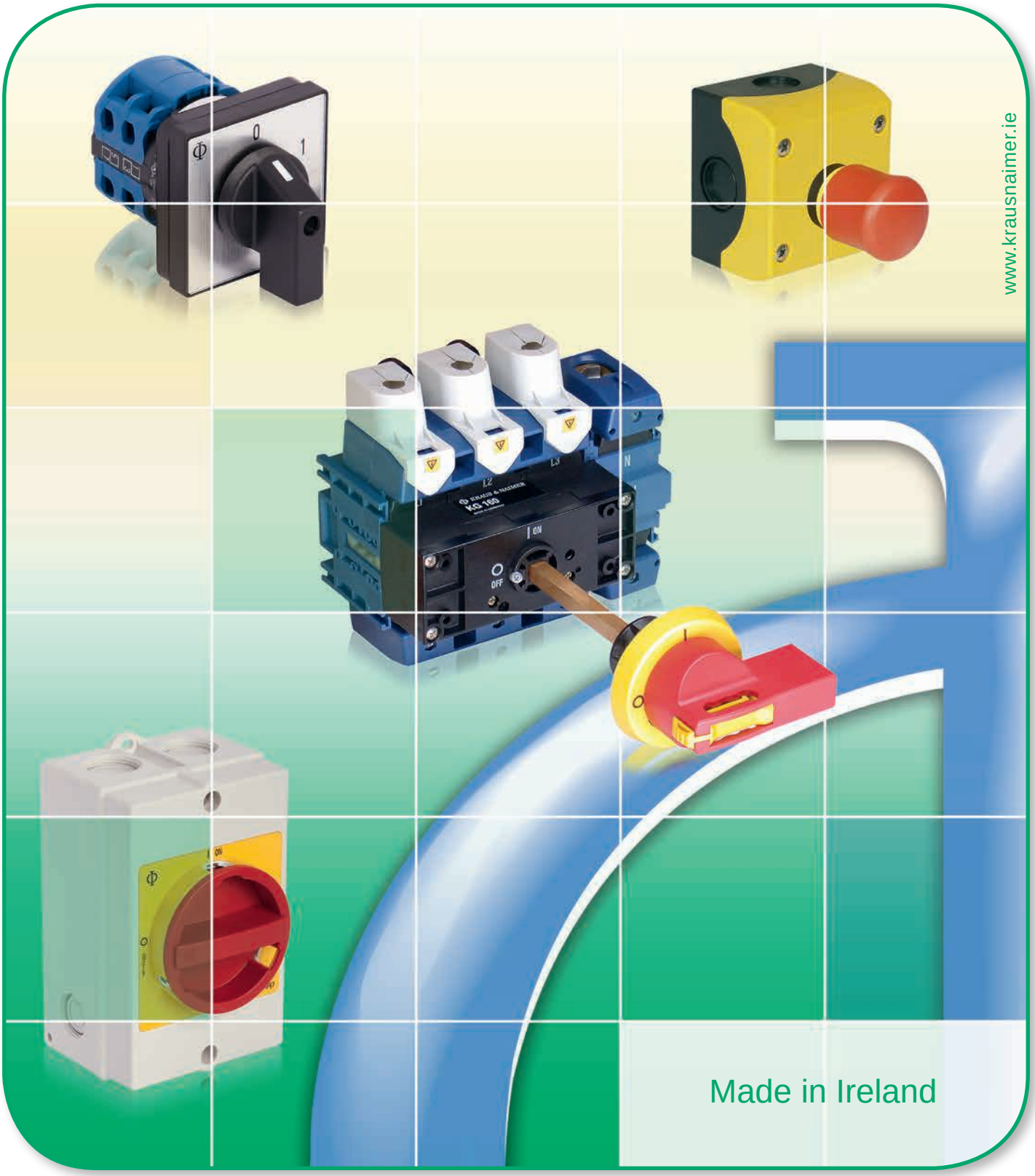
Kraus & Naimer Ltd. IRL

BLUE LINE switchgear

Short Form Catalogue



KRAUS & NAIMER

The development of the Blue Line rotary switch, contactor and motor starter product ranges is based on more than one hundred years experience by Kraus & Naimer in the design and manufacture of electrical switchgear. Kraus & Naimer pioneered the introduction of the cam operated rotary switch and continues to be recognized as the world leader in that product field.

BLUE LINE

Blue Line products are protected by numerous patents throughout the industrial world. They are built to national and international standards and designed to withstand adverse temperatures and climates.

Blue Line products are accepted and universally recognized for their quality and workmanship. They are supported by a world-wide sales and service organization.

The Kraus & Naimer Registered Trademark



WORLDWIDE SYMBOL FOR QUALITY SWITCHGEAR

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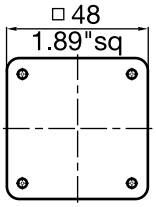
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This Short Form Catalogue contains the most widely used Kraus & Naimer Blue Line Control Switches, KG Switch Disconnectors, KG Switches, Control Gear, Relays and Overloads. Control switches are delivered with open terminals for ease of wiring. The Catalogue has been designed for your ease of use with 'one line' product coding and pricing. Please do not hesitate to contact the Sales Team at our Shannon Office for assistance, telephone: 061 704 700

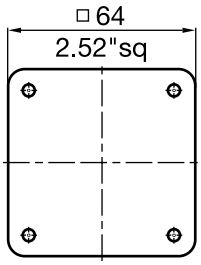
FRONT MOUNTING DIMENSIONS

Type BS EN 60947, IC 947-3/VDE 0660, part 107

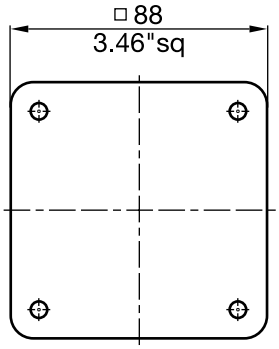
KO
KG10A
KG20A
KG32A



K1
KG10B
KG20B
KG32B
KG41B
KG64B
KG80
KG100



K2
KG126
KG161
KG251
KG316



	Rated Values				
	Thermal Current I_u/I_{th} A	Enclosed Thermal I_{the} A	Operational Current I_e A	Utilisation AC-23A 3 x 380 V kW	Category AC-3 440 V kW
KG10A KG10B	20	20	20	5.5	3.7
KG20A KG20B	25	25	25	7,5	5,5
KG32A KG32B	32	32	32	11	7.5
KG41B	40	40	40	15	11
KG64B	63	$55/_{50*}$	63	22	18,5
KG80	80	$80/_{70*}$	80	30	22
KG100	100	$100/_{80*}$	100	37	30
KG126	125	125	125	45	37
KG161	160	160	160	55	45
KG251	250	250	250	90	55
KG316	315	315	315	110	75

* Lower I_{the} rating 6 pole switches only

T-STANDARD ISOLATORS (SWITCH DISCONNECTORS) IEC947, BS7671, CE.

This Short Form Catalogue introduces Kraus & Naimer switch disconnectors to fully comply with BS EN60 947-3.
These isolators will bear the "CE" mark and Switch Disconnector symbol.
Terminals on KG10 to KG100 isolators are fingerproof to IP20.

SELECTION DATA		SWITCH TYPE										
BS EN 60947,IEC 947, VDE0660, IEC 204, EN 60204, VDE0113		KG10	KG20	KG32	KG41	KG64	KG80	KG100	KG125 KG126	KG160 KG161	KG250 KG251	KG315 KG316
Rated Insulation Voltage	V	690	690	690	690	690	690	690	1000	1000	1000	1000
Rated Thermal Current	A	20	25	32	40	63	80	100	125	160	250	315
Operational Current AC 21A	A	20	25	32	40	63	80	100	125	160	250	315
Utilisation Category 3 x 380V/440V AC-23A/B	kW	5.5	7.5	11	15	22	30	37	45	55	90	110
Single Core or Stranded Wire mm sq		2.5	6	6	16	16	35	35	M10	M10	M12	M12

ENCLOSED SWITCH DISCONNECTORS



- Threaded Entries - PFB
- Knockout Entries - KL
- Polycarbonate
- IP66/67 (KL) IP65 (ST)
- Red/Yellow Padlockable Handles
- Switch Interlocked with Lid
- Earth Terminal Included

	3 Pole	List Price €	3 Pole + Neutral	List Price €
25A	KG20 T203/IRL065 *PFB	28.29	KG20 T203/IRL067 *PFB	30.55
32A	KG32 T203/IRL065 *PFB	31.16	KG32 T203/IRL067 *PFB	33.47
40A	KG41 T203/IRL065 *PFB	36.12	KG41 T203/IRL067 *PFB	38.99
63A	KG64 T203/IRL065 *PFB	43.35	KG64 T203/IRL067 *PFB	46.23
80A	KG80 T203/IRL065 *KL1	65.04	KG80 T203/IRL067 *KL1	76.84
100A	KG100 T203/IRL065 *KL1	73.87	KG100 T203/IRL067 *KL1	86.34
125A	KG126 T203/IRL065 *ST3	225.55	KG126 T203/IRL067 *ST3	241.00
160A	KG161 T203/IRL065 *ST3	245.65	KG161 T203/IRL067 *ST3	261.09
250A	KG251 T203/IRL065 *ST3	271.73	KG251 T203/IRL067 *ST3	297.42
315A	KG316 T203/IRL065 *ST3	305.82	KG316 T203/IRL067 *ST3	331.56

