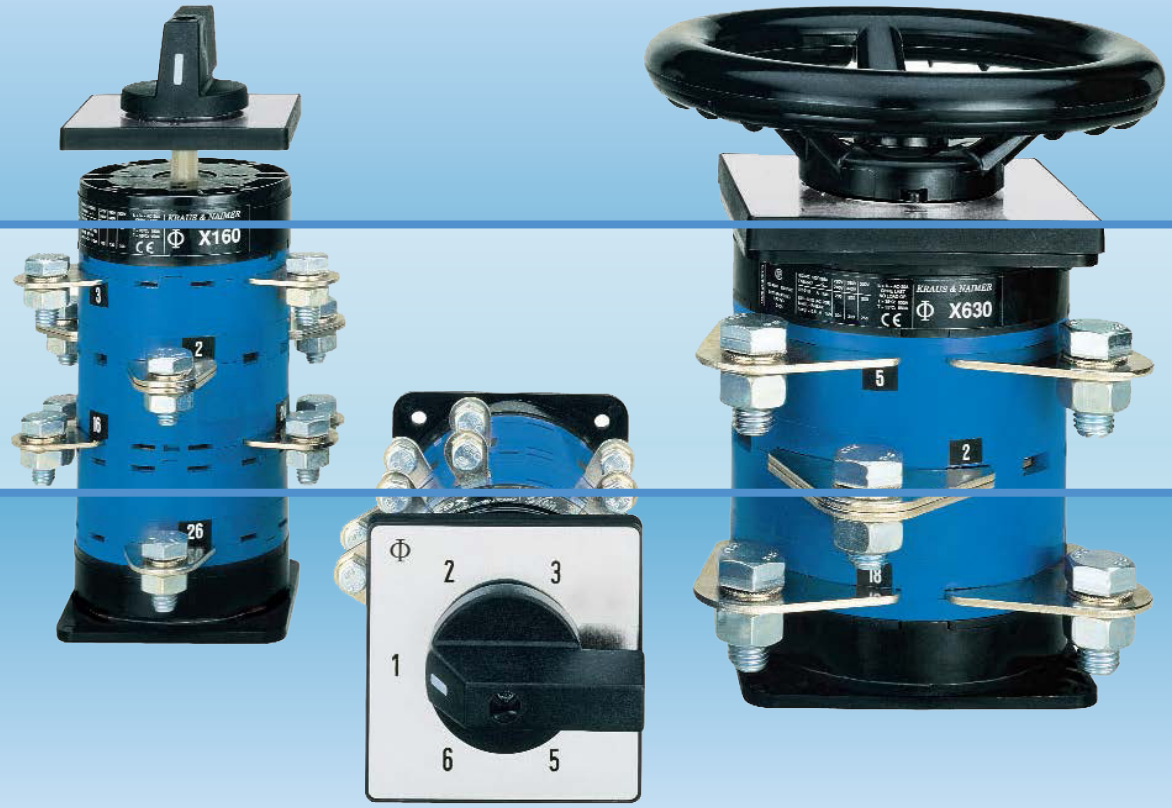
Kraus & Naimer

Catalogo 140
10 / 2026

Catalog 140

X Switches
80 A-630A



KRAUS & NAIMER

The development of the Blue Line rotary switch, contactor and motor starter product ranges is based on more than seventy-five 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 worldwide sales and service organization.

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WORLDWIDE SYMBOL FOR QUALITY SWITCHGEAR

Disconnectors and Main Switches acc. to IEC 60947-3 see Catalog 500

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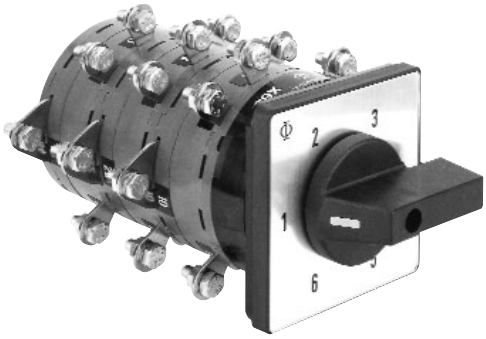
Construction Data

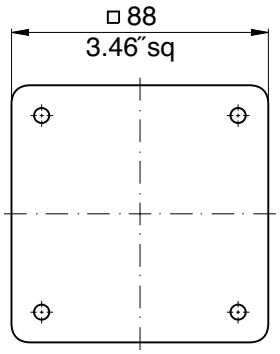
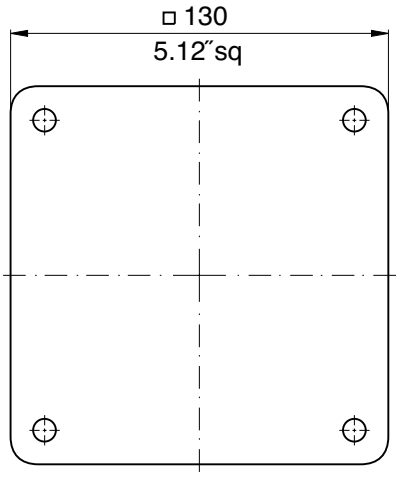
X switches are highly compact cam operated switches which meet the requirements of IEC 60947-3 for switches. Each stage contains 6 double-break contacts operated by a triple cam, providing a minimum length dimension for mounting purposes with a larger number of contacts. They are mainly used as general application switches and multi-step switches.

X switches are available with up to 6 stages. Up to 36 contacts are operated in up to 18 switch positions.

Switching angle may be 20°, 30°, 45°, 60° or 90°.

A wide range of optional extras, escutcheon plates and handles is available.



Switch Size		Type	Nominal Ratings				
			Acc. to IEC 60947-3, EN 60947-3, VDE 0660 part 107				
			Insulation Voltage[1] U_i	Thermal Current I_u/I_{th}[2]		Motor Rating AC-20B[3] 3 phase, 3 pole 380-440 V	500 V
			V	**A**		**A**	**A**
S2		**X63**	690	80	(63)	80	80
		X160	690	180	(150)	125	125
S3		**X100**	690	125	(100)	125	125
		X200	690	240	(200)	240	240
		X400	690	450	(400)	300	250
		X630	690	630	(560)	300	250

[1]Valid for lines with grounded common neutral termination, overload category III, pollution degree 3. Values for other supply systems on request.
[2]The values in brackets are valid for higher ambient temperature: 55 °C during 24 hours with peaks up to 60 °C. [3]Occasional switching under load.

How to order

Disconnectors and Main Switches according to IEC 60947-3 see Catalog 500

Three types of data (shown below) are required for ordering Blue Line cam-operated switches. Code numbers for ordering are shown in this catalog.

