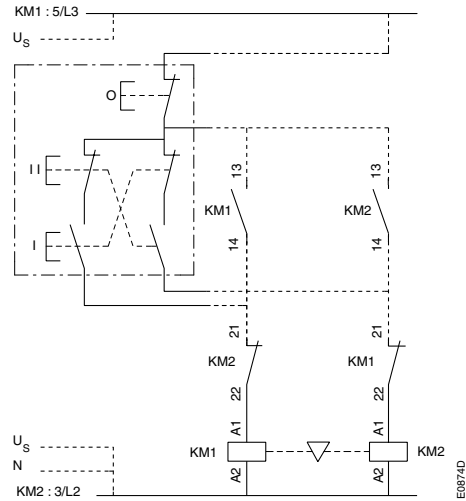
Wiring diagrams

VOA 9-30M ... VOA 40-30M reversing contactors, factory assembled

With VM 5-1 mechanical interlocking, electrical interlocking by built-in auxiliary contacts.



Power circuit

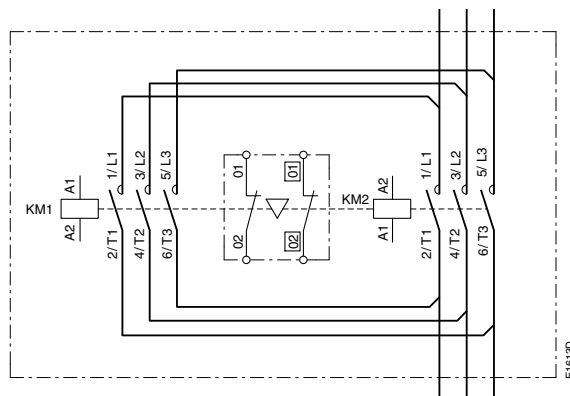


Remote control

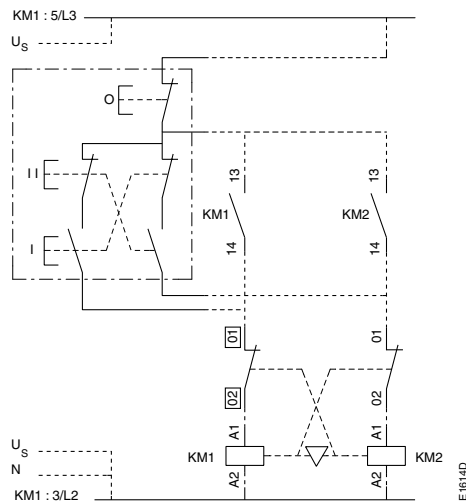
For the hold-in contacts (13-14) of the KM1 and KM2 contactors, supply separately 2 x CA 5-10 type N.O. auxiliary contact (see page 3/2).

VNA 95-30M ... VNA 110-30M reversing contactors, factory assembled

With VE 5-2 mechanical and electrical interlocking.



Power circuit



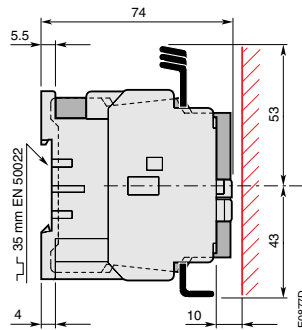
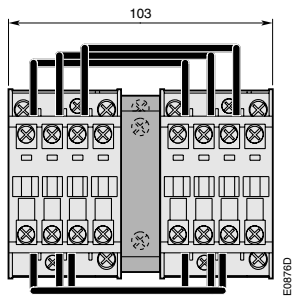
Remote control

For the hold-in contacts (13-14) of the KM1 and KM2 contactors, supply separately 2 x CA 5-10 type N.O. auxiliary contact (see page 3/2).