	3 Pole + 1 NO	List Price €	4 Pole	List Price €
25A	KG20 T203/IRL066 *PFB	31.40	KG20 T204/IRL068 *PFB	32.14
32A	KG32 T203/IRL066 *PFB	34.32	KG32 T204/IRL068 *PFB	35.75
40A	KG41 T203/IRL066 *PFB	39.74	KG41 T204/IRL068 *PFB	41.46
63A	KG64 T203/IRL066 *PFB	46.96	KG64 T204/IRL068 *PFB	49.70
125A	KG126 T203/IRL066 *ST3	230.97	KG126 T204/IRL068 *ST3	251.83
160A	KG161 T203/IRL066 *ST3	251.04	KG161 T204/IRL068 *ST3	278.77
250A	KG251 T203/IRL066 *ST3	280.75	KG251 T204/IRL068 *ST3	311.28
315A	KG316 T203/IRL066 *ST3	314.89	KG316 T204/IRL068 *ST3	345.42



	6 Pole	List Price €	6 Pole + 2 NO Early Break - Late Make	List Price €
25A	KG20 T206/IRL069 *KL	52.51	KG20 T206/IRL070 *KL	58.84
32A	KG32 T206/IRL069 *KL	60.11	KG32 T206/IRL070 *KL	66.47
40A	KG41 T206/IRL069 *KL1	79.85	KG41 T206/IRL070 *KL1	85.94
63A	KG64 T206/IRL069 *KL	91.59	KG64 T206/IRL070 *KL1	97.84
80A	KG80 T206/IRL069 *ST1	171.79	KG80 T206/IRL070 *ST1	177.62
100A	KG100 T206/IRL069 *ST1	195.05	KG100 T206/IRL070 *ST1	202.56
125A	KG125 T206/IRL069 *ST6	260.25	KG125 T206/IRL070 *ST6	267.07
160A	KG160 T206/IRL069 *ST6	300.40	KG160 T206/IRL070 *ST6	307.23

Dimensions and Technical Data on page 7

ECONOMY RANGE



- Knockout Entries
- Polycarbonate
- IP66/67
- Red/Yellow Padlockable Handles
- Switch Interlocked with Lid
- Earth Terminal Included

	2 Pole	List Price €		
25A	KG20 T205/IRL450 *KS	18.03		
32A	KG32 T205/IRL450 *KS	20.74		
	3 Pole + Neutra	List Price €	4 Pole	List Price €
20A	KG10 T203/IRL165 *KS	18.27	KG10 T204/IRL165 *KS	21.35
25A	KG20 T203/IRL165 *KS	20.59	KG20 T204/IRL165 *KS	25.35
32A	KG32 T203/IRL165 *KS	23.65	KG32 T204/IRL165 *KS	30.50
40A	KG41 T203/IRL165 *KL	33.98	KG41 T204/IRL165 *KL	39.20
63A	KG64 T203/IRL165 *KL	39.00	KG64 T204/IRL165 *KL	45.23

INTEGRATED PRODUCT RANGE



- Threaded Entries
- Polycarbonate IP65
- Red/Yellow Padlockable Handles
- Switch Interlocked with Lid
- Earth Terminal Included

	3 Pole	List Price €	3 Pole + Neutral	List Price €
25A	KG20 T203/IRL065 *KLIV	22.84	KG20 T203/IRL067 *KLIV	25.06
32A	KG32 T203/IRL065 *KLIV	25.85	KG32 T203/IRL067 *KLIV	28.07
40A	KG41 T203/IRL065 *KLIV	33.29	KG41 T203/IRL067 *KLIV	36.09
63A	KG64 T203/IRL065 *KLIV	38.30	KG64 T203/IRL067 *KLIV	41.11
80A	KG80 T203/IRL065 *KLIV	61.49	KG80 T203/IRL067 *KLIV	65.90
100A	KG100 T203/IRL065 *KLIV	70.32	KG100 T203/IRL067 *KLIV	74.73
	3 Pole + 1 NO	List Price €	4 Pole	List Price €
25A	KG20 T203/IRL066 *KLIV	26.05	KG20 T204/IRL068 *KLIV	26.66
32A	KG32 T203/IRL066 *KLIV	29.06	KG32 T204/IRL068 *KLIV	30.48
40A	KG41 T203/IRL066 *KLIV	36.90	KG41 T204/IRL068 *KLIV	38.50
63A	KG64 T203/IRL066 *KLIV	41.92	KG64 T204/IRL068 *KLIV	44.52
80A	KG80 T203/IRL066 *KLIV	66.71	KG80 T204/IRL068 *KLIV	69.51
100A	KG100 T203/IRL066 *KLIV	75.53	KG100 T204/IRL068 *KLIV	81.15

LARGE SIZED ENCLOSED RANGE

- Additional Wiring Space
- Polycarbonate IP65/67
- Red/Yellow Padlockable Handles
- Switch Interlocked with Lid
- Earth Terminal Included

	3 Pole + N	List Price €	3 Pole + N + 2NO	List Price €
40A	KG41 T203/IRL300 *KL1	53.09	KG41 T203/IRL400 *KL1	58.50
63A	KG64 T203/IRL300 *KL1	58.09	KG64 T203/IRL400 *KL1	63.53
80A	KG80 T203/IRL300 *ST1	107.13	KG80 T203/IRL400 *ST1	114.16
80A	KG80 T203/IRL300 *ST3	188.11	KG80 T203/IRL400 *ST3	193.82
100A	KG100 T203/IRL300 *ST1	115.96	KG100T203/IRL400 *ST1	122.99
100A	KG100 T203/IRL300 *ST3	196.94	KG100T203/IRL400 *ST3	203.96

8 POLE

- Polycarbonate Enclosed IP65 - KL & ST2, ST3
- Reinforced Polyester - ST4

	8 Pole	List Price €
25A	KG20 T208/IRL800 *KL	78.00
32A	KG32 T208/IRL800 *KL	87.15
40A	KG41 T208/IRL800 *ST2	139.16
63A	KG64 T208/IRL800 *ST2	151.19
80A	KG80 T208/IRL800 *ST3	263.18
100A	KG100 T208/IRL800 *ST3	281.64
125A	KG126 T208/IRL800 *ST4	464.40
160A	KG161 T208/IRL800 *ST4	518.19

Dimensions and Technical Data on page 7

PAINTED STEEL ENCLOSURES



- IP 65
- Red/Yellow Padlockable Handles
- Switch Interlocked with Lid
- Earth Terminal and Lid Bonding Link Included

	3 Pole + Neutral	List Price €	4 Pole	List Price €
25A	KG20 T203/IRL067 *MB1	106.08	KG20 T204/IRL068 *MB1	107.89
32A	KG32 T203/IRL067 *MB1	109.30	KG32 T204/IRL068 *MB1	111.70
40A	KG41 T203/IRL067 *MB2	118.93	KG41 T204/IRL068 *MB2	121.34
63A	KG64 T203/IRL067 *MB2	123.14	KG64 T204/IRL068 *MB2	126.56
80A	KG80 T203/IRL067 *MB3	160.88	KG80 T204/IRL068 *MB3	164.49
100A	KG100 T203/IRL067 *MB3	169.72	KG100 T204/IRL068 *MB3	176.14
125A	KG126 T203/IRL067 *MB4	242.58	KG126 T204/IRL068 *MB4	247.20
160A	KG161 T203/IRL067 *MB4	262.66	KG161 T204/IRL068 *MB4	274.83
250A	KG251 T203/IRL067 *MB5	369.25	KG251 T204/IRL068 *MB5	376.87
315A	KG316 T203/IRL067 *MB5	403.36	KG316 T204/IRL068 *MB5	422.24
	4 Pole + 1NO +1NC	List Price €	6 Pole + 1NO +1NC	List Price €
25A	KG20 T204/IRL460 *MB1	112.91	KG20 T206/IRL069 *MB2	122.15
32A	KG32 T204/IRL460 *MB1	116.73	KG32 T206/IRL069 *MB2	128.16
40A	KG41 T204/IRL460 *MB2	126.77	KG41 T206/IRL069 *MB3	164.10
63A	KG64 T204/IRL460 *MB2	132.78	KG64 T206/IRL069 *MB3	174.13
80A	KG80 T204/IRL460 *MB3	169.92	KG80 T206/IRL069 *MB3	192.60
100A	KG100 T204/IRL460 *MB3	181.56	KG100 T206/IRL069 *MB3	210.27
125A	KG126 T204/IRL460 *MB4	254.02	KG126 T206/IRL069 *MB5	367.25
160A	KG161 T204/IRL460 *MB4	280.92	KG161 T206/IRL069 *MB5	407.39
250A	KG251 T204/IRL460 *MB5	388.11		
315A	KG316 T204/IRL460 *MB5	433.48		

STAINLESS STEEL ENCLOSURES



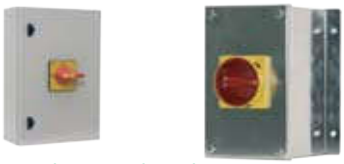
- IP 65
- Red/Yellow Padlockable Handles
- Switch Interlocked with Lid
- Earth Terminal Included

	3 Pole + Neutral	List Price €	4 Pole	List Price €
25A	KG20 T203/IRL067 *SB1	157.87	KG20 T204/IRL068 *SB1	159.39
32A	KG32 T203/IRL067 *SB1	160.88	KG32 T204/IRL068 *SB1	163.29
40A	KG41 T203/IRL067 *SB2	198.22	KG41 T204/IRL068 *SB2	200.62
63A	KG64 T203/IRL067 *SB2	203.24	KG64 T204/IRL068 *SB2	206.66
80A	KG80 T203/IRL067 *SB3	245.60	KG80 T204/IRL068 *SB3	249.21
100A	KG100 T203/IRL067 *SB3	254.42	KG100 T204/IRL068 *SB3	260.85
125A	KG126 T203/IRL067 *SB8	523.61	KG126 T204/IRL068 *SB8	528.22
160A	KG161 T203/IRL067 *SB8	543.69	KG161 T204/IRL068 *SB8	555.12
250A	KG251 T203/IRL067 *SB9	655.30	KG251 T204/IRL068 *SB9	662.92
315A	KG316 T203/IRL067 *SB9	689.41	KG316 T204/IRL068 *SB9	708.29
	4 Pole + 1NO + 1NC	List Price €	6 Pole + 1NO + 1NC	List Price €
25A	KG20 T204/IRL460 *SB1	164.49	KG20 T206/IRL069 *SB2	201.43
32A	KG32 T204/IRL460 *SB1	168.30	KG32 T206/IRL069 *SB2	207.46
40A	KG41 T204/IRL460 *SB2	206.05	KG41 T206/IRL069 *SB3	248.80
63A	KG64 T204/IRL460 *SB2	212.07	KG64 T206/IRL069 *SB3	258.84
80A	KG80 T204/IRL460 *SB3	254.62	KG80 T206/IRL069 *SB4	303.01
100A	KG100 T204/IRL460 *SB3	266.26	KG100 T206/IRL069 *SB4	320.66
125A	KG126 T204/IRL460 *SB8	535.05	KG126 T206/IRL069 *SB9	653.28
160A	KG161 T204/IRL460 *SB8	561.95	KG161 T206/IRL069 *SB9	693.44
250A	KG251 T204/IRL460 *SB9	674.16		
315A	KG316 T204/IRL460 *SB9	719.52		

