





**Mini contactors B6/4 kW;
B7/5.5 kW**

Mini contactor relays K..

Compact reversing contactors VB..

Thermal overload relay T7DU

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Coil voltages for mini contactors

B6, B7, VB6(A), VB7(A), BC6, BC7, VBC6(A), VBC7(A), K6, KC6.

AC		DC	
40-450 Hz	Code number	DC	Code number
V ①	☆ .. ☆	V	☆ .. ☆
24	0 .. 1	12	0 .. 7
42	0 .. 2	24	0 .. 1
48	0 .. 3	42	0 .. 2
110 ... 127	8 .. 4	48	1 .. 6
220 ... 240	8 .. 0	60	0 .. 3
380 ... 415	8 .. 5	110 ... 125	0 .. 4
		220 ... 240	0 .. 5

① Coil voltage range: 0.85 ... 1.1 x U_e

Mini contactors B6, BC6, B7, BC7

Ordering details



B6-30-10

SST 158 91 R



BC6-30-10-F

SST 158 91 R



B6-30-10-P

SST 161 91 R



B7-30-10

SST 158 91 APS



B7-40-00

SST 110 93 R



B7-40-00 with auxiliary switch CAF6-11 screwed on afterwards

SST 009 93 R

Type	Order code See Page 3 for adding code suffixes ☆..☆ to the order code	Auxiliary switches	Motor output 220 V 240 V kW	AC2...3 380 V 440 1V kW	Price per piece	Packing unit piece	Wight per piece kg
		NO NC					

Mini contactors B6

Mini contactors, with screw connection, for AC operation, 3.5 VA

B6-30-10	GJL 121 1001 R ☆ 10 ☆	1	0	2.2	4	10	0.180
B6-30-01	GJL 121 1001 R ☆ 01 ☆	0	1			10	0.180
B6-40-00	GJL 121 1201 R ☆ 00 ☆	0	0			10	0.180

Mini contactors, with flat pin connection, for AC operation, 3.5 VA

B6-30-10-F	GJL 121 1003 R ☆ 10 ☆	1	0	2.2	4	10	0.170
B6-30-01-F	GJL 121 1003 R ☆ 01 ☆	0	1			10	0.170
B6-40-00-F	GJL 121 1203 R ☆ 00 ☆	0	0			10	0.170

Mini contactors, with soldering pins, for AC operation, 3.5 VA, I_n < 8 A

B6-30-10-P	GJL 121 1009 R ☆ 10 ☆	1	0	2.2	4	10	0.170
B6-30-01-P	GJL 121 1009 R ☆ 01 ☆	0	1			10	0.170

Mini contactors, with screw connection, for DC operation, 3.5 W

BC6-30-10	GJL 121 3001 R ☆ 10 ☆	1	0	2.2	4	100	0.180
BC6-30-01	GJL 121 3001 R ☆ 01 ☆	0	1			10	0.180

Mini contactors, with flat pin connection, for DC operation, 3.5 W

BC6-30-10-F	GJL 121 3003 R ☆ 10 ☆	1	0	2.2	4	10	0.170
BC6-30-01-F	GJL 121 3003 R ☆ 01 ☆	0	1			10	0.170

Mini contactors, with soldering pins, for DC operation, 3.5 W, I_n < 8 A

BC6-30-10-P	GJL 121 3009 R ☆ 10 ☆	1	0	2.2	4	10	0.170
BC6-30-01-P	GJL 121 3009 R ☆ 01 ☆	0	1			10	0.170

Mini contactors B7

Mini contactors, with screw connection, for AC operation, 3.5 VA

B7-30-10	GJL 131 1001 R ☆ 10 ☆	1	0	3.0	5.5	10	0.180
B7-30-01	GJL 131 1001 R ☆ 01 ☆	0	1			10	0.180
B 7-40-00	GJL 131 1201 R ☆ 00 ☆	0	0			10	0.180

Mini contactors, with flat pin connection, for AC operation, 3.5 VA

B7-30-10-F	GJL 131 1003 R ☆ 10 ☆	1	0	3.0	5.5	10	0.170
B7-30-01-F	GJL 131 1003 R ☆ 01 ☆	0	1			10	0.170
B7-40-00-F	GJL 131 1203 R ☆ 00 ☆	0	0			10	0.170

Mini contactors, with soldering pins, for AC operation, 3.5 VA, I_n < 8 A

B7-30-10-P	GJL 131 1009 R ☆ 10 ☆	1	0	3.0	5.5	10	0.170
B7-30-01-P	GJL 131 1009 R ☆ 01 ☆	0	1			10	0.170

Mini contactors, with screw connection, for DC operation, 3.5 W

BC7-30-10	GJL 131 3001 R ☆ 10 ☆	1	0	3.0	5.5	10	0.180
BC7-30-01	GJL 131 3001 R ☆ 01 ☆	0	1			10	0.180

Mini contactors, with flat pin connection, for DC operation, 3.5 W

BC7-30-10-F	GJL 131 3003 R ☆ 10 ☆	1	0	3.0	5.5	10	0.170
BC7-30-01-F	GJL 131 3003 R ☆ 01 ☆	0	1			10	0.170

Mini contactors, with screw connection, for 24 V DC operation, with integr. surpressor diod, 3.5 W

B7D-30-10	GJL 131 7001 R 0101	1	0	3.0	5.5	10	0.170
B7D-30-01	GJL 131 7001 R 0011	0	1			10	0.170
B7D-40-00	GJL 131 7201 R 0001	0	0			10	0.170

Mini contactors, with soldering pins, for DC operation, 3.5 W, I_n < 8 A

BC7-30-10-P	GJL 131 3009 R ☆ 10 ☆	1	0	3.0	5.5	10	0.170
BC7-30-01-P	GJL 131 3009 R ☆ 01 ☆	0	1			10	0.170

Mini contactors, with screw connection, for 220 V DC operation, with integr. surpressor diod, 3.5 W

B7D-30-10	GJL 131 7001 R 0105	1	0	3.0	5.5	10	0.170
B7D-30-01	GJL 131 7001 R 0015	0	1			10	0.170
B7D-40-00	GJL 131 7201 R 0005	0	0			10	0.170

Compact reversing contactors

Ordering details

Compact reversing contactors VB6, VB7 and VB6A, VB7A

The mechanical interlock between the two contactors mechanically prevents switch-on of one contactor for as long as the other contactor is still on and vice versa. If reversing contactors are switched over too quickly, this involves the risk of a phase-to-phase short-circuit. This will be the case if the arc of the contactor switching off has not yet been quenched when the contacts of the contactor switching on are already closed.

In order to avoid these risks, both contactor coils must be de-energised **for at least 50 ms** and must also be mutually interlocked electrically.

The compact reversing contactors are offered with two different mechanical interlocks:

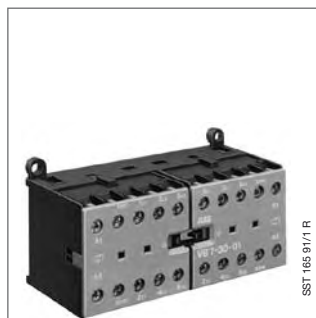
- VB6 resp. VB7: normal interlock
- VB6A resp. VB7A: interlock with mechanical safety blocking function

The safety blocking function is triggered if the voltage is applied to the coil of the contactor to be switched on before the contactor to be switched off has dropped out.

Safety blocking means that the contactor to be switched on is locked mechanically in OFF condition owing to the switch-on signal issued too early, and this state is retained until the blocking function is cancelled again as follows:

disconnect the voltage from the two contactor coils and then reconnect the voltage to the coil of the contactor to be switched on.

The contactor coils are designed for continuous operation when the contactor is de-energised, i.e. the coil is not damaged if the mechanical interlock prevents switch-on of the contactor with the coil voltage applied.



VB7-30-01



When the direction of rotation is changed, both contactor coils of VB6A, VB7A have to be deenergized for more than 50 ms.

Type	Order code See Page 3 for adding code suffixes to the order code	Auxiliary switches		Motor output AC2...3		Price per piece	Pack- ing unit piece	Weight per piece kg
		NO	NC	max. 220 V 240 V kW	380 V 440 V kW			

Compact reversing contactors VB6, VBC6, with mechanical interlock

Reversing contactors, with screw connection, for AC operation, 3.5 VA

VB6-30-10	GJL 121 1901 R ☆ 10 ☆	1	0	2.2	4		5	0.340
VB6-30-01	GJL 121 1901 R ☆ 01 ☆	0	1				5	0.340

Reversing contactors, with flat pin connection, for AC operation, 3.5 VA

VB6-30-10-F	GJL 121 1903 R ☆ 10 ☆	1	0	2.2	4		5	0.340
VB6-30-01-F	GJL 121 1903 R ☆ 01 ☆	0	1				5	0.340

Reversing contactors, with soldering pins, for AC operation, 3.5 VA, I_m < 8 A

VB6-30-10-P	GJL 121 1909 R ☆ 10 ☆	1	0	2.2	4		5	0.340
VB6-30-01-P	GJL 121 1909 R ☆ 01 ☆	0	1				5	0.340

Reversing contactors, with screw connection, for DC operation, 3.5 W

VBC6-30-10	GJL 121 3901 R ☆ 10 ☆	1	0	2.2	4		5	0.340
VBC6-30-01	GJL 121 3901 R ☆ 01 ☆	0	1				5	0.340

Reversing contactors, with flat pin connection, for DC operation, 3.5 W

VBC6-30-10-F	GJL 121 3903 R ☆ 10 ☆	1	0	2.2	4		5	0.340
VBC6-30-01-F	GJL 121 3903 R ☆ 01 ☆	0	1				5	0.340

Reversing contactors, with soldering pins, for DC operation, 3.5 W, I_m < 8 A

VBC6-30-10-P	GJL 121 3909 R ☆ 10 ☆	1	0	2.2	4		5	0.340
VBC6-30-01-P	GJL 121 3909 R ☆ 01 ☆	0	1				5	0.340

Compact reversing contactors VB7, VBC7, with mechanical interlock

Reversing contactors, with screw connection, for AC operation, 3.5 VA

VB7-30-10	GJL 131 1901 R ☆ 10 ☆	1	0	3.0	5.5		5	0.340
VB7-30-01	GJL 131 1901 R ☆ 01 ☆	0	1				5	0.340

Reversing contactors, with flat pin connection, for AC operation, 3.5 VA

VB7-30-10-F	GJL 131 1903 R ☆ 10 ☆	1	0	3.0	5.5		5	0.340
VB7-30-01-F	GJL 131 1903 R ☆ 01 ☆	0	1				5	0.340

Reversing contactors, with soldering pins, for AC operation, 3.5 VA, I_m < 8 A

VB7-30-10-P	GJL 131 1909 R ☆ 10 ☆	1	0	3.0	5.5		5	0.340
VB7-30-01-P	GJL 131 1909 R ☆ 01 ☆	0	1				5	0.340

Reversing contactors, with screw connection, for DC operation, 3.5 W

VBC7-30-10	GJL 131 3901 R ☆ 10 ☆	1	0	3.0	5.5		5	0.340
VBC7-30-01	GJL 131 3901 R ☆ 01 ☆	0	1				5	0.340

Reversing contactors, with flat pin connection, for DC operation, 3.5 W

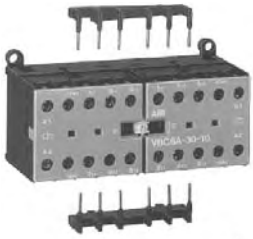
VBC7-30-10-F	GJL 131 3903 R ☆ 10 ☆	1	0	3.0	5.5		5	0.340
VBC7-30-01-F	GJL 131 3903 R ☆ 01 ☆	0	1				5	0.340

