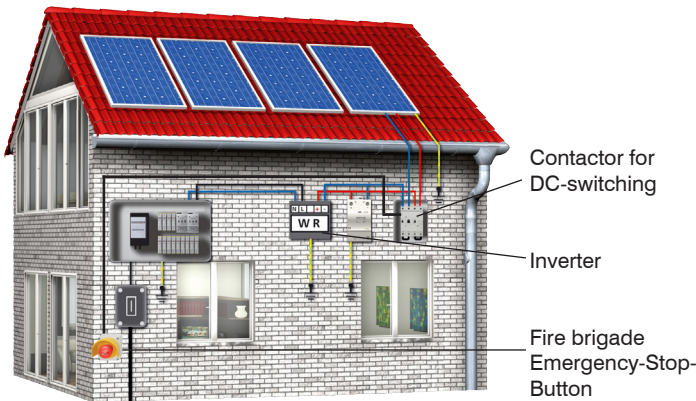


# Contactors for DC-Switching

AC-operated

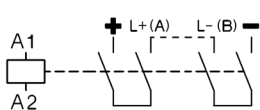
Rated Operational Current				Additional Aux. Contacts	Type	Coil voltage <sup>1)</sup> <b>230</b>	Pack pcs.	Weight kg/pcs.	Wiring diagram
DC1	600V	1000V	1200V						
	20A	-	-	2 HKA11	<b>K3DC-20A00 ...</b>	1	0,5		
	50A	-	-	+1 HKT.	<b>K3DC-48A00 ...</b>	1	0,5		
	60A	30A	-	2 HKA11	<b>K3DC-60A00 ...</b>	1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

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

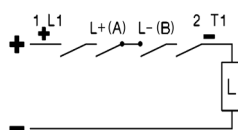


In most Photovoltaic-installations, the switch disconnectors according to IEC 60364-7-712 are integrated in the DC/AC-inverter. So the wires between solar-panels and inverter are continuously under voltage. According to ÖVE-R11-1: 2013, Photovoltaic-installations must have a fire protection defeat device. 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.

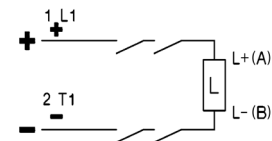
Switch diagram (4 contacts)



Connection diagram 1-pole: connect L+(A) and L-(B) (jumper attached)



Connection diagram 2-pole: don't use attached jumper



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 <sup>1)</sup>	Aux. Contacts	Pack pcs.	Weight kg/pcs.	Wiring diagram	
	24 24V= DC	additional				
	<b>KG3DC-12A00</b> ... <sup>5)</sup>	1 HKA11	1	0,5		
	<b>KG3DC-20A00</b> ... <sup>5)</sup>	+1 HKT.	1	0,5		
	<b>KG3DC-48A00</b> ... <sup>5)</sup>	+1 HKT.	1	0,5		
	<b>K3DC-60A00=</b> ... <sup>5)</sup>	1 HKA11	1	1,2		
	<b>K3DC-80A00=</b> ... <sup>5)</sup>	+1 HKT.	1	1,2		
	<b>K3DC-100A00=</b> ...		1	1,8		
	<b>KG3PV-12A00</b> ...	1 HKA11 +2 HKT.	1	0,85		
	<b>KG3PV-30A00</b> ... <sup>5)</sup>	1 HKA11 +2 HKT.	1	0,95		
	<b>KG3PV-60A00</b> ... <sup>5)</sup>		1	0,95		
	<b>K3PV-80A00=</b> ... <sup>5)</sup>	2 HKA11 +1 HKT.	1	1,5		
	<b>K3PV-100A00</b> ... <sup>2) 5)</sup>		1	2,3		
	<b>K3PV-150A00</b> ... <sup>2) 5)</sup>	2 HKA11 +1 HKT.	1	5		
	<b>K3PV-200A00</b> ... <sup>2) 5)</sup>		1	5		
	<b>K3PV-240A00</b> ... <sup>2) 5)</sup>		1	5		
	<b>K3PV-300A00</b> ... <sup>2) 5)</sup>	- -	2 HKA11	1	7,5	
	<b>K3PV-400A00</b> ... <sup>2) 5)</sup>	- -	+1 HKT.	1	7,5	
	<b>K3PV-450A00</b> ... <sup>2) 5)</sup>	- -		1	7,5	

