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# Működtető- és jelzőkészülékek

Teljes kínálat



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**ABB pilot devices are engineered for total reliability. Their innovative design simplify the entire process, from selection to installation. Enclosures, signal towers and signal beacons complete the portfolio.**

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# Pilot devices

## The complete offering

**OVERVIEW**  
P.2

**MODULAR  
PLASTIC RANGE**  
P.13

**MODULAR  
METAL RANGE**  
P.55

**COMPACT RANGE**  
P.87

**ENCLOSURES  
AND ASSEMBLED  
STATIONS**  
P.117

**LEGEND PLATES  
AND TEXT CAPS**  
P.131

**SIGNAL TOWERS  
AND SIGNAL  
BEACONS**  
P.137

**GENERAL  
TECHNICAL DATA**  
P.146

**INDEX**  
P.148

**MARKETING  
MATERIALS**  
P. 166

# Pilot devices

## Reliable in all applications

Whether it is installed in an EV charger or in the testing equipment of an elevator ABB pilot devices will work as a reliable interface for operators. They are designed and tested to withstand extreme environments.



01



02



03

- 01 Elevator
- 02 EV charging
- 03 Marine

# A small upgrade that can make a big difference.

Trust is everything. And in industrial environments, it is essential to have human-machine interfaces you can count on. Whenever you start or stop a process, the response must be assured. That’s why ABB pilot devices are designed and engineered to deliver total reliability.

Continuous production, maximum uptime and higher profits require exceptional process reliability.



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04

When it comes to the safety of your people, dependability is essential.



—  
04 Food and beverage  
—  
05 Marine and ports

—  
05

The details matter. Work starts and stops with pilot devices and so does your productivity and safety. Rely on ABB pilot devices to perform when it matters the most.



# Pilot devices

Reliable products, easy to select and install



ABB pilot devices are engineered for total reliability. Our products are tested to extremes and proven in the toughest environments. Their innovative design simplify the entire process, from selection to installation. Enclosures, signal towers and signal beacons complete the portfolio.



## Continuous operation

### Engineered for tough environments

ABB pilot devices are designed with protection degree of up to IP69K and 4X, guaranteeing reliability in extreme environments – making ABB pilot devices ideal for use in demanding industries such as construction and food and beverage. An innovative design that automatically cleans contacts ensures high reliability for all products.



## Global availability

### Simple selection and stock management

ABB's score offering includes the pilot devices most in demand, so product selection is easier, stock management is simpler and product availability is higher.

Support for exporters is world-class, thanks to ABB's standardized global range, certified to comply with all major international standards.



## Easy to install

### Save time and space

The unique design of ABB's modular ranges enable tool-free installation that is quick and simple. It provides high flexibility for last-minute changes. With its all-in-one construction, the compact range reduces installation space and save time.

# Pilot devices

## Reliability that lasts

### Continuous operation

#### Longer lifetime

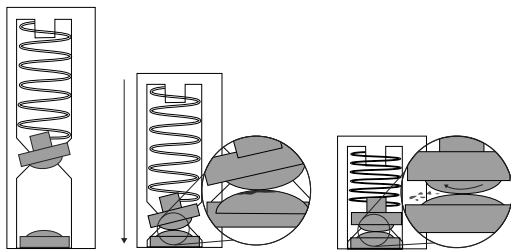
- ABB pilot Devices are engineered and tested to sustain frequent use over time in any environment

#### High mechanical durability

- Tested to achieve mechanical life time of up to 10 million operations

#### Ensuring electric connectivity

- Self-cleaning contacts ensure reliable operation without the need for maintenance, increasing uptime



The built-in wiping mechanism cleans the contacts when operated to remove dust and oxidation on the contacts and improve conductivity.

#### Dust and water proof

All ABB pilot devices are impenetrable to dust and are extremely resistant to water exposure.

#### IP66

IP66-classed pilot devices can withstand high-pressure water jets and are suitable for tough outdoor use.

#### IP67

IP67-classed pilot devices can withstand immersion in one metre of water for 30 minutes. They are suitable for use in the harshest environments with water and dust.

#### IP69K

IP69K pilot devices can withstand both rough treatment and intensive, high-temperature cleaning. They are ideal for environments with high sanitary requirements, such as the food and beverage industry.

**Find full test description in general technical data section.**

01 Mechanical durability test

02 Total protection against any kind of dust

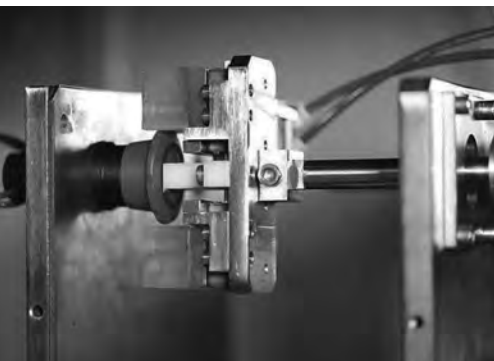
03 Powerful water jets projected against the front from a distance of 3 meters

### Testing that goes beyond the standards



Watch the video

Trust ABB to produce products that work in any environment.



01



02

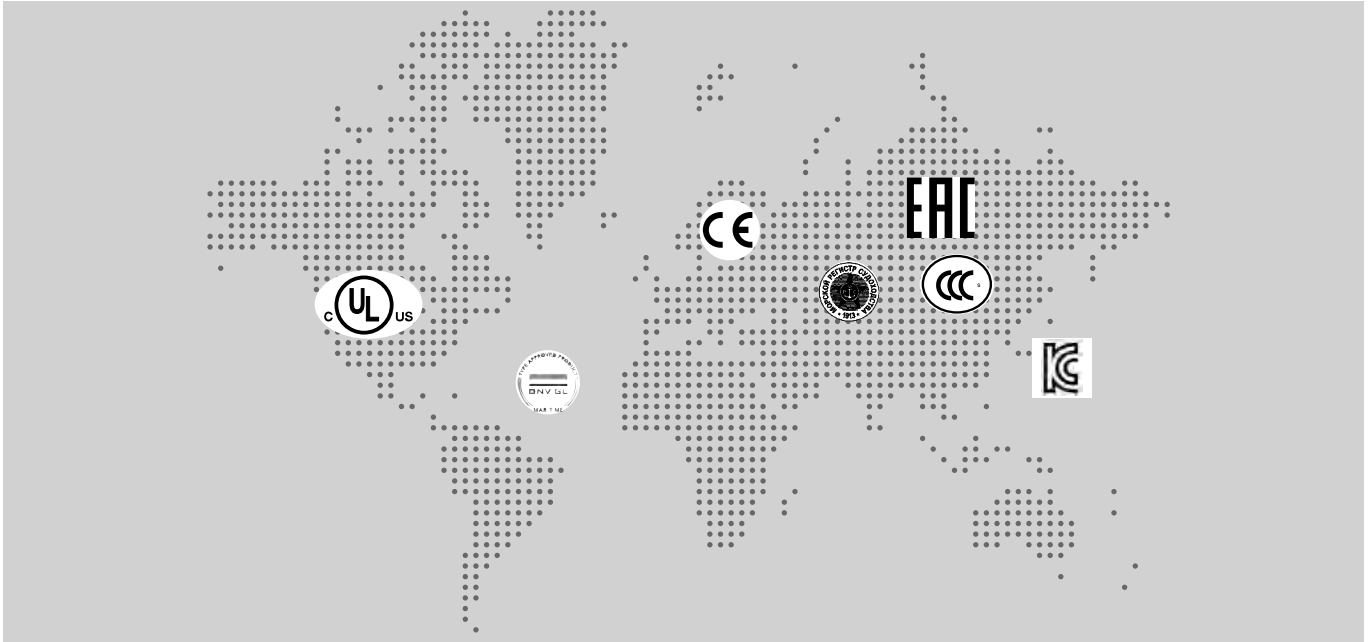


03



# Pilot devices

## Global quality, local support



### Global availability

#### Available worldwide from ABB

Achieve truly global solutions

- Same products and quality all around the world
- Local support available everywhere with ABB's global distribution network
- All certificates and spare parts available globally.

#### Always the right solution with the wide range of LEDs

Save time and money on your projects with fewer order codes for your illuminated products.

With supply voltage of 6.3 VDC to 415 VAC for both modular and compact range, ABB covers all the needs with no additional transformers.

### Easy to install

Reduce installation time by choosing between the flexible modular ranges and the all-in-one compact range of pilot devices.

Mixing and matching the two ranges enables faster and more flexible purchasing and design. Fastening of the nut is tool-free and most accessories can be used for both ranges.

# Modular plastic range

## Flexible configuration

A versatile selection of operators with high level of flexibility and a broad choice of electrical ratings. Find the perfect solution for almost every application.



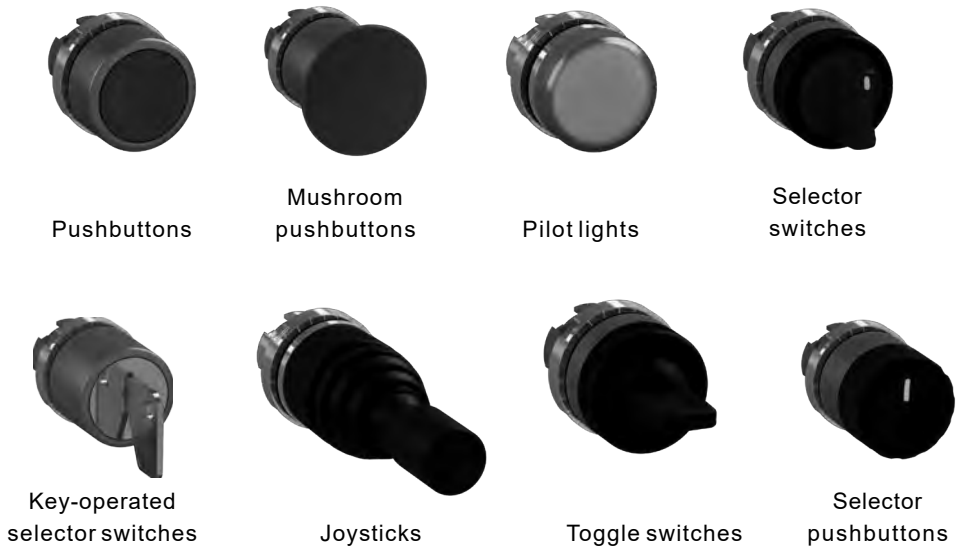
High AC-15 electrical ratings 6 A at 230 V.  
The flexible solution that simplifies your stock management.

- More flexibility:  
Last-minute changes made easy  
Up to 6 contact blocks, NO and NC
- Save up to 30% installation time with unique tool-free snap on components
- Simple solutions nuts require no tools
- Choice of 3- and 5-position holders
- Every requirement covered with a wide choice of operators and bezels

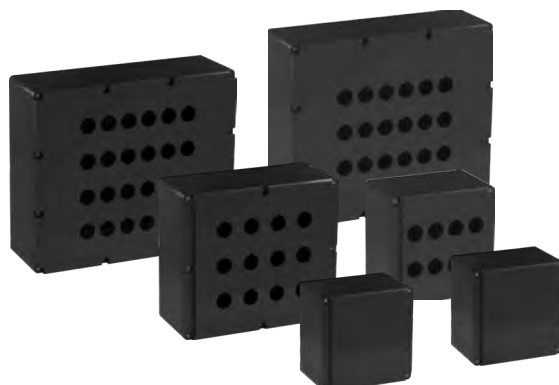
# Modular metal range

## Designed for demanding applications

ABB's modular metal range combines ultimate reliability with the total flexibility of a modular range. For mining, construction and heavy industry applications, find the right solution here.



IP66 aluminium metal enclosures are available to accompany this range



## Compact range

### All-in-one solution

The most efficient solution available, reducing installation time and cost. The compact range have the highest level of dust and water resistance on the market.



Pushbuttons



Heavy duty pushbuttons



Mushroom pushbuttons



Emergency stop pushbuttons



Machine stop pushbuttons



Pilot lights



Selector switches



Buzzers

Fewer order codes make selection easy and save time.

All-in-one design makes installation fast.



Improve reliability:  
Higher protection levels with IP66, IP67 and IP69K classification and 4X (NEMA)

Compact:  
Just 42mm built in depth





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# Pilot devices

## Modular plastic range

### Ordering details

14	Mounting instructions
15	Non-illuminated pushbuttons
17	Illuminated pushbuttons
19	Non-illuminated double pushbuttons
20	Illuminated double pushbuttons
22	Mushroom pushbuttons
23	Emergency stop pushbuttons
24	Machine stop pushbuttons
25	Heavy duty pushbuttons
25	Pilot lights
26	Non-illuminated selector switches
31	Illuminated selector switches
35	Key-operated selector switches
37	Potentiometers
38	Reset pushbuttons
39	Reset pushbuttons with shaft
40	Joysticks
41	Toggle switches

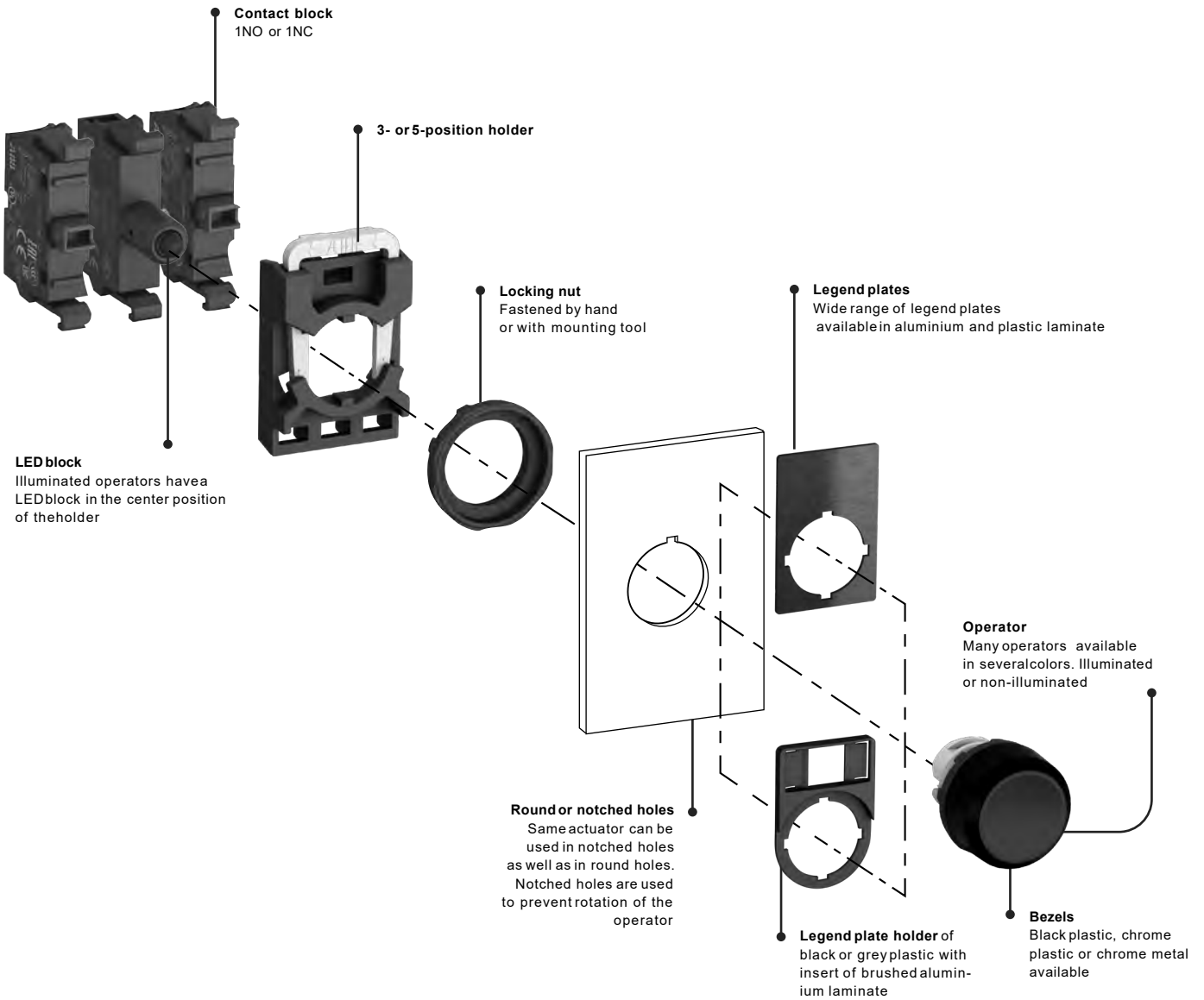
### Accessories for modular range

42	Contact block configuration
43	Holders and contact blocks for front mounting
44	LED blocks for front mounting
46	Other accessories

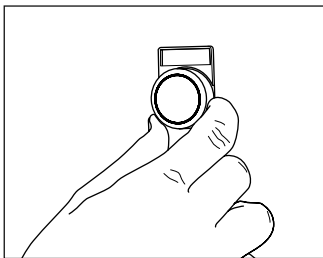
### Technical data

52	Drilling plan
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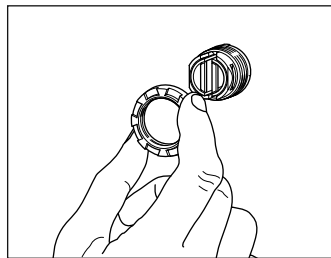
# Modular plastic range



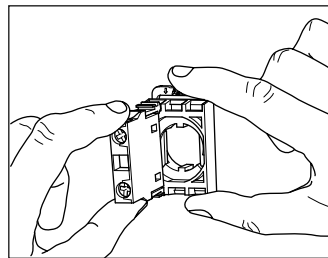
## Easy to install



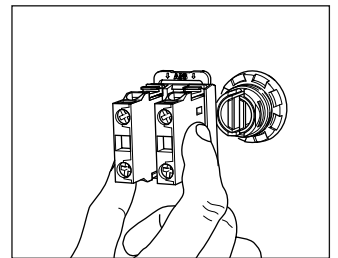
The operator is to be inserted from the front...



...and secured at the back with the nut.

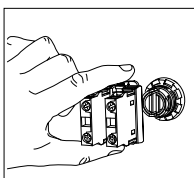
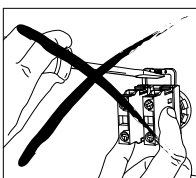


The contact blocks/ LEDblock are then snapped on to the holder...



...and the holder snaps on to the operator.

## ...and to remove



Press down the spring on the holder and pull the holder from the actuator.

## Simple and fast installation



Watch the video



# Modular plastic range

## Non-illuminated flush pushbuttons



MP1-10R

1SFC15104V0001



MP1-10Y

1SFC151016V0001



MP1-30L

1SFC151031V0001



MP2-10G

1SFC151015V0001



MP2-10W

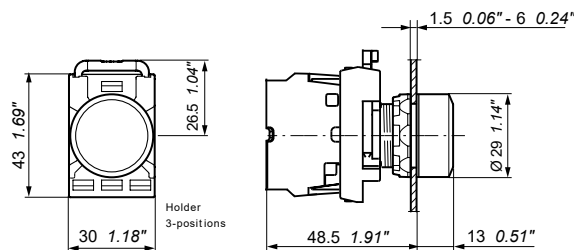
1SFC151018V0001



MP2-20B

1SFC151023V0001

Operator	Bezel	Type	Order code	Pkg qty	Weight (1 pce) kg
<b>Momentary</b>					
● Red	Black plastic	MP1-10R	1SFA611100R1001	10	0.016
	Chrome plastic	MP1-20R	1SFA611100R2001	10	0.016
	Chrome metal	MP1-30R	1SFA611100R3001	10	0.026
● Green	Black plastic	MP1-10G	1SFA611100R1002	10	0.016
	Chrome plastic	MP1-20G	1SFA611100R2002	10	0.016
	Chrome metal	MP1-30G	1SFA611100R3002	10	0.026
● Yellow	Black plastic	MP1-10Y	1SFA611100R1003	10	0.016
	Chrome plastic	MP1-20Y	1SFA611100R2003	10	0.016
	Chrome metal	MP1-30Y	1SFA611100R3003	10	0.026
● Blue	Black plastic	MP1-10L	1SFA611100R1004	10	0.016
	Chrome plastic	MP1-20L	1SFA611100R2004	10	0.016
	Chrome metal	MP1-30L	1SFA611100R3004	10	0.026
○ White	Black plastic	MP1-10W	1SFA611100R1005	10	0.016
	Chrome plastic	MP1-20W	1SFA611100R2005	10	0.016
	Chrome metal	MP1-30W	1SFA611100R3005	10	0.026
● Black	Black plastic	MP1-10B	1SFA611100R1006	10	0.016
	Chrome plastic	MP1-20B	1SFA611100R2006	10	0.016
	Chrome metal	MP1-30B	1SFA611100R3006	10	0.026
○ Clear	Black plastic	MP1-10C	1SFA611100R1008	10	0.016
	Chrome plastic	MP1-20C	1SFA611100R2008	10	0.016
	Chrome metal	MP1-30C	1SFA611100R3008	10	0.026
<b>Maintained</b>					
● Red	Black plastic	MP2-10R	1SFA611101R1001	10	0.016
	Chrome plastic	MP2-20R	1SFA611101R2001	10	0.016
	Chrome metal	MP2-30R	1SFA611101R3001	10	0.026
● Green	Black plastic	MP2-10G	1SFA611101R1002	10	0.016
	Chrome plastic	MP2-20G	1SFA611101R2002	10	0.016
	Chrome metal	MP2-30G	1SFA611101R3002	10	0.026
● Yellow	Black plastic	MP2-10Y	1SFA611101R1003	10	0.016
	Chrome metal	MP2-30Y	1SFA611101R3003	10	0.026
● Blue	Black plastic	MP2-10L	1SFA611101R1004	10	0.016
	Chrome plastic	MP2-20L	1SFA611101R2004	10	0.016
	Chrome metal	MP2-30L	1SFA611101R3004	10	0.026
○ White	Black plastic	MP2-10W	1SFA611101R1005	10	0.016
	Chrome plastic	MP2-20W	1SFA611101R2005	10	0.016
● Black	Black plastic	MP2-10B	1SFA611101R1006	10	0.016
	Chrome plastic	MP2-20B	1SFA611101R2006	10	0.016
	Chrome metal	MP2-30B	1SFA611101R3006	10	0.026
○ Clear	Black plastic	MP2-10C	1SFA611101R1008	10	0.016



MP1, MP2  
Dimensions (mm, inches)

# Modular plastic range

## Non-illuminated extended pushbuttons



MP3-10R

1SFC151006V0001



MP3-20Y

1SFC151028V0001



MP3-10W

1SFC151013V0001



MP3-10C

1SFC151933V0001



MP4-10G

1SFC151012V0001



MP4-10L

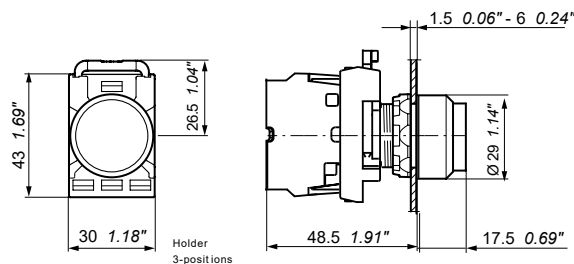
1SFC151019V0001



MP4-10B

1SFC151011V0001

Operator	Bezel	Type	Order code	Pkg qty	Weight (1 pce) kg
<b>Momentary</b>					
● Red	Black plastic	MP3-10R	1SFA611102R1001	10	0.016
	Chrome plastic	MP3-20R	1SFA611102R2001	10	0.016
	Chrome metal	MP3-30R	1SFA611102R3001	10	0.026
● Green	Black plastic	MP3-10G	1SFA611102R1002	10	0.016
	Chrome plastic	MP3-20G	1SFA611102R2002	10	0.016
	Chrome metal	MP3-30G	1SFA611102R3002	10	0.026
● Yellow	Black plastic	MP3-10Y	1SFA611102R1003	10	0.016
	Chrome plastic	MP3-20Y	1SFA611102R2003	10	0.016
	Chrome metal	MP3-30Y	1SFA611102R3003	10	0.026
● Blue	Black plastic	MP3-10L	1SFA611102R1004	10	0.016
	Chrome plastic	MP3-20L	1SFA611102R2004	10	0.016
	Chrome metal	MP3-30L	1SFA611102R3004	10	0.026
○ White	Black plastic	MP3-10W	1SFA611102R1005	10	0.016
	Chrome plastic	MP3-20W	1SFA611102R2005	10	0.016
	Chrome metal	MP3-30W	1SFA611102R3005	10	0.026
● Black	Black plastic	MP3-10B	1SFA611102R1006	10	0.016
	Chrome plastic	MP3-20B	1SFA611102R2006	10	0.016
	Chrome metal	MP3-30B	1SFA611102R3006	10	0.026
○ Clear	Black plastic	MP3-10C	1SFA611102R1008	10	0.016
	Chrome metal	MP3-30C	1SFA611102R3008	10	0.026
<b>Maintained</b>					
● Red	Black plastic	MP4-10R	1SFA611103R1001	10	0.016
	Chrome plastic	MP4-20R	1SFA611103R2001	10	0.016
● Green	Black plastic	MP4-10G	1SFA611103R1002	10	0.016
	Chrome plastic	MP4-20G	1SFA611103R2002	10	0.016
● Yellow	Black plastic	MP4-10Y	1SFA611103R1003	10	0.016
	Chrome plastic	MP4-20Y	1SFA611103R2003	10	0.016
● Blue	Black plastic	MP4-10L	1SFA611103R1004	10	0.016
	Chrome plastic	MP4-20L	1SFA611103R2004	10	0.016
○ White	Black plastic	MP4-10W	1SFA611103R1005	10	0.016
● Black	Black plastic	MP4-10B	1SFA611103R1006	10	0.016
	Chrome metal	MP4-30B	1SFA611103R3006	10	0.026
○ Clear	Black plastic	MP4-10C	1SFA611103R1008	10	0.016



MP3, MP4  
Dimensions (mm, inches)

# Modular plastic range

## Illuminated flush pushbuttons



MP1-31G

1SFC151048V0001



MP1-11Y

1SFC151042V0001



MP1-21L

1SFC151045V0001



MP2-31R

1SFC151046V0001



MP2-11L

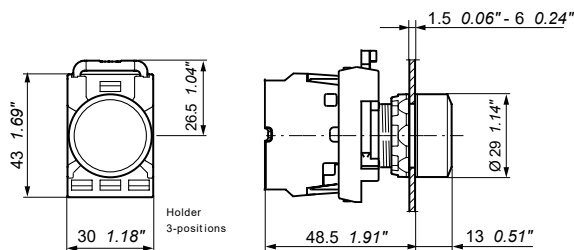
1SFC151040V0001



MP2-11C

1SFC151046V0001

Operator	Bezel	Type	Order code	Pkg qty	Weight (1 pce) kg
<b>Momentary</b>					
● Red	Black plastic	MP1-11R	1SFA611100R1101	10	0.016
	Chrome plastic	MP1-21R	1SFA611100R2101	10	0.016
	Chrome metal	MP1-31R	1SFA611100R3101	10	0.026
● Green	Black plastic	MP1-11G	1SFA611100R1102	10	0.016
	Chrome plastic	MP1-21G	1SFA611100R2102	10	0.016
	Chrome metal	MP1-31G	1SFA611100R3102	10	0.026
● Yellow	Black plastic	MP1-11Y	1SFA611100R1103	10	0.016
	Chrome plastic	MP1-21Y	1SFA611100R2103	10	0.016
	Chrome metal	MP1-31Y	1SFA611100R3103	10	0.026
● Blue	Black plastic	MP1-11L	1SFA611100R1104	10	0.016
	Chrome plastic	MP1-21L	1SFA611100R2104	10	0.016
	Chrome metal	MP1-31L	1SFA611100R3104	10	0.026
○ White	Black plastic	MP1-11W	1SFA611100R1105	10	0.016
	Chrome plastic	MP1-21W	1SFA611100R2105	10	0.016
	Chrome metal	MP1-31W	1SFA611100R3105	10	0.026
○ Clear	Black plastic	MP1-11C	1SFA611100R1108	10	0.016
	Chrome plastic	MP1-21C	1SFA611100R2108	10	0.016
	Chrome metal	MP1-31C	1SFA611100R3108	10	0.026
<b>Maintained</b>					
● Red	Black plastic	MP2-11R	1SFA611101R1101	10	0.016
	Chrome plastic	MP2-21R	1SFA611101R2101	10	0.016
	Chrome metal	MP2-31R	1SFA611101R3101	10	0.026
● Green	Black plastic	MP2-11G	1SFA611101R1102	10	0.016
	Chrome plastic	MP2-21G	1SFA611101R2102	10	0.016
	Chrome metal	MP2-31G	1SFA611101R3102	10	0.026
● Yellow	Black plastic	MP2-11Y	1SFA611101R1103	10	0.016
	Chrome plastic	MP2-21Y	1SFA611101R2103	10	0.016
	Chrome metal	MP2-31Y	1SFA611101R3103	10	0.026
● Blue	Black plastic	MP2-11L	1SFA611101R1104	10	0.016
	Chrome plastic	MP2-21L	1SFA611101R2104	10	0.016
	Chrome metal	MP2-31L	1SFA611101R3104	10	0.026
○ White	Black plastic	MP2-11W	1SFA611101R1105	10	0.016
	Chrome plastic	MP2-21W	1SFA611101R2105	10	0.016
	Chrome metal	MP2-31W	1SFA611101R3105	10	0.026
○ Clear	Black plastic	MP2-11C	1SFA611101R1108	10	0.016
	Chrome plastic	MP2-21C	1SFA611101R2108	10	0.016
	Chrome metal	MP2-31C	1SFA611101R3108	10	0.026



MP1, MP2

Dimensions (mm, inches)

# Modular plastic range

## Illuminated extended pushbuttons



MP3-11R

1SFC151065V0001



MP3-31G

1SFC151062V0001



MP3-11W

1SFC151072V0001



MP4-11Y

1SFC151063V0001



MP4-31L

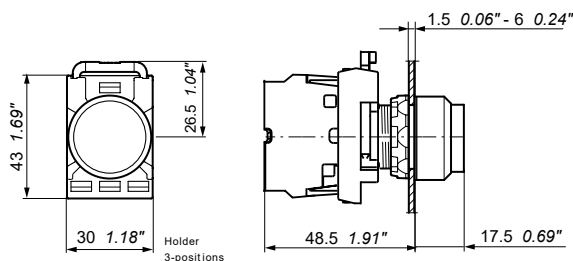
1SFC151061V0001



MP4-21C

1SFC151067V0001

Operator	Bezel	Type	Order code	Pkg qty	Weight (1 pce) kg
<b>Momentary</b>					
● Red	Black plastic	MP3-11R	1SFA611102R1101	10	0.016
	Chrome plastic	MP3-21R	1SFA611102R2101	10	0.016
	Chrome metal	MP3-31R	1SFA611102R3101	10	0.026
● Green	Black plastic	MP3-11G	1SFA611102R1102	10	0.016
	Chrome plastic	MP3-21G	1SFA611102R2102	10	0.016
	Chrome metal	MP3-31G	1SFA611102R3102	10	0.026
● Yellow	Black plastic	MP3-11Y	1SFA611102R1103	10	0.016
	Chrome plastic	MP3-21Y	1SFA611102R2103	10	0.016
	Chrome metal	MP3-31Y	1SFA611102R3103	10	0.026
● Blue	Black plastic	MP3-11L	1SFA611102R1104	10	0.016
	Chrome plastic	MP3-21L	1SFA611102R2104	10	0.016
	Chrome metal	MP3-31L	1SFA611102R3104	10	0.026
○ White	Black plastic	MP3-11W	1SFA611102R1105	10	0.016
	Chrome plastic	MP3-21W	1SFA611102R2105	10	0.016
	Chrome metal	MP3-31W	1SFA611102R3105	10	0.026
○ Clear	Black plastic	MP3-11C	1SFA611102R1108	10	0.016
	Chrome plastic	MP3-21C	1SFA611102R2108	10	0.016
	Chrome metal	MP3-31C	1SFA611102R3108	10	0.026
<b>Maintained</b>					
● Red	Black plastic	MP4-11R	1SFA611103R1101	10	0.016
	Chrome plastic	MP4-21R	1SFA611103R2101	10	0.016
	Chrome metal	MP4-31R	1SFA611103R3101	10	0.026
● Green	Black plastic	MP4-11G	1SFA611103R1102	10	0.016
	Chrome plastic	MP4-21G	1SFA611103R2102	10	0.016
	Chrome metal	MP4-31G	1SFA611103R3102	10	0.026
● Yellow	Black plastic	MP4-11Y	1SFA611103R1103	10	0.016
	Chrome plastic	MP4-21Y	1SFA611103R2103	10	0.016
● Blue	Black plastic	MP4-11L	1SFA611103R1104	10	0.016
	Chrome plastic	MP4-21L	1SFA611103R2104	10	0.016
	Chrome metal	MP4-31L	1SFA611103R3104	10	0.026
○ White	Black plastic	MP4-11W	1SFA611103R1105	10	0.016
	Chrome plastic	MP4-21W	1SFA611103R2105	10	0.016
○ Clear	Black plastic	MP4-11C	1SFA611103R1108	10	0.016
	Chrome plastic	MP4-21C	1SFA611103R2108	10	0.016
	Chrome metal	MP4-31C	1SFA611103R3108	10	0.026



MP3, MP4  
Dimensions (mm, inches)

# Modular plastic range

## Non-illuminated double pushbuttons momentary



MPD1-11B

1SFC151050V0001



MPD5-11B

1SFC151051V0001



MPD13-11B

1SFC151056V0001



MPD15-11B

1SFC151058V0001

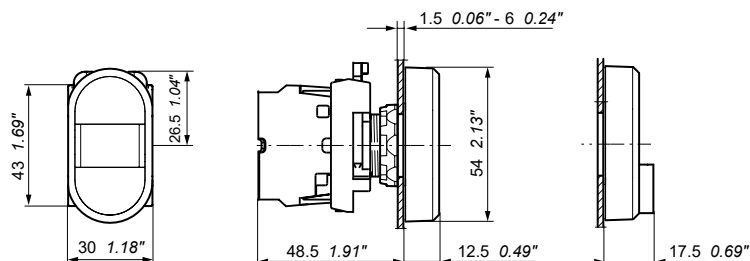


MA1-8139

1SFC151341F0001

Operator upper button	Operator lower button	Type	Order code	Pkg qty	Weight (1 pce) kg
<b>Flush pushbutton</b>					
● Green	● Red				
No text	No text	MPD1-11B	1SFA611130R1106	10	0.025
I	0	MPD2-11B	1SFA611131R1106	10	0.025
ON	OFF	MPD3-11B	1SFA611132R1106	10	0.025
START	STOP	MPD4-11B	1SFA611133R1106	10	0.025
○ White	● Black				
No text	No text	MPD5-11B	1SFA611134R1106	10	0.025
I	0	MPD6-11B	1SFA611135R1106	10	0.025
ON	OFF	MPD7-11B	1SFA611136R1106	10	0.025
START	STOP	MPD8-11B	1SFA611137R1106	10	0.025
● Black	● Red				
No text	No text	MPD9-11B	1SFA611138R1106	10	0.025
<b>Extended lower pushbutton</b>					
● Green	● Red				
No text	No text	MPD12-11B	1SFA611141R1106	10	0.025
I	0	MPD13-11B	1SFA611142R1106	10	0.025
ON	OFF	MPD14-11B	1SFA611143R1106	10	0.025
START	STOP	MPD15-11B	1SFA611144R1106	10	0.025
○ White	● Black				
No text	No text	MPD16-11B	1SFA611145R1106	10	0.025
I	0	MPD17-11B	1SFA611146R1106	10	0.025
ON	OFF	MPD18-11B	1SFA611147R1106	10	0.025
START	STOP	MPD19-11B	1SFA611148R1106	10	0.025
<b>Accessories</b>					
<b>Legend plate holder</b>					
2-position		MA1-8139	1SFA611920R8139	10	0.030

Note: Insert not included. Suitable for insert size 27x 15mm. Refer to Legend plates section.



