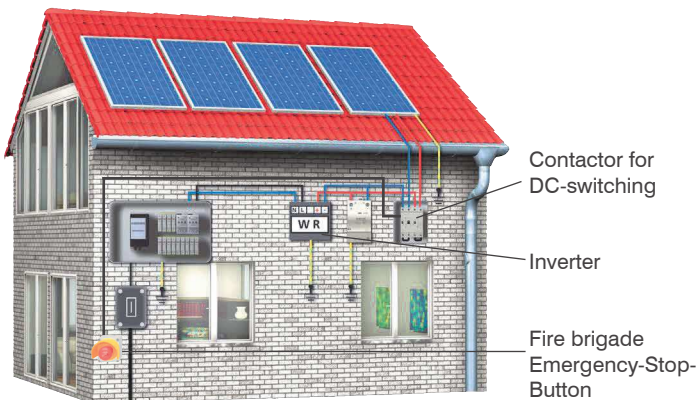


Contactors for DC-Switching

AC-operated

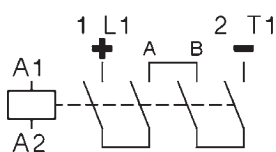
Rated Operational Current				Additional Aux. Contacts	Type	Coil voltage ¹⁾ 230	Coil voltage ¹⁾		Wiring diagram
DC1	600V	1000V	1200V				220-230V 50Hz, 240V 60Hz	Pack pcs.	
						↓			
	20A	-	-	2 HKA11	K3DC-20A00 ...		1	0,5	
	50A	-	-	+1 HKT.	K3DC-48A00 ...		1	0,5	
	60A	30A	-	2 HKA11	K3DC-60A00 ...		1	1,2	
	80A	60A	-	+1 HKT.	K3DC-80A00 ...		1	1,2	
	100A	-	-		K3DC-100A00 ...		1	1,8	
	12A	12A	6A	2 HKA11 +2 HKT.	K3PV-12A00 ...		1	0,8	
	30A	30A	-	2 HKA11	K3PV-30A00 ...		1	0,9	
	60A	60A	-	+2 HKT.	K3PV-60A00 ...		1	0,9	
	80A	80A	-	2 HKA11	K3PV-80A00 ...		1	1,5	
	100A	100A	-	+1 HKT.	K3PV-100A00 ...²⁾³⁾		1	2,3	
	150A	150A	-	2 HKA11	K3PV-150A00 ...²⁾³⁾		1	5	
	200A	200A	-	+1 HKT.	K3PV-200A00 ...²⁾³⁾		1	5	
	240A	240A	-		K3PV-240A00 ...²⁾³⁾		1	5	
	300A	300A	-	2 HKA11	K3PV-300A00 ...²⁾³⁾		1	7,5	
	400A	400A	-	+1 HKT.	K3PV-400A00 ...²⁾³⁾		1	7,5	
	450A	450A	-		K3PV-450A00 ...²⁾³⁾		1	7,5	

Contactors for DC-Switching for PV-installations, as remote controlled fire protection defeat device

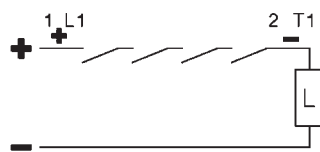


In most Photovoltaic-installations, the switch disconnectors according to IEC 60364-7-712 are integrated in the DC/AC-inverter. So the wires between solar-panels and inverter are continuously under voltage. According to ÖVE-R11-1: 2013, Photovoltaic-installations must have a fire protection defeat device. For this purpose, BENEDICT contactors for DC-switching, used as a fire protection defeat device, can switch off the Photovoltaic-installation with a remote controlled fire brigade Emergency-Stop-button.

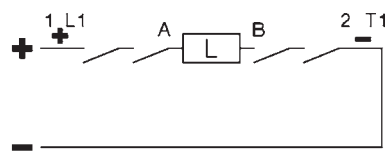
Switch diagram (4 contacts)



Connection diagram 1-pole




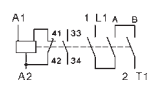

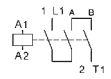

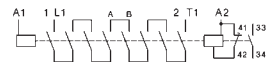
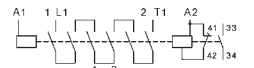

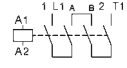

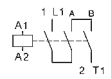

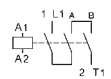
For using as two-poles contactor remove connection A-B




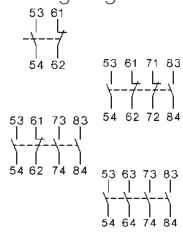


1) Other coil voltages from 24 to 600V AC, on request
 2) Type for AC- and DC-operating: e.g.: 230: 220-240V 50/60Hz and 220V=
 3) With integrated coil suppressor