## Auxiliary Contact Blocks for contactors K(G)3DC-.. and K(G)3PV-.., for low level switching<sup>4)</sup>

Type	Rated Operational Current			for contactors	Type	Pack pcs.	Weight kg/pcs.	Wiring diagrams
	AC15	AC15	AC1					
	230V	400V	690V					
	A	A	A					
	<b>3</b>	2	10	K(G)3DC, K(G)3PV-.. top	<b>HKT11</b>	1	0,04	
	<b>3</b>	2	10	K(G)3DC, K(G)3PV-.. top	<b>HKT22</b>	1	0,05	
	<b>3</b>	2	10	K(G)3DC, K(G)3PV-.. top	<b>HKT31</b>	1	0,05	
	<b>3</b>	2	10	K(G)3DC, K(G)3PV-.. top	<b>HKT40</b>	1	0,05	
	<b>3</b>	2	10	K(G)3DC, K(G)3PV-.. side	<b>HKA11</b>	1	0,05	

## Accessories



<b>Fire Brigade-EMERGENCY STOP key operated button</b> Ø40mm, according to EN418, unlock by key	<b>BG10P44S3-11 +SK</b>	1	0,22		3)
-------------------------------------------------------------------------------------------------	-------------------------	---	------	--	----

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	K(G)3DC- 12.. 20.. 48..			K3DC- 60.. 80..		K3DC- 100..	K(G)3PV- 12.. 30.. 60..			K3PV- 80..	K3PV- 100..	K3PV- 150.. 200.. 240..			K3PV- 300.. 400.. 450..				
Rated insulation Voltage V= U <sub>imp</sub> KV	600	600	600	1000	1000	600	1200	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
Poles in series	3	3	3	3	3	3	8	6	6	4	4	3	3	3	3	3	3		
DC1 600V dc I <sub>b</sub> A	12	20	50	60	80	100	12	30	60	80	100	150	200	240	300	400	450		
DC1 1000V dc I <sub>b</sub> A	1	-	-	30	60	-	12	30	60	80	100	150	200	240	300	400	450		
DC1 1200V dc I <sub>b</sub> A	-	-	-	-	-	-	6	-	-	-	-	-	-	-	-	-	-		
DC3/5 310V dc I <sub>b</sub> A	-	-	-	-	40	60	-	15	24	40	90	125	170	200	230	270	300		
DC3/5 460V dc I <sub>b</sub> A	-	-	-	-	-	-	-	15	24	40	40	125	170	200	230	270	300		
DC3/5 600V dc I <sub>b</sub> A	-	-	-	-	-	-	-	-	-	-	-	50	60	75	120	160	200		
Main pole resistance mΩ	2	2	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 mΩ	5,4	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 <sup>6</sup>	10											10			8				
Protection degree	IP20											IP00 / IP20 <sup>1)</sup>			IP00 / IP20 <sup>1)</sup>				
Main poles																			
Cable cross sections AC mm <sup>2</sup> DC mm <sup>2</sup>	2 x 1,5 - 10 2 x 1,5 - 6			2,5 - 35 2,5 - 35		4 - 35 4 - 50	2x1-2,5 2x1-2,5		2 x 1,5 - 10 2 x 1,5 - 6		2,5-35 2,5-35	4 - 55 4 - 35		Busbar 18 x 4 Screw M8			Busbar 25 x 6 Screw M10		
Tightening torque Nm	1,4	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 / screws					Screws	DIN-rail / Screws				Screws	Screws			Screws				
Operation range coils U <sub>c</sub>	0,85 - 1,1																		
Power consumption of coils																			
AC inrush VA sealed VAW	90 9 / 3			250 18 / 4		180 18 / 6			250 18 / 4		350 5 / 5			360 6 / 6					
DC inrush W sealed W	5,5 5 5			230 4		11 11			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				
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				
realise time ms	60 - 80			10 - 25		10 - 25		60 - 80		10 - 25 30 - 80		30 - 80			40 - 60				
Maximum ambient temperature Operation °C Storage °C	-40 bis +40 (+70) <sup>2)</sup> -40 bis +70																		
Short circuit protection																			
Coordination-Type „1“ max. fuse size gPV																			
600VDC A	63	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	50	63	80	100	125	-	-	-	100	-	-	-	-	-	-	-		
1000VDC A	-	-	-	80	100	-	-	50	80	100	125	-	-	-	-	-	-		
Short circuit current kA	3	3	3	3	3	5	3	3	3	5	5	10	10	10	10	10	10		