MPD  
Dimensions (mm, inches)

# Modular plastic range

## Illuminated double pushbuttons momentary - Flushlower button



MPD4-11C



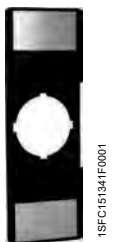
MPD5-11C



MPD2-11R



MDP3-11G



MA1-8139

Operator upper button	Operator lower button	Type	Order code	Pkg qty	Weight (1 pce) kg
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### Clear light indicator

● Green	● Red				
No text	No text	MPD1-11C	1SFA611130R1108	10	0.025
I	0	MPD2-11C	1SFA611131R1108	10	0.025
ON	OFF	MPD3-11C	1SFA611132R1108	10	0.025
START	STOP	MPD4-11C	1SFA611133R1108	10	0.025
○ White	● Black				
No text	No text	MPD5-11C	1SFA611134R1108	10	0.025
I	0	MPD6-11C	1SFA611135R1108	10	0.025
START	STOP	MPD8-11C	1SFA611137R1108	10	0.025

### Red light indicator

● Green	● Red				
No text	No text	MPD1-11R	1SFA611130R1101	10	0.025
I	0	MPD2-11R	1SFA611131R1101	10	0.025
ON	OFF	MPD3-11R	1SFA611132R1101	10	0.025
START	STOP	MPD4-11R	1SFA611133R1101	10	0.025
○ White	● Black				
No text	No text	MPD5-11R	1SFA611134R1101	10	0.025

### Green light indicator

● Green	● Red				
No text	No text	MPD1-11G	1SFA611130R1102	10	0.025
I	0	MPD2-11G	1SFA611131R1102	10	0.025
ON	OFF	MPD3-11G	1SFA611132R1102	10	0.025
START	STOP	MPD4-11G	1SFA611133R1102	10	0.025
○ White	● Black				
No text	No text	MPD5-11G	1SFA611134R1102	10	0.025
I	0	MPD6-11G	1SFA611135R1102	10	0.025
ON	OFF	MPD7-11G	1SFA611136R1102	10	0.025
START	STOP	MPD8-11G	1SFA611137R1102	10	0.025

### Yellow light indicator

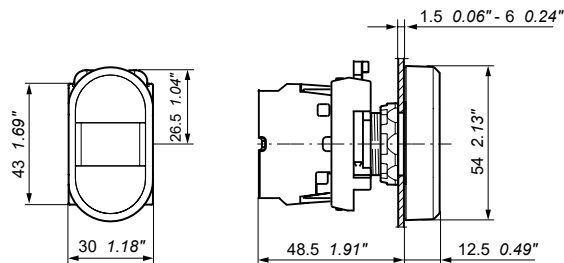
● Green	● Red				
No text	No text	MPD1-11Y	1SFA611130R1103	10	0.025
I	0	MPD2-11Y	1SFA611131R1103	10	0.025
ON	OFF	MPD3-11Y	1SFA611132R1103	10	0.025
START	STOP	MPD4-11Y	1SFA611133R1103	10	0.025
○ White	● Black				
No text	No text	MPD5-11Y	1SFA611134R1103	10	0.025

### Accessories

#### Legend plate holder

2-position	MA1-8139	1SFA611920R8139	10	0.030
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Note: Insert not included. Suitable for insert size 27x 15mm. Refer to Legend plates section.



MPD  
Dimensions (mm, inches)

# Modular plastic range

## Illuminated double pushbuttons momentary - Extended lower button



MPD12-11C



MPD14-11C



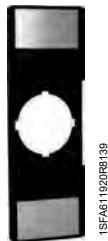
MDP13-11R



MDP14-11G



MDP12-11Y



MA1-8139

Operator upper button	Operator lower button	Type	Order code	Pkg qty	Weight (1 pce) kg
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### Clear light indicator

● Green	● Red				
No text	No text	MPD12-11C	1SFA611141R1108	10	0.025
I	0	MPD13-11C	1SFA611142R1108	10	0.025
ON	OFF	MPD14-11C	1SFA611143R1108	10	0.025
START	STOP	MPD15-11C	1SFA611144R1108	10	0.025
○ White	● Black				
No text	No text	MPD16-11C	1SFA611145R1108	10	0.025
I	0	MPD17-11C	1SFA611146R1108	10	0.025
START	STOP	MPD19-11C	1SFA611148R1108	10	0.025

### Red light indicator

● Green	● Red				
No text	No text	MPD12-11R	1SFA611141R1101	10	0.025
I	0	MPD13-11R	1SFA611142R1101	10	0.025
ON	OFF	MPD14-11R	1SFA611143R1101	10	0.025
START	STOP	MPD15-11R	1SFA611144R1101	10	0.025
○ White	● Black				
No text	No text	MPD16-11R	1SFA611145R1101	10	0.025

### Green light indicator

● Green	● Red				
No text	No text	MPD12-11G	1SFA611141R1102	10	0.025
I	0	MPD13-11G	1SFA611142R1102	10	0.025
ON	OFF	MPD14-11G	1SFA611143R1102	10	0.025
START	STOP	MPD15-11G	1SFA611144R1102	10	0.025
○ White	● Black				
No text	No text	MPD16-11G	1SFA611145R1102	10	0.025
I	0	MPD17-11G	1SFA611146R1102	10	0.025
START	STOP	MPD19-11G	1SFA611148R1102	10	0.025

### Yellow light indicator

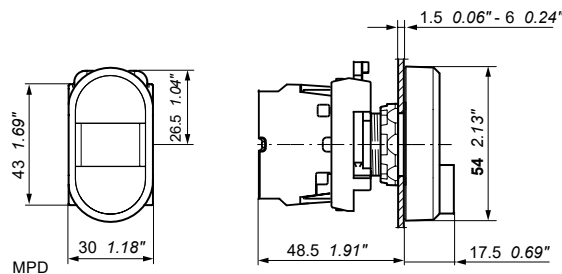
● Green	● Red				
No text	No text	MPD12-11Y	1SFA611141R1103	10	0.025
I	0	MPD13-11Y	1SFA611142R1103	10	0.025
ON	OFF	MPD14-11Y	1SFA611143R1103	10	0.025
START	STOP	MPD15-11Y	1SFA611144R1103	10	0.025
○ White	● Black				
No text	No text	MPD16-11Y	1SFA611145R1103	10	0.025
I	0	MPD17-11Y	1SFA611146R1103	10	0.025

### Accessories

#### Legend plate holder

2-position	MA1-8139	1SFA611920R8139	1	0.030
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Note: Insert not included. Suitable for insert size 27x 15mm. Refer to Legend plates section.



Dimensions (mm, inches)

# Modular plastic range

## Mushroom pushbuttons momentary



MPM1-10G

1SFC151007V0001



MPM1-10B

1SFC151010V0001



MPM2-10R

1SFC151073V0001



MPM2-10Y

1SFC151074V0001



MPM1-11G

1SFC151173V0001



MPM2-11R

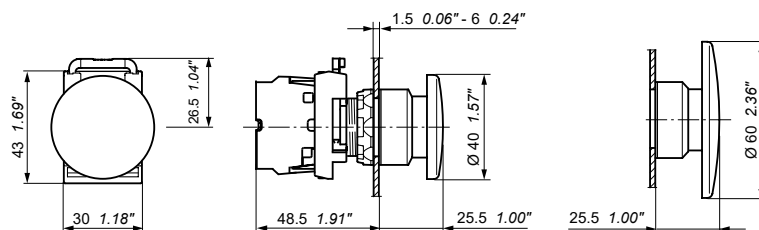
1SFC151155V0001

### Non illuminated

Operator	Type	Order code	Pkg qty	Weight (1 pce) kg
<b>Ø 40 mm</b>				
● Red	MPM1-10R	1SFA611124R1001	10	0.018
● Green	MPM1-10G	1SFA611124R1002	10	0.018
● Yellow	MPM1-10Y	1SFA611124R1003	10	0.018
● Black	MPM1-10B	1SFA611124R1006	10	0.018
<b>Ø 60 mm</b>				
● Red	MPM2-10R	1SFA611125R1001	10	0.020
● Yellow	MPM2-10Y	1SFA611125R1003	10	0.020
● Black	MPM2-10B	1SFA611125R1006	10	0.020

### Illuminated

Operator	Type	Order code	Pkg qty	Weight (1 pce) kg
<b>Ø 40 mm</b>				
● Red	MPM1-11R	1SFA611124R1101	10	0.018
● Green	MPM1-11G	1SFA611124R1102	10	0.018
● Yellow	MPM1-11Y	1SFA611124R1103	10	0.018
<b>Ø 60 mm</b>				
● Red	MPM2-11R	1SFA611125R1101	10	0.020
● Yellow	MPM2-11Y	1SFA611125R1103	10	0.020

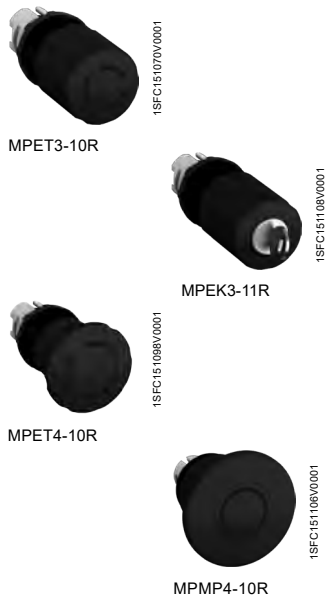


MPM1, MPM2  
Dimensions (mm, inches)



# Modular plastic range

## Emergency stop pushbuttons

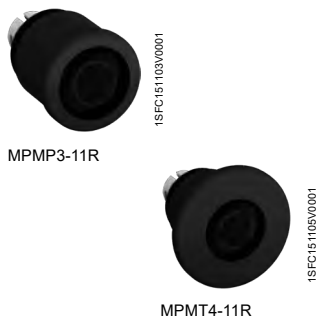


### Non illuminated

The emergency stops pushbuttons conform to the standard EN/IEC60947-5-5, Safety of machinery EN/ISO 13850 and to Machinery directive 2006/42/ EC.

Operator	Releasemethod	Type	Order code	Pkg qty	Weight (1 pce) kg
<b>Ø 30 mm</b>					
● Red	Twist release	MPET3-10R	1SFA611520R1001	1	0.036
● Red	Pull release	MPEP3-10R	1SFA611521R1001	1	0.036
● Red	Keycode 455	MPEK3-11R	1SFA611522R1101	1	0.065
● Red	Keycode 421	MPEK3-12R	1SFA611522R1201	1	0.065
● Red	Keycode 3433-E	MPEK3-13R	1SFA611522R1301	1	0.065
<b>Ø 40 mm</b>					
● Red	Twist release	MPET4-10R	1SFA611523R1001	1	0.036
● Red	Pull release	MPEP4-10R	1SFA611524R1001	1	0.036
● Red	Keycode 455	MPEK4-11R	1SFA611525R1101	1	0.065
● Red	Keycode 421	MPEK4-12R	1SFA611525R1201	1	0.065
● Red	Keycode 3433-E	MPEK4-13R	1SFA611525R1301	1	0.065
<b>Ø 60 mm</b>					
● Red	Twist release	MPMT4-10R	1SFA611513R1001	1	0.048
● Red	Pull release	MPMP4-10R	1SFA611514R1001	1	0.048

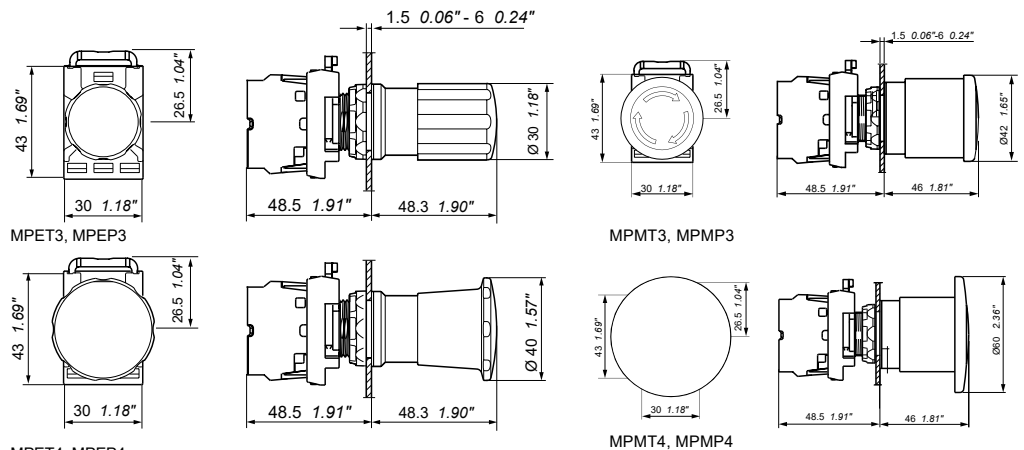
Note: Micro switch block MCBL-01 are not direct opening and does not fulfill IEC60947-5-5 for emergency stop devices.



### Illuminated

Operator	Releasemethod	Type	Order code	Pkg qty	Weight (1 pce) kg
<b>Ø 40 mm</b>					
● Red	Twist release	MPMT3-11R	1SFA611510R1101	1	0.041
● Red	Pull release	MPMP3-11R	1SFA611511R1101	1	0.041
<b>Ø 60 mm</b>					
● Red	Twist release	MPMT4-11R	1SFA611513R1101	1	0.048
● Red	Pull release	MPMP4-11R	1SFA611514R1101	1	0.048

Note: Micro switch block MCBL-01 are not direct opening and does not fulfill IEC60947-5-5 for emergency stop devices.



Dimensions (mm, inches)

# Modular plastic range

## Machinestop pushbuttons



MPET3-10B

1SFC151094V0001



MPET4-10B

1SFC151096V0001

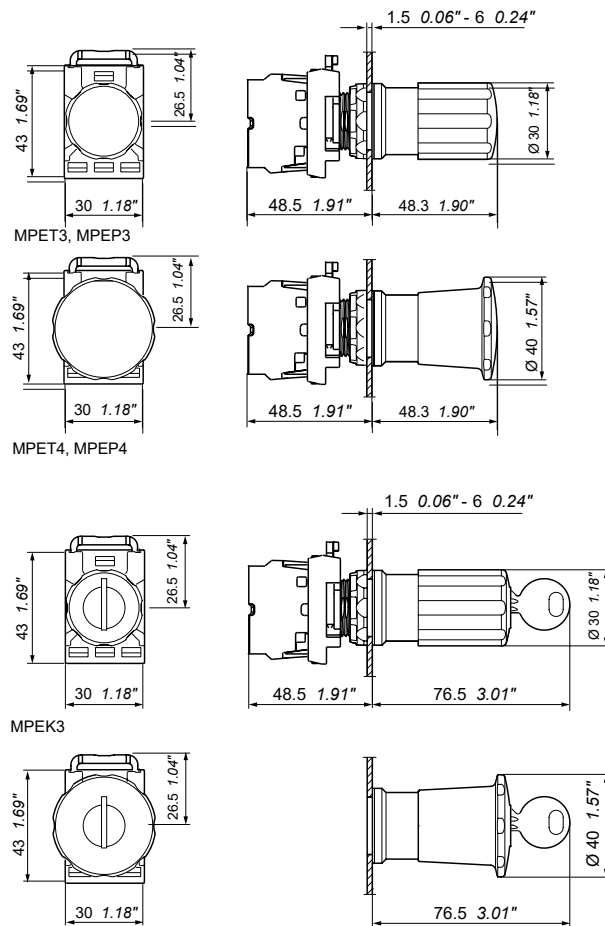


MPEK4-11B

1SFC151110V0001

### Non illuminated

Operator	Releasemethod	Type	Order code	Pkg qty	Weight (1 pce) kg
<b>Ø 30 mm</b>					
● Black	Twist release	MPET3-10B	1SFA611520R1006	1	0.036
● Black	Pull release	MPEP3-10B	1SFA611521R1006	1	0.036
● Black	Key code 455	MPEK3-11B	1SFA611522R1106	1	0.065
<b>Ø 40 mm</b>					
● Black	Twist release	MPET4-10B	1SFA611523R1006	1	0.036
● Black	Pull release	MPEP4-10B	1SFA611524R1006	1	0.036
● Black	Key code 455	MPEK4-11B	1SFA611525R1106	1	0.065



Dimensions (mm, inches)

## Modular plastic range Heavyduty pushbuttons



KP6-40R

1SFC151335/0001



KP6-40G

1SFC151336/0001



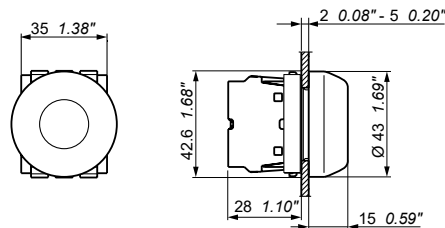
KP6-40B

1SFC151337/0001

### Description

For 30 mm mounting hole, 3-position holder included

Color	Type	Order code	Pkg qty	Weight (1 pce) kg
● Red	KP6-40R	1SFA616105R4001	1	0.028
● Green	KP6-40G	1SFA616105R4002	1	0.028
● Black	KP6-40B	1SFA616105R4006	1	0.028



KP6

## Modular plastic range Pilot lights



ML1-100R

1SFC151134/0001



ML1-100G

1SFC151135/0001



ML1-100Y

1SFC151136/0001



ML1-100C

1SFC151138/0001



ML1-100L

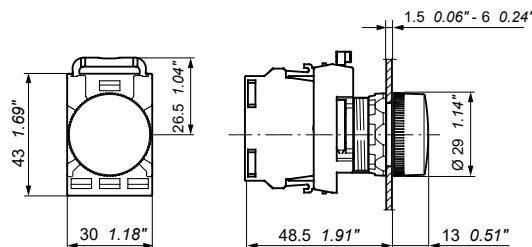
1SFC151137/0001

Color	Type	Order code	Pkg qty	Weight (1 pce) kg
● Red	ML1-100R	1SFA611400R1001	10	0.018
● Green	ML1-100G	1SFA611400R1002	10	0.018
● Yellow	ML1-100Y	1SFA611400R1003	10	0.018
● Blue	ML1-100L	1SFA611400R1004	10	0.018
○ White	ML1-100W	1SFA611400R1005	10	0.018
○ Clear	ML1-100C	1SFA611400R1008	10	0.018

### Lens

Light diffusing lens	Order code	Pkg qty	Weight (1 pce) kg
KA1-8005	1SFA616920R8005	10	0.001

Note: Light diffusing lens is used to improve spread of illumination from LED blocks. Cannot be used together with text cap.



ML1

Dimensions (mm, inches)

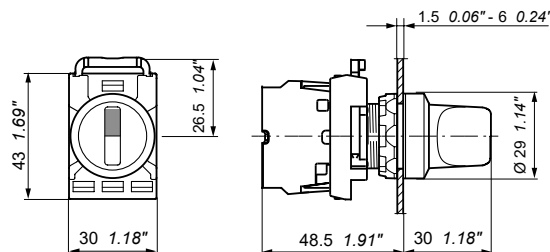
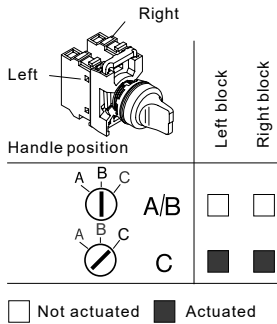
# Modular plastic range

## Non-illuminated selector switches - 2-position - Short handle



Operating principle	Color	Bezel	Type	Order code	Pkg qty	Weight (1 pce) kg
	● Red	Black plastic	M2SS1-10R	1SFA611200R1001	10	0.015
		Chrome plastic	M2SS1-20R	1SFA611200R2001	10	0.015
		Chrome metal	M2SS1-30R	1SFA611200R3001	10	0.024
	● Black	Black plastic	M2SS1-10B	1SFA611200R1006	10	0.015
		Chrome plastic	M2SS1-20B	1SFA611200R2006	10	0.015
		Chrome metal	M2SS1-30B	1SFA611200R3006	10	0.024
	● Grey	Black plastic	M2SS1-10U	1SFA611200R1007	10	0.015
		Chrome plastic	M2SS1-20U	1SFA611200R2007	10	0.015
	● Red	Black plastic	M2SS2-10R	1SFA611201R1001	10	0.015
		Chrome plastic	M2SS2-20R	1SFA611201R2001	10	0.015
		Chrome metal	M2SS2-30R	1SFA611201R3001	10	0.024
	● Black	Black plastic	M2SS2-10B	1SFA611201R1006	10	0.015
		Chrome plastic	M2SS2-20B	1SFA611201R2006	10	0.015
		Chrome metal	M2SS2-30B	1SFA611201R3006	10	0.024
	● Grey	Black plastic	M2SS2-10U	1SFA611201R1007	10	0.015
		Chrome plastic	M2SS2-20U	1SFA611201R2007	10	0.015
		Chrome metal	M2SS2-30U	1SFA611201R3007	10	0.024
	● Red	Black plastic	M2SS3-10R	1SFA611202R1001	10	0.015
		Chrome plastic	M2SS3-20R	1SFA611202R2001	10	0.015
		Chrome metal	M2SS3-30R	1SFA611202R3001	10	0.024
	● Black	Black plastic	M2SS3-10B	1SFA611202R1006	10	0.015
		Chrome plastic	M2SS3-20B	1SFA611202R2006	10	0.015
		Chrome metal	M2SS3-30B	1SFA611202R3006	10	0.024
	● Grey	Black plastic	M2SS3-10U	1SFA611202R1007	10	0.015
		Chrome plastic	M2SS3-20U	1SFA611202R2007	10	0.015

### Contacts actuated



M2SS  
Dimensions (mm, inches)

# Modular plastic range

## Non-illuminated selector switches - 2-position - Long handle



M2SS4-10R

1SFC151319/0001



M2SS4-30B

1SFC151220/0001

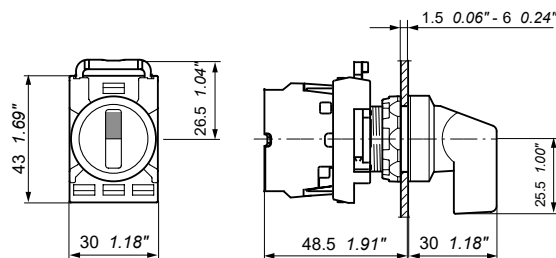
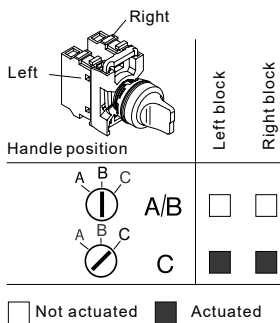


M2SS4-10U

1SFC151326/0001

Operating principle	Color	Bezel	Type	Order code	Pkg qty	Weight (1 pce) kg
	● Red	Black plastic	M2SS4-10R	1SFA611203R1001	10	0.018
		Chrome plastic	M2SS4-20R	1SFA611203R2001	10	0.018
	● Black	Black plastic	M2SS4-10B	1SFA611203R1006	10	0.018
		Chrome plastic	M2SS4-20B	1SFA611203R2006	10	0.018
	● Grey	Chrome metal	M2SS4-30B	1SFA611203R3006	10	0.027
		Black plastic	M2SS4-10U	1SFA611203R1007	10	0.018
	● Red	Black plastic	M2SS5-10R	1SFA611204R1001	10	0.018
		Chrome plastic	M2SS5-20R	1SFA611204R2001	10	0.018
		Chrome metal	M2SS5-30R	1SFA611204R3001	10	0.027
	● Black	Black plastic	M2SS5-10B	1SFA611204R1006	10	0.018
		Chrome plastic	M2SS5-20B	1SFA611204R2006	10	0.018
		Chrome metal	M2SS5-30B	1SFA611204R3006	10	0.027
● Grey	Black plastic	M2SS5-10U	1SFA611204R1007	10	0.018	
	Chrome plastic	M2SS5-20U	1SFA611204R2007	10	0.018	
		● Red	Black plastic	M2SS6-10R	1SFA611205R1001	10
Black plastic			M2SS6-10B	1SFA611205R1006	10	0.018
● Black		Chrome plastic	M2SS6-20B	1SFA611205R2006	10	0.018
		Chrome metal	M2SS6-30B	1SFA611205R3006	10	0.027
● Grey		Black plastic	M2SS6-10U	1SFA611205R1007	10	0.018
		Chrome plastic	M2SS6-20U	1SFA611205R2007	10	0.018

### Contacts actuated



M2SS  
Dimensions (mm, inches)

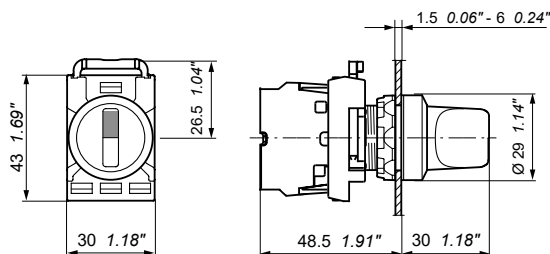
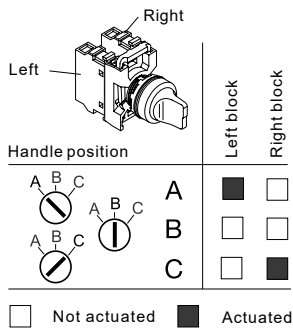
# Modular plastic range

## Non-illuminated selector switches - 3-position - Short handle



Operating principle	Color	Bezel	Type	Order code	Pkg qty	Weight (1 pce) kg
	● Red	Black plastic	M3SS1-10R	1SFA611210R1001	10	0.015
		Chrome plastic	M3SS1-20R	1SFA611210R2001	10	0.015
		Chrome metal	M3SS1-30R	1SFA611210R3001	10	0.024
	● Black	Black plastic	M3SS1-10B	1SFA611210R1006	10	0.015
		Chrome plastic	M3SS1-20B	1SFA611210R2006	10	0.015
		Chrome metal	M3SS1-30B	1SFA611210R3006	10	0.024
	● Grey	Black plastic	M3SS1-10U	1SFA611210R1007	10	0.015
		Chrome plastic	M3SS1-20U	1SFA611210R2007	10	0.015
		Chrome metal	M3SS1-30U	1SFA611210R3007	10	0.024
	● Red	Black plastic	M3SS2-10R	1SFA611211R1001	10	0.015
		Chrome plastic	M3SS2-20R	1SFA611211R2001	10	0.015
		Chrome metal	M3SS2-30R	1SFA611211R3001	10	0.024
	● Black	Black plastic	M3SS2-10B	1SFA611211R1006	10	0.015
		Chrome plastic	M3SS2-20B	1SFA611211R2006	10	0.015
		Chrome metal	M3SS2-30B	1SFA611211R3006	10	0.024
	● Grey	Black plastic	M3SS2-10U	1SFA611211R1007	10	0.015
		Chrome plastic	M3SS2-20U	1SFA611211R2007	10	0.015
		Chrome metal	M3SS2-30U	1SFA611211R3007	10	0.024
	● Red	Black plastic	M3SS3-10R	1SFA611212R1001	10	0.015
		Chrome plastic	M3SS3-20R	1SFA611212R2001	10	0.015
		Chrome metal	M3SS3-30R	1SFA611212R3001	10	0.024
	● Black	Black plastic	M3SS3-10B	1SFA611212R1006	10	0.015
		Chrome plastic	M3SS3-20B	1SFA611212R2006	10	0.015
		Chrome metal	M3SS3-30B	1SFA611212R3006	10	0.024
	● Grey	Black plastic	M3SS3-10U	1SFA611212R1007	10	0.015
		Chrome plastic	M3SS3-20U	1SFA611212R2007	10	0.015
		Chrome metal	M3SS3-30U	1SFA611212R3007	10	0.024
	● Red	Black plastic	M3SS7-10R	1SFA611216R1001	10	0.015
		Chrome plastic	M3SS7-20R	1SFA611216R2001	10	0.015
		Chrome metal	M3SS7-30R	1SFA611216R3001	10	0.024
	● Black	Black plastic	M3SS7-10B	1SFA611216R1006	10	0.015
		Chrome plastic	M3SS7-20B	1SFA611216R2006	10	0.015
		Chrome metal	M3SS7-30B	1SFA611216R3006	10	0.024
	● Grey	Black plastic	M3SS7-10U	1SFA611216R1007	10	0.015
		Chrome plastic	M3SS7-20U	1SFA611216R2007	10	0.015
		Chrome metal	M3SS7-30U	1SFA611216R3007	10	0.024

**Contacts actuated**



M3SS  
Dimensions (mm, inches)

# Modular plastic range

## Non-illuminated selector switches - 3-position - Long handle



M3SS4-10R

1SFC151319V0001



M3SS5-30B

1SFC151220V0001

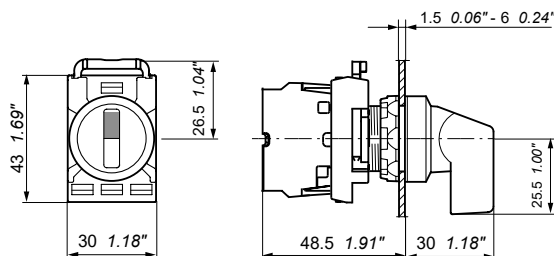
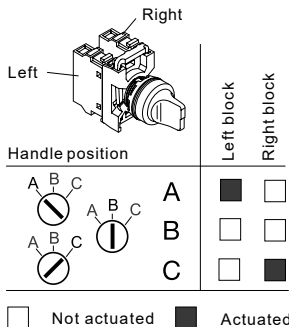


M3SS6-10U

1SFC151326V0001

Operating principle	Color	Bezel	Type	Order code	Pkg qty	Weight (1 pce) kg
	● Red	Black plastic	M3SS4-10R	1SFA611213R1001	10	0.018
		Chrome plastic	M3SS4-20R	1SFA611213R2001	10	0.018
	● Black	Black plastic	M3SS4-10B	1SFA611213R1006	10	0.018
		Chrome plastic	M3SS4-20B	1SFA611213R2006	10	0.018
	● Grey	Black plastic	M3SS4-10U	1SFA611213R1007	10	0.018
		Chrome plastic	M3SS4-20U	1SFA611213R2007	10	0.018
	● Red	Black plastic	M3SS5-10R	1SFA611214R1001	10	0.018
		Chrome metal	M3SS5-30R	1SFA611214R3001	10	0.018
	● Black	Black plastic	M3SS5-10B	1SFA611214R1006	10	0.018
		Chrome plastic	M3SS5-20B	1SFA611214R2006	10	0.018
	● Grey	Chrome metal	M3SS5-30B	1SFA611214R3006	10	0.027
		Black plastic	M3SS5-10U	1SFA611214R1007	10	0.018
	● Red	Black plastic	M3SS6-10R	1SFA611215R1001	10	0.018
		● Black	Black plastic	M3SS6-10B	1SFA611215R1006	10
	● Grey	Chrome plastic	M3SS6-20B	1SFA611215R2006	10	0.018
		Chrome metal	M3SS6-30B	1SFA611215R3006	10	0.027
	● Grey	Black plastic	M3SS6-10U	1SFA611215R1007	10	0.018
		● Red	Black plastic	M3SS8-10R	1SFA611217R1001	10
	● Black	Black plastic	M3SS8-10B	1SFA611217R1006	10	0.018
		Chrome plastic	M3SS8-20B	1SFA611217R2006	10	0.018
	Chrome metal	M3SS8-30B	1SFA611217R3006	10	0.027	
	● Grey	Black plastic	M3SS8-10U	1SFA611217R1007	10	0.018

### Contacts actuated



M3SS

Dimensions (mm, inches)

# Modular plastic range

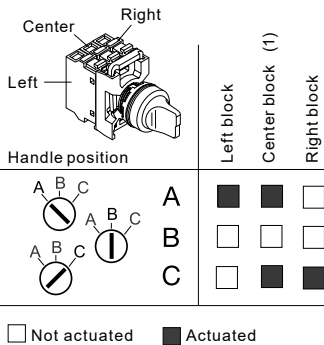
## Non-illuminated selector switches - 3-position - Short handle



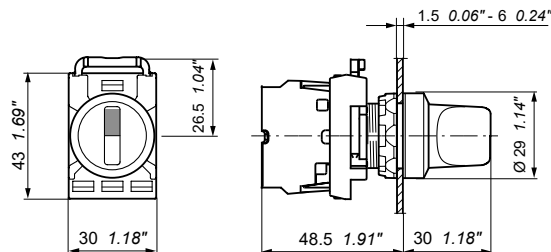
### Center block operating

Operating principle	Color	Bezel	Type	Order code	Pkg qty	Weight (1 pce) kg
	● Black	Black plastic	M3SSC1-10B	1SFA611250R1006	10	0.015
		Chrome metal	M3SSC1-30B	1SFA611250R3006	10	0.024
	● Black	Black plastic	M3SSC2-10B	1SFA611251R1006	10	0.015
		Chrome metal	M3SSC2-30B	1SFA611251R3006	10	0.024
	● Black	Black plastic	M3SSC3-10B	1SFA611252R1006	10	0.015
		Chrome metal	M3SSC3-30B	1SFA611252R3006	10	0.024
	● Black	Black plastic	M3SSC7-10B	1SFA611256R1006	10	0.015
		Chrome metal	M3SSC7-30B	1SFA611256R3006	10	0.024

### Contacts actuated



(1) To connect 3 separate circuits, one to each position ABC, use 1NO in left position and right position and 1NC in center position.