Contactors for DC-Switching

DC-operated

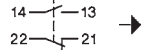
Type	Coil voltage ¹⁾	Aux. Contacts		Pack pcs.	Weight kg/pcs.	Wiring diagram	
	24 24V= DC	build in NO NC	additional Type				
		1	-	1 HKA11	1	0,5	
K3DC-48A10= ...⁵⁾		1	-	+1 HKT.	1	0,5	
		-	-	1 HKA11	1	1,2	
K3DC-80A00= ...⁵⁾		-	-	+1 HKT.	1	1,2	
K3DC-100A00= ...⁵⁾		-	-		1	1,8	
		1	-	1 HKA11 +2 HKT.	1	0,85	
K3PV-30A10= ...⁵⁾		1	-	1 HKA11	1	0,95	
K3PV-60A10= ...⁵⁾		1	-	+2 HKT.	1	0,95	
		-	-	2 HKA11	1	1,5	
K3PV-100A00 ...^{2) 5)}		-	-	+1 HKT.	1	2,3	
		-	-	2 HKA11	1	5	
K3PV-200A00 ...^{2) 5)}		-	-	+1 HKT.	1	5	
K3PV-240A00 ...^{2) 5)}		-	-		1	5	
		-	-	2 HKA11	1	7,5	
K3PV-400A00 ...^{2) 5)}		-	-	+1 HKT.	1	7,5	
K3PV-450A00 ...^{2) 5)}		-	-		1	7,5	

Auxiliary Contact Blocks for contactors K3DC-.. and K3PV-.., for low level switching⁴⁾

Type	Rated Operational Current			for contactors	Type	Pack pcs.	Weight kg/pcs.	Wiring diagrams
	AC15	AC15	AC1					
	230V	400V	690V		HKT11	1	0,04	
3	2	10	K3DC, K3PV-.. top		HKT22	1	0,05	
3	2	10	K3DC, K3PV-.. top		HKT31	1	0,05	
3	2	10	K3DC, K3PV-.. top		HKT40	1	0,05	
	3	2	10	K3DC, K3PV-.. side	HKA11	1	0,05	

Accessories















Fire Brigade-EMERGENCY STOP key operated button Ø40mm, according to EN418, unlock by key	BG10P44S3-11 +SK	1	0,22		3)
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1) Other coil voltages from 24 to 250V DC, on request
 2) Type for AC- and DC-operating: e.g.: 24: 24V 50/60Hz and 24V=
 3) → opener positive opening acc. IEC/EN60947-5-1
 4) Contacts suitable for electronic circuits, according to IEC60947-5-4 for rated voltage 24V DC (test ratings 17V DC, 5mA) Mirror contacts acc. IEC60947-4-1 Annex F.
 Technical data see page 78
 5) With integrated coil suppressor

