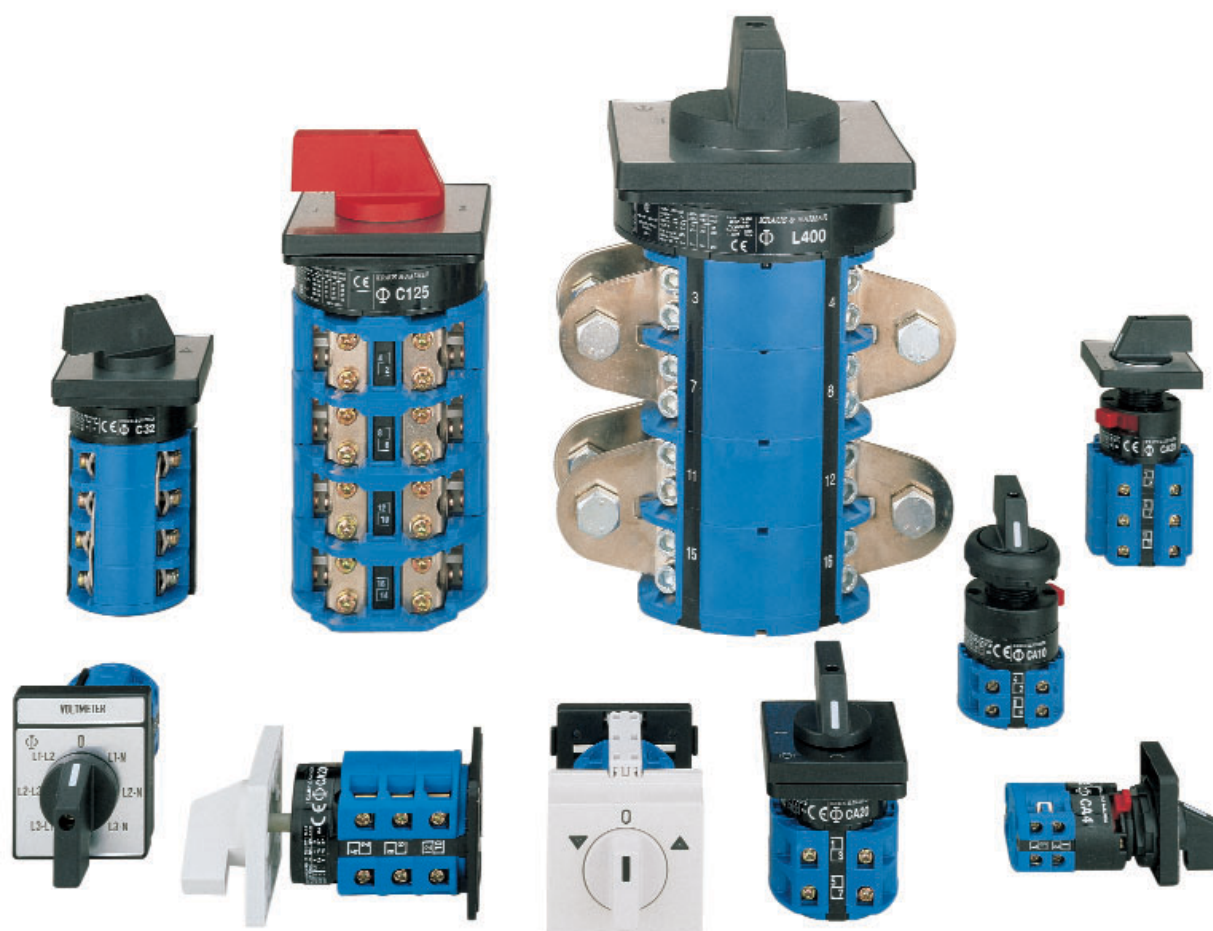


Catalog 100

CL Switches 10 A-20 A

C, CA, CAD Switches 10 A-315 A

L Switches 350 A-2400 A



KRAUS & NAIMER

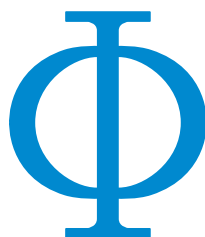
The development of the Blue Line rotary switch, contactor and motor starter product ranges is based on more than seventy-five years experience by Kraus & Naimer in the design and manufacture of electrical switchgear. Kraus & Naimer pioneered the introduction of the cam operated rotary switch and continues 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.

The Kraus & Naimer Registered Trademark



WORLDWIDE SYMBOL
FOR QUALITY SWITCHGEAR

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

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Construction Data

The load switches of the C, CA, CAD and CL-series offer a solution for most cam switch applications. Different contact designs, contact materials and terminals allow for their use as control switches, instrumentation switches and motor control switches, as well as in electronic circuitry and in aggressive environments according to IEC 60947-3 and VDE 0660 part 107.

The stage is the basis for all switches and can be supplied with a maximum of 2 contacts. The terminals are accessible from the side. CA and CAD switches are supplied with open terminals to facilitate wiring and are protected against accidental finger contact according to VDE 0106 part 100 (VBG 4). Captive plus-minus terminal screws and integrated screwdriver guides also reduce wiring.

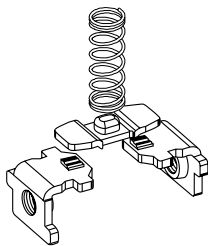
The switches of the new CL-series are supplied with IDC terminals (Insulation Displacement Connection) instead of the conventional screw type terminals. The stripping or preparation of the insulation is no longer required. Eliminate errors due to i.e., stripped end of the conductor too long or too short, incorrect sleeves used, sleeves crimped incorrectly or wrong crimping tool is used, terminal screws not tightened properly etc. The CL switches reduce installation time by 60 %-70 % compared to the screw type terminals. This translates to significant cost savings.

If a positive manual operation or a higher DC rating is required, many of these switches can be fitted with a snap action latching mechanism - suffix „S“ - to the switch type.

The cam-operated switches L350-L2000 are continuous current rated for off-load switching. They may be used to switch resistive or low inductive loads.

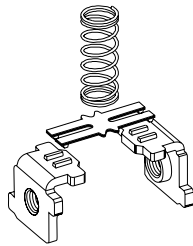
Special Contact Systems

CA4/CA4-1



High contact reliability by multiple cross-point contacts, electronic compatible, CA4 with 1 μ and CA4-1 with 35 μ gold plating.

CAD11/CAD12



H-bridge with „cross-wire“ contact system, high contact reliability also at lower voltages. CAD11 with gold-plated contacts, CAD12 with silver contact.

Type	Size	Possible Switching Angles	Max. No. of Stages
CA4, CA4-1	S00	30°, 45°, 60°, 90°	9
CL4	S00	30°, 45°, 60°, 90°	8
CA10-CA25	S0	30°, 45°, 60°, 90°	12
CA10S-CA25S	S0	60°	on request
CAD11, CAD12	S0	30°, 45°, 60°, 90°	12
CL10	S0	30°, 45°, 60°, 90°	10
CA10B-CA25B	S1	30°, 45°, 60°, 90°	12
C26, C32, C42	S1	20°, 30°, 45°, 60°, 90°	12
C26S, C32S, C42S	S1	60°	on request
C43, C80, C125	S2	20°, 30°, 45°, 60°, 90°	12
C315	S3	20°, 30°, 45°, 60°, 90°	12
L350/51, L630/31, L1000/01, L1250/51	S2	30°, 45°, 60°, 90°	12
L400, L600, L800, L1200, L1600, L2000	S3	30°, 45°, 60°, 90°	12

CL Switches



CA and CAD Switches



C Switches

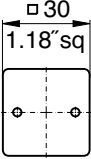
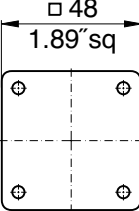
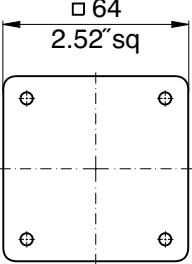
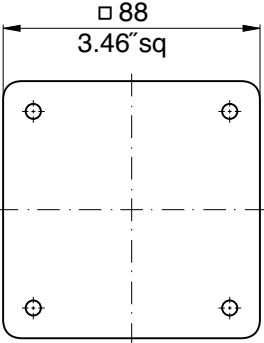
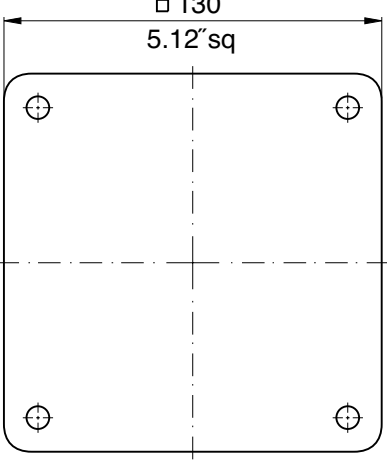


L Switches



Above illustrates the standard terminal positions.

Nominal Ratings

Switch Size	Type	According to IEC 60947-3/VDE 0660 part 107			
		Insulation Voltage ¹ U_i V	Thermal Current I_u/I_{th} A	Motor Rating 3 x 380 V-440 V AC-23 AC-3 kW kW	
S00 	CA4	440	10	3	2,2
	CA4-1	440	10	3	2,2
	CL4	440	10	3	2,2
S0 	CA10	690	20	7,5	5,5
	CA11	690	20	7,5	5,5
	CA20	690	25	11	7,5
	CA25	690	32	15	11
	CAD11	600	6	-	-
	CAD12	600	6	-	-
	CL10	690	20	7,5	5,5
S1 	CA10B	690	20	7,5	5,5
	CA11B	690	20	7,5	5,5
	CA20B	690	25	11	7,5
	CA25B	690	32	15	11
	C26	690	32	15	11
	C32	690	50	22	15
	C42	690	63	30	18,5
S2 	C43	690	63	30	18,5
	C80	690	115	45	30
	C125	690	150	75	37
	L350	690	350	90	37
	L351	690	350	90	37
	L630	690	630 ²	90	37
	L631	690	630 ²	90	37
	L1000	690	1000 ²	90	37
	L1001	690	1000 ²	90	37
	L1250	690	1250 ²	90	37
	L1251	690	1250 ²	90	37
S3 	C315	690	315	132	55
	C316³	1000	315	132	55
	L400	690	500	132	55
	L600	690	800 ²	132	55
	L800	690	1100 ²	132	55
	L1200	690	1450 ²	132	55
	L1600	690	1900 ²	132	55
	L2000	690	2400 ²	132	55

For further technical details, refer to pages 40-43.
To furnish with gold contacts and quick connects see page 4.

¹Valid for lines with grounded common neutral termination, overvoltage category III, pollution degree 3. Values for other supply systems on request. ²Ambient temperature 35 °C max. ³Additional switch functions on request.

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 3 which shows the thermal current, power rating and dimensions of each switch. For further technical details, refer to pages 40-43. Variations of contacts and terminals are shown below.

2. Switch Function

The code numbers for standard switches shown on pages 6-28 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 pages 29-35. Catalog **101** describes enclosures and optional extras.

Specify the mounting code to indicate required mounting.

CA10

A202-600

VE

Type of Switch

Extending the switch type coding the following combinations will define:

Amendment	Definition	For switch types
-1	with gold contacts ¹	CA10, CA11, CA10B, CA11B
-4	with quick connects	CA4
B	S0 switches with latching mechanism size S1	CA10, CA11, CA20, CA25, CAD12
C	S1 switches with latching mechanism size S2	C26, C32
L	with lockout-relay w/o manual release for std. sw.	C26, C32, C42
M	with lockout-relay with manual release for std. sw.	C26, C32, C42
X	with power failure release	CA10, CA11, CA20, CA25, CAD12, C26, C32, C42
Y	with power failure release and trip-free release	CA10, CA11, CA20
S	with snap action	CA10, CA11, CA20, CA25, C26, C32, C42 with 60° switching
R	with spring return latching mechanism	CA10

Example: Coding for switch type **CA10** with gold contacts is **CA10-1**.

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
S0, S1, S2, S3	electro-gray	electro-gray	brushed alu	black	-100
S0, S1, S2, S3	electro-gray	electro-gray	black	mat silver	-500
S00, S0, S1, S2, S3	black	black	brushed alu	black	-600
S00, S0, S1, S2, S3	black	black	black	mat silver	-700

¹Technical data on request.

How to order

Modification of Switches

Color combinations of escutcheon plate and handle

The standard switch consists of a plexi glass escutcheon plate with brushed aluminum backing and black inscription. The escutcheon plate frame is black as well as the handle. Page 4 shows 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 CA10 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: **CA10 A202-100 E**.

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) digit 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 desired.

Special programs for escutcheon plate and handle combinations

- **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 (if using switches with single hole mounting: - **.16**)
- **.11** = without escutcheon plate, but with handle bearing plate
- **.12** = with yellow escutcheon plate backing and red handle
- **.14** = with B-handle
- **.16** = escutcheon plate with frame and fixation ring only if using switches with single hole mounting
- **.17** = standard escutcheon plate and rectangular add-on escutcheon plate if using switches with single hole mounting FT2

Example: The complete coding for switch type CA10 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: **CA10 A202-103 E**.

Handles, Escutcheon Plates and Optional Extras

The handles for standard switches shown on pages 6-28 are suitable for mounting units with four hole mounting. Alternative types of handles available are illustrated on pages 29-35.

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 pages 36 and 37. 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 switches are available in sizes S00, S0, S1, S2 and S3. These size codes indicate the dimensions of the mounting, the escutcheon plate and the handle, as well as the size of optional devices and enclosures.

Page 3 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.

ESCUTCHEON PLATE		MOTOR 1		SWITCH		CA20		MOUNTING		VE		FIRM	
O		H		A		R		K		S		T	
POSITIONS		O		H		A		R		K		S	
O		H		A		R		K		S		T	
H		A		R		K		S		T		DATE	
A		R		K		S		T		DATE		SIGNED	
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Function	Escutch. Plate	Type/Handle				Code	Stages	Connection Diagram
		CA4 CA4-1 CL4	CAD.. CA10- CA25 CL10	CA10B- CA25B	C26- C315			

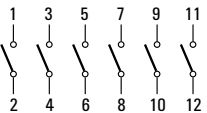
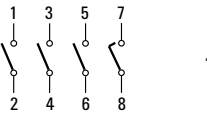
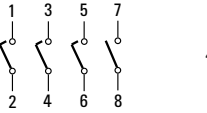
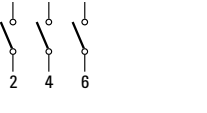
ON/OFF Switches with 60° Switching

1 pole 2 pole 3 pole 3 pole with red handle 3 pole with V850 padlock attachment						A200-600 A201-600 A202-600 A202-626 A202-627	1 1 2 2 2	
4 pole 4 pole 1 pole preclose 6° ¹ 5 pole 6 pole 7 pole 8 pole 8 pole 2 pole preclose 6° ¹ 9 pole 10 pole 11 pole 12 pole						A203-600 A653-600 A341-600 A342-600 A343-600 A344-600 A654-600 A345-600 A346-600 A347-600 A348-600	2 2 3 3 4 4 4 5 5 6 6	
1 pole 2 pole 3 pole 4 pole 4 pole 1 pole preclose 6° ¹ 5 pole 6 pole 7 pole 8 pole 8 pole 2 pole preclose 6° ¹ 9 pole 10 pole 11 pole 12 pole						A200-620 A201-620 A202-620 A203-620 A653-620 A341-620 A342-620 A343-620 A344-620 A654-620 A345-620 A346-620 A347-620 A348-620	1 1 2 2 2 3 3 4 4 4 5 5 6 6	
1 pole 2 pole 3 pole 4 pole 4 pole 1 pole preclose 6° ¹ 5 pole 6 pole						A200-621 A201-621 A202-621 A203-621 A653-621 A341-621 A342-621	1 1 2 2 2 3 3	
1 pole 2 pole 3 pole 4 pole 4 pole 1 pole preclose 6° ¹ 5 pole 6 pole						A200-622 A201-622 A202-622 A203-622 A653-622 A341-622 A342-622	1 1 2 2 2 3 3	
1 pole 2 pole 3 pole 4 pole 4 pole 1 pole preclose 6° ¹ 5 pole 6 pole						A200-623 A201-623 A202-623 A203-623 A653-623 A341-623 A342-623	1 1 2 2 2 3 3	
1 pole 2 pole 3 pole 4 pole 4 pole 1 pole preclose 6° ¹ 5 pole 6 pole						A200-624 A201-624 A202-624 A203-624 A653-624 A341-624 A342-624	1 1 2 2 2 3 3	
1 pole 2 pole 3 pole 4 pole 4 pole 1 pole preclose 6° ¹ 5 pole 6 pole						A200-625 A201-625 A202-625 A203-625 A653-625 A341-625 A342-625	1 1 2 2 2 3 3	

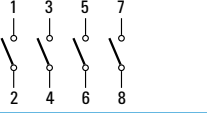
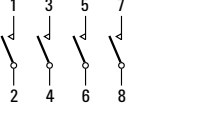
¹For use in a three phase four-wire system with switched neutral.