M3SSC  
Dimensions (mm, inches)

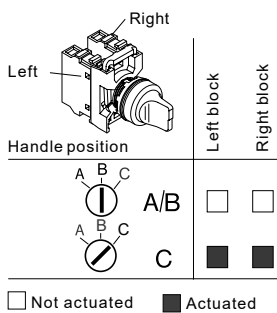


# Modular plastic range

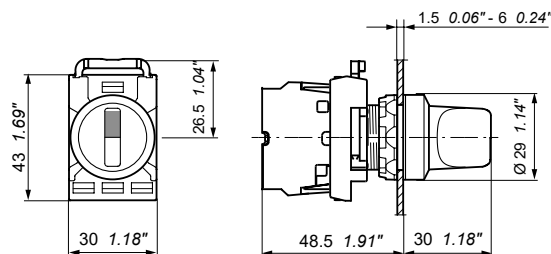
## Illuminated selector switches - 2-position - Short handle



**Contacts actuated**



Operating principle	Color	Bezel	Type	Order code	Pkg qty	Weight (1 pce) kg
●	Red	Black plastic	M2SS1-11R	1SFA611200R1101	10	0.015
		Chrome plastic	M2SS1-21R	1SFA611200R2101	10	0.015
		Chrome metal	M2SS1-31R	1SFA611200R3101	10	0.024
	Green	Black plastic	M2SS1-11G	1SFA611200R1102	10	0.015
		Chrome plastic	M2SS1-21G	1SFA611200R2102	10	0.015
		Chrome metal	M2SS1-31G	1SFA611200R3102	10	0.024
	Yellow	Black plastic	M2SS1-11Y	1SFA611200R1103	10	0.015
		Chrome plastic	M2SS1-21Y	1SFA611200R2103	10	0.015
		Chrome metal	M2SS1-31Y	1SFA611200R3103	10	0.024
●	Blue	Black plastic	M2SS1-11L	1SFA611200R1104	10	0.015
		Chrome plastic	M2SS1-21L	1SFA611200R2104	10	0.015
○	Clear	Black plastic	M2SS1-11C	1SFA611200R1108	10	0.015
		Chrome plastic	M2SS1-21C	1SFA611200R2108	10	0.015
		Chrome metal	M2SS1-31C	1SFA611200R3108	10	0.024
●	Red	Black plastic	M2SS2-11R	1SFA611201R1101	10	0.015
		Chrome plastic	M2SS2-21R	1SFA611201R2101	10	0.015
		Chrome metal	M2SS2-31R	1SFA611201R3101	10	0.024
	Green	Black plastic	M2SS2-11G	1SFA611201R1102	10	0.015
		Chrome plastic	M2SS2-21G	1SFA611201R2102	10	0.015
		Chrome metal	M2SS2-31G	1SFA611201R3102	10	0.024
	Yellow	Black plastic	M2SS2-11Y	1SFA611201R1103	10	0.015
		Chrome plastic	M2SS2-21Y	1SFA611201R2103	10	0.015
		Chrome metal	M2SS2-31Y	1SFA611201R3103	10	0.024
●	Blue	Black plastic	M2SS2-11L	1SFA611201R1104	10	0.015
		Chrome plastic	M2SS2-21L	1SFA611201R2104	10	0.015
		Chrome metal	M2SS2-31L	1SFA611201R3104	10	0.024
○	Clear	Black plastic	M2SS2-11C	1SFA611201R1108	10	0.015
		Chrome plastic	M2SS2-21C	1SFA611201R2108	10	0.015
		Chrome metal	M2SS2-31C	1SFA611201R3108	10	0.024
●	Red	Black plastic	M2SS3-11R	1SFA611202R1101	10	0.015
		Chrome plastic	M2SS3-21R	1SFA611202R2101	10	0.015
		Chrome metal	M2SS3-31R	1SFA611202R3101	10	0.024
	Green	Black plastic	M2SS3-11G	1SFA611202R1102	10	0.015
		Chrome plastic	M2SS3-21G	1SFA611202R2102	10	0.015
		Chrome metal	M2SS3-31G	1SFA611202R3102	10	0.024
	Yellow	Black plastic	M2SS3-11Y	1SFA611202R1103	10	0.015
		Chrome metal	M2SS3-31Y	1SFA611202R3103	10	0.024
		●	Blue	Black plastic	M2SS3-11L	1SFA611202R1104
Chrome plastic	M2SS3-21L			1SFA611202R2104	10	0.015
Chrome metal	M2SS3-31L			1SFA611202R3104	10	0.024
○	Clear	Black plastic	M2SS3-11C	1SFA611202R1108	10	0.015
		Chrome metal	M2SS3-31C	1SFA611202R3108	10	0.024



M2SS  
Dimensions (mm, inches)

# Modular plastic range

## Illuminated selector switches - 2-position - Long handle



M2SS4-11R

1SFC151220/0001



M2SS4-31G

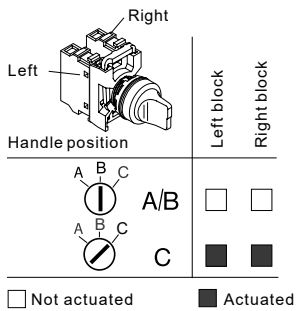
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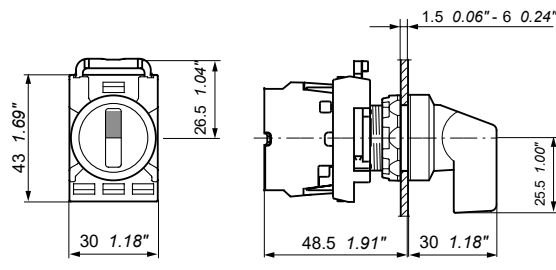
M2SS5-11Y

1SFC151323/0001

**Contacts actuated**



Operating principle	Color	Bezel	Type	Order code	Pkg qty	Weight (1 pce) kg
	● Red	Black plastic	M2SS4-11R	1SFA611203R1101	10	0.018
		Chrome plastic	M2SS4-21R	1SFA611203R2101	10	0.018
	● Green	Black plastic	M2SS4-11G	1SFA611203R1102	10	0.018
		Chrome plastic	M2SS4-21G	1SFA611203R2102	10	0.018
		Chrome metal	M2SS4-31G	1SFA611203R3102	10	0.027
	● Yellow	Black plastic	M2SS4-11Y	1SFA611203R1103	10	0.018
		Chrome plastic	M2SS4-21Y	1SFA611203R2103	10	0.018
	● Blue	Black plastic	M2SS4-11L	1SFA611203R1104	10	0.018
		Chrome plastic	M2SS4-21L	1SFA611203R2104	10	0.018
	○ Clear	Black plastic	M2SS4-11C	1SFA611203R1108	10	0.018
		Chrome plastic	M2SS4-21C	1SFA611203R2108	10	0.018
		Chrome metal	M2SS4-31C	1SFA611203R3108	10	0.027
	● Red	Black plastic	M2SS5-11R	1SFA611204R1101	10	0.018
		Chrome plastic	M2SS5-21R	1SFA611204R2101	10	0.018
		Chrome metal	M2SS5-31R	1SFA611204R3101	10	0.027
	● Green	Black plastic	M2SS5-11G	1SFA611204R1102	10	0.018
		Chrome plastic	M2SS5-21G	1SFA611204R2102	10	0.018
		Chrome metal	M2SS5-31G	1SFA611204R3102	10	0.027
	● Yellow	Black plastic	M2SS5-11Y	1SFA611204R1103	10	0.018
		Chrome plastic	M2SS5-21Y	1SFA611204R2103	10	0.018
		Chrome metal	M2SS5-31Y	1SFA611204R3103	10	0.027
	● Blue	Black plastic	M2SS5-11L	1SFA611204R1104	10	0.018
		Chrome plastic	M2SS5-21L	1SFA611204R2104	10	0.018
		Chrome metal	M2SS5-31L	1SFA611204R3104	10	0.027
○ Clear	Black plastic	M2SS5-11C	1SFA611204R1108	10	0.018	
	Chrome plastic	M2SS5-21C	1SFA611204R2108	10	0.018	
	Chrome metal	M2SS5-31C	1SFA611204R3108	10	0.027	
	● Red	Black plastic	M2SS6-11R	1SFA611205R1101	10	0.018
		Chrome plastic	M2SS6-21R	1SFA611205R2101	10	0.018
	● Green	Black plastic	M2SS6-11G	1SFA611205R1102	10	0.018
		Chrome plastic	M2SS6-21G	1SFA611205R2102	10	0.018
	● Yellow	Black plastic	M2SS6-11Y	1SFA611205R1103	10	0.018
		Chrome plastic	M2SS6-21Y	1SFA611205R2103	10	0.018
	● Blue	Black plastic	M2SS6-11L	1SFA611205R1104	10	0.018
		Chrome plastic	M2SS6-21L	1SFA611205R2104	10	0.018
	○ Clear	Black plastic	M2SS6-11C	1SFA611205R1108	10	0.018
		Chrome metal	M2SS6-31C	1SFA611205R3108	10	0.027



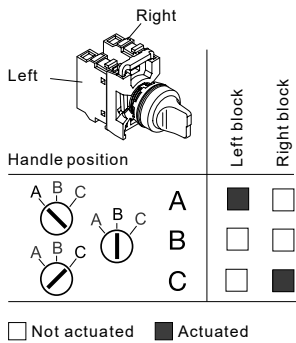
M2SS  
Dimensions (mm, inches)

# Modular plastic range

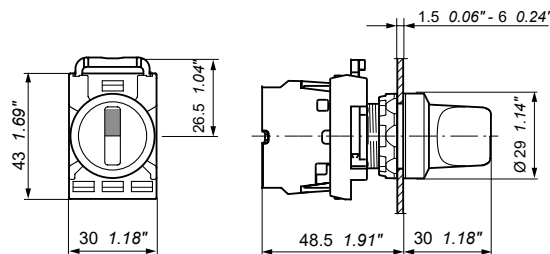
## Illuminated selector switches - 3-position - Short handle



### Contacts actuated



Operating principle	Color	Bezel	Type	Order code	Pkg qty	Weight (1 pce) kg
	● Red	Black plastic	M3SS1-11R	1SFA611210R1101	10	0.015
		Chrome plastic	M3SS1-21R	1SFA611210R2101	10	0.015
		Chrome metal	M3SS1-31R	1SFA611210R3101	10	0.024
	● Green	Black plastic	M3SS1-11G	1SFA611210R1102	10	0.015
		Chrome plastic	M3SS1-21G	1SFA611210R2102	10	0.015
		Chrome metal	M3SS1-31G	1SFA611210R3102	10	0.024
	● Yellow	Black plastic	M3SS1-11Y	1SFA611210R1103	10	0.015
		Chrome plastic	M3SS1-21Y	1SFA611210R2103	10	0.015
		Chrome metal	M3SS1-31Y	1SFA611210R3103	10	0.024
● Blue	Black plastic	M3SS1-11L	1SFA611210R1104	10	0.015	
	Chrome plastic	M3SS1-21L	1SFA611210R2104	10	0.015	
	Chrome metal	M3SS1-31L	1SFA611210R3104	10	0.024	
○ Clear	Black plastic	M3SS1-11C	1SFA611210R1108	10	0.015	
	Chrome plastic	M3SS1-21C	1SFA611210R2108	10	0.015	
	Chrome metal	M3SS1-31C	1SFA611210R3108	10	0.024	
	● Red	Black plastic	M3SS2-11R	1SFA611211R1101	10	0.015
		Chrome plastic	M3SS2-21R	1SFA611211R2101	10	0.015
		Chrome metal	M3SS2-31R	1SFA611211R3101	10	0.024
	● Green	Black plastic	M3SS2-11G	1SFA611211R1102	10	0.015
		Chrome plastic	M3SS2-21G	1SFA611211R2102	10	0.015
		Chrome metal	M3SS2-31G	1SFA611211R3102	10	0.024
	● Yellow	Black plastic	M3SS2-11Y	1SFA611211R1103	10	0.015
		Chrome plastic	M3SS2-21Y	1SFA611211R2103	10	0.015
		Chrome metal	M3SS2-31Y	1SFA611211R3103	10	0.024
● Blue	Black plastic	M3SS2-11L	1SFA611211R1104	10	0.015	
	Chrome plastic	M3SS2-21L	1SFA611211R2104	10	0.015	
	Chrome metal	M3SS2-31L	1SFA611211R3104	10	0.024	
○ Clear	Black plastic	M3SS2-11C	1SFA611211R1108	10	0.015	
	Chrome plastic	M3SS2-21C	1SFA611211R2108	10	0.015	
	Chrome metal	M3SS2-31C	1SFA611211R3108	10	0.024	
	● Red	Black plastic	M3SS3-11R	1SFA611212R1101	10	0.015
		Chrome plastic	M3SS3-21R	1SFA611212R2101	10	0.015
		Chrome metal	M3SS3-31R	1SFA611212R3101	10	0.024
	● Green	Black plastic	M3SS3-11G	1SFA611212R1102	10	0.015
		Chrome plastic	M3SS3-21G	1SFA611212R2102	10	0.015
		Chrome metal	M3SS3-31G	1SFA611212R3102	10	0.024
	● Yellow	Black plastic	M3SS3-11Y	1SFA611212R1103	10	0.015
		Chrome plastic	M3SS3-21Y	1SFA611212R2103	10	0.015
		Chrome metal	M3SS3-31Y	1SFA611212R3103	10	0.024
● Blue	Black plastic	M3SS3-11L	1SFA611212R1104	10	0.015	
	Chrome plastic	M3SS3-21L	1SFA611212R2104	10	0.015	
	Chrome metal	M3SS3-31L	1SFA611212R3104	10	0.024	
○ Clear	Black plastic	M3SS3-11C	1SFA611212R1108	10	0.015	
	Chrome plastic	M3SS3-21C	1SFA611212R2108	10	0.015	
	Chrome metal	M3SS3-31C	1SFA611212R3108	10	0.024	
	● Red	Black plastic	M3SS7-11R	1SFA611216R1101	10	0.015
		Chrome plastic	M3SS7-21R	1SFA611216R2101	10	0.015
		Chrome metal	M3SS7-31R	1SFA611216R3101	10	0.024
	● Green	Black plastic	M3SS7-11G	1SFA611216R1102	10	0.015
		Chrome plastic	M3SS7-21G	1SFA611216R2102	10	0.015
		Chrome metal	M3SS7-31G	1SFA611216R3102	10	0.024
	● Yellow	Black plastic	M3SS7-11Y	1SFA611216R1103	10	0.015
		Chrome plastic	M3SS7-21Y	1SFA611216R2103	10	0.015
		Chrome metal	M3SS7-31Y	1SFA611216R3103	10	0.024
● Blue	Black plastic	M3SS7-11L	1SFA611216R1104	10	0.015	
	Chrome plastic	M3SS7-21L	1SFA611216R2104	10	0.015	
	Chrome metal	M3SS7-31L	1SFA611216R3104	10	0.024	
○ Clear	Black plastic	M3SS7-11C	1SFA611216R1108	10	0.015	
	Chrome plastic	M3SS7-21C	1SFA611216R2108	10	0.015	
	Chrome metal	M3SS7-31C	1SFA611216R3108	10	0.024	



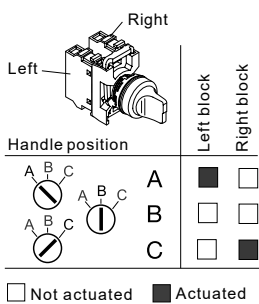
M3SS  
Dimensions (mm, inches)

# Modular plastic range

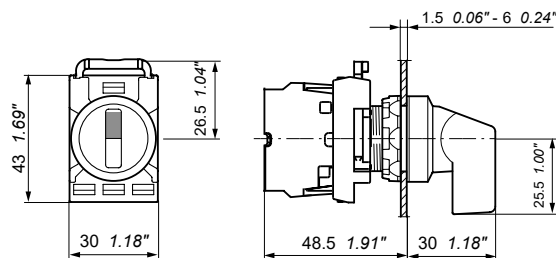
## Illuminated selector switches - 3-position - Long handle



**Contacts actuated**



Operating principle	Color	Bezel	Type	Order code	Pkg qty	Weight (1 pce) kg
	● Red	Black plastic	M3SS4-11R	1SFA611213R1101	10	0.018
		Chrome plastic	M3SS4-21R	1SFA611213R2101	10	0.018
		Chrome metal	M3SS4-31R	1SFA611213R3101	10	0.027
	● Green	Black plastic	M3SS4-11G	1SFA611213R1102	10	0.018
		Chrome plastic	M3SS4-21G	1SFA611213R2102	10	0.018
	● Yellow	Black plastic	M3SS4-11Y	1SFA611213R1103	10	0.018
		Chrome plastic	M3SS4-21Y	1SFA611213R2103	10	0.018
	● Blue	Black plastic	M3SS4-11L	1SFA611213R1104	10	0.018
		Chrome plastic	M3SS4-21L	1SFA611213R2104	10	0.018
○ Clear	Black plastic	M3SS4-11C	1SFA611213R1108	10	0.018	
	Chrome plastic	M3SS4-21C	1SFA611213R2108	10	0.018	
	Chrome metal	M3SS4-31C	1SFA611213R3108	10	0.027	
	● Red	Black plastic	M3SS5-11R	1SFA611214R1101	10	0.018
		Chrome plastic	M3SS5-21R	1SFA611214R2101	10	0.018
	● Green	Black plastic	M3SS5-11G	1SFA611214R1102	10	0.018
		Chrome plastic	M3SS5-21G	1SFA611214R2102	10	0.018
		Chrome metal	M3SS5-31G	1SFA611214R3102	10	0.027
	● Yellow	Black plastic	M3SS5-11Y	1SFA611214R1103	10	0.018
		Chrome plastic	M3SS5-21Y	1SFA611214R2103	10	0.018
	● Blue	Black plastic	M3SS5-11L	1SFA611214R1104	10	0.018
		Chrome plastic	M3SS5-21L	1SFA611214R2104	10	0.018
○ Clear	Black plastic	M3SS5-11C	1SFA611214R1108	10	0.018	
	Chrome plastic	M3SS5-21C	1SFA611214R2108	10	0.018	
	Chrome metal	M3SS5-31C	1SFA611214R3108	10	0.027	
	● Red	Black plastic	M3SS6-11R	1SFA611215R1101	10	0.018
		Chrome plastic	M3SS6-21R	1SFA611215R2101	10	0.018
	● Green	Black plastic	M3SS6-11G	1SFA611215R1102	10	0.018
		Chrome plastic	M3SS6-21G	1SFA611215R2102	10	0.018
	● Yellow	Black plastic	M3SS6-11Y	1SFA611215R1103	10	0.018
		Chrome plastic	M3SS6-21Y	1SFA611215R2103	10	0.018
	● Blue	Black plastic	M3SS6-11L	1SFA611215R1104	10	0.018
		Chrome metal	M3SS6-31L	1SFA611215R3104	10	0.027
	○ Clear	Black plastic	M3SS6-11C	1SFA611215R1108	10	0.018
	● Red	Black plastic	M3SS8-11R	1SFA611217R1101	10	0.018
		Chrome plastic	M3SS8-21R	1SFA611217R2101	10	0.018
		Chrome metal	M3SS8-31R	1SFA611217R3101	10	0.027
	● Green	Black plastic	M3SS8-11G	1SFA611217R1102	10	0.018
		Chrome plastic	M3SS8-21G	1SFA611217R2102	10	0.018
		Chrome metal	M3SS8-31G	1SFA611217R3102	10	0.027
	● Yellow	Black plastic	M3SS8-11Y	1SFA611217R1103	10	0.018
		Black plastic	M3SS8-11L	1SFA611217R1104	10	0.018
	○ Clear	Black plastic	M3SS8-11C	1SFA611217R1108	10	0.018



M3SS  
Dimensions (mm, inches)

# Modular plastic range

## Key-operated selector switches - 2-position







M2SSK1-101

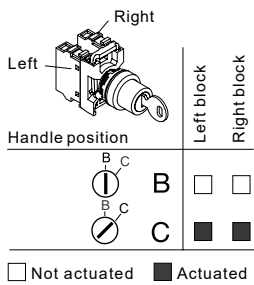
1SFC151133V0001

### Description

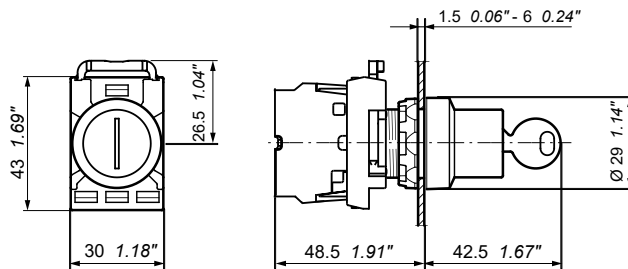
Key-operated selector switches are delivered in black color.

Operating principle	Key	Bezel	Type	Order code	Pkg qty (1 pce)	Weight kg	
 Key can be removed in both positions	Key code 455	Black plastic	M2SSK1-101	1SFA611280R1001	1	0.045	
		Chrome plastic	M2SSK1-201	1SFA611280R2001	1	0.045	
		Chrome metal	M2SSK1-301	1SFA611280R3001	1	0.054	
	Key code 421	Black plastic	M2SSK1-102	1SFA611280R1002	1	0.045	
		Chrome metal	M2SSK1-302	1SFA611280R3002	1	0.054	
		Key code 3433-E	Black plastic	M2SSK1-103	1SFA611280R1003	1	0.045
	Random selection (1)	Black plastic	M2SSK1-104	1SFA611280R1004	25	0.045	
		Chrome metal	M2SSK1-304	1SFA611280R3004	25	0.054	
	 Key can be removed in B position only	Key code 455	Black plastic	M2SSK2-101	1SFA611281R1001	1	0.045
			Chrome plastic	M2SSK2-201	1SFA611281R2001	1	0.045
Chrome metal			M2SSK2-301	1SFA611281R3001	1	0.054	
Key code 421		Black plastic	M2SSK2-102	1SFA611281R1002	1	0.045	
		Chrome metal	M2SSK2-302	1SFA611281R3002	1	0.054	
		Key code 3433-E	Black plastic	M2SSK2-103	1SFA611281R1003	1	0.045
Random selection (1)		Black plastic	M2SSK2-104	1SFA611281R1004	25	0.045	
		Chrome metal	M2SSK2-304	1SFA611281R3004	25	0.054	
 Key can be removed in position Bonly		Key code 455	Black plastic	M2SSK3-101	1SFA611282R1001	1	0.045
			Chrome metal	M2SSK3-301	1SFA611282R3001	1	0.054
	Key code 421	Black plastic	M2SSK3-102	1SFA611282R1002	1	0.045	
		Chrome metal	M2SSK3-302	1SFA611282R3002	1	0.054	
	Key code 3433-E	Black plastic	M2SSK3-103	1SFA611282R1003	1	0.045	
		Chrome metal	M2SSK3-303	1SFA611282R3003	1	0.054	
Random selection (1)	Black plastic	M2SSK3-104	1SFA611282R1004	25	0.045		
	Chrome metal	M2SSK3-304	1SFA611282R3004	25	0.054		
 Key can be removed in A only	Key code 455	Black plastic	M2SSK4-101	1SFA611289R1001	1	0.045	

### Contacts actuated



(1) The order code includes 25 keys operated selector switches. Each selector switch includes unique key code. Key codes 455, 421 and 3433-E not included.



M2SSK  
Dimensions (mm, inches)

# Modular plastic range

## Key-operated selector switches - 3-position









1SFC151133V0001

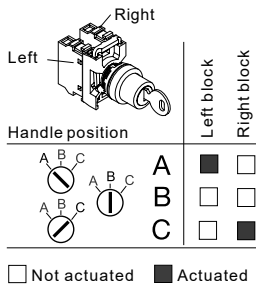
M2SSK1-101

### Description

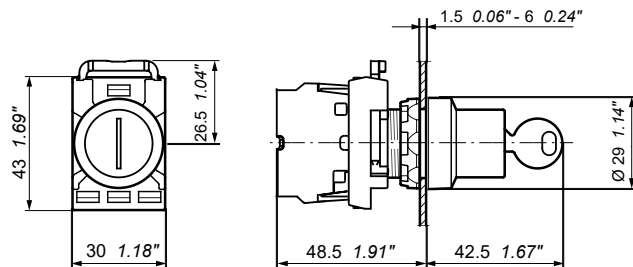
Key-operated selector switches are delivered in black color.

Operating principle	key	Bezel	Type	Order code	Pkg qty (1 pce)	Weight kg
 Key can be removed in all positions	Key code 455	Black plastic	M3SSK1-101	1SFA611283R1001	1	0.045
		Chrome plastic	M3SSK1-201	1SFA611283R2001	1	0.045
	Key code 421	Chrome metal	M3SSK1-301	1SFA611283R3001	1	0.054
		Black plastic	M3SSK1-102	1SFA611283R1002	1	0.045
	Key code 3433-E	Chrome metal	M3SSK1-302	1SFA611283R3002	1	0.054
		Black plastic	M3SSK1-103	1SFA611283R1003	1	0.045
Random selection (1)	Chrome metal	M3SSK1-303	1SFA611283R3003	1	0.054	
	Black plastic	M3SSK1-104	1SFA611283R1004	25	0.045	
 Key can be removed in position B only	Key code 455	Black plastic	M3SSK2-101	1SFA611284R1001	1	0.045
		Chrome metal	M3SSK2-301	1SFA611284R3001	1	0.054
Key code 421	Black plastic	M3SSK2-102	1SFA611284R1002	1	0.045	
	Key code 3433-E	Black plastic	M3SSK2-103	1SFA611284R1003	1	0.045
Random selection (1)	Black plastic	M3SSK2-104	1SFA611284R1004	25	0.045	
	Key code 455	Black plastic	M3SSK3-101	1SFA611285R1001	1	0.045
 Key can be removed in position B only	Key code 421	Chrome metal	M3SSK3-301	1SFA611285R3001	1	0.054
		Black plastic	M3SSK3-102	1SFA611285R1002	1	0.045
Key code 3433-E	Chrome metal	M3SSK3-302	1SFA611285R3002	1	0.054	
	Black plastic	M3SSK3-103	1SFA611285R1003	1	0.045	
Random selection (1)	Chrome metal	M3SSK3-303	1SFA611285R3003	1	0.054	
	Black plastic	M3SSK3-104	1SFA611285R1004	25	0.045	
 Key can be removed in position A only	Key code 455	Black plastic	M3SSK4-101	1SFA611286R1001	1	0.045
		Chrome metal	M3SSK4-301	1SFA611286R3001	1	0.054
Key code 421	Black plastic	M3SSK4-102	1SFA611286R1002	1	0.045	
	Chrome metal	M3SSK4-302	1SFA611286R3002	1	0.054	
 Key can be removed in all positions	Key code 455	Black plastic	M3SSK5-101	1SFA611287R1001	1	0.045
		Chrome metal	M3SSK5-301	1SFA611287R3001	1	0.054
Key code 3433-E	Black plastic	M3SSK5-103	1SFA611287R1003	1	0.045	
	Key code 455	Black plastic	M3SSK6-101	1SFA611288R1001	1	0.045
 Key can be removed in A only						

### Contacts actuated



(1)The order code includes 25key operated selector switches.Each selector switch includes unique keycode.Key codes 455,421 and 3433-Enot included.



M3SSK

Dimensions (mm,inches)

# Modular plastic range

## Potentiometers



MT-110B

1SFC151138V0001

### Description

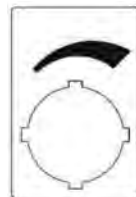
Blackknob with integrated position indication and marking in white.

Bezel	Type	Order code	Pkg qty	Weight (1 pce) kg
<b>Knob with resistor 5 kΩ</b>				
Black plastic	MT-105B	1SFA611410R1056	1	0.040
Chrome plastic	MT-205B	1SFA611410R2056	1	0.040
Chrome metal	MT-305B	1SFA611410R3056	1	0.049
<b>Knob with resistor 10 kΩ</b>				
Black plastic	MT-110B	1SFA611410R1106	1	0.040
Chrome plastic	MT-210B	1SFA611410R2106	1	0.040
Chrome metal	MT-310B	1SFA611410R3106	1	0.048
<b>Knob with resistor 50 kΩ</b>				
Black plastic	MT-150B	1SFA611410R1506	1	0.040
Chrome plastic	MT-250B	1SFA611410R2506	1	0.040
Chrome metal	MT-350B	1SFA611410R3506	1	0.049
<b>Knob without resistor (1)</b>				
Black plastic	MT-1B	1SFA611410R1006	10	0.022
Chrome plastic	MT-2B	1SFA611410R2006	10	0.022
Chrome metal	MT-3B	1SFA611410R3006	10	0.030
<b>Legend plates aluminum</b>				
29.6 x 44.5 mm	Ø 22 mm	–	SK615562-87	10 0.002
48.5 x 44.5 mm, scale:0-10	Ø 22 mm	–	SK615562-88	10 0.002
48.5 x 44.5 mm, scale:0-50	Ø 22 mm	MA6-1252	1SFA611930R1252	10 0.002

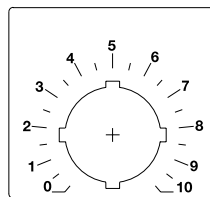
(1) Knob without resistor: for shaft diameter 6-6.35 mm. Min. shaft length 20 mm.



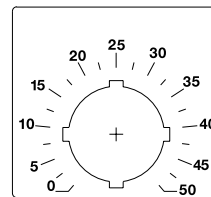
MA6-1252



SK615562-87



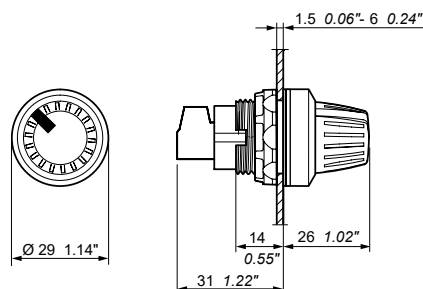
SK615562-88



MA6-1252

### Technical data

Power rating	2 W
Mechanical angle	280°
Insulation voltage	900 V
Operating temperature	-1 ... + 70° C
Resistance tolerance	± 10 ohm
Mechanical life	20 000 operations

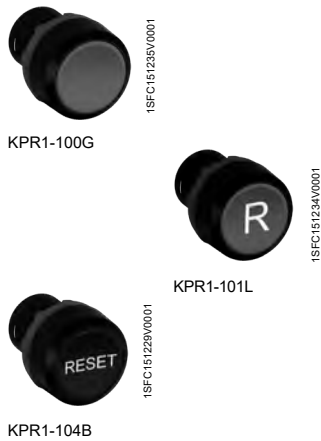


MT

Dimensions (mm, inches)

# Modular plastic range

## Resetpushbuttons



### Description

Resetpushbuttons are momentary and include only black plastic bezel.

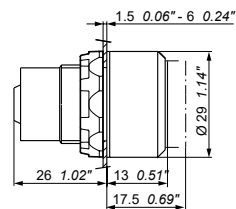
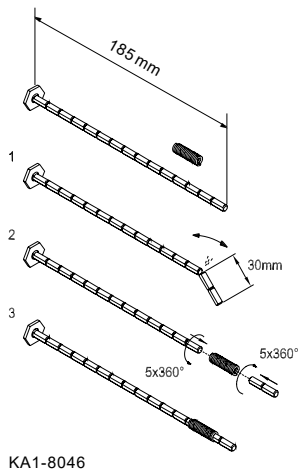
Color	Text	Type	Order code	Pkg qty	Weight (1 pce) kg
<b>Flushreset pushbutton</b>					
● Red	No text	KPR1-100R	1SFA616160R1001	10	0.020
● Green	No text	KPR1-100G	1SFA616160R1002	10	0.020
	I	KPR1-102G	1SFA616160R1022	10	0.020
	II	KPR1-103G	1SFA616160R1032	10	0.020
● Yellow	No text	KPR1-100Y	1SFA616160R1003	10	0.020
● Blue	No text	KPR1-100L	1SFA616160R1004	10	0.020
	R	KPR1-101L	1SFA616160R1014	10	0.020
○ White	No text	KPR1-100W	1SFA616160R1005	10	0.020
	R	KPR1-101W	1SFA616160R1015	10	0.020
	I	KPR1-102W	1SFA616160R1025	10	0.020
● Black	No text	KPR1-100B	1SFA616160R1006	10	0.020
	RESET	KPR1-104B	1SFA616160R1046	10	0.020

### Extended reset pushbutton

● Red	No text	KPR2-100R	1SFA616161R1001	10	0.021
	O	KPR2-105R	1SFA616161R1051	10	0.021
● Blue	No text	KPR2-100L	1SFA616161R1005	10	0.021
● Black	No text	KPR2-100B	1SFA616161R1006	10	0.021
	O	KPR2-105B	1SFA616161R1056	10	0.021

### Accessories

	Type	Order code	Pkg qty	Weight (1 pce) kg
Shaft	KA1-8046	1SFA616920R8046	10	0.007
Flexible joint	KA1-8047	1SFA616920R8047	10	0.005



KPR1, KPR2

Dimensions (mm, inches)



# Modular plastic range

## Resetpushbuttons with shaft



KPR3-100R

1SFC151225V0001



KPR3-104B

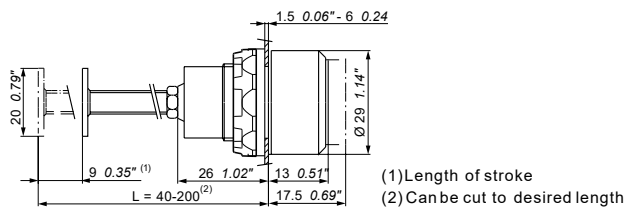
1SFC151222V0001

### Description

Resetpushbuttons are momentary and include only black plastic bezel.

Color	Text	Type	Order code	Pkg qty	Weight (1 pce) kg
<b>Flushreset pushbutton</b>					
● Red	No text	KPR3-100R	1SFA616162R1001	10	0.027
● Green	No text	KPR3-100G	1SFA616162R1002	10	0.027
	II	KPR3-103G	1SFA616162R1032	10	0.027
	START	KPR3-106G	1SFA616162R1062	10	0.027
● Yellow	No text	KPR3-100Y	1SFA616162R1003	10	0.027
● Blue	No text	KPR3-100L	1SFA616162R1004	10	0.027
	R	KPR3-101L	1SFA616162R1014	10	0.027
○ White	No text	KPR3-100W	1SFA616162R1005	10	0.027
	R	KPR3-101W	1SFA616162R1015	10	0.027
	I	KPR3-102W	1SFA616162R1025	10	0.027
● Black	No text	KPR3-100B	1SFA616162R1006	10	0.027
	RESET	KPR3-104B	1SFA616162R1046	10	0.027
<b>Extended reset pushbutton</b>					
● Red	No text	KPR4-100R	1SFA616163R1001	10	0.028
	O	KPR4-105R	1SFA616163R1051	10	0.028
○ White	No text	KPR4-100W	1SFA616163R1005	10	0.028
● Black	No text	KPR4-100B	1SFA616163R1006	10	0.028
	O	KPR4-105B	1SFA616163R1056	10	0.028

Note:Flexible joint not included.



KPR3, KPR4  
 Dimensions (mm, inches)

# Modular plastic range

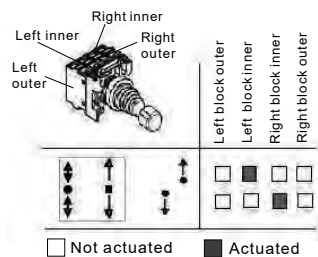
## Joysticks



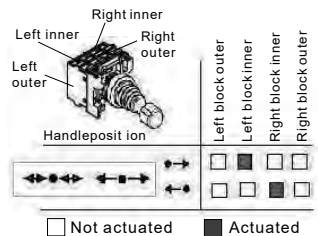
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MJS1-60B

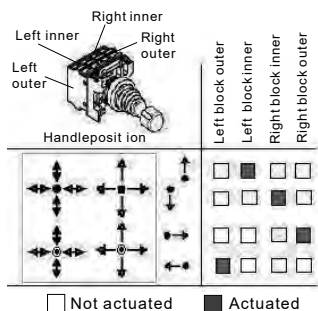
**Contacts actuated**



**Contacts actuated**

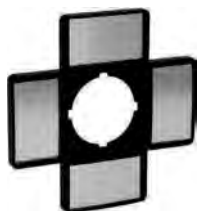


**Contacts actuated**



1SFC151481F0001

MA1-8138



1SFC151480F0001

MA1-8137

**Description**

IP protection degree : IP66, IP67 and IP69K. 4-position holder included.

