

# Pilot Devices, Compact Range

*New range of Pilot Devices, 22 mm*

**New**



**ABB**

## The competitive choice

The compact range is a new competitive choice for OEM customers and Panel Builders with high requirements of cost efficient, easy to use and reliable products.

### Features

- Reliable performance
- Less stock-keeping
- "All-in-one function"  
One Order Code = one complete function
- Robust design
- Easy mounting



### Part of the ABB Family

The compact range can easily be combined with our modular Pilot Devices as they have the same front design.

### Worldwide availability

ABB is represented in over 130 countries. Our pilot devices meet all major international and national standards.

### Technical advantages

- High degree of protection
- One or two built-in electrically separated contacts (1NO, 1NC, 2NO, 2NC or 1NC + 1NO)
- Contacts with wiping action
- Low built-in depth



Same front design for both the modular and the compact range. Robust actuators in clear colors with large text and push area.



Samples of accessories

## Pushbuttons, non-illuminated



Contacts included:  
NO NC



1	-
2	-
-	1
-	2
1	1

**Pushbutton**  
Momentary  
Flush button

**Type**

CP1-10■-10
CP1-10■-20
CP1-10■-01
CP1-10■-02
CP1-10■-11

**Pushbutton**  
Maintained  
Flush button

**Type**

CP2-10■-10
CP2-10■-20
CP2-10■-01
CP2-10■-02
CP2-10■-11

**Pushbutton**  
Momentary  
Extended button

**Type**

CP3-10■-10
CP3-10■-20
CP3-10■-01
CP3-10■-02
CP3-10■-11

**Pushbutton**  
Maintained  
Extended button

**Type**

CP4-10■-10
CP4-10■-20
CP4-10■-01
CP4-10■-02
CP4-10■-11

**Color**

**Code letter**

Red	●	<b>R</b>
Green	●	<b>G</b>
Yellow	●	<b>Y</b>
Blue	●	<b>L</b>
White	○	<b>W</b>
Black	●	<b>B</b>
Grey	●	<b>U</b>

### Ordering example

Requested: A compact pushbutton, momentary, with red extended button and one NO contact.

**Order: 1 piece of CP3-10R-10**

**Minimum order quantity: 10 pieces**

**Packing: 10 pieces/plastic bag, 10 bags/box**



## Pushbuttons, non-illuminated



Contacts included:  
NO NC



1	-
-	1

**Pushbutton**

Momentary  
Flush button, white

with black I

**Type**

CP1-110W-10
-

with black II

**Type**

CP1-210W-10
-

**Pushbutton**

Maintained  
Extended button, black

with white 0

**Type**

-
CP3-310B-01

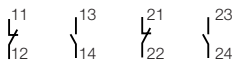
## Selector switches, non-illuminated



Contacts included:

Actuated in position **C**

NC NO NC NO



-	1	-	-
-	1	-	1
1	-	-	-
1	-	1	-
-	1	1	-

### Two position

Maintained



Type

<b>C2SS1-10■-10</b>	<b>C2SS1-10■-20</b>	<b>C2SS1-10■-01</b>	<b>C2SS1-10■-02</b>	<b>C2SS1-10■-11</b>
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Maintained



Type

<b>C2SS2-10■-10</b>	<b>C2SS2-10■-20</b>	<b>C2SS2-10■-01</b>	<b>C2SS2-10■-02</b>	<b>C2SS2-10■-11</b>
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Momentary



Type

<b>C2SS3-10■-10</b>	<b>C2SS3-10■-20</b>	<b>C2SS3-10■-01</b>	<b>C2SS3-10■-02</b>	<b>C2SS3-10■-11</b>
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Color

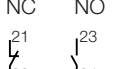
Code letter

Red		<b>R</b>
Black		<b>B</b>
Grey		<b>U</b>

Contacts included:

Actuated in position **A**

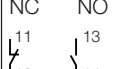
NC NO



-	1	-	1
1	-	1	-
1	-	-	1

Actuated in position **C**

NC NO



-	1	-	1
1	-	1	-
1	-	-	1

### Three position

Maintained



Type

<b>C3SS1-10■-20</b>	<b>C3SS1-10■-02</b>	<b>C3SS1-10■-11</b>
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Momentary



Type

<b>C3SS2-10■-20</b>	<b>C3SS2-10■-02</b>	<b>C3SS2-10■-11</b>
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Momentary



Type

<b>C3SS3-10■-20</b>	<b>C3SS3-10■-02</b>	<b>C3SS3-10■-11</b>
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Momentary



Type

<b>C3SS7-10■-20</b>	<b>C3SS7-10■-02</b>	<b>C3SS7-10■-11</b>
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### Ordering example

Requested: A red compact selector switch with three positions, Momentary, spring return from A to B and maintained position in C.