Dimensions and Technical Data on pages 2 & 7
Also Available in 3 Pole +N, +1NO, +1NC

ENCLOSED MAIN SWITCH 3 & 4 POLE

- Reinforced Polyester/ Polycarbonate Enclosure
- Painted Steel Enclosure



- Stainless Steel Enclosure
- IP65
- Earth Terminal and Lid Bonding Link Included
- Switch Interlocked with Lid

	3 Pole + 1NO	List Price €	4 Pole + 1NO	List Price €
250A	KG251 T203/IRL066 *ST3	280.75	KG251 T204/IRL103 *ST3	314.07
400A	KS400 T203/IRL066 *ST5	745.70	KS400 T204/IRL103 *ST5	774.64
630A	KS630 T203/IRL066 *ST5	979.29	KS630 T204/IRL103 *ST5	1011.42
	3 Pole + 1NO	List Price €	4 Pole + 1NO	List Price €
250A	KG251 T203/IRL066 *MB5	365.14	KG251 T204/IRL103 *MB5	398.46
400A	KS400 T203/IRL066 *MB6	459.57	KS400 T204/IRL103 *MB6	488.50
630A	KS630 T203/IRL066 *MB6	828.73	KS630 T204/IRL103 *MB6	860.87
800A	KS800 T203/IRL066 *MB7	1032.85	KS800 T204/IRL103 *MB7	1037.66
1250A	KS1250 T203/IRL066 *MB7	1276.38	KS1250 T204/IRL103 *MB7	1447.78
	3 Pole + 1NO	List Price €	4 Pole + 1NO	List Price €
250A	KG251 T203/IRL066 *SB9	638.63	KG251 T204/IRL103 *SB9	671.95
400A	KS400 T203/IRL066 *SB13	861.03	KS400 T204/IRL103 *SB13	889.96
630A	KS630 T203/IRL066 *SB13	1079.65	KS630 T204/IRL103 *SB13	1111.79

MAIN EMERGENCY OFF SWITCH

- With Emergency Stop
- IP65
- Includes 1NC Contact



- Polycarbonate Enclosure



- Painted Steel Enclosure

	3 Pole + N + 1NO	List Price €	6 Pole + N + 1NO	List Price €
25A	KG20 T207/IRL209 *KL1	73.82		
32A	KG32 T207/IRL209 *KL1	75.09		
40A	KG41 T207/IRL209 *KL1	88.64	KG41 T206/IRL163 *KL	101.26
63A	KG64 T207/IRL209 *KL1	92.58	KG64 T206/IRL163 *KL1	108.93
80A	KG80 T207/IRL209 *KL1	102.79	KG100 T206/IRL163 *ST1	214.96
100A	KG100 T207/IRL209 *KL1	115.12	KG100 T206/IRL163 *ST1	231.01
125A	KG126 T207/IRL209 *ST3	316.19		
160A	KG161 T207/IRL209 *ST3	336.27		
250A	KG251 T207/IRL209 *ST3	372.60		
	3 Pole + N + 1NO	List Price	6 Pole + N + 1NO	List Price €
25A	KG20A T207/IRL205 *MB2	168.24	KG20B T206/IRL206 *MB3	202.56
32A	KG32A T207/IRL205 *MB2	171.25	KG32B T206/IRL206 *MB3	208.57
40A	KG41 T207/IRL205 *MB3	200.96	KG41B T206/IRL206 *MB4	235.47
63A	KG64 T207/IRL205 *MB3	205.98	KG64B T206/IRL206 *MB4	245.51
80A	KG80 T207/IRL205 *MB4	239.30		
100A	KG100 T207/IRL205 *MB4	248.13		

PUSH BUTTON STATION

	Stainless Steel	List Price €	Polycarbonate	List Price €
• Emergency Stop with 1NO + 1NC	P N091/IRL445 *SB30	113.48	P SN/PVT (IRSI)	31.19
• Emergency Stop with Key Lock	P N094/IRL446 *SB30	126.86	P SN/PVS (IRSI)	46.12



ENCLOSED CHANGEOVER SWITCH

- Polycarbonate







	1 Pole	List Price €	2 Pole	List Price €
Rotary style			Block Style	
32A	C 26 A211–900 *PF8	42.95	63A KH 63 T902-900KL12	94.74
50A	C 32 A211–900 *PF8	68.25	80A KH 80 T902-900KL12	122.41
63A	C 42 A211–900 *PF8	75.88		
63A	C 42 A211–900 *ST	92.96		
100A	C 80 A211–900 *ST	135.10		
	3 Pole	List Price €	4 Pole	List Price €
Block Style			Block Style	
63A	KG 64 K900/IRL440 *ST	107.94	63A KG 64 K950/IRL440 *ST	121.58
100A	KG100 K900/IRL430 *ST	146.51	100A KG100 K950/IRL430 *ST	183.15
125A	KG125 K900/IRL430 *ST	239.07	125A KG125 K950/IRL430 *ST	327.31
160A	KG160 K900/IRL430 *ST	298.00	160A KG160 K950/IRL430 *ST	375.48

Dimensions and Technical Data on page 7

SELECTION DATA

BS EN 60947,IEC 947, VDE0660, IEC 204, EN 60204, VDE0113		KG41	KG64	KG80	KG100	KG126	KG161	KG251	KG316	KS400	KS630	KS800	KS1250
Rated insulation Voltage	V	690	690	690	690	1000	1000	1000	1000	1000	1000	1000	1000
Enclosed Thermal Current	A	40	63	80	100	125	160	250	315	400	500	800	1000
Operational Current AC 21A	A	40	63	80	100	125	160	250	315	400	630	800	1250
Utilisation Category 3 x 380V/440V AC-23A/B	kW	15	22	30	37	45	55	90	110	220	295	475	600
Single Core or Stranded Wire mm sq		16	16	35	35	95	95	185	185	240	2 x 300	2 x 300	4 x 185

ENCLOSURE DIMENSIONS (mm) FOR SWITCH DISCONNECTORS

TYPE	H	W	D	Cable entries (mm)
KS	120	85	80	20
PFB	160	85	78	20 (KG20&32)/ 25 (KG41-63)
KL	190	100	90	25
KL1	250	145	100	25
KL1V KG20 - KG32	160	85	82	25
KL1V KG41 - KG64	190	100	91	25
KL1V KG80 - KG100	250	145	107	40
ST1	270	190	175	Solid Sides
ST2	280	190	130	Solid Sides
ST3	380	280	150	Solid Sides
ST4	500	400	200	Solid Sides
ST5	800	600	300	Solid Sides (Reinforced Polyester)
ST6	300	280	150	Solid Sides (Reinforced Polyester)
MB1	164	94	90	Solid Sides
MB2	194	119	115	Solid Sides
MB3	300	250	150	Solid Sides
MB4	400	300	150	Solid Sides
MB5	600	400	200	Solid Sides
MB6	800	600	300	Solid Sides
MB7	1000	800	300	Solid Sides
SB1	164	94	91.5	Solid Sides
SB2	194	119	116.5	Solid Sides
SB3	254	149	126.50	Solid Sides
SB4	250	250	150	Solid Sides
SB8	400	300	175	Solid Sides
SB9	500	400	175	Solid Sides
SB13	650	450	220	Solid Sides
SB30	100	100	91.5	Solid Sides

CHANGEOVER DIMENSIONS

32 Amp x 2 Pole	C 26 A211 – 900 *PF8	(82mm x 82mm x 63,2mm)
50 Amp x 2 Pole	C 32 A211 – 900 *PF8	(106mm x 106mm x 94.5mm)
63 Amp x 2 Pole	C 42 A211 – 900 *PF8	(106mm x 106mm x 94.5mm)
63 Amp x 2 Pole	C 42 A211 – 900 *ST	(175mm x 135mm x 118mm)
63 Amp x 2 Pole	KH 63 T902-900 KLI2	(250mm x 145mm x 107mm)
63 Amp x 3 Pole	KG 64 K900/IRL440 *ST	(190mm x 190mm x 130mm)
63 Amp x 4 Pole	KG 64 K950/IRL440 *ST	(190mm x 190mm x 130mm)
80 Amp x 2 Pole	KH 80 T902-900 KL12	(250mm x 145mm x 107mm)
100 Amp x 2 Pole	C 80 A211 – 900 *ST	(260mm x180mm x 130mm)
100 Amp x 3 Pole	KG100 K900/IRL430 *ST	(190mm x 190mm x130mm))
100 Amp x 4 Pole	KG100 K950/IRL430 *ST	(280mm x 190mm x 130mm)
125 Amp x 3 Pole	KG125 K900/IRL430 *ST	(380mm x 280mm x 150mm)
125 Amp x 4 Pole	KG125 K950/IRL430 *ST	(380mm x 280mm x 150mm)
160 Amp x 3 Pole	KG160 K900/IRL430 *ST	(380mm x 280mm x 150mm)
160 Amp x 4 Pole	KG160 K950/IRL430 *ST	(380mm x 280mm x 150mm)