Position	Bezel	Type	Order code	Pkg qty	Weight (1 pce) kg
↑ ↓	Black plastic	MJS1-40B	1SFA611701R4006	1	0.043
	Chrome metal	MJS1-60B	1SFA611701R6006	1	0.052
↑ ↓ ↔	Black plastic	MJS2-40B	1SFA611702R4006	1	0.043
	Chrome metal	MJS2-60B	1SFA611702R6006	1	0.052
↔	Black plastic	MJS3-40B	1SFA611703R4006	1	0.043
	Chrome metal	MJS3-60B	1SFA611703R6006	1	0.052
↔↔	Black plastic	MJS4-40B	1SFA611704R4006	1	0.043
	Chrome metal	MJS4-60B	1SFA611704R6006	1	0.052
↑ ↓ ↔	Black plastic	MJS5-40B	1SFA611705R4006	1	0.043
	Chrome metal	MJS5-60B	1SFA611705R6006	1	0.052
↑ ↓ ↔ ↔↔	Black plastic	MJS6-40B	1SFA611706R4006	1	0.043
	Chrome metal	MJS6-60B	1SFA611706R6006	1	0.052

**With latching function**

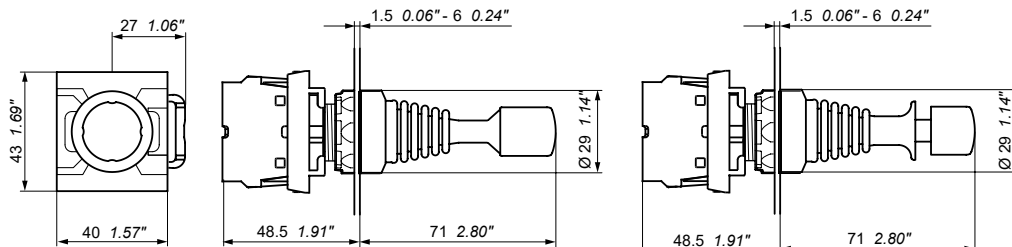
↑ ↓	Black plastic	MJS7-40B	1SFA611707R4006	1	0.043
	Chrome metal	MJS7-60B	1SFA611707R6006	1	0.052
↑ ↓ ↔	Black plastic	MJS9-40B	1SFA611709R4006	1	0.043
	Chrome metal	MJS9-60B	1SFA611709R6006	1	0.052
↔	Black plastic	MJS8-40B	1SFA611708R4006	1	0.043
	Chrome metal	MJS8-60B	1SFA611708R6006	1	0.052
↔↔	Black plastic	MJS10-60B	1SFA611710R6006	1	0.052
	Chrome metal	MJS10-40B	1SFA611712R4006	1	0.043
↑ ↓ ↔	Black plastic	MJS12-40B	1SFA611712R4006	1	0.052
	Chrome metal	MJS12-60B	1SFA611712R6006	1	0.052
↑ ↓ ↔ ↔↔	Black plastic	MJS11-40B	1SFA611711R4006	1	0.043
	Chrome metal	MJS11-60B	1SFA611711R6006	1	0.052

**Accessories**

Type	Order code	Pkg qty	Weight (1 pce) kg
<b>Legend plates, 66 x 59 aluminum laminate with adhesive back</b>			
2-position - Up - Down	MA6-1240 1SFA611930R1240	10	0.004
2-position - Left - Right	MA6-1241 1SFA611930R1241	10	0.004
4-position Up - down - right - left	MA6-1242 1SFA611930R1242	10	0.004

**Legend plates holder (inserts not included, suitable for insert size 27x15)**

2-position	MA1-8138 1SFA611920R8138	10	0.002
4-position	MA1-8137 1SFA611920R8137	10	0.003



MJS  
Dimensions (mm, inches)

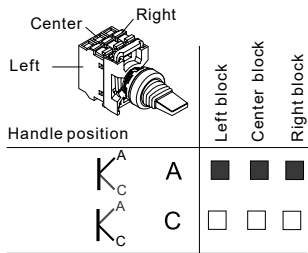
# Modular plastic range

## Toggle switches



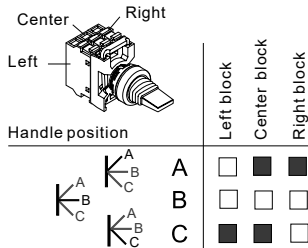
Operating principle	Bezel	Type	Order code	Pkg qty	Weight (1 pce) kg
<b>2-position</b>					
	Black plastic	MTS1-10B	1SFA611300R1006	10	0.014
	Chrome plastic	MTS1-20B	1SFA611300R2006	10	0.014
	Chrome metal	MTS1-30B	1SFA611300R3006	10	0.023
<b>3-position</b>					
	Black plastic	MTS3-10B	1SFA611302R1006	10	0.014
	Chrome plastic	MTS3-20B	1SFA611302R2006	10	0.014
	Chrome metal	MTS3-30B	1SFA611302R3006	10	0.023
	Black plastic	MTS2-10B	1SFA611301R1006	10	0.014
	Chrome plastic	MTS2-20B	1SFA611301R2006	10	0.014
	Chrome metal	MTS2-30B	1SFA611301R3006	10	0.023

**Contacts actuated, 2-position**

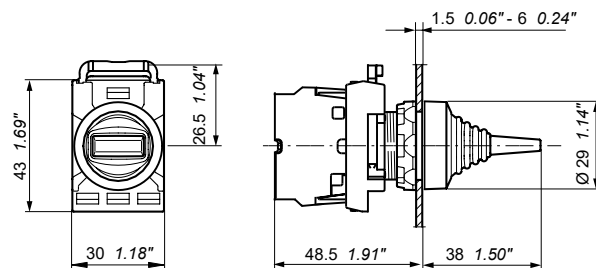


Not actuated     Actuated

**Contacts actuated, 3-position**



Not actuated     Actuated

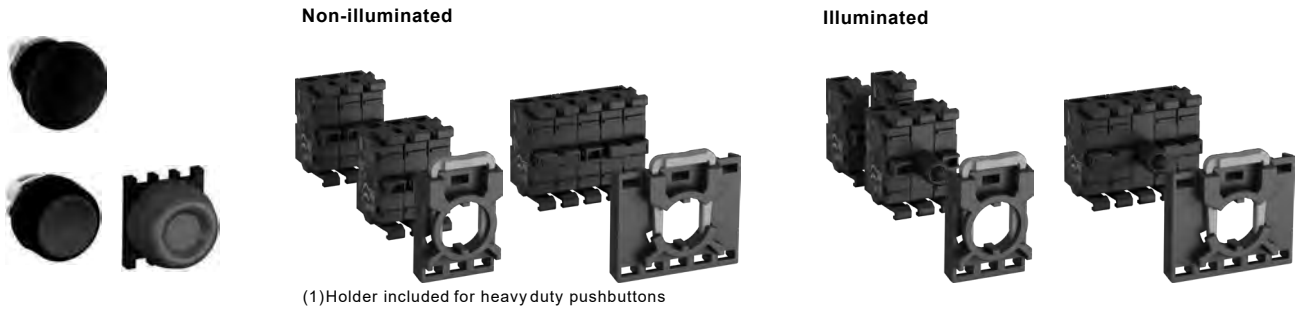


MTS  
Dimensions (mm, inches)

# Modular plastic range

## Contact block configuration

### Pushbuttons - Heavy duty pushbuttons (1) - Mushrooms pushbuttons



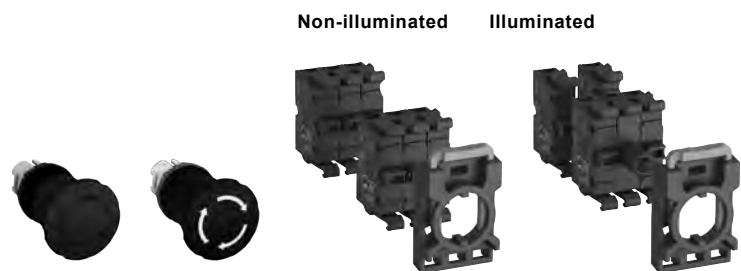
### Double pushbuttons



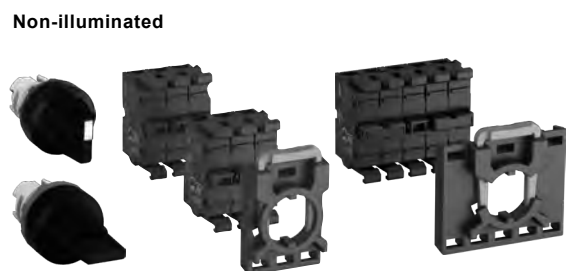
### Selector switches



### Emergency stop pushbuttons - Machine stop pushbuttons



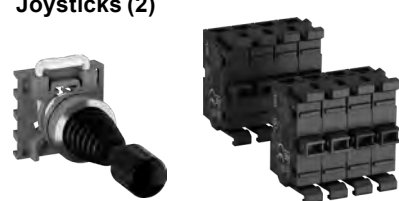
### Toggle switches - Center block operating selector switches



### Pilot lights



### Joysticks (2)

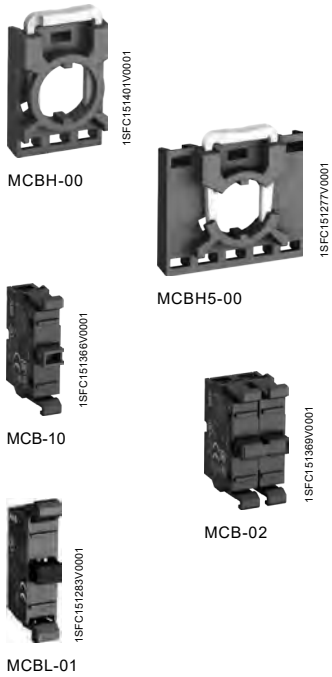


Note:locking nut included with all operators.

(2)Holder is included for joystick.

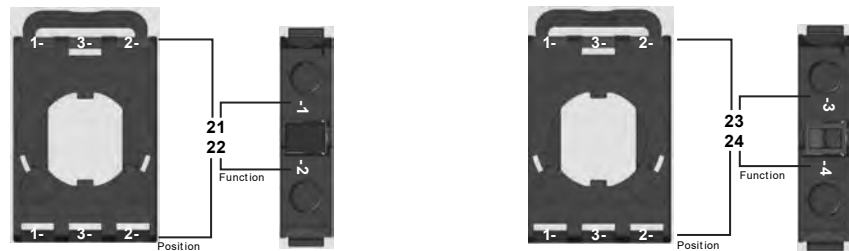
# Modular plastic range

## Holders and contact blocks for front mounting



Description	Contacts	Type	Order code	Pkg qty	Weight (1 pce)
kg					
<b>Holders</b>					
3-position	--	MCBH-00	1SFA611605R1100	10	0.006
5-position	--	MCBH5-00	1SFA611601R1100	10	0.008
<b>Single contact blocks</b>					
For 3 & 5-position holder	1 0	MCB-10	1SFA611610R1001	10	0.013
	0 1	MCB-01	1SFA611610R1010	10	0.013
<b>Single contact blocks, gold plated contacts</b>					
For 3 & 5-position holder	1 0	MCB-10G	1SFA611610R1101	10	0.013
	0 1	MCB-01G	1SFA611610R1110	10	0.013
<b>Double contacts blocks</b>					
For 3 & 5-position holder	2 0	MCB-20	1SFA611610R1002	10	0.026
	0 2	MCB-02	1SFA611610R1020	10	0.026
	1 1	MCB-11	1SFA611610R1011	10	0.026
<b>Micro switch contact blocks</b>					
For 3-position holder	1 0	MCBL-10	1SFA611612R1010	10	0.013
	0 1	MCBL-01	1SFA611612R1001	10	0.013

Note: micro switch block MCBL-01 are not direct opening and does not fulfill IEC60947-5-5 for emergency stop devices.  
 Note: 3 micro switch contact blocks max. allowed. If more than 3 contact blocks are needed, micro switch contact block to be mounted on the second stack.

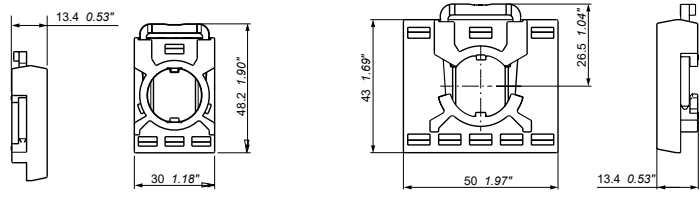


**Combined markings**

11	31	21
12	32	22

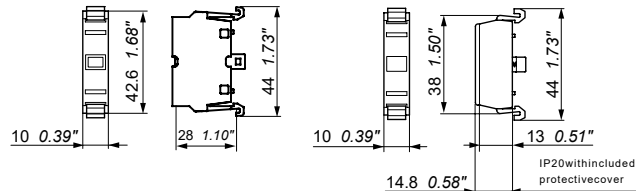
**Combined markings**

13	33	23
14	34	24



MCBH

MCBH5



MCB

MCBL

Dimensions (mm, inches)

## Modular plastic range

### LEDblocks for front mounting



MLBL-00W

1SFC15141TV0001

Color	Rated current mA	Wavelength nm	Luminance mcd	Type	Order code	Pkg qty	Weight (1pce) kg
<b>Rated voltage 12 V DC</b>							
● Red	12.0	620	320	MLBL-00R	1SFA611621R1001	10	0.012
● Green	12.0	520	1500	MLBL-00G	1SFA611621R1002	10	0.012
● Yellow	12.0	588	380	MLBL-00Y	1SFA611621R1003	10	0.012
● Blue	12.0	468	450	MLBL-00L	1SFA611621R1004	10	0.012
○ White	12.0	(1)	600	MLBL-00W	1SFA611621R1005	10	0.012
<b>Rated voltage 24 V AC/DC</b>							
● Red	10.0	620	250	MLBL-01R	1SFA611621R1011	10	0.012
● Green	10.0	520	1500	MLBL-01G	1SFA611621R1012	10	0.012
● Yellow	10.0	588	250	MLBL-01Y	1SFA611621R1013	10	0.012
● Blue	10.0	468	450	MLBL-01L	1SFA611621R1014	10	0.012
○ White	10.0	(1)	600	MLBL-01W	1SFA611621R1015	10	0.012
<b>Rated voltage 48 V AC/DC</b>							
● Red	10.0	620	260	MLBL-02R	1SFA611621R1021	10	0.012
● Green	13.0	520	1500	MLBL-02G	1SFA611621R1022	10	0.012
● Yellow	10.0	588	300	MLBL-02Y	1SFA611621R1023	10	0.012
● Blue	13.0	468	450	MLBL-02L	1SFA611621R1024	10	0.012
○ White	13.0	(1)	600	MLBL-02W	1SFA611621R1025	10	0.012
<b>Rated voltage 60 V AC/DC</b>							
● Red	13.0	620	350	MLBL-03R	1SFA611621R1031	10	0.012
● Green	13.0	520	2000	MLBL-03G	1SFA611621R1032	10	0.012
● Yellow	13.0	588	400	MLBL-03Y	1SFA611621R1033	10	0.012
● Blue	13.0	468	550	MLBL-03L	1SFA611621R1034	10	0.012
○ White	13.0	(1)	750	MLBL-03W	1SFA611621R1035	10	0.012
<b>Rated voltage 110-130 V AC</b>							
● Red	10.0	620	200	MLBL-04R	1SFA611621R1041	10	0.012
● Green	10.0	520	1200	MLBL-04G	1SFA611621R1042	10	0.012
● Yellow	10.0	588	250	MLBL-04Y	1SFA611621R1043	10	0.012
● Blue	10.0	468	400	MLBL-04L	1SFA611621R1044	10	0.012
○ White	10.0	(1)	500	MLBL-04W	1SFA611621R1045	10	0.012
<b>Rated voltage 110-130 V AC high anti-inductive voltage (2)</b>							
● Red	10.0	620	250	MLBL-04AR	1SFA611621R3041	10	0.012
● Green	10.0	520	1500	MLBL-04AG	1SFA611621R3042	10	0.012
● Yellow	10.0	582	300	MLBL-04AY	1SFA611621R3043	10	0.012
● Blue	10.0	468	450	MLBL-04AL	1SFA611621R3044	10	0.012
○ White	10.0	(1)	600	MLBL-04AW	1SFA611621R3045	10	0.012
<b>Rated voltage 110-130 V DC</b>							
● Red	10.0	620	250	MLBL-05R	1SFA611621R1051	10	0.012
● Green	10.0	520	1500	MLBL-05G	1SFA611621R1052	10	0.012
● Yellow	10.0	588	300	MLBL-05Y	1SFA611621R1053	10	0.012
● Blue	10.0	468	450	MLBL-05L	1SFA611621R1054	10	0.012
○ White	10.0	(1)	600	MLBL-05W	1SFA611621R1055	10	0.012
<b>Rated voltage 220 V DC</b>							
● Red	8.0	620	180	MLBL-06R	1SFA611621R1061	10	0.012
● Green	8.0	520	110	MLBL-06G	1SFA611621R1062	10	0.012
● Yellow	8.0	588	200	MLBL-06Y	1SFA611621R1063	10	0.012
● Blue	8.0	468	450	MLBL-06L	1SFA611621R1064	10	0.012
○ White	8.0	(1)	600	MLBL-06W	1SFA611621R1065	10	0.012

Note: care should be taken for DC supply where + and - must be correctly connected. This is marked X1(+) and X2(-) on the product.  
 (1) X=0.31, Y=0.32 according to the ICI Chromaticity diagram.

(2) Higher threshold to light up LED to be used in application where there is risk of large induced voltages.

# Modular plastic range

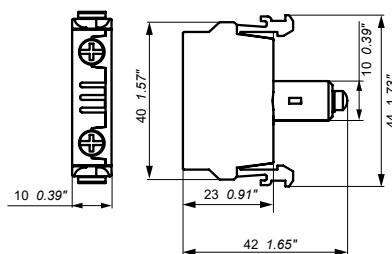
## LEDblocks for front mounting



MLBL-00W

Color	Rated current mA	Wavelength nm	Luminance mcd	Type	Order code	Pkg qty	Weight (1pce) kg
<b>Rated voltage 230 V AC</b>							
● Red	10.0	620	250	MLBL-07R	1SFA611621R1071	10	0.012
● Green	10.0	520	1500	MLBL-07G	1SFA611621R1072	10	0.012
● Yellow	10.0	588	300	MLBL-07Y	1SFA611621R1073	10	0.012
● Blue	10.0	468	450	MLBL-07L	1SFA611621R1074	10	0.012
○ White	10.0	(1)	600	MLBL-07W	1SFA611621R1075	10	0.012
<b>Rated voltage 230 V AC high anti-inductive voltage (2)</b>							
● Red	10.0	620	250	MLBL-99R	1SFA611621R1991	10	0.012
● Green	10.0	520	1500	MLBL-99G	1SFA611621R1992	10	0.012
● Yellow	10.0	588	300	MLBL-99Y	1SFA611621R1993	10	0.012
● Blue	10.0	468	450	MLBL-99L	1SFA611621R1994	10	0.012
○ White	10.0	(1)	600	MLBL-99W	1SFA611621R1995	10	0.012
<b>Rated voltage 380 V AC</b>							
● Red	10.0	620	250	MLBL-08R	1SFA611621R1081	10	0.012
● Green	10.0	520	1500	MLBL-08G	1SFA611621R1082	10	0.012
● Yellow	10.0	582	300	MLBL-08Y	1SFA611621R1083	10	0.012
● Blue	10.0	468	450	MLBL-08L	1SFA611621R1084	10	0.012
○ White	10.0	(1)	600	MLBL-08W	1SFA611621R1085	10	0.012
<b>Rated voltage 415 V AC</b>							
● Red	11	620	280	MLBL-09R	1SFA611621R1091	10	0.012
● Green	11	520	1800	MLBL-09G	1SFA611621R1092	10	0.012
● Yellow	11	588	350	MLBL-09Y	1SFA611621R1093	10	0.012
● Blue	11	468	500	MLBL-09L	1SFA611621R1094	10	0.012
○ White	11	(1)	650	MLBL-09W	1SFA611621R1095	10	0.012

Note: care should be taken for DC supply where + and - must be correctly connected. This is marked X1(+) and X2(-) on the product.  
 (1) X=0.31, Y=0.32 according to the ICI Chromaticity diagram.  
 (2) Higher threshold to light up LED to be used in application where there is risk of large induced voltages.



MLBL  
 Dimensions (mm, inches)

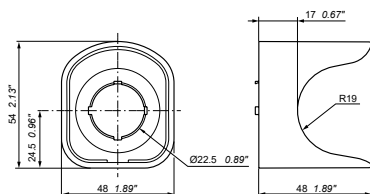
# Modular plastic range

## Accessories



Description	Bezel/ color	Type	Order code	Pkg qty	Weight (1pce) kg
<b>30 mm adaptors for 22 mm operator (1.5 - 4 mm panel thickness)</b>					
Emergency stop pushbuttons, MPM	Black plastic	KA1-8027	1SFA616920R8027	1	0.007
	Chrome metal	KA1-8028	1SFA616920R8028	1	0.021
Pushbuttons, selector switches, pilot lights, potentiometers, emergency stop pushbuttons, MPE	Black plastic	KA1-8029	1SFA616920R8029	1	0.010
Flush mounted pushbuttons	Chrome metal	KA1-8073	1SFA616920R8073	1	0.050
Flush mounted selector switches	Chrome metal	MA1-8074	1SFA611920R8074	1	0.050
<b>Protective membrane, silicone</b>					
Flush pushbutton		MA1-8052	1SFA611920R8052	10	0.002
Double pushbutton		MA1-8126	1SFA611920R8126	10	0.002
Extended pushbutton		MA1-8002	1SFA611920R8002	10	0.002
<b>Protective ring</b>					
To prevent accidental operation. Cannot be used together with Legend plate holder					
Flush and extended pushbuttons	Clear plastic	-	SK615512-1	10	0.002
Flush pushbuttons	Metal and black plastic	KA1-8010	1SFA616920R8010	10	0.008
<b>Bezel</b>					
Pushbuttons	Black plastic	KA1-8022	1SFA616920R8022	10	0.002
	Chrome plastic	KA1-8020	1SFA616920R8020	10	0.002
	Chrome metal	KA1-8021	1SFA616920R8021	10	0.015
Selector switches	Black plastic	KA1-8080	1SFA616920R8080	10	0.002
	Chrome plastic	KA1-8023	1SFA616920R8023	10	0.002
	Chrome metal	KA1-8024	1SFA616920R8024	10	0.015
<b>Square bezel</b>					
Black plastic		-	SK616016-2	10	0.001
<b>Lockable shroud</b>					
Pushbuttons, selector switches	Plastic	MA1-8153	1SFA611920R8153	10	0.023
Emergency stop 30 mm	Metal	-	SK615502-D	1	0.080
<b>Touch guard</b>					
Touch guard		MA1-8152	1SFA611920R8152	10	0.023
<b>Shroud with anti rotation tabs, slot for pad-lock and with water drainage</b>					
Emergency stop, machine stop 40 mm	● Yellow	MA1-8053	1SFA611920R8053	10	0.020
	● Grey	MA1-8128	1SFA611920R8128	10	0.020

Note: Din-rail adaptor should be used with 2contact blocks for rear mounting type MCB..B.



MA1  
Dimensions (mm,inches)



# Modular plastic range

## Accessories



MA1-8131

1SFC151276V0001



MDB-2

1SFC151435F0001



MA1-8015

1SFC151275V0001



MA1-8149

1SFC151044F0001



MA1-8019

1SFC151385V0001

Description	Bezel/ color	Type	Order code	Pkg qty	Weight (1pce) kg
<b>DIN-rail adaptor</b>					
DIN-rail adaptor		MA1-8131	1SFA611920R8131	1	0.020
DIN-rail adaptor with one dummy block		MA1-8001	1SFA611920R8001	1	0.028
Dummy block		MDB-2	1SFA611630R1002	10	0.003
Note:Din-rail adaptor should be used with 2contact blocks for rear mounting type MCB..B.					
Note:Dummyblocks are used when onlyone contact block or a compact pilot device is used together with the DIN-rail adaptor					
<b>Mounting tools</b>					
Mounting tool for tightening the locking nut		MA1-8015	1SFA611920R8015	1	0.021
Mounting tool for power tool		MA1-8149	1SFA611920R8149	1	0.155
<b>Extra key</b>					
Key code 455			SK616021-71	10	0.007
Key code 421			SK616021-72	10	0.007
Keycode 3433-E			SK616021-73	10	0.007
Locking nut		MA1-8019	1SFA611920R8019	10	0.001

# Modular plastic range

## Technical data

### Standards and approvals

IEC/ EN 60947-1	Low Voltage switchgear and controlgear - Part 1: General rules
IEC/ EN 60947-5-1	Low Voltage switchgear and controlgear - part 5-1: control circuit devices and switching elements - Electromechanical control circuit devices
IEC/ EN 60947-5-5	Low Voltage switchgear and controlgear - part 5-5: control circuit devices and switching elements - Electrical emergency stop device with mechanical latching function
IEC/ EN 60073	Basic and safety principles for man-machine interface, marking and identification coding principles for indicators and actuators
IEC/ EN 60529	Degrees of protection provided by enclosures (IP code)
EN 50013	Low Voltage switchgear and controlgear for industrial use, terminal marking and distinctive number for particular control switches
DIN 40050-9	Road vehicles; Degrees of protection (IP-code); protection against foreign objects; water and contact; electrical equipment
UL 508	Industrial control equipment
CSAC 22.2 No 14	Industrial control equipment

### Environmental data

#### Degrees of protection

Operators	IEC/EN DIN	UL/CSA
Pushbutton: MP	IP66	Type 1, 3R, 4, 4X, 12, 13
Double pushbutton: MPD	IP66	Type 1, 3R, 4, 4X, 12, 13
Mushroom pushbutton: MPM	IP66	Type 1, 3R, 4, 4X, 12, 13
Emergency stop pushbuttons: MPMT, MPMP, MPET, MPEP, MPEK	IP66	Type 1, 3R, 4, 4X, 12, 13
Selector switch: M2SS, M3SS	IP66	Type 1, 3R, 4, 4X, 12, 13
Key-operated selector switch: M2SSK, M3SSK	IP66	Type 1, 3R, 4, 4X, 12
Toggle switch: MTS2, MTS3	IP66	Type 1, 3R, 4, 4X, 12, 13
Heavy duty pushbutton: KP6	-	Type 1, 3R, 4, 4X
Reset pushbutton: KPR	IP66	Type 1, 3R, 4, 4X, 12, 13
Joystick: MJS	IP66, 67, 69K	Type 1, 4X (indoor), 12, 13
Pilot light: ML	IP66	Type 1, 3R, 4, 4X, 12, 13
Potentiometer: MT	IP66	Type 1, 3R, 4, 4X, 12, 13
Contact block : MCB	IP20	-
Plastic enclosure: MEP	IP66	Type 1, 3R, 4, 4X, 12, 13
Metallic enclosures: KEM	IP66, 67, 69K	-

Note: Specified degree of protection is for operator mounted on panel. If other items are mounted in between, please make sure that they are correctly sealed.

#### Temperature

Ambient temperature during operation	-25 to +70 °C
Storage temperature	-40 to +85 °C






### Technical data

#### Terminals

Plus-minus pozidriv No.2 screw with DIN-washer.

Connectable area min. 1 x 0.5 mm<sup>2</sup> / AWG20 - max. 2 x 2.5 mm<sup>2</sup> / 2 x AWG14

### Connecting characteristics

Contact block type	MCB	MCBL	MLBL
Connection capacity (min. ... max.)			
 Solid/stranded	1 x	1...2.5 mm <sup>2</sup>	
	2 x	1...2.5 mm <sup>2</sup>	
 Flexible	1 x	0.75...2.5 mm <sup>2</sup>	
	2 x	0.75...2.5 mm <sup>2</sup>	
 Flexible with non insulated ferrule	1 x	0.75...2.5 mm <sup>2</sup>	
	2 x	0.75...2.5 mm <sup>2</sup>	
 Flexible with insulated ferrule	1 x	0.75...2.5 mm <sup>2</sup>	
	2 x	0.75...2.5 mm <sup>2</sup>	
 Lugs	L ≤	7.0 mm	
	L >	3.5 mm	
Connection capacity acc. to UL/CSA 1 or 2 x	AWG20...14		
Tightening torque	Plus-minus Pozidriv No. 2 screw with DIN-washer		
Operators locking nut	Min. 2 Nm / Max. 2.3 Nm		
Cable terminal	0.9 Nm		

#### Material

No ozone depleting substances in the products. All front of panel plastic components are made of polycarbonate

PC polycarbonate	High impact strength, good outdoor resistance. Chemical resistance (see table below)
PSU polysulphone	Can withstand high temperatures, acids, basic solutions, alkaline compounds, oils, alcohols
PA polyamide	Can withstand high temperatures, aliphatic, aromatic and chlorinated hydrocarbons, esters, ketone-aldehydes, alcohols and basic solutions
PBT	Can withstand high temperature, aliphatic and aromatic hydrocarbons, acids, basic solutions, alcohols, grease and oils
Zinc	Good corrosion resistance in inland-, sea and industrial atmosphere
Light-alloy	Good corrosion resistance in inland-, sea and industrial atmosphere

#### Chemical resistance for polycarbonate

Chemical class	Effects
Alcohols and alkalis	Generally compatible at low concentration and room temperature. Higher concentrations and elevated temperatures can result in etching and attack evidenced by decomposition
Aliphatic hydrocarbons	Generally compatible
Amines	Surface crystallization and chemical attack. Avoid
Aromatic hydrocarbons	Partial solvents and severe stress cracking agents (i.e., xylene, toluene) Avoid
Detergents and cleaners	Mild soap solutions are generally compatible. Strong alkaline materials should be avoided
Esters	Cause severe crystallization. Partial solvents Avoid
Greases and oils	Pure petroleum types generally compatible. Many additives used with them are not
Halogenated, hydrocarbons	Solvents Avoid
Ketones	Cause severe crystallization and stress cracking. Partial solvents Avoid
Silicone oil and greases	Generally compatible up to 85 °C

# Modular plastic range

## Technical data

### Electrical data

MCB Standard contact blocks (standard and gold plated)  
 Self cleaning silver contacts, NC contact with positive opening.  
 At voltages and currents below 24 V and 5.6 mA we recommend our micro switch blocks.

#### Ratings as per IEC 60947-5-1

Rated insulation voltage, $U_i$	690 V	
Rated thermal current, $I_{th}$	10 A	
Rated operational current, $I_e$ Utilization category AC 15,	at: 120 V	8 A
	at: 230 V	6 A
	at: 400 V	4 A
	at: 690 V	2 A
Rated operational current, $I_e$ utilisation category DC 13,	at: 24 V	5 A
	at: 125 V	1.1 A
	at: 250 V	0.55 A
Rated impulse withstand voltage	$U_{imp}$	6 kV
Pollution degree	3	

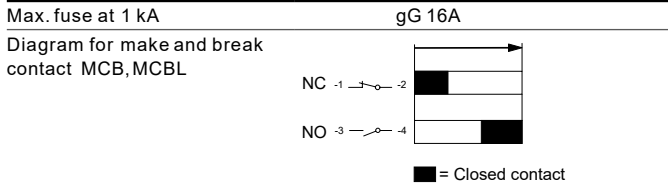
Ratings as per UL, CSA, NEMA	A600 AC	Q600 DC
Rated insulation voltage	600 V	600 V
Rated thermal current	10 A	2.5 A
Rated operational current	at: 120 V	6 A
	at: 240 V	3 A
	at: 480 V	1.5 A
	at: 600 V	1.2 A
	at: 125 V	0.55 A
	at: 250 V	0.27 A
	at: 480 V	0.10 A
	at: 600 V	0.10 A

#### Max. number of contact blocks per operator

The contact blocks can be stacked in max two levels on the 3-block holder. Only one level is accepted on the 5-block holder.

Pushbutton, toggle switch, mushroom pushbutton, double pushbutton, selector switch, key-operated selector switch and emergency stop operator	6
Joystick	8

#### Short circuit protection



#### Micro switch block

Ratings as per IEC 60947-5-1		
Rated insulation voltage, $U_i$	125 V	
Rated thermal current, $I_{th}$	3 A	
Rated operational current, $I_e$ utilisation category AC 14,	at: 125 V	0.5 A
	at: 24 V	0.3 A
Rated operational current, $I_e$ utilization category DC 13,	at: 24 V	0.1 A
Rated operational current, $I_e$ utilization category DC 12,	at: 24 V	0.1 A

Ratings as per UL 508		
	125 V AC	3 A
	60 V DC	0.2 A
	48 V DC	0.1 A

#### Minimum switching capacity

Standard contact blocks	24 V DC	5.6 mA
Gold plated contact blocks	5 V DC	12 mA
	12 V DC	1 mA
Micro switch blocks	3 V DC	1 mA

### Mechanical data

Mechanical life	
Standard contact blocks MCB	10 million operations
Micro switch block MCBL	1 million operations
Pushbuttons MP, momentary mushroom pushbuttons MPM	2 million operations

#### Selector switches M2SS, M3SS

Standard contact blocks and micro switch block	3-position holder		500 000 operations
Standard contact blocks	3-position holder		
Standard contact blocks	5-position holder		
Standard contact blocks in two stacks	3-position holder		

#### Selector switches - center block operating M3SSC

Standard contact blocks	3-position holder		250 000 operations
Standard contact blocks in two stacks	3-position holder		150 000 operations

**Key-operated selector switch M2SSK, M3SSK and double pushbutton MPD** 500 000 operations

**Emergency stop pushbuttons MPET, MPEP, MPEK** 100 000 operations

**Toggle switch MTS** 1 million operations

#### Joystick MJS

Micro switch block	4-position holder		500 000 operations
Standard contact blocks	4-position holder		
Standard contact blocks and micro switch block	4-position holder		400 000 operations
Standard contact blocks in two stacks	4-position holder		300 000 operations

#### LED blocks MLBL

Service life for LED means number of service hours until the brightness has been reduced down 50%. Service life 50 000 h operating at 25 °C, 40-70% rh (relative humidity)

Color of white LED	$x=0.31$ $Y=0.32$ means the position of color in the ICI Chromaticity diagram
Voltage tolerance on LED blocks	-30 to +10% voltage is acceptable without affecting the Service life
Voltage peaks on LED blocks	Voltage peaks up to 1000 V. Current peaks up to 500 mA during a few msec.
Glowing light	All integrated LED bulbs have a function built in to cut leakage currents

## Modular plastic range

### Technical data

#### LED blocks front and rear mounting MLBL

Color	Current		Illuminance		Anti ... inductive peak voltage V	Main wavelength nm	Color temperature K
	mA Min.	Max.	lx Min.	Max.			
<b>Voltage range 12 V DC</b>							
● Red	11	15	1000	3500	5	620 ... 625	–
● Green	8	12	3700	12500	5	515 ... 520	–
● Yellow	11	15	1200	4250	5	585 ... 590	–
● Blue	8	12	1500	5300	5	465 ... 470	–
○ Clear	8	12	1800	8500	5	–	8000 ... 12000
<b>Voltage range 24 V AC/ DC</b>							
● Red	8	12	900	3100	5	620 ... 625	–
● Green	8	12	3000	11500	5	515 ... 520	–
● Yellow	8	12	1000	3400	5	585 ... 590	–
● Blue	8	12	1500	5300	5	465 ... 470	–
○ Clear	8	11	1800	8500	5	–	8000 ... 12000
<b>Voltage range 48 V AC/ DC</b>							
● Red	8	12	900	3100	5	620 ... 625	–
● Green	8	12	3000	11500	5	515 ... 520	–
● Yellow	8	12	1000	3400	5	585 ... 590	–
● Blue	8	12	1500	5300	5	465 ... 470	–
○ Clear	8	12	1800	8500	5	–	8000 ... 12000
<b>Voltage range 60 V AC/ DC</b>							
● Red	8	12	900	3100	5	620 ... 625	–
● Green	8	12	3000	11500	5	515 ... 520	–
● Yellow	8	12	1000	3400	5	585 ... 590	–
● Blue	8	12	1500	5300	5	465 ... 470	–
○ Clear	8	12	1800	8500	5	–	8000 ... 12000
<b>Voltage range 110 ... 130 V AC</b>							
● Red	8	12	900	3100	15	620 ... 625	–
● Green	8	12	3200	12000	15	515 ... 520	–
● Yellow	8	12	1000	3700	15	585 ... 590	–
● Blue	8	12	1550	5500	15	465 ... 470	–
○ Clear	8	12	1850	8800	15	–	8000 ... 12000
<b>Voltage range 110 ... 130 V AC high anti-inductive voltage (1)</b>							
● Red	14	16	700	2600	25	620 ... 625	–
● Green	14	16	2100	8200	25	515 ... 520	–
● Yellow	14	16	750	3000	25	585 ... 590	–
● Blue	14	16	1000	5000	25	465 ... 470	–
○ Clear	14	16	1500	8100	25	–	8000 ... 12000
<b>Voltage range 110 ... 130 V DC</b>							
● Red	8	12	900	3100	15	620 ... 625	–
● Green	8	12	3000	11500	15	515 ... 520	–
● Yellow	8	12	1000	3400	15	585 ... 590	–
● Blue	8	12	1500	5300	15	465 ... 470	–
○ Clear	8	12	1800	8500	15	–	8000 ... 12000

**Note:**

The testing distance of illuminance is 2mm, between top of lens and the sensor surface. Clean test environment, supply voltage at 50/60 Hz with harmonized wave and without length high frequency.

Rated voltage tolerance of LED blocks: -30% to +10%.

(1) Higher threshold to light up LED to be used in applications where there is risk of large induced voltages.

## Modular plastic range

### Technical data

Color	Current		Illuminance		Anti-inductive peak voltage	Main wavelength	Color temperature
	mA Min.	Max.	lx Min.	Max.	V	Nm	K
<b>Voltage range 220 V DC</b>							
● Red	7	10	700	2300	15	620 ... 625	–
● Green	7	10	2400	8000	15	515 ... 520	–
● Yellow	7	10	800	3100	15	585 ... 590	–
● Blue	7	10	1200	4350	15	465 ... 470	–
○ Clear	7	10	1400	7000	15	–	8000 ... 12000
<b>Voltage range 230 V AC</b>							
● Red	8	12	900	3100	15	620 ... 625	–
● Green	8	12	3000	11500	15	515 ... 520	–
● Yellow	8	12	1000	3400	15	585 ... 590	–
● Blue	7	11	1500	5300	15	465 ... 470	–
○ Clear	7	11	1800	8500	15	–	8000 ... 12000
<b>Voltage range 380 V AC</b>							
● Red	8	12	900	3100	15	620 ... 625	–
● Green	8	12	3000	11500	15	515 ... 520	–
● Yellow	8	12	1000	3400	15	585 ... 590	–
● Blue	8	12	1500	5300	15	465 ... 470	–
○ Clear	8	12	1800	8500	15	–	8000 ... 12000
<b>Voltage range 415 V AC</b>							
● Red	8	12	900	3100	15	620 ... 625	–
● Green	8	12	3000	11500	15	515 ... 520	–
● Yellow	8	12	1000	3400	15	585 ... 590	–
● Blue	8	12	1500	5300	15	465 ... 470	–
○ Clear	8	12	1800	8500	15	–	8000 ... 12000
<b>Voltage range 230 V AC high anti-inductive voltage (1)</b>							
● Red	8	12	480	1700	55	620 ... 625	–
● Green	6	11	1500	5800	55	515 ... 520	–
● Yellow	8	12	530	1900	55	585 ... 590	–
● Blue	6	11	850	3100	55	465 ... 470	–
○ Clear	6	11	1000	5200	55	–	8000 ... 12000

**Note:**

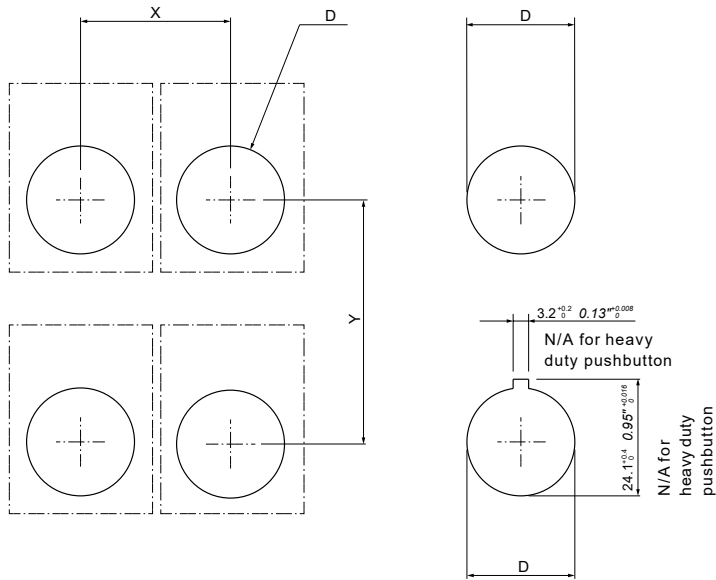
The testing distance of illuminance is 2mm, between top of lens and the sensor surface. Clean test environment, supply voltage at 50/60 Hz with harmonized wave and without length high frequency.

