

Contact blocks and lamp blocks with holder for front mounting

Max. number of blocks in holder	Included blocks	Catalog No.	Ref. Code
3	1 NC	MCBH-01	1SFA 611 605 R1110
3	1 NO	MCBH-10	1SFA 611 605 R1101
3	2 NC	MCBH-02	1SFA 611 605 R1120
3	2 NO	MCBH-20	1SFA 611 605 R1102
3	3 NC	MCBH-03	1SFA 611 605 R1130
3	3 NO	MCBH-30	1SFA 611 605 R1103
3	1 NO + 1 NC	MCBH-11	1SFA 611 605 R1111
3	1 NO + 2 NC	MCBH-12	1SFA 611 605 R1121
3	2 NO + 1 NC	MCBH-21	1SFA 611 605 R1112

For illuminated operators

3	1 NC + 1 LB	MCBH-011	1SFA 611 605 R1210
3	1 NO + 1 LB	MCBH-101	1SFA 611 605 R1201
3	1 NO + 1 NC + 1 LB	MCBH-111	1SFA 611 605 R1211
3	2 NC + 1 LB	MCBH-021	1SFA 611 605 R1220
3	2 NO + 1 LB	MCBH-201	1SFA 611 605 R1202

Single contact blocks for front mounting

Included blocks	Catalog No.	Ref. Code
1 NO	MCB-10	1SFA 611 610 R1001
1 NC	MCB-01	1SFA 611 610 R1010
1 NO with gold plated contacts	MCB-10G	1SFA 611 610 R1101
1 NC with gold plated contacts	MCB-01G	1SFA 611 610 R1110

Double contact block for front mounting

To be used together with MCBH5-00 when contact blocks in position 4- and 5- are needed. Also when using MCBH-00 together with selector switch and contact block in position 3- is

Included blocks	Catalog No.	Ref. Code
2 NO	MCB-20	1SFA 611 610 R1002
2 NC	MCB-02	1SFA 611 610 R1020
1 NO + 1 NC	MCB-11	1SFA 611 610 R1011

Single lamp blocks for front mounting, Ba 9s base

Description	Catalog No.	Ref. Code
For max. 2 W, 230 V AC and DC filament bulb or LED 115 V AC supply voltage. For 60 V filament bulb max. 1.2 W 230 V AC supply voltage. For 130 V filament bulb max. 2 W	MLB-1	1SFA 611 620 R1001
115 V AC and DC supply voltage For 24 V LED	MLB-2	1SFA 611 620 R1002
24 V AC and DC supply voltage. With resistor. Intended for electronic circuits. The resistor limits the making current and protects against disturbances in the electronic circuit For 24 V filament bulb	MLB-3	1SFA 611 620 R1003
	MLB-4	1SFA 611 620 R1004
	MLB-5	1SFA 611 620 R1005

Holders

Description	Catalog No.	Ref. Code
Holders for front mounting		
For three blocks	MCBH-00	1SFA 611 605 R1100
For five blocks	MCBH5-00	1SFA 611 601 R1100

Contact blocks and lamp blocks for rear mounting See Page 8.43

Accessories

Transformer block

For 6 or 24 V filament bulb and 24 V LED. Rated power 1.5 W.

Primary voltage	Secondary voltage	Catalog No.	Ref. Code
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With lamp holder for front mounting, Ba 9s base

Intended to supply a 1.2 W filament bulb.

110 - 127V AC	6 V AC	KTR1-1001	1SFA 616 950 R1001
220 - 250 V AC	6 V AC	KTR1-1002	1SFA 616 950 R1002
380 - 420 V AC	6 V AC	KTR1-1003	1SFA 616 950 R1003
440 - 480 V AC	6 V AC	KTR1-1004	1SFA 616 950 R1004
500 - 600 V AC	6 V AC	KTR1-1005	1SFA 616 950 R1005
110 - 127 V AC	24 V AC ①	KTR1-1011	1SFA 616 950 R1011
220 - 250 V AC	24 V AC ①	KTR1-1012	1SFA 616 950 R1012
380 - 420 V AC	24 V AC ①	KTR1-1013	1SFA 616 950 R1013
440 - 480 V AC	24 V AC ①	KTR1-1014	1SFA 616 950 R1014

For illuminated operators ②

Intended to supply a 1.2 W filament bulb mounted in lamp block MLB-1 (1SFA 611 620 R1001) only.