1. Type of Switch

The type of switch required may be easily selected by referring to the table on page 2 which shows the thermal current, power rating and dimensions of each switch. For further technical details, refer to page 14.

2. Switch Function

The code numbers for standard switches shown on pages 5-10 indicate the switch function, escutcheon plate, handle and any optional extras.

Additional coding to modify type and color of handle and escutcheon plate is explained below.

3. Type of Mounting

Types of mounting are shown on page 11.

Specify the mounting code to indicate required mounting.

X63 A202-600 VE

Modification of Switches

The part number for switch function and options may be modified in cases where items are required other than standard. The modification may involve the escutcheon plate inscription, color combination of escutcheon plate and handle, type of escutcheon plate and handle or the optional extra.

Switch Size	Escutcheon Plate Frame	Handle	Escutcheon Plate Backing	Escutcheon Plate Lettering	Dash Number
S2, S3	electro-gray	electro-gray	brushed alu	black	-100
S2, S3	electro-gray	electro-gray	black	mat silver	-500
S2, S3	black	black	brushed alu	black	-600
S2, S3	black	black	black	mat silver	-700

The standard switch consists of a transparent escutcheon plate with brushed aluminum backing and black inscription. The escutcheon plate frame is black as well as the handle. Above there are further color combinations of escutcheon plate and handle which are available. The appropriate dash number must be substituted in the switch function coding to specify other color combinations as required.

Example: The complete coding for switch type X63 with a 3 pole ON/OFF switch function, electro-gray handle and electro-gray escutcheon plate frame with brushed aluminum backing and black inscription which reads 0-1 is as follows: **X63 A202-100 E**.

How to order

Special programs for escutcheon plate and handle combinations

The following is a list of special programs for escutcheon plate and handle combinations. They may be obtained by specifying any one of the following two (2) digits dash-numbers as a part of the overall dash-number. It is still necessary to prefix these two digit numbers with the first digit which represents the color combination required.

-000 = without escutcheon plate, without handle
- .01 = without escutcheon plate
- .02 = without handle
- .03 = with square escutcheon plate without lettering
- .04 = with rectangular escutcheon plate without lettering
- .05 = with square escutcheon plate without lettering and without handle
- .06 = with rectangular escutcheon plate without lettering and without handle
- .07 = standard escutcheon plate, without lettering on rectangular section
- .08 = with F-handle
- .09 = with P-handle
- .10 = escutcheon plate with frame and fixation ring only
- .11 = without escutcheon plate, but with handle bearing plate

Example: The complete coding for switch type X63 with a 3 pole ON/OFF switch function with electro-gray escutcheon plate frame, square escutcheon plate without lettering, brushed aluminum plate backing and electro-gray handle reads as follows: **X63 A202-103 VE**.

Handles, Escutcheon Plates and Optional Extras

The handles for standard switches shown on pages 5-10 are suitable for mounting units with four hole mounting. Alternative types of handles available are illustrated on page 12.
When a handle, escutcheon plate or optional extra is required but not covered by the dash number, the code number for the selected component should be entered separately. A comprehensive range of available standard escutcheon plates is illustrated on page 13. Non-standard or special escutcheon plate engravings are available at extra cost.
The large number of optional extras and enclosures is covered in Catalog **101**.

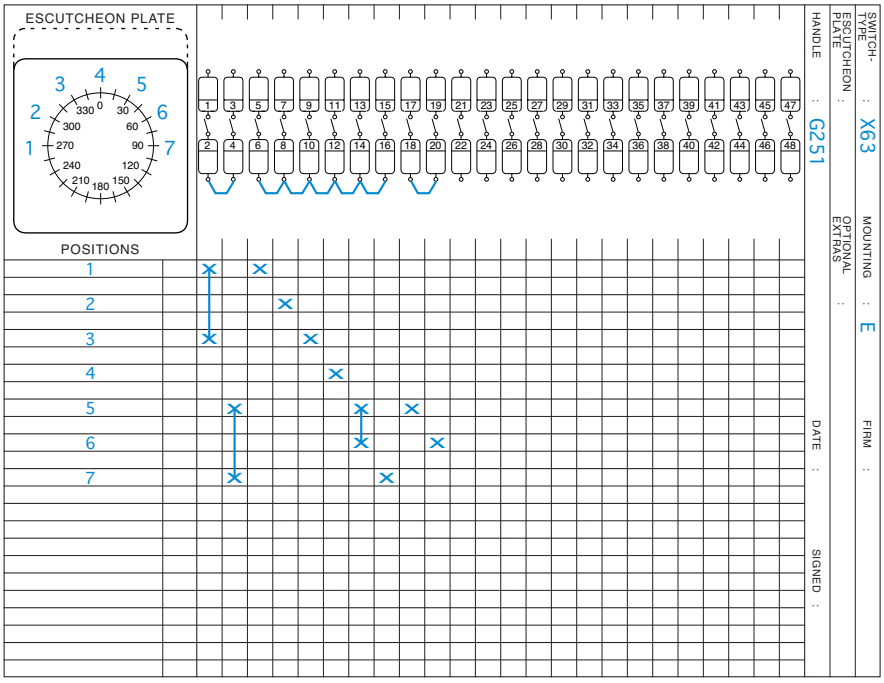
Switch Size

Blue Line X switches are available in sizes S2 and S3. These size codes indicate the dimensions of the mounting, the escutcheon plate and the handle as well as the size of the optional devices. Page 2 lists these sizes and the various switch types they include.

Ordering of Special Switches and Escutcheon Plates

When ordering special switches and escutcheon plates it is advisable to use our order form, as illustrated. The customer's requirements are shown in blue as an example.

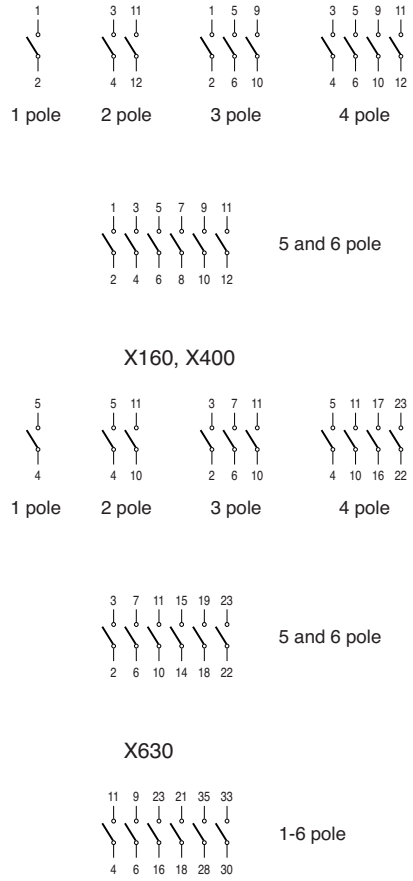
For technical reasons, it may not be possible to follow the sequence of contacts requested by the customer. The final contact development which is sent with every switch will show the customer's original terminal markings.



