



Short form

catalogue

Enclosed switches including; grp • insulated • mild & stainless steel • red painted • photovoltaic
Switch-disconnectors including; isolating switches • main/emergency off • changeover switches





Kraus & Naimer

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and universally recognised for their quality and workmanship.**

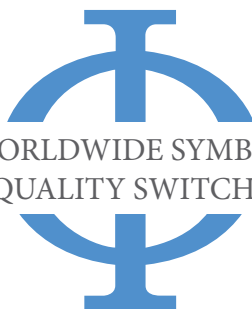
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which celebrated its 100 year anniversary in 2007.

In 1963, Kraus & Naimer Limited was established as the UK sales and marketing company
for Kraus & Naimer switchgear. By the early 70's successful growth meant a move to its current
purpose-built premises in Newbury, where it supplies over 3,000 customers with world-renowned,
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WORLDWIDE SYMBOL
FOR QUALITY SWITCHGEAR



Main/Emergency-Off Switch - 3, 4, 6 & 8 Pole 20A - 315A



- IP66/67 protection
- red/yellow padlockable handle
- optional black handle available
- grey insulated enclosure (RAL7035)
- earth terminal included
- switch interlocked with lid to prevent opening in 'ON' position

Without Auxiliaries	Ie AC-21A	3 Pole		Encl. Ref		3 Pole + Solid Neutral (TP&N)		Encl. Ref		
	20A	KG10	T203/GBA270 *KS1V	KSAV		KG10	T203/GBA355 *KS1V	KSAV		
	25A	KG20	T203/GBA270 *KS1V	KSAV		KG20	T203/GBA355 *KS1V	KSAV		
	32A	KG32	T203/GBA270 *KS1V	KSAV		KG32	T203/GBA355 *KS1V	KSAV		
	40A	KG41	T203/GBA270 *KL1V	KLCV		KG41	T203/GBA355 *KL1V	KLCV		
	63A	KG64	T203/GBA270 *KL1V	KLCV		KG64	T203/GBA355 *KL1V	KLCV		
	80A	KG80	T203/GBA270 *KL1V	KLDV		KG80	T203/GBA355 *KL1V	KLDV		
	100A	KG100	T203/GBA270 *KL1V	KLDV		KG100	T203/GBA355 *KL1V	KLDV		
	125A	KG105	T203/GBA270 *KL1V	KLDV		KG105	T203/GBA355 *KL1V	KLDV		
	125A ³⁾	KG125	T203/GBA270 *ST	ST3		KG125	T207/GBA355 *ST	ST3		
	160A	KG160	T203/GBA270 *ST	ST3		KG160	T207/GBA355 *ST	ST3		
	200A	KG210	T203/GBA270 *ST	ST3		KG210	T207/GBA355 *ST	ST4		
	250A	KG250	T203/GBA270 *ST	ST3		KG250	T207/GBA355 *ST	ST4		
	315A	KG315	T203/GBA270 *ST	ST3		KG315	T207/GBA355 *ST	ST4		

With Auxiliaries ¹	Ie AC-21A	3 Pole		Encl. Ref		3 Pole + Solid Neutral (TP&N)		Encl. Ref		
	20A	KG10	T203/GBA281 *KS1V	KSAV		KG10	T203/GBA374 *KS1V	KSAV		
	25A	KG20	T203/GBA280 *KS1V	KSAV		KG20	T203/GBA373 *KS1V	KSAV		
	32A	KG32	T203/GBA280 *KS1V	KSAV		KG32	T203/GBA373 *KS1V	KSAV		
	40A	KG41	T203/GBA280 *KL1V	KLCV		KG41	T203/GBA373 *KL1V	KLCV		
	63A	KG64	T203/GBA280 *KL1V	KLCV		KG64	T203/GBA373 *KL1V	KLCV		
	80A	KG80	T203/GBA280 *KL1V	KLDV		KG80	T203/GBA373 *KL1V	KLDV		
	100A	KG100	T203/GBA280 *KL1V	KLDV		KG100	T203/GBA373 *KL1V	KLDV		
	125A	KG105	T203/GBA280 *KL1V	KLDV		KG105	T203/GBA373 *KL1V	KLDV		
	125A ³⁾	KG125	T203/GBA065 *ST	ST3		KG125	T207/GBA110 *ST	ST3		
	160A	KG160	T203/GBA065 *ST	ST3		KG160	T207/GBA110 *ST	ST3		
	200A	KG210	T203/GBA070 *ST	ST3		KG210	T207/GBA120 *ST	ST4		
	250A	KG250	T203/GBA070 *ST	ST3		KG250	T207/GBA120 *ST	ST4		
	315A	KG315	T203/GBA070 *ST	ST3		KG315	T207/GBA120 *ST	ST4		