Data acc. to UL60947-4-1



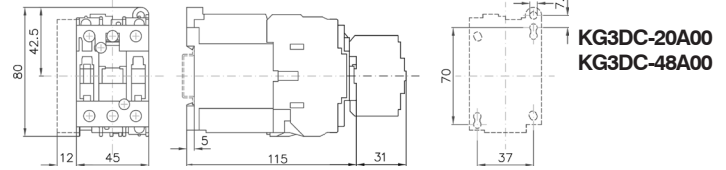
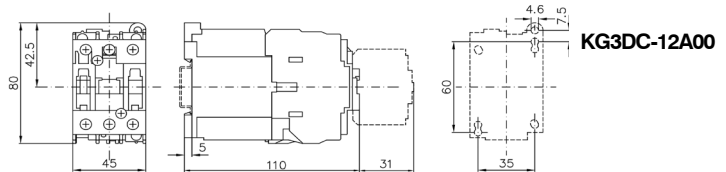
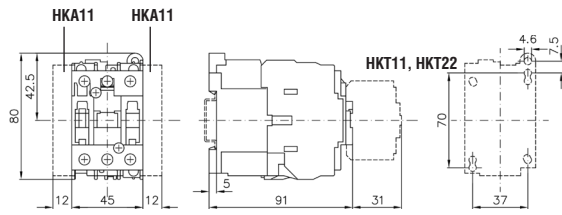
Type		K(G)3DC- 12.. 20.. 48..			K3DC- 60.. 80..		K3PV- 80..	K3PV- 150..	200..	240..	K3PV- 300..	400..	450..
General Use I <sub>b</sub> [A]	600V DC	12	20	40	60	80	80	130	160	200	300	330	360
	1000V DC	-	-	-	30	60	80	130	160	200	300	330	360
Motor Control I <sub>b</sub> [A]	220-240V DC	-	12	20	38	55	72	89	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
	Fuse PK5	-	12	12	75	90	90	125	150	175	300	350	400
	max. short circuit current [kA]	-	5	5	5	5	5	10	10	10	10	10	10
	Voltage DC [V]	-	600	600	600	600	600	600	600	600	600	600	600

1) IP20 with terminal lugs

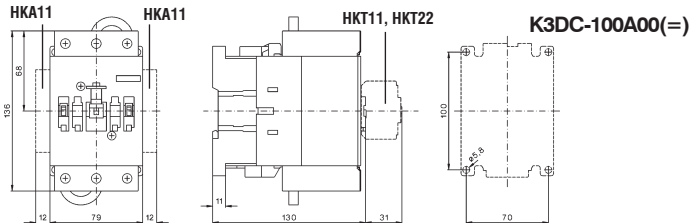
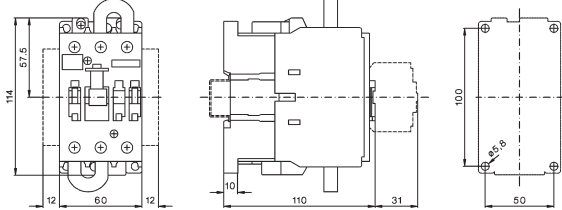
2) > 40° ... 1% / °C de-rating (eg. at 60°C 20% de-rating)