Order forms are available on request.

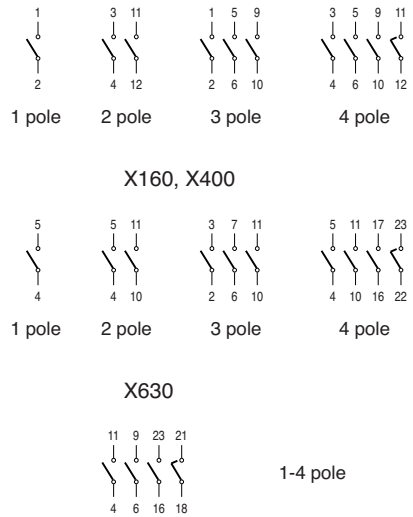
ON/OFF Switches with 60° Switching

Function	Escutch. Plate	Type/Handle X63-X200	Type/Handle X160, X400	Type/Handle X630	Code	Stages X63-X200	Stages X160, X400	Stages X630	Connection Diagram
1 pole	0 1				A200-600	1	1	1	X63, X100, X200
2 pole					A201-600	1	1	1	
3 pole					A202-600	1	1	2	
4 pole					A203-600	1	2	2	
5 pole					A341-600	1	2	3	
6 pole					A342-600	1	2	3	
1 pole	OFF ON				A200-620	1	1	1	
2 pole					A201-620	1	1	1	
3 pole					A202-620	1	1	2	
4 pole					A203-620	1	2	2	
5 pole					A341-620	1	2	3	
6 pole					A342-620	1	2	3	

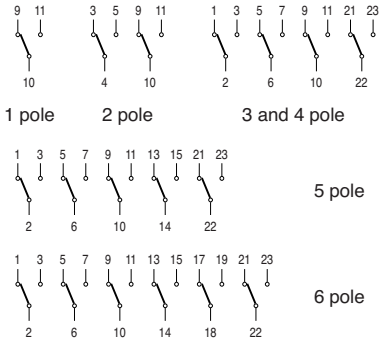


ON/OFF Switches with 90° Switching

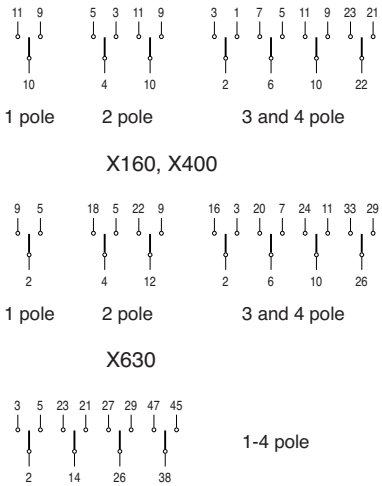
Function	Escutch. Plate	Type/Handle X63-X200	Type/Handle X160, X400	Type/Handle X630	Code	Stages X63-X200	Stages X160, X400	Stages X630	Connection Diagram
1 pole contacts	1 0				A290-600	1	1	1	X63, X100, X200
2 pole preclose 30°					A291-600	1	1	1	
3 pole					A292-600	1	1	2	
4 pole					A293-600	1	2	2	
1 pole contacts	ON OFF				A290-620	1	1	1	
2 pole preclose 30°					A291-620	1	1	1	
3 pole					A292-620	1	1	2	
4 pole					A293-620	1	2	2	



Double-throw Switches without “OFF” 60° Switching

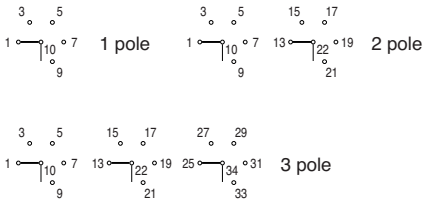
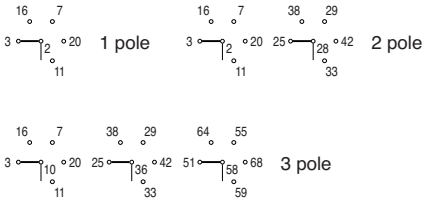
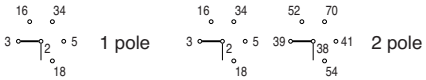
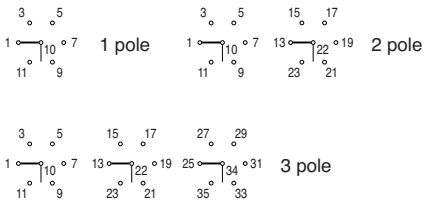
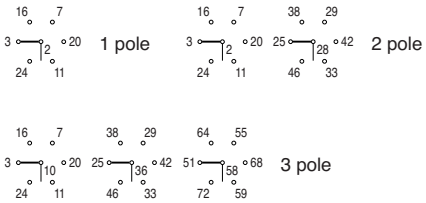
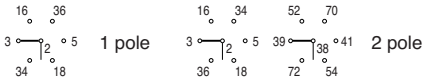
Function	Escutch. Plate	Type/Handle X63-X200	Type/Handle X160, X400	Type/Handle X630	Code	Stages X63-X200	Stages X160, X400	Stages X630	Connection Diagram
1 pole					A220-600	1	1	1	
2 pole					A221-600	1	2	2	
3 pole					A222-600	1	2	3	
4 pole					A223-600	2	3	4	
5 pole					A369-600	2	4		
6 pole					A370-600	2	4		

Double-throw Switches with Center “OFF” 60° Switching

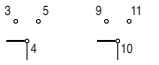
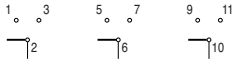
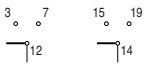
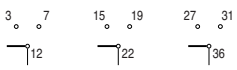
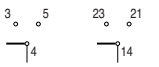
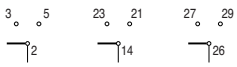
Function	Escutch. Plate	Type/Handle X63-X200	Type/Handle X160, X400	Type/Handle X630	Code	Stages X63-X200	Stages X160, X400	Stages X630	Connection Diagram
1 pole					A210-600	1	1	1	
2 pole					A211-600	1	2	2	
3 pole					A212-600	1	2	3	
4 pole					A213-600	2	3	4	
1 pole					A210-620	1	1	1	
2 pole					A211-620	1	2	2	
3 pole					A212-620	1	2	3	
4 pole					A213-620	2	3	4	