Technical Data

Data according to IEC 60947-4-1, VDE 0660

Type		K3DC-20..	K3DC-48..	K3DC-60..	K3DC-80..	K3DC-100..	K3PV-12..	K3PV-30..	K3PV-60..	K3PV-80..	K3PV-100..	K3PV-150..	K3PV-200..	K3PV-240..	K3PV-300..	K3PV-400..	K3PV-450..				
Rated insulation voltage U_{imp}	V= kV	600 8	600 8	1000 8	1000 8	600 8	1200 8	1000 8	1000 8	1000 8	1000 8	1000 8	1000 8	1000 8	1000 8	1000 8	1000 8				
poles in series		3	3	3	3	3	8	6	6	4	4	3	3	3	3	3	3				
DC1 600V dc	I_e A	20	50	60	80	100	12	30	60	80	100	150	200	240	300	400	450				
DC1 1000V dc	I_e A	-	-	30	60	-	12	30	60	80	100	150	200	240	300	400	450				
DC1 1200V dc	I_e A	-	-	-	-	-	6	-	-	-	-	-	-	-	-	-	-				
DC3/5 310V dc	I_e A	-	-	-	40	60	-	15	24	40	90	125	170	200	230	270	300				
DC3/5 460V dc	I_e A	-	-	-	-	-	-	15	24	40	40	125	170	200	230	270	300				
DC3/5 600V dc	I_e A	-	-	-	-	-	-	-	-	-	-	50	60	75	120	160	200				
Main pole resistance	mOhm	1,8	1,8	1,4	1,2	1	2,2	1,8	1,8	1,2	1	0,5	0,5	0,35	0,15	0,15	0,15				
poles in series resistance	mOhm	5,4	5,4	4,2	3,6	3	17,6	10,8	10,8	4,8	4	1,5	1,5	1,1	0,5	0,5	0,5				
Mechanical life	10^6	10										10			8						
Protection degree		IP20										IP00 / IP20 ¹⁾			IP00 / IP20 ¹⁾						
Main poles																					
Cable cross sections	mm ²	2 x 1,5 - 10		2,5 - 35		4 - 35 +4-50		2x 1,5-2,5		2 x 1,5 - 10		2,5-35 4 - 35 +4 - 50		Busbar 18 x 4 Screw M8			Busbar 25 x 6 Screw M10				
Tightening torque	Nm	2,3 - 2,7		5 - 6		8 - 9,6		1,4 - 1,6		2,3 - 2,7		5 - 6		8 - 9,6		17 - 20			35 - 42		
Mounting		DIN-rail or screw				screws		DIN-rail or screws				Screws		Screws			Screws				
Operating range of coils	Uc	0,85 - 1,1																			
Power consumption of coils																					
AC inrush sealed	VA VA/W	90 9 / 3		250 18 / 4		180 18 / 6		250 18 / 4		350 5 / 5		360 6 / 6									
DC inrush sealed	W W	120 2		230 4		230 5		230 4		350 5		360 6									
Switching time																					
AC make time	ms	10 - 25		12 - 30		12 - 30		10 - 25		12 - 30		15 - 50		30 - 60			40 - 60				
AC release time	ms	6 - 18		6 - 15		6 - 15		6 - 18		6 - 15		30 - 80		30 - 80			40 - 60				
DC make time	ms	15 - 25		15 - 25		20 - 30		15 - 25		15 - 25		15 - 50		30 - 60			40 - 60				
DC release time	ms	40 - 70		10 - 25		10 - 25		40 - 70		10 - 25		30 - 80		30 - 80			40 - 60				
Maximum ambient temperature																					
Operation °C		-40 to +40 (+70) ²⁾																			
Storage °C		-40 to +70																			
Short circuit protection for contactors																					
Coordination-type „1“ max. fuse size gPV																					
600VDC A		63	80	-	-	160	-	-	-	-	-	160	200	250	-	-	-				
1000VDC A		-	-	-	-	-	12	63	100	-	160	160	200	250	315	400	500				
Coordination-type „2“ max. fuse size gPV																					
600VDC A		50	63	80	100	125	-	-	-	100	-	-	-	-	-	-	-				
1000VDC A		-	-	80	100	-	-	50	80	100	125	-	-	-	-	-	-				
Short-circuit current	kA	3	3	3	3	5	3	3	3	5	5	10	10	10	10	10	10				

Data according to UL60947-4-1 

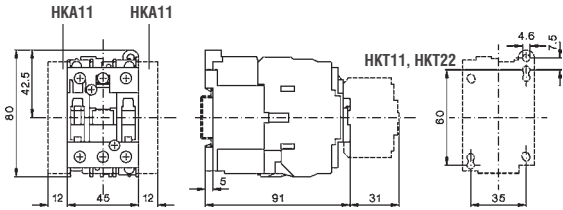
Type		K3DC-20..	K3DC-48..	K3DC-60..	K3DC-80..	K3PV-80..	K3PV-150..	K3PV-200..	K3PV-240..	K3PV-300..	K3PV-400..	K3PV-450..
General Use I_e [A]	600V DC	20	40	60	80	80	130	160	200	300	330	360
	1000V DC	-	-	30	60	80	130	160	200	300	330	360
Motor Control I_e [A]	220-240V DC	12	20	38	55	72	89	106	140	173	206	255
	500V DC	12	16	34	51	67	83	99	123	164	205	246
	550-600V DC	12	16	38	46	61	90	111	148	185	222	294

1) IP20 w. terminal lug.

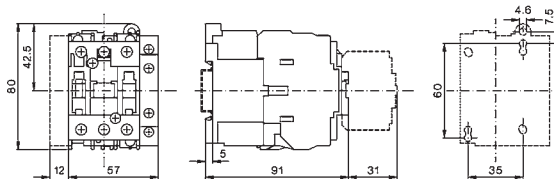
2) > 40° ... 1% / C° de-rating (eg. at 60°C 20% de-rating)

Dimensions

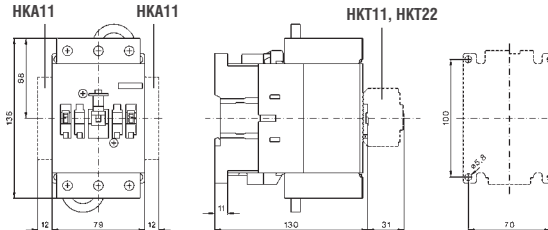
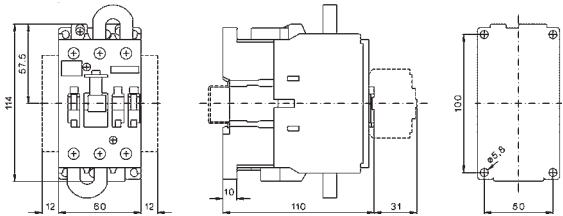
K3DC-20A00, K3DC-48A00