With 2 NC contacts.

**Order: 1 piece of C3SS7-10R-02**

**Minimum order quantity: 10 pieces**

**Packing: 10 pieces/plastic bag. 10 bags/box**



## Pilot lights



**Pilot light** Ba 9s base, bulb not included

Colour

Red	
Green	
Yellow	
Blue	
White	
Clear	

Type

<b>CL-100R</b>
<b>CL-100G</b>
<b>CL-100Y</b>
<b>CL-100L</b>
<b>CL-100W</b>
<b>CL-100C</b>

# Accessories



Description				Order Code	Weight, kg
<b>Filament bulbs</b> Ba 9s base					
Type of current: AC/DC.					
Rated voltage, V	Rated current, mA	Rated output, W	Service life, h		
6	200	1.2	10 000	<b>1SFA 616 921 R1008</b>	0.002
12	100	1.2	10 000	<b>1SFA 616 921 R1018</b>	0.002
24	50	1.2	10 000	<b>1SFA 616 921 R1028</b>	0.002
30	40	1.2	10 000	<b>1SFA 616 921 R1038</b>	0.002
48	42	2	6 000	<b>1SFA 616 921 R1048</b>	0.002
60	20	1.2	5 000	<b>1SFA 616 921 R1058</b>	0.002
110	18	2	7 500	<b>1SFA 616 921 R1108</b>	0.002
130	15	2	7 500	<b>1SFA 616 921 R1128</b>	0.002

## LEDs

With one diode chip mounted on a Ba 9s base.  
Choose the same color for the LED and the lamp cap or else use a clear lamp cap.  
For white light use white LED with clear lamp cap.  
At DC the lamp base have to be connected to cathode (-) and the bottom contact to anode (+).

Rated voltage, V	Rated current, mA	Color	Wave-length, nM	Luminance, mcd		
Type of current: <b>DC Service life &gt;50 000 hours</b>						
12	15	Red	630	250	<b>1SFA 616 921 R2011</b>	0.005
12	15	Green	525	1000	<b>1SFA 616 921 R2012</b>	0.005
12	15	Yellow	592	250	<b>1SFA 616 921 R2013</b>	0.005
12	15	Blue	470	450	<b>1SFA 616 921 R2014</b>	0.005
12	15	White	x=0.31 y=3.2	600	<b>1SFA 616 921 R2015</b>	0.005
Type of current: <b>(AC)/DC<sup>1)</sup> Service life &gt;50 000 hours</b>						
24	15	Red	630	250	<b>1SFA 616 921 R2021</b>	0.005
24	15	Green	525	800	<b>1SFA 616 921 R2022</b>	0.005
24	15	Yellow	592	250	<b>1SFA 616 921 R2023</b>	0.005
24	15	Blue	470	400	<b>1SFA 616 921 R2024</b>	0.005
24	15	White	x=0.31 y=3.2	500	<b>1SFA 616 921 R2025</b>	0.005
Type of current: <b>(AC)/DC<sup>1)</sup> Service life &gt;50 000 hours</b>						
48	12	Red	630	200	<b>1SFA 616 921 R2041</b>	0.005
48	12	Green	525	640	<b>1SFA 616 921 R2042</b>	0.005
48	12	Yellow	592	200	<b>1SFA 616 921 R2043</b>	0.005
48	12	Blue	470	320	<b>1SFA 616 921 R2044</b>	0.005
48	12	White	x=0.31 y=3.2	400	<b>1SFA 616 921 R2045</b>	0.005
Type of current: <b>(AC)/DC<sup>1)</sup> Service life &gt;50 000 hours</b>						
60	10	Red	630	160	<b>1SFA 616 921 R2051</b>	0.005
60	10	Green	525	530	<b>1SFA 616 921 R2052</b>	0.005
60	10	Yellow	592	160	<b>1SFA 616 921 R2053</b>	0.005
60	10	Blue	470	260	<b>1SFA 616 921 R2054</b>	0.005
60	10	White	x=0.31 y=3.2	330	<b>1SFA 616 921 R2055</b>	0.005
Type of current: <b>AC<sup>1)</sup> Service life 25 000 hours</b>						
110-130	4-6	Red	630	25-35	<b>1SFA 616 921 R2131</b>	0.005
110-130	4-6	Green	525	300-350	<b>1SFA 616 921 R2132</b>	0.005
110-130	4-6	Yellow	592	60-90	<b>1SFA 616 921 R2133</b>	0.005
110-130	4-6	Blue	470	130-150	<b>1SFA 616 921 R2134</b>	0.005
110-130	4-6	White	x=0.31 y=3.2	160-200	<b>1SFA 616 921 R2135</b>	0.005
Type of current: <b>AC/DC<sup>1)</sup> Service life 25 000 hours</b>						
110-130	4-6	Red	630	25-35	<b>1SFA 616 921 R2141</b>	0.005
110-130	4-6	Green	525	300-350	<b>1SFA 616 921 R2142</b>	0.005
110-130	4-6	Yellow	592	60-90	<b>1SFA 616 921 R2143</b>	0.005
110-130	4-6	Blue	470	130-150	<b>1SFA 616 921 R2144</b>	0.005
110-130	4-6	White	x=0.31 y=3.2	160-200	<b>1SFA 616 921 R2145</b>	0.005
Type of current: <b>AC<sup>1)</sup> Service life 25 000 hours</b>						
230	4	Red	630	25	<b>1SFA 616 921 R2221</b>	0.005
230	4	Green	525	300	<b>1SFA 616 921 R2222</b>	0.005
230	4	Yellow	592	60	<b>1SFA 616 921 R2223</b>	0.005
230	4	Blue	470	130	<b>1SFA 616 921 R2224</b>	0.005
230	4	White	x=0.31 y=3.2	160	<b>1SFA 616 921 R2225</b>	0.005