KG OPTIONAL EXTRAS	Description	Code No.	List Price €
	Operating Shafts		
	Base Mounting KG Switch disconnectors are available with alternative operating shafts; either longer than the type shown in this catalogue or with fixed shaft lengths to suit particular customer requirements		
	Side Mounted Earth Terminal		
	KG20B, KG32B	K0 H052/A	2.22
	KG41B, KG64B	K1 H052/B	2.80
	KG80, KG100	K2 H052/C	4.41
	Side Mounted Neutral Terminal (Fully rated)		
	KG20B, KG32B	K0 H053/A	2.22
	KG41B, KG64B	K1 H053/B	2.80
	KG80, KG100	K2 H053/C	4.41
	Early Break/Late Make Side Mounted Auxiliary Contacts 1 NO + 1NC Rated K0 = 10A K1 = 16A K2 = 16A		
	Panel Mounting - E		
	KG20B, KG32B	K0 H010/A11-E	5.01
	KG41B, KG64B	K1 H010/A11-E	5.41
	KG80, KG100	K2 H010/A11-E	7.03
	Base Mounting - VE		
	KG20B, KG32B	K0 H010/A11-VE	5.01
	KG41B, KG64B	K1 H010/A11-VE	5.41
	KG80, KG100	K2 H010/A11-VE	7.03
	KS400, KS630	K3 H010/A11-VE	14.55
	KS800, KS1250	K3B H010/A11-VE	14.55
	Cam (Top) Mounted Auxiliary Contacts Various Configurations Available (Only Fitted at Factory)		
	Terminal Covers (For one side of switch)		
	3 Main contacts		
	KG20B KG32B	K0 M160/3	0.80
	KG41B KG64B	K1 M160/3	1.00
	KG80 KG100	K2 M160/3	1.40
	KG126 KG161	K3 M160/33	4.83
	KG251 KG316	K3 M160/31	7.83
	4 Main contacts		
	KG20B KG32B	K0 M160/4	1.00
	KG41B KG64B	K1 M160/4	1.28
	KG80 KG100	K2 M160/4	1.80
	KG126 KG161	K3 M160/43	6.43
	KG251 KG316	K3 M160/41	10.40





- Tightening Spanner
  For CA10 & CG6 Range



- M800 Deflatable Door Handle
- Available in Black & Red or Yellow & Red



BASE MOUNTED KG ISOLATORS



- Extended Metal Operating Shaft/300mm
- Red/Yellow Padlockable Handle/IP65
- Door Interlocked
- Live Terminals Shrouded
- KG126 - KG316 - Defeatable Door Clutch
- KS800 - KS1250 - Pistol Style Handle

3 Pole	List Price €	3 Pole + N	List Price €
KG20 T203/IRL100 VE	21.96	KG20 T203/IRL106 VE	24.38
KG32 T203/IRL100 VE	24.98	KG32 T203/IRL106 VE	27.39
KG41 T203/IRL100 VE	29.71	KG41 T203/IRL106 VE	32.81
KG64 T203/IRL100 VE	34.72	KG64 T203/IRL106 VE	37.82
KG80 T203/IRL100 VE	44.35	KG80 T203/IRL106 VE	49.16
KG100 T203/IRL100 VE	53.18	KG100 T203/IRL106 VE	58.00
KG126 T203/IRL100 VE	70.48	KG126 T203/IRL106 VE	83.51
KG161 T203/IRL100 VE	112.30	KG161 T203/IRL106 VE	129.35
KG251 T203/IRL100 VE	141.41	KG251 T203/IRL106 VE	169.72
KG316 T203/IRL100 VE	175.53	KG316 T203/IRL106 VE	203.82
KS400 T203/IRL100 VE	195.11		
KS630 T203/IRL100 VE	413.73		
KS800 T203/IRL100 VE	512.67		
KS1250 T203/IRL100 VE	729.11		

3 Pole + 1NO	List Price €	3 Pole + 1NO/NC*	List Price €
KG20 T203/IRL111 VE	25.19	KG20 T203/IRL112 VE	26.98
KG32 T203/IRL111 VE	28.19	KG32 T203/IRL112 VE	30.00
KG41 T203/IRL111 VE	33.31	KG41 T203/IRL112 VE	35.13
KG64 T203/IRL111 VE	38.34	KG64 T203/IRL112 VE	40.14
KG80 T203/IRL111 VE	49.56	KG80 T203/IRL112 VE	51.37
KG100 T203/IRL111 VE	58.39	KG100 T203/IRL112 VE	60.21
KG126 T203/IRL111 VE	74.61	KG126 T203/IRL112 VE	75.70
KG161 T203/IRL111 VE	117.72	KG161 T203/IRL112 VE	119.14
KG251 T203/IRL111 VE	147.44	KG251 T203/IRL112 VE	149.65
KG316 T203/IRL111 VE	181.55	KG316 T203/IRL112 VE	183.72

*** Cam Operated Auxiliaries Early Break (Fitted at Factory)**

4 Pole	List Price €	6 Pole	List Price €	6 Pole + INO/NC	List Price €
KG20 T204/IRL100 VE	25.98	KG20 T206/IRL100 VE	32.61	KG20 T206/IRL351 VE	37.64
KG32 T204/IRL100 VE	29.80	KG32 T206/IRL100 VE	38.64	KG32 T206/IRL351 VE	43.66
KG41 T204/IRL100 VE	35.21	KG41 T206/IRL100 VE	47.16	KG41 T206/IRL351 VE	52.59
KG64 T204/IRL100 VE	41.23	KG64 T206/IRL100 VE	57.18	KG64 T206/IRL351 VE	62.63
KG80 T204/IRL100 VE	52.77	KG80 T206/IRL100 VE	76.46	KG80 T206/IRL351 VE	83.51
KG100 T204/IRL100 VE	64.41	KG100 T206/IRL100 VE	94.13	KG100 T206/IRL351 VE	101.17
KG126 T204/IRL100 VE	86.51	KG126 T206/IRL100 VE	160.08	KG126 T206/IRL351 VE	166.91
KG161 T204/IRL100 VE	140.09	KG161 T206/IRL100 VE	200.23	KG161 T206/IRL351 VE	207.06
KG251 T204/IRL100 VE	172.64				
KG316 T203/IRL100 VE	218.58				
KS400 T204/IRL100 VE	234.74				
KS630 T204/IRL100 VE	453.36				
KS800 T204/IRL100 VE	549.95				
KS1250 T204/IRL100 VE	900.50				

PANEL MOUNTED KG ISOLATORS



- Padlockable Handle

3 Pole	List Price €	4 Pole	List Price€
KG10B T213/04 E	13.72	KG10B T214/04 E	15.14
KG20B T213/04 E	15.76	KG20B T214/04 E	19.77
KG32B T213/04 E	18.76	KG32B T214/04 E	23.57
KG41B T213/04 E	21.78	KG41B T214/04 E	27.28
KG64B T213/04 E	26.79	KG64B T214/04 E	33.31
KG80 T213/04 E	36.42	KG80 T214/04 E	44.86
KG100 T213/04 E	45.24	KG100 T214/04 E	56.48

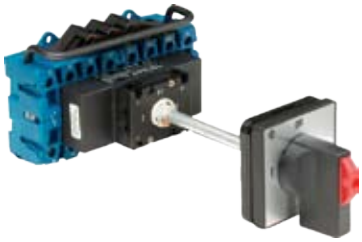
BASE MOUNTED KG ISOLATORS

- Suitable for 45mm Knockout
- Padlockable Handle



3 Pole	List Price €	3 Pole + N	List Price€
KG20 T203/IRL099 VE2	13.25	KG20 T203/IRL098 VE2	15.45
KG32 T203/IRL099 VE2	16.24	KG32 T203/IRL098 VE2	18.46
KG41 T203/IRL099 VE2	19.25	KG41 T203/IRL098 VE2	22.08
KG64 T203/IRL099 VE2	24.27	KG64 T203/IRL098 VE2	27.10
KG80 T203/IRL099 VE2	33.51	KG80 T203/IRL098 VE2	37.93
KG100 T203/IRL099 VE2	42.35	KG100 T203/IRL098 VE2	46.76
KG105 T203/IRL099 VE2	56.41	KG105 T203/IRL098 VE2	60.82
KG160 T203/IRL099 VE2	92.74	KG160 T203/IRL098 VE	108.20

BASE MOUNTED CHANGEOVERS



- C/W Shaft Extension/300mm
- Door Interlock and Padlockable Handle
- 90° Switching 1-0-2
- IP65

	3 Pole	List Price €	4 Pole	List Price €
25A	KG 20 K900/IRL127 VE	35.61	KG 20 K950/IRL127 VE	44.06
32A	KG 32 K900/IRL127 VE	41.66	KG 32 K950/IRL127 VE	51.69
40A	KG 41 K900/IRL127 VE	53.19	KG 41 K950/IRL127 VE	64.82
63A	KG 64 K900/IRL127 VE	63.24	KG 64 K950/IRL127 VE	76.88
80A	KG 80 K900/IRL127 VE	88.52	KG 80 K950/IRL127 VE	108.58
100A	KG100 K900/IRL127 VE	106.18	KG100 K950/IRL127 VE	131.89
125A	KG125 K900/IRL127 VE	171.63	KG125 K950/IRL127 VE	211.78
160A	KG160 K900/IRL127 VE	211.78	KG160 K950/IRL127 VE	265.57

