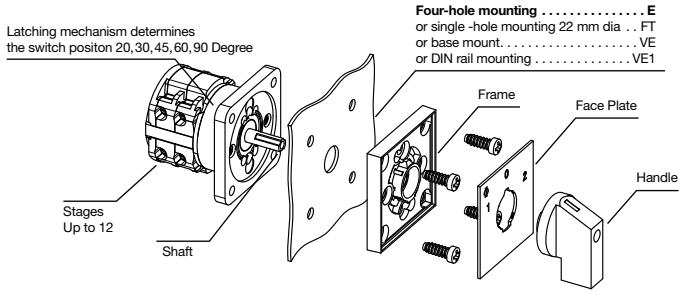
Construction Data

The load switches of the C, CA and CAD-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 EN 50274, VDE 0660 part 514 and DGUV V3. Switches up to type CA25B are supplied with captive screws with clamping plates. The switch types CA40-CA63 are supplied with box terminals. Captive plus-minus terminal screws and integrated screwdriver guides facilitate wiring.

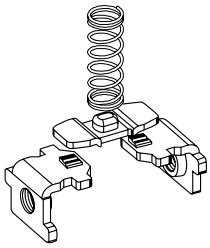
If a positive manual operation or a higher DC rating is required, many of these switches can be fitted with a snap action latching mechanism - suffix „S“ - to the switch type.

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



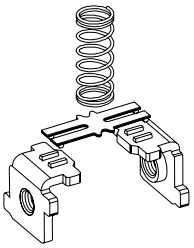
Special Contact Systems

CA4/CA4-1



High contact reliability by multiple cross-point contacts, electronic compatible.

CAD4-1/CAD11/CAD12



High contact reliability by H-bridge design with “cross-wire“ contacts. The contact system with gold-plated contacts (CAD12 with silver contact) allows for low voltages, electronic compatible.

Type	Size	Possible Switching Angles	Max. No. of Stages
CA4, CA4-1, CAD4-1	S00	30°, 45°, 60°, 90°	9
CA10-CA25	S0	30°, 45°, 60°, 90°	12
CA10S-CA25S	S0	60°, 90°	on request
CAD11, CAD12	S0	30°, 45°, 60°, 90°	12
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
CA40, CA50, CA63	S1	30°, 45°, 60°, 90°	12
C43, C80, C125, C200-4	S2	20°, 30°, 45°, 60°, 90°	12
C315	S3	30°, 45°, 60°, 90°	12
L350, L351, L630, L631	S2	30°, 45°, 60°, 90°	12
L1000			
L400, L600, L800, L1200, L1600, L2000	S3	30°, 45°, 60°, 90°	12

CA and CAD Switches (CA4-CA25B)

CA Switches (CA40-CA63)

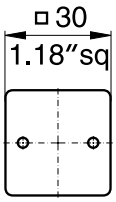
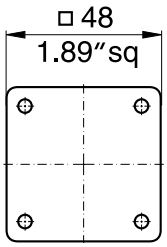
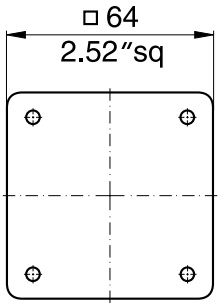
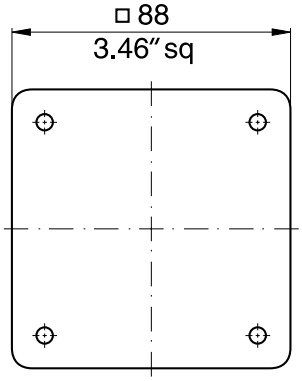
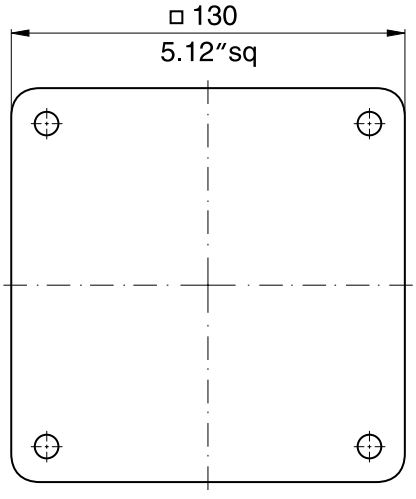
C Switches

L Switches

Above illustrates the standard terminal positions.