Function	Escutch. Plate	Type/Handle CA4 CA4-1 CL4 CAD.. CA10- CA25 CL10 CA10B- CA25B CL10 C26- C315	Code	Stages	Connection Diagram
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ON/OFF Switches with 90° Switching

1 pole contacts						A290-600 A291-600 A292-600	1 1 2	 1, 2, 3, 4, 5 and 6 pole
2 pole preclose 30°						A324-600 A293-600 A327-600	2 2 2	
3 pole						A325-600 A326-600	3 3	
4 pole								
4 pole 1 pole preclose 60°								
4 pole 3 pole preclose 30°								
5 pole contacts								 4 pole 1 pole preclose 60°
6 pole preclose 30°								
1 pole contacts						A290-620 A291-620 A292-620	1 1 2	
2 pole preclose 30°						A324-620 A293-620 A327-620	2 2 2	
3 pole								
4 pole								 4 pole 3 pole preclose 30°
4 pole 1 pole preclose 60°								
4 pole 3 pole preclose 30°								
5 pole contacts						A325-620 A326-620	3 3	
6 pole preclose 30°								
3 pole 360° rotation	 					A208-600 A208-620	2 2	
3 pole for foot operation						A386-600	2	

ON/OFF Switches with 30° Switching

1 pole						A100-600 A101-600 A102-600 A103-600	1 1 2 2	 1-4 pole
2 pole								 1-4 pole
3 pole								
4 pole								
1 pole with spring return						A204-600 A205-600 A206-600 A207-600	1 1 2 2	
2 pole with spring return								
3 pole with spring return								
4 pole with spring return								
1 pole with spring return						A204-620 A205-620 A206-620 A207-620	1 1 2 2	
2 pole with spring return								
3 pole with spring return								
4 pole with spring return								

¹not available for switch type CA25

Function	Escutch. Plate	Type/Handle CA4 CA4-1 CL4 CAD.. CA10- CA25 CL10 CA10B- CA25B C26- C315	Code	Stages	Connection Diagram
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Double-throw Switches without „OFF“ 60° Switching

1 pole						A220-600	1	
2 pole						A221-600	2	
3 pole						A222-600	3	
4 pole						A223-600	4	
4 pole 1 pole preclose 6° ²						A673-600	4	
5 pole						A369-600	5	
6 pole						A370-600	6	
7 pole					A371-600	7		
8 pole					A372-600	8		
8 pole 2 pole preclose 6° ²					A972-600	8		
9 pole		 2				A373-600	9	
10 pole						A374-600	10	
11 pole						A375-600	11	
12 pole						A376-600	12	

1	3	5	7	9	11	13	15	1	3	5	7	9	11	13	15
2		6		10		14		2		6		10		14	
1-4 pole								4 pole 1 pole preclose 6°							
1	5	3	7	9	13	11	15	17	19						
2		4		10		12		18							
5 pole															
1	5	3	7	9	13	11	15	17	21	19	23	25	27		
2		4		10		12		18		20		26			
6 and 7 pole															
1	5	3	7	9	13	11	15	17	21	19	23	25	27	31	35
2		4		10		12		18		20		26		28	34
8 and 9 pole															
1	5	3	7	9	13	11	15	17	21	19	23	25	29	27	31
2		4		10		12		18		20		26		28	
8 pole 2 pole preclose 6°															
1	5	3	7	9	13	11	15	17	21	19	23	25	29	31	33
2		4		10		12		18		20		26		28	34

Double-throw Switches without „OFF“ with electrically isolated contacts

1 pole						A720-600	1	
2 pole						A721-600	2	
3 pole						A722-600	3	
4 pole						A723-600	4	
4 pole 1 pole preclose 6° ²						A973-600	4	
1 pole with spring return						A795-600	1	

Double-throw Switches without „OFF“ 30° Switching

1 pole						A120-600	1	
2 pole						A121-600	2	
3 pole						A122-600	3	
4 pole						A123-600	4	
1 pole with spring return						A295-600	1	
2 pole with spring return						A296-600	2	
3 pole with spring return						A297-600	3	
1 pole with spring return						A295-620	1	
2 pole with spring return						A296-620	2	
3 pole with spring return						A297-620	3	

Switch Function and Configuration

C, CA, CAD, CL Switches

Function	Escutch. Plate	Type/Handle CA4 CA4-1 CL4 CAD.. CA10- CA25 CL10 CA10B- C43 C80- C315	Code	Stages	Connection Diagram
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Double-throw Switches with Center „OFF“ 60° Switching

1 pole 2 pole 3 pole 4 pole 4 pole 1 pole preclose 6° ³ 5 pole 6 pole 7 pole 8 pole 8 pole 2 pole preclose 6° ³						A210-600 A211-600 A212-600 A213-600 A913-600 A361-600 A362-600 A363-600 A364-600 A664-600	1 2 3 4 4 5 6 7 8 8	
1 pole 2 pole 3 pole 4 pole 4 pole 1 pole preclose 6° ³ 5 pole 6 pole 7 pole 8 pole 8 pole 2 pole preclose 6° ³						A210-620 A211-620 A212-620 A213-620 A913-620 A361-620 A362-620 A363-620 A364-620 A664-620	1 2 3 4 4 5 6 7 8 8	
1 pole 2 pole 3 pole						A210-621 A211-621 A212-621	1 2 3	
1 pole 2 pole 3 pole						A210-622 A211-622 A212-622	1 2 3	
1 pole 2 pole 3 pole						A210-623 A211-623 A212-623	1 2 3	
1 pole 2 pole 3 pole 4 pole 4 pole 1 pole preclose 6° ³						A210-624 A211-624 A212-624 A213-624 A913-624	1 2 3 4 4	

Double-throw Switches with Center „OFF“ 90° Switching

1 pole 2 pole 3 pole 4 pole 1 pole preclose 6°						A218-600 A219-600 A299-600 A294-600	1 2 3 4	
1 pole 2 pole 3 pole 4 pole 1 pole preclose 6°						A218-620 A219-620 A299-620 A294-620	1 2 3 4	

Double-throw Switches with Center „OFF“ and electrically isolated contacts

1 pole 2 pole 3 pole 4 pole 4 pole 1 pole preclose 6° ³						A710-600 A711-600 A712-600 A713-600 A963-600	1 2 3 4 4	
1 pole with spring return 2 pole to center						A714-600 A715-600	1 2	

¹switch type C315 with handle ²not available for switch type C315 ³For use in a three phase four-wire system with switched neutral.

Function	Escutch. Plate	Type/Handle CA4 CA4-1 CL4 CAD.. CA10- CA25 CL10 CA10B- CA25B C26- C315	Code	Stages	Connection Diagram
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Double-throw Switches with Spring Return to Center

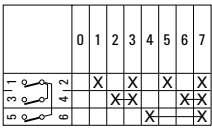
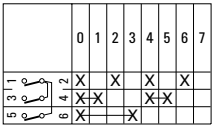
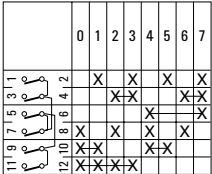
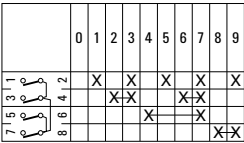
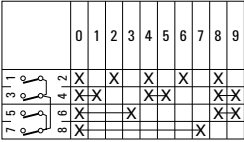
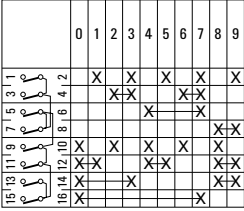
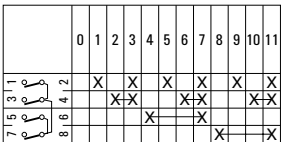
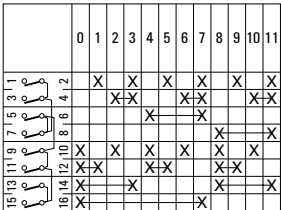
1 pole with spring return to center					A214-600 A215-600 A216-600	1 2 3	
1 pole					A214-620 A215-620 A216-620	1 2 3	
2 pole with spring return from left to center					A320-600 A321-600 A322-600	1 2 3	
1 pole					A320-621 A321-621 A322-621	1 2 3	

General Application Switches

1 pole 2 Gang 2 pole Switching sequence: 3 pole 0, A, A+B					A310-600 A312-600 A314-600	1 2 3	
1 pole					A310-620 A312-620 A314-620	1 2 3	
1 pole 3 Gang 2 pole Switching sequence: 3 pole 0, A, A+B, A+B+C					A311-600 A313-600 A315-600	2 3 5	
1 pole					A311-620 A313-620 A315-620	2 3 5	
1 pole 2 Gang 2 pole Series switching 3 pole Switching sequence: 0, A, B, A+B					A330-600 A331-600 A332-600	1 2 3	
1 pole					A330-620 A331-620 A332-620	1 2 3	
2 pole 2 Gang Series-parallel Switching Switching sequence: 0, A+B series, A, A+B parallel					A339-600 A339-620	2 2	

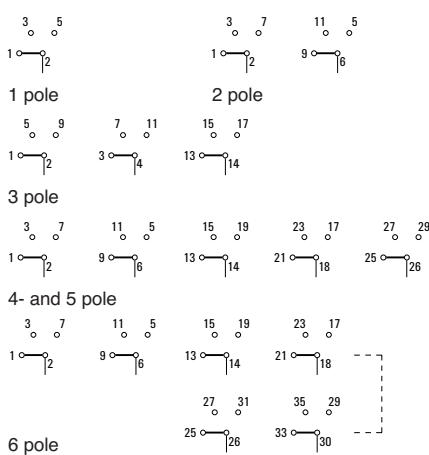
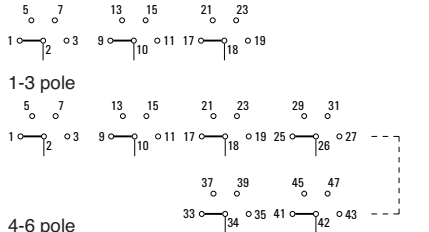
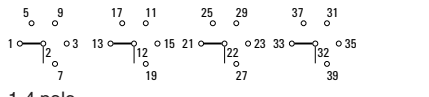
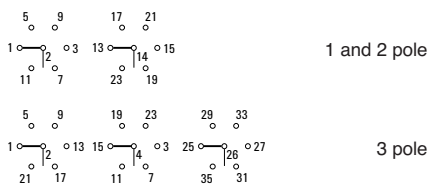
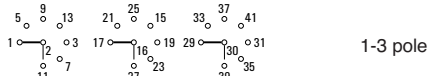
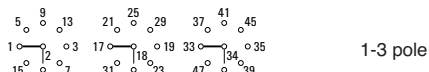
Function	Escutch. Plate	Type/Handle				Code	Stages	Connection Diagram
		CA4 CA4-1 CL4	CA10 CAD11 CAD12 CL10	CA10B- CA25B	C26- C315			

Coding Switches/Binary Code

0 - 7 360° rotation						A540-600	2	
0 - 7 complement 360° rotation						A541-600	2	
0 - 7 + complement 360° rotation						A542-600	3	
0 - 9						A550-600	2	
0 - 9 complement						A551-600	2	
0 - 9 + complement						A552-600	4	
0 - 11 360° rotation						A543-600	2	
0 - 11 + complement 360° rotation						A545-600	4	

Function	Escutch. Plate	Type/Handle				Code	Stages	Connection Diagram
		CA4 CA4-1 CL4	CAD.. CA10- CA25 CL10	CA10B- C43	C80- C315			

Multi-step Switches without „OFF“

1 pole 2 pole 3 pole 4 pole 5 pole 6 pole	3 Step		      ²	     	     	     	A230-600 A250-600 A270-600 A476-600 A484-600 A489-600	2 3 5 6 8 9		
1 pole 2 pole 3 pole 4 pole 5 pole 6 pole	4 Step		      ⁴	     	     	     	A231-600 A251-600 A271-600 A477-600 A485-600 A490-600	2 4 6 8 10 12		
1 pole 2 pole 3 pole 4 pole	5 Step		    ⁴	   	    ⁴	   	A232-600 A252-600 A272-600 A478-600	3 5 8 10		
1 pole 2 pole 3 pole	6 Step		   ²	  	  	  	A233-600 A253-600 A273-600	3 6 9		
1 pole 2 pole 3 pole	7 Step		   ⁴	  	  	  	A234-600 A254-600 A274-600	4 7 11		
1 pole 2 pole 3 pole	8 Step		   ⁴	  	  	  	A235-600 A255-600 A275-600	4 8 12		
1 pole	9 Step		         ¹	        	        	        	        	A236-600	5	
1 pole	10 Step		       ¹	       	       	       	       	A237-600	5	
1 pole	11 Step		     ¹	     	     	     	     	A238-600	6	
1 pole 1 pole 360° rotation	12 Step		   ¹	   	   	   	   	A239-600 A639-600	6 6	

¹switch type C315 with  handle ²not available for switch type CL4 ³not available for switch type CA11B ⁴not available for switch type CL10

Function	Escutch. Plate	Type/Handle				Code	Stages	Connection Diagram
		CA4 CA4-1 CL4	CAD.. CA10- CA25 CL10	CA10B- C43	C80- C315			

Multi-step Switches without „OFF“ with electrically isolated contacts

1 pole 3 Step						A730-600	2	1 pole
2 pole						A750-600	3	2 pole
1 pole 4 Step						A731-600	2	1 pole
2 pole						A751-600	4	2 pole

Multi-step Switches with „OFF“

1 pole 2 Step						A240-600	1	1-6 pole
2 pole						A260-600	2	
3 pole						A280-600	3	
4 pole						A480-600	4	
5 pole						A486-600	5	
6 pole						A491-600	6	
1 pole						A240-620	1	1-6 pole
2 pole						A260-620	2	
3 pole						A280-620	3	
4 pole						A480-620	4	
5 pole						A486-620	5	
6 pole						A491-620	6	
1 pole 3 Step						A241-600	2	1-6 pole
2 pole						A261-600	3	
3 pole						A281-600	5	
4 pole						A481-600	6	
5 pole						A487-600	8	
1 pole						A241-620	2	
2 pole						A261-620	3	1-6 pole
3 pole						A281-620	5	
4 pole						A481-620	6	
5 pole						A487-620	8	
1 pole						A241-621	2	
2 pole						A261-621	3	

Function	Escutch. Plate	Type/Handle				Code	Stages	Connection Diagram
		CA4 CA4-1 CL4	CAD.. CA10- CA25 CL10	CA10B- C43	C80- C315			