Rated voltage tolerance of LED blocks: -30% to +10%

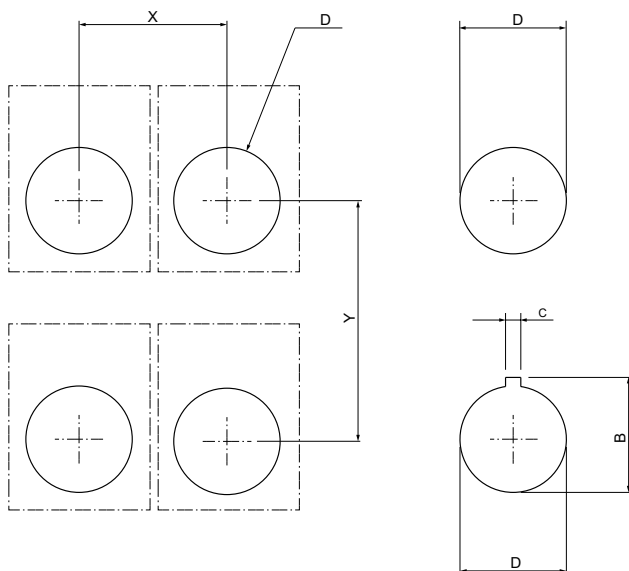
(1) Higher threshold to light up LED to be used in applications where there is risk of large induced voltages.

## Modular plastic range

### Drilling plan



Description	X	Y	D		Panel thickness
			Ø mm	inch	
Pushbutton, pilot light, selector switch short handle, potentiometer, toggle switch	31 1.22"	50 1.97"	Ø 22.3 $^{+0.4}_0$	0.88 $^{+0.016}_0$	1.5 0.06" - 6 0.24"
Pushbutton, pilot light, selector switch short handle (with legend plate)	31 1.22"	55 2.17"	Ø 22.3 $^{+0.4}_0$	0.88 $^{+0.016}_0$	1.5 0.06" - 6 0.24"
Mushroom pushbutton (60 mm)	45 1.77"	50 1.97"	Ø 22.3 $^{+0.4}_0$	0.88 $^{+0.016}_0$	1.5 0.06" - 6 0.24"
Mushroom pushbutton (40 mm)	65 2.56"	70 2.76"	Ø 22.3 $^{+0.4}_0$	0.88 $^{+0.016}_0$	1.5 0.06" - 6 0.24"
Double pushbutton	31 1.22"	55 2.17"	Ø 22.3 $^{+0.4}_0$	0.88 $^{+0.016}_0$	1.5 0.06" - 6 0.24"
Double pushbutton (with legend plate)	31 1.22"	95 3.74"	Ø 22.3 $^{+0.4}_0$	0.88 $^{+0.016}_0$	1.5 0.06" - 6 0.24"
Heavy duty pushbutton	50 1.97"	50 1.97"	Ø 30.5 $^{+0.5}_0$	1.20 $^{+0.02}_0$	2 0.08" - 5 0.20"
Potentiometer (with legend plate)	51 2.01"	50 1.97"	Ø 22.3 $^{+0.4}_0$	0.88 $^{+0.016}_0$	1.5 0.06" - 6 0.24"
Toggle switch (with legend plate)	31 1.22"	66 2.60"	Ø 22.3 $^{+0.4}_0$	0.88 $^{+0.016}_0$	1.5 0.06" - 6 0.24"
Joystick (with legend plate)	100 3.94"	100 3.94"	Ø 22.3 $^{+0.4}_0$	0.88 $^{+0.016}_0$	1.5 0.06" - 6 0.24"



Accessories	X	Y	D		B		C	Panel thickness
			Ø mm	inch	Ø mm	inch		
5 block holder	51 2.01"	50 1.97"	Ø 22.3 $^{+0.4}_0$	0.88 $^{+0.016}_0$	24.1 $^{+0.4}_0$	0.95 $^{+0.016}_0$	3.2 0.13"	1.5 0.06" - 6 0.24"
30 mm adaptor	42 1.65"	52 2.05"	Ø 30.5 $^{+0.5}_0$	1.20 $^{+0.02}_0$	33 $^{+0.5}_0$	1.30 $^{+0.02}_0$	5 0.20"	2 0.08" - 7 0.28"







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# Pilot devices

## Modular metal range

### Ordering details

56	Non-illuminated pushbuttons momentary
57	Non-illuminated marked pushbuttons momentary
58	Illuminated pushbuttons momentary
59	Non-illuminated mushroom pushbuttons
60	Illuminated mushroom pushbuttons
61	Pilot lights
62	Non-illuminated selector switches
63	Illuminated selector switches
68	Key-operated selector switches
72	Joysticks
74	Toggle switches
75	Selector pushbuttons

### Accessories for modular range

76	Holder and contact blocks for front mounting
77	Power supplies
78	LED bulbs for power supplies
79	LED blocks for front mounting
80	Other accessories
81	Metal enclosures

### 83 Technical data

### 85 Dimension

### 86 Drilling plan

# Modular metal range

## Non-illuminated pushbuttons momentary



P9MPNRG with holder

1SFC151476V0001



P9MPNRG

1SFC151523V0001



P9MPNGG

1SFC151529V0001



P9MPNBG

1SFC151530V0001



P9MPNNG

1SFC151526V0001



P9MPNRS

1SFC151519V0001



P9MPNVS

1SFC151518V0001



P9MPNLS

1SFC151521V0001



P9MPNNS

1SFC151520V0001



P9ACDPP

1SFC151828V0001

### Description

Each reference includes the satin chrome metal body and nut together with the holder.

Operator	Type	Order code	Pkg qty	Weight (1 pce) kg
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#### Flush pushbutton

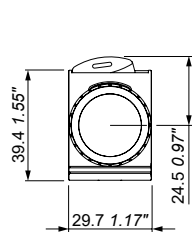
● Red	P9MPNRG	1SFA184001R9001	1	0.058
● Green	P9MPNVG	1SFA184002R9002	1	0.058
● Yellow	P9MPNGG	1SFA184003R9003	1	0.058
● Blue	P9MPNLG	1SFA184006R9004	1	0.058
○ White	P9MPNBG	1SFA184007R9005	1	0.058
● Black	P9MPNNG	1SFA184000R9006	1	0.058

#### Extended pushbutton

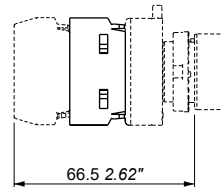
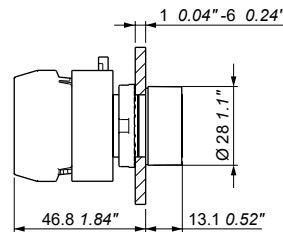
● Red	P9MPNRS	1SFA184011R9001	1	0.062
● Green	P9MPNVS	1SFA184012R9002	1	0.062
● Yellow	P9MPNGS	1SFA184057R9003	1	0.062
● Blue	P9MPNLS	1SFA184016R9004	1	0.062
○ White	P9MPNBS	1SFA184017R9005	1	0.062
● Black	P9MPNNS	1SFA184010R9006	1	0.062

#### Maintained accessory

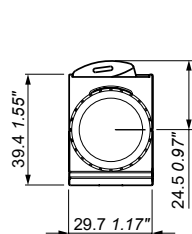
Device for standard pushbuttons, illuminated pushbuttons: To be used only with contact blocks P9B01VN, P9B01VR, P9B10VA and P9B01FN	P9ACDPP	1SFA187843R8000	1	0.012
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P9MPN..G



P9ACDPP



P9MPN..S

Dimensions (mm, inches)

# Modular metal range

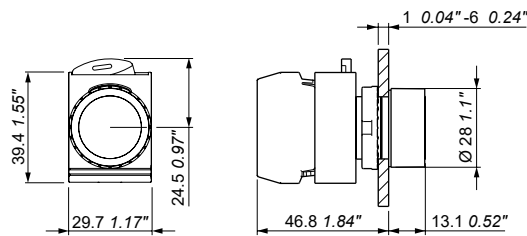
## Non-illuminated marked pushbuttons momentary



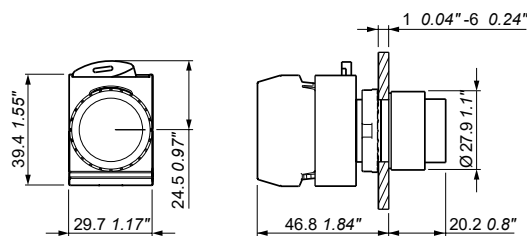
### Flush pushbuttons

Each reference includes the satin chrome metal body and nut together with the holder.

Text/ symbol	Color	Type	Order code	Pkg qty	Weight (1 pce) kg
START	Green	P9MPNVG202	1SFA187149R9502	1	0.058
STOP	Red	P9MPNRG201	1SFA187147R9501	1	0.058
	Black	P9MPNNG201	1SFA188908R9506	1	0.058
R	Blue	P9MPNNG037	1SFA187143R9504	1	0.058
⊕	Green	P9MPNVG030	1SFA187146R9502	1	0.058
	White	P9MPNBG030	1SFA188057R9505	1	0.058
	Black	P9MPNNG030	1SFA187145R9506	1	0.058
I	Green	P9MPNVG028	1SFA187112R9502	1	0.058
	White	P9MPNBG028	1SFA187151R9505	1	0.058
	Black	P9MPNNG028	1SFA187111R9506	1	0.058
O	Red	P9MPNRG029	1SFA187110R9501	1	0.058
	Black	P9MPNNG029	1SFA187150R9506	1	0.058
→	Green	P9MPNVG006	1SFA187118R9502	1	0.058
	White	P9MPNBG006	1SFA187152R9505	1	0.058
	Black	P9MPNNG006	1SFA187117R9506	1	0.058



P9MPN..G



P9MPN..S

Dimensions (mm, inches)

# Modular metal range

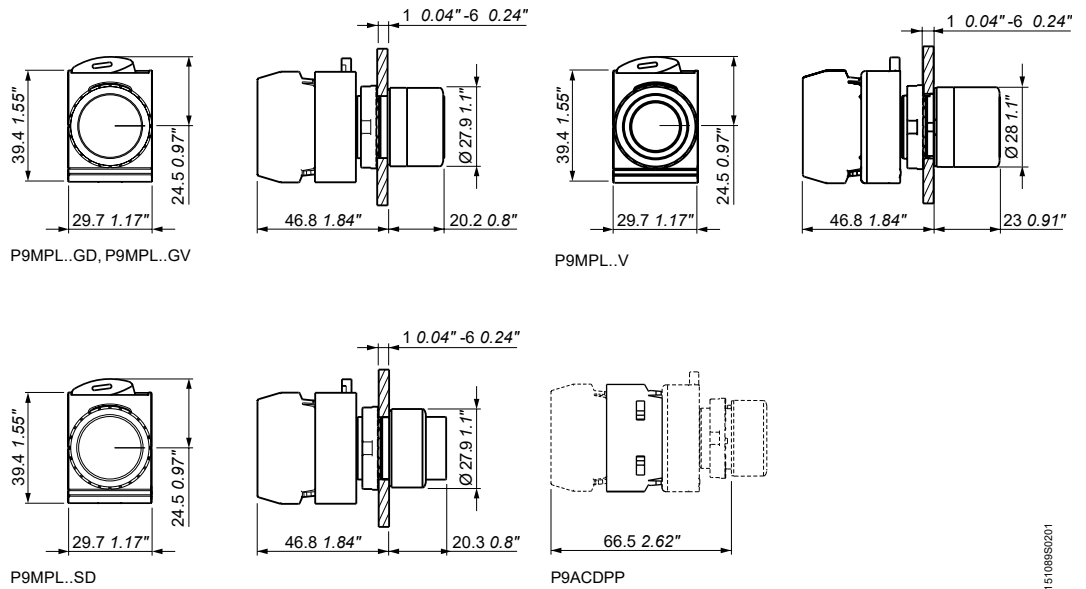
## Illuminated pushbuttons momentary



### Description

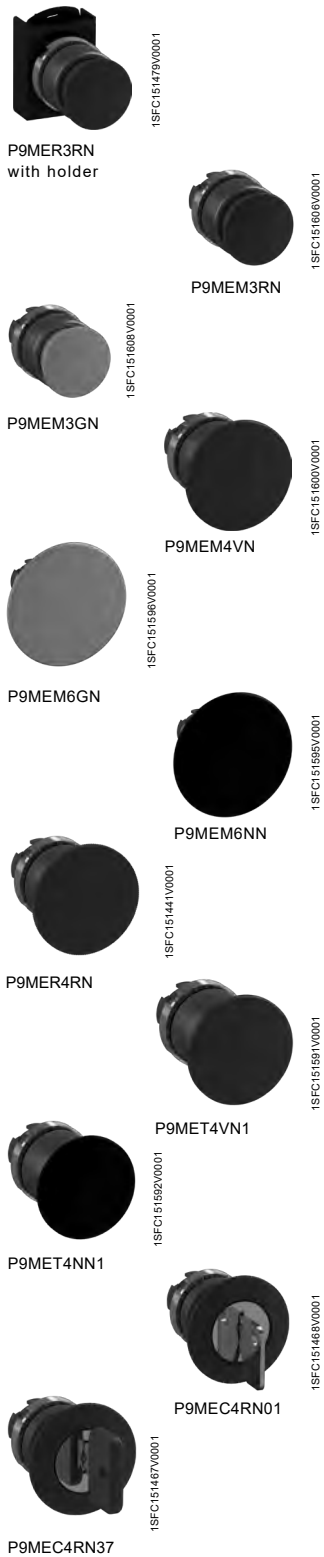
Each reference includes the satin chrome metal body and nut together with the holder.

Operator	Type	Order code	Pkg qty	Weight (1 pce) kg
<b>Flush pushbutton - Plastic lens type</b>				
● Red	P9MPLRGD	1SFA184491R9101	1	0.057
● Green	P9MPLVGD	1SFA184492R9102	1	0.057
● Yellow	P9MPLGGD	1SFA184493R9103	1	0.057
● Blue	P9MPLLGD	1SFA184496R9104	1	0.057
○ White	P9MPLBGD	1SFA184497R9105	1	0.057
● Orange	P9MPLAGD	1SFA184495R9109	1	0.057
<b>Flush pushbutton - Glass lens type</b>				
● Red	P9MPLRGV	1SFA184521R9101	1	0.060
● Green	P9MPLVGV	1SFA184522R9102	1	0.060
● Yellow	P9MPLGGV	1SFA184523R9103	1	0.060
● Blue	P9MPLLGV	1SFA184526R9104	1	0.060
○ White	P9MPLBGV	1SFA184527R9105	1	0.060
<b>Extended pushbutton - Plastic lens type</b>				
● Red	P9MPLRSD	1SFA184501R9101	1	0.059
● Green	P9MPLVSD	1SFA184502R9102	1	0.059
● Yellow	P9MPLGSD	1SFA184503R9103	1	0.059
● Blue	P9MPLLSD	1SFA184506R9104	1	0.059
○ White	P9MPLBSD	1SFA184507R9105	1	0.059
● Orange	P9MPLASD	1SFA184505R9109	1	0.059
<b>Maintained accessory</b>				
Device for standard pushbuttons, illuminated pushbuttons: To be used only with contact blocks P9B01VN, P9B01VR, P9B10VA and P9B01FN	P9ACDPP	1SFA187843R8000	1	0.012



# Modular metal range

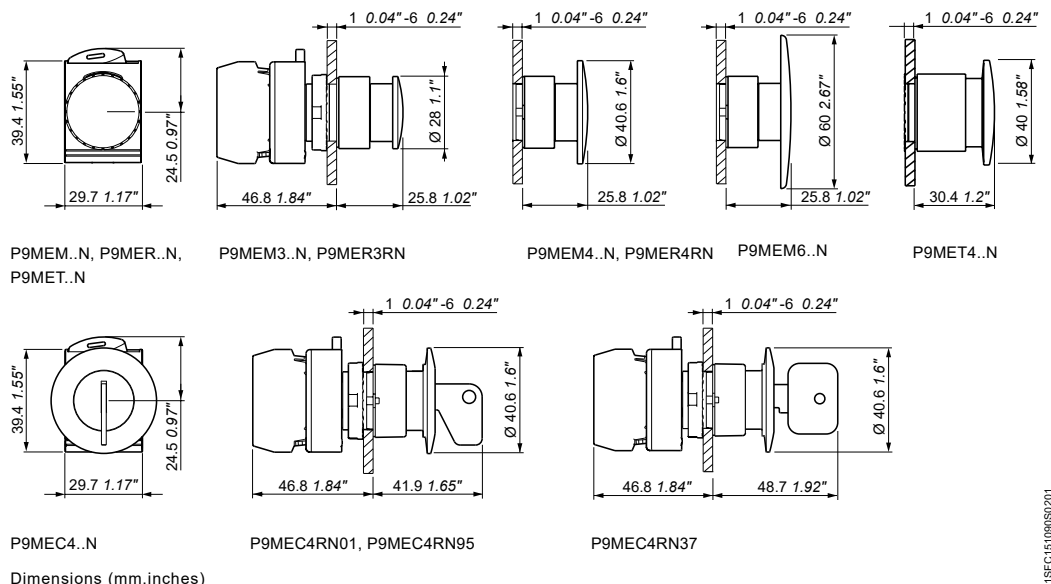
## Non-illuminated mushroom pushbuttons



### Description

Each reference includes the satin chrome metal body and nut together with the holder.

Color	Release method	Type	Order code	Pkg qty	Weight (1 pce) kg
<b>Momentary</b>					
<b>Ø 28 mm</b>					
● Red	–	P9MEM3RN	1SFA184031R9001	1	0.060
● Green	–	P9MEM3VN	1SFA184032R9002	1	0.060
● Yellow	–	P9MEM3GN	1SFA184033R9003	1	0.060
● Black	–	P9MEM3NN	1SFA184030R9006	1	0.060
<b>Ø 40 mm</b>					
● Red	–	P9MEM4RN	1SFA184041R9001	1	0.061
● Green	–	P9MEM4VN	1SFA184042R9002	1	0.061
● Yellow	–	P9MEM4GN	1SFA184043R9003	1	0.061
● Black	–	P9MEM4NN	1SFA184040R9006	1	0.061
<b>Ø 60 mm</b>					
● Red	–	P9MEM6RN	1SFA184051R9001	1	0.070
● Green	–	P9MEM6VN	1SFA184052R9002	1	0.070
● Yellow	–	P9MEM6GN	1SFA184053R9003	1	0.070
● Black	–	P9MEM6NN	1SFA184050R9006	1	0.070
<b>Maintained</b>					
<b>Ø 28 mm</b>					
● Red	Twist release	P9MER3RN	1SFA184070R9001	1	0.066
<b>Ø 40 mm</b>					
● Red	Pull release	P9MET4RN1	1SFA184061R9001	1	0.069
	Twist release	P9MER4RN	1SFA184071R9001	1	0.069
● Green	Pull release	P9MET4VN1	1SFA184062R9002	1	0.069
● Yellow	Pull release	P9MET4GN1	1SFA184063R9003	1	0.069
● Black	Pull release	P9MET4NN1	1SFA184060R9006	1	0.069
<b>Maintained with key</b>					
<b>Ø 40 mm</b>					
● Red	Key code 01	P9MEC4RN01	1SFA192000R9001	1	0.090
	Key code 37	P9MEC4RN37	1SFA192012R9001	1	0.090
	Key code 95	P9MEC4RN95	1SFA184073R9001	1	0.090



# Modular metal range

## Illuminated mushroom pushbuttons



P9MEM4RL

1SFC151602V0001



P9MEM4GL

1SFC151604V0001



P9MET4RL1

1SFC151586V0001



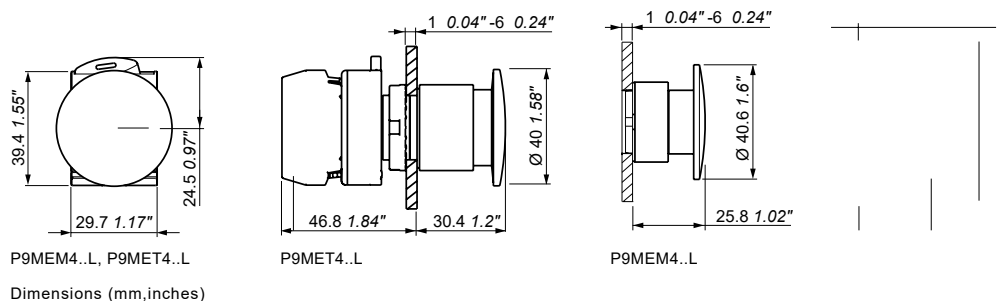
P9MET4LL1

1SFC151587V0001

### Description

Each reference includes the satin chrome metal body and nut together with the holder.

Color	Release method	Type	Order code	Pkg qty	Weight (1 pce) kg
<b>Momentary</b>					
<b>Ø 40 mm</b>					
● Red	–	P9MEM4RL	1SFA184551R9101	1	0.062
● Green	–	P9MEM4VL	1SFA184552R9102	1	0.062
● Yellow	–	P9MEM4GL	1SFA184553R9103	1	0.062
● Blue	–	P9MEM4LL	1SFA184556R9104	1	0.062
<b>Maintained</b>					
<b>Ø 40 mm</b>					
● Red	Pull release	P9MET4RL1	1SFA184561R9101	1	0.062
● Green	Pull release	P9MET4VL1	1SFA184562R9102	1	0.062
● Yellow	Pull release	P9MET4GL1	1SFA184563R9103	1	0.062
● Blue	Pull release	P9MET4LL1	1SFA184566R9104	1	0.062



# Modular metal range

## Pilot lights



P9MLBD  
with holder

1SFC151478V0001



P9MLRD

1SFC151579V0001



P9MLVD

1SFC151578V0001



P9MLGD

1SFC151582V0001



P9MLLD

1SFC151580V0001



P9MLBD

1SFC151583V0001



P9MLID

1SFC151581V0001



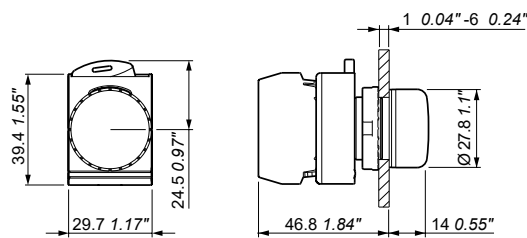
P9MLAD

1SFC151584V0001

### Description

Each reference includes the satin chrome metal body and nut together with the holder.

Color	Type	Order code	Pkg qty	Weight (1 pce) kg
<b>Operator - Plastic lens type</b>				
● Red	P9MLRD	1SFA184791R9001	1	0.050
● Green	P9MLVD	1SFA184792R9002	1	0.050
● Yellow	P9MLGD	1SFA184793R9003	1	0.050
● Blue	P9MLLD	1SFA184796R9004	1	0.050
○ White	P9MLBD	1SFA184797R9005	1	0.050
○ Clear	P9MLID	1SFA184798R9008	1	0.050
● Orange	P9MLAD	1SFA184795R9009	1	0.050



P9ML...D  
Dimensions (mm, inches)

# Modular metal range

## Non-illuminated selector switches - 2-position

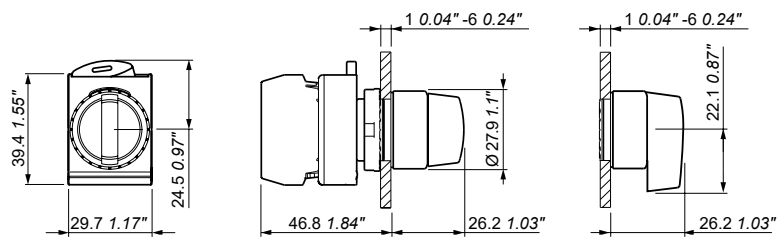
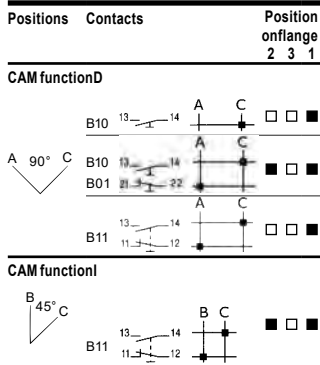


### Description

Each reference includes the satin chrome metal body and nut together with the holder.

Operating principle	Color	CAM function	Type	Order code	Pkg qty	Weight (1 pce) kg
<b>Short handle</b>						
	● Black	I	P9MSMI0N	1SFA184120R9006	1	0.065
	● Red	D	P9MSMD0R	1SFA184111R9001	1	0.065
	● Black	D	P9MSMD0N	1SFA184110R9006	1	0.065
	● Red	I	P9MSMI5R	1SFA184151R9001	1	0.065
	● Black	I	P9MSMI5N	1SFA184150R9006	1	0.065
	● Red	D	P9MSMD5R	1SFA184141R9001	1	0.065
	● Black	D	P9MSMD5N	1SFA184140R9006	1	0.065
<b>Long handle</b>						
	● Black	I	P9MSVI0N	1SFA184371R9006	1	0.068
	● Black	D	P9MSVD0N	1SFA184370R9006	1	0.068
	● Black	I	P9MSVI5N	1SFA184374R9006	1	0.068
	● Black	D	P9MSVD5N	1SFA184373R9006	1	0.068

### Contacts actuated



P9MSM, P9MSV  
Dimensions (mm, inches)



# Modular metal range

## Illuminated selector switches - 2-position



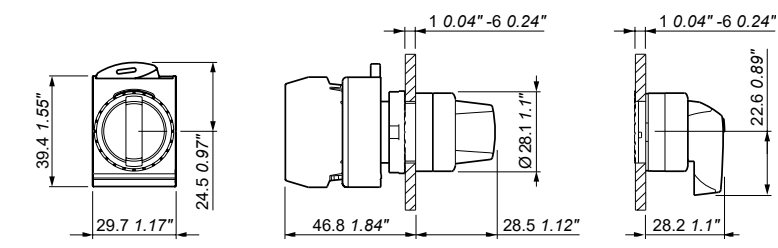
### Description

Each reference includes the satin chrome metal body and nut together with the holder.

Operating principle	Color	CAM function	Type	Order code	Pkg qty	Weight (1 pce) kg
<b>Short handle</b>						
	● Red	D	P9MSLD0R	1SFA184591R9101	1	0.059
	● Green	D	P9MSLD0V	1SFA184592R9102	1	0.059
	● Yellow	D	P9MSLD0G	1SFA184593R9103	1	0.059
	● Blue	D	P9MSLD0L	1SFA184596R9104	1	0.059
	○ White	D	P9MSLD0B	1SFA184597R9105	1	0.059
	● Orange	D	P9MSLD0A	1SFA184595R9109	1	0.059
<b>Long handle</b>						
	● Red	D	P9MSAD0R	1SFA184641R9101	1	0.060
	● Green	D	P9MSAD0V	1SFA184642R9102	1	0.060
	● Blue	D	P9MSAD0L	1SFA184646R9104	1	0.060
	○ White	D	P9MSAD0B	1SFA184647R9105	1	0.060

### Contacts actuated

Positions	Contacts	Position on flange
		2 3 1
<b>CAM function D</b>		
	B10	
	B01	
	B11	



P9MSL, P9MSA  
Dimensions (mm, inches)

# Modular metal range

## Non-illuminated selector switches - 3-position



P9MSVZ0N  
wit holder

1SFC15147V/0001



P9MSMZ0R

1SFC151506V/0001



P9MSMZ3N

1SFC151508V/0001



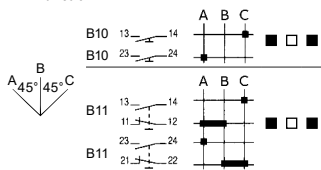
P9MSVZ5N

1SFC151503V/0001

### Contacts actuated

Positions	Contacts	Position onflange
		2 3 1

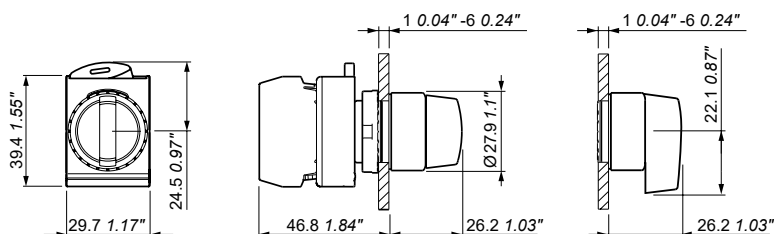
#### CAM function Z



### Description

Each reference includes the satin chrome metal body and nut together with the holder.

Operating principle	Color	CAM function	Type	Order code	Pkg qty	Weight (1 pce) kg
<b>Short handle</b>						
	● Red	Z	P9MSMZ0R	1SFA184201R9001	1	0.065
	● Black	Z	P9MSMZ0N	1SFA184200R9006	1	0.065
	● Red	Z	P9MSMZ3R	1SFA184321R9001	1	0.065
	● Black	Z	P9MSMZ3N	1SFA184320R9006	1	0.065
	● Black	Z	P9MSMZ5N	1SFA184280R9006	1	0.065
	● Red	Z	P9MSMZ1R	1SFA184241R9001	1	0.065
	● Black	Z	P9MSMZ1N	1SFA184240R9006	1	0.065
<b>Long handle</b>						
	● Black	Z	P9MSVZ0N	1SFA184379R9006	1	0.068
	● Black	Z	P9MSVZ3N	1SFA184391R9006	1	0.068
	● Black	Z	P9MSVZ5N	1SFA184387R9006	1	0.068
	● Black	Z	P9MSVZ1N	1SFA184383R9006	1	0.068



P9MSM, P9MSV  
Dimensions (mm, inches)

# Modular metal range

## Illuminated selector switches - 3-position

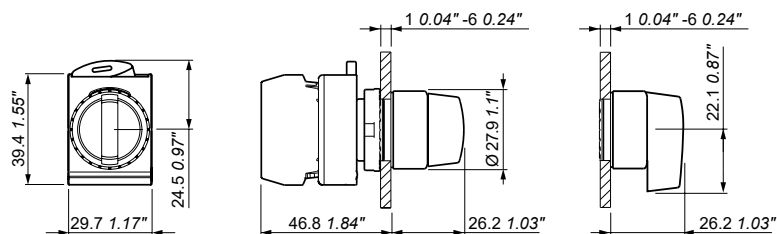
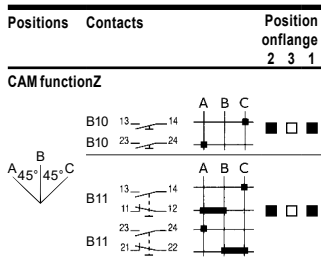


### Description

Each reference includes the satin chrome metal body and nut together with the holder.

Operating principle	Color	CAM function	Type	Order code	Pkg qty	Weight (1 pce) kg
<b>Short handle</b>						
	● Red	Z	P9MSLZ0R	1SFA184601R9101	1	0.065
	● Green	Z	P9MSLZ0V	1SFA184602R9102	1	0.065
	● Yellow	Z	P9MSLZ0G	1SFA184603R9103	1	0.065
	● Blue	Z	P9MSLZ0L	1SFA184606R9104	1	0.065
	○ White	Z	P9MSLZ0B	1SFA184607R9105	1	0.065
	● Orange	Z	P9MSLZ0A	1SFA184605R9109	1	0.065
		● Red	Z	P9MSLZ3R	1SFA184631R9101	1
● Green		Z	P9MSLZ3V	1SFA184632R9102	1	0.065
● Yellow		Z	P9MSLZ3G	1SFA184633R9103	1	0.065
● Blue		Z	P9MSLZ3L	1SFA184636R9104	1	0.065
○ White		Z	P9MSLZ3B	1SFA184637R9105	1	0.065
● Orange		Z	P9MSLZ3A	1SFA184635R9109	1	0.065
		● Red	Z	P9MSLZ5R	1SFA184621R9101	1
	● Green	Z	P9MSLZ5V	1SFA184622R9102	1	0.065
	● Red	Z	P9MSLZ1R	1SFA184611R9101	1	0.065
	● Green	Z	P9MSLZ1V	1SFA184612R9102	1	0.065
	● Yellow	Z	P9MSLZ1G	1SFA184613R9103	1	0.065
	○ White	Z	P9MSLZ1B	1SFA184617R9105	1	0.065
<b>Long handle</b>						
	● Green	Z	P9MSAZ0V	1SFA184652R9102	1	0.068
	○ White	Z	P9MSAZ0B	1SFA184657R9105	1	0.068
	● Green	Z	P9MSAZ3V	1SFA184682R9102	1	0.068
	○ White	Z	P9MSAZ3B	1SFA184687R9105	1	0.068
	● Orange	Z	P9MSAZ3A	1SFA184685R9109	1	0.068

### Contacts actuated



P9MSL, P9MSA  
Dimensions (mm, inches)

# Modular metal range

## Non-illuminated selector switches - 4-position



1SFC151471V0001

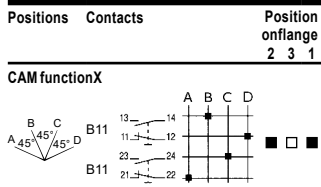
P9MSMX0N with holder



P9MSMX0N

1SFC151589V0001

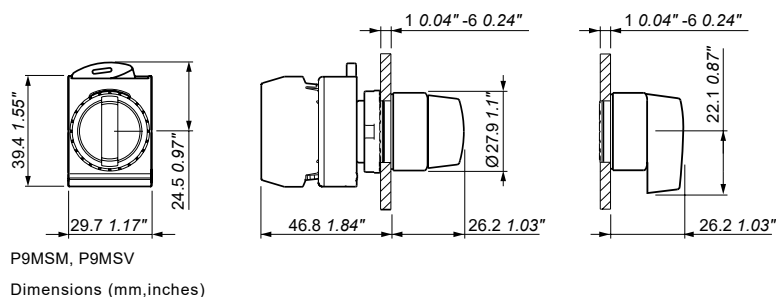
### Contacts actuated



### Description

Each reference includes the satin chrome metal body and nut together with the holder.

Operating principle	Color	CAM function	Type	Order code	Pkg qty	Weight (1 pce) kg
<b>Short handle</b>						
	● Black	X	P9MSMX0N	1SFA184397R9006	1	0.065
	● Black	X	P9MSMX5N	1SFA184340R9006	1	0.065
<b>Long handle</b>						
	● Black	X	P9MSVX0N	1SFA184392R9006	1	0.068
	● Black	X	P9MSVX5N	1SFA184393R9006	1	0.068



# Modular metal range

## Non-illuminated selector switches - 5-position



1SFC151511V0001

P9MSMYOR

### Description

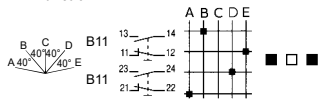
Each reference includes the satin chrome metal body and nut together with the holder.

Operating principle	Color	CAM function	Type	Order code	Pkg qty	Weight (1 pce) kg
<b>Short handle</b>						
	● Black	W	P9MSMW0N	1SFA184360R9006	1	0.065
	● Red	Y	P9MSMY0R	1SFA184351R9001	1	0.065
	● Black	Y	P9MSMY0N	1SFA184350R9006	1	0.065

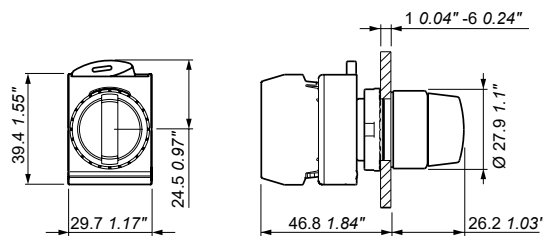
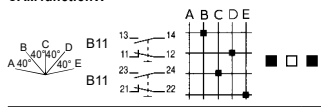
### Contacts actuated

Positions	Contacts	Position on flange
		2 3 1

#### CAM function Y



#### CAM function W



P9MSM  
Dimensions (mm, inches)

# Modular metal range

## Key-operated selector switches - 2-position



P9MSCI0C37 with holder

1SFC151469V0001











P9MSCI0C95

1SFC151516V0001

### Description

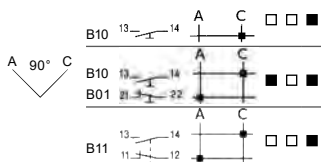
Each reference includes the satin chrome metal body and nut together with the holder.