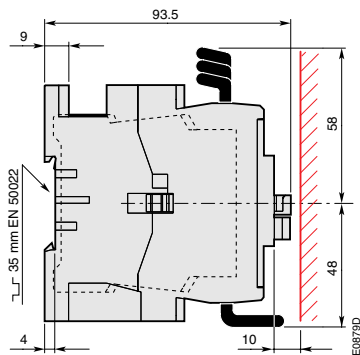
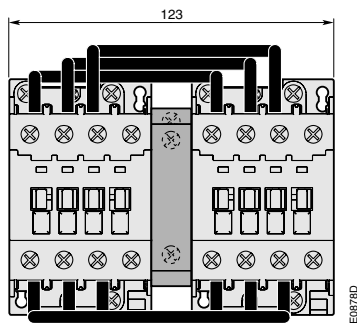
VOA ..-30M, VNA ..-30M Reversing Contactors Open Type Version



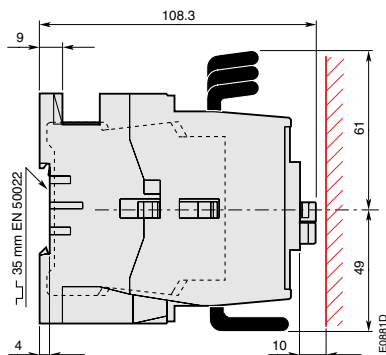
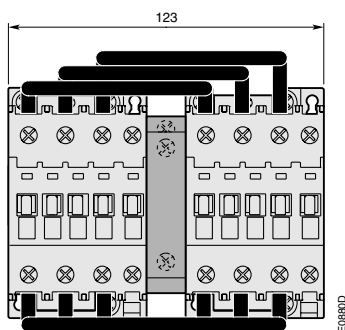
Dimensions (in mm)



VOA 9-30M ... VOA 16-30M



VOA 26-30M

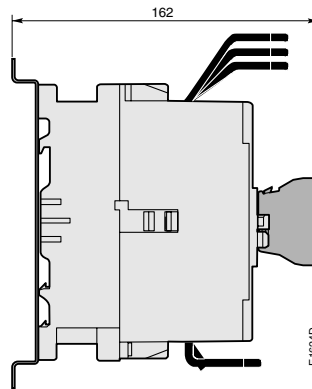
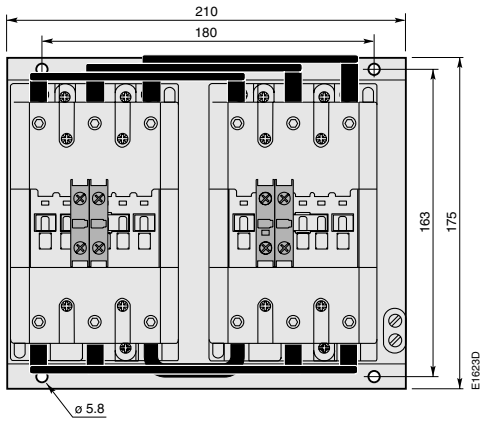


VOA 30-30M, VOA 40-30M

VOA ..-30M, VNA ..-30M Reversing Contactors Open Type Version



Dimensions (in mm)