Multi-step Switches with „OFF“

1 pole 4 Step 2 pole 3 pole 4 pole						A242-600 A262-600 A282-600 A482-600	2 4 6 8	
						A242-620 A262-620 A282-620 A482-620	2 4 6 8	
1 pole 5 Step 2 pole 3 pole						A243-600 A263-600 A283-600	3 5 8	
						A243-620 A263-620 A283-620	3 5 8	
1 pole 6 Step 2 pole 3 pole						A244-600 A264-600 A284-600	3 6 9	
						A244-620 A264-620 A284-620	3 6 9	
1 pole 7 Step 2 pole						A245-600 A265-600	4 7	
						A245-620 A265-620	4 7	
1 pole 8 Step						A246-600	4	
						A246-620	4	
1 pole 9 Step						A247-600	5	
						A247-620	5	
1 pole 10 Step						A248-600	5	
						A248-620	5	
1 pole 11 Step 1 pole 360° rotation						A249-600 A649-600	6 6	
						A249-620 A649-620	6 6	

¹not available for switch type CL4

Function	Escutch. Plate	Type/Handle	Code	Stages	Connection Diagram
		CA4 CA4-1 CL4	CA10- CA25 CAD.. CL10 CA10B- CA25B		

Voltmeter Switches without „OFF“

3 phase 3 wire						A023-600	2	
						A023-620	2	
3 phase 3 wire 3 phase to phase and phase to neutral						A025-600	3	
						A025-620	3	

Voltmeter Switches with „OFF“

2 pole 360° rotation						A002-600	1	
3 phase 3 wire						A004-600	2	
						A004-620	2	
						A004-621	2	
						A004-622	2	
						A004-623	2	
						A004-624	2	
						A011-600	2	

Function	Escutch. Plate	Type/Handle	Code	Stages	Connection Diagram
		CA4 CA4-1 CA10- CAD.. CA10B- CL4 CA25 CL10 CA25B			

Voltmeter Switches with „OFF“

3 phase to neutral						A005-600	2	
						A005-620	2	
						A005-621	2	
						A005-622	2	
						A005-623	2	
3 phase to phase and 3 phase to neutral						A007-600	3	
						A007-620	3	
						A007-621	3	
						A007-622	3	
						A007-623	3	
						A007-624	3	
2 separate 3 phase with center „OFF“						A008-600	4	
						A008-620	4	
						A008-621	4	
						A008-622	4	

Function	Escutch. Plate	Type/Handle				Code	Stages	Connection Diagram
		CA4 CA4-1 CL4	CAD.. CA10- CA25 CL10	CA10B- C32	C43- C125			

Voltmeter Switches with „OFF“

3 phase and 1 phase to neutral						A010-600	3	
						A010-620	3	
						A010-621	3	
						A010-622	3	

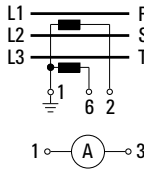
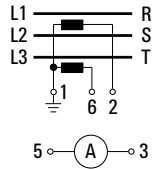
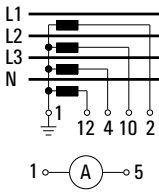
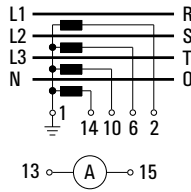
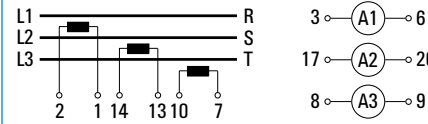
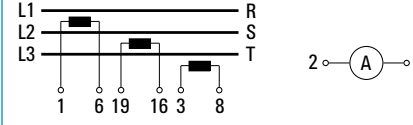
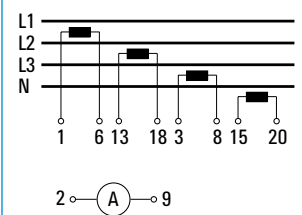
Ammeter Switches

Single pole with one current transformer						A046-600	1	
						A046-620	1	
						A046-621	1	
Single pole with 3 current transformers without „OFF“						A017-600	3	for A017: for A059:
						A059-600	3	
						A017-620	3	
						A059-620	3	
Single pole with 3 current transformers with „OFF“ 360° rotation						A048-600	3	for A048: for A058:
						A058-600	3	
						A048-620	3	
						A058-620	3	
						A048-621	3	
						A058-621	3	
						A048-622	3	
						A058-622	3	
						A048-623	3	for A048: for A058:
						A058-623	3	

¹available only up to switch type CA25B ²not available for switch types CL4 and CL10

Function	Escutch. Plate	Type/Handle	Code	Stages	Connection Diagram
		CA4 CA4-1 CL4	CAD.. CA10- CA25 CL10		
		CA10B- C42	C43- C125		

Ammeter Switches

Single pole with 2 current transformers (3 readings)					A021-600	2	 
					A021-620	2	
Single pole with 4 current transformers					A036-600	4	 
					A036-620	4	
					A056-600	4	
					A056-620	4	
2 pole 2 current transformers					A037-600	3	
					A037-620	3	
					A037-621	3	
2 pole 3 current transformers					A019-600	5	
					A019-620	5	
					A038-600	5	
					A038-620	5	
					A038-621	5	
					A038-621	5	
2 pole 4 current transformers					A039-600	6	
					A039-620	6	

¹not available for switch types CL4 and CL10

Switch Function and Configuration

C, CA, CAD, CL Switches

Function	Escutch. Plate	Type/Handle				Code	Stages	Connection Diagram
		CA4 CA4-1 CL4	CAD.. CA10- CA25 CL10	CA10B- CA25B	C26- C43			

Volt-ammeter Switches

3 phase - phase to phase 3 current						A027-600 A057-600	6	for A027: 	for A057:
						A028-600	7		
						A033-600	5		for CL switches: *19 instead of 11
3 phase voltage 3 phase current 4 wire						A035-600	5		for CL switches: *17 instead of 9

Control Switches

Stop switch						A174-600	1	
Start switch						A175-600	1	
Stop start switch single pole						A176-600	1	
Stop start switch 2 pole						A183-600	2	
Stop start switch with spring return from start to run						A178-600	1	
Stop start switch with spring return to run for 2 units						A177-600	2	

¹not available for switch types CL4 and CL10

Function	Escutch. Plate	Type/Handle	Code	Stages	Connection Diagram
		CA4 CA4-1 CL4	CAD.. CA10- CA25 CL10	CA10B- CA25B C26 C32	

Control Switches

Stop start switch with spring return to run with contactor interlock contactors for 2 units						A182-600	2	
						A182-620	2	
Motor voltage control switch						A150-600	2	

Control Switches with electrically isolated contacts

Stop start switch single pole						A789-600	1	
Stop start switch with spring return to 1						A791-600	1	
Stop start switch with spring return to run for 2 units						A790-600	2	
Contactor control with spring return to „OFF“						A179-600	2	
						A179-620	2	
Circuit breaker control						A537-600	2	

Control and Alarm Switches¹

With slip clutch and without indicator device						A190-600	5 ³	
Without indicator device						A192-600	2	

Function	Escutch. Plate	Type/Handle				Code	Stages	Connection Diagram
		CA4 CA4-1 CL4	CAD.. CA10- CA25 CL10	CA..B C26- C43	C80- C315			

Motor Reversing Switches

2 pole						A400-600	2	
						A400-620	2	
						A400-621	2	
3 pole						A401-600	3	
						A401-620	3	
						A401-621	3	
3 pole with spring return to „OFF“						A228-600	3	

Function	Escutch. Plate	Type/Handle CA4 CA4-1 CL4 CAD.. CA10- CA25 CL10 CA10B- CA25B C26- C315	Code	Stages	Connection Diagram
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Motor Control Switches

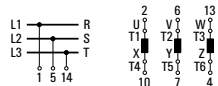
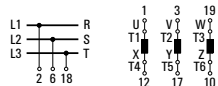
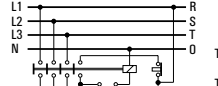
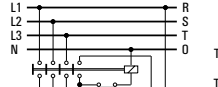
2 speed single winding						A440-600	4	
						A440-620	4	
2 speed single winding without „OFF“						A466-600	4	
						A441-600	4	
2 speed single winding with center „OFF“						A441-600	4	
						A441-620	4	
2 speed single winding reversing						A442-600	6	
						A442-620	6	
2 speed single winding for use with contactors						A444-600	5	
						A444-620	5	
2 speed reversing for 2 way operation with slip clutch for „OFF“ load use						A468-600	10 ¹	
						A468-620	10 ¹	

Switch Function and Configuration

C, CA, CAD, CL Switches

[illegible]

Star-delta Switches

OFF-star-delta	 					A410-600	4	
Reversing						A413-600	5	
With auxiliary contact closed in „OFF“ position						A416-600	5	
For use with reversing contactors		 ¹	 ¹			A419-600	4	

Start and Run Switches

Split-phase start					A425-600	2		Split-phase Start FLD
					A425-620	2		Split-phase Start FLD
Split-phase start reversing					A426-600	3		Split-phase Start FLD
					A426-620	3		Split-phase Start FLD
Split-phase reversing auto cutout of start field winding					A622-600	3		Split-phase Start FLD

¹not available for switch types CL4 and CL10 ²not available for switch type CA25

Function/Type	Escutch. Plate	Handle	Code	Stages	Double Latching	Connection Diagram	L350 L630 L1000 L1250	L351 L631 L1001 L1251
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ON/OFF Switches with 60° Switching

1 pole L350/L351 2 pole 3 pole 4 pole			A200-600 A201-600 A202-600 A203-600	1 2 3 4			1-4 pole
1 pole 2 pole 3 pole 4 pole			A200-620 A201-620 A202-620 A203-620	1 2 3 4			1-4 pole
1 pole L400 2 pole 3 pole 4 pole			A200-600 A201-600 A202-600 A203-600	2 2 4 4			1-4 pole
3 pole with lugs suitable for protective cover			A302-600	3			1-4 pole
1 pole 2 pole 3 pole 4 pole			A200-620 A201-620 A202-620 A203-620	2 2 4 4			A302
1 pole L600 2 pole 3 pole 4 pole			A200-600 A201-600 A202-600 A203-600	3 3 6 6			1-4 pole
1 pole L630/L631 2 pole 3 pole 4 pole			A200-600 A201-600 A202-600 A203-600	2 4 6 8	● ●		1-4 pole
1 pole L800 2 pole 3 pole 4 pole			A200-600 A201-600 A202-600 A203-600	2 4 6 8			1-4 pole
1 pole L1000/L1001 2 pole 3 pole 4 pole			A200-600 A201-600 A202-600 A203-600	3 6 9 12	● ● ●		1-4 pole
1 pole L1200 2 pole 3 pole			A200-600 A201-600 A202-600	3 6 9			1-3 pole
1 pole L1250/L1251 2 pole 3 pole			A200-600 A201-600 A202-600	4 8 12	● ●		1-3 pole
1 pole L1600 2 pole 3 pole			A200-600 A201-600 A202-600	4 8 12			1-3 pole
1 pole L2000 2 pole			A200-600 A201-600	5 10	●		1 and 2 pole

Function/Type	Escutch. Plate	Handle	Code	Stages	Double Latching	Connection Diagram	L350 L630 L1000 L1250	L351 L631 L1001 L1251
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ON/OFF Switches with 90° Switching

1 pole L350/L351 2 pole 3 pole 4 pole 1 pole preclose 60°			A290-600 A291-600 A292-600 A293-600	1 2 3 4				
1 pole L400 2 pole 3 pole 4 pole 1 pole preclose 60° 3 pole with lugs suitable for protective cover 3 pole 360° rotation	 	 	A290-600 A291-600 A292-600 A293-600 A307-600 A208-600	2 2 4 4 3 4		 		
1 pole L600 2 pole 3 pole 4 pole 1 pole preclose 60°		 	A290-600 A291-600 A292-600 A293-600	3 3 6 6	● ●	 		
1 pole L630/L631 2 pole 3 pole 4 pole 1 pole preclose 60°		 	A290-600 A291-600 A292-600 A293-600	2 4 6 8	● ●	 		
1 pole L800 2 pole 3 pole 4 pole 1 pole preclose 60°		 	A290-600 A291-600 A292-600 A293-600	2 4 6 8	● ● ●	 		
1 pole L1000/L1001 2 pole 3 pole 4 pole 1 pole preclose 60°		 	A290-600 A291-600 A292-600 A293-600	3 6 9 12	● ● ●	 		
1 pole L1200 2 pole 3 pole		 	A290-600 A291-600 A292-600	3 6 9	● ● ●			1-3 pole
1 pole L1250/L1251 2 pole 3 pole		 	A290-600 A291-600 A292-600	4 8 12	● ●			1-3 pole

- Additional length for switches size S2 for mounting E/EF = 27 mm
- Additional length for switches size S3 for mounting E/EF = 31,5 mm and mounting ER/VE = 20,1 mm

Function/Type	Escutch. Plate	Handle	Code	Stages	Double Latching	Connection Diagram	L350 L630 L1000 L1250	L351 L631 L1001 L1251
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ON/OFF Switches with 90° Switching

1 pole 2 pole 3 pole	L1600			A290-600 A291-600 A292-600	4 8 12			1-3 pole
1 pole 2 pole	L2000			A290-600 A291-600	5 10			1- and 2 pole

Double-throw Switches without „OFF“ 60° Switching

1 pole 2 pole 3 pole 4 pole	L350/L351			A220-600 A221-600 A222-600 A223-600	2 4 6 8			1-4 pole
1 pole 2 pole 3 pole 4 pole	L400			A220-600 A221-600 A222-600 A223-600	2 4 6 8			1-4 pole
1 pole 2 pole 3 pole 4 pole	L600			A220-600 A221-600 A222-600 A223-600	3 6 9 12			1-4 pole
1 pole 2 pole 3 pole	L630/L631			A220-600 A221-600 A222-600	4 8 12			1-3 pole
1 pole 2 pole 3 pole	L800			A220-600 A221-600 A222-600	4 8 12			1-3 pole
1 pole 2 pole	L1000/L1001			A220-600 A221-600	6 12			1 and 2 pole
1 pole	L1200			A220-600	6			
1 pole	L1250/L1251			A220-600	8			
1 pole	L1600			A220-600	8			
1 pole	L2000			A220-600	10			

Function/Type	Escutch. Plate	Handle	Code	Stages	Double Latching	Connection Diagram	L350 L630 L1000 L1250	L351 L631 L1001 L1251
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Double-throw Switches with Center „OFF“

1 pole 2 pole 3 pole 4 pole	L350/L351			A210-600 A211-600 A212-600 A213-600	2 4 6 8			1-4 pole
1 pole 2 pole 3 pole 4 pole	L400			A210-600 A211-600 A212-600 A213-600	2 4 6 8			1-4 pole
1 pole 2 pole 3 pole 4 pole	L600			A210-600 A211-600 A212-600 A213-600	3 6 9 12	● ●		1-4 pole
1 pole 2 pole 3 pole	L630/L631			A210-600 A211-600 A212-600	4 8 12	●		1-3 pole
1 pole 2 pole 3 pole	L800			A210-600 A211-600 A212-600	4 8 12	●		1-3 pole
1 pole 2 pole	L1000/L1001			A210-600 A211-600	6 12	●		1 and 2 pole
1 pole	L1200			A210-600	6			
1 pole	L1250/L1251			A210-600	8			
1 pole	L1600			A210-600	8			
1 pole	L2000			A210-600	10			

Multi-step Switches single pole without „OFF“

3 Step	L350/L351			A230-600	4		
3 Step	L400			A230-600	4		
4 Step	L350/L351			A231-600	4		
4 Step	L400			A231-600	4		
5 Step	L350/L351			A232-600	6		