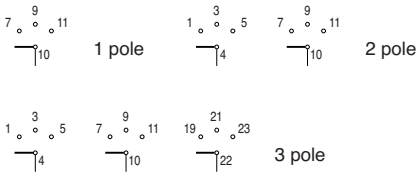
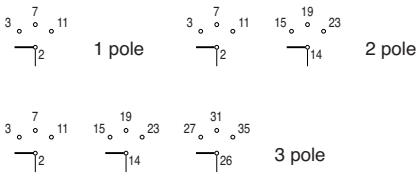
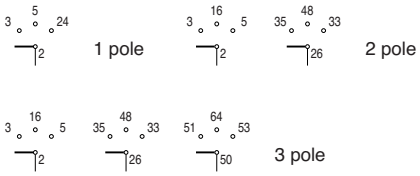
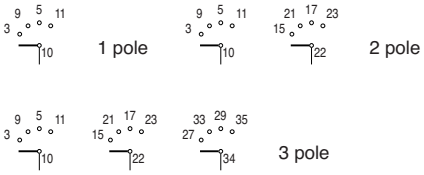
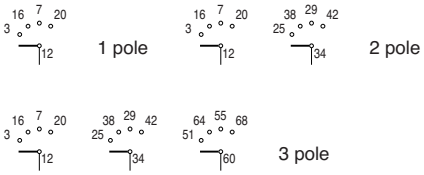
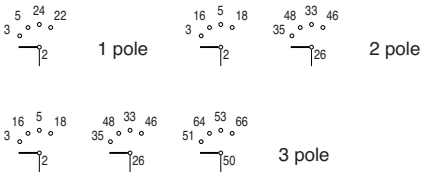
Function	Escutch. Plate	Type/Handle X63-X200	Type/Handle X160, X400	Type/Handle X630	Code	Stages X63-X200	Stages X160, X400	Stages X630	Connection Diagram
Multi-step Switches without "OFF"									
1 pole 3 Step 2 pole 3 pole					A230-600 A250-600 A270-600	1 1 2	1 2 3	2 4 6	X63, X100, X200 1 pole: 9 11 / 7 10 2 pole: 4 6 / 2 3; 9 11 / 7 10 3 pole: 4 6 / 2 3; 9 11 / 7 10; 21 23 / 19 22 X160, X400 1 pole: 11 7 / 3 2 2 pole: 11 7 / 3 2; 23 19 / 15 14 3 pole: 11 7 / 3 2; 23 19 / 15 14; 35 31 / 27 26 X630 1 pole: 5 16 / 3 12 2 pole: 16 5 / 3 2; 48 33 / 35 26 3 pole: 16 5 / 3 2; 48 33 / 35 26; 64 53 / 51 50
1 pole 4 Step 2 pole 3 pole					A231-600 A251-600 A271-600	1 2 3	2 4 6	2 4 6	X63, X100, X200 1 pole: 5 9 / 3 10 11 2 pole: 5 9 / 3 10 11; 17 21 / 15 22 23 3 pole: 5 9 / 3 10 11; 17 21 / 15 22 23; 29 33 / 27 34 35 X160, X400 1 pole: 16 7 / 3 2 20 2 pole: 16 7 / 3 12 20; 38 29 / 25 28 42 3 pole: 16 7 / 3 12 20; 38 29 / 25 34 42; 64 55 / 51 60 68 X630 1 pole: 16 18 / 3 2 5 2 pole: 16 18 / 3 2 5; 48 46 / 35 26 33 3 pole: 24 22 / 3 2 5; 48 46 / 27 26 29; 72 70 / 51 50 53

*Type X400 with handle

Function	Escutch. Plate	Type/Handle X63-X200	Type/Handle X160, X400	Type/Handle X630	Code	Stages X63-X200	Stages X160, X400	Stages X630	Connection Diagram
Multi-step Switches without "OFF"									
1 pole 5 Step 2 pole 3 pole					A232-600 A252-600 A272-600	1 2 3	2 4 6	3 6	X63, X100, X200  X160, X400  X630 
1 pole 6 Step 2 pole 3 pole			*		A233-600 A253-600 A273-600	1 2 3	2 4 6	3 6	X63, X100, X200  X160, X400  X630 

*Type X400 with handle

Function	Escutch. Plate	Type/Handle X63-X200	Type/Handle X160, X400	Type/Handle X630	Code	Stages X63-X200	Stages X160, X400	Stages X630	Connection Diagram
Multi-step Switches without "OFF"									
1 pole 7 Step					A234-600	2	4	4	X63 X100 X200 X160 X400 X630
1 pole 8 Step					A235-600	2	4	4	X63 X100 X200 X160 X400 X630
1 pole 9 Step					A236-600	2	4	5	X63 X100 X200 X160 X400 X630
Multi-step Switches with "OFF"									
1 pole 2 Step 2 pole 3 pole					A240-600 A260-600 A280-600	1 1 1	1 2 3	1 2 3	X63, X100, X200 1 pole  2 pole  3 pole X160, X400 1 pole  2 pole  3 pole X630 1 pole  2 pole  3 pole

Function	Escutch. Plate	Type/Handle X63-X200	Type/Handle X160, X400	Type/Handle X630	Code	Stages X63-X200	Stages X160, X400	Stages X630	Connection Diagram
Multi-step Switches with "OFF"									
1 pole 3 Step 2 pole 3 pole					A241-600 A261-600 A281-600	1 1 2	1 2 3	2 4 6	X63, X100, X200  1 pole 2 pole 3 pole X160, X400  1 pole 2 pole 3 pole X630  1 pole 2 pole 3 pole
1 pole 4 Step 2 pole 3 pole			*		A242-600 A262-600 A282-600	1 2 3	2 4 6	2 4 6	X63, X100, X200  1 pole 2 pole 3 pole X160, X400  1 pole 2 pole 3 pole X630  1 pole 2 pole 3 pole

*Type X400 with handle

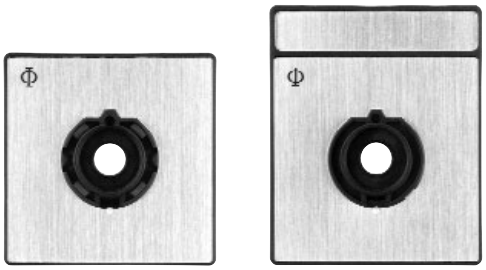
Four Hole Panel Mounting and Base Mounting	Code	X63, X160	X100, X200-X630
Panel Mounting			
Four hole panel mounting	E	●	●
Four hole panel mounting, protection IP 65	EF	●	●
Panel and base mounting			
Four hole panel mounting	ER	●	●
Four hole panel mounting, protection IP 65	ERF	●	●
Base Mounting			
Four hole panel mounting	VE	●	●