DIN RAIL MOUNTED CHANGEOVERS



- Suitable for 45mm Knockout
- 90° Switching 1-0-2

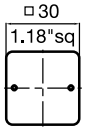


	2 Pole	List Price €
63A	KH 63 T902-900 VE2 (IRSI)	54.14
80A	KH 80 T902-900 VE2 (IRS2)	71.65

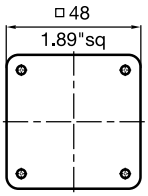
	3 Pole	List Price €	4 Pole	List Price €
25A	KG 20 K900/IRL157 VE2	28.05	KG20 K950/IRL157 VE2	36.47
32A	KG 32 K900/IRL157 VE2	34.06	KG32 K950/IRL157 VE2	44.10
40A	KG 41 K900/IRL157 VE2	43.45	KG41 K950/IRL157 VE2	55.08
63A	KG 64 K900/IRL157 VE2	53.47	KG64 K950/IRL157 VE2	67.12
80A	KG 80 K900/IRL157 VE2	75.88	KG80 K950/IRL157 VE2	95.94
100A	KG100 K900/IRL157 VE2	93.54	KG100 K950/IRL157 VE2	119.24

FRONT MOUNTING DIMENSIONS

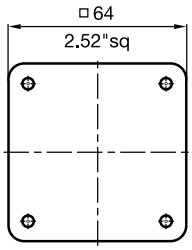
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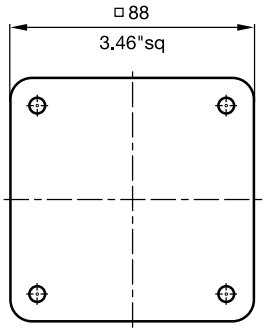
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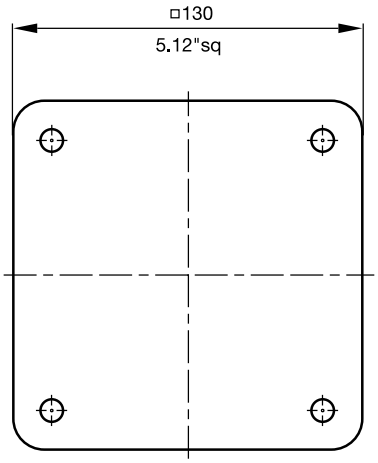
S1



S2



S3

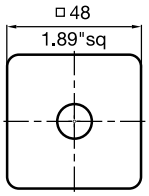


Type According to IEC 947-3/VDE 0660, part 107

	Rated Values				
	Voltage U_i	Thermal Current I_u/I_{th}		Motor Rating AC-23A 3 x 380 V/440 V	AC-3
	V	A		kW	kW
CG6	690	20	(20)	7,5	5,5
CG8	500	20	(20)	7,5	5,5
CA10	690	20	(20)	7,5	5,5
CA20	690	25	(32)	11	7,5
CR10	690	20	(20)	7,5	5,5
CR20	690	25	(32)	11	7,5
CA10B	690	20	(20)	7,5	5,5
CA20B	690	25	(32)	11	7,5
C26	690	32	(40)	15	11
C32	690	50	(63)	22	15
C42	690	63	(80)	30	18,5
C43	690	63	(80)	30	18,5
C80	690	115	(125)	45	30
C125	690	150	(200)	75	37
C315	690	315	(315)	132	55
C316*	1000	315	(315)	132	55
L400	690	480	(480)	132	55
L600	690	800	(800)	132	55
L800	690	1100	(1100)	132	55
L1200	690	1450	(1450)	132	55
L1600	690	1900	(1900)	132	55
L2000	690	2400	(2400)	132	55

FT2

- Single Hole Mounting



This Short Form Catalogue introduces Kraus & Naimer switches which fully comply with IEC947-3 (EN60947-3).

These switches bear the "CE" mark.

The values in ( ) meet the requirements of IEC 408, BS 5419 and VDE 0660 part 107/09.82.

SELECTION DATA

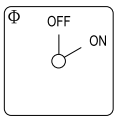

CG6


CA10

IEC 947, EN 60947, VDE0660		CG6	CA10	CA20	C26	C32	C42
Rated Insulation Voltage	V	690	690	690	690	690	690
Rated Thermal Current	A	20	20	25	32	50	63
Rated Category 3 x 380 V/440 V	kW	7.5	7.5	11	15	22	30

OFF/ON

- 60° Switching

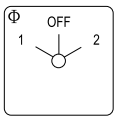


FS2/FT2 - Single Hole Mounting
E - 4 Hole Mounting

	1 Pole	List Price €	2 Pole	List Price €
20A	CG6 A200-620 FS2	8.59	CG 6 A201-620 FS2	10.08
20A	CA10 A200-620 FT2	9.44	CA10 A201-620 FT2	10.93
25A	CA20 A200-620 FT2	12.64	CA20 A201-620 FT2	14.33
32A	C26 A200-620 E	21.68	C 26 A201-620 E	24.67
50A	C32 A200-620 E	31.12	C 32 A201-620 E	35.33
63A	C42 A200-620 E	34.92	C 42 A201-620 E	40.15
	3 Pole	List Price €	4 Pole	List Price €
20A	CG6 A202-620 FS2	12.41	CG 6 A203-620 FS2	13.91
20A	CA10 A202-620 FT2	13.27	CA10 A203-620 FT2	14.76
25A	CA20 A202-620 FT2	18.59	CA20 A203-620 FT2	20.29
32A	C26 A202-620 E	30.91	C 26 A203-620 E	33.92
50A	C32 A202-620 E	44.36	C 32 A203-620 E	48.57
63A	C42 A202-620 E	50.98	C 42 A203-620 E	56.20

1-0-2 SWITCHES

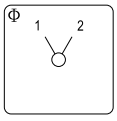
- 60° Switching



	1 Pole	List Price €	2 Pole	List Price €
20A	CG6 A210-620 FS	10.08	CG 6 A211-620 FS2	13.91
20A	CA10 A210-620 FT2	10.93	CA10 A211-620 FT2	14.76
25A	CA20 A210-620 FT2	14.33	CA20 A211-620 FT2	20.29
32A	C26 A210-620 E	24.67	C 26 A211-620 E	33.92
50A	C32 A210-620 E	35.33	C 32 A211-620 E	48.57
63A	C42 A210-620 E	40.15	C 42 A211-620 E	56.20
	3 Pole	List Price €	4 Pole	List Price €
20A	CG6 A212-620 FS2	17.74	CG 6 A213-620 FS2	21.57
20A	CA10 A212-620 FT2	18.59	CA10 A213-620 FT2	22.42
25A	CA20 A212-620 FT2	26.26	CA20 A213-620 FT2	32.43
32A	C26 A212-620 E	43.16	C 26 A213-620 E	52.38
50A	C32 A212-620 E	61.83	C 32 A213-620 E	75.07
63A	C42 A212-620 E	72.26	C 42 A213-620 E	88.32

1-2 SWITCHES

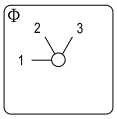
- 60° Switching



	1 Pole	List Price €	2 Pole	List Price €
20A	CG6 A220-600 FS2	10.08	CG 6 A221-600 FS2	13.91
20A	CA10 A220-600 FT2	10.93	CA10 A221-600 FT2	14.76
25A	CA20 A220-600 FT2	14.33	CA20 A221-600 FT2	20.29
32A	C26 A220-600 E	24.67	C 26 A221-600 E	33.92
50A	C32 A220-600 E	35.33	C 32 A221-600 E	48.57
63A	C42 A220-600 E	40.15	C 42 A221-600 E	56.20
	3 Pole	List Price €	4 Pole	List Price €
20A	CG6 A222-600 FS2	17.74	CG 6 A223-600 FS2	21.58
20A	CA10 A222-600 FT2	18.59	CA10 A223-600 FT2	22.42
25A	CA20 A222-600 FT2	26.26	CA20 A223-600 FT2	32.43
32A	C26 A222-600 E	43.16	C 26 A223-600 E	52.38
50A	C32 A222-600 E	61.83	C 32 A223-600 E	75.07
63A	C42 A222-600 E	72.26	C 42 A223-600 E	88.32

3 STEP SWITCHES

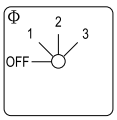
- Without Off
- 60° Switching



	1 Pole	List Price €	2 Pole	List Price €
	2 Stages		**3 Stages**	
20A	CG6 A230-600 FS2	12.42	CG6 A250-600 FS2	17.74
20A	CA10 A230-600 FT2	13.27	CA10 A250-600 FT2	18.60

3 STEP SWITCHES

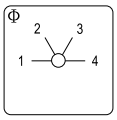
- With Off
- 45° Switching



	1 Pole	List Price€	2 Pole	List Price€
	2 Stages		**3 Stages**	
20A	CG6 A241-620 FS2	12.42	CG6 A261-620 FS2	17.74
20A	CA10 A241-620 FT2	13.27	CA10 A261-620 FT2	18.60
	3 Pole	List Price€	4 Pole	List Price€
	5 Stages		**6 Stages**	
20A	CA10 A270-600 FT2	24.77	CA10 A476-600 FT2	30.08

4 STEP SWITCHES

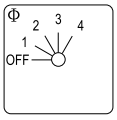
- Without Off
- 60° Switching



	1 Pole	List Price€	2 Pole	List Price€
	2 Stages		**3 Stages**	
20A	CG6 A231-600 FS2	13.92	CG6 A251-600 FS2	21.58
20A	CA10 A231-600 FT2	14.76	CA10 A251-600 FT2	22.42
	3 Pole	List Price€	4 Pole	List Price€
	5 Stages		**6 Stages**	
20A	CA10 A271-620 FT2	30.08	CA10 A481-620 FT2	37.74

4 STEP SWITCHES

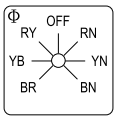
- With Off
- 30° Switching



	1 Pole	List Price€	2 Pole	List Price€
	2 Stages		**3 Stages**	
20A	CG6 A231-620 FS2	13.92	CG6 A251-620 FS2	21.58
20A	CA10 A231-620 FT2	14.76	CA10 A251-620 FT2	22.42
	3 Pole	List Price€	4 Pole	List Price€
	6 Stages		**8 Stages**	
20A	CA10 A271-600 FT2	13.92	CA10 A477-600 FT2	21.58
20A	CA10 A282-620 FT2	30.08	CA10 A482-620 FT2	37.74