Reversing contactors, with soldering pins, for DC operation, 3.5 W, I_m < 8 A

VBC7-30-10-P	GJL 131 3909 R ☆ 10 ☆	1	0	3.0	5.5		5	0.340
VBC7-30-01-P	GJL 131 3909 R ☆ 01 ☆	0	1				5	0.340

Compact reversing contactors

Ordering details



Reversing contactor VBC6A-3-10
Reversing connection BMS6-30

Type	Order code See Page 3 for adding code suffixes ☆..☆ to the order code	Auxiliary switches		Motor output AC2...3		Price per unit	Pack- ing unit piece	Weight per piece kg
		NO	NC	220 V 240 V kW	380 V 440 V kW			

Compact reversing contactors VB6A, VBC6A, with mechanical interlock

Reversing contactors, with screw connection, for AC operation, 3.5 VA

VB6A-30-10	GJL 121 1911 R ☆ 10 ☆	1	0	2.2	4		5	0.340
VB6A-30-01	GJL 121 1911 R ☆ 01 ☆	0	1				5	0.340

Reversing contactors, with flat pin connection, for AC operation, 3.5 VA

VB6A-30-10-F	GJL 121 1913 R ☆ 10 ☆	1	0	2.2	4		5	0.340
VB6A-30-01-F	GJL 121 1913 R ☆ 01 ☆	0	1				5	0.340

Reversing contactors, with soldering pins, for AC operation, 3.5 VA, I_n < 8 A

VB6A-30-10-P	GJL 121 1919 R ☆ 10 ☆	1	0	2.2	4		5	0.340
VB6A-30-01-P	GJL 121 1919 R ☆ 01 ☆	0	1				5	0.340

Reversing contactors, with screw connection, for DC operation, 3.5 W

VBC6A-30-10	GJL 121 3911 R ☆ 10 ☆	1	0	2.2	4		5	0.340
VBC6A-30-01	GJL 121 3911 R ☆ 01 ☆	0	1				5	0.340

Reversing contactors, with flat pin connection, for DC operation, 3.5 W

VBC6A-30-10-F	GJL 121 3913 R ☆ 10 ☆	1	0	2.2	4		5	0.340
VBC6A-30-01-F	GJL 121 3913 R ☆ 01 ☆	0	1				5	0.340

Reversing contactors, with soldering pins, for DC operation, 3.5 W, I_n < 8 A

VBC6A-30-10-P	GJL 121 3919 R ☆ 10 ☆	1	0	2.2	4		5	0.340
VBC6A-30-01-P	GJL 121 3919 R ☆ 01 ☆	0	1				5	0.340

Compact reversing contactors VB7A, VBC7A, with mechanical interlock

Reversing contactors, with screw connection, for AC operation, 3.5 VA

VB7A-30-10	GJL 131 1911 R ☆ 10 ☆	1	0	3.0	5.5		5	0.340
VB7A-30-01	GJL 131 1911 R ☆ 01 ☆	0	1				5	0.340

Reversing contactors, with flat pin connection, for AC operation, 3.5 VA

VB7A-30-10-F	GJL 131 1913 R ☆ 10 ☆	1	0	3.0	5.5		5	0.340
VB7A-30-01-F	GJL 131 1913 R ☆ 01 ☆	0	1				5	0.340

Reversing contactors, with soldering pins, for AC operation, 3.5 VA, I_n < 8 A

VB7A-30-10-P	GJL 131 1919 R ☆ 10 ☆	1	0	3.0	5.5		5	0.340
VB7A-30-01-P	GJL 131 1919 R ☆ 01 ☆	0	1				5	0.340

Reversing contactors, with screw connection, for DC operation, 3.5 W

VBC7A-30-10	GJL 131 3911 R ☆ 10 ☆	1	0	3.0	5.5		5	0.340
VBC7A-30-01	GJL 131 3911 R ☆ 01 ☆	0	1				5	0.340

Reversing contactors, with flat pin connection, for DC operation, 3.5 W

VBC7A-30-10-F	GJL 131 3913 R ☆ 10 ☆	1	0	3.0	5.5		5	0.340
VBC7A-30-01-F	GJL 131 3913 R ☆ 01 ☆	0	1				5	0.340

Reversing contactors, with soldering pins, for DC operation, 3.5 W, I_n < 8 A

VBC7A-30-10-P	GJL 131 3919 R ☆ 10 ☆	1	0	3.0	5.5		5	0.340
VBC7A-30-01-P	GJL 131 3919 R ☆ 01 ☆	0	1				5	0.340

Interface contactors

Mini contactors for connection to PLCs

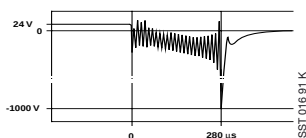
Ordering details



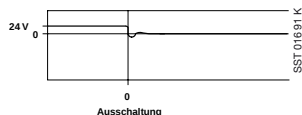
BC7-30-10-1.4

Oscillograms

Without protective circuit



With integrated protective circuit



- Controlled directly by PLC
- Integrated protective circuit with diodes and additional surge suppressor
- Non-confusable coil connection
- You save time and money for additional external wiring
- Thermal overload relay T7DU available as accessory, see Page 19.

Interface contactors BC6

Auxiliary switch blocks **cannot** be fitted later on !

Type	Order code	Auxiliary switches		Motor output		AC2...3	Price per piece	Pack- ing unit piece	Weight per piece kg
		NO	NC	220 V	380 V				
				240 V	440 V				
kW									
Motor contactors, with screw connection, for DC operation 24V / 1.4 W									
BC6-30-10-1.4	GJL 121 3001 R 8101	1	0	2.2	4			10	0.180
BC6-30-01-1.4	GJL 121 3001 R 8011	0	1	2.2	4			10	0.180
Motor contactors, with flat pin connection, for DC operation 24V / 1.4 W									
BC6-30-10-F-1.4	GJL 121 3003 R 8101	1	0	2.2	4			10	0.180
BC6-30-01-F-1.4	GJL 121 3003 R 8011	0	1	2.2	4			10	0.180
Motor contactors, with soldering pins, for DC operation 24V / 1.4 W, I _n < 8 A									
BC6-30-10-P-1.4	GJL 121 3009 R 8101	1	0	2.2	4			10	0.170
BC6-30-01-P-1.4	GJL 121 3009 R 8011	0	1	2.2	4			10	0.170
Motor contactors, with screw connection, for DC operation 17 ... 32 V / 2.4 W									
BC6-30-10-2.4	GJL 121 3001 R 5101	1	0	2.2	4			10	0.180
BC6-30-01-2.4	GJL 121 3001 R 5011	0	1	2.2	4			10	0.180
Motor contactors, with flat pin connection, for DC operation 17 ... 32 V / 2.4 W									
BC6-30-10-F-2.4	GJL 121 3003 R 5101	1	0	2.2	4			10	0.170
BC6-30-01-F-2.4	GJL 121 3003 R 5011	0	1	2.2	4			10	0.170
Motor contactors, with soldering pins, for DC operation 17 ... 32 V / 2.4 W, I _n < 8 A									
BC6-30-10-P-2.4	GJL 121 3009 R 5101	1	0	2.2	4			10	0.170
BC6-30-01-P-2.4	GJL 121 3009 R 5011	0	1	2.2	4			10	0.170

Interface contactors BC7

Auxiliary switch blocks **cannot** be fitted later on !

Motor contactors, with screw connection, for DC operation 24V / 1.4 W								
BC7-30-10-1.4	GJL 131 3001 R 8101	1	0	3.0	5.5		10	0.170
BC7-30-01-1.4	GJL 131 3001 R 8011	0	1	3.0	5.5		10	0.170
Motor contactors, with flat pin connection, for DC operation 24V / 1.4 W								
BC7-30-10-F-1.4	GJL 131 3003 R 8101	1	0	3.0	5.5		10	0.170
BC7-30-01-F-1.4	GJL 131 3003 R 8011	0	1	3.0	5.5		10	0.170
Motor contactors, with soldering pins, for DC operation 24V / 1.4 W, I_n < 8 A								
BC7-30-10-P-1.4	GJL 131 3009 R 8101	1	0	3.0	5.5		10	0.170
BC7-30-01-P-1.4	GJL 131 3009 R 8011	0	1	3.0	5.5		10	0.170
Motor contactors, with screw connection, for DC operation 17 ... 32 V / 2.4 W								
BC7-30-10-2.4	GJL 131 3001 R 5101	1	0	3.0	5.5		10	0.170
BC7-30-01-2.4	GJL 131 3001 R 5011	0	1	3.0	5.5		10	0.170
Motor contactors, with flat pin connection, for DC operation 17 ... 32 V / 2.4 W								
BC7-30-10-F-2.4	GJL 131 3003 R 5101	1	0	3.0	5.5		10	0.170
BC7-30-01-F-2.4	GJL 131 3003 R 5011	0	1	3.0	5.5		10	0.170
Motor contactors, with soldering pins, for DC operation 17 ... 32 V / 2.4 W, I_n < 8 A								
BC7-30-10-P-2.4	GJL 131 3009 R 5101	1	0	3.0	5.5		10	0.170
BC7-30-01-P-2.4	GJL 131 3009 R 5011	0	1	3.0	5.5		10	0.170

Mini contactors for connection to PLCs B6S ... with integrated protective circuit

Auxiliary switch blocks **cannot** be fitted later on !

Motor contactors, with screw connection, for DC operation 24 V / 1.7 W								
B6S-30-10-1.7	GJL 121 3001 R7101	1	0	2.2	4.0		10	0.180
B6S-30-01-1.7	GJL 121 3001 R7011	0	1	2.2	4.0		10	0.180
Motor contactors, with screw connection, for DC operation 17...32 V / 2.8 W								
B6S-30-10-2.8	GJL 121 3001 R7102	1	0	2.2	4.0		10	0.180
B6S-30-01-2.8	GJL 121 3001 R7012	0	1	2.2	4.0		10	0.180

Mini contactors for connection to PLCs B7S ... with integrated protective circuit

Auxiliary switch blocks **cannot** be fitted later on !