Handles

Type	Color	Code	Size S2	Size S3
R-Handle	black	G001	●	●
	red	G002	●	●
	white	G003	●	●
	electro-gray	G007	●	●
F-Handle	black	G221	●	—
	red	G222	●	—
	white	G223	●	—
	electro-gray	G227	●	—
Handwheel	black	G971	—	●
Capstan Handle	black	G931	—	●

Type	Color	Code	Size S2	Size S3
I-Handle	black	G251	●	●
	red	G252	●	●
	white	G253	●	●
	electro-gray	G257	●	●
K-Handle	black	G411	●	●
	red	G412	●	●
	white	G413	●	●
	electro-gray	G417	●	●
P-Handle	black	G211	●	●
	red	G212	●	●
	white	G213	●	●
	electro-gray	G217	●	●

Escutcheon Plates

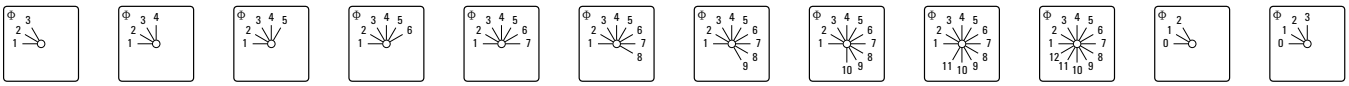


Square and rectangular escutcheon plates are available for each size of switch. The escutcheon plate consists of a frame and a faceplate having the switch positions which is than embossed with hot-foil backing. The escutcheon plate frame is an essential part of the switch and serves as a bearing surface for the handle. If the switch is to be mounted without an escutcheon plate we would recommend the handle bearing plate T100-04.

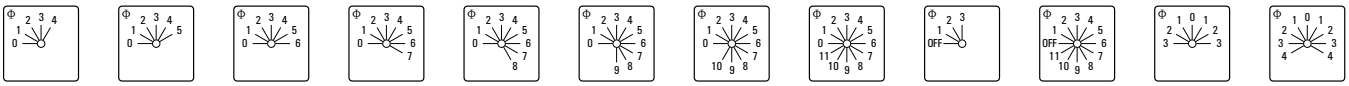
Standard Letterings Available

(over 500 standard letterings, special letterings on request)

30° switching

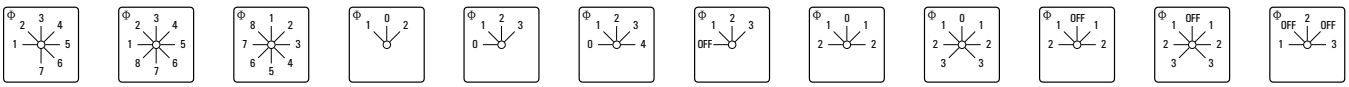


F161 F052 F055 F138 F135 F136 F010 F011 F012 F013 F053 F001



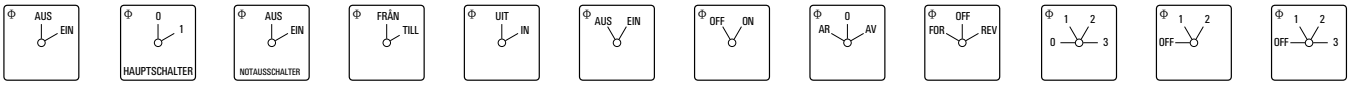
F002 F003 F004 F005 F006 F007 F008 F009 F040 F048 F014 F015

45° switching



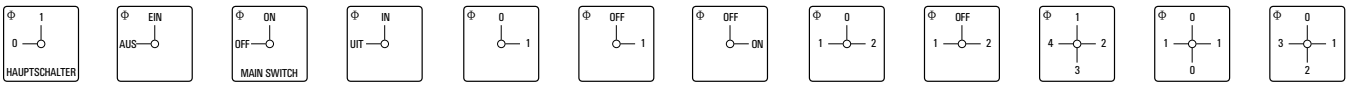
F110 F111 F745 F216 F109 F293 F115 F105 F106 F113 F116 F739

60° switching



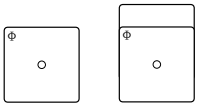
F197 F103 F310 F198 F089 F291 F721 F314 F093 F102 F098 F100

90° switching



F203 F068 F201 F252 F058 F065 F208 F057 F064 F060 F062 F059

Miscellaneous



F990 PE F990 PR

F821 F822 F824 F825 F826

Selection Data			X63	X100	X160	X200	X400	X630
Rated Insulation Voltage U_i	IEC 60947-3, EN 60947-3[1]							
	VDE 0660 part 107[1]	V	690	690	690	690	690	690
	UL/CSA[2]	V	600	600	600	600	600	600
Rated Operational Voltage U_e	IEC 60947-3, EN 60947-3[1]							
	VDE 0660 part 107[1]	V	500	500	500	500	500	500
	UL/CSA[2]	V	600	600	600	600	600	600
Rated Impulse Withstand Voltage U_{imp}[1]		kV	6	6	6	6	6	6
Rated Thermal Current I_u/I_{th}	IEC 60947-3, EN 60947-3							
	VDE 0660 part 107							
Ambient temp. +35 °C during 24 hours with peaks up to +40 °C		A	80	125	180	240	450	630
Ambient temp. +55 °C during 24 hours with peaks up to +60 °C		A	63	100	150	200	400	560
	UL/CSA[2]	A	80/63	150/100	180/160	250/200	400	630
Rated Operational Current I_e								
AC-20A No-load operation[3]	IEC 60947-3, EN 60947-3							
	VDE 0660 part 107 500 V	A	80	125	180	240	450	630
Occasional switching under load cos φ 0,8 (AC-20B)[3]	3 phase, 3 pole and 440 V	A	80	125	125	240	300	300
	1 phase, 2 pole 500 V	A	80	125	100	240	250	250
AC-21B Switching of resistive loads, including moderate overloads	3 phase, 3 pole and 1 phase, 2 pole 500 V	A	63	100	80	200	200	200
Interrupting Rating	UL/CSA[2] 600 V	A	63	100	63/80	150/200	150/200	150/200
Short Circuit Protection								
Max. fuse size	(gL-characteristic)	A	80	125	200	250	500	630
Rated short-time withstand current	(1 s-current)	kA	on request					

DC Switching Capacity

No. of series contacts	1	2	3	4	5	6	8		X63	X100	X160	X200	X400	X630
	Voltage V													
DC-1	48	95	140	190	240	290	350		63	100	80	200	220	–
Resistive loads	60	120	180	240	300	360	450	A	11	15	12	22	25	–
T ≤ 1 ms	110	220	330	440	550	660	–		2,2	2,5	2,5	–	–	–
Inductive loads	24	48	72	96	120	144	190		63	100	80	200	220	–
T = 50 ms	30	60	90	120	150	180	240	A	18	25	20	32	35	–
	48	95	140	190	240	290	350		6	7	7	8	–	–
	60	120	180	240	300	360	450		1,8	2	2	–	–	–

Terminals - Use copper wire only		for	Cable lug or flat connection e. g. jointed					
	connection screw	Ø	M6	M8	M10	M10	M12	M16
	length	mm	15	16	20	20	30	30
Ambient Temperature of Stages[4]			55 °C during 24 hours with peaks up to 60 °C at 100 % load, permissible load see Rated Thermal Current I_u/I_{th}.					