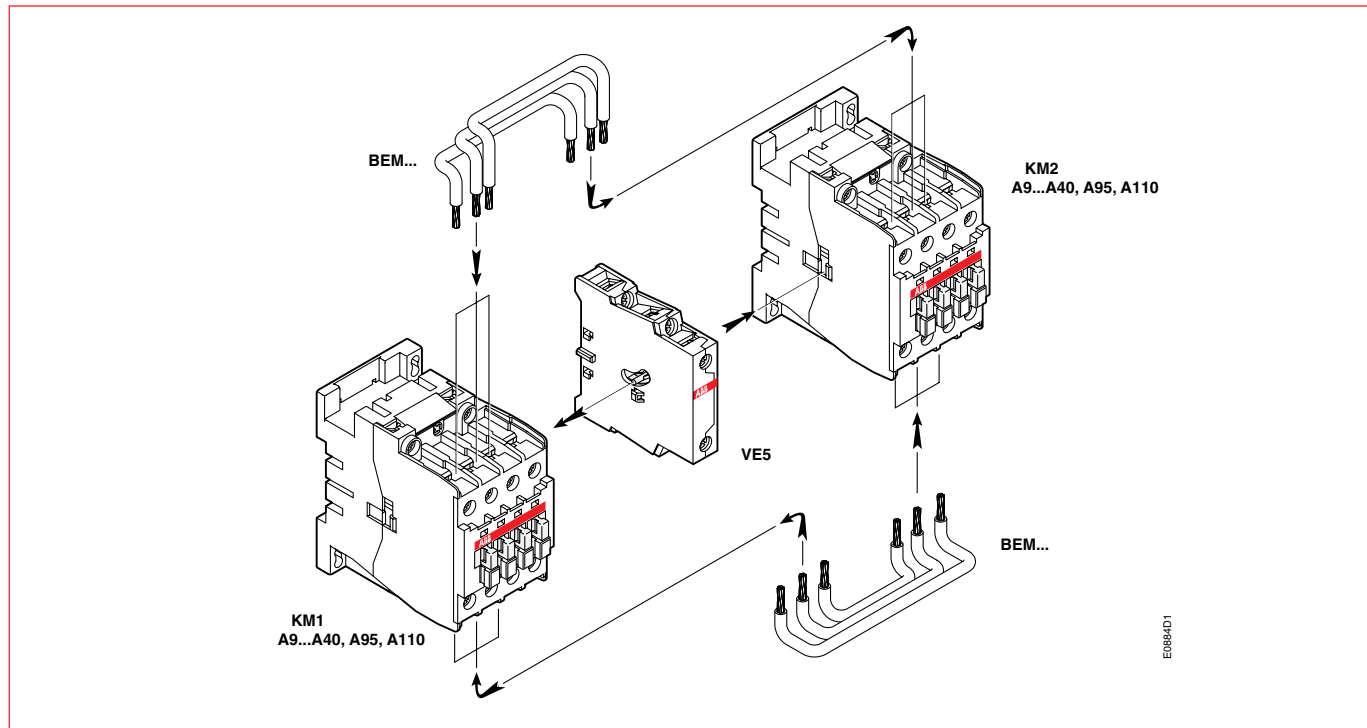


VNA 95-30M, VNA 110-30M

Reversing Contactors in Kit Form Open Type Version



Components for reversing contactors in kit form



Description

Each reversing contactor will include:

- 2 side-by-side mounted 3-pole contactors.

- 1 mechanical and electrical interlocking device.

This device mechanically prevents one of the contactors from closing as long as the other contactor is closed.

Moreover, it is fitted with 2 N.C. auxiliary contacts that should be wired in the control circuit in order to electrically interlock the contactors.

- 1 **BEM...-30** power connection set connecting the main poles of the contactors (technical data according to the table below).

Type	Insulated copper connections	Cross-section	Mounting on contactors
BEM 16-30	rigid solid	2.5 mm ²	A 9-30-10, A 12-30-10, A 16-30-10
BEM 26-30	rigid stranded	6 mm ²	A 26-30-10
BEM 40-30	rigid stranded	10 mm ²	A 30-30-10, A 40-30-10
BEM 110-30	bars	36 mm ²	A 95-30-00, A 110-30-00

The connecting terminals have an IP20 degree of protection.

Fixing by means of a mounting plate or rail 35 x 7.5 mm or 35 x 15 mm according to EN 50022.

Coil voltage codes

The coil voltage codes are to be used to complete the contactor order codes, page 3/7.

□ Coil voltage code		
V 50Hz	V 60Hz	Code 8□
24	24	1
42	42	2
48	48	3
110	110 - 120	4
110 - 115	115 - 127	9
220 - 230	230 - 240	0
230 - 240	240 - 260	8
380 - 400	400 - 415	5
400 - 415	415 - 440	6
415 - 440	440 - 460	7