- Additional length for switches size S2 for mounting E/EF = 27 mm
- Additional length for switches size S3 for mounting E/EF = 31,5 mm and mounting ER/VE = 20,1 mm

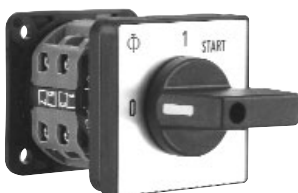
Function/Type	Escutch. Plate	Handle	Code	Stages	Double Latching	Connection Diagram	L350 L630 L1000 L1250	L351 L631 L1001 L1251
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Multi-step Switches single pole without „OFF“

5 Step	L400			A232-600	6			
6 Step	L350/L351			A233-600	6			
6 Step	L400			A233-600	6			
7 Step	L350/L351			A234-600	8			
7 Step	L400			A234-600	8			
8 Step	L350/L351			A235-600	8			
8 Step	L400			A235-600	8			
9 Step	L350/L351			A236-600	10			
9 Step	L400			A236-600	10			
10 Step	L350/L351			A237-600	10			
10 Step	L400			A237-600	10			
11 Step	L350/L351			A238-600	12			
11 Step	L400			A238-600	12			
12 Step	L350/L351			A239-600	12			
12 Step	L400			A239-600	12			

Two Hole Panel Mounting or Mosaic Mounting		Terminals rotated 90°	Code	CA4 CA4-1 CL4
	Panel mounting			
	Two hole panel mounting	●	E E-V	● ●
	Panel mounting with shaft seal Protection IP 65			
	Two hole panel mounting	●	EF EF-V	● ●
	Panel mounting with round shaft for combining with commercial radio knobs			
	Two hole panel mounting Shaft diam. 6 mm/.24 inch		E9	●
	Two hole panel mounting Shaft diam. 6.35 mm/.25 inch		E91	●
 	Mosaic mounting			
	For Siemens-Mosaic 30 mm grid depth		E92	●
	For Subklew-, Kreutzenbeck-, Symo-Mosaic 28 mm 25 mm 25 mm grid depth		E93	●
	For Mauell-Mosaic 30 mm grid depth		E94	●

Two or Four Hole Panel Mounting	Terminals rotated 90°	Code	CAD.. CA10- CA25 CL10	CA10B- C42	C43- C125 L350- L1251 Size S2	C315 L400- L2000 Size S3
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Panel mounting							
	Four hole panel mounting	●	E E-V	● ●	●	●	
	Four hole panel mounting Protection IP 65	●	EF EF-V	● ●	●	●	
	Two hole panel mounting Protection IP 65	●	E22 E22-V	● ●			
Panel mounting using larger escutcheon plate and handle and with heavy duty latching							
	Four hole panel mounting		EG	●	C26- C42	C80- C125	
	Four hole panel mounting Protection IP 65		EGF	●	C26- C42	C80- C125	
Panel and base mounting							
	Four hole panel mounting		ER	CAD.. CA10- CA25	●	●	●
	Four hole panel mounting Protection IP 65		ERF	CAD.. CA10- CA25	●	●	●

Two or Four Hole Panel Mounting	Code	CAD.. CA10- CA25 CL10	CA10B CA11B CA20B CA25B C26	C32 C42	C43
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	Panel mounting with heavy duty latching and metal shaft Four screw panel mounting Mounting plate, escutcheon plate and handle of size S0	KN2	●			
	 Four screw panel mounting Mounting plate, escutcheon plate and handle of size S1	KN1	●	●	●	
	Four screw panel mounting Mounting plate, escutcheon plate and handle of size S1 and 6 mm square metal shaft	KD1	●	●	●	
	Panel mounting with protective cover Four screw panel mounting Protection front IP 40 rear IP 30 for CA and CAD IP 42 for C26-C43	EC	CAD.. CA10- CA25	●	●	●
	Four screw panel mounting with additional shaft seal Protection front IP 65 rear IP 30 for CA and CAD IP 42 for C26-C43	ED	CAD.. CA10- CA25	●	●	●
	Four screw panel mounting Protection front IP 40 rear IP 42	EC1		●		
	Four screw panel mounting with additional shaft seal Protection front IP 65 rear IP 42	ED1		●		
	Two screw panel mounting Protection front IP 65 rear IP 42	ED22	CAD.. CA10- CA25			

Mounting

C, CA, CAD, CL Switches

Single Hole Mounting		Terminals rotated 90°	Code	CA4 CA4-1 CL4	CAD.. CA10- CA25 CL10
      	With locking nut and shaft seal, protection IP 65	●	FS1 FS1-V	16/22 16/22	
	Without escutcheon plate		FT1 FT1-V FT3 FT3-V		22 22 22/30 22/30
	With square escutcheon plate		FS2 FS2-V	16/22 16/22	
			FT2 FT2-V FT4 FT4-V		22 22 22/30 22/30
	With rectangular escutcheon plate		FS4 FS4-V	16/22 16/22	
	With size S1 escutcheon plate and heavy duty latching		FH3 FH3-V		22 22
	Mounting key for locking nut		S00 T170 09		

Base Mounting	Terminals rotated 90°	Code	CAD.. CA10- CA25	CA10B- C42	C43- L2000
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Base mounting					
 Base mounting - four hole For four hole base mounting and with integrated simplified door clutch, protection IP 65	•	VE VE-V	• •	• •	•
	•	VF VF-V	• •		
 For two hole base mounting For two hole base mounting and with integrated simplified door clutch, protection IP 65	•	VE22 VE22V	• •		
	•	VF22 VF22V	• •		
 Snap-on base mounting for track EN 50022.		VE1	•	•	

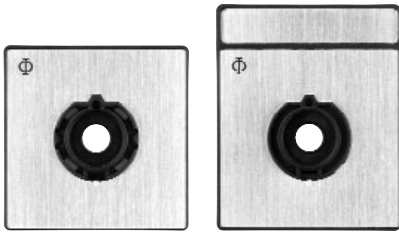
Base Mounting	Code	CA4 CA4-1	CAD.. CA10- CA25
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Base mounting			
	Snap-on base mounting for track EN 50022 with escutcheon plate for 45 mm standard knock-out.	VE2	●
	Snap-on base mounting for track EN 50022. Both the escutcheon plate for 45 mm standard knock-out and the handle are adjustable in height.	VE21	● ●
	Snap-on base mounting for track EN 50022 with circular escutcheon plate for 46 mm knock-out.	VE3	●
	Base mounting - four hole - for circular escutcheon plate with 46 mm knock-out.	VE4	●

Mounting Plates for Plaster Depth Boxes acc. to DIN 49070 and ÖNORM E6508	Code	CAD.. CA10- CA25
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	Plaster depth trim	UE1	●
	With light	UE2	●
	With facility for light addition	UE3	●
	Plaster depth trim	UE4	●
	With light	UE5	●
	With facility for light addition	UE6	●
	For multiple boxes	UE7	●

Escutcheon Plates

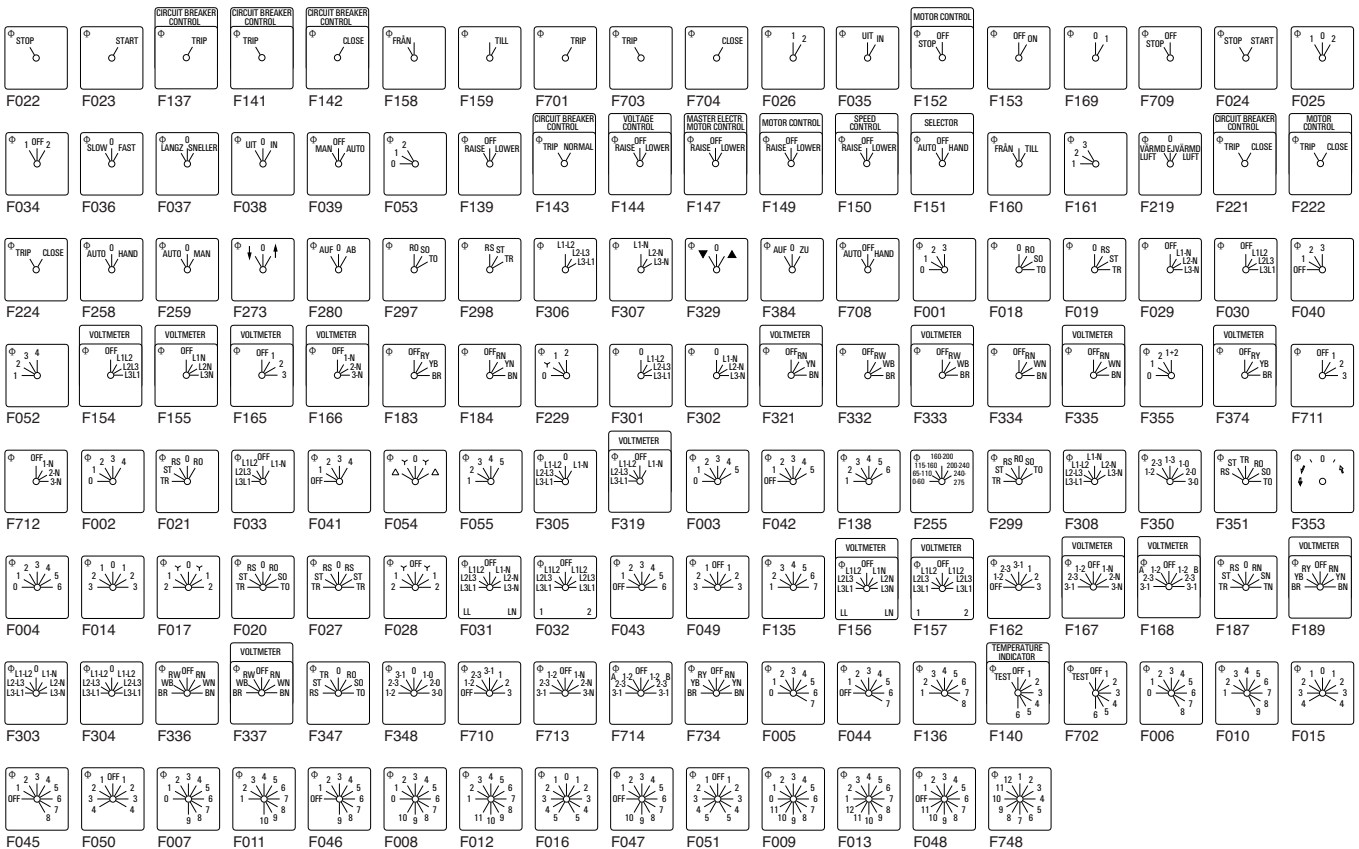


Square and rectangular escutcheon plates are available for each size of switch. The escutcheon plate consists of a frame and a faceplate having the switch positions which is then embossed with hot-foil backing. The escutcheon plate frame is an essential part of the switch and serves as a bearing surface for the handle. If the switch is to be mounted without an escutcheon plate we would recommend for size S1, S2 and S3 the handle bearing plate T100-04.

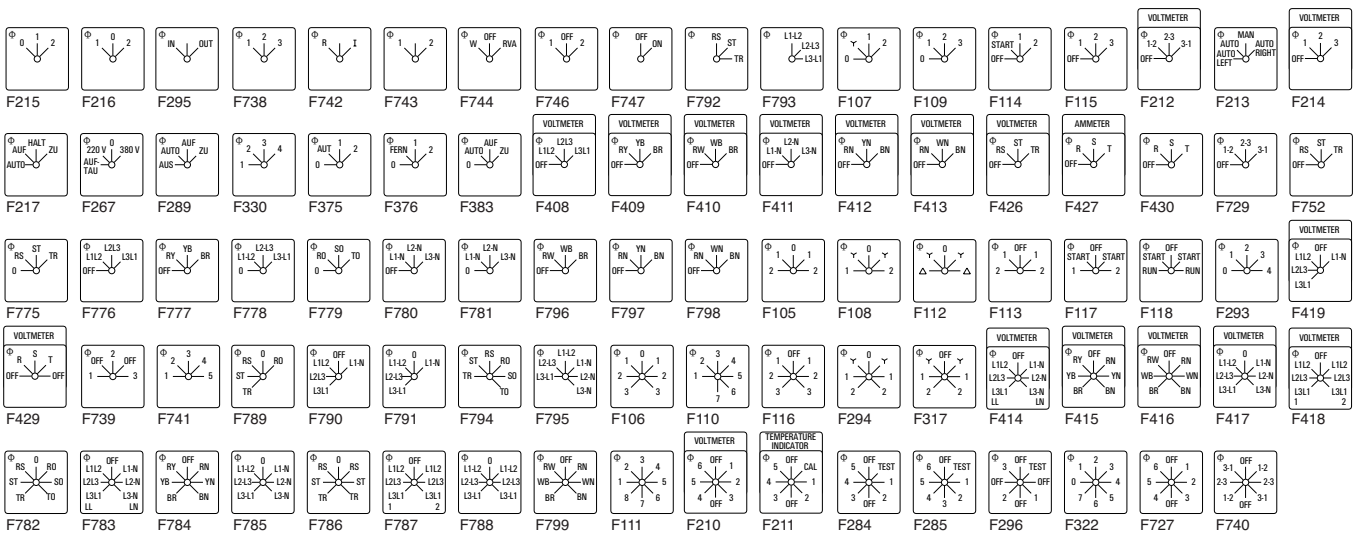
Standard Letterings Available

(Over 500 standard letterings, special letterings upon request.)