VOLTMETER SWITCH

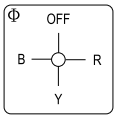
- 45° Switching



	3 Ph- Ph /3 Ph - N	List Price€
20A	CA10 A007-622 E	18.09

AMMETER SWITCH

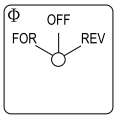
- 90° Switching



	1 Pole - 3 CTs	List Price€
20A	CA10 A048-621 E	18.09

MOTOR REVERSING SWITCH

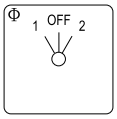
- 60° Switching



	3 Pole	List Price€
20A	CA10 A401-620 E	16.59

SPRING RETURN TO CENTRE

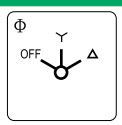
- 1-0-2
(Elec. Isolated Contacts)



	1 Pole	List Price€	2 Pole	List Price€
20A	CA10 A714-600 FT2	10.93	CA10 A715-600 FT2	14.76

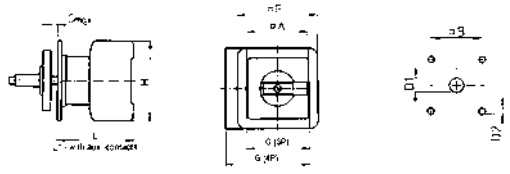
SPRING RETURN TO CENTRE

- 60° Switching



	1 Pole	List Price €
20A	CA10 A410-620 E	21.92

FRONT PANEL MOUNTING



'H' dimension includes terminal covers for KG126-KG316. For KG80/100: add 26mm on side that cover is fitted.

Factory fitted auxiliary contacts are integral with the main switch body - they are not side mounting type.

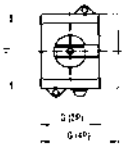
Drilling Plans for KG Main/Emergency-Off Switches

	A	B	C	D1	D2	F
KG10B	64	48	4	11-15	5	64
KG20B, KG32B	64	48	4	10	5	64
KG41B, KG64B	64	48	4	10	5	64
KG80, KG100	64	48	4	10	5	88
KG126, KG161	88	68	5.5	13	6	-
KG251, KG316	88	68	5.5	13	6	-

	G-3 Pole	G-4 Pole	H	L	L1
KG10B	48	48	50	57.2	66.7
KG20B, KG32B	42	55.5	54	53.8	62.8
KG41B, KG64B	50	66	64	60.5	70.5
KG80, KG100	70	92	80	70.6	80.6
KG126, KG161	112	150	190	96	117
KG251, KG316	145	197.5	219	103	124

BASE MOUNTING - with door interlock

Base Mounting Holes



3 & 4 Pole

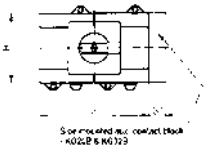


KG10B-100



KG126-316

Base Mounting Holes



6 Pole



KG20B-100



KG126-161

'H' dimension includes terminal covers for KG126-KG316. For KG80/100: add 26mm on side that cover is fitted.

Factory fitted auxiliary contacts are integral with the main switch body, except for KG20B and KG32B 6 pole switches, which have a side mounted auxiliary block fitted.

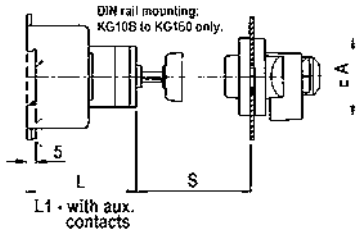
Drilling Plans for KG Main/Emergency-Off Switches

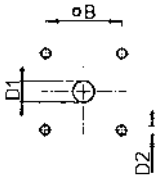
	D3	E1	F	F1	F2	F3
KG10B	5	60	22	-	-	-
KG20B, KG32B	5	60	22	32	10	-
KG41B, KG64B	5	70	25	37.5	12.5	-
KG80, KG100	6	90	25	47.5	22.5	-
KG126, KG161	6.4	78	36	-	-	76
KG251, KG316	6.4	82	44	-	-	-

	G-3 Pole	G-4 Pole	G- 6 Pole	G1	H
KG10B	48	48	-	-	50
KG20B, KG32B	42	55.5	84	10	54
KG41B, KG64B	50	66	100	-	64
KG80, KG100	70	92	140	-	80
KG126, KG161	112	150	224	-	190
KG251, KG316	145	187.5	-	-	219

BASE MOUNTING - with door interlock

Standard Door Interlock - 3, 4 & 6 Pole Switches





Shaft Position in the body is adjustable.

KG Main/Emergency-Off Switches

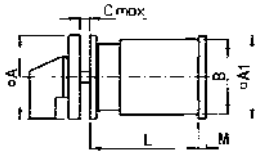
	A	B	D1	D2	L 3/4 Pole	L1 3/4 Pole
KG10B	64	48	22	5	56.2	65.7
KG20B, KG32B	64	48	22	5	50	59
KG41B, KG64B	64	48	22	5	61	71
KG80, KG100	64	48	22	5	68	78
KG126, KG161	88	68	27	6	91	91
KG251, KG316	88	68	27	6	98	98

	S 3/4 Pole	L 6 Pole	L1 6 Pole	S 6 Pole
KG10B	37-118	-	-	-
KG20B, KG32B	37-125	57.5	57.5	39-135
KG41B, KG64B	35-132	67	77	35-132
KG80, KG100	36-130	79.2	89.2	36-130
KG126, KG161	50-309	93	93	50-199
KG251, KG316	50-309	-	-	-

FRONT PANEL MOUNTING - type E

Front Panel Mounting - type E
Front/Base Mounting - type ER

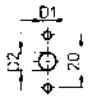
Base

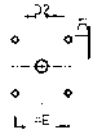




CH10 to L400

Front





CH10 to L400

Rotary Cam Switches

	A	A1	B	C	D1	D2	D3	E	E1	M
CG4-E	30	-	28	4	3.2	8-11	-	-	-	-
CH10-E	48	-	46	4	5	8-15	-	36	-	-
CA10	48	48	43	4	5	8-15	5	36	36	4.5
CA20	48	48	45	4	5	8-15	5	36	36	4.5
CA25-E	48	48	46	4	5	8-15	-	36	-	-
CA25-ER	48	64	46	4	5	8-15	5	36	48	5.5
C26	64	64	58	4	5	10-15	5	48	48	7.5
C32	64	64	60	4	5	10-15	5	48	48	7.5
C42-E	64	64	66	4	5	10-15	-	48	-	-
C42-ER	64	88	66	4	5	10-15	6	48	68	7.5
C80	88	88	84	5.5	6	13-17	6	68	68	9.4
C125	88	88	88	5.5	6	13-17	6	68	68	9.4
C315/L400	130	130	126	7	7	15.5-20	7	104	104	11.9

'L' DIMENSIONS

Stages	CG4	CH10	CA10	CA20	CA25	C26	C32	C42	C80	C125	C315/L400
1	38.5	43.5	33.5	37.7	39	42	46.8	50.8	61.5	67.5	78.6
2	50.5	57.5	43	50.4	53	54.7	64.3	72.3	88	100	117.2
3	62.5	71.5	52.5	63.1	67	67.4	81.8	93.8	114.5	132.5	155.8
4	74.5	85.5	62	75.8	81	80.1	99.3	115.3	141	165	194.4
5	86.5	99.5	71.5	88.5	95	92.8	116.8	136.8	167.5	197.5	233
6	98.5	113.5	81	101.2	109	105.5	134.3	158.3	194	230	271.6
7	110.5	127.5	90.5	113.9	123	118.2	151.8	179.8	220.5	262.5	310.2
8	122.5	141.5	100	126.6	137	130.9	169.3	201.3	247	295	348.8
9	-	155.5	109.5	139.3	151	143.6	186.8	222.8	273.5	327.5	387.4
10	-	169.5	119	152	165	156.3	204.3	244.3	300	360	426
11	-	183.5	128.5	164.7	179	169	221.8	265.8	326.5	392.5	464.6
12	-	197.5	138	177.4	193	181.7	239.3	287.3	353	425	503.2

MOUNTING OPTION INFORMATION



The options detailed below can be selected by substituting the optional code number for the suffix code "E".
Also, if mounting option does not include an escutcheon plate, change suffix number from '620' to '600' when appropriate.

Example: 2 pole 20A Off/On switch, key operated.
Single hole mounting without escutcheon plate.
Key only removed in Off (12 o'clock) position.

CA10 A201-600 ***FT1**
V750D/3C

STANDARD MOUNTING OPTION - DESCRIPTION



Panel Mounting - 4 hole
Front protection IP 65



Single Hole Mounting
Front protection IP 65

Without escutcheon plate:
16/22 mm Ø
22 mm Ø
With escutcheon plate:
16/22 mm Ø
22 mm Ø



Adaptor also available for 30mm Ø hole



Base Mounting
Front protection IP40

With baseplate
With snap-on DIN track baseplate



Panel Mounting with Larger Handle and Escutcheon Plate
Front protection IP40

4 hole panel mounting



Key Operator - Single Hole Mounting
Front protection IP 65

Without escutcheon plate:
Micro-Kaba key (16/22 mm Ø)
Ronis key (16/22 mm Ø)
Strebor key (22 mm Ø)

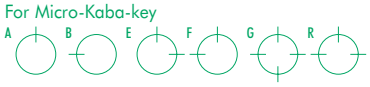
With escutcheon plate:
Micro-Kaba key (16/22 mm Ø)
Ronis key (16/22 mm Ø)
Strebor key (22 mm Ø)



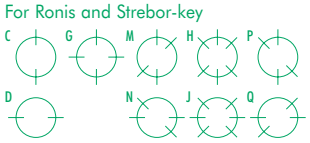
Adaptor also available for 30mm Ø hole

Key removed programme -
add letter to end of optional code no.