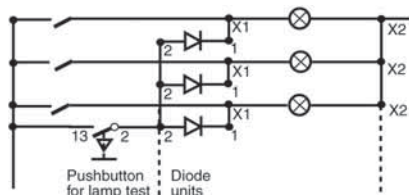
110 - 127V AC	6 V AC	KTR1-2001	1SFA 616 950 R2001
220 - 250 V AC	6 V AC	KTR1-2002	1SFA 616 950 R2002
380 - 420 V AC	6 V AC	KTR1-2003	1SFA 616 950 R2003
440 - 480 V AC	6 V AC	KTR1-2004	1SFA 616 950 R2004
500 - 600 V AC	6 V AC	KTR1-2005	1SFA 616 950 R2005
110 - 127 V AC	24 V AC ①	KTR1-2011	1SFA 616 950 R2011
220 - 250 V AC	24 V AC ①	KTR1-2012	1SFA 616 950 R2012
380 - 420 V AC	24 V AC ①	KTR1-2013	1SFA 616 950 R2013
440 - 480 V AC	24 V AC ①	KTR1-2014	1SFA 616 950 R2014

Diode block

To be used if several lamps are to be connected to a common lamp-test pushbutton. A diode must be connected in series with each lamp. The diode block snaps onto the lamp block or is placed at the side.

Description	Catalog No.	Ref. Code
Diode block	MDB-1001	1SFA 611 630 R1001

Diagram for lamp test with three diode block



① Can be used with LED bulb

② To be used with with directly supplied lamp blocks only.

Filament bulbs

Ba 9s base Catalog No. of current: AC/DC. A lamp changing tool is required for changing bulb.

Description					Catalog No.	Ref. Code
Rated voltage V	Rated current mA	Rated output W	Service life h	Lumiance mcd		
6	200	1.2	10 000	350	5911 086-11	5911 086-11
12	100	1.2	10 000	230	5911 086-12	5911 086-12
24	50	1.2	10 000	280	5911 086-13	5911 086-13
30	40	1.2	10 000	250	5911 086-4	5911 086-4
48	42	2	6 000	500	5911 086-5	5911 086-5
60	20	1.2	5 000	190	5911 086-14	5911 086-14
110	18	2	7 500	250	5911 086-7	5911 086-7
130	15	2	7 500	120	5911 086-15	5911 086-15

LEDs

With one diode chip mounted on a Ba 9s base. Choose the same color for the LED and the lamp cap or el clear lamp cap.

For white light use white LED with clear lamp cap. At DC the lamp base have to be connected to cathode bottom contact to anode (+).

Description				Catalog No.	Ref. Code
Color	Rated current mA	Wave-length nm	Luminance mcd		
Rated voltage 12 V, DC Service life >50 000 h					
Red	15	630	250	KA2-2011	1SFA 616 921 R2011
Green	15	525	1000	KA2-2012	1SFA 616 921 R2012
Yellow	15	592	250	KA2-2013	1SFA 616 921 R2013
Blue	15	470	450	KA2-2014	1SFA 616 921 R2014
White	15	x=0.31 y=0.32	600	KA2-2015	1SFA 616 921 R2015
Rated voltage 24 V, (AC)/DC Service life >50 000 h					
Red	15	630	250	KA2-2021	1SFA 616 921 R2021
Green	15	525	800	KA2-2022	1SFA 616 921 R2022
Yellow	15	592	250	KA2-2023	1SFA 616 921 R2023
Blue	15	470	400	KA2-2024	1SFA 616 921 R2024
White	15	x=0.31 y=0.32	500	KA2-2025	1SFA 616 921 R2025
Rated voltage 48 V, (AC)/DC Service life >50 000 h					
Red	12	630	200	KA2-2041	1SFA 616 921 R2041
Green	12	525	1700	KA2-2042	1SFA 616 921 R2042
Yellow	12	592	240	KA2-2043	1SFA 616 921 R2043
Blue	12	470	720	KA2-2044	1SFA 616 921 R2044
White	12	x=0.31 y=0.32	1200	KA2-2045	1SFA 616 921 R2045
Rated voltage 60 V, (AC)/DC Service life >50 000 h					
Red	10	630	160	KA2-2051	1SFA 616 921 R2051
Green	10	525	1400	KA2-2052	1SFA 616 921 R2052
Yellow	10	592	200	KA2-2053	1SFA 616 921 R2053
Blue	10	470	600	KA2-2054	1SFA 616 921 R2054
White	10	x=0.31 y=0.32	1000	KA2-2055	1SFA 616 921 R2055
Rated voltage 110-130 V, AC Service life 25 000 h					
Red	4-6	630	60-100	KA2-2131	1SFA 616 921 R2131
Green	4-6	525	500-850	KA2-2132	1SFA 616 921 R2132
Yellow	4-6	592	70-120	KA2-2133	1SFA 616 921 R2133
Blue	4-6	470	220-350	KA2-2134	1SFA 616 921 R2134
White	4-6	x=0.31 y=0.32	350-600	KA2-2135	1SFA 616 921 R2135
Rated voltage 110-130 V, AC/DC Service life 25 000 h					
Red	4-6	630	60-100	KA2-2141	1SFA 616 921 R2141
Green	4-6	525	500-850	KA2-2142	1SFA 616 921 R2142
Yellow	4-6	592	70-120	KA2-2143	1SFA 616 921 R2143
Blue	4-6	470	220-350	KA2-2144	1SFA 616 921 R2144
White	4-6	x=0.31 y=0.32	350-600	KA2-2145	1SFA 616 921 R2145
Rated voltage 230 V, AC Service life 25 000 h					
Red	4	630	60	KA2-2221	1SFA 616 921 R2221
Green	4	525	500	KA2-2222	1SFA 616 921 R2222
Yellow	4	592	70	KA2-2223	1SFA 616 921 R2223
Blue	4	470	220	KA2-2224	1SFA 616 921 R2224
White	4	x=0.31 y=0.32	350	KA2-2225	1SFA 616 921 R2225