<sup>1)</sup> At AC the luminance is decreased with 30 % and there is also a slight flickering.

## Accessories

Description	Type	Order Code	Weight, kg
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### Protective membrane

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

For pushbutton with:

Flush button	<b>KA1-8052</b>	<b>1SFA 616 920 R8052</b>	0.002
Extended button	<b>KA1-8002</b>	<b>1SFA 616 920 R8002</b>	0.002

### Mounting tool

Used for fastening the nut.

	<b>1SFA 616 920 R8015</b>	0.100
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### 30 mm adaptors

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

Black plastic	<b>KA1-8029</b>	<b>1SFA 616 920 R8029</b>	0.010
Metal	<b>KA1-8030</b>	<b>1SFA 616 920 R8030</b>	0.035

Description	Type	Order Code	Weight, kg
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### Lamp changing tool

Fits filament bulbs and LEDs.

<b>KA1-8072</b>	<b>1SFA 616 920 R8072</b>	0.002
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Description	Order Code	Weight, kg
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### Legend plates

#### Engraved fixed plates with symbol/text

Symbol/text	Legend plate material
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#### For pushbuttons and pilot lights

O	Silver-grey aluminium	<b>SK 615 550-61</b>	0.002
Off	Silver-grey aluminium	<b>SK 615 552-21</b>	0.002
On	Silver-grey aluminium	<b>SK 615 552-22</b>	0.002
Start	Silver-grey aluminium	<b>SK 615 550-44</b>	0.002
Stop	Silver-grey aluminium	<b>SK 615 552-31</b>	0.002

Symbol/text

Centre	Right	Legend plate material
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#### For two-position selector switches

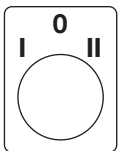
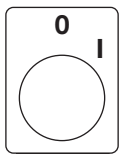
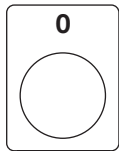
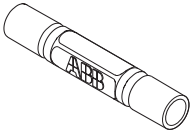
O	I	Silver-grey aluminium	<b>SK 615 550-75</b>	0.002
Hand	Auto	Silver-grey aluminium	<b>SK 615 552-31</b>	0.002
Off	On	Silver-grey aluminium	<b>SK 615 552-53</b>	0.002
Stop	Start	Silver-grey aluminium	<b>SK 615 552-55</b>	0.002

Symbol/text

Left	Centre	Right	Legend plate material
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#### For three-position selector switches

I	O	II	Silver-grey aluminium	<b>SK 615 550-81</b>	0.002
Hand	O	Auto	Silver-grey aluminium	<b>SK 615 550-80</b>	0.002
Slow	Off	Fast	Silver-grey aluminium	<b>SK 615 552-60</b>	0.002