Notes

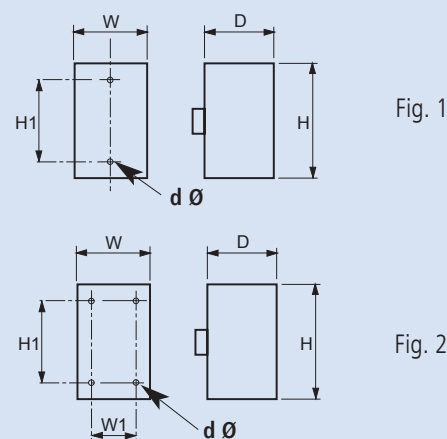
- 1) The following auxiliary contacts are provided:-
 KG10 3 to 6 Pole 1 N.O. (early break) + 1 N.C.
 KG20 to KG105 3 to 6 Pole 2 N.O. (early break)
 KG10 to KG100 8 Pole 1 N.O. (early break) + 1 N.C.
 KG125 to KG315 3 to 8 Pole 2 N.O. (early break) + 2 N.C.

2) Switched neutral pole is early make/late break.

3) KG125 suitable for applications requiring larger cable termination and increased enclosure size.

DIMENSIONS (units= mm throughout the catalogue unless stated otherwise)

Encl. Ref.	Encl. Dim.			Encl. Dim.			Cable Entries.	Line Drg.
	H	W	D	H1	W1	d		
KSAV	120	85	90	110	-	4.2	4 x 20/25mm k'outs	Fig. 1
KLCV	190	100	93	178	-	5.6	4 x 20/25mm k'outs	Fig. 1
KLD	250	145	107	229	124	6.5	4 x 25/40mm k'outs	Fig. 2
KLDV	250	145	107	229	124	6.5	4 x 25/40mm k'outs	Fig. 2
STE	280	190	180	254	164	7	2 x gland plates	Fig. 2
ST2	280	190	130	254	164	7	2 x gland plates	Fig. 2
ST3	380	280	180	354	254	7	2 x gland plates	Fig. 2
ST4	560	380	180	534	354	7	2 x gland plates	Fig. 2



Please refer to end of part no. for enclosure reference. See tables below:

4 Pole (3ph + Sw N ²)	Encl. Ref	6 Pole	Encl. Ref	le AC-21A
KG10 T204/GBA290 *KS1V	KSAV	KG10B T206/GBA320 *KS1V	KSAV	20A
KG20 T204/GBA290 *KS1V	KSAV	KG20B T206/GBA320 *KL1V	KLCV	25A
KG32 T204/GBA290 *KS1V	KSAV	KG32B T206/GBA320 *KL1V	KLCV	32A
KG41 T204/GBA290 *KL1V	KLCV	KG41B T206/GBA320 *KL1V	KLDV	40A
KG64 T204/GBA290 *KL1V	KLCV	KG64B T206/GBA320 *KL1V	KLDV	63A
KG80 T204/GBA290 *KL1V	KLDV	KG80 T206/GBA967 *ST	STE	80A
KG100 T204/GBA290 *KL1V	KLDV	KG100 T206/GBA967 *ST	STE	100A
KG105 T204/GBA290 *KL1V	KLDV	KG105 T206/GBA967 *ST	STE	125A
KG125 T204/GBA290 *ST	ST3	KG125 T206/GBA967 *ST	ST4	125A ³⁾
KG160 T204/GBA290 *ST	ST3	KG160 T206/GBA967 *ST	ST4	160A
KG210 T204/GBA290 *ST	ST4			200A
KG250 T204/GBA290 *ST	ST4			250A
KG315 T204/GBA290 *ST	ST4			315A