① At AC the luminance is decreased with 30 % and there is also a slight flickering.

Accessories

Flashing LED

A lamp changing tool is required for changing bulb.
Choose the same color for the LED and the lamp cap or use a clear lamp cap.
The lamp base has to be connected to cathode (-) and the bottom contact to anode (+).

Description	Catalog No.	Ref. Code
Rated voltage 24 V, rated current 25 mA, DC		
	Wave length	Service life
Color	nm	hours
Red	630	50 000
Green	565	50 000
Yellow	585	50 000
	Catalog No.	Ref. Code
	4950 512-1	4950 512-1
	4950 512-2	4950 512-2
	4950 512-3	4950 512-3

Lamp changing tool

Description	Catalog No.	Ref. Code
For LEDs and for bulbs	KA1-8072	1SFA 616 920 R8072

Mounting tool

Description	Catalog No.	Ref. Code
Used for tightening the sleeve	KA1-8015	1SFA 611 920 R8015

Membrane of rubber

Of transparent, heat and cold resistant rubber. Does not harden at low temperature.
Gives IP 67 degree of protection. When membrane is used, remove the gasket.

For operator with	Catalog No.	Ref. Code
Flush button	KA1-8052	1SFA 616 920 R8052
Extended button	KA1-8002	1SFA 616 920 R8002

Emergency stop shroud

For 40 mm Emergency Stop Pushbuttons. Not for use with plastic enclosure.

Color	Catalog No.	Ref. Code
To prevent inadvertant operation.		
Yellow	KA1-8053	1SFA 616 920 R8053

Protective ring

Description	Catalog No.	Ref. Code
For flush and extended buttons		
To prevent inadvertant operation.		
Not together with legend plate holder.	SK 615 512-1	SK 615 512-1

Protective cover

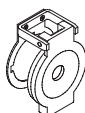
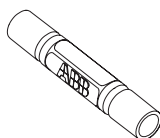
Description	Catalog No.	Ref. Code
For flush button.		
To prevent inadvertant operation.		
Not together with legend plate holder.	KA1-8010	1SFA 616 920 R8010

Bezel (Packing unit 10 pieces)

Description	Catalog No.	Ref. Code
For pushbutton		
Grey, plastic	KA1-8079	1SFA 616 920 R8079
Black, plastic	KA1-8022	1SFA 616 920 R8022
Metal	KA1-8021	1SFA 616 920 R8021
For selector switch		
Grey, plastic	KA1-8077	1SFA 616 920 R8077
Black, plastic	KA1-8080	1SFA 616 920 R8080
Metal	KA1-8024	1SFA 616 920 R8024

Square bezel

Black, plastic (Packing unit 10 pieces)	SK 616 016-2	SK 616 016-2
Grey, plastic (Packing unit 10 pieces)	KA1-8124	1SFA 611 920 R8124