Operating principle	Key code	Key head color	CAM function	Type	Order code	Pkg qty	Weight (1 pce) kg
 Key can be removed in B only	37	Red/Metal	I	P9MSCI0C37	1SFA192162R9006	1	0.120
	01	Metal	I	P9MSCI0C01	1SFA192150R9006	1	0.120
	95	Metal	I	P9MSCI0C95	1SFA184403R9006	1	0.120
 Key can be removed in C only	01	Metal	I	P9MSCI0E01	1SFA192165R9006	1	0.120
	95	Metal	I	P9MSCI0E95	1SFA184404R9006	1	0.120
 Key can be removed in B and C	95	Metal	I	P9MSCI0N95	1SFA184405R9006	1	0.120
 Key can be removed in A only	37	Red/Metal	D	P9MSCD0A37	1SFA192117R9006	1	0.120
	01	Metal	D	P9MSCD0A01	1SFA192105R9006	1	0.120
	95	Metal	D	P9MSCD0A95	1SFA184400R9006	1	0.120
 Key can be removed in C only	01	Metal	D	P9MSCD0E01	1SFA192120R9006	1	0.120
	95	Metal	D	P9MSCD0E95	1SFA184401R9006	1	0.120
 Key can be removed in A and C positions	37	Red/Metal	D	P9MSCD0K37	1SFA192147R9006	1	0.120
	01	Metal	D	P9MSCD0K01	1SFA192135R9006	1	0.120
	95	Metal	D	P9MSCD0K95	1SFA184402R9006	1	0.120
 Key can be removed in B position	37	Red/Metal	I	P9MSCI5C37	1SFA192267R9006	1	0.120
	01	Metal	I	P9MSCI5C01	1SFA192255R9006	1	0.120
	95	Metal	I	P9MSCI5C95	1SFA184410R9006	1	0.120
 Key can be removed in A position	37	Red/Metal	D	P9MSCD5A37	1SFA192252R9006	1	0.120
	01	Metal	D	P9MSCD5A01	1SFA192240R9006	1	0.120
	95	Metal	D	P9MSCD5A95	1SFA184409R9006	1	0.120

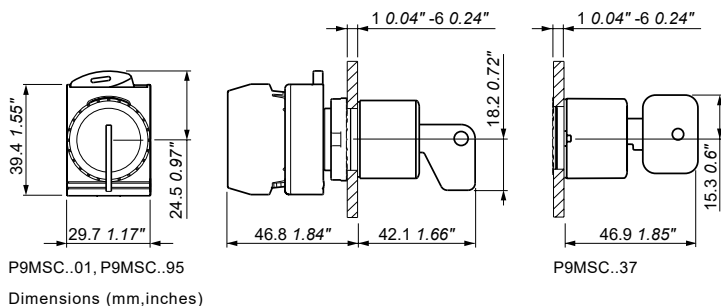
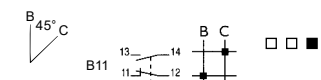
### Contacts actuated

Positions	Contacts	Position on flange
2 3 1		

#### CAM function D



#### CAM function I



P9MSC..01, P9MSC..95  
Dimensions (mm, inches)

P9MSC..37

# Modular metal range

## Key-operated selector switches - 3-position



P9MSCZ0T37  
with holder

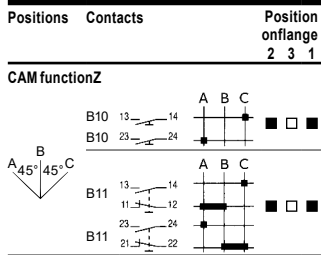
1SFC151489V0001



P9MSCZ0T95

1SFC151516V0001

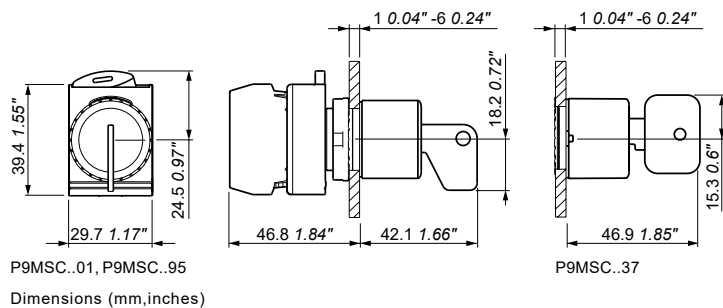
### Contacts actuated



### Description

Each reference includes the satin chrome metal body and nut together with the holder.

Operating principle	Key code	Key head color	Key head color	CAM function	Type	Order code	Pkg qty	Weight (1 pce) kg
 Key can be removed in all positions	37	Red/Metal	Z	P9MSCZ0T37	1SFA192702R9006	1	0.120	
	01	Metal	Z	P9MSCZ0T01	1SFA192690R9006	1	0.120	
	95	Metal	Z	P9MSCZ0T95	1SFA184439R9006	1	0.120	
Key can be removed in A position only	95	Metal	Z	P9MSCZ0A95	1SFA184433R9006	1	0.120	
Key can be removed in B position only	95	Metal	Z	P9MSCZ0C95	1SFA184434R9006	1	0.120	
Key can be removed in A and B positions	95	Metal	Z	P9MSCZ0H95	1SFA184436R9006	1	0.120	
Key can be removed in B and C positions	95	Metal	Z	P9MSCZ0N95	1SFA184438R9006	1	0.120	
 Key can be removed in position B only	95	Metal	Z	P9MSCZ1C95	1SFA184449R9006	1	0.120	
Key can be removed in A and C positions	95	Metal	Z	P9MSCZ1N95	1SFA184451R9006	1	0.120	



# Modular metal range

## Key-operated selector switches - 3-position



1SFC151470V0001

P9MSCZ3C01 with holder



1SFC151516V0001

P9MSCZ0A95

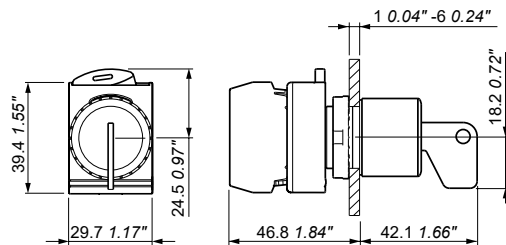
### Contacts actuated

Positions	Contacts	Position on flange
CAM function Z		2 3 1
B10	13-14	■ □ ■
B10	23-24	■ □ ■
B11	13-14	■ □ ■
B11	11-12	■ □ ■
B11	23-24	■ □ ■
B11	21-22	■ □ ■

### Description

Each reference includes the satin chrome metal body and nut together with the holder.

Operating principle	Key code	Key head color	CAM function	Type	Order code	Pkg qty	Weight (1 pce) kg
	01	Metal	Z	P9MSCZ3C01	1SFA193110R9006	1	0.120
	95	Metal	Z	P9MSCZ3C95	1SFA184467R9006	1	0.120
	01	Metal	Z	P9MSCZ5A01	1SFA193020R9006	1	0.120
	95	Metal	Z	P9MSCZ5A95	1SFA184461R9006	1	0.120
	01	Metal	Z	P9MSCZ5H01	1SFA193050R9006	1	0.120
	95	Metal	Z	P9MSCZ5C95	1SFA184462R9006	1	0.120



P9MSC..01, P9MSC..95  
Dimensions (mm, inches)



# Modular metal range

## Key-operated selector switches - 4-position



1SFC151470V0001

P9MSCX0A95 with holder




P9MSCX0A95

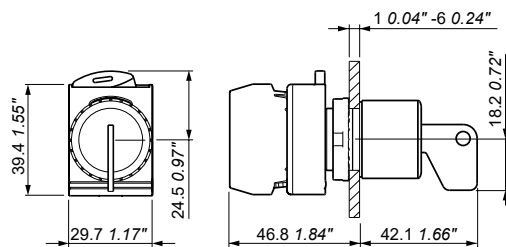
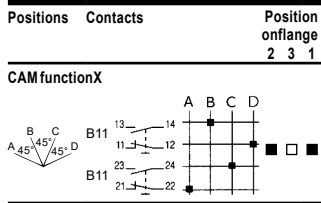
1SFC151516V0001

### Description

Each reference includes the satin chrome metal body and nut together with the holder.

Operating principle	Key code	Key head color	CAM function	Type	Order code	Pkg qty	Weight (1 pce) kg
 Key can be removed in A position	95	Metal	X	P9MSCX0A95	1SFA184468R9006	1	0.120
	01	Metal	X	P9MSCX0Z01	1SFA193335R9006	1	0.120
Key can be removed in all positions	95	Metal	X	P9MSCX0Z95	1SFA184482R9006	1	0.120

### Contacts actuated



P9MSC..01, P9MSC..95  
Dimensions (mm, inches)

# Modular metal range

## Joysticks- 2-position and 4-position



P9MMN2A with holder

1SFC151477V0001



P9MMN2F

1SFC151574V0001



P9MMB2FG

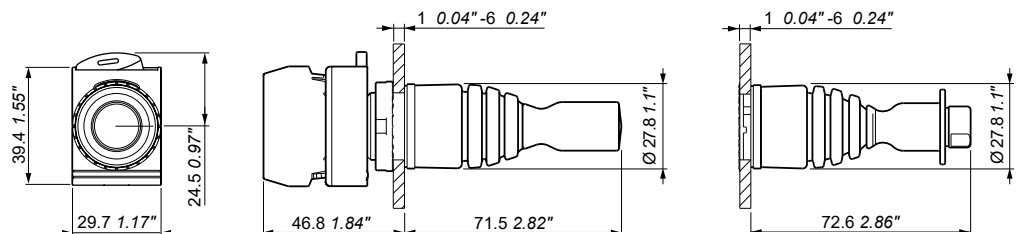
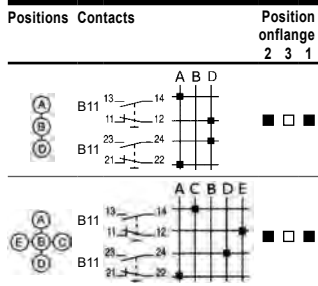
1SFC151576V0001

### Description

Each reference includes the satin chrome metal body and nut together with the holder.

Position	Material Color	Type	Order code	Pkg qty	Weight (1 pce) kg
<b>Without latching function</b>					
↑ ↓	Rubber/Black	P9MMN2F	1SFA184700R9006	1	0.090
↑ ↓	Rubber/Black	P9MMN2T	1SFA184701R9006	1	0.090
↑ ↓	Rubber/Black	P9MMN2A	1SFA184702R9006	1	0.090
↑ ↓	Rubber/Black	P9MMN2B	1SFA184703R9006	1	0.090
↑ ↓	Rubber/Black	P9MMN4F	1SFA184720R9006	1	0.090
↑ ↓	Rubber/Black	P9MMN4T	1SFA184721R9006	1	0.090
↑ ↓	Silicone/Grey	P9MMN4TG	1SFA184716R9006	1	0.090
<b>With latching function</b>					
↑ ↓	Rubber/Black	P9MMB2F	1SFA184710R9006	1	0.090
↑ ↓	Silicone/Grey	P9MMB2FG	1SFA184709R9006	1	0.090
↑ ↓	Rubber/Black	P9MMB2T	1SFA184711R9006	1	0.090
↑ ↓	Rubber/Black	P9MMB2A	1SFA184712R9006	1	0.090
↑ ↓	Rubber/Black	P9MMB4F	1SFA184740R9006	1	0.090
↑ ↓	Rubber/Black	P9MMB4T	1SFA184741R9006	1	0.090
↑ ↓	Silicone/Grey	P9MMB4TG	1SFA184744R9006	1	0.090

### Contacts actuated



P9MMN, P9MMB  
Dimensions (mm, inches)

# Modular metal range

## Joysticks - Accessories



1SFC151435V0001

P9ARSCMN



1SFC151614V0001

P9ARSCMB



1SFC151434V0001

P9ARSGMN



1SFC151613V0001

P9ARSGMB

### Accessories

Description	Color	Type	Order code	Pkg qty	Weight (1 pce) kg
Rubber boot for joystick without latching	● Black	P9ARSCMN	1SFA188043R8000	1	0.008
Rubber boot for joystick with latching	● Black	P9ARSCMB	1SFA188044R8000	1	0.008
Silicone boot for joystick without latching	● Grey	P9ARSGMN	1SFA187495R8000	1	0.008
Silicone boot for joystick with latching	● Grey	P9ARSGMB	1SFA187496R8000	1	0.008

# Modular metal range

## Toggle switches



1SFC151480V0001

P9MCD  
with holder



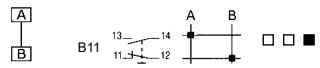
1SFC151480V0001

P9MCD

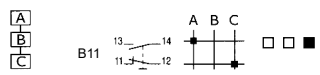
### Contacts actuated

Positions	Contacts	Position on flange
		2 3 1

#### CAM function D



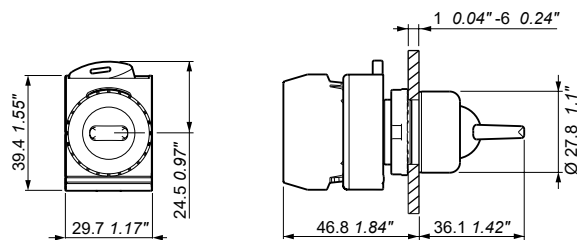
#### CAM function B



### Description

Each reference includes the satin chrome metal body and nut together with the holder.

Operating principle	CAM function	Type	Order code	Pkg qty	Weight (1 pce) kg
<b>2 position</b>					
	D	P9MCD	1SFA184695R9006	1	0.073
<b>3 position</b>					
	B	P9MCB	1SFA184696R9006	1	0.073
	B	P9MCC	1SFA184697R9006	1	0.073



P9MC  
Dimensions (mm, inches)

# Modular metal range Selector pushbuttons



P9MPS22G  
with holder

1SFC15147AV0001



P9MPS22G

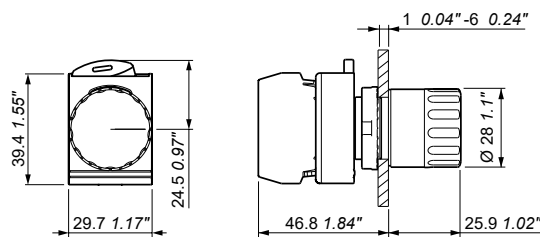
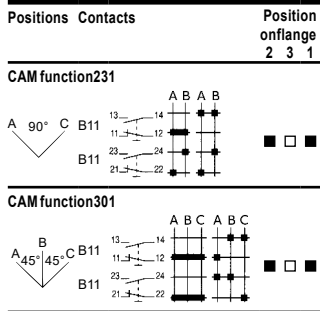
1SFC15151TV0001

## Description

Each reference includes the satin chrome metal body and nut together with the holder.

Operating principle	CAM function	Type	Order code	Pkg qty	Weight (1 pce) kg
<b>2 position</b>					
	231	P9MPS22G	1SFA184691R9006	1	0.069
<b>3 position</b>					
	301	P9MPS34G	1SFA184693R9006	1	0.065

## Contacts actuated



P9MPS  
Dimensions (mm, inches)

# Modular metal range

## Holders and contact blocks for front mounting



1SFC151627V0001

P9ACFS3



1SFC151628V0001

P9ACFS5



1SFC151611V0001

P9B10VN



1SFC151610V0001

P9B20VN



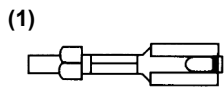
1SFC151611V0001

P9B10VA



1SFC151612V0001

P9B10FN



1x (6.35 x 0.8 mm)  
2x (2.8 x 0.8 mm)

### Screw terminals

Description	Contacts	Type	Order code	Pkg qty	Weight (1 pce)
					kg

### Holders

3-position	- -	P9ACFS3	1SFA187841R8000	1	0.009
5-position	- -	P9ACFS5	1SFA187842R8000	1	0.016

### Single contact blocks

For 3 & 5-position holder	1 0	P9B10VN	1SFA187002R8001	1	0.009
	1 0	P9B10VN-AA	1SFA215832R8001	200	0.009
	0 1	P9B01VN	1SFA187001R8010	1	0.009

### Double contact blocks

For 3 & 5-position holder	2 0	P9B20VN	1SFA187009R8002	1	0.016
	0 2	P9B02VN	1SFA187008R8020	1	0.016
	0 2	P9B02VN-AA	1SFA205236R8020	200	0.016
	1 1	P9B11VN	1SFA187000R8011	1	0.016
	1 1	P9B11VN-AA	1SFA242712R8011	500	0.016

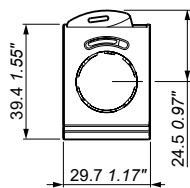
### Single contact blocks with N.O. early make contacts and N.C. late break contacts

For 3 & 5-position holder	1 0	P9B10VA	1SFA187004R8201	1	0.009
	0 1	P9B01VR	1SFA187003R8110	1	0.010

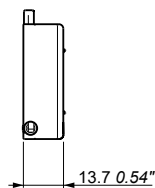
### Faston terminals

#### Single contact blocks (1)

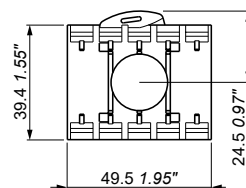
For 3 & 5-position holder	1 0	P9B10FN	1SFA187013R8301	1	0.009
	1 0	P9B10FN-AA	1SFA215835R8301	200	0.009
	0 1	P9B01FN	1SFA187012R8310	1	0.009



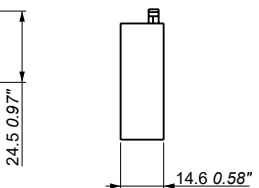
P9ACFS3



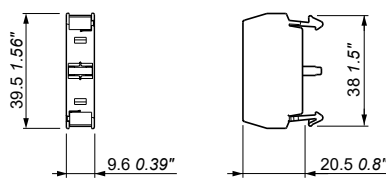
P9ACFS5



P9B10VN, P9B01VN, P9B10VA, P9B01VR



P9B20VN, P9B02VN, P9B11VN



P9B10FN, P9B01FN

Dimensions (mm, inches)

# Modular metal range

## Power supplies



P9PDNV0

1SFC151501V0001



P9PDTV0

1SFC151500V0001



P9PDNF0

1SFC151502V0001

Description	Type	Order code	Pkg qty	Weight (1 pce) kg
<b>Screw terminals</b>				
Full voltage IEC:BA9S max 380 V - 2 W bulb not included	P9PDNV0	1SFA187020R1080	1	0.010
UL - CSA:BA9S max 250 V - 2 W bulb not included	P9PDNV0-AA	1SFA215831R1000	200	0.010
Test full voltage IEC:BA9S max 380 V - 2 W bulb not included	P9PDTV0	1SFA187027R8000	1	0.018
UL - CSA:BA9S max 250 V - 2 W bulb not included				
<b>Faston terminals</b>				
Full voltage IEC:BA9S max 380 V - 2 W bulbs not included	P9PDNF0	1SFA187055R1300	1	0.013
UL - CSA:BA9S max 250 V - 2 W bulbs not included	P9PDNF0-AA	1SFA215834R1300	200	0.013

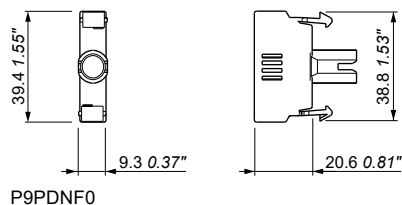
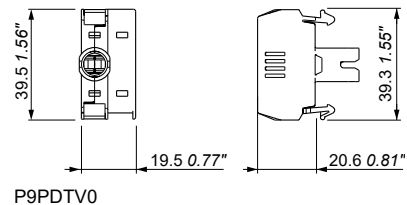
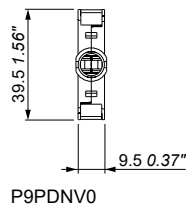
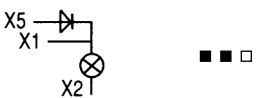
### Contacts actuated

Power supplies	Position on flange
	2 3 1

P9PDNV0



P9PDTV0 - P9PDNF0



Dimensions (mm, inches)

## Modular metal range

### LEDbulbs for power supplies



BA9S6LEDB

1SFC151630/0001

Color	Type	Order code	Pkg qty	Weight (1 pce) kg
<b>Rated voltage 6 V AC/DC</b>				
● Red	BA9S6LEDR	1SFA187163R1001		0.002
● Green	BA9S6LEDV	1SFA187164R1002		0.002
● Yellow	BA9S6LEDG	1SFA187161R1003		0.002
● Blue	BA9S6LEDL	1SFA187162R1001		0.002
○ White	BA9S6LEDB	1SFA187160R1005		0.002
<b>Rated voltage 12 V AC/DC</b>				
● Red	BA9S12LEDR	1SFA187168R1011		0.002
● Green	BA9S12LEDV	1SFA187169R1012		0.002
● Yellow	BA9S12LEDG	1SFA187166R1013		0.002
● Blue	BA9S12LEDL	1SFA187167R1014		0.002
○ White	BA9S12LEDB	1SFA187165R1015		0.002
<b>Rated voltage 24 V AC/DC</b>				
● Red	BA9S24LEDR	1SFA187173R1021		0.002
● Green	BA9S24LEDV	1SFA187174R1022		0.002
● Yellow	BA9S24LEDG	1SFA187171R1023		0.002
● Blue	BA9S24LEDL	1SFA187172R1024		0.002
○ White	BA9S24LEDB	1SFA187170R1025		0.002
<b>Rated voltage 48 V AC/DC</b>				
● Red	BA9S48LEDR	1SFA187178R1031		0.002
● Green	BA9S48LEDV	1SFA187179R1032		0.002
● Yellow	BA9S48LEDG	1SFA187176R1033		0.002
● Blue	BA9S48LEDL	1SFA187177R1034		0.002
○ White	BA9S48LEDB	1SFA187175R1035		0.002
<b>Rated voltage 60 V AC/DC</b>				
○ White	BA9S60LED	1SFA187191R1045		0.002
<b>Rated voltage 110 - 120 V AC/DC</b>				
● Red	BA9S110LEDR	1SFA187183R1041		0.002
● Green	BA9S110LEDV	1SFA187184R1042		0.002
● Yellow	BA9S110LEDG	1SFA187181R1043		0.002
● Blue	BA9S110LEDL	1SFA187182R1045		0.002
○ White	BA9S110LEDB	1SFA187180R1045		0.002
<b>Rated voltage 130 V AC/DC</b>				
○ White	BA9S130LED	1SFA187190R1045		0.002
<b>Rated voltage 230 V AC</b>				
● Red	BA9S230LEDR	1SFA187188R1051		0.002
● Green	BA9S230LEDV	1SFA187189R1052		0.002
● Yellow	BA9S230LEDG	1SFA187186R1053		0.002
● Blue	BA9S230LEDL	1SFA187187R1054		0.002
○ White	BA9S230LEDB	1SFA187185R1055		0.002



# Modular metal range

## LEDblocks for front mouting



P9PLNVDR

1SFC151489V/0001

### Standard Light

Color	Type	Order code	Pkg qty	Weight (1 pce) kg
<b>Rated voltage 24 V AC/DC</b>				
● Red	P9PLNVDR	1SFA197004R1011	1	0.020
● Green	P9PLNVDV	1SFA197005R1012	1	0.020
● Yellow	P9PLNV DG	1SFA197002R1013	1	0.020
● Blue	P9PLNV DL	1SFA197003R1014	1	0.020
○ White	P9PLNV DB	1SFA197001R1015	1	0.020

### Rated voltage 120 V AC

● Red	P9PLNVJR	1SFA197010R1041	1	0.020
● Green	P9PLNVJV	1SFA197011R1042	1	0.020
● Yellow	P9PLNVJG	1SFA197008R1043	1	0.020
● Blue	P9PLNVJL	1SFA197009R1044	1	0.020
○ White	P9PLNVJB	1SFA197007R1045	1	0.020

### Rated voltage 230 V AC

● Red	P9PLNVNR	1SFA197016R1071	1	0.020
● Green	P9PLNVNV	1SFA197017R1072	1	0.020
● Yellow	P9PLNVNG	1SFA197014R1073	1	0.020
● Blue	P9PLNVNL	1SFA197015R1074	1	0.020
○ White	P9PLNVNB	1SFA197013R1075	1	0.020

### Flashing Light

Color	Type	Order code	Pkg qty	Weight (1 pce) kg
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### Rated voltage 24 V AC/DC

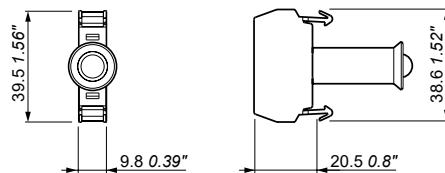
● Red	P9PLFVDR	1SFA197022R1011	1	0.020
● Green	P9PLFVDV	1SFA197023R1012	1	0.020
● Yellow	P9PLFVDG	1SFA197020R1013	1	0.020
● Blue	P9PLFVDL	1SFA197021R1014	1	0.020
○ White	P9PLFVDB	1SFA197019R1015	1	0.020
● Orange	P9PLFVDA	1SFA197018R1019	1	0.020

### Rated voltage 120 V AC

● Red	P9PLFVJR	1SFA197028R1041	1	0.020
● Yellow	P9PLFVJG	1SFA197026R1043	1	0.020
○ White	P9PLFVJB	1SFA197025R1045	1	0.020

### Rated voltage 230 V AC

● Red	P9PLFVNR	1SFA197034R1071	1	0.020
● Yellow	P9PLFVNG	1SFA197032R1073	1	0.020
○ White	P9PLFVNB	1SFA197031R1075	1	0.020



P9PL

Dimensions (mm, inches)

## Modular metal range

### Accessories



P9ACRCL

1SFC151483V0001



P9ACDPP

1SFC151623V0001



P9ACWAF

1SFC151625V0001



P9ARAM32

1SFC151484V0001



P9ACA6

1SFC151482V0001



080CPR

1SFC151460V0001




080CPN

1SFC151481V0001



P9ARCST

1SFC151465V0001

Description	Contacts	Type	Order code	Pkg qty	Weight (1 pce)
					kg

#### Protection cover

Protection cover padlockable for standard pushbuttons, illuminated pushbuttons, selector switches, illuminated selector switches

P9ACRCL

1SFA187840R8000

1

0.039

#### Maintained accessory

Device for standard pushbuttons, illuminated pushbuttons:  
To be used only with contact blocks P9B01VN, P9B01VR, P9B10VA and P9B01FN

P9ACDPP

1SFA187843R8000

1

0.012

#### Tools

Locking ring wrench

P9ACWAF

1SFA187845R8000

1

0.037

#### Adapter ring

Adapter ring for 30 mm hole to mount P922 mm in a 30 mm hole

P9ARAM32

1SFA188801R8000

1

0.006

#### Terminal adapter

PCB adapter for faston contacts

P9ACA6

1SFA188804R8000

1

0.051

#### Rubber protective caps (IP66) for standard pushbuttons

##### Flush pushbuttons

Description	Type	Order code	Pkg qty	Weight (1 pce)
<b>Nitrile rubber</b>				kg
● Red	080CPR	1SFA170191R8000	1	0.004
● Green	080CPV	1SFA170192R8000	1	0.004
● Black	080CPN	1SFA170190R8000	1	0.004
○ Clear	080CPT	1SFA170198R8000	1	0.004

##### Extended pushbuttons

○ Clear	P9ARCST	1SFA187490R8000	1	0.004
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## Modular metal range

### Metal enclosures with holes and accessories



080SP8

1SFC151481V0001



080SP12

1SFC151489V0001



080SP18

1SFC151486V0001



080SP24

1SFC151485V0001

#### Enclosure with holes for pilot devices

Empty enclosures in aluminium, IP66. Grey color.

Description	Hole types	Type	Order code	Pkg qty	Weight (1 pce) kg
<b>With hole for cable gland</b>					
1-seat	1	080SP1	1SFA170801R1001	1	0.313
2-seat	2	080SP2	1SFA170802R1002	1	0.440
3-seat	3	080SP3	1SFA170803R1003	1	0.695
4-seat	4	080SP4	1SFA170804R1004	1	0.435
6-seat	6	080SP6	1SFA170806R1006	1	0.694
8-seat	8	080SP8	1SFA170807R1008	1	0.932
12-seat	12	080SP12	1SFA170808R1012	1	1.685
18-seat	18	080SP18	1SFA170809R1018	1	2.891
24-seat	24	080SP24	1SFA170810R1024	1	2.912
<b>With hole for cable gland and deep base</b>					
1-seat	1M	080SP1M	1SFA170831R1001	1	0.402
2-seat	2M	080SP2M	1SFA170832R1002	1	0.540
4-seat	4M	080SP4M	1SFA170834R1004	1	0.530
<b>Without hole for cable gland</b>					
1-seat	1	080SP1SFE	1SFA170836R3001	1	0.335
2-seat	2	080SP2SFE	1SFA170842R3002	1	0.442
3-seat	3	080SP3SFE	1SFA170848R3003	1	0.715
4-seat	4	080SP4SFE	1SFA170850R3004	1	0.453
6-seat	6	080SP6SFE	1SFA170852R3006	1	0.705
8-seat	8	080SP8SFE	1SFA170854R3008	1	0.990
12-seat	12	080SP12SFE	1SFA170857R3012	1	1.737
<b>Without hole for cable gland and deep base</b>					
1-seat	1M	080SP1MSFE	1SFA170839R3001	1	0.416

## Modular metal range

### Metal enclosures without holes



080SP8SFC

1SFC151482V/0001



080SP8SF

1SFC151482V/0001

#### Enclosure without holes for pilot devices

Empty enclosures in aluminium, IP66. Grey color.

Description	Hole types	Type	Order code	Pkg qty	Weight (1 pce) kg
<b>With hole for cable gland</b>					
	1	080SP1SFC	1SFA170835R2000	1	0.324
	2	080SP2SFC	1SFA170841R2000	1	0.444
	3	080SP3SFC	1SFA170847R2000	1	0.708
	8	080SP8SFC	1SFA170853R2000	1	0.977
	12	080SP12SFC	1SFA170856R2000	1	1.720
	18	080SP18SFC	1SFA170859R2000	1	2.948
<b>With hole for cable gland and deep base</b>					
	1M	080SP1MSFC	1SFA170838R2000	1	0.405
	2M	080SP2MSFC	1SFA170844R2000	1	0.542
<b>Without hole for cable gland</b>					
	1	080SP1SF	1SFA170837R4000	1	0.333
	2	080SP2SF	1SFA170843R4000	1	0.446
	3	080SP3SF	1SFA170849R4000	1	0.735
	8	080SP8SF	1SFA170855R4000	1	1.019
	12	080SP12SF	1SFA170858R4000	1	1.775
	18	080SP18SF	1SFA170861R4000	1	3.050
<b>Without hole for cable gland and deep base</b>					
	1M	080SP1MSF	1SFA170840R4000	1	0.414
	2M	080SP2MSF	1SFA170846R4000	1	0.553

## Modular metal range

### Technical data

#### Standards and approvals

IEC/ EN60947-1	Low Voltage switchgear and controlgear - Part 1: General rules
IEC/ EN60947-5-1	Low Voltage switchgear and controlgear - part 5-1: control circuit devices and switching elements - Electromechanical control circuit devices
IEC/ EN60073	Basic and safety principles for man-machine interface, marking and identification coding principles for indicators and actuators
IEC/ EN60529	Degrees of protection provided by enclosures (IP code)
UL 508	Industrial control equipment
CSAC22.2 No 14	Industrial control equipment

#### Environmental data

##### Degrees of protection

Operators	IEC/EN DIN	UL/CSA
Modular metal range: P9M	IP66	Type 1, 3, 3R, 3S, 4, 4X, 12, 13
Contact block: P9B	IP2x	-
Metallic enclosures: 080SP	IP66	-

##### Temperature

Ambient temperature during operation	-30 to +70 °C
Storage temperature	-40 to +70 °C

#### Terminals

##### Screws

Connectable area	min. 1 x 0.34 mm <sup>2</sup> /AWG22 max. 2 x 4 mm <sup>2</sup> / 2 x AWG12
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##### Tightening torque

Operators locking nut	Min. 2 Nm / Max. 2.3 Nm
Cable terminals	0.9 Nm

#### Electrical data

P9B Standard contact blocks

Self cleaning silver contacts, NCcontact with positive opening.

##### Ratings as per IEC 60947-5-1

Rated insulation voltage, U <sub>i</sub>	690 V
Rated thermal current, I <sub>th</sub>	10 A
Rated operational current, I <sub>e</sub>	at: 24 V 10 A
Utilization category AC 15,	at: 48 V 10 A
	at: 60 V 10 A
	at: 110 V 6 A
	at: 220V 3 A
	at: 380 V 2 A
	at: 500 V 1.5 A
	at: 600 V 1.2 A
Rated operational current, I <sub>e</sub>	at: 24 V 2.5 A
utilisation category DC 13,	at: 48 V 1.4 A
	at: 60 V 1 A
	at: 110 V 0.55 A
	at: 220V 0.27 A
	at: 300 V 0.2 A
Rated impulse withstand voltage	U <sub>imp</sub> 4 kV

##### Performances according to CSA and UL

AC heavy duty	(A600)
DC standard duty	(Q300)

##### Number of electrical contacts

Holder	Standard 3 positions	Optional 5 positions
Momentary pushbuttons		
Momentary mushroom pushbuttons	Max 6	Max 8
Standard selector switches	Max 4	Max 8
Key selector switches		
Joysticks		
Selector pushbuttons	Max 4	-
Toggle switches		
Maintained mushroom pushbuttons	Max 4	-
Illuminated pushbuttons		
Illuminated momentary mushroom pushbuttons	Max 4	Max 4
Illuminated selector switches		
Illuminated maintained mushroom pushbuttons	Max 2	Max 2

##### Short circuit protection

With fuses 16 AgGacc. to IEC60269-1 and IEC60269-3

##### Minimum switching capacity

Standard contact blocks	12 VDC	5 mA
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## Modular metal range

### Technical data

#### Mechanical endurance

Joysticks	500 000 operations
Keypushbuttons	
Toggle switches	
Illuminated selector switches	
Maintained accessory	
Standard selector switches	1 million operations
Keyselector switches	
Illuminated pushbuttons	
Selector pushbuttons	
Standard pushbuttons	3 million operations
Mushroom head pushbuttons	

#### Performances of the contacts

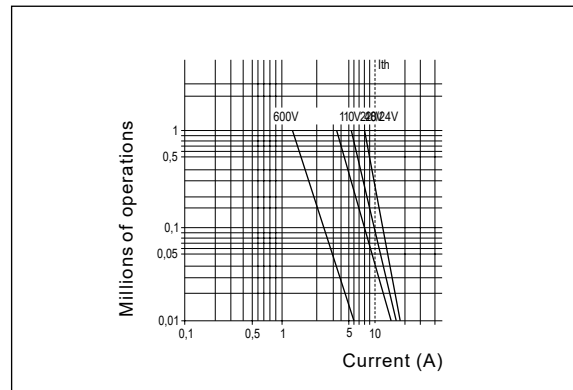
- Slow acting
- Self-cleaning sliding
- NCforced breaking
- Double movable bridge
- Four switching points
- Double break

#### Identification of the terminals

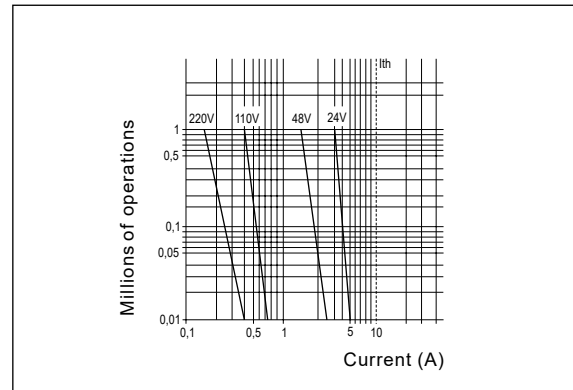
According EN50013

#### Electrical endurance

Alternative current 50/60Hz cat. AC 15



Direct current cat. DC 13



#### Rear panel modularity

The P9 series is composed with 10 mm or a multiple of 10 mm modular units, fitted side by side on a proper mounting flange.

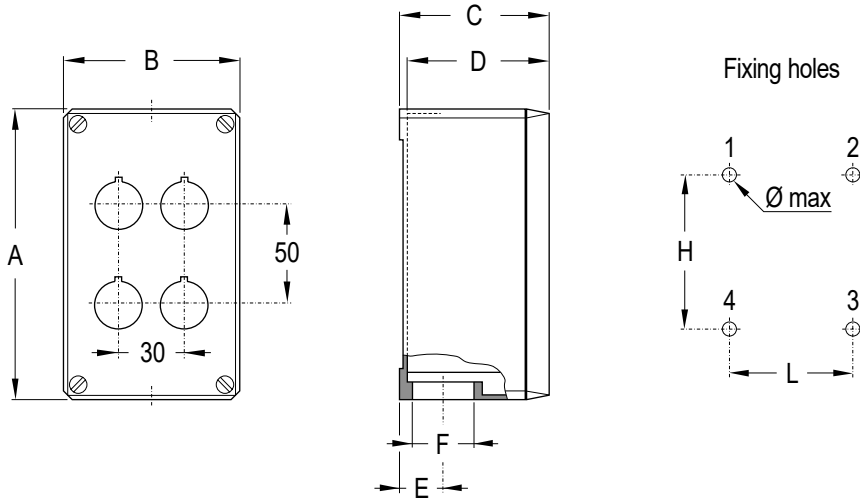
The standard operators are supplied with a three position flange with a capacity of 3 units of 10 mm or 1 of 10 mm and 1 of 20 mm or 1 of 30 mm.