Motor contactors, with screw connection, for DC operation 24 V / 1.7 W								
B7S-30-10-1.7	GJL 131 3001 R7101	1	0	3.0	5.5		10	0.180
B7S-30-01-1.7	GJL 131 3001 R7011	0	1	3.0	5.5		10	0.180
Motor contactors, with screw connection, for DC operation 17...32 V / 2.8 W								
B7S-30-10-2.8	GJL 131 3001 R7102	1	0	3.0	5.5		10	0.180
B7S-30-01-2.8	GJL 131 3001 R7012	0	1	3.0	5.5		10	0.180

Mini contactor relays, interface contactor relays / mini contactor relays for connection to PLCs

Ordering details



KC6-40 E-P

Type	Order code See Page 3 for adding code suffixes ☆☆☆ to the order code	Auxiliary switches		220 V 240 V A	AC15 380 V 240 V A	500 V 440 V A	Price per piece	Pack- ing unit piece	Weight per piece kg
		NO	NC						

Mini contactor relays

Contactor relays, with screw connection, for AC operation, 3.5 VA

K6-40E	GJH 121 1001 R ☆ 40 ☆	4	0	4	3	2		10	0.180
K6-31Z	GJH 121 1001 R ☆ 31 ☆	3	1	4	3	2		10	0.180
K6-22Z	GJH 121 1001 R ☆ 22 ☆	2	2	4	3	2		10	0.180

Contactor relays, with flat pin connection, for AC operation, 3.5 VA

K6-40E-F	GJH 121 1003 R ☆ 40 ☆	4	0	4	3	2		10	0.170
K6-31Z-F	GJH 121 1003 R ☆ 31 ☆	3	1	4	3	2		10	0.170
K6-22Z-F	GJH 121 1003 R ☆ 22 ☆	2	2	4	3	2		10	0.170

Contactor relays, with soldering pins, for AC operation, 3.5 VA

K6-40E-P	GJH 121 1009 R ☆ 40 ☆	4	0	4	3	2		10	0.170
K6-31Z-P	GJH 121 1009 R ☆ 31 ☆	3	1	4	3	2		10	0.170
K6-22Z-P	GJH 121 1009 R ☆ 22 ☆	2	2	4	3	2		10	0.170

Contactor relays, with screw connection, for DC operation, 3.5 W

KC6-40E	GJH 121 3001 R ☆ 40 ☆	4	0	4	3	2		10	0.180
KC6-31Z	GJH 121 3001 R ☆ 31 ☆	3	1	4	3	2		10	0.180
KC6-22Z	GJH 121 3001 R ☆ 22 ☆	2	2	4	3	2		10	0.180

Contactor relays, with flat pin connection, for DC operation, 3.5 W

KC6-40E-F	GJH 121 3003 R ☆ 40 ☆	4	0	4	3	2		10	0.170
KC6-31Z-F	GJH 121 3003 R ☆ 31 ☆	3	1	4	3	2		10	0.170
KC6-22Z-F	GJH 121 3003 R ☆ 22 ☆	2	2	4	3	2		10	0.170

Contactor relays, with soldering pins, for DC operation, 3.5 W

KC6-40E-P	GJH 121 3009 R ☆ 40 ☆	4	0	4	3	2		10	0.170
KC6-31Z-P	GJH 121 3009 R ☆ 31 ☆	3	1	4	3	2		10	0.170
KC6-22Z-P	GJH 121 3009 R ☆ 22 ☆	2	2	4	3	2		10	0.170

Interface contactor relays

Auxiliary switch blocks **cannot** be fitted later on !

Contactor relay, with screw connection, for DC operation, 24 V / 1.4 W

KC6-40E-1.4	GJH 121 3001 R 8401	4	0	4	3	2		10	0.180
KC6-31Z-1.4	GJH 121 3001 R 8311	3	1	4	3	2		10	0.180

Contactor relay, with flat pin connection, for DC operation, 24 V / 1.4 W

KC6-40E-F-1.4	GJH 121 3003 R 8401	4	0	4	3	2		10	0.180
KC6-31Z-F-1.4	GJH 121 3003 R 8311	3	1	4	3	2		10	0.180

Contactor relay, with soldering pins, for DC operation, 24 V / 1.4 W

KC6-40E-P-1.4	GJH 121 3009 R 8401	4	0	4	3	2		10	0.170
KC6-31Z-P-1.4	GJH 121 3009 R 8311	3	1	4	3	2		10	0.170

Contactor relay, with screw connection, for DC operation, 17 ... 32 V / 2.4 W

KC6-40E-2.4	GJH 121 3001 R 5401	4	0	4	3	2		10	0.180
KC6-31Z-2.4	GJH 121 3001 R 5311	3	1	4	3	2		10	0.180

Contactor relay, with flat pin connection, for DC operation, 17 ... 32 V / 2.4 W

KC6-40E-F-2.4	GJH 121 3003 R 5401	4	0	4	3	2		10	0.170
KC6-31Z-F-2.4	GJH 121 3003 R 5311	3	1	4	3	2		10	0.170

Contactor relay, with soldering pins, for DC operation, 17 ... 32 V / 2.4 W

KC6-40E-P-2.4	GJH 121 3009 R 5401	4	0	4	3	2		10	0.170
KC6-31Z-P-2.4	GJH 121 3009 R 5311	3	1	4	3	2		10	0.170

Mini contactor relays for connection to PLCs K6S ... with integrated protective circuit

Auxiliary switch blocks **cannot** be fitted later on !

Contactor relay, with screw connection, for DC operation, 24 V / 1.7 W

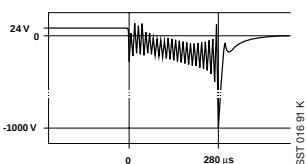
K6S-40E-1.7	GJH 121 3001 R 7401	4	0	4	3	2		10	0.180
K6S-31Z-1.7	GJH 121 3001 R 7311	3	1	4	3	2		10	0.180
K6S-22Z-1.7	GJH 121 3001 R 7221	2	2	4	3	2		10	0.180

Contactor relay, with screw connection, for DC operation, 17 ... 32 V / 2.8 W

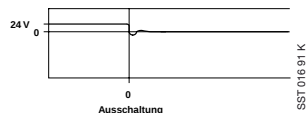
K6S-40E-2.8	GJH 121 3001 R 7402	4	0	4	3	2		10	0.180
K6S-31Z-2.8	GJH 121 3001 R 7312	3	1	4	3	2		10	0.180
K6S-22Z-2.8	GJH 121 3001 R 7222	2	2	4	3	2		10	0.180

Oscillograms

Without protective circuit



With integrated protective circuit



- Controlled directly by PLC
- Integrated protective circuit with diodes and additional surge suppressor
- Non-confusable coil connection
- You save time and money for additional external wiring

Mini contactors TBC7

Mini contactor relays TKC6

Railway app.: extended coil operating range, technical data

Mini contactors TBC7

Type	Order code See below for adding code suffixes □.□ to the order code	Auxiliary switch		AC-1 max. 240 V A	Motor output AC-2/AC-3			Price per piece	Pack- ing unit piece	Weight per piece kg
		NO	NC		220 V 440 V kW	380 V kW	500 V kW			

Motor contactors, with screw connection, for DC operation

TBC7-30-10	GJL 131 3061 R □ 10 □	1	0	20	3	5,5	4		10	0.180
TBC7-30-01	GJL 131 3061 R □ 01 □	0	1	20	3	5.5	4		10	0.180

Mini contactor relays TKC6

Contactor relays, with screw connection, for DC operation

TKC6-22Z	GJH 121 3061 R ☆ 22 ☆	2	2	6					10	0.180
TKC6-31Z	GJH 121 3061 R ☆ 31 ☆	2	2	6					10	0.180
TKC6-40E	GJH 121 3061 R ☆ 40 ☆	4	0	6					10	0.180

Contactor relays, with flat pin connection, for DC operation

TKC6-22Z-F	GJH 121 3063 R ☆ 22 ☆	2	2	6					10	0.180
TKC6-31Z-F	GJH 121 3063 R ☆ 31 ☆	2	2	6					10	0.180
TKC6-40E-F	GJH 121 3063 R ☆ 40 ☆	4	0	6					10	0.180

Coil code numbers

Coil voltage ranges

Example:

TBC7-30-10	GJL 131 3061 R ☆ 10 ☆	1	0	20	3	5,5	4		10	0.180
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17 ... 24 ... 32 V DC = 5 .. 1

50 ... 70 ... 90 V DC = 5 .. 5

77 ... 110 ... 143 V DC = 6 .. 2

140 ... 200 ... 260 V DC = 6 .. 8

Coil data

Power consumption of coils

at U_{max} (20 °C): operate/hold ≤ 5 W

Reliable drop-out: $\leq 0.2 \times U_c$ (U_c = Rated operating voltage)

Reliable pick-up: $\geq U_{cmin}$



The voltages specified in the table are absolute limit values!

It is not permitted to attach auxiliary switch blocks CA6 or CAF6.

Technical data of TBC7, TKC6

Permissible ambient temperatures

including self-heating °C -30 ... +55

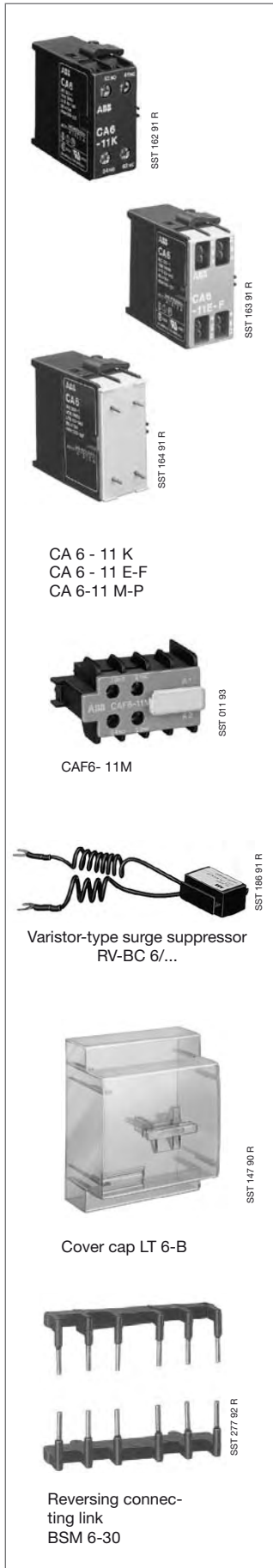
not including self-heating °C -30 ... +70

Storage temperature °C -40 ... +85

All other technical data and dimensions correspond to Types BC7 and KC6.