29.6 x 39 mm  
Text height 3 mm

## Technical data

### Standards

IEC 73, 529, 947-5-1, 947-5-5  
 EN 50 013, 60 947-5-1  
 UL 508  
 CSA C22.2 No. 14

### Degree of protection

#### Operators

Compact pushbutton  
 Compact pilot lights  
 Compact selector switch

IP 66  
 IP 66  
 IP 66  
 IP 20

#### Terminals

### Mechanical life

Pushbuttons 0.5 million operations  
 Selector switches 0.5 million operations

### Temperature

Ambient temperature during operation -25 to +70 °C  
 Storage temperature -30 to +85 °C

### Terminals

Plus-minus Pozidrive Size 2  
 Connectable area

min. 1 x 0.5 mm<sup>2</sup>  
 max. 2 x 1.5 mm<sup>2</sup>/  
 2 x AWG14  
 0.9 Nm

Recommended torque

### Contacts

#### Ratings as per UL, CSA, NEMA C300, R300

Rated insulation voltage		250 V
Rated thermal current		2.5 A
Rated operational current at	120 V	1.5 A
	240 V	0.75 A

#### Ratings as per IEC 947-5-1

Rated insulation voltage, U <sub>i</sub>		300 V
Rated thermal current, I <sub>th</sub>		5 A
Rated operational current, I <sub>e</sub> , utilization category AC 15, at	120 V	1.5 A
	240 V	1 A
Rated operational current, I <sub>e</sub> , utilization category DC 13, at	24 V	0.3 A
	125 V	0.2 A

#### Short circuit protection

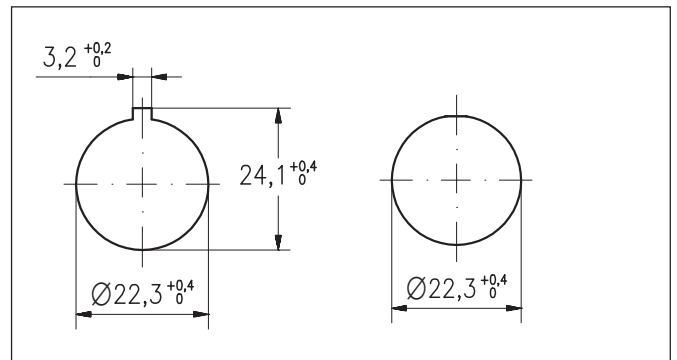
Max. fuse at 1 kA 16 A ordinary  
 10 A delayed

#### Bulbs Ba9s

3 W, 240 V

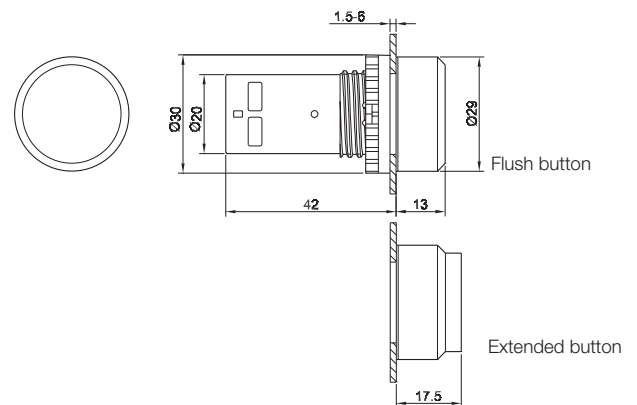
## Drilling plan

### for pushbuttons, switches and pilot lights

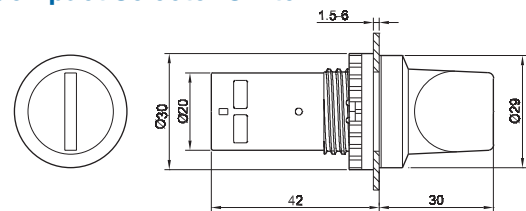


## Dimensions

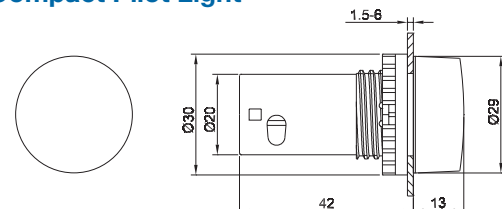
### Compact Pushbutton



### Compact Selector Switch



### Compact Pilot Light





## *Get in touch with the Pilot Devices from ABB*

A pushbutton has to be sturdy and reliable, applicable in all environments and adaptable to widely differing requirements. Further, it should be easy to install.

You will find all these features in ABB's range of Pilot Devices.

Find information about ABB Low Voltage Products on [www.abb.com/lowvoltage](http://www.abb.com/lowvoltage)

# ABB