< back to table of contents >

< back to table of contents >

Switch Size	Type	According to IEC 60947-3/VDE 0660 part 107			
		Insulation Voltage[1]	Thermal Current	Motor Rating 3 x 380 V-440 V	
		U_i	I_u/I_{th}	AC-23	AC-3
		V	**A**	**kW**	**kW**
S00 	**CA4**	440	10	3	2,2
	CA4-1	440	10	3	2,2
	CAD4-1	440	5	-	-
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	-	-
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
	CA40	690	40	18,5	15
	CA50	690	50	22	18,5
	CA63	690	63	30	18,5
S2 	**C43**	690	63	30	18,5
	C80	690	115	45	30
	C125	690	150	75	37
	C200-4	690	200	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
S3 	**C315**	690	315	132	55
	C316[3]	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 44-47.
To furnish with gold contacts and quick connects see page 6.

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

Function	Escutch. Plate	Type/Handle CA4 CA4-1 CAD4-1	CAD.. CA10- CA25	CA10B- CA25B	CA40 C26- C315	Code	Stages	Connection Diagram

Double-throw Switches without „OFF“ 60° Switching

Dimensions p. 56

Function	Escutch. Plate	Code	Stages	Connection Diagram
1 pole	F072	A220	1	1-4 pole; 4 pole 1 pole preclose 6°
2 pole		A221	2	
3 pole		A222	3	
4 pole		A223	4	
4 pole 1 pole preclose 6°[2]		WAA673	4	
5 pole		A369	5	5 pole
6 pole		A370	6	6 and 7 pole
7 pole		A371	7	
8 pole		A372	8	8 and 9 pole
8 pole 2 pole preclose 6°[2]		WAA972	8	8 pole 2 pole preclose 6°
9 pole		WAA373	9	
10 pole		WAA374	10	10 and 11 pole
11 pole		WAA375	11	
12 pole		WAA376	12	12 pole

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

Function	Escutch. Plate	Code	Stages	Connection Diagram
1 pole	F072	A720	1	1-4 pole
2 pole		A721	2	
3 pole		A722	3	
4 pole		A723	4	
4 pole 1 pole preclose 6°[2]		WAA973	4	4 pole 1 pole preclose 6°
1 pole with spring return	F026	A795	1	1 pole mit Rückzug

Double-throw Switches without „OFF“ 30° Switching

Function	Escutch. Plate	Code	Stages	Connection Diagram
1 pole	F026	WAA120	1	1-4 pole
2 pole		WAA121	2	
3 pole		WAA122	3	
4 pole		WAA123	4	
1 pole with spring return	F026	A295	1	1-3 pole
2 pole with spring return		A296	2	
3 pole with spring return		WAA297	3	

[1]not available for switch type CA25 [2]for use in a three phase four-wire system with switched neutral

< back to table of contents >

Single Hole Mount	Terminals rotated 90°	Code	CA4 CA4-1 CAD4-1	CAD.. CA10- CA25
			mm	mm
Single Hole Mount complete with lock nut and shaft seal				
 Bezel mount, Protection IP 66/67/69k		FS1	16/22	
	●	FS1-V	16/22	
		FT1		22
	●	FT1-V		22
		FT3		22/30
	●	FT3-V		22/30
 Square face plate, Protection IP 66/67/69k		FS2	16/22	
	●	FS2-V	16/22	
		FT2		22
	●	FT2-V		22
		FT4		22/30
	●	FT4-V		22/30
S1 square face plate and heavy duty stop, Protection IP 66/67/69k		FH3		22
	●	FH3-V		22
 Rectangular face plate, Protection IP 66/67/69k		FS4	16/22	
	●	FS4-V	16/22	
		FT6		22
	●	FT6-V		22
S1 rectangular face plate and heavy duty stop, Protection IP 66/67/69k		FH4		22
	●	FH4-V		22
 Lock nut spanner		S00 T170 09		

< back to table of contents >