4 Pole (3ph + Sw N ²)	Encl. Ref	6 Pole	Encl. Ref	8 Pole (2 x 3ph + Sw N ²)	Encl. Ref	le AC-21A
KG10 T204/GBA311 *KS1V	KSAV	KG10 T206/40 *KS51V	KSAV	KG10 T208/GBA002 *KS1V	KSAV	20A
KG20 T204/GBA310 *KS1V	KSAV	KG20B T206/GBA330 *KL1V	KLCV	KG20B T208/GBA008 *KL	KLD	25A
KG32 T204/GBA310 *KS1V	KSAV	KG32B T206/GBA330 *KL1V	KLCV	KG32B T208/GBA008 *KL	KLD	32A
KG41 T204/GBA310 *KL1V	KLCV	KG41B T206/GBA330 *KL1V	KLDV	KG41B T208/GBA008 *ST	ST2	40A
KG64 T204/GBA310 *KL1V	KLCV	KG64B T206/GBA330 *KL1V	KLDV	KG64B T208/GBA008 *ST	ST2	63A
KG80 T204/GBA310 *KL1V	KLDV	KG80 T206/GBA907 *ST	STE	KG80 T208/GBA008 *ST	ST3	80A
KG100 T204/GBA310 *KL1V	KLDV	KG100 T206/GBA907 *ST	STE	KG100 T208/GBA008 *ST	ST3	100A
KG105 T204/GBA310 *KL1V	KLDV	KG105 T206/GBA907 *ST	STE			125A
KG125 T204/GBA075 *ST	ST3	KG125 T206/GBA085 *ST	ST4	KG125 T208/GBA010 *ST	ST4	125A ³⁾
KG160 T204/GBA075 *ST	ST3	KG160 T206/GBA085 *ST	ST4	KG160 T208/GBA010 *ST	ST4	160A
KG210 T204/GBA080 *ST	ST4					200A
KG250 T204/GBA080 *ST	ST4					250A
KG315 T204/GBA080 *ST	ST4					315A

Switch - Disconnecter 2 & 4 pole.

- IP66/67 Protection
- black/grey padlockable handle
- grey insulated enclosure (RAL7035)
- switch interlocked with lid to prevent opening in 'ON' position
- class II compliant
- rated for use in ambient temperatures up to 50°C
- non-polarity sensitive

**KGD40 only:**

- up to 50 amps @1000 VDC to give higher rating achieved by use of permanent magnets in the contact body used to reduce arcing time

Single String DC Switch Disconnectors - Selection Chart DC-21B

Single String	Voltage													Order Code No.	FIG.	
	250V	375V	400V	450V	500V	600V	650V	660V	750V	800V	850V	920V	1000V			
	25A	25A	25A	25A	21A	20A	20A	18A	18A	18A	11A	11A		KG20 T104/D-P003 KL51V	FIG 1	
						25A	25A	23A	23A	23A	15A	15A	12A	KG32 T104/D-P003 KL51V	FIG 1	
	50A	40A	40A	30A	30A									KGD40 TD102/D-P003 KL11V	FIG 2	
		50A		40A	40A	40A	30A	30A	30A		20A	20A	20A	KGD40 TD103/D-P003 KL11V	FIG 2	
			50A	50A	50A		40A	40A	40A	40A	30A	30A	30A	KGD40 TD104/D-P003 KL11V	FIG 2	
						50A	50A	50A	50A		40A	40A	40A	KGD40B TD106/D-P003 KL11V	FIG 3	
										50A	50A	50A	50A	KGD40B TD108/D-P003 KL11V	FIG 3	