Reversing Contactors in Kit Form Open Type Version

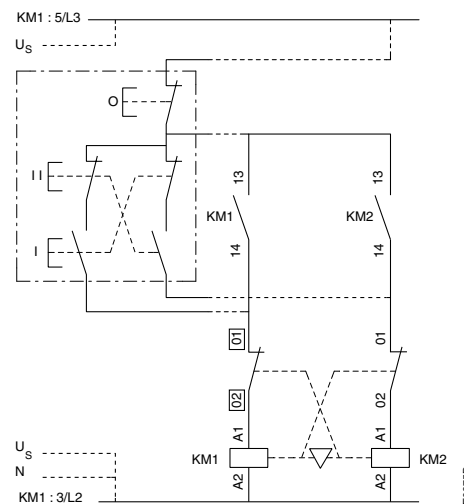
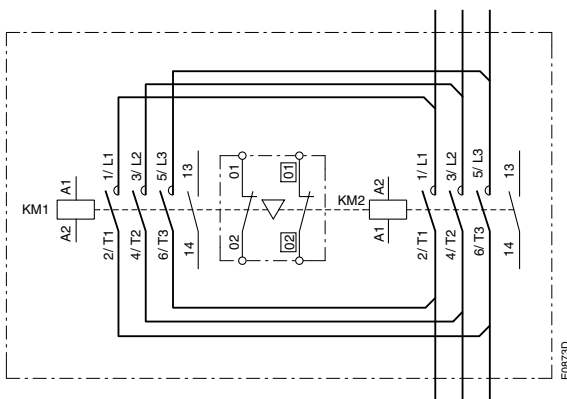


Ordering details

Rated operational current I_n AC-3			Power AC-3 3-phase motor 1500 rpm 50 Hz	Contactors KM1 + KM2 Type state coil voltage: U_c	Interlocking Type	Connection set Type		
A			Rated voltage (V) kW	Order code to be completed with coil voltage code: 8□ (see page 3/6)	Order code	Order code		
9	380- 400	4	2 x	A 9-30-10 U_c	1 x VE 5-1 1SBN 03 0110 R1000	1 x BEM 16-30 1SBN 08 1401 R1000		
9	415	4		1SBL 14 1001 R8□10				
7	690	5.5						
12	380-400	5.5	2 x	A 12-30-10 U_c		1 x VE 5-1 1SBN 03 0110 R1000	1 x BEM 26-30 1SBN 08 2401 R1000	
12	415	5.5		1SBL 16 1001 R8□10				
9	690	7.5						
17	380-400	7.5	2 x	A 16-30-10 U_c			1 x VE 5-1 1SBN 03 0110 R1000	1 x BEM 40-30 1SBN 08 2801 R1000
17	415	9		1SBL 18 1001 R8□10				
10	690	9						
26	380-400	11	2 x	A 26-30-10 U_c				1 x VE 5-2 1SBN 03 0210 R1000
26	415	11		1SBL 24 1001 R8□10				
17	690	15						
32	380-400	15	2 x	A 30-30-10 U_c	1 x VE 5-2 1SBN 03 0210 R1000			
32	415	15		1SBL 28 1001 R8□10				
21	690	18.5						
37	380-400	18.5	2 x	A 40-30-10 U_c		1 x VE 5-2 1SBN 03 0210 R1000		
37	415	18.5		1SBL 32 1001 R8□10				
25	690	22						
96	380-400	45	2 x	A 95-30-00 U_c			1 x VE 5-2 1SBN 03 0210 R1000	
96	415	55		1SFL 43 1001 R8□00				
65	690	55						
110	380-400	55	2 x	A 110-30-00 U_c				1 x VE 5-2 1SBN 03 0210 R1000
110	415	59		1SFL 45 1001 R8□00				
82	690	75						

3

Wiring diagrams - Reversing contactors with VE 5-1 interlocking (A 9 ... A 40)



Power circuit

Remote control

N.O. auxiliary contacts (13-14) built into the KM1 and KM2 contactors are available for the hold-in function of the KM1, KM2 contactors.

For the reversing contactors with VE 5-2 interlocking (A 95 and A 110) use a VNA ...-30M wiring diagrams, page 3/3

>> Factory assembled reversing contactors page 3/1 >> Accessories page 3/2 >> Dimensions page 3/4