When the three position flange is not enough to satisfy the applications needs, the five position flange is required to add two more units of 10 mm mounted side by side.

Using the five position flange take into account the bigger with (50 mm instead of 30 mm).

# Modular metal range

## Dimension



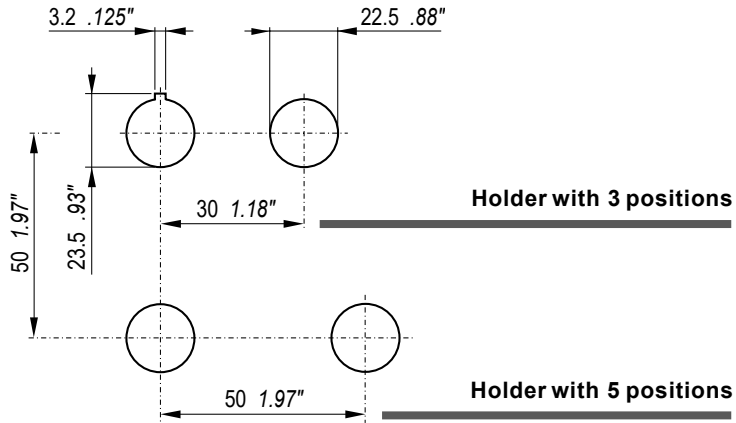
Hole type	Holes Ø22		Dimensions										Fixing templates			
	Vertic.	Horizont.	A		B		C		D		E		F	H x L x Ø max		Position of the holes
			mm	in	mm	in	mm	in	mm	in	mm	in		mm	in	
1	1	-	87	3.43	87	3.43	75	2.95	72	72	21.5	0.85	PG21	74x55x4	2.91x2.17x0.16	1-3
1M	1	-	87	3.43	87	3.43	100	3.94	97	97	21.5	0.85	PG21	68x55x4	2.68x2.17x0.16	1-3
2	2	-	145	5.71	87	3.43	75	2.95	72	72	21.5	0.85	PG21	132x55x4	5.2x2.17x0.16	1-3
2M	2	-	145	5.71	87	3.43	100	3.94	97	97	21.5	0.85	PG21	126x55x4	4.96x2.17x0.16	1-3
3	3	-	195	7.68	87	3.43	100	3.94	97	97	21.5	0.85	PG21	176x55x4	6.93x2.17x0.16	1-3
4	2	2	145	5.71	87	3.43	75	2.95	72	72	21.5	0.85	PG21	132x55x4	5.2x2.17x0.16	1-3
4M	2	2	145	5.71	87	3.43	100	3.94	97	97	21.5	0.85	PG21	126x55x4	4.96x2.17x0.16	1-3
6	3	2	195	7.68	87	3.43	100	3.94	97	97	21.5	0.85	PG21	176x55x4	6.93x2.17x0.16	1-3
8	2	4	152	5.98	152	5.98	101.5	4	98.5	98.5	27	1.06	PG29	136x119x6	5.35x4.69x0.24	1-2-3-4
12	3	4	205	8.07	230	9.06	101.5	4	98.5	98.5	27	1.06	PG29	172x214x6	6.77x8.43x0.24	1-2-3-4
18	3	6	257	10.12	300	11.81	101.5	4	98.5	98.5	35	1.38	PG36	221x282x6	8.7x11.1x0.24	1-2-3-4
24	4	6	257	10.12	300	11.81	101.5	4	98.5	98.5	35	1.38	PG36	221x282x6	8.7x11.1x0.24	1-2-3-4

## Modular metal range

### Drilling plan

#### Mounting

Fitted for panels 1 to 6 mm thick with holes drilled according to IEC60947-5-1 standards.





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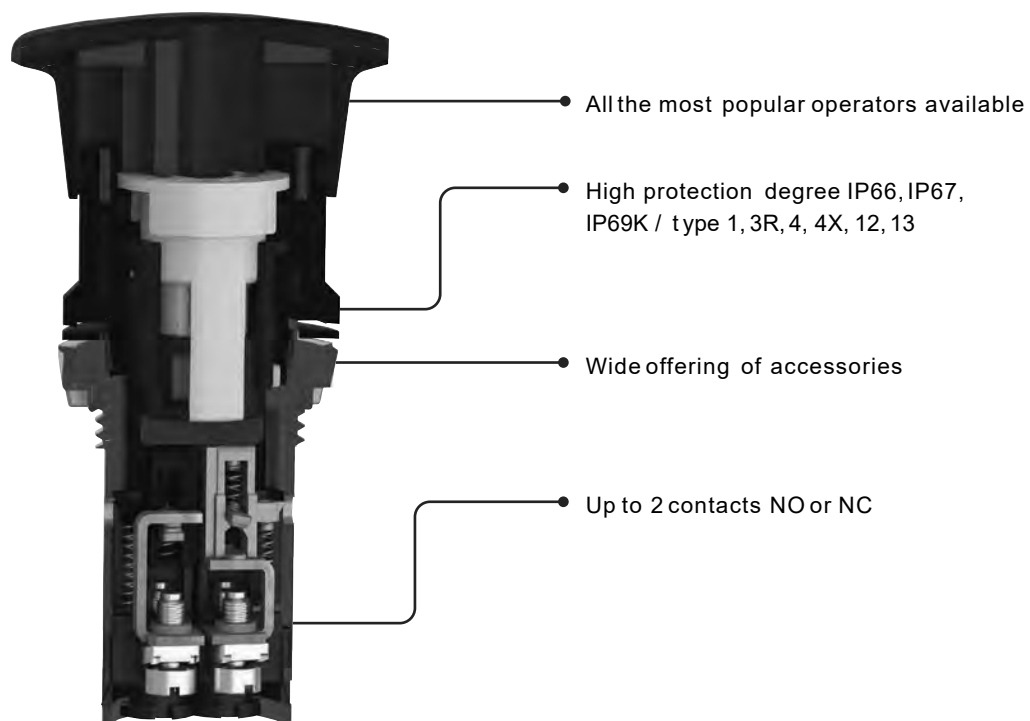
# Pilot devices

## Compact range

	<b>Ordering details</b>
89	Non-illuminated pushbuttons
93	Illuminated pushbuttons
97	Mushroom pushbuttons
98	Emergency stop pushbuttons
99	Machine stop pushbuttons
100	Heavy duty pushbuttons
901	Pilot lights
103	Pilot lights BA9s
103	LED bulbs
105	Selector switches
107	Buzzers
<b>108</b>	<b>Accessories</b>
<b>110</b>	<b>Technical data</b>
<b>116</b>	<b>Drilling plan</b>

## Compact range

The compact range is the most efficient solution reducing both installation time and cost thanks to the all-in-one design. It is perfect for tough environment thanks to the market leading level of dust and water resistance.

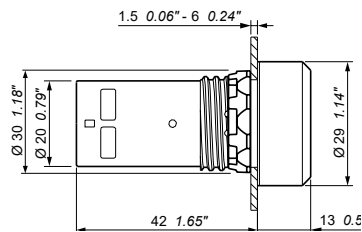


# Compact range

## Non-illuminated flush pushbuttons - Momentary



Operator	Bezel	Contacts	Type	Order code	Pkg qty	Weight (1 pce)
						kg
● Red	Black plastic	1 0	CP1-10R-10	1SFA619100R1011	10	0.018
		0 1	CP1-10R-01	1SFA619100R1041	10	0.018
		1 1	CP1-10R-11	1SFA619100R1071	10	0.022
	Chrome metal	2 0	CP1-10R-20	1SFA619100R1021	10	0.022
		0 2	CP1-10R-02	1SFA619100R1051	10	0.022
		1 0	CP1-30R-10	1SFA619100R3011	10	0.032
● Green	Black plastic	0 1	CP1-30R-01	1SFA619100R3041	10	0.032
		1 1	CP1-30R-11	1SFA619100R3071	10	0.036
		2 0	CP1-30R-20	1SFA619100R3021	10	0.036
	Chrome metal	0 2	CP1-30R-02	1SFA619100R3051	10	0.036
		1 0	CP1-10G-10	1SFA619100R1012	10	0.018
		1 1	CP1-10G-11	1SFA619100R1072	10	0.022
● Yellow	Black plastic	2 0	CP1-10G-20	1SFA619100R1022	10	0.022
		1 0	CP1-30G-10	1SFA619100R3012	10	0.032
		1 1	CP1-30G-11	1SFA619100R3072	10	0.036
	Chrome metal	2 0	CP1-30G-20	1SFA619100R3022	10	0.036
		1 0	CP1-10Y-10	1SFA619100R1013	10	0.018
		1 1	CP1-10Y-11	1SFA619100R1073	10	0.022
● Blue	Black plastic	2 0	CP1-10Y-20	1SFA619100R1023	10	0.022
		1 0	CP1-30Y-10	1SFA619100R3013	10	0.032
		1 1	CP1-30Y-11	1SFA619100R3073	10	0.036
	Chrome metal	2 0	CP1-30Y-20	1SFA619100R3023	10	0.036
		1 0	CP1-10L-10	1SFA619100R1014	10	0.018
		1 1	CP1-10L-11	1SFA619100R1074	10	0.022
○ White	Black plastic	2 0	CP1-10L-20	1SFA619100R1024	10	0.022
		1 0	CP1-30L-10	1SFA619100R3014	10	0.032
		1 1	CP1-30L-11	1SFA619100R3074	10	0.036
	Chrome metal	2 0	CP1-30L-20	1SFA619100R3024	10	0.036
		1 0	CP1-10W-10	1SFA619100R1015	10	0.018
		1 1	CP1-10W-11	1SFA619100R1075	10	0.022
● Black	Black plastic	2 0	CP1-10W-20	1SFA619100R1025	10	0.022
		1 0	CP1-30W-10	1SFA619100R3015	10	0.032
		1 1	CP1-30W-11	1SFA619100R3075	10	0.036
		2 0	CP1-30W-20	1SFA619100R3025	10	0.036
		1 0	CP1-10B-10	1SFA619100R1016	10	0.018
		0 1	CP1-10B-01	1SFA619100R1046	10	0.018
	Chrome metal	1 1	CP1-10B-11	1SFA619100R1076	10	0.022
		2 0	CP1-10B-20	1SFA619100R1026	10	0.022
		0 2	CP1-10B-02	1SFA619100R1056	10	0.022
		1 0	CP1-30B-10	1SFA619100R3016	10	0.032
		0 1	CP1-30B-01	1SFA619100R3046	10	0.032
		1 1	CP1-30B-11	1SFA619100R3076	10	0.036
	Chrome metal	2 0	CP1-30B-20	1SFA619100R3026	10	0.036
		0 2	CP1-30B-02	1SFA619100R3056	10	0.036



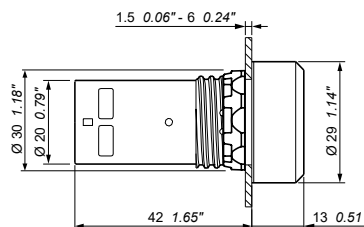
CP1  
Dimensions (mm, inches)

# Compact range

## Non-illuminated flush pushbuttons - Maintained



Operator	Bezel	Contacts	Type	Order code	Pkg qty	Weight (1 pce)	
						kg	
● Red	Black plastic	1 0	CP2-10R-10	1SFA619101R1011	10	0.018	
		0 1	CP2-10R-01	1SFA619101R1041	10	0.018	
		1 1	CP2-10R-11	1SFA619101R1071	10	0.022	
		2 0	CP2-10R-20	1SFA619101R1021	10	0.022	
		0 2	CP2-10R-02	1SFA619101R1051	10	0.022	
	Chrome metal	1 0	CP2-30R-10	1SFA619101R3011	10	0.032	
		0 1	CP2-30R-01	1SFA619101R3041	10	0.032	
		1 1	CP2-30R-11	1SFA619101R3071	10	0.036	
		2 0	CP2-30R-20	1SFA619101R3021	10	0.036	
		0 2	CP2-30R-02	1SFA619101R3051	10	0.036	
● Green	Black plastic	1 0	CP2-10G-10	1SFA619101R1012	10	0.018	
		1 1	CP2-10G-11	1SFA619101R1072	10	0.022	
		2 0	CP2-10G-20	1SFA619101R1022	10	0.022	
	Chrome metal	1 0	CP2-30G-10	1SFA619101R3012	10	0.032	
		1 1	CP2-30G-11	1SFA619101R3072	10	0.036	
		2 0	CP2-30G-20	1SFA619101R3022	10	0.036	
● Yellow	Black plastic	1 0	CP2-10Y-10	1SFA619101R1013	10	0.018	
		1 1	CP2-10Y-11	1SFA619101R1073	10	0.022	
		2 0	CP2-10Y-20	1SFA619101R1023	10	0.022	
	Chrome metal	1 1	CP2-30Y-11	1SFA619101R3073	10	0.036	
		2 0	CP2-30Y-20	1SFA619101R3023	10	0.036	
		1 0	CP2-10L-10	1SFA619101R1014	10	0.018	
● Blue	Black plastic	1 1	CP2-10L-11	1SFA619101R1074	10	0.022	
		2 0	CP2-10L-20	1SFA619101R1024	10	0.022	
		1 0	CP2-30L-10	1SFA619101R3014	10	0.032	
	Chrome metal	2 0	CP2-30L-20	1SFA619101R3024	10	0.036	
		1 0	CP2-10W-10	1SFA619101R1015	10	0.018	
		1 1	CP2-10W-11	1SFA619101R1075	10	0.022	
○ White	Black plastic	2 0	CP2-10W-20	1SFA619101R1025	10	0.022	
		1 0	CP2-30W-10	1SFA619101R3015	10	0.032	
		2 0	CP2-30W-20	1SFA619101R3025	10	0.036	
	● Black	Black plastic	1 0	CP2-10B-10	1SFA619101R1016	10	0.018
			0 1	CP2-10B-01	1SFA619101R1046	10	0.018
			1 1	CP2-10B-11	1SFA619101R1076	10	0.022
2 0			CP2-10B-20	1SFA619101R1026	10	0.022	
Chrome metal		0 2	CP2-10B-02	1SFA619101R1056	10	0.022	
		1 0	CP2-30B-10	1SFA619101R3016	10	0.032	
		0 1	CP2-30B-01	1SFA619101R3046	10	0.032	
		1 1	CP2-30B-11	1SFA619101R3076	10	0.036	
		2 0	CP2-30B-20	1SFA619101R3026	10	0.036	
		2 0	CP2-30B-20	1SFA619101R3026	10	0.036	



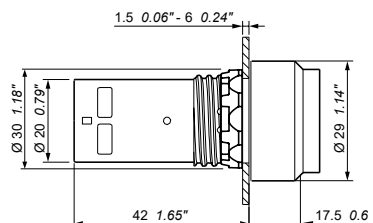
CP2  
Dimensions (mm, inches)

# Compact range

## Non-illuminated extended pushbuttons - Momentary



Operator	Bezel	Contacts	Type	Order code	Pkg qty	Weight (1 pce)		
						kg		
● Red	Black plastic	1 0	CP3-10R-10	1SFA619102R1011	10	0.019		
		0 1	CP3-10R-01	1SFA619102R1041	10	0.019		
		1 1	CP3-10R-11	1SFA619102R1071	10	0.022		
	Chrome metal	2 0	CP3-10R-20	1SFA619102R1021	10	0.022		
		0 2	CP3-10R-02	1SFA619102R1051	10	0.022		
		0 1	CP3-30R-01	1SFA619102R3041	10	0.033		
● Green	Black plastic	1 0	CP3-10G-10	1SFA619102R1012	10	0.019		
		1 1	CP3-10G-11	1SFA619102R1072	10	0.022		
		2 0	CP3-10G-20	1SFA619102R1022	10	0.022		
	Chrome metal	1 0	CP3-30G-10	1SFA619102R3012	10	0.033		
		1 1	CP3-30G-11	1SFA619102R3072	10	0.036		
		2 0	CP3-30G-20	1SFA619102R3022	10	0.036		
● Yellow	Black plastic	1 0	CP3-10Y-10	1SFA619102R1013	10	0.019		
		1 1	CP3-10Y-11	1SFA619102R1073	10	0.022		
		2 0	CP3-10Y-20	1SFA619102R1023	10	0.022		
	Chrome metal	2 0	CP3-30Y-20	1SFA619102R3023	10	0.036		
		● Blue	Black plastic	1 0	CP3-10L-10	1SFA619102R1014	10	0.019
				1 1	CP3-10L-11	1SFA619102R1074	10	0.022
2 0	CP3-10L-20			1SFA619102R1024	10	0.022		
○ White	Black plastic	2 0	CP3-30L-20	1SFA619102R3024	10	0.036		
		1 0	CP3-10W-10	1SFA619102R1015	10	0.019		
		1 1	CP3-10W-11	1SFA619102R1075	10	0.022		
	Chrome metal	2 0	CP3-10W-20	1SFA619102R1025	10	0.022		
		1 0	CP3-30W-10	1SFA619102R3015	10	0.033		
		1 1	CP3-30W-11	1SFA619102R3075	10	0.036		
● Black	Black plastic	2 0	CP3-30W-20	1SFA619102R3025	10	0.036		
		1 0	CP3-10B-10	1SFA619102R1016	10	0.019		
		0 1	CP3-10B-01	1SFA619102R1046	10	0.019		
		1 1	CP3-10B-11	1SFA619102R1076	10	0.022		
		2 0	CP3-10B-20	1SFA619102R1026	10	0.022		
		0 2	CP3-10B-02	1SFA619102R1056	10	0.022		
	Chrome metal	1 0	CP3-30B-10	1SFA619102R3016	10	0.033		
		0 1	CP3-30B-01	1SFA619102R3046	10	0.033		
		1 1	CP3-30B-11	1SFA619102R3076	10	0.036		
		2 0	CP3-30B-20	1SFA619102R3026	10	0.036		



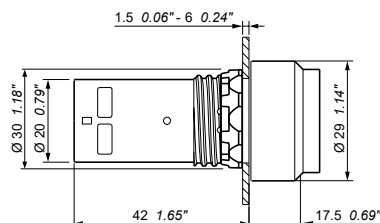
CP3  
Dimensions (mm, inches)

# Compact range

## Non-illuminated extended pushbuttons - Maintained



Operator	Bezel	Contacts	Type	Order code	Pkg qty	Weight (1 pce)	
						kg	
● Red	Black plastic	1 0	CP4-10R-10	1SFA619103R1011	10	0.019	
			CP4-10R-01	1SFA619103R1041	10	0.019	
		1 1	CP4-10R-11	1SFA619103R1071	10	0.022	
			CP4-10R-20	1SFA619103R1021	10	0.022	
		0 2	CP4-10R-02	1SFA619103R1051	10	0.022	
			Chrome metal	1 1	CP4-30R-11	1SFA619103R3071	10
● Green	Black plastic	1 0	CP4-10G-10	1SFA619103R1012	10	0.019	
			CP4-10G-11	1SFA619103R1072	10	0.022	
		2 0	CP4-10G-20	1SFA619103R1022	10	0.022	
			Chrome metal	1 0	CP4-30G-10	1SFA619103R3012	10
		2 0	CP4-30G-20	1SFA619103R3022	10	0.036	
			● Yellow	Black plastic	1 0	CP4-10Y-10	1SFA619103R1013
1 1	CP4-10Y-11	1SFA619103R1073			10	0.022	
● Blue	Black plastic	1 0	CP4-10L-10	1SFA619103R1014	10	0.019	
			1 1	CP4-10L-11	1SFA619103R1074	10	0.022
○ White	Black plastic	1 0	CP4-10W-10	1SFA619103R1015	10	0.019	
			1 1	CP4-10W-11	1SFA619103R1075	10	0.022
● Black	Black plastic	1 0	CP4-10B-10	1SFA619103R1016	10	0.019	
			1 1	CP4-10B-11	1SFA619103R1076	10	0.022
		2 0	CP4-10B-20	1SFA619103R1026	10	0.022	
			0 2	CP4-10B-02	1SFA619103R1056	10	0.022



CP4  
Dimensions (mm,inches)

# Compact range

## Illuminated flush pushbuttons - Momentary



Operator	Bezel	Contacts	Type	Order code	Pkg qty	Weight (1 pce)
						kg

### Rated voltage 24 V AC/ DC

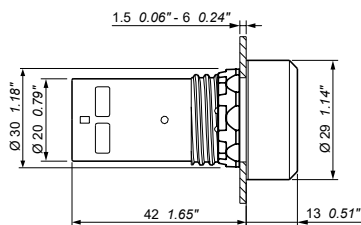
● Red	Black plastic	1 0	CP1-11R-10	1SFA619100R1111	10	0.025
		0 1	CP1-11R-01	1SFA619100R1141	10	0.025
	Chrome metal	1 0	CP1-31R-10	1SFA619100R3111	10	0.039
		0 1	CP1-31R-01	1SFA619100R3141	10	0.039
● Green	Black plastic	1 0	CP1-11G-10	1SFA619100R1112	10	0.025
	Chrome metal	1 0	CP1-31G-10	1SFA619100R3112	10	0.039
● Yellow	Black plastic	1 0	CP1-11Y-10	1SFA619100R1113	10	0.025
	Chrome metal	1 0	CP1-31Y-10	1SFA619100R3113	10	0.039
● Blue	Black plastic	1 0	CP1-11L-10	1SFA619100R1114	10	0.025
		1 0	CP1-31L-10	1SFA619100R3114	10	0.039
	0 1	CP1-31L-01	1SFA619100R3144	10	0.039	
○ Clear	Black plastic	1 0	CP1-11C-10	1SFA619100R1118	10	0.025
	Chrome metal	1 0	CP1-31C-10	1SFA619100R3118	10	0.039

### Rated voltage 110...130 V AC/ DC

● Red	Black plastic	1 0	CP1-12R-10	1SFA619100R1211	10	0.025
		0 1	CP1-12R-01	1SFA619100R1241	10	0.025
● Green	Black plastic	1 0	CP1-12G-10	1SFA619100R1212	10	0.025
● Yellow	Black plastic	1 0	CP1-12Y-10	1SFA619100R1213	10	0.025
● Blue	Black plastic	1 0	CP1-12L-10	1SFA619100R1214	10	0.025
○ Clear	Black plastic	1 0	CP1-12C-10	1SFA619100R1218	10	0.025

### Rated voltage 220 V AC/ DC

● Red	Black plastic	1 0	CP1-13R-10	1SFA619100R1311	10	0.025
		0 1	CP1-13R-01	1SFA619100R1341	10	0.025
● Green	Black plastic	1 0	CP1-13G-10	1SFA619100R1312	10	0.025
● Yellow	Black plastic	1 0	CP1-13Y-10	1SFA619100R1313	10	0.025
● Blue	Black plastic	1 0	CP1-13L-10	1SFA619100R1314	10	0.025
○ Clear	Black plastic	1 0	CP1-13C-10	1SFA619100R1318	10	0.025



CP1  
Dimensions (mm, inches)

# Compact range

## Illuminated flush pushbuttons - Maintained



Operator	Bezel	Contacts	Type	Order code	Pkg qty	Weight (1 pce)
						kg

### Rated voltage 24 V AC/ DC

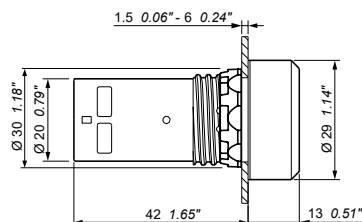
● Red	Black plastic	1 0	CP2-11R-10	1SFA619101R1111	10	0.025
		0 1	CP2-11R-01	1SFA619101R1141	10	0.025
● Green	Black plastic	1 0	CP2-11G-10	1SFA619101R1112	10	0.025
● Yellow	Black plastic	1 0	CP2-11Y-10	1SFA619101R1113	10	0.025
● Blue	Black plastic	1 0	CP2-11L-10	1SFA619101R1114	10	0.025
○ Clear	Black plastic	1 0	CP2-11C-10	1SFA619101R1118	10	0.025

### Rated voltage 110...130 V AC/ DC

● Red	Black plastic	1 0	CP2-12R-10	1SFA619101R1211	10	0.025
		0 1	CP2-12R-01	1SFA619101R1241	10	0.025
● Green	Black plastic	1 0	CP2-12G-10	1SFA619101R1212	10	0.025
● Yellow	Black plastic	1 0	CP2-12Y-10	1SFA619101R1213	10	0.025
● Blue	Black plastic	1 0	CP2-12L-10	1SFA619101R1214	10	0.025
○ Clear	Black plastic	1 0	CP2-12C-10	1SFA619101R1218	10	0.025

### Rated voltage 220 V AC/ DC

● Red	Black plastic	1 0	CP2-13R-10	1SFA619101R1311	10	0.025
		0 1	CP2-13R-01	1SFA619101R1341	10	0.025
● Green	Black plastic	1 0	CP2-13G-10	1SFA619101R1312	10	0.025
● Yellow	Black plastic	1 0	CP2-13Y-10	1SFA619101R1313	10	0.025
● Blue	Black plastic	1 0	CP2-13L-10	1SFA619101R1314	10	0.025
○ Clear	Black plastic	1 0	CP2-13C-10	1SFA619101R1318	10	0.025



CP1

Dimensions (mm, inches)



## Compact range

### Illuminated extended pushbuttons - Momentary



CP3-11R-10

1SFC151210V0001



CP3-11G-10

1SFC151213V0001



CP3-11Y-10

1SFC151208V0001

Operator	Bezel	Contacts	Type	Order code	Pkg qty	Weight (1 pce)
						kg



#### Rated voltage 24 V AC/ DC

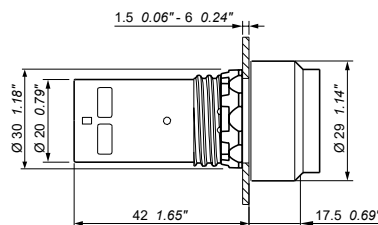
● Red	Black plastic	1 0	CP3-11R-10	1SFA619102R1111	10	0.025
		0 1	CP3-11R-01	1SFA619102R1141	10	0.025
● Green	Black plastic	1 0	CP3-11G-10	1SFA619102R1112	10	0.025
● Yellow	Black plastic	1 0	CP3-11Y-10	1SFA619102R1113	10	0.025
● Blue	Black plastic	1 0	CP3-11L-10	1SFA619102R1114	10	0.025
○ Clear	Black plastic	1 0	CP3-11C-10	1SFA619102R1118	10	0.025

#### Rated voltage 110...130 V AC/ DC

● Red	Black plastic	1 0	CP3-12R-10	1SFA619102R1211	10	0.025
		0 1	CP3-12R-01	1SFA619102R1241	10	0.025
● Green	Black plastic	1 0	CP3-12G-10	1SFA619102R1212	10	0.025
● Yellow	Black plastic	1 0	CP3-12Y-10	1SFA619102R1213	10	0.025
● Blue	Black plastic	1 0	CP3-12L-10	1SFA619102R1214	10	0.025
○ Clear	Black plastic	1 0	CP3-12C-10	1SFA619102R1218	10	0.025

#### Rated voltage 220 V AC/ DC

● Red	Black plastic	1 0	CP3-13R-10	1SFA619102R1311	10	0.025
		0 1	CP3-13R-01	1SFA619102R1341	10	0.025
● Green	Black plastic	1 0	CP3-13G-10	1SFA619102R1312	10	0.025
● Yellow	Black plastic	1 0	CP3-13Y-10	1SFA619102R1313	10	0.025
● Blue	Black plastic	1 0	CP3-13L-10	1SFA619102R1314	10	0.025
○ Clear	Black plastic	1 0	CP3-13C-10	1SFA619102R1318	10	0.025



CP3

Dimensions (mm, inches)

## Compact range

### Illuminated extended pushbuttons - Maintained



CP4-11R-10

1SFC151210V0001



CP4-11G-10

1SFC151213V0001



CP4-11Y-10

1SFC151208V0001



Operator	Bezel	Contacts	Type	Order code	Pkg qty	Weight (1 pce)
						kg

#### Rated voltage 24 V AC/ DC

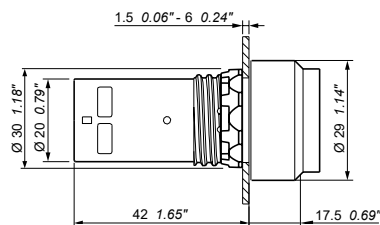
● Red	Black plastic	1 0	CP4-11R-10	1SFA619103R1111	10	0.025
		0 1	CP4-11R-01	1SFA619103R1141	10	0.025
● Green	Black plastic	1 0	CP4-11G-10	1SFA619103R1112	10	0.025
● Yellow	Black plastic	1 0	CP4-11Y-10	1SFA619103R1113	10	0.025
● Blue	Black plastic	1 0	CP4-11L-10	1SFA619103R1114	10	0.025
○ Clear	Black plastic	1 0	CP4-11C-10	1SFA619103R1118	10	0.025

#### Rated voltage 110...130 V AC/ DC

● Red	Black plastic	1 0	CP4-12R-10	1SFA619103R1211	10	0.025
		0 1	CP4-12R-01	1SFA619103R1241	10	0.025
● Green	Black plastic	1 0	CP4-12G-10	1SFA619103R1212	10	0.025
● Yellow	Black plastic	1 0	CP4-12Y-10	1SFA619103R1213	10	0.025
● Blue	Black plastic	1 0	CP4-12L-10	1SFA619103R1214	10	0.025
○ Clear	Black plastic	1 0	CP4-12C-10	1SFA619103R1218	10	0.025

#### Rated voltage 220 V AC/ DC

● Red	Black plastic	1 0	CP4-13R-10	1SFA619103R1311	10	0.025
		0 1	CP4-13R-01	1SFA619103R1341	10	0.025
● Green	Black plastic	1 0	CP4-13G-10	1SFA619103R1312	10	0.025
● Yellow	Black plastic	1 0	CP4-13Y-10	1SFA619103R1313	10	0.025
● Blue	Black plastic	1 0	CP4-13L-10	1SFA619103R1314	10	0.025
○ Clear	Black plastic	1 0	CP4-13C-10	1SFA619103R1318	10	0.025



CP4

Dimensions (mm, inches)

## Compact range

### Non-illuminated mushroom pushbuttons - Momentary



1SFC151259V0001

CPM3-10R-11



1SFC151357V0001

CPM3-10G-11



1SFC151259V0001

CPM3-10Y-11



1SFC151260V0001

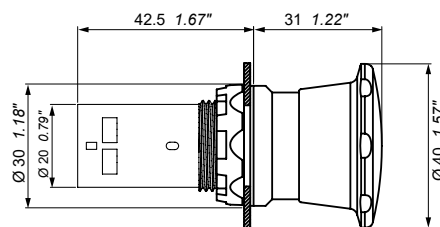
CPM3-10L-11



1SFC151358V0001

CPM3-10B-11

Operator	Contacts	Type	Order code	Pkg qty	Weight (1 pce)
					kg
<b>Ø 40 mm</b>					
● Red	1 1	CPM3-10R-11	1SFA619126R1071	1	0.036
● Green	1 1	CPM3-10G-11	1SFA619126R1072	1	0.036
● Yellow	1 1	CPM3-10Y-11	1SFA619126R1073	1	0.036
● Blue	1 1	CPM3-10L-11	1SFA619126R1074	1	0.036
● Black	1 1	CPM3-10B-11	1SFA619126R1076	1	0.036



CPM3  
Dimensions (mm, inches)

# Compact range

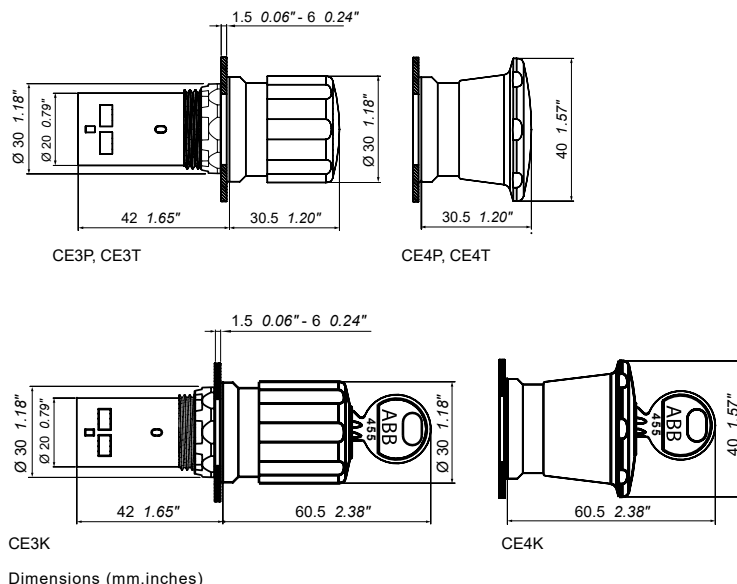
## Non-illuminated emergency stop pushbuttons



### Description

The emergency stop pushbuttons conform to the standard EN/IEC60947-5-5, Safety of machinery standard EN/ISO 13850, IEC60204-1 and to Machinery directive 2006/42/ EC.

Operator	Releasemethod	Contacts	Type	Order code	Pkg qty	Weight (1 pce)
kg						
<b>Ø 30 mm</b>						
● Red	Twist release	0 1	CE3T-10R-01	1SFA619500R1041	1	0.032
		1 1	CE3T-10R-11	1SFA619500R1071	1	0.032
		0 2	CE3T-10R-02	1SFA619500R1051	1	0.032
● Red	Pull release	0 1	CE3P-10R-01	1SFA619501R1041	1	0.032
		1 1	CE3P-10R-11	1SFA619501R1071	1	0.032
		0 2	CE3P-10R-02	1SFA619501R1051	1	0.032
● Red	Keycode 455	0 1	CE3K1-10R-01	1SFA619502R1041	1	0.060
		1 1	CE3K1-10R-11	1SFA619502R1071	1	0.060
		0 2	CE3K1-10R-02	1SFA619502R1051	1	0.060
<b>Ø 40 mm</b>						
● Red	Twist release	0 1	CE4T-10R-01	1SFA619550R1041	1	0.036
		1 1	CE4T-10R-11	1SFA619550R1071	1	0.036
		0 2	CE4T-10R-02	1SFA619550R1051	1	0.036
● Red	Pull release	0 1	CE4P-10R-01	1SFA619551R1041	1	0.036
		1 1	CE4P-10R-11	1SFA619551R1071	1	0.036
		0 2	CE4P-10R-02	1SFA619551R1051	1	0.036
● Red	Keycode 455	0 1	CE4K1-10R-01	1SFA619552R1041	1	0.064
		1 1	CE4K1-10R-11	1SFA619552R1071	1	0.064
		0 2	CE4K1-10R-02	1SFA619552R1051	1	0.064



04

# Compact range

## Non-illuminated machine stop pushbuttons



1SFC151167V0001

CE3T-10B-11



1SFC151168V0001

CE3P-10B-11



1SFC151170V0001

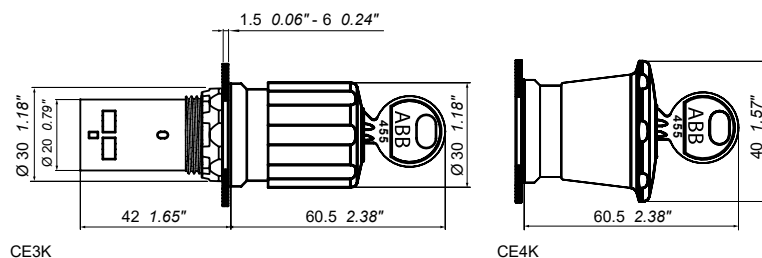
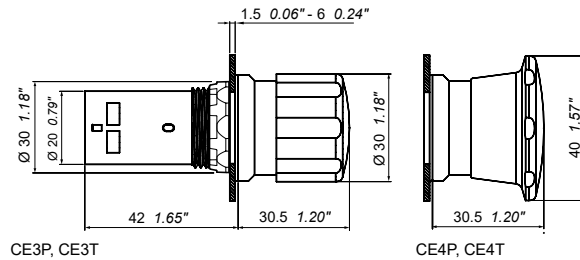
CE4T-10B-11



1SFC151171V0001

CE4P-10B-11

Operator	Releasemethod	Contacts	Type	Order code	Pkg qty	Weight (1 pce)
kg						
<b>Ø 30 mm</b>						
● Black	Twist release	0 1	CE3T-10B-01	1SFA619500R1046	1	0.032
		1 1	CE3T-10B-11	1SFA619500R1076	1	0.032
● Black	Pull release	1 1	CE3P-10B-11	1SFA619501R1076	1	0.032
● Black	Key code 455	1 1	CE3K1-10B-11	1SFA619502R1076	1	0.060
<b>Ø 40 mm</b>						
● Black	Twist release	1 0	CE4T-10B-10	1SFA619550R1016	1	0.032
		0 1	CE4T-10B-01	1SFA619550R1046	1	0.032
		1 1	CE4T-10B-11	1SFA619550R1076	1	0.032
		2 0	CE4T-10B-20	1SFA619550R1026	1	0.032
		0 2	CE4T-10B-02	1SFA619550R1056	1	0.032
● Black	Pull release	1 1	CE4P-10B-11	1SFA619551R1076	1	0.032
● Black	Key code 455	1 1	CE4K1-10B-11	1SFA619552R1076	1	0.064



Dimensions (mm, inches)

# Compact range

## Heavyduty pushbuttons



1SFC151023V0001

CP6-10R-11



1SFC151024V0001

CP6-10G-11



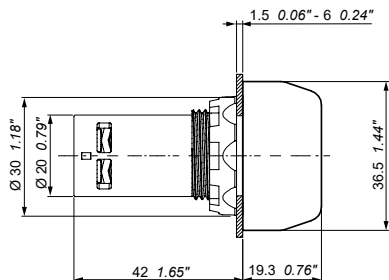
1SFC151023V0001

CP6-10B-11

### Description

Silicone rubber cap.