Accessories for mini contactors

Ordering details



Type	Order code	For mini contactor	Price per unit	Packing unit	Weight per piece kg
		Type		Stck.	
Auxiliary switch blocks for mounting at one side ②					
CA6-11K	GJL 120 1317 R 0001	Screw connection K6... and KC6... B6(7)-40-00 and BC6(7)-40-00 B6(7)-30-10 and BC6(7)-30-10 B6(7)-30-01 and BC6(7)-30-01 Flat pin connection K6...F and KC6...F B6(7)-40-00-F and BC6(7)-40-00-F B6(7)-30-10-F and BC6(7)-30-10-F B6(7)-30-01-F and BC6(7)-30-01-F Soldering connection K6...P and KC6...P B6(7)-40-00-P and BC6(7)-40-00-P B6(7)-30-10-P and BC6(7)-30-10-P B6(7)-30-01-P and BC6(7)-30-01-P		10	0.030
CA6-11E	GJL 120 1317 R 0002			10	0.030
CA6-11M	GJL 120 1317 R 0003			10	0.030
CA6-11N	GJL 120 1317 R 0004			10	0.030
CA6-11K-F	GJL 120 1318 R 0001			10	0.030
CA6-11E-F	GJL 120 1318 R 0002			10	0.030
CA6-11M-F	GJL 120 1318 R 0003			10	0.030
CA6-11N-F	GJL 120 1318 R 0004			10	0.030
CA6-11K-P	GJL 120 1319 R 0001			10	0.030
CA6-11E-P	GJL 120 1319 R 0002			10	0.030
CA6-11M-P	GJL 120 1319 R 0003			10	0.030
CA6-11N-P	GJL 120 1319 R 0004			10	0.030
Auxiliary switch blocks for mounting at front ① Screw connection					
CAF6-11K	GJL 120 1330 R 0001	K6 and KC6		10	0.035
CAF6-20K	GJL 120 1330 R 0005	K6 and KC6		10	0.035
CAF6-02K	GJL 120 1330 R 0009	K6 and KC6		10	0.035
CAF6-11E	GJL 120 1330 R 0002	B(C)6-, B(C)7-40-00, VB(C)...(A)		10	0.035
CAF6-20E	GJL 120 1330 R 0006	B(C)6-, B(C)7-40-00, VB(C)...(A)		10	0.035
CAF6-02E	GJL 120 1330 R 0010	B(C)6-, B(C)7-40-00, VB(C)...(A)		10	0.035
CAF6-11M	GJL 120 1330 R 0003	B(C)6-, B(C)7-30-10, VB(C)...(A)		10	0.035
CAF6-20M	GJL 120 1330 R 0007	B(C)6-, B(C)7-30-10, VB(C)...(A)		10	0.035
CAF6-02M	GJL 120 1330 R 0011	B(C)6-, B(C)7-30-10, VB(C)...(A)		10	0.035
CAF6-11N	GJL 120 1330 R 0004	B(C)6-, B(C)7-30-01, VB(C)...(A)		10	0.035
CAF6-20N	GJL 120 1330 R 0008	B(C)6-, B(C)7-30-01, VB(C)...(A)		10	0.035
CAF6-02N	GJL 120 1330 R 0012	B(C)6-, B(C)7-30-01, VB(C)...(A)		10	0.035
Soldering receptacle (I _n ≤ 8 A)					
LB6	GJL 120 1902 R 0001	For mini contactors B, BC, K, KC		10	0.014
LB6-CA	GJL 120 1903 R 0001	For 2-pole auxiliary switch blocks		10	0.006
Plunger					
BN6	GJL 120 1904 R 0001	For manual operation		50	0.060
Identification marker					
BA50	FPTN 472 625 R 0001	50 clip-on label carriers 50 transparent covers 60 non-adhesive labels ③ 75 self-adhesive labels ③ (③ on sheet)		1 bag	0.100
Varistor-type surge suppressors for protective circuit of the DC contactors BC6, BC7 and KC6					
Note: Mini contactors for AC operation have an integrated protective circuit.					
RV-BC6/60	GHV 250 1902 R 0002	24-60 V. with cable lug		10	0.004
RV-BC6-F/60	GHV 250 1902 R 0003	24-60 V. flat pin, 2.8 mm		10	0.004
RV-BC6/250	GHV 250 1903 R 0002	50-250 V. with cable lug		10	0.004
RV-BC6-F/250	GHV 250 1903 R 0003	50-250 V. flat pin, 2.8 mm		10	0.004
RV-BC6/380	GHV 250 1904 R 0002	380 V. with cable lug		10	0.004
RV-BC6-F/380	GHV 250 1904 R 0003	380 V. flat pin, 2.8 mm		10	0.004
Cover cap, transparent, sealable, enclosure IP 20					
LT6-B	GJL 120 1906 R 0001	for contactors B, BC, K, KC 6 with screw connection		10	0.001
Reversing connecting link					
BSM6-30	GJL 120 1908 R 0001	for compact reversing contactors, VB..., VBC.. with screw connection, cross-section 1.8 mm²		10	0.010
Parallel connecting link					
LP6	GJL 120 1907 R 0001	for contactors B, BC, mit Schraubanschluß, 1 mm thick		100	0.001

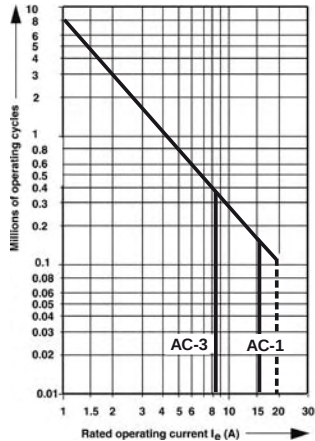
① Auxiliary switches CA6 and CAF6 may not be fitted simultaneously.

Compact reversing contactors VB6 / VBC6 Mini contactors B6 / BC6 / B6S Mini contactor relays K6 / KC6 / K6S

Technical data to IEC 947-4-1, IEC 947-5-1

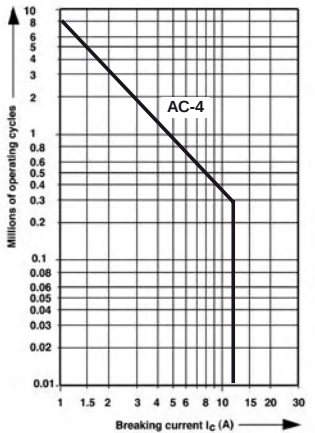
Utilisation category AC-1/AC-3

Contact member service life curves
B6, BC6, B6S



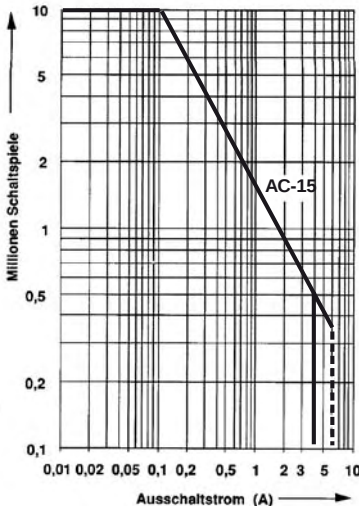
Utilisation category AC-4

Switching a 3-phase squirrel-cage induction motor and switching off the starting current.
Switch-off current I_c at AC-4 corresponds to 6 times the motor's rated operating current.



Utilisation category AC-15

Contact member service life curves
K6, KC6, CA6, CAF6



General data

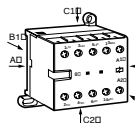
Rated insulation voltage U_i	V	690
Permissible ambient temperature		
Contactor without overload relay	°C	- 25 ... + 55
Contactor with overload relay	°C	- 25 ... + 50
Storage temperature	°C	- 40 ... + 80
Climatic resistance	to DIN 50 017 to UTE C 63-100	Resistant to changeable climates KFW, 30 cycles Version I
Mounting position		any

Main contacts

Mechanical service life	10 million operations			
Electrical service life	see curves			
Max. switching frequency AC-1	ops./h	300		
DC-1, DC-3, DC-5, AC-2, AC-3, AC-15, DC-13	ops./h	600		
Rated operating voltage U_e	V AC	12 to 690		
Rated operating current I_e/AC-1, AC-3 and max. motor output / AC-3 at U_e		AC-1 / I_e A	AC-2, AC-3	
		55 °C	40 °C	I_e A P kW
	220/240 V	16	20	9 2.2
	380/440 V	16	20	9/8 4.0
	500 V	12	12	5.5 3.0

Switching times		B6	BC6	K6	K C6
Closing delay	NO	14 to 26		14 to 26	
Opening delay		16 to 40	4 to 10	16 to 40	4 to 10
Closing delay		18 to 42	6 to 12	18 to 42	6 to 12
Opening delay	NC	14 to 26		14 to 26	

Shock resistance with normal installation position



Shock resistance

Contactors switched off
Contactors switched on

Semi-sinusal shock, 10 ms: with no change in contact state				
A	B1	B2	C1	C2
20 g	20 g	20 g	20 g	20 g
10 g	20 g	20 g	20 g	20 g

Power loss per pole:

2 W at 20 A

Back-up fuse, Type gL, Type 1, Type 2

20 A, 20 A

Auxiliary contacts: integrated, CA6, CAF6, K6, KC6, K6S

Rated operating voltage U_e	V DC	12 to 240
	V AC	12 to 500
Conventional thermal continuous current I_n	A	6
Back-up fuse, Type gGA10		
Rated operating current I_e/AC-15		
at U_e		
24-240 V	A	4
380/440 V	A	3
500 V	A	2
Rated operating current I_e/DC -13		
at U_e		
24 V	A	1.5
60 V	A	0.5
110 V	A	0.4
220/240 V	A	0.04

Min. making/breaking capacity of the auxiliary contacts

⊕ 17 V and ⊕ 5 mA

Solenoid coils

Rated power		closing / holding			
Basic contactors					
B6/K6, VB6	AC	VA	3.5		
BC6/KC6, VBC6	DC	W	3.5		
Interface contactors					
BC6/KC6-1.4	DC 24 V	W	1.4		
BC6/KC6-2.4	DC 17 ... 32 V	W	2.4		
Mini contactor for connection to PLCs, mini contactor relay for connection to PLCs			cold	warm	
			I mA	P W	I mA P W
B6S-1.7, K6S-1.7	DC 24 V	W	77	1.75	60 1.35
B6S-2.8, K6S-2.8	DC 17 ... 32 V	W	125	2.80	94 2.10
Coil voltage range			0.85 ... 1.1x U_e		