30° switching



45° switching



Escutcheon Plates

60° switching

F070	F072	F087	F088	F089	F133	F163	F164	F192	F193	F196	F197	F198	F230	F231	F232	F234	F243
F244	F247	F257	F262	F263	F264	F268	F282	F288	F470	F291	F310	F311	F313	F323	F328	F352	F367
F379	F380	F382	F705	F721	F722	F750	F754	F071	F073	F075	F076	F080	F081	F085	F086	F090	F091
F092	F093	F094	F098	F104	F194	F220	F223	F235	F237	F239	F240	F241	F249	F260	F269	F469	F274
F281	F290	F292	F312	F314	F315	F316	F324	F331	F344	F354	F356	F357	F358	F359	F364	F370	F371
F373	F377	F381	F385	F723	F732	F735	F077	F100	F101	F102	F309	F342	F343	F361	F362	F363	F365
F366	F074	F078	F082	F096	F097	F191	F195	F256	F325	F326	F720	F724	F079	F083	F084	F095	F099
F185	F190	F199	F233	F236	F238	F242	F283	F725	F730	F731	F736	F737					

90° switching

F056	F058	F063	F065	F068	F069	F134	F177	F178	F182	F201	F208	F209	F205	F207	F209	F320	F349	F715
F360	F378	F456	F458	F700	F743	F057	F061	F064	F067	F171	F181	F205	F207	F209	F320	F349	F715	
F719	F059	F060	F062	F066	F170	F172	F173	F174	F175	F176	F179	F180	F186	F188	F202	F204	F206	
F250	F265	F266	F286	F318	F327	F338	F339	F425	F716	F717	F718	F726	F733	F751	F755	F756	F437	

Miscellaneous

F119	F122	F125	F126	F129	F130	F225	F246	F248	F261	F341	F123	F127	F145	F146	F148	F245	F287
F345	F706	F707	F120	F121	F124	F128	F131	F132	F749								
F801	F802	F803	F804	F805	F806	F807	F808	F809	F810	F811	F812	F813	F814	F815	F816	F817	F818
F819	F820	F821	F822	F823	F824	F825	F826	F827	F828	F829	F830	F831	F832	F833	F834	F835	

Handles

Type	Color	Code	Size				
			S00	S0	S1	S2	S3

Type	Color	Code	Size				
			S00	S0	S1	S2	S3

R-Handle 	black red white electro-gray	G001 G002 G003 G007	— ● ● ● ● — ● ● ● ● — ● ● ● ● — ● ● ● ●
F-Handle 	black red white electro-gray	G221 G222 G223 G227	● ● ● ● — ● ● ● ● — ● ● ● ● — ● ● ● ● —
S-Handle  S0 S1	black red white electro-gray	G301 G302 G303 G307	— ● ● — — — ● ● — — — ● ● — — — ● ● — —
P-Handle  S0 S1-S3	black red white electro-gray	G211 G212 G213 G217	— ● ● ● ● — ● ● ● ● — ● ● ● ● — ● ● ● ●
Handwheel 	black	G971	— — — — ●
Capstan Handle 	black	G931	— — — — ●

I-Handle  S00 S0-S3	black red white electro-gray	G251 G252 G253 G257	● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ●
B-Handle 	black red white electro-gray	G521 G522 G523 G527	— ● ● — — — ● ● — — — ● ● — — — ● ● — —
L-Handle 	black red white electro-gray	G501 G502 G503 G507	— — ● — — — — ● — — — — ● — — — — ● — —
K-Handle 	black red white electro-gray	G411 G412 G413 G417	— — ● ● ● — — ● ● ● — — ● ● ● — — ● ● ●
O-Handle 	black red white electro-gray	G321 G322 G323 G327	— — ● — — — — ● — — — — ● — — — — ● — —

International Standards and Approvals

Country	Authority	Mark or Standard	CAD11/12 CA4 CA4-1	CA10 CA11 CA20	CA10B CA11B CA20B	CA25 CA25B	C26 C32 C42	C43 C80 C125	L350/1 L630/1 L1000/1	L1250/1 C315 C316	L400 L600 L800	L1200 L1600 L2000
USA	Underwriters Laboratories Inc.	 ¹							●	●	●	●
		 ² ₃	●	●	●	●	●	●			●	
Canada	UL investigated acc. to CSA	 ⁶	●	●	●	●	●	●	●	●	●	●
		 ¹ _c							●	●	●	●
		 ² ₃	●	●	●	●	●	●			●	
			●	●	●	●	●	●				
Switzerland	Schweizerischer Elektrotechnischer Verein		+	+	+	+	+	+	+	+	+	+
Denmark	Danmarks Elektriske Materielkontrol		+	+	+	+	+	+	+	+	+	+
Norway	Norges Elektriske Materielkontrol		+	+	+	+	+	+	+	+	+	+
Sweden	Svenska Elektriska Materielkontrollanstalten		+	+	+	+	+	+	+	+	+	+
Finland	Sähkötar-kastuskeskus		+	+	+	+	+	+	+	+	+	+
Austria	Österreichischer Verband für Elektrotechnik		+	+	+	+	+	+	+	+	+	+
Federal Republic of Germany	Verband Deutscher Elektrotechniker	VDE 0660 ⁴	+	+	+	+	+	+	+	+	+	+
Great Britain	British Standards Institution	BS EN 60947 ⁴	+	+	+	+	+	+	+	+	+	+
International Electrical Commission (IEC) Recommendation		IEC 60947 ⁵	+	+	+	+	+	+	+	+	+	+
China	China Quality Certification Centre	 ⁷ GB14048.3	●	●	●							
Russian Federation	GOST	 ⁷ CH01	●	●	●	●	●	●	+	+	+	+
Germanischer Lloyd			+	+	+	+	+	+	+	+	+	+
Lloyds Register of Shipping			+	+	+	+	+	+	+	+	+	+
● Switch approved + Switch conforms to requirements + No approval required												
¹ Approved under the "Component Program" (UL-Recognized Industrial Component). File No. E35541, Category Control No. NLRV2 (U.S.) resp. NLRV8 (Canada).												
² Approved under the "Listing Program". File No. E35541, Category Control No. NLRV (U.S.) resp. NLRV7 (Canada).												
³ Switch types CAD11/CAD12 approved under the "Listing Program". File No. E60262, Category Control No. NRNT (U.S.) resp. NRNT7 (Canada).												
⁴ It is not required for Industrial Switchgear to bear a symbol but must conform to requirements. By stating the specific standard no. on the product the manufacturer declares that all requirements of the product standard are met.												
⁵ IEC does not operate an approval scheme.												
⁶ File No. 13002, Class No. 3211-05 resp. 4652-04.												
⁷ If this approval is required, please request when ordering.												

Selection Data

CA4 CA10 CA11 CA20 CA25 C42
CA4-1 CL4 CA10B CL10 CA11B CA20B CA25B C26 C32 C43 C80 C125 C315/C316

Rated Insulation Voltage U _i			IEC 60947-3, EN 60947-3 ¹ VDE 0660 part 107 ¹ SEV ⁴ UL/Canada CEE/NEMKO		V	440	440	690	690	690	690	690	690	690	690	690	690/1000				
					V	380	380	660	690	660	660	690	660	660	660	660	660	660			
					V	300	—	300	—	600	600	300	600	600	600	600	600	600			
					V	400/380	—	380	—	400	400	—	400	400	400	400	—	—			
Rated Impulse Withstand Voltage U _{imp}					kV	4	4	6	6	6	6	6	6	6	6	6	6/8				
Rated Thermal Current I _U /I _{th}			IEC 60947-3, EN 60947-3 VDE 0660 part 107 SEV ⁴ 380 V 660 V UL/Canada		A	10	10	20	20	20	25	32	32	50	63	115	150	315			
					A	10	10	16	16	16	25	32	32	40	63	100	160	315			
					A	—	—	12	12	12	25	32	32	40	63	—	—	315			
					A	10	—	20	—	20	30	30	40	50	65	100	150	240			
Rated Operational Current I _e																					
AC-21A	Switching of resistive loads, including moderate overloads	IEC 60947-3, EN 60947-3 VDE 0660 part 107		A	10	10	20	20	20	25	32	32	40	63	100	150	315				
					10	10	16	16	16	25	32	32	40	63	100	160	315				
AC-1	Resistive or low inductive loads	SEV ⁴ 380 V 660 V		A	—	—	12	12	12	20	32	32	40	63	—	—	315				
					A																
AC-22A	Switching of combined resistive or low inductive loads including moderate overloads	IEC 60947-3, EN 60947-3 VDE 0660 220 V-500 V part 107 660 V-690 V		A	10	10	20	20	20	25	32	32	40	63	100	150	315				
					A	—	—	20	20	20	25	32	32	40	63	100	125	125			
AC-15	Switching of control devices, contactors, valves etc.	IEC 60947-3, EN 60947-3 VDE 0660 220 V-240 V part 107 380 V-440 V		A	2,5	2,5	5	5	5	8	12	14	16	—	—	—	—				
					A	1,5	1,5	4	4	4	5	6	6	7	—	—	—	—			
Pilot Duty		UL/Canada ⁴	Heavy	VAC	300	—	300	—	600	600	300	600	600	600	600	600	—				
Ampere Rating Resistive or low inductive loads		UL/Canada ⁴		A	10	—	20	—	20	30	30	40	50	65	100	150	240				
Resistive load/motor load		CEE NEMKO		A	4/2	—	10/6	—	10/6	16/10	—	25/10	32/10	40/10	63/10	—	—				
				A	6/4 ²	—	10/6	—	—	20/10	—	—	—	—	—	—	—				
Short Circuit Protection																					
Max. fuse size		(gL-characteristic)			A	10	10	25	25	25	35	35	50	63	80	125	200	315			
Rated short-time withstand current		(1s-current)			A	60	90	140	140	140	280	480	350	800	1000	1300	2000	4200			
DC Switching Capacity						Rated Operational Current I _e															
No. of series contacts		1	2	3	4	5	6	8													
Voltage V																					
Resistive loads T ≤ 1 ms	24	48	70	95	120	145	190	A	CA4	CA10		CA11		CA20	CA25			C315 ³			
	48	95	140	190	240	290	350		CA4-1	CL4	CA10B	CL10	CA11B	CA20B	CA25B	C26S	C32S	C42S	C80	C125	C316 ³
	60	120	180	240	300	360	450		10	10	20	20	20	25	32	—	50	—	115	—	315
	110	220	330	440	550	660	—		6	6	12	12	12	20	25	32	40	63	100	150	250
	220	440	660	—	—	—	—		2,5	2,5	4,5	4,5	4,5	7,5	10	23	27	30	—	—	—
	440	660	—	—	—	—	—		0,7	0,7	1	1	1	1,5	2	6,5	—	—	—	—	—
Inductive loads T = 50 ms	24	48	70	95	120	145	190	A	0,3	0,3	0,4	0,4	0,4	0,5	0,6	1,2	—	—	—	—	
	30	60	90	120	150	180	240		0,2	0,2	0,27	0,27	0,27	0,3	0,3	0,4	—	—	—	—	—
	48	95	140	190	240	290	350		6	6	12	12	12	20	25	32	40	63	100	150	250
	60	120	180	240	300	360	450		3	3	5	5	5	9	12	25	30	55	33	50	70
	110	220	330	440	550	660	—		1	1	2	2	2	3	3	16	20	—	—	—	—
									0,7	0,7	1	1	1	1,5	1,5	11	15	—	—	—	—
Ambient Temperature of Stages ⁵					open at 100 % I _U /I _{th} enclosed at 100 % I _{the}		55 °C during 24 hours with peaks up to 60 °C 35 °C during 24 hours with peaks up to 40 °C														

Selection Data													
	CA4		CA10		CA11	CA20	CA25	C42			C315		
	CA4-1	CL4	CA10B	CL10	CA11B	CA20B	CA25B	C26	C32	C43	C80	C125	C316

Rated Utilization Category				IEC 60947-3, EN 60947-3 VDE 0660 part 107														
AC-2	Slip ring motor starting, reversing and plugging, star-delta starting CA4-C32	3 phase	220 V-240 V	kW	2,5	2,5	4	4	4	5,5	7,5	8	10	18,5	30	37	55	
		3 pole	380 V-440 V		4,5	4,5	7,5	7,5	7,5	11	15	15	18,5	30	45	55	90	
			500 V		–	–	10	10	10	15	18,5	18,5	22	40	55	75	110	
			660 V-690 V		–	–	10	10	10	13	15	15	22	37	55	55	55	
AC-3	Direct-on-line starting, star-delta starting C42-C315	3 phase	220 V-240 V	kW	1,5	1,5	3	3	3	4	5,5	5,5	7,5	11	15	22	37	
		3 pole	380 V-440 V		2,2	2,2	5,5	5,5	5,5	7,5	11	11	15	18,5	30	37	55	
			500 V		–	–	5,5	5,5	5,5	7,5	11	11	15	18,5	30	37	55	
			660 V-690 V		–	–	5,5	5,5	5,5	7,5	11	11	15	18,5	30	37	37	
AC-4	Direct-on-line starting, reversing, plugging and inching	1 phase	110 V	kW	0,3	0,3	0,6	0,6	0,6	1,5	2,2	2,2	2,5	3	3,7	5,5	11	
		2 pole	220 V-240 V		0,55	0,55	2,2	2,2	2,2	3	4	4	5,5	6	7,5	11	22	
			380 V-440 V		0,75	0,75	3	3	3	3,7	5,5	5,5	7,5	11	13	18,5	30	
		3 phase	220 V-240 V	kW	0,37	0,37	0,55	0,55	0,55	1,5	2,5	2,7	3,7	5,5	6	10	15	
		3 pole	380 V-440 V		0,55	0,55	1,5	1,5	1,5	3	5,5	5,5	6	7,5	11	15	25	
			500 V		–	–	1,5	1,5	1,5	3	5,5	5,5	6	7,5	11	15	25	
			660 V-690 V		–	–	1,5	1,5	1,5	3	5,5	5,5	6	7,5	11	15	22	
1 phase	110 V	kW	0,15	0,15	0,3	0,3	0,3	0,45	0,75	0,75	1,1	1,2	1,5	2,2	4			
2 pole	220 V-240 V		0,25	0,25	0,75	0,75	0,75	1,1	1,5	1,5	2,2	2,4	3	4	7,5			
	380 V-440 V		0,5	0,5	1,5	1,5	1,5	2,2	3	3	3,7	4	5,5	7,5	11			
AC-23A	Frequent switching of motors or other high inductive loads	3 phase	220 V-240 V	kW	1,8	1,8	3,7	3,7	3,7	5,5	7,5	7,5	11	15	30	37	75	
		3 pole	380 V-440 V		3	3	7,5	7,5	7,5	11	15	15	22	30	45	75	132	
			500 V		–	–	7,5	7,5	7,5	11	15	15	30	45	55	90	132	
			660 V-690 V		–	–	7,5	7,5	7,5	11	15	15	22	55	65	65	37	
		1 phase	110 V	kW	0,37	0,37	0,75	0,75	0,75	1,5	2,2	2,2	2,5	4	5,5	11	18,5	
		2 pole	220 V-240 V		0,75	0,75	2,5	2,5	2,5	3	4	4	5,5	10	15	22	37	
			380 V-440 V		1,1	1,1	3,7	3,7	3,7	5,5	7,5	7,5	11	18,5	22	37	55	
Ratings		UL/Canada																
	Standard motor load DOL-Rating (similar AC-3)		120 V	HP	0,75	–	1,5	–	1,5	3	5	5	7,5	7,5	10	15	30	
		3 phase	240 V		1	–	3	–	3	7,5	10	10	15	15	20	25	75	
		3 pole	480 V		–	–	–	–	5	10	–	20	25	25	30	40	75	
			600 V		–	–	–	–	5	10	–	25	30	30	40	50	60	
			120 V	HP	0,33	–	0,5	–	0,5	1,5	2	2	3	3	5	7,5	15	
		1 phase	240 V		0,75	–	1	–	1	3	5	5	7,5	7,5	10	15	40	
		2 pole	277 V		0,75	–	2	–	2	3	5	5	7,5	7,5	10	15	40	
			480 V		–	–	–	–	2	5	–	10	15	15	20	25	50	
	Heavy motor load Reversing-Rating (similar AC-4)		600 V	HP	–	–	–	–	2	5	–	15	20	20	25	30	50	
			120 V		–	–	0,5	–	0,5	1	2	2	3	5	7,5	10	15	
		3 phase	240 V		–	–	1	–	1	2	3	3	5	7,5	15	20	30	
		3 pole	440 V-600 V		–	–	–	–	3	5	–	10	15	20	25	30	40	
			120 V	HP	–	–	0,17	–	0,17	0,33	1,5	1,5	1,5	2	3	5	7,5	
		1 phase	240 V		–	–	0,5	–	0,5	0,75	3	3	3	5	7,5	10	15	
		2 pole	277 V		–	–	0,6	–	0,6	1	3	3	3	5	7,5	10	15	
Max. Permissible Wire Gage - Use copper wire only																		
Single-core or stranded wire				mm ²	2x	1x ²	2x	1x ²	2x	2x	2x	2x	2x	2x	2x	2x	2x	
				AWG	1,5	0,5-1,5	2,5	0,5-2,5	2,5	4	6	6	10	16	35	70	185 ¹	
					14	–	12	–	12	10	8	8	8	6	2	2/0	MCM 350	
Flexible wire				mm ²	2x	1x ²	2x	1x ²	2x	2x	2x	2x	2x	2x	2x	2x	2x	
(sleeving in accordance with DIN 46228)					1,5	0,5-1,5	2,5	0,5-2,5	2,5	4	4	6	6	10	25	50	150 ¹	
Flexible AWG wires (without sleeve)				AWG	(–)	(–)	(2,5)	(–)	(2,5)	(2,5)	(4)	(4)	(6)	(10)	(25)	(50)		
					16	–	14	–	14	12	10	10	8	6	3	1/0	MCM 300	

¹Cable lug must accept M12 screw. ²The insulation material of the conductor has to be PVC (typical wire codes are H05V-K0,5 ... H07V-K1,5 or H05V-U0,5 ... H07V-U1,5 etc.). Other materials on request. Connected conductors, which have to be disconnected and re-connected again must be cut in order to ensure a proper electrical connection and to prevent a complete cut-off of the wire insulation. The permissible ambient temperature range when connecting the wires is 5-40 °C.

