

Rotary Cam Switches

Rotary cam switches series CS are intended for multiple switching operations in main as well as in auxiliary circuits:

- As motor switches they are designed for direct-online starting and stopping of single- phase and three-phase motors. They also come out as star-delta switches, reversing switches, pole-change over motor switches.
- In auxiliary circuits they are assembled in compliance with the switching programme according to preference:
 - switches for control, signalling and measuring circuits.
 - switches, selector switches and step switches e.g. for transformers and welding apparatuses.
 - Group switches e.g. for switching operations of resistors and heaters.
 - Control switch with automatic return

Advantages

- high making and breaking capacities
- electrical and mechanical endurance
- small dimensions.

Rotary cam switches comply with international and national standards such as: IEC/EN 60947-3, VDE 0660, TS EN 60947-3, BS 5419 etc.

Designation

CS XX(I_{th}[A]) YY(diagram) Z_(design)

ON-OFF switches with 60° switching angle

Thermal current
10-100 A



1-pole					
Type	Thermal current I _{th}	Code No.	Type, layout and symbol	Weight [g]	Packaging [pcs]
CS 10 90 U	10A	004773000		75	1
CS 16 90 U	16A	004773001		75	
CS 25 90 U	25A	004773002		90	
CS 32 90 U	32A	004773003		115	
CS 40 90 U	40A	004773004		180	
CS 63 90 U	63A	004773005		290	
CS 80 90 U	80A	004773006		405	
CS 100 90 U	100A	004773007		470	

Connection diagram in technical data

2-pole					
Type	Thermal current I _{th}	Code No.	Type, layout and symbol	Weight [g]	Packaging [pcs]
CS 10 91 U	10A	004773008		80	1
CS 16 91 U	16A	004773009		80	
CS 25 91 U	25A	004773010		90	
CS 32 91 U	32A	004773011		115	
CS 40 91 U	40A	004773012		180	
CS 63 91 U	63A	004773013		290	
CS 80 91 U	80A	004773014		405	
CS 100 91 U	100A	004773015		470	

Connection diagram in technical data

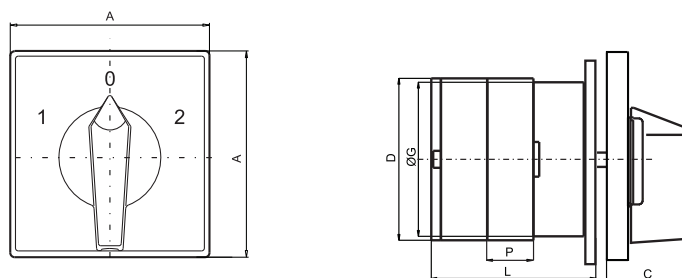
3-pole					
Type	Thermal current I _{th}	Code No.	Type, layout and symbol	Weight [g]	Packaging [pcs]
CS 10 10 U	10A	004773016		95	1
CS 16 10 U	16A	004773017		95	
CS 25 10 U	25A	004773018		115	
CS 32 10 U	32A	004773019		160	
CS 40 10 U	40A	004773020		260	
CS 63 10 U	63A	004773021		415	
CS 80 10 U	80A	004773022		590	
CS 100 10 U	100A	004773023		685	