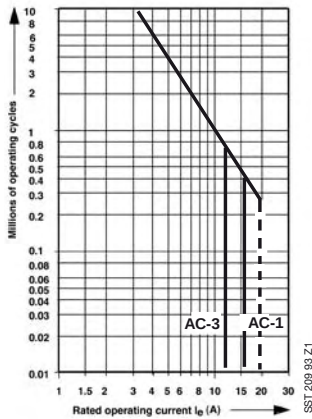
Switching DC, see leaflet

Mini contactors B7 / BC7 / B7S

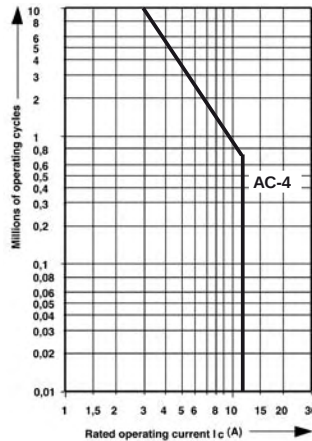
Compact reversing contactors VB7 / VBC7

Technical data to IEC 947-4-1

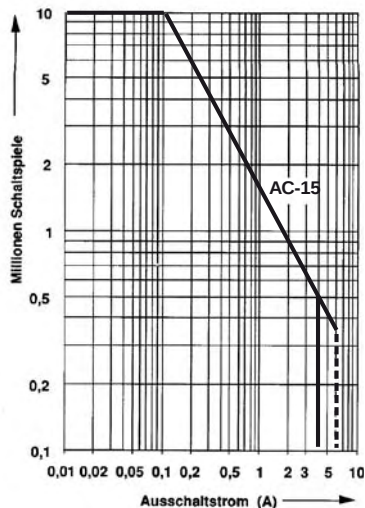
Utilisation category AC-1/AC-3
Contact member service life curves
B 7, BC 7, B 7S



Utilisation category AC-4
Switching a 3-phase squirrel-cage induction motor and switching off the starting current.
Switch-off current I_c at AC-4 corresponds to 6 times the motor's rated operating current



Utilisation category AC-15
Contact member service life curves
K6, KC6, CA6, CAF6



General data

Rated insulation voltage U_i	V	690
Permissible ambient temperature	°C	- 25 ... + 55
Contactor without overload relay	°C	- 25 ... + 50
Storage temperature	°C	- 40 ... + 80
Climatic resistance	to DIN 50 017 to UTE C 63-100	Resistant to changeable climates KFW, 30 cycles Version 1
Mounting position		any

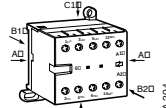
Main contacts

Mechanical service life	10 million operations			
Electrical service life	see curves			
Max. switching frequency	AC-1 ops./h	300		
DC-1, DC-3, DC-5, AC-2, AC-3, AC-15, DC-13 ops./h		600		
Rated operating voltage U_e	V AC	12 to 690		
Rated operating current I_e/AC-1, AC-3 and motor output / AC-3		AC-1 / I_e A	AC-2, AC-3	
		55 °C	40 °C	I_e A P kW
at U_e	220/240 V	16	20	12/11 3
	380/440 V	16	20	12/11 5.5
	500 V	12	12	7 4

Switching times

Closing delay	NO	ms	B7 14 to 26	BC7 16 to 40 4 to 10
Opening delay		ms		18 to 42 6 to 12
Closing delay	NC	ms		
Opening delay		ms	14 to 26	

Shock resistance with normal installation position



Shock direction	A	B1	B2	C1	C2
Contactors switched off	20 g	20 g	20 g	20 g	20 g
Contactors switched on	10 g	20 g	20 g	20 g	20 g

Power loss per pole:

2 W at 20 A

Back-up fuse assignment type

Type 1

25 A

Type gG (gL)

Type 2

20 A

Auxiliary contacts: integrated

Minimum making/breaking

⊕ 17 V ⊕ 5 mA

Solenoid coils

Rated power

Basic contactors

B7 / VB7 AC VA Closing / holding

3.5

BC7 / VBC7 DC W 3.5

Interface contactors

BC7-1.4 DC 24 V W 1.4

BC7-2.4 DC 17 ... 32 V W 2.4

Mini contactor for connection to PLCs

			cold		warm	
			I (mA)	P (W)	I (mA)	P (W)
B7S-1.7	DC	24 V	77	1.70	60	1.35
B7S-2.8	DC	17 ... 32 V	125	2.80	94	2.10

Coil voltage range 0.85...1.1x U_e

Utilisation categories for B6 and B7

Utilisation category		DC-1		DC-3		DC-5	
		L/R < 1 ms		L/R < 2 ms		L/R < 7.5 ms	
	24 V	A	16.0	16.0	16.0		
	48 V	A	16.0	8.0	2.0		
	60 V	A	16.0	4.0	1.25		
	110 V	A	7.0	1.5	0.4		
	220 V	A	0.8	0.25	0.20		
	24 V	A	16.0	16.0	16.0		
	48 V	A	16.0	16.0	16.0		
	60 V	A	16.0	15.0	12.0		
	110 V	A	16.0	7.0	2.0		
	220 V	A	5.0	1.5	0.5		
	24 V	A	16.0	16.0	16.0		
	48 V	A	16.0	16.0	16.0		
	60 V	A	16.0	16.0	16.0		
	110 V	A	16.0	15.0	8.0		
	220 V	A	14.0	4.0	2.0		

Mini contactors B6, B7 / BC6, BC7

Compact reversing contactors VB6(7) / VBC6(7)

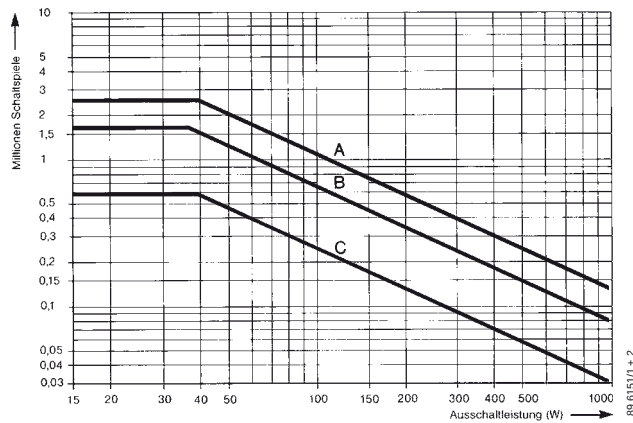
Contact member service life, utilisation categories

Contact member service life for utilisation categories DC-1, DC-3, DC-5

The following curves show the contact member service life for utilisation categories DC-1, DC-3 and DC-5 for 3 poles in series. If only one current path is used, the service life read off for the related breaking capacity must be multiplied by **0.33**, and, if there are 2 current paths, it must be multiplied by **0.66**.

The time constants L/R (ms) which differ for the individual utilisation categories have been allowed for on the curves.

A = 3 poles in series DC-1
B = 3 poles in series DC-3
C = 3 poles in series DC-5



Mini contactors B6, B7 / BC6, BC7

Compact reversing contactors VB6(7) / VBC6(7)

Switching lamp loads

Switching lamp loads

The following table shows the number of lamps which can be connected per circuit at 230 V/50 Hz. Please note the following:

If the specified capacitor load is exceeded, this may result in admissibly high peak inrush currents. Other factors which influence the magnitude of peak inrush currents are as follows:

- Length and cross-section of installed supply cables
- Type of electronic ballast units
- Lamp make

The following lamp load table thus contains non-binding guideline values.

Lamp type	Lamp data		Permissible number of lamps per circuit (230 V, 50 Hz) I, in the case of contactor type B6, B7, BC6, BC7	Ca- pa- citor load in µF
	Watt	A		
Incandescent lamps	60	0.26	20	
	100	0.43	12	
	200	0.87	6	
	300	1.30	4	
	500	2.17	2	
	1000	4.35	1	
Fluorescent lamps	p.f. uncorrected and series p.f. correction			
	15	0.33	25	
	20	0.37	23	
	40	0.43	20	
	58	0.67	16	
	65	0.67	12	
	115	1.5	5	
	140	1.5	5	
	Lead-lag circuit			
	2 x 20	2 x 0.13	2 x 26	Lamp pairs
	2 x 40	2 x 0.22	2 x 20	
	2 x 58	2 x 0.32	2 x 16	
	2 x 65	2 x 0.34	2 x 12	
	2 x 115	2 x 0.65	2 x 5	
	2 x 140	2 x 0.75	2 x 5	
Parallel p.f. correction				
15	0.11	7	4.5	
20	0.13	6	4.5	
40	0.22	7	4.5	
58	0.32	5	7	
65	0.34	4	7	
115	0.65	1	18	
140	0.75	1	18	
High-pressure mercury-vapour lamps e.g. HQL, HPL	p.f. uncorrected			
	50	0.61	10	
	80	0.8	7	
	125	1.15	5	
	250	2.15	3	
	400	3.25	2	
	700	5.40	1	
	Parallel p.f. correction			
	50	0.28	4	7
	80	0.41	3	8
	125	0.65	2	10
	250	1.22	1	18
	400	1.95	1	25
	700	3.45	-	45
	1000	4.8	-	60
Lamps with electronic ballast units	1 x 18	Đ	17	
	2 x 18	Đ	8	
	1 x 36	Đ	11	
	2 x 36	Đ	6	
	1 x 56	Đ	11	
	2 x 58	Đ	6	

Lamp type	Lamp data		Permissible number of lamps per circuit (230 V, 50 Hz) I, in the case of contactor type B6, B7, BC6, BC7	Ca- pa- citor load in µF	
	Watt	A			
Metal-halogen lamps e.g. HQI, HPI	p.f. uncorrected				
	35	0.53	10		
	70	1	5		
	150	1.8	3		
	250	3	2		
	400	3.5	1		
	Parallel p.f. correction				
	35	0.25	6	6	
	70	0.45	3	12	
	150	0.75	1	20	
	250	1.5	1	33	
	400	2.5	1	35	
Low-pressure sodium-vapour lamps	p.f. uncorrected				
	35	1.5	4		
	55	1.5	4		
	90	2.4	2		
	135	3.5	2		
	150	3.3	2		
	180	3.3	2		
	200	2.3	2		
	Parallel p.f. correction				
	35	0.31	-	20	
	55	0.42	-	20	
	90	0.63	-	30	
	135	0.94	-	45	
	150	1.0	-	40	
	180	1.16	-	40	
	200	1.32	-	25	
	High-pressure sodium-vapour lamps	p.f. uncorrected			
		150	1.8	3	
250		3.0	2		
330		3.7	2		
400		4.7	1		
Parallel p.f. correction					
150		0.83	-	20	
250		1.5	-	33	
330		2.0	-	40	
400		2.4	-	48	
1000		6.3	-	106	
Transformers for halogen low-volt lamps		Transformers for	Permissible number of transformers per circuit (230 V, 50 Hz) in the case of contactor type		
	Watt	B6, B7, BC6, BC7			
	20	40			
	50	20			
	75	13			
	100	10			
	150	7			
	200	5			
	300	3			

Mini contactors, mini contactor relays

Thermal overload relay

Accessories, Approvals



B6 30-10



KC6-31 Z

The following equipment has been approved or approval has been requested in those countries and classification societies where approval is mandatory. For some countries, special versions of equipment are available. When a supplier of a control unit incorporates approved equipment, this does not exempt him from his obligation to implement the overall installation in accordance with the legal local requirements of the country involved.