Selection Data

L350 L351 L400 L600 L630 L631 L800 L1000 L1001 L1200 L1250 L1251 L1600 L2000

Rated Insulation Voltage U _i				IEC 60947-3, EN 60947-3 ¹ VDE 0660 part 107 ¹ UL/Canada ²	V	690	690	690	690	690	690	690	690	690	
					V	600	600	600	600	600	600	600	600	600	
Rated Impulse Withstand Voltage U _{imp}					kV	6	6	6	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	350	500	800	630	1100	1000	1450	1250	1900	2400
Ambient temp. +55 °C during 24 hours with peaks up to +60 °C					A	350	500	750	600	950	920	1300	1100	1700	2000
UL/Canada ²					A	350	400	630	630	800	1000	1200	1250	1600	2000
Rated Operational Current I _e															
AC-20A	No-load operation	IEC 60947-3, EN 60947-3 VDE 0660 part 107		690 V	A	350	500	800	630	1100	1000	1450	1250	1900	2400
	Occasional switching under load cos φ 0,8 (AC-20B)	3 phase, 3 pole and 1 phase, 2 pole	220 V-440 V 500 V 660 V-690 V	A	350	500	800	500	1000	630	1200	630	1200	1200	
A				350	450	500	450	630	500	800	500	800	800		
A				315	350	400	360	400	400	400	400	400	400		
AC-21B	Switching of resistive loads, including mo- derate overloads	3 phase, 3 pole and 1 phase, 2 pole	220 V-440 V 500 V 660 V-690 V	A	250	450	500	350	630	400	800	400	800	800	
A				250	400	450	315	500	350	630	350	630	630		
A				200	300	350	250	350	300	350	300	350	350		
Interrupting Rating		UL/Canada ² CSA	600 V 600 V	A	200	300	300	200	300	200	300	200	200	200	
				A	200	200	200	200	200	200	200	200	200	200	
Rated Utilization Category					IEC 60947-3, EN 60947-3 VDE 0660 part 107										
AC-23B	Occasional switching of motors or other high inductive loads	3 phase 3 pole	220 V-240 V 380 V-440 V 500 V 660 V-690 V	kW	45	75	75	45	75	45	75	45	75	75	
kW				90	132	132	90	132	90	132	90	132	132		
kW				110	132	132	110	132	110	132	110	132	132		
kW				65	65	65	65	65	65	65	65	65	65		
Short Circuit Protection															
Max. fuse size				(gL-characteristic)	A	400	500	800	630	1250	1000	2x800	1250	2x1000	2x1250
Rated short-time withstand current				(1s-current)	A	on request									
Terminals															
				for connection screw		M12	M12	M16	Cable lug or copper bus			M16	M16	2xM16	4xM16
				length	mm	20	30	40	30	40	40	40	50	50	50
Ambient Temperature of Stages ³					55 °C during 24 hours with peaks up to 60 °C, permissible load see Rated Thermal Current.										

Selection Data	CAD11	CAD12
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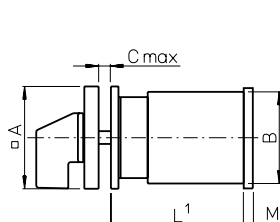
Rated Insulation Voltage U _i		IEC 60947-3, EN 60947-3 ¹	V	600	600	
		VDE 0660 part 107	V	600	600	
		SEV ²	V	300	300	
		UL/Canada	V	300	300	
		min. voltage	V	1 ⁵	6	
Rated Impulse Withstand Voltage U _{imp}				on request		
Rated Thermal Current I _U /I _{th}		IEC 60947-3, EN 60947-3	A	6	6	
		VDE 0660 part 107	A	5	5	
		SEV ²	A	6	6	
		UL/Canada	A	6	6	
Rated Operational Current I _e		IEC 60947-3, EN 60947-3				
		VDE 0660 part 107				
		UL/Canada ³				
		AC-21A Switching of resistive loads, including moderate overloads	1 V/6 V	A	6/3	—/6
			12 V/24 V	A	2/1	5/5
			48 V/110 V	A	0,8/0,4	4/3
			220 V/400 V	A	0,2/0,13	2/1,3
			440 V/500 V	A	0,1/0,08	1/0,8
			600 V	A	0,05	0,5
		AC-1 Resistive or low inductive loads	SEV ²			
			1 V/6 V	A	5/3	—/5
			12 V/24 V	A	2/1	5/5
			48 V/110 V	A	0,8/0,4	4/3
			220 V/380 V	A	0,2/0,13	2/1,3
			440 V/500 V	A	0,1/0,08	1/0,8
				600 V	A	0,05
Short Circuit Protection						
Max. fuse size (gL-characteristic)		A	6	6		
Rated short-time withstand current (1s-current)		A	35	50		
DC Switching Capacity		IEC 60947-3, EN 60947-3				
		VDE 0660 part 107				
		SEV ²				
		DC-1 Resistive load T = 1 ms	UL/Canada ³			
			1 V/6 V	A	4/2,5	—/4
			12 V/24 V	A	1,5/0,8	3/2,2
			48 V/60 V	A	0,3/0,27	1,2/1
110 V/220 V	A		0,2/0,1	0,6/0,3		
	240 V/500 V	A	0,08/0,03	0,25/0,1		
	600 V	A	0,02	0,1		
Max. Permissible Wire Gage - Use copper wire only						
			Single-core or stranded wire	mm ²	2x	2x
					2,5	2,5
				AWG	12	12
			Flexible wire (sleeving in accordance with DIN 46228)	mm ²	2x	2x
					2,5	2,5
	(2,5)	(2,5)				
	AWG	14	14			
Ambient Temperature of Stages ⁴			open at 100 % I _U /I _{th} enclosed at 100 % I _{the}			
			55 °C during 24 hours with peaks up to 60 °C 35 °C during 24 hours with peaks up to 40 °C			

¹Valid for lines with grounded common neutral termination, overvoltage category III, pollution degree 3. Values for other supply systems on request.

²International Standards and Approvals, refer to page 39. ³Max. 300 V. ⁴For electromagnetic optional extras see additional data in Catalog 101.

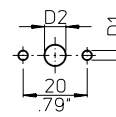
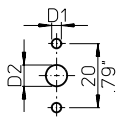
⁵Values for lower voltages on request.

Two or Four Hole Panel Mounting

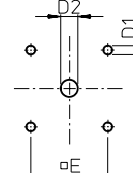


E
for CA4, CA4-1
E-V
for CL4

E-V
for CA4, CA4-1
E
for CL4



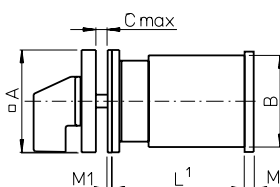
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E-V
ER



	CA4		CA10 CA11 CAD11		CA10B CA11B		CA10B CA11B		CA10B CA11B		CA10B CA11B		CA10B CA11B		CA10B CA11B		C315	
	CA4-1	CL4	CAD12	CL10	CA20	CA25 ³	CA20B	CA25B	C26	C32	C42 ³	C43	C80	C125	L switches	L switches	Size S2	Size S3
A	30 1.18	30 1.18	48 1.89	48 1.89	48 1.89	48 (64) 1.89 (2.52)	64 2.52	64 2.52	64 2.52	64 2.52	64 (88) 2.52 (3.46)	88 3.46	88 3.46	88 3.46	88 3.46	88 3.46	130 5.12	130 5.12
B	29.5 1.16	35x46 1.38x1.81	43 1.69	50x56 1.97x2.20	45 1.77	46 1.81	56 2.20	56 2.20	58 2.28	60 2.36	66 2.60	84 3.30	84 3.30	88 3.46	88 3.46	88 3.46	126 4.96	126 4.96
C	4 .16	4 .16	4 .16	4 .16	4 .16	4 .16	4 .16	4 .16	4 .16	4 .16	4 .16	5.5 .22	5.5 .22	5.5 .22	5.5 .22	5.5 .22	7 .28	7 .28
D1	3.2 .13	3.2 .13	5 .20	5 .20	5 .20	5 .20	5 .20	5 .20	5 .20	5 .20	5 (6) .20 (.24)	6 .24	6 .24	6 .24	6 .24	6 .24	7 .28	7 .28
D2	8-11 .31-.43	8-11 .31-.43	8-15 .31-.59	8-15 .31-.59	8-15 .31-.59	8-15 .31-.59	10-15 .39-.59	10-15 .39-.59	10-15 .39-.59	10-15 .39-.59	10-15 .39-.59	13-17 .51-.67	13-17 .51-.67	13-17 .51-.67	13-17 .51-.67	13-17 .51-.67	15.5-20 .61-.79	15.5-20 .61-.79
E	-	-	36 1.42	36 1.42	36 1.42	36 (48) 1.42 (1.89)	48 1.89	48 1.89	48 1.89	48 1.89	48 (68) 1.89 (2.68)	68 2.68	68 2.68	68 2.68	68 2.68	68 2.68	104 4.09	104 4.09
M²	-	-	4.5 .18	-	4.5 .18	5.5 .22	5 .20	5.5 .22	7.5 .30	7.5 .30	7.5 .30	7.5 .30	9.4 .37	9.4 .37	27.5 1.08	11.9 .47	27.5 1.08	11.9 .47

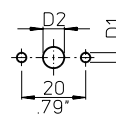
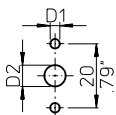
²M, additional length for mounting ER only

³Dimensions in () for ER mounting plate only

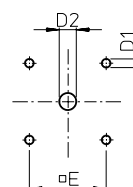


EF
for CA4, CA4-1
EF-V
for CL4

EF-V
for CA4, CA4-1
EF
for CL4



EF
EF-V
ERF

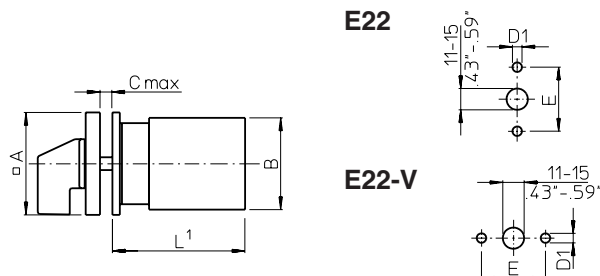


	CA4		CA10 CA11 CAD11		CA10B CA11B		CA10B CA11B		CA10B CA11B		CA10B CA11B		CA10B CA11B		C315	
	CA4-1	CL4	CAD12	CL10	CA20	CA25 ³	CA20B	CA25B	C26	C32	C42 ³	C43	C80	C125	L switches	L switches
A	30 1.18	30 1.18	48 1.89	48 1.89	48 1.89	48 (64) 1.89 (2.52)	64 2.52	64 2.52	64 2.52	64 2.52	64 (88) 2.52 (3.46)	88 3.46	88 3.46	88 3.46	88 3.46	130 5.12
B	29.5 1.16	35x46 1.38x1.81	43 1.69	50x56 1.97x2.20	45 1.77	46 1.81	56 2.20	56 2.20	58 2.28	60 2.36	66 2.60	84 3.30	84 3.30	88 3.46	88 3.46	126 4.96
C	4 .16	4 .16	4 .16	4 .16	4 .16	4 .16	4 .16	4 .16	4 .16	4 .16	4 .16	5.5 .22	5.5 .22	5.5 .22	5.5 .22	7 .28
D1	3.2 .13	3.2 .13	5 .20	5 .20	5 .20	5 .20	5 .20	5 .20	5 .20	5 .20	5 (6) .20 (.24)	6 .24	6 .24	6 .24	6 .24	7 .28
D2	8-11 .31-.43	8-11 .31-.43	15-19 .59-.75	15-19 .59-.75	15-19 .59-.75	15-19 .59-.75	19-22 .75-.87	19-22 .75-.87	19-22 .75-.87	19-22 .75-.87	19-22 .75-.87	26-30 1.02-1.18	26-30 1.02-1.18	26-30 1.02-1.18	26-30 1.02-1.18	22-25 .87-.98
E	-	-	36 1.42	36 1.42	36 1.42	36 (48) 1.42 (1.89)	48 1.89	48 1.89	48 1.89	48 1.89	48 (68) 1.89 (2.68)	68 2.68	68 2.68	68 2.68	68 2.68	104 4.09
M²	-	-	4.5 .18	-	4.5 .18	5.5 .22	5 .20	5.5 .22	7.5 .30	7.5 .30	7.5 .30	7.5 .30	9.4 .37	9.4 .37	27.5 1.08	11.9 .47
M1	1 .04	1 .04	-	-	-	-	-	-	-	-	-	-	-	-	-	-

²M, additional length for mounting ERF only

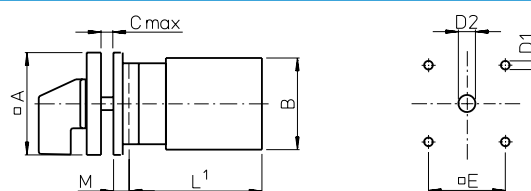
³Dimensions in () for ERF mounting plate only

Two or Four Hole Panel Mounting



	CA10	CA11	CAD11	CAD12	CL10	CA20	CA25
A	48	48	48	48	1.89	1.89	1.89
B	43	50x56	45	46	1.69	1.97x2.20	1.77
C	4	4	4	4	.16	.16	.16
D1	5	5	5	5	.20	.20	.20
E	30	30	30	30	1.17	1.17	1.17

EG
EGF

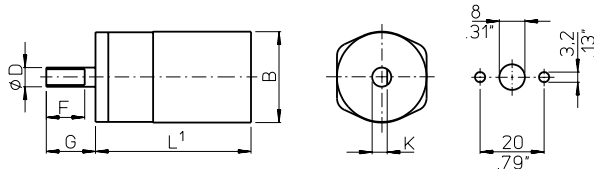


	CA10	CA11	CAD11	CAD12	CL10	CA20	CA25	C26	C32	C42	C80	C125
												L switches
												Size S2
A	64	64	64	64	64	64	64	88	88	88	130	130
	2.52	2.52	2.52	2.52	2.52	2.52	2.52	3.46	3.46	3.46	5.12	5.12
B	43	50x56	45	46	58	60	66	84	88	88	88	88
	1.69	1.97x2.20	1.77	1.81	2.28	2.36	2.60	3.30	3.46	3.46	3.30	3.46
C	4	4	4	4	5,5	5,5	5,5	7	7	7	7	7
	.16	.16	.16	.16	.22	.22	.22	.28	.28	.28	.28	.28
D1	5	5	5	5	6	6	6	7	7	7	7	7
	.20	.20	.20	.20	.24	.24	.24	.28	.28	.28	.28	.28
D2	10-15	10-15	10-15	10-15	13-17	13-17	13-17	15,5-20	15,5-20	15,5-20	15,5-20	15,5-20
	.39-.59	.39-.59	.39-.59	.39-.59	.51-.67	.51-.67	.51-.67	.61-.79	.61-.79	.61-.79	.61-.79	.61-.79
D2	19-22	19-22	19-22	19-22	26-30	26-30	26-30	22-25	22-25	22-25	22-25	22-25
	.75-.87	.75-.87	.75-.87	.75-.87	1.02-1.18	1.02-1.18	1.02-1.18	.87-.98	.87-.98	.87-.98	.87-.98	.87-.98
E	48	48	48	48	68	68	68	104	104	104	104	104
	1.89	1.89	1.89	1.89	2.68	2.68	2.68	4.09	4.09	4.09	4.09	4.09
M	6,7	6,7	6,7	6,7	0,5	0,5	0,5	2	2	2	2	2
	.26	.26	.26	.26	.02	.02	.02	.08	.08	.08	.08	.08
M	6,7	6,7	6,7	6,7	0,5	0,5	0,5	2	2	2	2	2
	.26	.26	.26	.26	.02	.02	.02	.08	.08	.08	.08	.08