Accessories



30 mm adaptors

For use when fitting the 22 mm pilot devices in 30 mm mounting holes. (1.5 – 4 mm panels)

Description	Catalog No.	Ref. Code
For use with emergency stop pushbuttons		
Black plastic.	KA1-8027	1SFA 616 920 R8027
Metal.	KA1-8028	1SFA 616 920 R8028
For use with pushbuttons, selector switches, pilot lights, potentiometers and buzzers		
Black plastic.	KA1-8029	1SFA 616 920 R8029
Metal.	KA1-8030	1SFA 616 920 R8030

Adaptors

Description	Catalog No.	Ref. Code
For flush mounted pushbuttons		
	KA1-8073	1SFA 616 920 R8073
For flush mounted selector switches		
	KA1-8074	1SFA 616 920 R8074

Extra key

Description	Catalog No.	Ref. Code
Ronis 455 (key code 71)	SK 616 021-71	SK 616 021-71
Ronis 421 (key code 72)	SK 616 021-72	SK 616 021-72
Ronis 3433-E (key code 73)	SK 616 021-73	SK 616 021-73

Label sheet

Description	Catalog No.	Ref. Code
For marking of contact blocks at two levels	2949 1725-1	2949 1725-1

Lenses for pilot lights (Packing unit 10 pieces)

Description/Color	Catalog No.	Ref. Code
Red	KA1-8031	1SFA 616 920 R8031
Green	KA1-8032	1SFA 616 920 R8032
Yellow	KA1-8033	1SFA 616 920 R8033
Blue	KA1-8034	1SFA 616 920 R8034
White	KA1-8035	1SFA 616 920 R8035

Buttons for pushbuttons (Packing unit 10 pieces)

Description	Color	Catalog No.	Ref. Code
Flush, opaque	Red	KA1-8081	1SFA 616 920 R8081
	Green	KA1-8082	1SFA 616 920 R8082
	Yellow	KA1-8083	1SFA 616 920 R8083
	Blue	KA1-8084	1SFA 616 920 R8084
	White	KA1-8085	1SFA 616 920 R8085
	Black	KA1-8086	1SFA 616 920 R8086
	Grey	KA1-8087	1SFA 616 920 R8087
	Clear	KA1-8088	1SFA 616 920 R8088
Extended, opaque	Red	KA1-8091	1SFA 616 920 R8091
	Green	KA1-8092	1SFA 616 920 R8092
	Yellow	KA1-8093	1SFA 616 920 R8093
	Blue	KA1-8094	1SFA 616 920 R8094
	White	KA1-8095	1SFA 616 920 R8095
	Black	KA1-8096	1SFA 616 920 R8096
	Grey	KA1-8097	1SFA 616 920 R8097
	Clear	KA1-8098	1SFA 616 920 R8098
Flush, transparent	Red	KA1-8101	1SFA 616 920 R8101
	Green	KA1-8102	1SFA 616 920 R8102
	Yellow	KA1-8103	1SFA 616 920 R8103
	Blue	KA1-8104	1SFA 616 920 R8104
	White	KA1-8105	1SFA 616 920 R8105
	Clear	KA1-8108	1SFA 616 920 R8108
Extended, transparent	Red	KA1-8111	1SFA 616 920 R8111
	Green	KA1-8112	1SFA 616 920 R8112
	Yellow	KA1-8113	1SFA 616 920 R8113
	Blue	KA1-8114	1SFA 616 920 R8114
	White	KA1-8115	1SFA 616 920 R8115
	Clear	KA1-8118	1SFA 616 920 R8118



Accessories

22mm hole plug (UL Type 1, 3R, 4, 4X, 12)

Hole plugs are used to cover pushbutton holes in panels

Description	Catalog No.
22mm hole plug	SK 616 502-B

Padlock attachment for 30mm mushroom head (twist release only)

Prevents unauthorized use of equipment. Provides space for up to 4 padlocks with the button in the depressed position. Holes fit standard 1/4" padlock.

Description	Catalog No.
Padlock attachment	SK 615 502-D

Spare gasket

Description	Catalog No.
Gasket	2152 0357-1

Selector switch lock

Description	Catalog No.
Selector switch lock	CBK-XSWL

Selector switch guard

Description	Catalog No.
Selector switch guard	CBK-XSWG