Approvals

Test marks

Abbreviation

Validity



SEV
Switzerland



DEMKO
Denmark



NEMKO
Norway



SEMKO
Sweden



EL
Inspect.
Finland



CS
Canada



USA



UL



GL
Germany

Mini contactors

B6../B7..	■	■	■	■	■	■	■	■	■
B6/B7..-F	■	■	□	■	■	■	■	■	■
B6/B7..-P	■	■	□	■	■	■	■	■	■
BC6/BC 7..	■	■	■	■	■	■	■	■	■
BC6/BC 7..-F	■	■	□	■	■	■	■	■	■
BC6/BC7..-P	■	■	□	■	■	■	■	■	■
BC6/BC7..-1.4	■	■	■	■	■	■	■	■	■
BC6/BC7..-F-1.4	■	■	■	■	■	■	■	■	■
BC6/BC7..-P-1.4	■	■	■	■	■	■	■	■	■
BC6/BC7..-2.4	■	■	■	■	■	■	■	■	■
BC6/BC7..-F-2.4	■	■	■	■	■	■	■	■	■
BC6/BC7..-P-2.4	■	■	■	■	■	■	■	■	■
B6S/B7 S	■	■	■	■	■	■	■	■	■

Compact reversing contactors

VB6/VB7..	■	■	□	■	■	■	■	■	■
VBC 6/VBC7	■	■	■	■	■	■	■	■	■

Thermal overload relay

T6DU	■	□	■	■	■	■	■	■	■
------	---	---	---	---	---	---	---	---	---

Mini contactor relays

K6..	■	■	■	■	■	■	■	■	■
K6..-F	■	■	■	■	■	■	■	■	■
K6..-P	■	■	■	■	■	■	■	■	■
KC6..	■	■	■	■	■	■	■	■	■
KC6..-F	■	■	■	■	■	■	■	■	■
KC6..-P	■	■	■	■	■	■	■	■	■
KC6..-1.4	■	■	■	■	■	■	■	■	■
KC6..-F-1.4	■	■	■	■	■	■	■	■	■
KC6..-P-1.4	■	■	■	■	■	■	■	■	■
KC6..-2.4	■	■	■	■	■	■	■	■	■
KC6..-F-2.4	■	■	■	■	■	■	■	■	■
KC6..-P-2.4	■	■	■	■	■	■	■	■	■

Accessories

CA6-11..	■	■	■	■	■	■	■	■	■
CAF6..	■	■	■	■	■	■	■	■	■
LB6	■	■	■	■	■	■	■	■	■
LB6-CA	■	■	■	■	■	■	■	■	■

■ Normal version approved; rating plates bear the test mark if mandatory.

□ Submitted for approval

Motor rating and rated operating currents in accordance with CSA and UL for contactors (B(C)6 and B(C)7, in addition to contactor relays K(C)6.

In the case of CSA and UL, the contactors are approved both for "Motor rating 3-phase" and for "AMP rating". For this reason, the permissible ratings for contactors are approved either for "hp" or "Amp rating", with an assigned rated current

Motor rating for contactors B(C)6:

Rated operating voltage	$U_e \sim$ (V)	110/120 V	220/240 V	440/480 V	540/600 V
Motor output	P (hp)	1	2	3	1
3-phase	I_e (A)	8.4	6.8	1.8	1.7
Motor output	P (hp)	1	2	-	-
Single-phase	I_e (A)	16	12	-	-

Amp-rating: - 12 A-300 V, AC for the main contacts of contactors B(C)6

respectively. The approved values for the individual contactors and contactor relays are given in the table below. The determining factor is the data indicated on the units as shown on the following table

Motor rating for contactors B(C)7 :

Rated operating voltage	$U_e \sim$ (V)	110/120 V	220/240 V	440/480 V	540/600 V
Motor output	P (hp)	1	3	5	5
3-phase	I_e (A)	8.4	9.6	7.6	6.1
Motor output	P (hp)	1	2	2	2
Single-phase	I_e (A)	16	12	6	4.8

Amp-rating: - 12 A-600 V, AC for the main contacts of contactors B(C)7

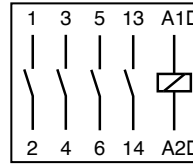
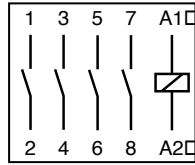
- 5 A-600 V, AC pilot duty A 600 for incorporated auxiliary contacts B(C)6, K(C)6 and B(C)7, in addition to attachable auxiliary switch blocks CA6.
Values for 220 ... 208 V = (220 ... 240 V) x 1.15

Mini contactors and mini contactor relays

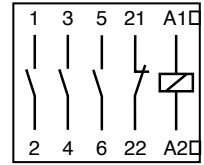
Terminal designation

and location of the connection terminals

Location of the connection terminals and terminal designation



91 A 364

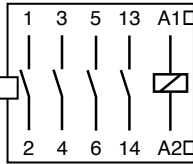
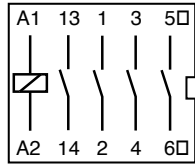


Mini contactors

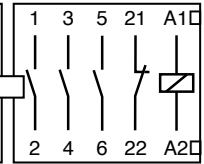
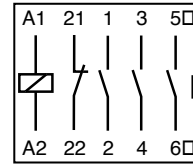
B6(7)-40-00 ...
BC6(7)-40-00 ...

B6(7)-30-10 ...
BC6(7)-30-10 ...

B6(7)-30-01 ...
BC6(7)-30-01 ...



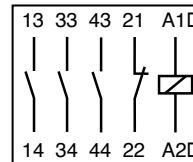
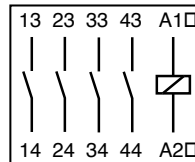
91 A 365



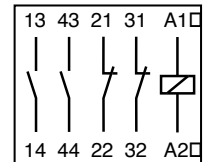
Compact reversing contactors

VB6(7)-30-10 ...
VBC6(7)-30-10 ...

VB6(7)-30-01 ...
VBC6(7)-30-01 ...



91 A 366



Mini contactor relays

K6-40 E ...
KC6-40 E ...

K6-31 Z ...
KC6-31 Z ...

K6-22 Z ...
KC6-22 Z ...

Auxiliary switches CA6/CAF6 *

For extending the mini contactors B6, B7, BC6, BC7, K6 and KC6 with auxiliary contacts

Except: Contactors with coils < 3.5 W

Auxiliary switches CA6..., attachable at side

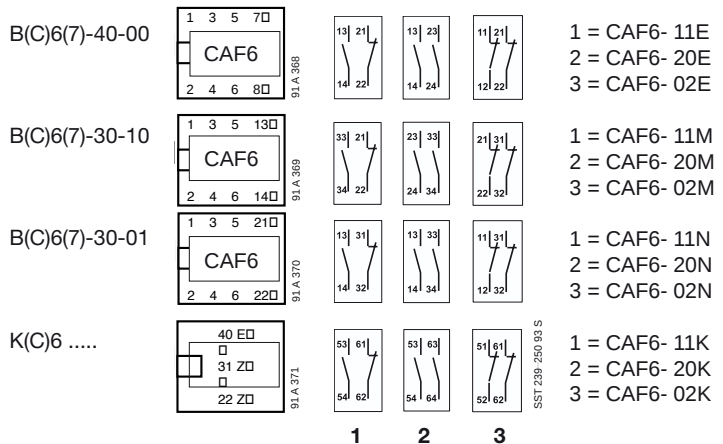
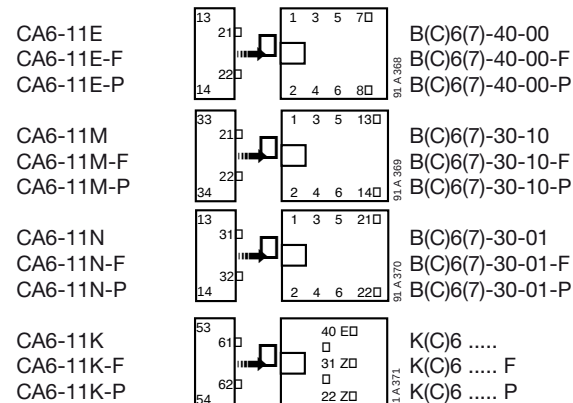
Cannot be attached on compact reversing contactors VB6(7), VBC6(7), VB6A(7) or VBC6A(7).

Connection type: Screw connection
Flat pin connection
Soldering connection

Auxiliary switches CAF6, (also in the case of reversing contactors) can be screwed on at the front

Connection type: Screw connection

Schütztypen



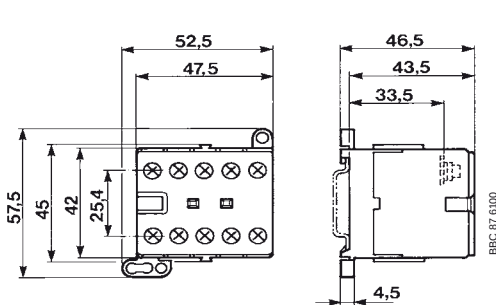
Only one CA 6 or one CAF 6 auxiliary switch can be attached to a contactor in each case

Mini contactors

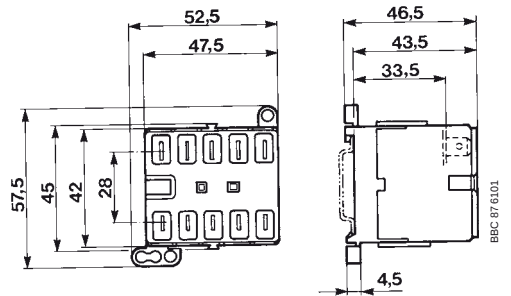
Accessories

Dimension diagrams

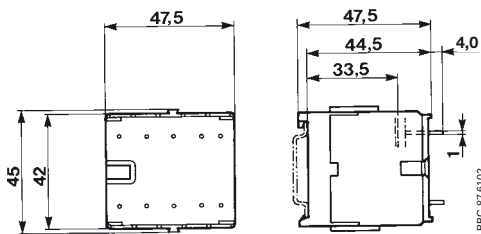
Dimensions in mm
Subject to modification



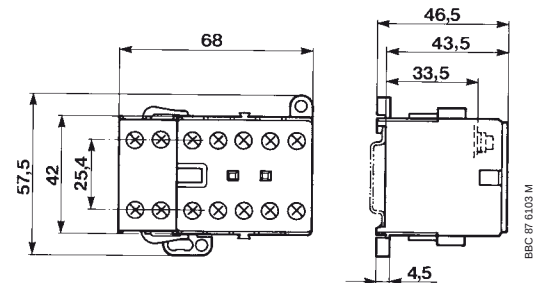
B6(7)..., BC6(7)..., K6..., KC6...,
for screw connection