[1]Valid for lines with grounded common neutral termination, overload category III, pollution degree 3. Values for other supply systems on request. [2]International Standards and Approvals, refer to page 15. [3]Valid for ambient temperature max. 35 °C. [4]For electromagnetic optional extras see additional data in Catalog 101.

International Standards and Approvals

Country	Authority	Mark or Standard	X63	X100	X160	X200	X400	X630
USA	Underwriters Laboratories	c UL us	●	●	●	●	●	●
Canada	Canadian Standards Association		●	●	●	●	●	●
Switzerland	Schweizerischer Elektrotechnischer Verein		+	+	+	+	+	+
Federal Republic of Germany	Verband Deutscher Elektrotechniker	VDE 0660[1]	+	+	+	+	+	+
Great Britain	British Standards Institution	BS EN 60947[1]	+	+	+	+	+	+
International Electrical Commission (IEC) Recommendation		IEC 60947[2]	+	+	+	+	+	+
Europäisches Komitee für Elektrotechnische Normung (CENELEC)		EN 60947[2]	+	+	+	+	+	+

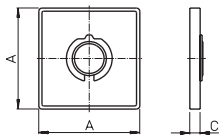
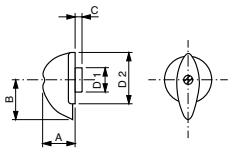
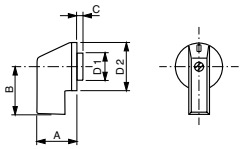
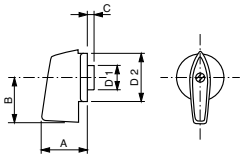
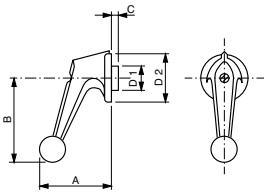
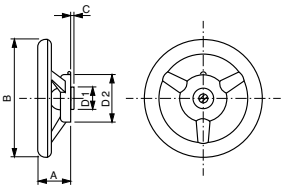
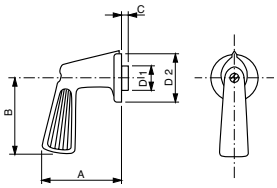
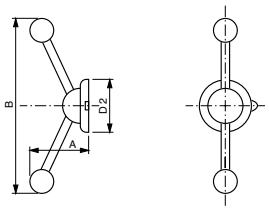
● Switch approved

+ Switch conforms to requirements

[1]Industrial switchgear is not required to bear a symbol but must conform to requirements. By referring to the specific specification on the product the manufacturer implies that these requirements have been met.
[2]IEC and CENELEC do not operate an approval scheme.

Dimensions

mm
inch

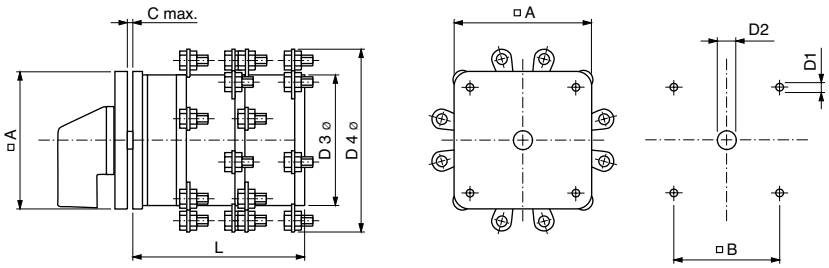
Escutcheon Plates and Handles	Size	A	B	C	D1ø	D2ø	Escutcheon Plates and Handles	Size	A	B	C	D1ø	D2ø
PE-Escutcheon Plate 	S2	88 3.46		8,5 .34									
	S3	130 5.12		10 .39									
R-Handle 	S2	30 1.18	42 1.65	5 .20	25,4 1	50 1.97	**I-Griff** 	S2	35 1.38	43,8 1.72	5 .20	25,4 1	50 1.97
	S3	47 1.85	63 2.48	5 .20	37 1.46	77,6 3.06		S3	54 2.13	64,8 2.55	5 .20	37 1.46	77,6 3.06
F-Handle 	S2	44,7 1.76	45 1.77	5 .20	25,4 1	50 1.97	**K-Handle** 	S2	55 2.17	71 2.80	5 .20	25,4 1	50 1.97
								S3	75 2.95	106 4.18	5 .20	37 1.46	77,6 3.06
Handwheel 	S3	55 2.17	200 7.87	5 .20	37 1.46	79,5 3.13	**P-Handle** 	S2	70 2.76	68 2.68	5 .20	25,4 1	50 1.97
								S3	81 3.19	85 3.35	5 .20	37 1.46	77,6 3.06
Capstan Handle 	S3	110 4.33	350 13.78			74 2.91							

Dimensions

mm
inch

Four Hole Panel Mounting

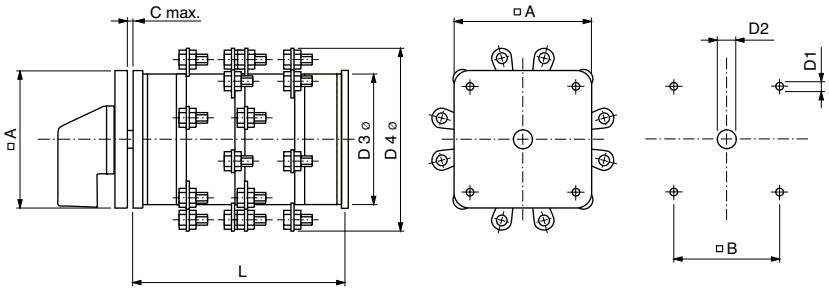
E, EF



		X63	X100	X200
A		88 3.46	130 5.12	130 5.12
B		68 2.68	104 4.09	104 4.09
C		7,5 .30	4,5 .18	4,5 .18
D1		6 .24	7 .28	7 .28
D2	E	13-17 .51-.67	15,5-20 .61-.79	15,5-20 .61-.79
D2	EF	26-30 1.02-1.18	22-25 .87-.98	22-25 .87-.98
D3		84 3.31	128 5.04	128 5.04
D4		120 4.72	170 6.69	188 7.40