For Micro-Kaba-key



For Ronis and Strebor-key



	Suitable for switch types:							
Optional Code No.	CG4/CG6	CG8	CA10	CA20	CA25	C26	C32	C42
EF	•	•	•	•	•	•	•	•
FS1	•	•						
FT1			•	•	•			
FS2	•	•						
FT2			•	•	•			
VE		•	•	•	•	•	•	•
VE1		•	•	•	•	•	•	•
EG			•	•	•	•	•	•
*FS1 V750D/1	•	•						
*FS1 V750D/2	•	•						
*FT1 V750D/3			•	•	•			
*FS2 V750D/1	•	•						
*FS2 V750D/2	•	•						
*FT2 V750D/3			•	•	•			

OPTIONAL EXTRAS INFORMATION



The options detailed below can be selected by adding the code number, for the required optional extra, after the complete switch code.

Example: 3 pole, 32A, Off/On Switch.
Base mounting, with standard door clutch and interlock, IP65

CA 25 A292-620 VE
M280E/B2.EF

STANDARD MOUNTING OPTION - DESCRIPTION



Protective Rear Cover
Front protection IP40
Protection for terminals IP30

For CA10, 1 - 6 stages



Plastic Enclosure
Protection IP65
Conduit Entries - ISO 20mm

1 - 4 stage switch

Note: For enclosed switches suffix no. 600, etc. changes to 900, etc. E.g. CA10 A202-620 E changes to CA10 A202-920 PFI.

Suitable for switch types:

Optional Code No.	CG4/CG6	CA10	CA20	CA25	C26	C32	C42	
EC		•						
PF1		•	•	•				

STANDARD MOUNTING OPTION - DESCRIPTION



Standard Door Clutch
with adjustable metal shaft

Protection IP40, without interlock
Protection IP40, with interlock
Protection IP65, without interlock
Protection IP40, with interlock



Padlockable Handles
Suitable for 4 padlocks
Suitable for 2 padlocks

Available with red handle/yellow escutcheon plate or black handle/silver escutcheon plate. When ordering, please specify required colour and locked position.





Rectangular Add-on Escutcheon Plate - Blank
Black frame, silver escutcheon plate

Also available in other colours or with text. Please enquire.



Escutcheon Plate Special Engraving
Non-standard engraving is available - specify required text when ordering switch.

Suitable for switch types:

Optional Code No.	CG4/CG6	CA10	CA20	CA25	C26	C32	C42	
M280E/A2		•	•	•	•	•	•	
M280E/B2		•	•	•	•	•	•	
M280E/A2...EF		•	•	•	•	•	•	
M280E/B2...EF		•	•	•	•	•	•	
V845		•	•	•	•	•	•	
V840A		•	•	•	•	•	•	
F991/A1B-PRC	•	•	•	•	•	•	•	
	•	•	•	•	•	•	•	

DOL STARTERS **TECHNICAL DATA**

DIRECT-ON-LINE STARTERS			M10D13	M12D13	M15D23	M17D23	M10D11	M12D11	M10D21	M17D11
	Rated Insulation Voltage	V	660	660	660	660	660	660	660	660
	Rated Output 3x380 V/440V	kW	4.0	5.5	7.5	11.0	-	-	-	-
	Rated Output 1x240 V	kW	-	-	-	-	1.1	1.5	2.2	3.7

SINGLE PHASE ENCLOSED



Average F.L.C	Overload Range	Code Number	List Price €
	Without Overload	M10D11 A230 / 00000 KL5	35.91
2.0A	1.8 – 2.8A	M10D11 A230 / 00280 KL5	59.28
3.88A	2.7 – 4.2A	M10D11 A230 / 00420 KL5	59.28
5.2A	4.0 – 6.2A	M10D11 A230 / 00620 KL5	59.28
6.59A	6.0 – 9.2A	M10D11 A230 / 00920 KL5	59.28
9.6A	8.0 – 12.75A	M10D11 A230 / 01275 KL5	59.28
	Without Overload	M12D11 A230 / 00000 KL5	43.23
12.7A	11.0 – 16.0A	M12D11 A230 / 01600 KL5	66.60
	Without Overload	M10D21 A230 / 00000 KL5	53.98
15.7A	11.0 – 16.0A	M10D21 A230 / 01600 KL5	77.34
15.3A	15.0 – 20.0A	M10D21 A230 / 02000 KL5	83.63
	Without Overload	M17D11 A230 / 00000 KL5	65.69
24.3A	19.0 – 25.0A	M17D11 A230 / 02500 KL5	95.64
29.6A	24.0 – 32.0A	M17D11 A230 / 03200 KL5	100.14

3 PHASE ENCLOSED

- IP65
- Direct-On-Line Motor Starter

Dimensions (mm)

H	160
W	85
D	110
Cable Entries ISO	20mm

Average F.L.C	Overload Range	Code Number	List Price €
	Without Overload	M10D13 A400 / 00000 KL5	39.02
0.9A	0.85 – 1.3A	M10D13 A400 / 00130 KL5	64.41
1.6A	1.2 – 1.9A	M10D13 A400 / 00190 KL5	64.41
2.0A	1.8 – 2.8A	M10D13 A400 / 00280 KL5	64.41
3.5A	2.7 – 4.2A	M10D13 A400 / 00420 KL5	64.41
5.0A	4.0 – 6.2A	M10D13 A400 / 00620 KL5	64.41
8.5A	6.0 – 9.2A	M10D13 A400 / 00920 KL5	64.41
	Without Overload	M512D13 A400 /00000 KL5	45.45
11.5A	8.0 - 12.0A	M12D13 A400 / 01200 KL5	70.86
	Without Overload	M15D23 A400 / 00000 KL5	55.09
11.5A	11.0 - 16.0A	M15D23 A400 / 01600 KL5	80.20
15.5A	15.0 - 20.0A	M15D23 A400 / 02000 KL5	80.20
	Without Overload	M17D23 A400 / 00000 KL5	73.30
22A	19 – 25A	M17D23 A400 / 02500 KL5	103.86

C/W HAND OFF AUTO SWITCH



- Reset Button

Average F.L.C	Overload Range	Code Number	List Price €
		M10D51 IRL205*	

MOTOR STARTERS **TECHNICAL DATA**

AUTOMATIC STAR DELTA			M15S1	M15S2	M17S1	M17S2	M26S1	M26S2	M27S1	M35S1	M36S1	M36S2
		HP	10	15	20	25	30	34	40	50	60	75
	Nominal V	V	380	380	380	380	380	380	380	380	380	380
	Rated Output 3x380V / 440V	kW	7.5	11	15	18.5	22	25	30	37	45	55

AUTOMATIC STAR DELTAS



- C/W Fused Control Circuit

AC 3 kW	Code Number	List Price €
7.5	M15S1 A400/IRL123 M	289.88
11	M15S2 A400/IRL123 M	302.28
15	M17S1 A400/IRL123 M	330.64
18.5	M17S2 A400/IRL123 M	338.76
22	M26S1 A400/IRL123 M	411.27
25	M26S2 A400/IRL123 M	424.57
30	M27S1 A400/IRL123 M	455.59
37	M35S1 A400/IRL123 M	581.99
45	M36S1 A400/IRL123 M	606.21
55	M36S2 A400/IRL123 M	632.79

ENCLOSED MOTOR STARTERS



- C/W Isolator

AC 3 kW	Code Number	List Price €
5.5	M12D13 A400/IRL159 M	152.45
7.5	M15D23 A400/IRL159 M	159.02
11	M17D23 A400/IRL159 M	180.67

MULTIPOLE RELAYS TECHNICAL DATA

		S1000	S1200	S1500	S1700
Rated Insulation Voltage	V	660	660	660	660
Thermal Current Open/Encls	A	16/10	20/16	16/10	20/16

MULTIPOLE RELAYS



- S10/S12

Poles NO NC	Code Number	List Price	Code Number	List Price €
2 2	S1000 A230/0022	17.36	S1200 A230/0022	21.75
3 1	S1000 A230/0031	17.36	S1200 A230/0031	21.75
4 -	S1000 A230/0040	17.36	S1200 A230/0040	21.75
4 4	S1500 A230/0044	24.62	S1700 A230/0044	30.75
5 3	S1500 A230/0053	24.62	S1700 A230/0053	30.75
6 2	S1500 A230/0062	24.62	S1700 A230/0062	30.75
8 -	S1500 A230/0080	24.62	S1700 A230/0080	30.75

ENCLOSED 8 POLE RELAYS

- Enclosed Contacts (NO)
- Enclosure Drilled to Accept Seals (ESB)

	Code Number	List Price €
2 x 8 Pole Contactors	M15 A230/IRL284 *ST	80.43
Enclosure Dimensions (175mm x 125mm x 125mm)		
4 x 8 Pole Contactors	M15 A230/IRL407 *ST	154.31
Enclosure Dimensions (175mm x 175mm x 125mm)		

CONTACTORS TECHNICAL DATA

		S1010	S1510	S1710	S1210	S1520	S1720	R2630	R2730	R3560	R3660
Rated Insulation Voltage	V	660	660	660	660	660	660	660	660	660	660
Thermal Current Open/Encls	A	20/16	20/16	20/16	20/16	32/20	32/20	40/32	40/32	70/63	70/63
Rated Output 3x380V/440V AC-3	kW	4	4	5.5	5.5	7.5	11	15	18.5	22	30
Rated Output 3x380V/440V AC-3	A	9	9	9	12	16	22	30	37	44	60