Two String DC Switch Disconnectors - Selection Chart DC-21B

Two String	Ratings Per String (220V - 500V)											Order Code No.	FIG.	
	220V	250V	280V	330V	340V	375V	400V	420V	440V	460V	500V			
	25A	21A	21A	20A	20A	18A	18A	11A	11A	11A		KG20 T104/GB-P103 KL51V	FIG 1	
	28A	28A	28A	25A	25A	23A	23A	15A	15A	15A	12A	KG32 T104/GB-P103 KL51V	FIG 1	
	50A	50A	40A	40A	40A	40A	40A	30A	30A	30A	30A	KGD40 TD104/D-P004 KL11V	FIG 2	
			50A	50A	50A	50A		40A	40A	40A	40A	KGD40B TD106/D-P004 KL11V	FIG 3	
							50A	50A	50A	50A	50A	KGD40B TD108/D-P004 KL11V	FIG 3	
	Ratings Per String (510V - 1000V)											Order Code No.	FIG.	
	510V	560V	600V	660V	680V	690V	750V	800V	920V	1000V				
	20A	20A	20A	20A	12A	12A	12A	12A	8A	8A		KGD40 TD104/D-P004 KL11V	FIG 2	
	25A	23A	23A		15A	15A						KG32B T106/GB-P103 KL11V	FIG 2	
					20A	18A	18A	18A	11A			KG20B T108/GB-P103 KL11V	FIG 3	
	40A	40A	40A	30A	30A	30A	30A	20A	20A	20A		KGD40B TD106/D-P004 KL11V	FIG 3	
				40A	40A	40A	40A	40A	30A	30A		KGD40B TD108/D-P004 KL11V	FIG 3	

Please select the switch disconnecter according to the maximum voltage and current output of all upstream PV modules, this must include all corrective factors according to relevant standards.