Connection diagram in technical data

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Technical data											
Type			CS 10	CS 16	CS 25	CS 32	CS 40	CS 63	CS 80	CS 100	
Rated insulation voltage	U_i	V	400	400	690	690	690	690	690	690	
Rated impulse withstand voltage	U_{imp}	kV	4	4	6	6	6	6	6	6	
Rated thermal current	I_{th}	A	16	20	25	32	50	70	85	100	
Main switch IEC 60947 (III/3)	Max. value of rated operational voltage	V	400	400	480	480	480	480	480	480	
	Rated impulse withstand voltage	kV	4	4	4	4	4	4	4	4	
Max. fuse size for short-circuit protection gL 10kA		A	16	20	25	32	40	63	80	100	
Rated short-time withstand current I_{cw}	1 sec	A	200	250	400	600	800	800	1000	1800	
	3 sec	A	120	10	250	400	530	700	800	900	
	10 sec	A	70	80	140	240	290	350	400	450	
	30 sec	A	40	50	90	150	200	250	250	300	
	60 sec	A	30	40	70	120	150	150	160	200	
Rated operational current $I_{c AC1/AC21}$		A	10	16	25	32	40	63	80	85	
Rated operational current $I_c AC15$	110/120 V	A	8	10	20	25	40	50			
	220/230 V	A	6	8	20	25	30	40			
	380/400 V	A	4	6	16	20	25	40			
	660/690 V	A			8	8,5	8,5	10			
Motor switch in utilisation category AC3/AC23	3 phase	220/230 V	kW	2,5/3	3/5	5,6/6,5	7,6/8	9/9	11/15	12/18,5	19/22
		380/400 V	kW	4/6	5/7,5	7,5/11	11/15	15/18,5	18,5/22	22/32	32/37
		500/690 V	kW			11/11	15/18,5	19/22	22/30	28/45	42/55
	1 phase 2 poles	110/120 V	kW	0,8/0,8	0,8/0,8	1,5/1,5	2,5/2,5	2,5/3	3/3,5		
		220/230 V	kW	1,5/1,7	2,2/2,5	3/3,7	4,8/5	5,5/6	6/9		
		380/400 V	kW	2,2/3	3/3,7	5,5/5,5	6,5/7,5	7,5/9	11/15		
Motor switch in utilisation category AC4	3 phase	220/230 V	kW	1,2	1,5	2,5	3	5	6	7	9,5
		380/400 V	kW	1,8	3	4	5,5	8	11	12	16
		500/690 V	kW			4	7,5	8	11	12	16
Mechanical endurance	switching cycles	10^6	3	3	3	3	3	2	2	2	
Terminal screw			M3,5	M3,5	M35	M4	M5	M5	2xM5	2xM5	
Screw head						(+,-) PZ2				(-)	
Tightening torque			0,8	0,8	0,8	1,2	1,8	2	2	2	
Cable cross-section	Rigid	mm ²	2x(1-2,5)	2x(1-2,5)	2x(1-4)	2x(2,5-6)	2x(2,5-10)	2x(4-16)		10-25	
	Flexible	mm ²	2x(1-2,5)	2x(1-2,5)	2x(1-4)	2x(2,5-6)	2x(2,5-6)	2x(4-16)		6-25, 2x(6-10)	
Protection degree of terminals						IP20				IP00	
Permissible ambient temperature		°C					-25 ... +55				
Standards										IEC 60947-3, VDE 0660, EN 60947 - 3	

Dimensions



Type	Marking					Number of elements (L/mm)											
	A	C	D	ØG	P	1	2	3	4	5	6	7	8	9	10	11	12
CS 10	48	26	38,6	38,6	12,8	32,5	45,3	58,1	70,9	83,7	96,5	109,3	122,1	134,9	147,7	160,5	173,3
CS 16	48	26	38,6	38,6	12,8	32,5	45,3	58,1	70,9	83,7	96,5	109,3	122,1	134,9	147,7	160,5	173,3
CS 25	48	26	45,2	38,6	12,8	32,5	45,3	58,1	70,9	83,7	96,5	109,3	122,1	134,9	147,7	160,5	173,3
CS 32	65	33	53	38,6	12,8	37	49,8	62,6	75,4	88,2	101	113,8	126,6	139,4	152,2	165	177,8
CS 40	65	33	61	56,4	17,5	50,6	68,1	85,6	103,1	120,6	138,1	155,6	173,1	190,6	208,1	225,6	243,1
CS 63	65	33	61	56,4	17,5	50,6	68,1	85,6	103,1	120,6	138,1	155,6	173,1	190,6	208,1	225,6	243,1
CS 80	90	41	84	80	25	67,5	92,5	117,5	142,5	167,5	192,5	217,5	242,5	267,5	292,5	317,5	342,5
CS 100	90	41	84	80	25	67,5	92,5	117,5	142,5	167,5	192,5	217,5	242,5	267,5	292,5	317,5	342,5