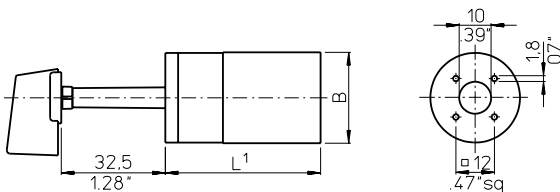
¹see page 51

Four Hole Panel Mounting or Mosaic Mounting

E9
E91



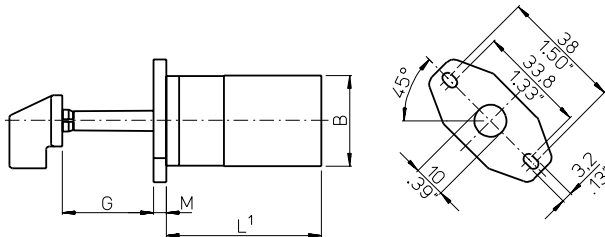
E92



CA4	CL4
CA4-1	35x46
29,5	1.16
1.16	1.38x1.81

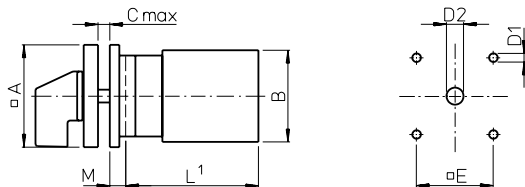
B

E93
E94



CA4	E9	E91	E92	E93	E94
CA4-1	6	6,35	-	-	-
CL4	.24	.25	-	-	-
D	12	12,8	-	-	-
F	.47	.50	-	-	-
G	15,4	17,4	32,5	28,5	32,5
K	.61	.69	1,28	1,12	1,28
M	4,7	5,5	-	-	-
	.19	.22	-	-	-
	-	-	-	4	-
	-	-	-	.16	-

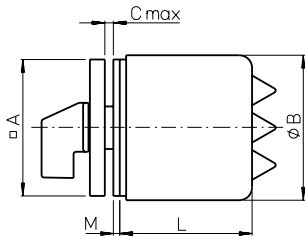
KN1
KD1
KN2



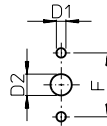
KN2	CA10	CA11	CAD11	CL10	CA20	CA25
A	48	48	48	48	48	48
B	1.89	1.89	1.89	1.89	1.89	1.89
C	43	50x56	45	46	46	46
D1	1.69	1.97x2.20	1.77	1.81	1.81	1.81
D2	4	4	4	4	4	4
E	.16	.16	.16	.16	.16	.16
M	5	5	5	5	5	5
	.20	.20	.20	.20	.20	.20
	8-15	8-15	8-15	8-15	8-15	8-15
	.31-.59	.31-.59	.31-.59	.31-.59	.31-.59	.31-.59
	36	36	36	36	36	36
	1.42	1.42	1.42	1.42	1.42	1.42
	5,2	5,2	5,2	5,2	5,2	5,2
	.20	.20	.20	.20	.20	.20

KN1	CA10	CA11	CAD11	CL10	CA20	CA25	CA10B	CA11B	CA20B	CA25B	C26	C32	C42
A	64	64	64	64	64	64	64	64	64	64	64	64	64
B	2.52	2.52	2.52	2.52	2.52	2.52	2.52	2.52	2.52	2.52	2.52	2.52	2.52
C	43	50x56	45	46	46	46	56	56	56	56	56	60	66
D1	1.69	1.97x2.20	1.77	1.81	1.81	1.81	2.20	2.20	2.20	2.20	2.28	2.36	2.60
D2	4	4	4	4	4	4	4	4	4	4	4	4	4
E	.16	.16	.16	.16	.16	.16	.16	.16	.16	.16	.16	.16	.16
M	5	5	5	5	5	5	5	5	5	5	5	5	5
	.20	.20	.20	.20	.20	.20	.20	.20	.20	.20	.20	.20	.20
	10-15	10-15	10-15	10-15	10-15	10-15	10-15	10-15	10-15	10-15	10-15	10-15	10-15
	.39-.59	.39-.59	.39-.59	.39-.59	.39-.59	.39-.59	.39-.59	.39-.59	.39-.59	.39-.59	.39-.59	.39-.59	.39-.59
	48	48	48	48	48	48	48	48	48	48	48	48	48
	1.89	1.89	1.89	1.89	1.89	1.89	1.89	1.89	1.89	1.89	1.89	1.89	1.89
	4,7	4,7	4,7	4,7	4,7	4,7	7	7	7	7	7	7	7
	.19	.19	.19	.19	.19	.19	.28	.28	.28	.28	.28	.28	.28

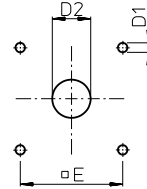
Two or Four Hole Panel Mounting



ED22



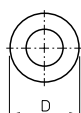
**EC
ED
EC1
ED1**



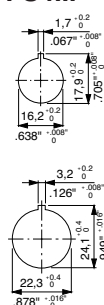
		CA10		CAD11		CAD12		CA11		CA20		CA25		CA10B		CA11B		CA20B		CA25B		C26		C32		C42		C43	
		EC		ED		EC		ED		EC		ED		EC		ED		EC		ED		EC		ED		EC		ED	
		ED		ED22		ED		ED22		ED		ED22		ED		ED22		ED		ED22		ED		ED22		ED		ED22	
EC/EC1 ED/ED1/ ED22	A	48 1.89	48 1.89	48 1.89	48 1.89	64 2.52	64 2.52	48 1.89	48 1.89	64 2.52	64 2.52	48 1.89	48 1.89	64 2.52	64 2.52	64 2.52	64 2.52	64 2.52	64 2.52	64 2.52	64 2.52	64 2.52	88 3.46	88 3.46	88 3.46	88 3.46	88 3.46	88 3.46	
	B	50 1.97	74 2.91	50 1.97	74 2.91	68 2.68	74 2.91	68 2.68	74 2.91	68 2.68	74 2.91	68 2.68	74 2.91	88 3.46	74 2.91	88 3.46	74 2.91	88 3.46	74 2.91	88 3.46	74 2.91	88 3.46	74 2.91	108 4.25	108 4.25	108 4.25	108 4.25	108 4.25	
	C	4 .16	-	4 .16	-	4 .16	-	4 .16	-	4 .16	-	4 .16	-	4 .16	-	4 .16	-	4 .16	-	4 .16	-	4 .16	-	4 .16	-	4 .16	-	4 .16	
	D	2 .08	4 .16	2 .08	4 .16	2 .08	4 .16	2 .08	4 .16	2 .08	4 .16	2 .08	4 .16	2 .08	4 .16	4 .16	4 .16	4 .16	4 .16	4 .16	4 .16	4 .16	4 .16	7.5 .30	7.5 .30	7.5 .30	7.5 .30	7.5 .30	
EC/EC1 ED/ED1/ ED22	D1	5 .20	5 .20	5 .20	5 .20	5 .20	5 .20	5 .20	5 .20	5 .20	5 .20	5 .20	5 .20	5 .20	5 .20	5 .20	5 .20	5 .20	5 .20	5 .20	5 .20	5 .20	5 .20	6 .24	6 .24	6 .24	6 .24	6 .24	
	D2	8-15 .31-.59	-	8-15 .31-.59	-	8-15 .31-.59	-	8-15 .31-.59	-	8-15 .31-.59	-	8-15 .31-.59	-	10-15 .39-.59	10-15 .39-.59	10-15 .39-.59	10-15 .39-.59	10-15 .39-.59	10-15 .39-.59	10-15 .39-.59	10-15 .39-.59	10-15 .39-.59	10-15 .39-.59	13-15 .51-.59	13-15 .51-.59	13-15 .51-.59	13-15 .51-.59	13-15 .51-.59	
	D2	18-22 .71-.87	11-15 .43-.59	18-22 .71-.87	11-15 .43-.59	18-22 .71-.87	11-15 .43-.59	18-22 .71-.87	11-15 .43-.59	18-22 .71-.87	11-15 .43-.59	18-22 .71-.87	11-15 .43-.59	22-25 .87-.98	19-22 .75-.87	22-25 .87-.98	19-22 .75-.87	22-25 .87-.98	19-22 .75-.87	22-25 .87-.98	19-22 .75-.87	22-25 .87-.98	19-22 .75-.87	28-33 1.1-1.3	28-33 1.1-1.3	28-33 1.1-1.3	28-33 1.1-1.3	28-33 1.1-1.3	
	E	36 1.42	-	36 1.42	-	48 1.89	-	48 1.89	-	48 1.89	-	48 1.89	-	48 1.89	48 1.89	48 1.89	48 1.89	48 1.89	48 1.89	48 1.89	48 1.89	48 1.89	48 1.89	68 2.68	68 2.68	68 2.68	68 2.68	68 2.68	
ED/ED22	F	-	30 1.17	-	30 1.17	-	30 1.17	-	30 1.17	-	30 1.17	-	30 1.17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	M	2 .08	1.5 .06	2 .08	1.5 .06	2 .08	1.5 .06	2 .08	1.5 .06	2 .08	1.5 .06	2 .08	1.5 .06	2 .08	-	2 .08	-	2 .08	-	2 .08	-	2.2 .09	-	2.2 .09	-	2.2 .09	-	2.2 .09	
	1	53.5 2.10	74.3 2.93	53.5 2.10	74.3 2.93	-	74.3 2.93	-	74.3 2.93	-	74.3 2.93	-	74.3 2.93	-	73.7 2.90	-	73.7 2.90	-	73.7 2.90	-	73.7 2.90	-	73.7 2.90	-	101 3.98	101 3.98	101 3.98	101 3.98	101 3.98
	2	53.5 2.10	74.3 2.93	53.5 2.10	74.3 2.93	-	74.3 2.93	-	74.3 2.93	-	74.3 2.93	-	74.3 2.93	-	73.7 2.90	-	73.7 2.90	-	73.7 2.90	-	73.7 2.90	-	73.7 2.90	-	101 3.98	101 3.98	101 3.98	101 3.98	101 3.98
Stages L	3	67.5 2.66	74.3 2.93	67.5 2.66	74.3 2.93	-	74.3 2.93	-	74.3 2.93	-	74.3 2.93	-	74.3 2.93	-	73.7 2.90	-	73.7 2.90	-	73.7 2.90	-	73.7 2.90	-	73.7 2.90	-	101 3.98	101 3.98	101 3.98	101 3.98	101 3.98
	4	67.5 2.66	74.3 2.93	67.5 2.66	74.3 2.93	-	74.3 2.93	-	74.3 2.93	-	74.3 2.93	-	74.3 2.93	-	73.7 2.90	-	73.7 2.90	-	73.7 2.90	-	73.7 2.90	-	73.7 2.90	-	101 3.98	101 3.98	101 3.98	101 3.98	101 3.98
	5	81.5 3.21	94.3 3.71	-	-	103 4.06	-	103 4.06	-	103 4.06	-	103 4.06	-	93.7 3.69	103 4.06	-	103 4.06	-	103 4.06	-	103 4.06	-	103 4.06	-	139 5.47	177 6.97	177 6.97	177 6.97	177 6.97
	6	81.5 3.21	94.3 3.71	-	-	-	-	-	-	-	-	-	-	103 4.06	127 5	-	127 5	-	127 5	-	127 5	-	127 5	-	177 6.97	215 8.46	215 8.46	215 8.46	215 8.46
	7	-	-	-	-	-	-	-	-	-	-	-	-	127 5	139.5 5.47	-	139.5 5.47	-	139.5 5.47	-	139.5 5.47	-	139.5 5.47	-	177 6.97	215 8.46	215 8.46	215 8.46	215 8.46
	8	-	-	-	-	-	-	-	-	-	-	-	-	127 5	152 5.98	-	152 5.98	-	152 5.98	-	152 5.98	-	152 5.98	-	215 8.46	253 9.96	253 9.96	253 9.96	253 9.96
	9	-	-	-	-	-	-	-	-	-	-	-	-	139.5 5.47	164.5 6.48	-	164.5 6.48	-	164.5 6.48	-	164.5 6.48	-	164.5 6.48	-	215 8.46	253 9.96	253 9.96	253 9.96	253 9.96
	10	-	-	-	-	-	-	-	-	-	-	-	-	152 5.98	177 6.97	-	177 6.97	-	177 6.97	-	177 6.97	-	177 6.97	-	253 9.96	-	291 11.46	291 11.46	291 11.46
	11	-	-	-	-	-	-	-	-	-	-	-	-	152 5.98	-	-	-	-	-	-	-	-	-	-	253 9.96	-	291 11.46	291 11.46	291 11.46
	12	-	-	-	-	-	-	-	-	-	-	-	-	164.5 6.48	-	-	-	-	-	-	-	-	-	-	253 9.96	-	329 12.95	329 12.95	329 12.95

Single Hole Mounting or Base Mounting

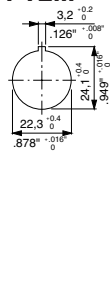
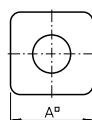
FS1...
FT1...
FT3...



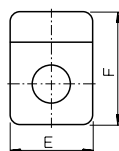
FS1...
FS2...
FS4...



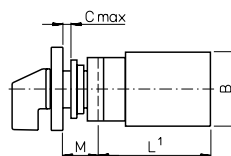
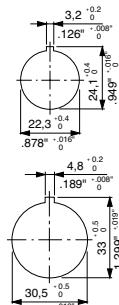
FH3...
FS2...
FT2...
FT4...



FS4...



FT3...
FT4...



A/E

FH3...

B

C

D

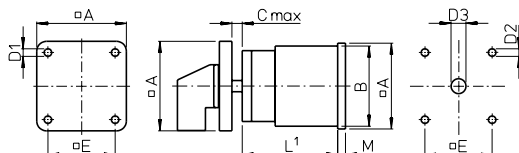
F

M

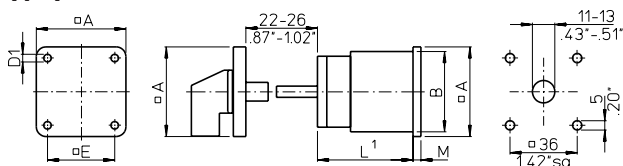
FH3...