Switch Type	Thermal Rating	Insulation Voltage, U _i	Rated operating Current & power				Short Circuit Protection	Terminal Capacity		
			Operational current, I _e		Operational Power, 3 ph.					
			AC-15	AC-21A	AC-3	AC-23A				
	Enclosed rating I _{the}		110V 220-240V 380-415V	690V	220V-240V 380-415V	230V-240V 400-415V	Max. fuse gL/gG char.	Single core/ stranded wire.	Flexible wire, with sleeve.	Terminal bolt for Cu bar/lug.
			A	V	A		kW		A	mm ²
Switch-disconnectors - selection data in accordance with: IEC 60947, IEC 60204, BS EN 60947, BS EN 60204										
KG10	20	690	- - -	20	2.2 3.7	3 5.5	20	2.5	1.5	-
KG20	25	690	- - -	25	4 5.5	5.5 7.5	35	6	4	-
KG32	32	690	- - -	32	5.5 7.5	5.5 11	35	6	4	-
KG41	40	690	- - -	40	7.5 11	7.5 15	50	16	10	-
KG64	63	690	- - -	63	11 18.5	11 22	63	16	10	-
KG80	80	690	- - -	80	15 22	18.5 30	80	50	35	-
KG100	100	690	- - -	100	18.5 30	22 37	100	50	35	-
KG105	125	690	- - -	125	22 37	25 45	125	50	35	-
KG125	125	1000 ¹⁾	- - -	125	22 37	30 45	125	95	70	-
KG160	160	1000 ¹⁾	- - -	160	30 45	30 55	160	95	70	-
KG210	200	1000 ¹⁾	- - -	200	37 55	37 75	200	185	120	-
KG250	250	1000 ¹⁾	- - -	250	37 55	37 90	250	185	120	-
KG315	315	1000 ¹⁾	- - -	315	45 75	55 110	315	185	120	-
KH16	16	800 ¹⁾	- - -	16	3 5.5	4.5 7.5	25	6	4	-
KH20	20	800 ¹⁾	- - -	20	3.5 6.5	5.5 10	32	6	4	-
KH25	25	800 ¹⁾	- - -	25	4 7.5	7 12	35	6	4	-
KH32	32	800 ¹⁾	- - -	32	5.5 11	9 16	35	10	6	-
KH40	40	800 ¹⁾	- - -	40	7.5 15	11 20	50	10	6	-
KH63	63	1000 ¹⁾	- - -	63	11 22	18.5 30	80	35	25	-
KH80	80	1000 ¹⁾	- - -	80	15 30	23 40	100	35	25	-
KH85	100	1000 ¹⁾	- - -	100	3) 3)	3) 3)	100	35	25	-
UK20	20	690	5 5 4	20	3 5.5	3.7 7.5	25	2x2.5	2x2.5	-
UK25	25	690	8 8 5	25	4 7.5	5.5 11	35	2x4	2x2.5	-
UK32	32	690	12 12 6	32	5.5 11	7.5 15	35	2x6	2x4	-
UK250/A	250	1000	- - -	250	- -	75 140	315	150		M8
UK315/A	315	1000	- - -	315	- -	100 160	500	240		M10
UK400/A	400	1000	- - -	400	- -	132 220	500	240		M10
UK630/A	630	1000	- - -	630	- -	200 355	800	400/2x155		M12
UK800/A	800	1000	- - -	800	- -	250 450	800	500/2x240		M12
UK1000/A	1000	1000	- - -	1000	- -	- 560	1250	630/2x400		M12
UK1250/A	1250	1000	- - -	1250	- -	- 710	1250	2x400		M12
C200-4	200	690		200	22 37	37 75	200	95	95	M8
C316 (6 pole) (in RB10, MB10, SB10 encl)	275	1000	- - -	275	37 55	75 132	315	150	150	M12
C316 (6 pole) (in RB29, MB29, SB29 encl)	315	1000	- - -	315	37 55	75 132	315	185	150	M12
Switch & Control Stations - selection data in accordance with: IEC 60947, BS EN 60947.										
CA4	10	440	- 2.5 1.5	10	0.55 2.2	0.75 3	10	2x1.5	2x1.5	-
CA25	32	690	12 12 6	32	5.5 11	7.5 15	35	2x6	2x4	-
C32	50	690	16 16 7	40	7.5 15	11 22	63	2x10	2x6	-
C42	63	690	- - -	63	11 18.5	15 30	80	2x16	2x10	-
C80	115	690	- - -	100	15 30	30 45	125	35	25	-
C125	150	690	- - -	150	22 37	37 75	200	70	50	-
C200-4	200	690	- - -	200	22 37	37 75	200	95	95	M8
C315 (In MB10 encl)	275	690	- - -	275	37 55	75 132	315	150	150	M12
C315 (In MB29 encl)	315	690	- - -	315	37 55	75 132	315	185	150	M12
KN1/KN2/KN3/KN10/CA10	20	690	5 5 4	20	3 5.5	3.7 7.5	25	2x2.5	2x2.5	-
KN4	20	690	- - -	-	3 ²⁾ 5.5 ²⁾	- -	25	2x2.5	2x2.5	-
KN5/KN6	25	690	8 8 5	25	4 7.5	5.5 11	35	2x4	2x2.5	-
KN7/KN8	32	690	14 14 6	32	5.5 11	7.5 15	50	2x6	2x4	-
P N/P SN	6	500	6 6 4	-	- -	- -	10	2.5	1.5	-

Notes: 1) Only valid for no-load switching (AC-20A) above 690v.

3) KH85 is only available as 2 pole changeover switch.

2) 1 phase, 240v, rating = 1.5kW.

Single phase rating @240v: AC-3 = 10kW, 62A. AC-23A = 11kW, 68A.



Short form catalogue DB02/2017

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