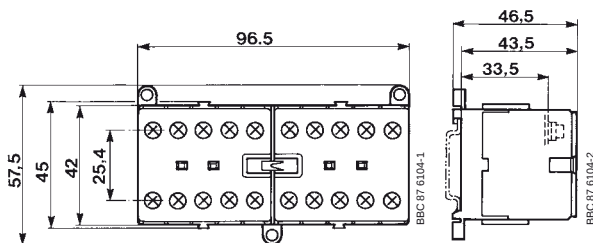
B6(7)..., BC6(7)..., K6..., KC6...,
for flat pin connection



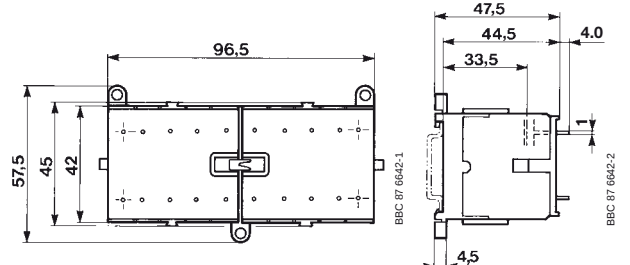
B6(7)..., BC6(7)..., KC6..., KC6...,
with soldering pins



B6(7)..., BC6(7)..., K6..., KC6...,
with auxiliary switch block CA6



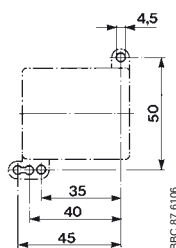
Compact reversing contactor VB(C)6(7)
with screw connection



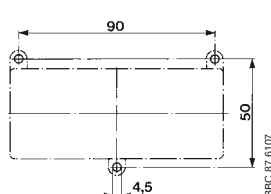
Compact reversing contactor VB(C)6(7)
with soldering pins

Drilling plans for mini contactors

For screw mounting M4

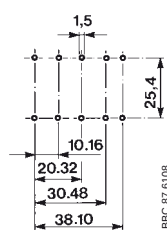


B6(7)..., BC6(7)...,
K6..., KC6..

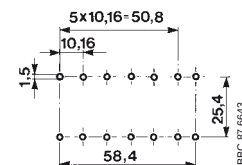


VB6(7), VBC6(7)
VB6A(7A), VBC6A(7A)

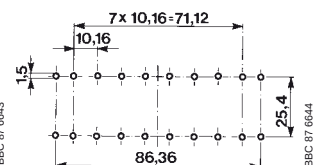
For PC board



Basic devices
4-pole



Basic devices with
auxiliary switch block



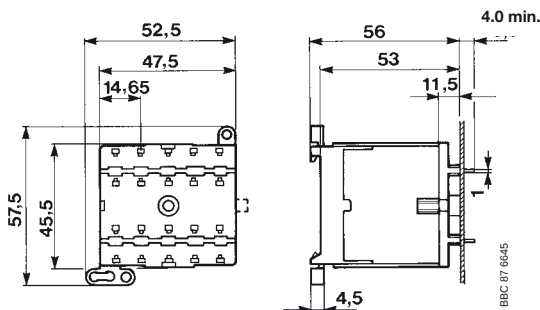
Compact
reversing contactor

Mini contactors

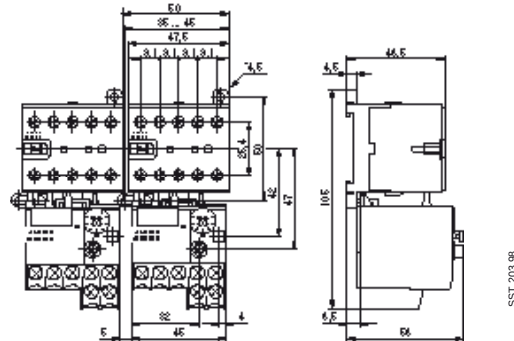
Accessories

Dimension diagrams

Dimensions in mm
Subject to modification

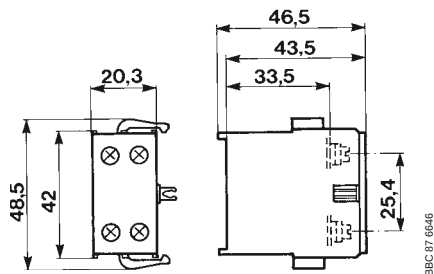


B6(7)-F mit LB6

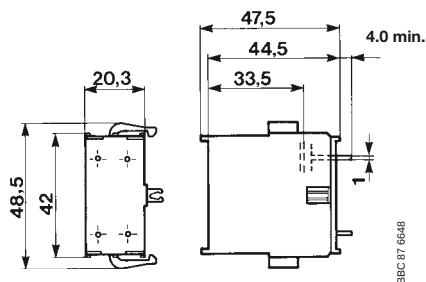


B6(7) with T7DU

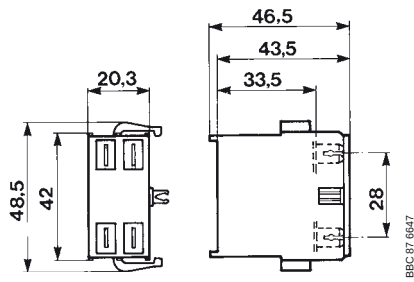
Auxiliary switch blocks



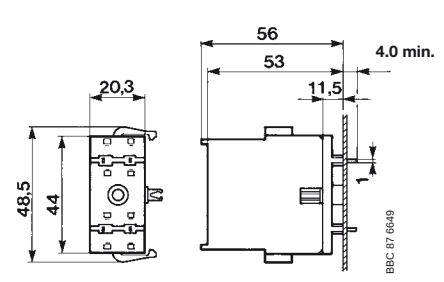
CA6



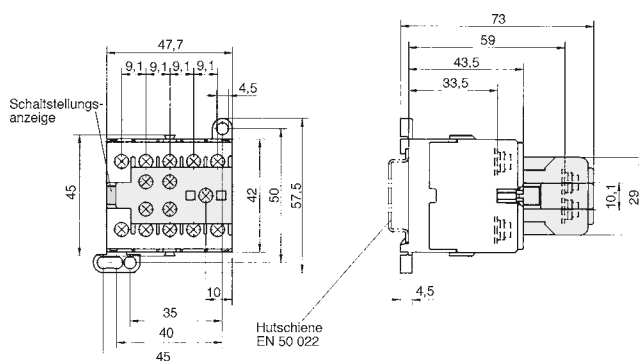
CA6-P



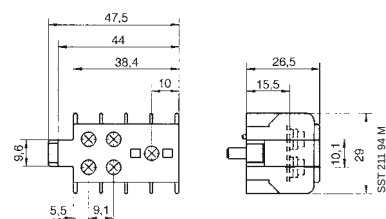
CA6-F



CA6 with LB6-CA



B(C)6, B(C)7, K(C)6
with screwed-on auxiliary switch block CAF6



CAF6

Thermal overload relay T7DU

for mini contactors

Technical data, ordering details



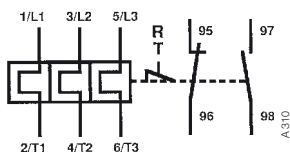
SST 002 98

Thermal overload relay
T7DU



SST 001 98

Thermal overload relay
T7DU mounted onto
a mini contactor B7-30-01



Type	Order code	Setting range	Max. fuse		Preis per piece	Pack. unit	Weight
			aM A	gL A			
		A ... A				piece	kg

Thermal overload relay T7DU for mini contactors B6, BC6, B6S, BC6, VB6, VBC6, B7, BC7, B7S, BC7, VB7, VBC7

T7DU 0.16	1SAZ 111 301 R 0001	0.10 ... 0.16		0.5		1	0.070
T7DU 0.24	1SAZ 111 301 R 0002	0.16 ... 0.24		1,0		1	0.070
T7DU 0.4	1SAZ 111 301 R 0003	0.24 ... 0.40		2,0		1	0.070
T7DU 0.6	1SAZ 111 301 R 0004	0.40 ... 0.60		2,0		1	0.070
T7DU 1.0	1SAZ 111 301 R 0005	0.60 ... 1.00		4,0		1	0.070
T7DU 1.6	1SAZ 111 301 R 0006	1.00 ... 1.60		6,0		1	0.070
T7DU 2.4	1SAZ 111 301 R 0007	1.60 ... 2.40		6,0		1	0.070
T7DU 4.0	1SAZ 111 301 R 0008	2.40 ... 4.00		10,0		1	0.070
T7DU 6.0	1SAZ 111 301 R 0009	4.00 ... 6.00		10,0		1	0.070
T7DU 9.0	1SAZ 111 301 R 0010	6.00 ... 9.00		10,0		1	0.070
T7DU12.0	1SAZ 111 301 R 0011	9.00 ... 12.00		20,0		1	0.070

T7DU is into normal Version for EEx e suitableTable:
Tripping times of T7DU at multiple of setting current on request.
Technical data see page 20.

Dimension (in mm)
B6/B7 with mounted T7DU see page 18.

The tripping characteristic is the value at 20°C ambient temperature from cold state. The tripping time is dependent on the operating current. By operating in a warm state the tripping time of the overload relay approximately is reduced by 1/4 of the relevant value in cold state.

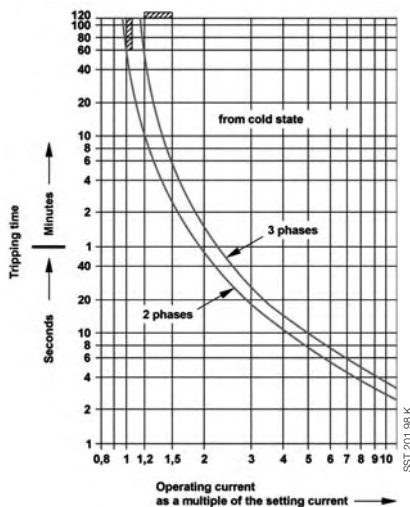
Therma ad relay T7DU

for mini contactors

Technical data, ordering details

Technical data

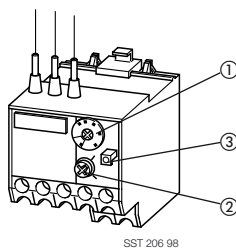
Rated insulation voltage	U_i	690 V
Permissible ambient temperature	°C	-25 ... +50 open temperature-compensated
Storage temperature	°C	-40 ... +70
Mounting position		±30° referred to vertical mounting position not horizontal, not upside down, 5 mm lateral clearance for side-by-side mounting
Switching frequency with avoidance of premature tripping	max. ops./h	15
² 40 % relative duty	max. ops./h	60 (if $6 \times I_n$ starting time ² 1s)



Load rating of auxiliary switches

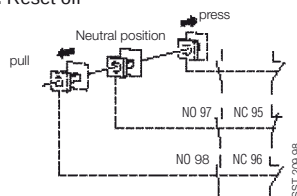
Type		T 7 DU	
		NC 95-96	NO 97-98
Rated operating voltage U_e	V	500	500
Thermal continuous current	A	6	6
Rated operating voltage I_e at AC-15 220 to 240 V	A	1.5	1.5
at AC-15 380 to 415 V	A	0.7	0.5
at AC-15 to 500 V	A	0.5	0.3
In the case of DC-15 220 V	A	0.2	0.2

Time-current curves (mean values),
for thermal overload relay T7DU,
0.1 ... 12 A.