# Dimensions

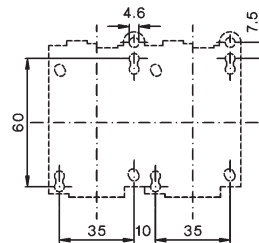
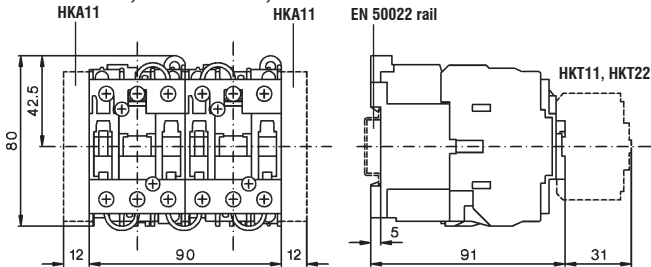
## K3DC-20A00, K3DC-48A00



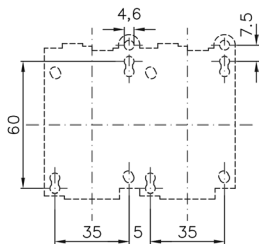
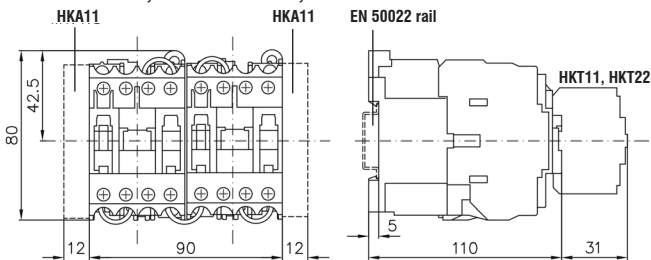
## K3DC-60A00(=), K3DC-80A00(=)



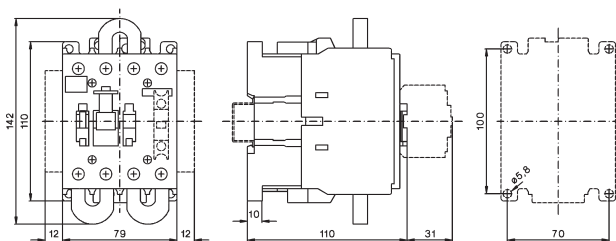
## K3PV-12A00, K3PV-30A00, K3PV-60A00



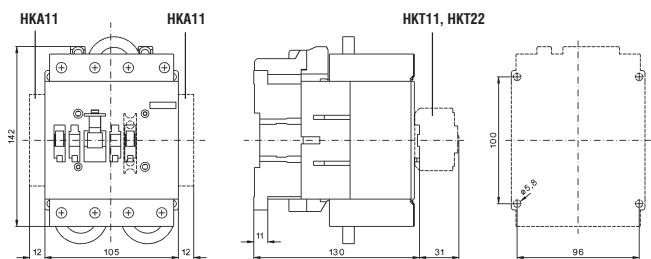
## KG3PV-12A00, KG3PV-30A00, KG3PV-60A00



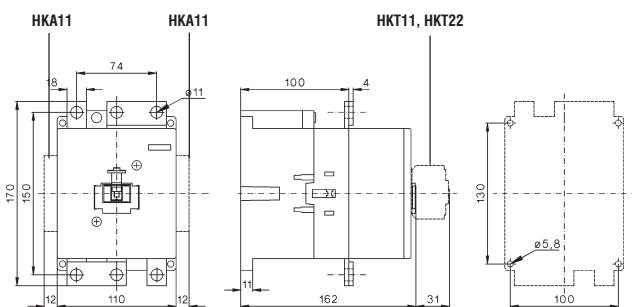
## K3PV-80A00(=)



## K3PV-100A00(=)



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



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