No. of stages		1	2	3	4	5	6
X63	mm	72,5	110,5	148,5	186,5	224,5	262,5
	inch	2.85	4.35	5.85	7.34	8.84	10.33
X100	mm	84	128	172	216	260	304
	inch	3.31	5.04	6.77	8.5	10.24	11.97
X200	mm	90	140	190	240	290	340
	inch	3.54	5.51	7.48	9.45	11.42	13.39

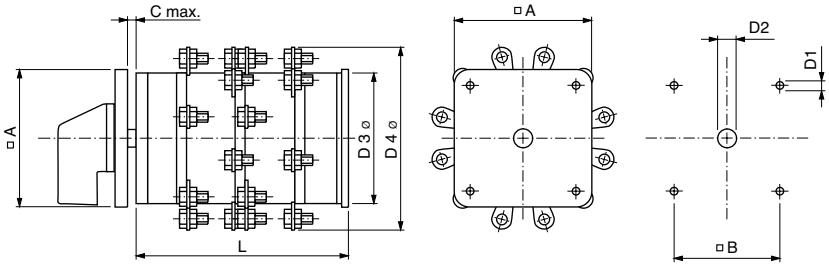
ER, ERF



		X63	X100	X200
A		88 3.46	130 5.12	130 5.12
B		68 2.68	104 4.09	104 4.09
C		5,5 .22	7 .28	7 .28
D1		6 .24	7 .28	7 .28
D2	ER	13-17 .51-.67	15,5-20 .61-.79	15,5-20 .61-.79
D2	ERF	26-30 1.02-1.18	22-25 .87-.98	22-25 .87-.98
D3		84 3.31	128 5.04	128 5.04
D4		120 4.72	170 6.69	188 7.40

No. of stages		1	2	3	4	5	6
X63	mm	100	138	176	214	252	290
	inch	3.93	5.43	6.93	8.42	9.92	11.41
X100	mm	116	160	204	248	292	336
	inch	4.57	6.3	8.03	9.76	11.5	13.23
X200	mm	122	172	222	272	322	372
	inch	4.8	6.77	8.74	10.71	12.68	14.65

VE



	X63	X100	X200
A	88 3.46	130 5.12	130 5.12
B	68 2.68	104 4.09	104 4.09
C	16 .63	19,3 .76	19,3 .76
D1	6 .24	7 .28	7 .28
D2	13-17 .51-.67	15,5-20 .61-.79	15,5-20 .61-.79
D3	84 3.31	128 5.04	128 5.04
D4	120 4.72	170 6.69	188 7.40

No. of stages		1	2	3	4	5	6
X63	mm	99,5	137,5	175,5	213,5	251,5	289,5
	inch	3.91	5.41	6.91	8.4	9.9	11.39
X100	mm	115,5	159,5	203,5	247,5	291,5	335,5
	inch	4.55	6.28	8.01	9.74	11.48	13.21
X200	mm	121,5	171,5	221,5	271,5	321,5	371,5
	inch	4.78	6.75	8.72	10.69	12.66	14.63

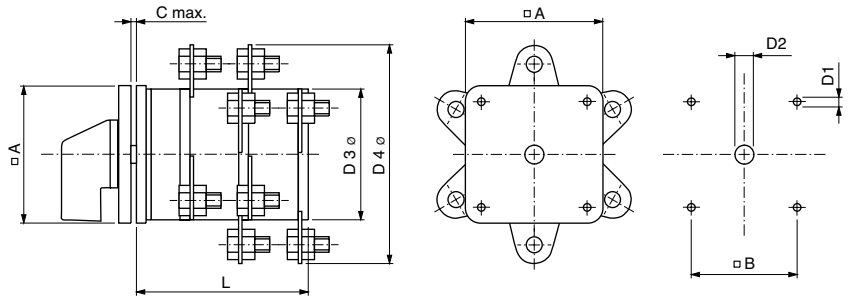
Dimensions

mm
inch

Four Hole Panel Mounting

X160 X400

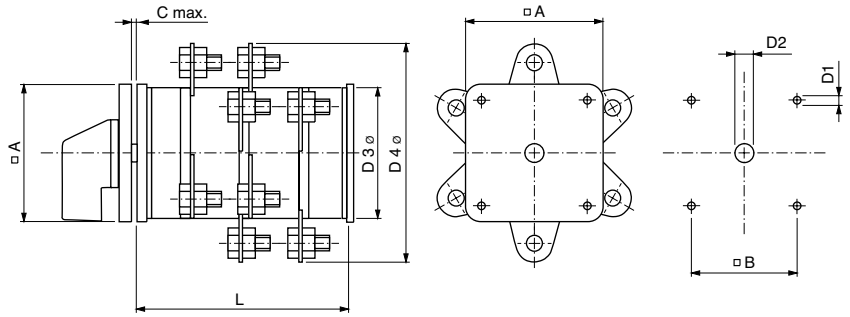
E, EF



		X160	X400
A		88 3.46	130 5.12
B		68 2.68	104 4.09
C		7,5 .3	4,5 .18
D1		6 .24	7 .28
D2	E	13-17 .51-.67	15,5-20 .61-.79
D2	EF	26-30 1.02-1.18	22-25 .87-.98
D3		84 3.31	128 5.04
D4		142 5.59	200 7.87

No. of stages		1	2	3	4	5	6
X160	mm	72,5	110,5	148,5	186,5	224,5	262,5
	inch	2.85	4.35	5.85	7.34	8.84	10.33
X400	mm	90	140	190	240	290	340
	inch	3.54	5.51	7.48	9.45	11.42	13.39

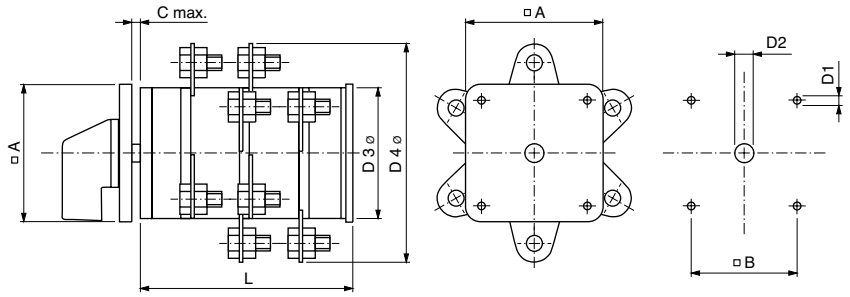
ER, ERF



		X160	X400
A		88 3.46	130 5.12
B		68 2.68	104 4.09
C		5,5 .22	7 .28
D1		6 .24	7 .28
D2	E	13-17 .51-.67	15,5-20 .61-.79
D2	ERF	26-30 1.02-1.18	22-25 .87-.98
D3		84 3.31	128 5.04
D4		142 5.59	200 7.87