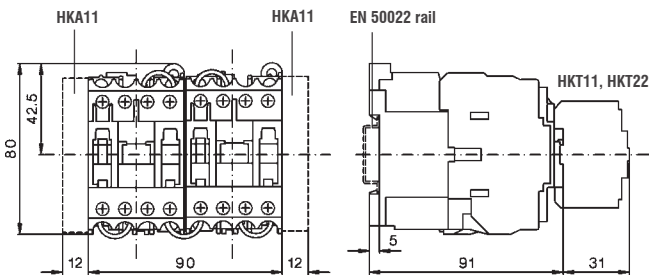
K3DC-20A10=, K3DC-48A10=



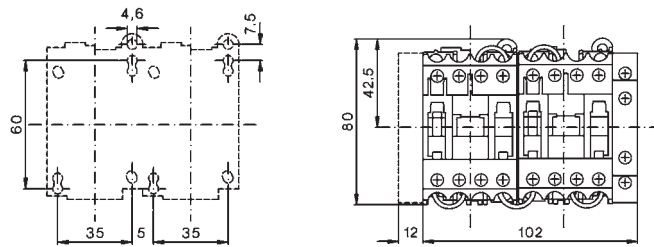
K3DC-60A00(=), K3DC-80A00(=), K3DC-100A00(=)



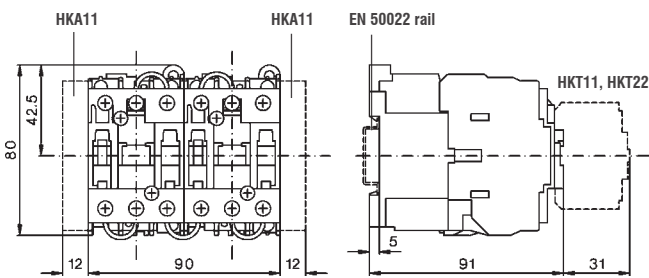
K3PV-12A00



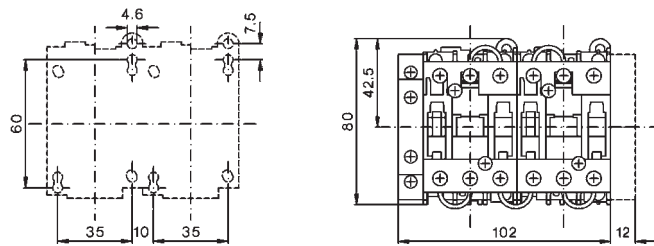
K3PV-12A10=



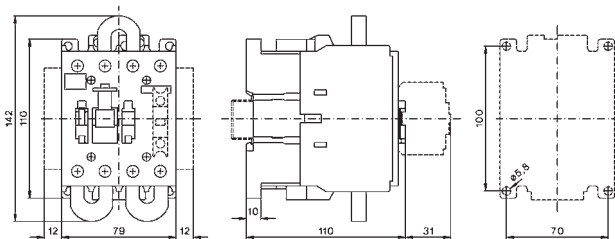
K3PV-30A00, K3PV-60A00



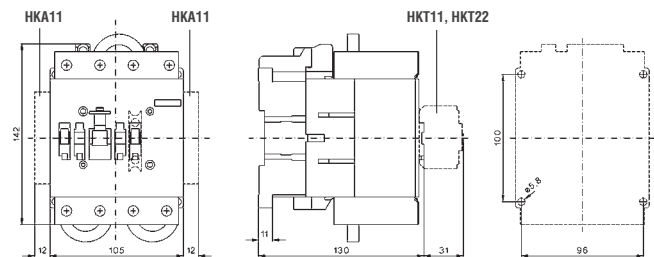
K3PV-30A10=, K3PV-60A10=



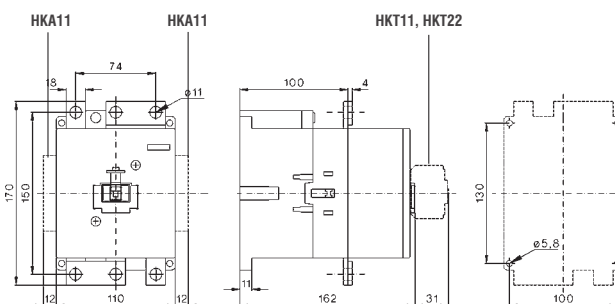
K3PV-80A00(=)



K3PV-100A00(=)



K3PV-150A00(=), K3PV-200A00(=), K3PV-240A00(=)



K3PV-300A00(=), K3PV-400A00(=), K3PV-450A00(=)