CONTACTORS



- S15/S17



- R35/R36

	2 Pole	List Price €		List Price €
20A/16A	S1010 A230/2000	15.28	R2640 A230/2000	49.10
32A/20A	S1020 A230/2000	25.26	R3570 A230/2000	96.61
40A/32A	S1730 A230/2000	31.06		
	3 Pole	**List Price €**		**List Price €**
NO NC				
- -	S1010 A230/3000	16.43	S1210 A230/3000	20.43
1 -	S1010 A230/3010	17.36	S1210 A230/3010	21.42
- 1	S1010 A230/3001	17.36	S1210 A230/3001	21.42
2 2	S1510 A230/3022	23.65	S1710 A230/3022	28.33
3 1	S1510 A230/3031	23.65	S1710 A230/3031	28.33
3 2	S1510 A230/3032	24.62	S1710 A230/3032	29.29
1 -	S1520 A230/3010	27.52	S1720 A230/3010	38.01
2 2	S1520 A230/3022	30.58	S1720 A230/3022	40.89
3 1	S1520 A230/3031	30.58	S1720 A230/3031	40.89
- -	R2630 A230/3000	47.01	R2730 A230/3000	63.44
2 2	R2630 A230/3022	54.41	R2730 A230/3022	70.86
- -	R3560 A230/3000	96.61	R3660 A230/3000	112.39
3 3	R3560 A230/3033	105.63	R3660 A230/3033	121.42
	4 POLE	**List Price €**		**List Price €**
20A/16A	S1010 A230/4000	17.36	R2640 A230/4000	38.66
20A/16A	S1510 A230/4010	21.75	R3530 A230/4000	96.61
20A/16A	S1710 A230/4010	27.85		

THERMAL OVERLOAD RELAYS



Code Number		List Price €	Code Number		List Price €
			C/W Aux Contact		
Range A	**Thermal Overloads Single Phase**		**Range A**	**Thermal Overloads 3 Phase**	
			0.13- 0.20	T9E1 0013/0020-004 A	27.10
			0.19- 0.29	T9E1 0019/0029-004 A	27.10
			0.27- 0.42	T9E1 0027/0042-004 A	27.10
			0.40- 0.62	T9E1 0040/0062-004 A	27.10
			0.60- 0.92	T9E1 0060/0092-004 A	27.10
			0.85- 1.3	T9E1 0085/0130-004 A	27.10
1.2 - 1.9	T9E2 0120/0190-004 A	23.28	1.2 - 1.9	T9E1 0120/0190-004 A	27.10
1.8 – 2.8	T9E2 0180/0280-004 A	23.28	1.8 – 2.8	T9E1 0180/0280-004 A	27.10
2.7 – 4.2	T9E2 0270/0420-004 A	23.28	2.7 – 4.2	T9E1 0270/0420-004 A	27.10
4 – 6.2	T9E2 0400/0620-004 A	23.28	4 – 6.2	T9E1 0400/0620-004 A	27.10
6 – 9.2	T9E2 0600/0920-004 A	23.28	6 – 9.2	T9E1 0600/0920-004 A	27.10
8 – 12	T9E2 0800/1200-004 A	23.28	8 – 12	T9E1 0800/1200-004 A	27.10
11 – 16	T9E2 1100/1600-004 A	23.28	11 – 16	T9E1 1100/1600-004 A	27.10
15 – 20	T9E2 1500/2000-004 A	23.28	15 – 20	T9E1 1500/2000-004 A	32.61
19 - 25	T9E2 1900/2500-004 A	23.28	19 - 25	T9E1 1900/2500-004 A	33.51
24 – 32	T9E2 2400/3200-004 A	34.34			

DEGREES OF PROTECTION

IP CODES

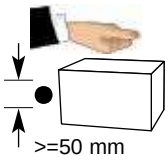
A coding system is defined by BS EN 60529 for the classification of degrees of protection provided by enclosures of electrical equipment against solid objects and water. This coding comprises the letters 'IP' followed by a two digit code as follows:-

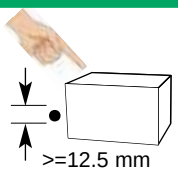
IP 6 5

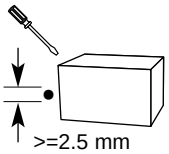
Defines protection against solid objects and access to hazardous parts.

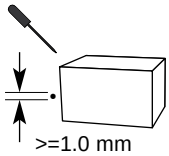
Defines protection against water.

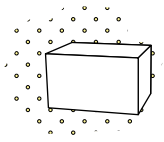
1ST DIGIT	Protection against solid objects and access to hazardous parts
0	No Protection

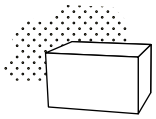
1ST DIGIT	Protection against solid objects and access to hazardous parts
1 	No ingress by solid objects >=50 mm diameter nor access to hazardous parts with the back of the hand

1ST DIGIT	Protection against solid objects and access to hazardous parts
2 	No ingress by solid objects >=12.5 mm diameter nor access to hazardous parts with a finger.

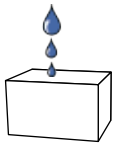
1ST DIGIT	Protection against solid objects and access to hazardous parts
3 	No ingress by solid objects >=2.5 mm diameter nor access to hazardous parts with a tool.

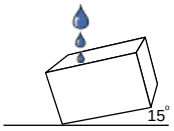
1ST DIGIT	Protection against solid objects and access to hazardous parts
4 	No ingress by solid objects >=1.0 mm diameter nor access to hazardous parts with a wire.

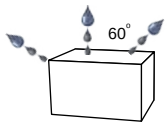
1ST DIGIT	Protection against solid objects and access to hazardous parts
5 	Dust protected. Ingress of dust is not completely prevented, but there should be no harmful deposits. No access to hazardous parts with a wire.

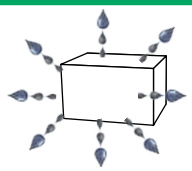
1ST DIGIT	Protection against solid objects and access to hazardous parts
6 	Dust-tight. No ingress of dust. No access to hazardous parts with a wire.

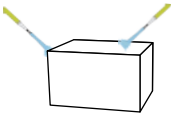
2ND DIGIT	Protection against water
0	No Protection

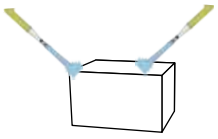
2ND DIGIT	Protection against water
1 	Vertically falling drops of water shall have no harmful effect.

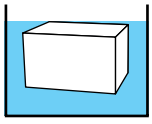
2ND DIGIT	Protection against water
2 	Vertically falling drops of water shall have no harmful effect when the enclosure is tilted at any angle up to 15° from vertical.

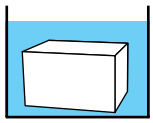
2ND DIGIT	Protection against water
3 	Water sprayed at up to 60° from the vertical shall have no harmful effect.

2ND DIGIT	Protection against water
4 	Water splashed from any direction shall have no harmful effect.

2ND DIGIT	Protection against water
5 	Jets of water projected from any direction shall have no harmful effect.

2ND DIGIT	Protection against water
6 	Strong jets of water projected from any direction shall have no harmful effect.

2ND DIGIT	Protection against water
7 	Temporary immersion in water shall not result in ingress of harmful quantities of water.

2ND DIGIT	Protection against water
8 	Continuous immersion in water shall not result in ingress of harmful quantities of water.

Reference should be made to BS EN 60529:1992 for full details concerning test and acceptance criteria.

Technical literature covering the following products is available on request.

CATALOGUE NUMBER	C-, CA-, CAD-, CR-Switches 10A - 315A and L-Switches 350A - 2400A
100	C-switches are designed for universal application. They are recommended for instrument, isolator, double-throw and motor control. L-switches are designed for load and off-load applications. They may be used to switch resistive or low-inductive loads.

CATALOGUE NUMBER	Enclosures and Optional Extras
101	The complete product line, a large number of optional extras are available, including door interlocks, push-pull devices, cylinder and padlock attachments, control and indicator devices, AC motor drives, as well as enclosures, both insulated and metal.

CATALOGUE NUMBER	A- and AD-Switches 6A - 40A
110	A-switches have 4 contacts in each switching stage. These switches provide an extensive range of switch functions and require a minimum mounting depth. Up to 36 switching positions are possible, with availability of 48 contacts per 12 stage switch column.

CATALOGUE NUMBER	CG-Switches 10A - 25A
120	Ultra compact CG-switches are ideally suited for control and instrumentation applications. CG-switch terminals are "fingerproof", according to VDE 0106, part 100. Terminals are conveniently accessible for wiring and are delivered open. All CG4-switches offer specially designed gold plated contacts, which facilitates their use in electronic circuitry and chemically aggressive environments

CATALOGUE NUMBER	D-Switches up to 25A
130	D-switches incorporate unique corrosion resistant contacts that permit operation on system voltage as low as 30mV. They have fully enclosed and protected contacts which can be operated either by rotary and/or lateral handle movement. D-switches are used in calibration and semiconductor circuits. They are also used for relay and contactor control.

CATALOGUE NUMBER	X-Switches 63A - 630A
140	X-switches can be applied for load, tap and gang switching duties. They incorporate 6 contacts in each switching stage. Their compact design provides a minimum length dimension for mounting purposes.

CATALOGUE NUMBER	KG-Switches 25A - 250A and K-Switches 63A - 3000A
150	KG-switches and K-switches are excellent circuit interruptors. They have high through fault and fault making capacities and are especially designed for use as isolators and safety switches for machine tools, distribution panels and switchboards. KG "ON-OFF" switches offer unusually wide isolation distances between terminals which are designed for time saving "straight-line" wiring. ON-OFF switches are available with up to 8 poles and double-throw switches are available with up to 3 poles

CATALOGUE NUMBER	Contactors 16A - 125A and Motorstarters 4kW - 55kW
200	These include control relays, motor contactors, two and four pole output contactors, heating contactors, thermal overload relays

We reserve the right to make technical and dimensional changes without prior notice.



Kraus & Naimer

BLUE LINE switchgear



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NQA
NATIONAL QUALITY ASSURANCE
ISO9002
REGISTERED COMPANY

Certificate Number 8531/1
Standard Industrial Classification Code: 6149