No. of stages		1	2	3	4	5	6
X160	mm	100	138	176	214	252	290
	inch	3.93	5.43	6.93	8.42	9.92	11.41
X400	mm	122	172	222	272	322	372
	inch	4.8	6.77	8.74	10.71	12.68	14.65

VE



	X160	X400
A	88 3.46	130 5.12
B	68 2.68	104 4.09
C	16 .63	19,3 .76
D1	6 .24	7 .28
D2	13-17 .51-.67	15,5-20 .61-.79
D3	84 3.31	128 5.04
D4	142 5.59	200 7.87

No. of stages		1	2	3	4	5	6
X160	mm	99,5	137,5	175,5	213,5	251,5	289,5
	inch	3.91	5.41	6.91	8.4	9.9	11.39
X400	mm	121,5	171,5	221,5	271,5	321,5	371,5
	inch	4.78	6.75	8.72	10.69	12.66	14.63

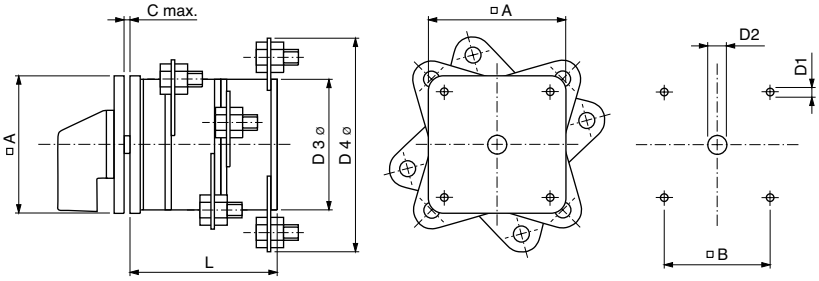
Dimensions

mm
inch

Four Hole Panel Mounting

X630

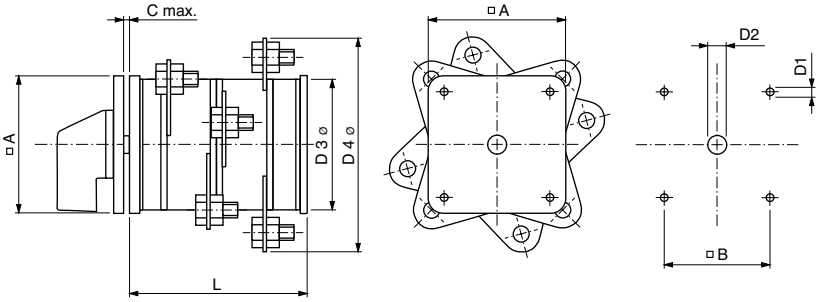
E, EF



A		130 5.12
B		104 4.09
C		4,5 .18
D1		7 .28
D2	E	15,5-20 .61-.79
D2	EF	22-25 .87-.98
D3		128 5.04
D4		218 8.58

No. of stages		1	2	3	4	5	6
X630	mm	90	146	202	258	314	370
	inch	3.54	5.75	7.95	10.16	12.36	14.57

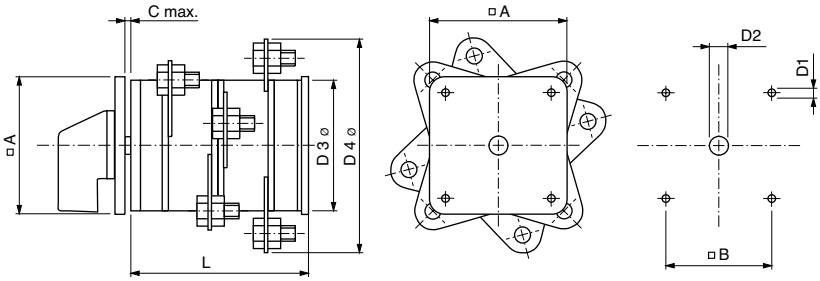
ER, ERF



A		130 5.12
B		104 4.09
C		7 .28
D1		7 .28
D2	ER	15,5-20 .61-.79
D2	ERF	22-25 .87-.98
D3		128 5.04
D4		218 8.58

No. of stages		1	2	3	4	5	6
X630	mm	122	178	234	290	346	402
	inch	4.8	7.01	9.21	11.42	13.62	15.83

VE



A		130 5.12
B		104 4.09
C		19,3 .76
D1		7 .28
D2		15,5-20 .61-.79
D3		128 5.04
D4		218 8.58

No. of stages		1	2	3	4	5	6
X630	mm	121,5	177,5	233,5	289,5	345,5	401,5
	inch	4.78	6.99	9.19	11.4	13.6	15.81

The Range of “Blue Line” Switchgear

Technical literature covering the following products is available on request.

	Catalog Number
Main Switches and Main Switches with Emergency Function 16 A-315 A **Maintenance Switches 20 A-315 A** **Switch Disconnectors 20 A-315 A** According to IEC 60947-3, EN 60947-3, VDE 0660 part 107, IEC 60204, EN 60204 and VDE 0113	**500**
CL Switches 10 A-20 A **C, CA and CAD Switches 10 A-315 A and L Switches 350 A-2400 A** C, CA and CAD 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 are used to switch resistive or low inductive loads.	**100**
Optional Extras and Enclosures The complete product line, a large number of optional extras is 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.	**101**
A and AD Switches 6 A-25 A A and AD 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.	**110**
CG, CH and CHR Switches 10 A-25 A Ultra compact CG, CH and CHR switches are ideally suited for control and instrumentation applications. CG switch terminals are “finger-proof”, according to VDE 0106. Terminals are conveniently accessible for wiring and are delivered open. All CG4 switches offer specially designed gold plated contacts or H-bridges with “cross-wire” contact systems, which facilitates their use in electronic circuitry and chemically aggressive environments.	**120**
DH, DHR, DK and DKR Switches 6 A-16 A DH, DHR, DK and DKR switches incorporate unique corrosion resistant contacts that permit operation on system voltage as low as 1 V. 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.	**130**
X Switches 80 A-630 A 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.	**140**
KG Switches 20 A-315 A and KH and KHR Switches 16 A-80 A KG, KH and KHR 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 high dimensioned air and creepage 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 4 poles.	**150**
Contactors 16 A-115 A and Motor Starters 1,1 kW-55 kW These include control relays, motor contactors, two and four pole output contactors, heating contactors, thermal overload relays.	**200**
Push Buttons and Pilot Lights, 22,5 mm Ø A complete range of state-of-the-art push buttons and pilot lights represent an ideal combination of functional security and economical efficiency in a modular design.	**302**

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

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