Setting options

- ① **Setting knob** for motor rated current
- ② **Reset:** Manual "manual reset"
Position A: Auto "without manual reset"
Position H: Reset off
- ③ **Test knob**

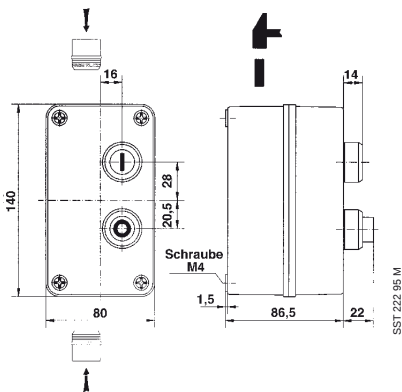


Motor starters in insulating-material housings DRB6, DRB7

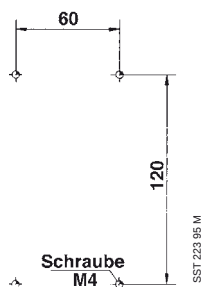


DRB6 / DRB7

SST 055 95 R



Dimension diagram DRB6 / DRB7



Drilling plan DRB6 / DRB7

SST 223 95 M

The convincing features of the motor starters DRB6 and DRB7 are their power and efficiency with compact design. DRB 6 is capable of switching rated motor outputs of 4 kW AC3 and DRB7 switches rated outputs up to 5.5 kW AC3. The devices are extremely low-noise. The motor starters feature contactors of type of construction B6 resp. B7 with universal coils. The insulating-material housings comply with enclosure IP 65. The starters are available in two versions: with or without integrated thermal overload relay T7DU.

Ordering details

Type	Control voltage 40 to 450 Hz.	Order code	Max. back-up fuse, Type 2		Price	Weight/ piece kg
			aM A	gl A		

Motor starter with thermal overload relay T 7 DU

DRB6	1.0 A	220 -240 V AC	GJK 127 4156 R 5689	2	4	0.670
DRB6	1.6 A	220 -240 V AC	GJK 127 4156 R 5691	2	4	0.670
DRB6	2.4 A	220 -240 V AC	GJK 127 4156 R 5693	4	6	0.670
DRB6	4.0 A	220 -240 V AC	GJK 127 4156 R 5694	4	6	0.670
DRB6	6.0 A	220 -240 V AC	GJK 127 4156 R 5696	10	16	0.670
DRB6	9.0 A	220 -240 V AC	GJK 127 4156 R 5697	12	20	0.670

Motor starter without thermal overload relay

DRB6	220-240 V AC	GJK 127 4156 R 5601			0.580
DRB7	220 -240 V AC	GJK 137 4156 R 5601			0.580

Technical data

General data:

Motor starters DRB6 and DRB7 feature thermal overload relays T7DU and pushbuttons "ON"- "OFF/RESET" and are wired in accordance with the circuit diagram below. (Pushbuttons green for ON, red for OFF/RESET)

Motor output, AC-3:

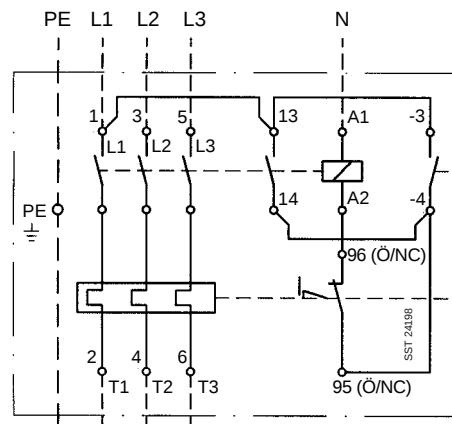
DRB6	380-415 V	4.0 kW	DRB7	380-415 V	5.5 kW
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Application:

Starting 3-phase motors, 40-60 Hz AC3

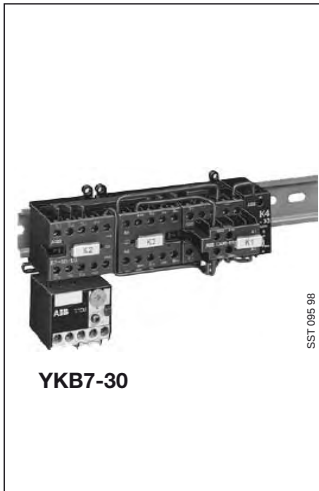
Circuit diagram

U_e 380 - 415 V 3-phase, 50/60 Hz
 U_c 220 - 240 V 40 ... 450 Hz



Star-delta contactor combinations

Type YKB7-30



Star-delta contactor combination YKB7-30 for switching motors up to 9 kW AC3 400/440 V.

The small, compact and extremely flat combination can be used primarily for applications in which space is at a premium or which involve a low installation depth owing to their compact dimensions of (HxWxD) 105 x 185 x 80.6 mm.

The star-delta contactor combination consists of a three mini contactors, one thermal overload relay

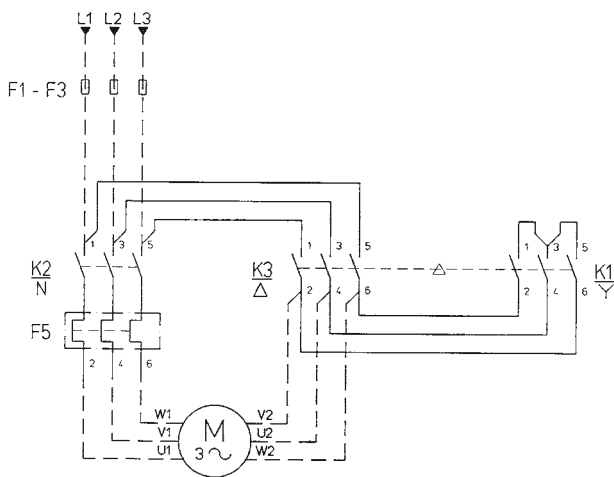
(set to rated motor current x 0.58) and a star-delta timer block with a setting range of 1.5 ... 30 s.

The YKB7-30 is pre-wired ready for connection and is mounted on a top-hat rail to DIN EN 50 022, enclosure IP 00.

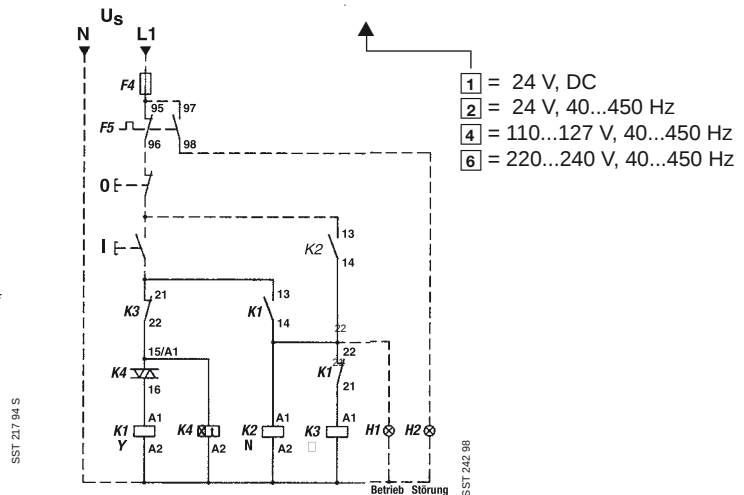
An incorporated mechanical interlock which mutually interlocks the star contactor and delta contactor ensures high operational reliability.

Ordering details

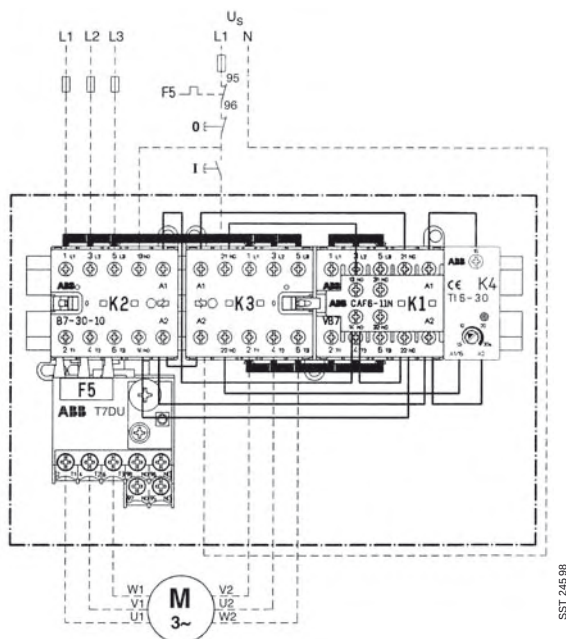
Motor output P 400 V, AC 3 kW	Contactors N, Y, Δ	Thermal overload relay Setting range A	Order code Add the code No. ☐ to the order code	Price	Weight/ piece kg	Pack. unit piece
4	B7, VB7	4.0 ... 6.0	GJK 131 389 ☐ R 0096		0.760	1
5.5 ... 7.5	B7, VB7	6.0 ... 9.0	GJK 131 389 ☐ R 0097		0.760	1
9	B7, VB7	9.0 ... 12.0	GJK 131 389 ☐ R 0098		0.760	1



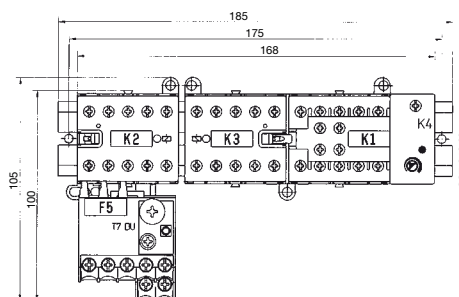
Main circuit for YKB7-30



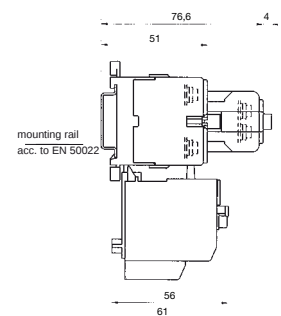
Control circuit for YKB7-30



Wiring diagram for YKB7-30



Dimension diagram for YKB7-30



Mini Contactors

Type B6, B7