	CA4	CL4	CA10 CA11 CAD11	CL10	CA20	CA25
CA4-1	30	30	48	48	48	48
	1.18	1.18	1.89	1.89	1.89	1.89
FH3...	-	-	64	64	64	64
	-	-	2.52	2.52	2.52	2.52
B	28	35x46	43	50x56	45	46
	1.10	1.38x1.81	1.69	1.97x2.20	1.77	1.81
C	5	5	6	6	6	6
	.20	.20	.24	.24	.24	.24
D	29.5	29.5	39	39	39	39
	1.16	1.16	1.54	1.54	1.54	1.54
F	39	39	-	-	-	-
	1.54	1.54	-	-	-	-
M	12.5	12.5	20	20	20	20
	.49	.49	.79	.79	.79	.79
FH3...	-	-	27	27	27	27
	-	-	1.07	1.07	1.07	1.07

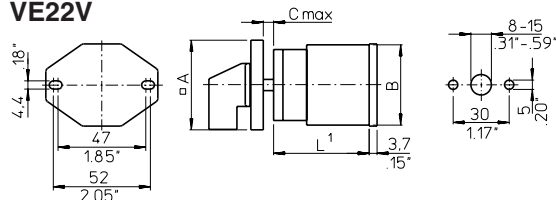
VE
VE-V



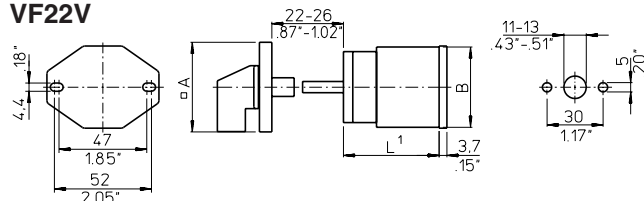
VF
VF-V



VE22
VE22V



VF22
VF22V

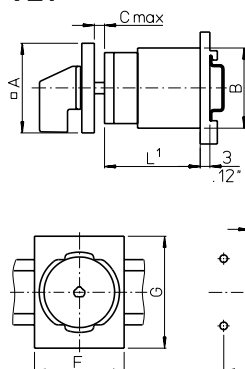


	CA10 CA11 CAD11	CA10B CA11B	CA25 ²	CA20B	CA25B	C26	C32	C42 ²	C43	C80	C125	L switches Size S2	L switches Size S3
A	48	48	48 (64)	64	64	64	64	64 (88)	88	88	88	88	128
	1.89	1.89	1.89 (2.52)	2.52	2.52	2.52	2.52	2.52 (3.46)	3.46	3.46	3.46	3.46	5.04
B	43	45	46	56	56	58	60	66	84	84	88	88	126
	1.69	1.77	1.81	2.20	2.20	2.28	2.36	2.60	3.30	3.30	3.46	3.46	4.96
C	10.5	10.5	10.5	13.5	13.5	13.5	13.5	13.5	16	16	16	16	19.3
	.41	.41	.41	.53	.53	.53	.53	.53	.63	.63	.63	.63	.76
D1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	5.4	5.4	5.4	5.4	5.4	7
	.16	.16	.16	.16	.16	.16	.16	.21	.21	.21	.21	.21	.28
D2	5	5	5	5	5	5	5	5	6	6	6	6	7
	.20	.20	.20	.20	.20	.20	.20	.20	.24	.24	.24	.24	.28
D3	8-15	8-15	8-15	10-15	10-15	10-15	10-15	10-15	13-17	13-17	13-17	13-17	15.5-20
	.31-.59	.31-.59	.31-.59	.39-.59	.39-.59	.39-.59	.39-.59	.39-.59	.51-.67	.51-.67	.51-.67	.51-.67	.61-.79
E	36	36	36 (48)	48	48	48	48	48 (68)	68	68	68	68	104
	1.42	1.42	1.42 (1.89)	1.89	1.89	1.89	1.89	1.89 (2.68)	2.68	2.68	2.68	2.68	4.09
M	2.2	2.2	3.2	2.5	2.5	5	5	5	7	8.9	8.9	27	11.4
	.09	.09	.13	.10	.10	.20	.20	.20	.28	.35	.35	1.06	.45

²Dimensions in () for revertive mounting plate

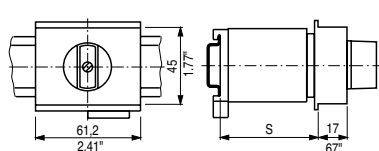
Base Mounting

VE1

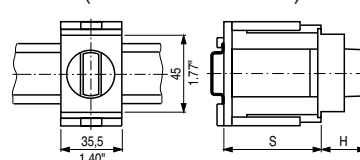


	CA10 CA11 CAD11		CA10B CA11B CA20B		CA25B	C26	C32	C42
A	48	48	48	64	64	64	64	64
B	1.89	1.89	1.89	2.52	2.52	2.52	2.52	2.52
C	43	45	46	56	56	58	60	66
D1	1.69	1.77	1.81	2.20	2.20	2.28	2.36	2.60
D2	10,5	10,5	10,5	13,5	13,5	13,5	13,5	13,5
E	.41	.41	.41	.53	.53	.53	.53	.53
F	5	5	5	5	5	5	5	5
G	.20	.20	.20	.20	.20	.20	.20	.20
	8-15	8-15	8-15	10-15	10-15	10-15	10-15	10-15
	.31-.59	.31-.59	.31-.59	.39-.59	.39-.59	.39-.59	.39-.59	.39-.59
	36	36	36	48	48	48	48	48
	1.42	1.42	1.42	1.89	1.89	1.89	1.89	1.89
	48	48	48	70	70	70	70	70
	1.89	1.89	1.89	2.76	2.76	2.76	2.76	2.76
	60	60	60	60	60	60	60	60
	2.36	2.36	2.36	2.36	2.36	2.36	2.36	2.36

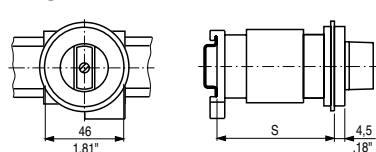
VE2



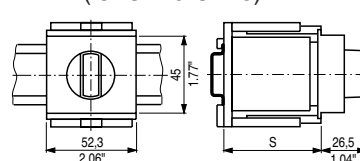
VE21 (for CA4 and CA4-1)



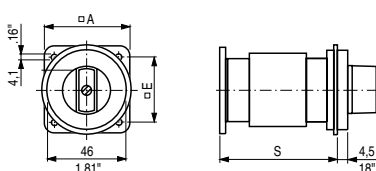
VE3



VE21 (for CA10-CA25)



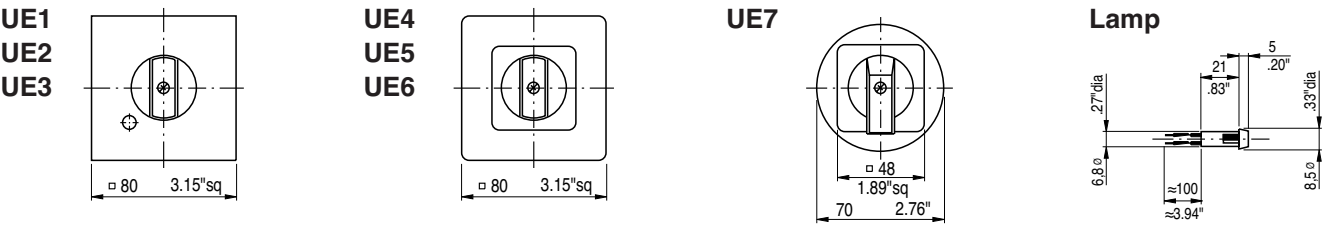
VE4



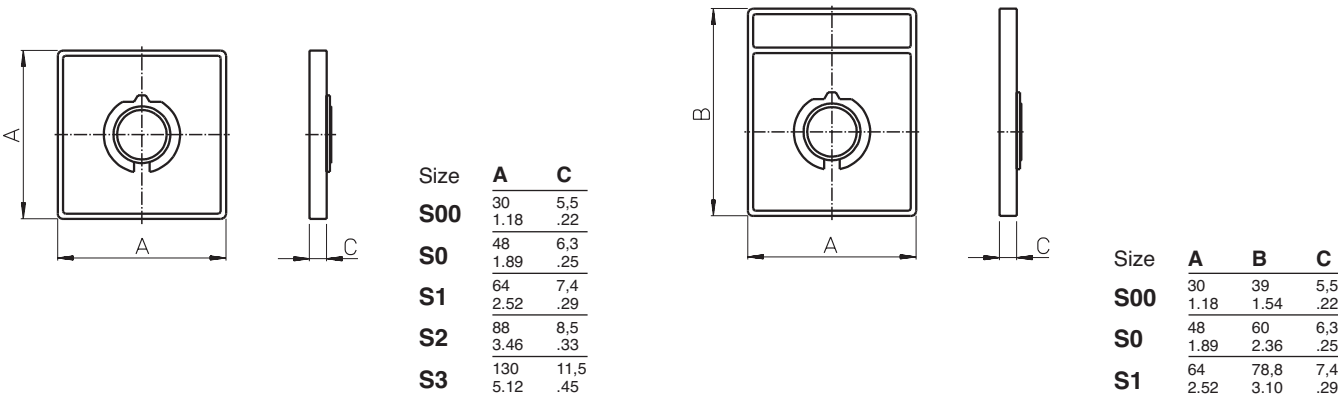
	VE2			VE3		VE4			S _{min.}	H	VE21				
	CA10 CAD11 CAD12	CA11 CA20	CA25	CA10 CAD11 CAD12	CA11 CA20 CA25	CA10 CAD11 CAD12	CA11 CA20 CA25	CA25			CA4 CA4-1	CA10 CAD11 CAD12	CA11 CA20	CA25	
	Max. no. of stages			Max. no. of stages		Max. no. of stages					No. of stages				
S = 46 1.81	3	1	-	1	1	1	2	-	44 1.73	21 .83	1/2	1/2	1/2	1/2	1
S = 50 1.97	3	1	1	2	1	2	2	1	46 1.81	26,5 1.04	3	3	-	-	2
S = 61 2.40	4	2	2	3	2	3	3	2	54 2.13	26,5 1.04	4	-	-	-	-
S = 67 2.64	5	2	2	3	2	3	3	2	56 2.20	-	-	-	3	3	-
S = 69 2.70	5	3 ²	3	4	3	4	4	3	60 2.36	-	-	-	-	-	3
									62 2.44	26,5 1.04	5	-	-	-	-
									66 2.60	-	-	4/5	-	-	-
									68 2.68	-	-	-	4	-	-
									70 2.76	26,5 1.04	6	-	-	4	-
									74 2.91	-	-	6	-	-	4

¹see page 51 ²not available for switch type CA20

Wall Mounting, Escutcheon Plates and Additional Length



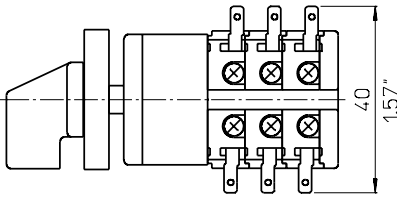
Escutcheon plates for mounting E, EF, ER, ERF, EG, EGF, KN1, KD1, KN2, EC, EC1, ED, ED1, VE, VE1, VF



Additional length for amendment (page 4)

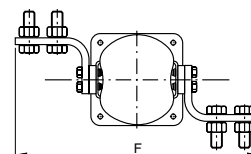
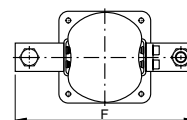
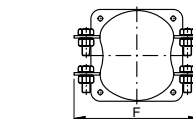
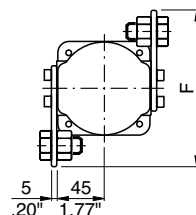
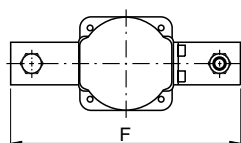
	CA10	CA11	CAD11	CA20	C26	C32	C42
Latching mechanism size S1	5,4 .21	5,4 .21	-	-	-	-	-
Latching mechanism size S2	-	-	-	9,2 .36	9,2 .36	-	-
Snap action	14,3 .56	14,3 .56	12,2 .48	12,2 .48	12,2 .48	-	-

Quick connects for switches CA4-4



Additional Length

Terminal lugs for switches C315, C316 and L switches



C315
C316
L400
L600

L800
L1200
L1600

L2000

	L350	L630	L1000	L1250	L351	L631	L1001	L1251	C315 C316	L400	L600	L800 L1200	L1600 L2000
F	190 7.48	220 8.66	230 9.06	240 9.45	138 5.43	148 5.83	148 5.83	148 5.83	150 5.91	180 7.09	208 8.19	256 10.08	326 12.83

Length L

Stages	CA10																C125	C315
	CA4		CAD11														L switches	L switches
	CA4-1	CL4	CAD12	CL10	CA11	CA20	CA25	CA10B	CA11B	CA20B	CA25B	C26	C32	C42	C43	C80	Size S2	Size S3
1	30	34	33,5	37,2	36,7	37,7	39	38,9	42,1	43,1	44,4	42	46,8	50,8	59	61,5	67,5	78,6
	1.18	1.34	1.32	1.46	1.44	1.48	1.51	1.53	1.66	1.70	1.75	1.65	1.84	2.00	2.32	2.42	2.66	3.09
2	38	46	43	49,9	49,4	50,4	53	48,4	54,8	55,8	58,4	54,7	64,3	72,3	80,5	88,0	100	117,2
	1.50	1.81	1.69	1.96	1.94	1.98	2.09	1.91	2.16	2.20	2.30	2.15	2.51	2.85	3.17	3.46	3.94	4.61
3	46	58	52,5	62,6	62,1	63,1	67	57,9	67,5	68,5	72,4	67,4	81,8	93,8	102	114,5	132,5	155,8
	1.81	2.28	2.07	2.46	2.44	2.48	2.64	2.28	2.66	2.70	2.85	2.65	3.22	3.69	4.02	4.51	5.22	6.13
4	54	70	62	75,3	74,8	75,8	81	67,4	80,2	81,2	86,4	80,1	99,3	115,3	123,5	141	165	194,4
	2.13	2.76	2.44	2.96	2.94	2.98	3.19	2.65	3.16	3.20	3.40	3.15	3.91	4.54	4.86	5.55	6.50	7.65
5	62	82	71,5	88	87,5	88,5	95	76,9	92,9	93,9	100,4	92,8	116,8	136,8	145	167,5	197,5	233
	2.44	3.23	2.81	3.46	3.44	3.48	3.74	3.03	3.66	3.70	3.95	3.65	4.60	5.39	5.71	6.59	7.78	9.17
6	70	94	81	100,7	100,2	101,2	109	86,4	105,6	106,6	114,4	105,5	134,3	158,3	166,5	194	230	271,6
	2.76	3.70	3.19	3.96	3.94	3.98	4.29	3.40	4.16	4.20	4.50	4.15	5.29	6.23	6.56	7.64	9.06	10.69
7	78	106	90,5	113,4	112,9	113,9	123	95,9	118,3	119,3	128,4	118,2	151,8	179,8	188	220,5	262,5	310,2
	3.07	4.17	3.56	4.46	4.44	4.48	4.84	3.78	4.66	4.70	5.05	4.65	5.98	7.08	7.40	8.68	10.33	12.21
8	86	118	100	126,1	125,6	126,6	137	105,4	131	132	142,4	130,9	169,3	201,3	209,5	247	295	348,8
	3.39	4.65	3.94	4.96	4.94	4.98	5.39	4.15	5.16	5.20	5.60	5.15	6.67	7.93	8.25	9.72	11.61	13.73
9	94	-	109,5	138,8	138,3	139,3	151	114,9	143,7	144,7	156,4	143,6	186,8	222,8	231	273,5	327,5	387,4
	3.70	-	4.31	5.46	5.44	5.48	5.94	4.52	5.66	5.70	6.15	5.65	7.36	8.77	9.09	10.77	12.89	15.25
10	-	-	119	151,5	151	152	165	124,4	156,4	157,4	170,4	156,3	204,3	244,3	252,2	300	360	426
	-	-	4.68	5.96	5.94	5.98	6.50	4.90	6.16	6.20	6.70	6.15	8.04	9.62	9.54	11.81	14.17	16.77
11	-	-	128,5	-	163,7	164,7	179	133,9	169,1	170,1	184,4	169	221,8	265,8	274	326,5	392,5	464,6
	-	-	5.06	-	6.44	6.48	7.05	5.27	6.66	6.70	7.25	6.65	8.73	10.46	10.79	12.85	15.45	18.29
12	-	-	138	-	176,4	177,4	193	143,4	181,8	182,8	198,4	181,7	239,3	287,3	295,5	353	425	503,2
	-	-	5.43	-	6.94	6.98	7.60	5.65	7.16	7.20	7.80	7.15	9.42	11.31	11.63	13.90	16.73	19.81

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-1250 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