Color	Contacts	Type	Order code	Pkg qty	Weight (1 pce)
					kg
● Red	1 1	CP6-10R-11	1SFA619105R1071	10	0.031
	2 0	CP6-10R-20	1SFA619105R1021	10	0.031
	0 2	CP6-10R-02	1SFA619105R1051	10	0.031
● Green	1 1	CP6-10G-11	1SFA619105R1072	10	0.031
	2 0	CP6-10G-20	1SFA619105R1022	10	0.031
● Black	1 1	CP6-10B-11	1SFA619105R1076	10	0.031
	2 0	CP6-10B-20	1SFA619105R1026	10	0.031
	0 2	CP6-10B-02	1SFA619105R1056	10	0.031



CP6

Dimensions (mm,inches)

# Compact range Pilot lights



CL2-502R

1SFC151338V0001



CL2-506G

1SFC151339V0001



CL2-508Y

1SFC151340V0001



CL2-506L

1SFC151341V0001



CL2-506C

1SFC151342V0001

## Description

Integrated LED, no bulb needed.

Color	Rated current mA	Anti-in-ductive voltage Vpeak	Wave-length nm	Illumi-nation lx	Type	Order code	Pkg qty	Weight (1 pce) kg
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### Voltage 6.3 V

● Red	16	2	625	70	CL2-506R	1SFA619403R5061	10	0.016
● Green	16	2	520	125	CL2-506G	1SFA619403R5062	10	0.016
● Yellow	16	2	590	75	CL2-506Y	1SFA619403R5063	10	0.016
● Blue	16	2	470	10	CL2-506L	1SFA619403R5064	10	0.016
○ Clear	16	2	(1)	290	CL2-506C	1SFA619403R5068	10	0.016

### Voltage 12 V DC

● Red	16	2	625	110	CL2-501R	1SFA619403R5011	10	0.016
● Green	16	2.5	520	165	CL2-501G	1SFA619403R5012	10	0.016
● Yellow	16	2.5	590	85	CL2-501Y	1SFA619403R5013	10	0.016
● Blue	16	2.5	470	15	CL2-501L	1SFA619403R5014	10	0.016
○ Clear	16	2.5	(1)	320	CL2-501C	1SFA619403R5018	10	0.016

### Voltage 24 V AC/ DC

● Red	16	6	625	80	CL2-502R	1SFA619403R5021	10	0.016
● Green	16	6	520	135	CL2-502G	1SFA619403R5022	10	0.016
● Yellow	16	6	590	55	CL2-502Y	1SFA619403R5023	10	0.016
● Blue	16	6	470	10	CL2-502L	1SFA619403R5024	10	0.016
○ Clear	16	6	(1)	230	CL2-502C	1SFA619403R5028	10	0.016

### Voltage 48 ... 60 V AC/ DC

● Red	13-17	7	625	75	CL2-507R	1SFA619403R5071	10	0.016
● Green	13-17	7	520	140	CL2-507G	1SFA619403R5072	10	0.016
● Yellow	13-17	7	590	80	CL2-507Y	1SFA619403R5073	10	0.016
● Blue	13-17	7	470	10	CL2-507L	1SFA619403R5074	10	0.016
○ Clear	13-17	7	(1)	260	CL2-507C	1SFA619403R5078	10	0.016

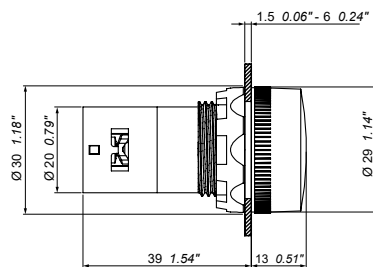
### Voltage 110 ... 130 V AC

● Red	15-17	20	625	85	CL2-513R	1SFA619403R5131	10	0.016
● Green	15-17	20	520	90	CL2-513G	1SFA619403R5132	10	0.016
● Yellow	15-17	20	590	85	CL2-513Y	1SFA619403R5133	10	0.016
● Blue	15-17	20	470	10	CL2-513L	1SFA619403R5134	10	0.016
○ Clear	15-17	20	(1)	340	CL2-513C	1SFA619403R5138	10	0.016

### Voltage 110 ... 130 V DC

● Red	8-9	20	625	55	CL2-515R	1SFA619403R5151	10	0.016
● Green	8-9	20	520	125	CL2-515G	1SFA619403R5152	10	0.016
● Yellow	8-9	20	590	50	CL2-515Y	1SFA619403R5153	10	0.016
● Blue	8-9	20	470	10	CL2-515L	1SFA619403R5154	10	0.016
○ Clear	8-9	20	(1)	210	CL2-515C	1SFA619403R5158	10	0.016

(1) X = 0.31, Y = 0.32



CL2

Dimensions (mm, inches)

# Compact range Pilot lights



CL2-502R

1SFC151338V0001



CL2-506G

1SFC151339V0001



CL2-508Y

1SFC151340V0001



CL2-506L

1SFC151341V0001



CL2-506C

1SFC151342V0001

## Description

Integrated LED, no bulb needed.

Color	Rated current mA	Anti-inductive voltage Vpeak	Wave-length nm	Illumi-nation lx	Type	Order code	Pkg qty	Weight (1 pce) kg
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### Voltage 220 V DC

● Red	6	20	625	40	CL2-520R	1SFA619403R5201	10	0.016
● Green	6	20	520	90	CL2-520G	1SFA619403R5202	10	0.016
● Yellow	6	20	590	30	CL2-520Y	1SFA619403R5203	10	0.016
● Blue	6	20	470	5	CL2-520L	1SFA619403R5204	10	0.016
○ Clear	6	20	(1)	120	CL2-520C	1SFA619403R5208	10	0.016

### Voltage 230 V AC

● Red	17	30	625	95	CL2-523R	1SFA619403R5231	10	0.016
● Green	17	35	520	155	CL2-523G	1SFA619403R5232	10	0.016
● Yellow	17	35	590	70	CL2-523Y	1SFA619403R5233	10	0.016
● Blue	17	35	470	10	CL2-523L	1SFA619403R5234	10	0.016
○ Clear	17	35	(1)	225	CL2-523C	1SFA619403R5238	10	0.016

### Rated voltage 230 V AC high anti-inductive voltage (2)

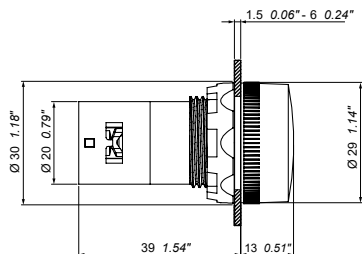
● Red	17	60	625	75	CL2-623R	1SFA619403R6231	10	0.016
● Green	17	80	520	70	CL2-623G	1SFA619403R6232	10	0.016
● Yellow	17	70	590	50	CL2-623Y	1SFA619403R6233	10	0.016
● Blue	17	80	470	5	CL2-623L	1SFA619403R6234	10	0.016
○ Clear	17	80	(1)	155	CL2-623C	1SFA619403R6238	10	0.016

### Rated voltage 380 ... 415 V AC

● Red	15-17	55	625	85	CL2-542R	1SFA619403R5421	10	0.016
● Green	15-17	65	520	130	CL2-542G	1SFA619403R5422	10	0.016
● Yellow	15-17	65	590	60	CL2-542Y	1SFA619403R5423	10	0.016
● Blue	15-17	65	470	10	CL2-542L	1SFA619403R5424	10	0.016
○ Clear	15-17	65	(1)	395	CL2-542C	1SFA619403R5428	10	0.016

(1) X = 0.31, Y = 0.32

(2) Higher threshold to light up LED to be used in application where there is risk of large induced voltages.



CL2

Dimensions (mm, inches)



## Compact range Pilot lights BA9s



CL-100R



CL-100L

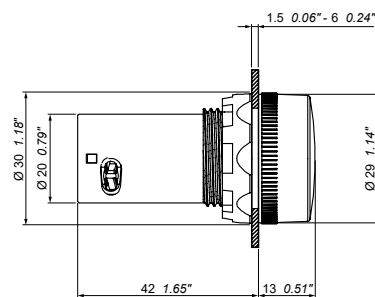
### Description

Bulb not included and should be ordered separately, see Accessories section for order codes and information.

Color	Type	Order code	Pkg qty	Weight (1 pce) kg
● Red	CL-100R	1SFA619402R1001	10	0.018
● Green	CL-100G	1SFA619402R1002	10	0.018
● Yellow	CL-100Y	1SFA619402R1003	10	0.018
● Blue	CL-100L	1SFA619402R1004	10	0.018
○ White	CL-100W	1SFA619402R1005	10	0.018
○ Clear	CL-100C	1SFA619402R1008	10	0.018

## Accessories for compact range Flashing LED bulbs for CL-100 pilot lights

Color	Wavelength nm	Type	Order code	Pkg qty	Weight (1 pce) kg
<b>Rated voltage 24 V DC rated current 25 mA, service life &gt; 50 000 h</b>					
● Red	630	–	4950512-1	20	0.005
● Green	565	–	4950512-2	20	0.005
● Yellow	585	–	4950512-3	20	0.005



CL100

Dimensions (mm, inches)

## Accessories for compact range

### LED bulbs for CL-100 pilot lights



KA2...

1SFC1517BR001

Color	Wavelength nm	Luminance mdc	Type	Order code	Pkg qty	Weight (1 pce) kg
<b>Rated voltage 12V DC rated current 15 mA, service life &gt; 50 000 h</b>						
● Red	630	250	KA2-2011	1SFA616921R2011	20	0.005
● Green	525	1000	KA2-2012	1SFA616921R2012	20	0.005
● Yellow	592	250	KA2-2013	1SFA616921R2013	20	0.005
● Blue	470	450	KA2-2014	1SFA616921R2014	20	0.005
○ White	(1)	600	KA2-2015	1SFA616921R2015	20	0.005
<b>Rated voltage 24 V (AC)/ DC rated current 15 mA, service life &gt; 50 000 h</b>						
● Red	630	250	KA2-2021	1SFA616921R2021	20	0.005
● Green	525	800	KA2-2022	1SFA616921R2022	20	0.005
● Yellow	592	250	KA2-2023	1SFA616921R2023	20	0.005
● Blue	470	400	KA2-2024	1SFA616921R2024	20	0.005
○ White	(1)	500	KA2-2025	1SFA616921R2025	20	0.005
<b>Rated voltage 36 V (AC)/ DC rated current 12 mA, service life &gt; 50 000 h</b>						
● Red	630	200	KA2-2031	1SFA616921R2031	20	0.005
● Green	525	2000	KA2-2032	1SFA616921R2032	20	0.005
● Yellow	592	200	KA2-2033	1SFA616921R2033	20	0.005
● Blue	470	750	KA2-2034	1SFA616921R2034	20	0.005
○ White	(1)	1400	KA2-2035	1SFA616921R2035	20	0.005
<b>Rated voltage 48 V (AC)/ DC rated current 12 mA, service life &gt; 50 000 h</b>						
● Red	630	200	KA2-2041	1SFA616921R2041	20	0.005
● Green	525	1700	KA2-2042	1SFA616921R2042	20	0.005
● Yellow	592	240	KA2-2043	1SFA616921R2043	20	0.005
● Blue	470	720	KA2-2044	1SFA616921R2044	20	0.005
○ White	(1)	1200	KA2-2045	1SFA616921R2045	20	0.005
<b>Rated voltage 60 V (AC)/ DC rated current 10 mA, service life &gt; 50 000 h</b>						
● Red	630	160	KA2-2051	1SFA616921R2051	20	0.005
● Green	525	1400	KA2-2052	1SFA616921R2052	20	0.005
● Yellow	592	200	KA2-2053	1SFA616921R2053	20	0.005
● Blue	470	600	KA2-2054	1SFA616921R2054	20	0.005
○ White	(1)	1000	KA2-2055	1SFA616921R2055	20	0.005
<b>Rated voltage 110 ... 130 V AC rated current 4-6 mA, service life 25 000 h</b>						
● Red	630	60-100	KA2-2131	1SFA616921R2131	20	0.005
● Green	525	500-850	KA2-2132	1SFA616921R2132	20	0.005
● Yellow	592	70-120	KA2-2133	1SFA616921R2133	20	0.005
● Blue	470	220-350	KA2-2134	1SFA616921R2134	20	0.005
○ White	(1)	350-600	KA2-2135	1SFA616921R2135	20	0.005
<b>Rated voltage 110 ... 130 V (AC)/ DC rated current 4-6 mA, service life 25 000 h</b>						
● Red	630	60	KA2-2141	1SFA616921R2141	20	0.005
● Green	525	500	KA2-2142	1SFA616921R2142	20	0.005
● Yellow	592	70	KA2-2143	1SFA616921R2143	20	0.005
● Blue	470	220	KA2-2144	1SFA616921R2144	20	0.005
○ White	(1)	350	KA2-2145	1SFA616921R2145	20	0.005
<b>Rated voltage 230 V AC rated current 4 mA, service life 25 000 h</b>						
● Red	630	60	KA2-2221	1SFA616921R2221	20	0.005
● Green	525	500	KA2-2222	1SFA616921R2222	20	0.005
● Yellow	592	70	KA2-2223	1SFA616921R2223	20	0.005
● Blue	470	220	KA2-2224	1SFA616921R2224	20	0.005
○ White	(1)	350	KA2-2225	1SFA616921R2225	20	0.005
<b>Rated voltage 230 V (AC)/ DC rated current 4 mA, service life 25 000 h</b>						
● Red	630	60	KA2-2231	1SFA616921R2231	20	0.005
● Green	525	500	KA2-2232	1SFA616921R2232	20	0.005
● Yellow	592	70	KA2-2233	1SFA616921R2233	20	0.005
● Blue	470	220	KA2-2234	1SFA616921R2234	20	0.005
○ White	(1)	350	KA2-2235	1SFA616921R2235	20	0.005

Note: Choose the same color on the LED as on the lamp cap. (1) X=0.31, Y=0.32 according to the ICI chromaticity diagram.

# Compact range

## Non-illuminated selector switches - 2-position



1SFC151255V0001

C2SS1-10B-10



C2SS3-30B-10

1SFC151359V0001

### Description

Compact selector switches are delivered in black color.

Operating principle	Bezel	Contacts	Type	Order code	Pkg qty	Weight (1 pce)
						kg

### Short handle

	Black plastic	1 0	C2SS1-10B-10	1SFA619200R1016	10	0.02
		0 1	C2SS1-10B-01	1SFA619200R1046	10	0.02
		1 1	C2SS1-10B-11	1SFA619200R1076	10	0.024
	Chrome metal	2 0	C2SS1-10B-20	1SFA619200R1026	10	0.024
		1 0	C2SS1-30B-10	1SFA619200R3016	10	0.029
		0 1	C2SS1-30B-01	1SFA619200R3046	10	0.029
	Black plastic	1 1	C2SS1-30B-11	1SFA619200R3076	10	0.032
		2 0	C2SS1-30B-20	1SFA619200R3026	10	0.032
		1 0	C2SS2-10B-10	1SFA619201R1016	10	0.02
	Chrome metal	0 1	C2SS2-10B-01	1SFA619201R1046	10	0.02
		1 1	C2SS2-10B-11	1SFA619201R1076	10	0.024
		2 0	C2SS2-10B-20	1SFA619201R1026	10	0.024
	Black plastic	1 0	C2SS2-30B-10	1SFA619201R3016	10	0.029
		0 1	C2SS2-30B-01	1SFA619201R3046	10	0.029
		1 1	C2SS2-30B-11	1SFA619201R3076	10	0.032
	Chrome metal	2 0	C2SS2-30B-20	1SFA619201R3026	10	0.032
		1 0	C2SS3-10B-10	1SFA619202R1016	10	0.02
		0 1	C2SS3-10B-01	1SFA619202R1046	10	0.02
	Black plastic	1 1	C2SS3-10B-11	1SFA619202R1076	10	0.024
		2 0	C2SS3-10B-20	1SFA619202R1026	10	0.024
		1 0	C2SS3-30B-10	1SFA619202R3016	10	0.029
	Chrome metal	1 1	C2SS3-30B-11	1SFA619202R3076	10	0.032
		2 0	C2SS3-30B-20	1SFA619202R3026	10	0.032

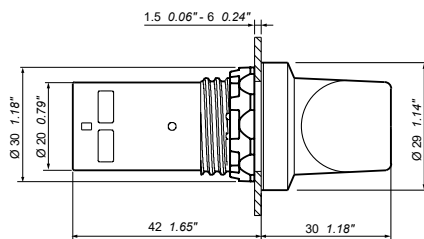
### Long handle

	Chrome metal	1 0	C2SS5-30B-10	1SFA619204R3016	10	0.029
		1 1	C2SS5-30B-11	1SFA619204R3076	10	0.032

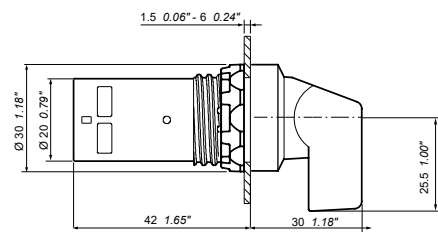
### Contacts actuated

2-position selector switch  
Contacts included,

	actuated in position C			
	NC	NO	NC	NO
	11	13	21	23
	12	14	22	24
1 NO	-	1	-	-
2 NO	-	1	-	1
1 NC	1	-	-	-
2 NC	1	-	1	-
1NO + 1NC	-	1	1	-



C2SS,short handle  
Dimensions (mm, inches)



C2SS,long handle

# Compact range

## Non-illuminated selector switches - 3-position



1SFC151255V0001

C3SS1-10B-11



1SFC151355V0001

C3SS2-30B-20

### Description

Compact selector switches operators are delivered in black color.

Operating principle	Bezel	Contacts	Type	Order code	Pkg qty	Weight (1 pce)
						kg



### Short handle

	Black plastic	1 1	C3SS1-10B-11	1SFA619210R1076	10	0.024
		2 0	C3SS1-10B-20	1SFA619210R1026	10	0.024
	Chrome metal	1 1	C3SS1-30B-11	1SFA619210R3076	10	0.032
		2 0	C3SS1-30B-20	1SFA619210R3026	10	0.032
	Black plastic	1 1	C3SS2-10B-11	1SFA619211R1076	10	0.024
		2 0	C3SS2-10B-20	1SFA619211R1026	10	0.024
	Chrome metal	1 1	C3SS2-30B-11	1SFA619211R3076	10	0.032
		2 0	C3SS2-30B-20	1SFA619211R3026	10	0.032
	Black plastic	1 1	C3SS3-10B-11	1SFA619212R1076	10	0.024
		2 0	C3SS3-10B-20	1SFA619212R1026	10	0.024
	Chrome metal	1 1	C3SS3-30B-11	1SFA619212R3076	10	0.032
		2 0	C3SS3-30B-20	1SFA619212R3026	10	0.032
	Black plastic	1 1	C3SS7-10B-11	1SFA619216R1076	10	0.024
		2 0	C3SS7-10B-20	1SFA619216R1026	10	0.024
	Chrome metal	2 0	C3SS7-30B-20	1SFA619216R3026	10	0.032

### Long handle

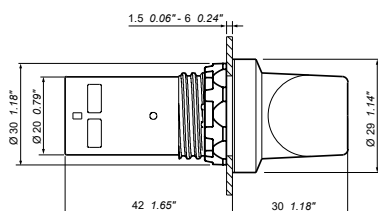
	Black plastic	1 1	C3SS4-10B-11	1SFA619213R1076	10	0.024
		2 0	C3SS4-10B-20	1SFA619213R1026	10	0.024
	Black plastic	1 1	C3SS5-10B-11	1SFA619214R1076	10	0.024
		2 0	C3SS5-10B-20	1SFA619214R1026	10	0.024
	Chrome metal	1 1	C3SS5-30B-11	1SFA619214R3076	10	0.032
		2 0	C3SS5-30B-20	1SFA619214R3026	10	0.032
	Black plastic	2 0	C3SS6-10B-20	1SFA619215R1026	10	0.024
	Black plastic	2 0	C3SS8-10B-20	1SFA619217R1026	10	0.024

### Contacts actuated

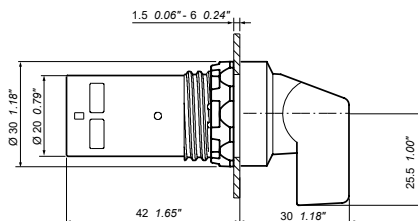
3-position selector switch  
Contacts included,

actuated in position:

A		C	
NC	NO	NC	NO
21	23	11	13
22	24	12	14
2 NO	- 1	- 1	- 1
2 NC	1 -	1 -	-
1 NO + 1 NC	1 -	-	1



C3SS,short handle  
Dimensions (mm,inches)



C3SS,long handle

# Compact range Buzzers



CB1-600G

1SFC151157V/0001



CB1-610R

1SFC151159V/0001



CB1-610Y

1SFC151158V/0001



CB1-620B

1SFC151160V/0001

## Illuminated

Color	Light and sound output	Rated current mA	Luminance mcd	Type	Order code	Pkg qty	Weight (1 pce) kg
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### Rated voltage 24 V AC/ DC

● Green	Continuous	48	126	CB1-600G	1SFA619600R6002	10	0.021
● Red	Pulsation	53	60	CB1-610R	1SFA619600R6101	10	0.021
● Yellow	Pulsation	53	60	CB1-610Y	1SFA619600R6103	10	0.021

### Rated voltage 110 ... 130 V AC

● Green	Continuous	55	126	CB1-601G	1SFA619600R6012	10	0.021
● Red	Pulsation	70	60	CB1-611R	1SFA619600R6111	10	0.021
● Yellow	Pulsation	70	60	CB1-611Y	1SFA619600R6113	10	0.021

### Rated voltage 110 ... 130 V DC

● Green	Continuous	15	126	CB1-602G	1SFA619600R6022	10	0.021
● Red	Pulsation	15	60	CB1-612R	1SFA619600R6121	10	0.021
● Yellow	Pulsation	15	60	CB1-612Y	1SFA619600R6123	10	0.021

### Rated voltage 230 V AC

● Green	Continuous	55	126	CB1-603G	1SFA619600R6032	10	0.021
● Red	Pulsation	70	60	CB1-613R	1SFA619600R6131	10	0.021
● Yellow	Pulsation	70	60	CB1-613Y	1SFA619600R6133	10	0.021

## Non-Illuminated

Color	Sound output	Rated current mA	Luminance mcd	Type	Order code	Pkg qty	Weight (1 pce) kg
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### Rated voltage 24 V AC/ DC

● Black	Continuous	40	-	CB1-620B	1SFA619600R6206	10	0.021
	Pulsation	48	-	CB1-630B	1SFA619600R6306	10	0.021

### Rated voltage 110 ... 130 V AC

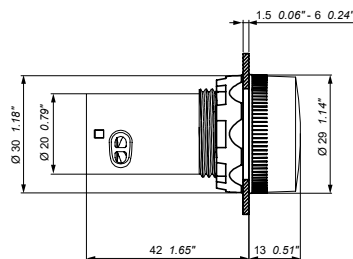
● Black	Continuous	40	-	CB1-621B	1SFA619600R6216	10	0.021
	Pulsation	48	-	CB1-631B	1SFA619600R6316	10	0.021

### Rated voltage 110 ... 130 V DC

● Black	Continuous	15	-	CB1-622B	1SFA619600R6226	10	0.021
	Pulsation	15	-	CB1-632B	1SFA619600R6326	10	0.021

### Rated voltage 230 V AC

● Black	Continuous	40	-	CB1-623B	1SFA619600R6236	10	0.021
	Pulsation	40	-	CB1-633B	1SFA619600R6336	10	0.021



CB1

Dimensions (mm, inches)

# Compact range Accessories



KA1

1SFC151259F0001



MA1-8052

1SFC151397V0001



KA1-8010

1SFC1513779F0001



KA1-8022/ KA1-8021

1SFC151212C0001



SK616016-2

1SFC151497F0001



MA1-8153

1SFC151391V0001



CA1-8054

1SFC151287V0001

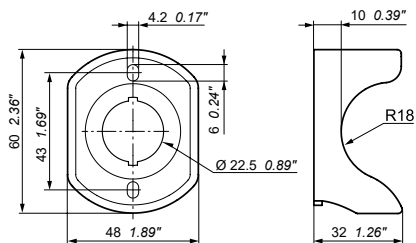


CA1-8053

1SFC151288V0001

Description	Bezel/ color	Type	Order code	Pkg qty	Weight (1pce) kg
<b>30 mm adaptors for 22 mm operator (1.5 - 4 mm panel thickness)</b>					
Emergency stop pushbuttons, MPM	Black plastic	KA1-8027	1SFA616920R8027	1	0.007
	Chrome metal	KA1-8028	1SFA616920R8028	1	0.021
Pushbuttons, selector switches, pilot lights, potentiometers, emergency stop pushbuttons, MPE	Black plastic	KA1-8029	1SFA616920R8029	1	0.010
Flush mounted pushbuttons	Chrome metal	KA1-8073	1SFA616920R8073	1	0.050
Flush mounted selector switches	Chrome metal	MA1-8074	1SFA611920R8074	1	0.050
<b>Protective membrane, silicone</b>					
Flush pushbutton		MA1-8052	1SFA611920R8052	10	0.002
Extended pushbutton		MA1-8002	1SFA611920R8002	10	0.002
<b>Protective ring</b>					
To prevent accidental operation. Cannot be used together with Legend plate holder					
Flush and extended pushbuttons	Clear plastic	-	SK615512-1	10	0.002
Flush pushbuttons	Metal and black plastic	KA1-8010	1SFA616920R8010	10	0.008
<b>Bezel</b>					
Pushbuttons	Black plastic	KA1-8022	1SFA616920R8022	10	0.002
	Chrome plastic	KA1-8020	1SFA616920R8020	10	0.002
	Chrome metal	KA1-8021	1SFA616920R8021	10	0.015
Selector switches	Black plastic	CA1-8077	1SFA619920R8077	10	0.002
	Chrome metal	CA1-8078	1SFA619920R8078	10	0.010
<b>Square bezel</b>					
Black plastic		-	SK616016-2	10	0.001
<b>Lockable shroud</b>					
Pushbuttons, selector switches	Plastic	MA1-8153	1SFA611920R8153	10	0.023
Emergency stop 30 mm	Metal	-	SK615502-D	1	0.080
<b>Touch guard</b>					
Touch guard		MA1-8152	1SFA611920R8152	10	0.023
<b>Shroud with anti rotation tabs, slot for pad-lock and with water drainage</b>					
Emergency stop, machine stop 40 mm	● Yellow	CA1-8053	1SFA619920R8053	10	0.016
	● Grey	CA1-8054	1SFA619920R8054	10	0.016
<b>Lamp changing tool</b>					
Lamp changing tool		KA1-8072	1SFA616920R8072	1	0.002

Note: Din-rail adaptor should be used with 2contact blocks for rear mounting type MCB .B.



CA1  
Dimensions (mm,inches)

# Compact range Accessories



Description	Bezel/ color	Type	Order code	Pkg qty	Weight (1pce) kg
<b>DIN-rail adaptor</b>					
DIN-rail adaptor with 2 dummy block		CA1-8080	1SFA619920R8080	1	0.028
Dummy block		MDB-2	1SFA611630R1002	10	0.003
Note:Din-rail adaptor should be used with 2contact blocks for rear mounting type MCB..B. Note:Dummyblocks are used when onlyone contact block or a compact pilot deviceis used together with the DIN-railadaptor					
<b>Mounting tools</b>					
For tightening the locking nut					
Plastic/ Mounting tool manual		MA1-8015	1SFA611920R8015	1	0.021
Metal/ Mounting tool for power tool		MA1-8149	1SFA611920R8149	1	0.155
<b>Extra key</b>					
Key code 455			SK616021-71	10	0.007
Key code 421			SK616021-72	10	0.007
Keycode 3433-E			SK616021-73	10	0.007
Locking nut		MA1-8019	1SFA611920R8019	10	0.001

04

## Compact range

### Technical data

#### Standards and approvals

IEC/ EN60947-1	Low Voltage switchgear and controlgear - Part 1: General rules
IEC/ EN60947-5-1	Low Voltage switchgear and controlgear - part 5-1: control circuit devices and switching elements - Electromechanical control circuit devices
IEC/ EN60947-5-5	Low Voltage switchgear and controlgear - part 5-5: control circuit devices and switching elements - Electrical emergency stop device with mechanical latching function
IEC/ EN60073	Basic and safety principles for man-machine interface, marking and identification coding principles for indicators and actuators
IEC/ EN60529	Degrees of protection provided by enclosures (IP code)
EN 50013	Low Voltage switchgear and controlgear for industrial use, terminal marking and distinctive number for particular control switches
DIN 40050-9	Road vehicles; degrees of protection (IP-code); protection against foreign objects; water and contact; electrical equipment
UL 508	Industrial control equipment
CSAC22.2 No 14	Industrial control equipment

#### Environmental data

##### Degrees of protection

Operators	IEC/EN DIN	UL/CSA
Pushbutton	IP66, IP67 and IP69K	Type 1, 3R, 4, 4X, 12, 13
Selector switches	IP66, IP67 and IP69K	Type 1, 3R, 4, 4X, 12, 13
Buzzer	IP66, IP67 and IP69K	Type 1, 3R, 4, 4X, 12, 13
Heavy duty	IP66, IP67 and IP69K	Type 1, 3R, 4, 4X, 12, 13
Pilot lights	IP66, IP67 and IP69K	Type 1, 3R, 4, 4X, 12, 13
Emergency stops	IP66, IP67 and IP69K	Type 1, 3R, 4, 4X, 12, 13
Terminals	IP20	-

##### Temperature

Ambient temperature during operation	-25 to +70 °C
Storage temperature	-40 to +85 °C

#### Technical data

##### Cable connections

Operator	Cable terminal
Pushbutton	Plus-minus Pozidriv No. 2
Selector switch	Connectable area: min. 1 x 0.5 mm <sup>2</sup> / 1 x AWG22
Emergency stop	max. 2 x 1.5 mm <sup>2</sup> / 2 x AWG14
Pilot light	Connectable area: min. 1 x 0.5 mm <sup>2</sup> / 1 x AWG20 max. 2 x 2.5 mm <sup>2</sup> / 2 x AWG14

##### Tightening torque

Operators locking nut	Min. 2 Nm / Max. 2.3 Nm
Cable terminals M3	0.8 Nm
Cable terminals M3.5	0.9 Nm

##### Short circuit protection

Max. fuse at 1 kA	gG 10A
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##### Mechanical life

Pushbuttons, selector switches, heavy duty	500 000 operations
Emergency stop pushbutton	50 000 operations

##### LED products (Pilot lights, illuminated pushbuttons)

Service life for LED means number of service hours until the brightness has been reduced down 50%. Service life 50 000 h, operating at 25 °C, 40~70%rh (relative humidity)

Color of white LED x = 0.31 Y = 0.32 means the position of color in the ICI chromaticity diagram

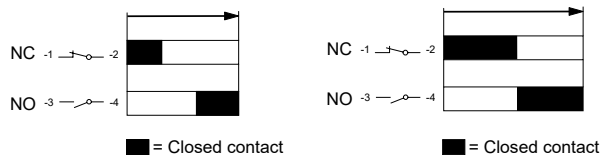
Voltage tolerance on LED -30 to +10% voltage is acceptable without affecting the service life

Voltage peaks on LED Voltage peaks up to 1000 V current peaks up to 500 mA during a few msec

Glowing light All integrated LED have a function built in to cut leakage currents

##### Make-and-break contacts

Pushbutton Emergency stop pushbutton





## Compact range

### Technical data

Material	
No ozone depleting substances in the products.	
All front of panel plastic components are made of polycarbonate	
PC polycarbonate	High impact strength, good outdoor resistance. Chemical resistance (see table below)
PSU polysulphone	Can withstand high temperatures, acids, basic solutions, alkaline compounds, oils, alcohols
PA polyamide	Can withstand high temperatures, aliphatic, aromatic and chlorinated hydrocarbons, esters, ketone-aldehydes, alcohols and basic solutions
PBT	Can withstand high temperature, aliphatic and aromatic hydrocarbons, acids, basic solutions, alcohols, grease and oils
Zinc	Good corrosion resistance in inland-, sea and industrial atmosphere
Light-alloy	Good corrosion resistance in inland-, sea and industrial atmosphere
Chemical resistance for polycarbonate	
Chemical class	Effects
Acids	No significant effect under most typical conditions of concentration and temperature
Alcohols and alkalis	Generally compatible at low concentration and room temperature. Higher concentrations and elevated temperatures can result in etching and attack evidenced by decomposition
Aliphatic hydrocarbons	Generally compatible
Amines	Surface crystallization and chemical attack      Avoid
Aromatic hydrocarbons	Partial solvents and severe stress cracking agents (i.e., xylene, toluene).      Avoid
Detergents and cleaners	Mild soap solutions are generally compatible. Strong alkaline materials should be avoided
Esters	Cause severe crystallization. Partial solvents.      Avoid
Greases and oils	Pure petroleum types generally compatible. Many additives used with them are not
Halogenated, hydrocarbons	Solvents.      Avoid
Ketones	Cause severe crystallization and stress cracking. Partial solvents.      Avoid
Silicone oil and greases	Generally compatible up to 85 °C

Note: Specified degree of protection is for operator mounted on panel. If other items are mounted in between, please make sure that they are correctly sealed.

Electrical data	
Contacts	
Rated frequency	50-60 Hz
Ratings as per IEC 60947-5-1	
Rated insulation voltage, $U_i$	300 V
Rated thermal current, $I_{th}$	5 A
Rated operational current, $I_e$ at: 240 V	1 A
Utilization category AC 15,	
Rated operational current, $I_e$ at: 24 V	0.3 A
utilization category DC 13, at: 125 V	0.2 A
Rated impulse withstand voltage $U_{imp}$	6 kV
Pollution degree	3
Ratings as per UL, CSA, NEMA	
	<b>C300</b> <b>R300</b>
	AC DC
Rated insulation voltage	250 V 250 V
Rated thermal current	2.5 A 1 A
Rated operational current at: 120 V	1.5 A
at: 125 V	0.22 A
at: 240 V	0.75 A
at: 250 V	0.11 A
Short circuit protection	
Max. fuse at 1 kA	gG 10A
Buzzer	
Short circuit protection	
Max. fuse at 1 kA	gG 10A
Ratings as per IEC 60947-5-1	
Rated insulation voltage, $U_i$	300 V
Rated impulse withstand voltage $u_{imp}$	4 kV
Rated frequency	50-60 Hz
Sound level db	≥80 db /10 cm
Product service life	> 5000 hours
Signal output	
Audio frequency	6.7 kHz

## Compact range

### Technical data

#### Illuminated pushbuttons CP

Color	Current		Illuminance of flush cap		Illuminance of extended cap		Anti-inductive peak voltage	Main wavelength	Color temperature
	mA Min.	Max.	lx Min.	Max.	lx Min.	Max.			
<b>Voltage range 24 V AC/ DC</b>									
● Red	8.5	11.5	150	600	120	400	5	620 ... 625	–
● Green	8.0	11.0	200	800	150	500	5	515 ... 520	–
● Yellow	8.5	11.5	200	800	120	400	5	585 ... 590	–
● Blue	8.5	10.5	200	500	200	400	5	465 ... 470	–
○ Clear	8.5	10.5	620	1000	360	700	5	–	8000 ... 12000
<b>Voltage range 110 ... 130 V AC/ DC</b>									
● Red	6.5	9.0	150	600	100	350	15	620 ... 625	–
● Green	6.5	9.0	150	600	100	350	15	515 ... 520	–
● Yellow	6.5	9.0	150	600	100	350	15	585 ... 590	–
● Blue	6.5	9.0	200	450	180	300	15	465 ... 470	–
○ Clear	6.5	9.0	520	860	300	600	15	–	8000 ... 12000
<b>Voltage range 230 V AC/ DC</b>									
● Red	4.0	6.0	150	600	120	400	15	620 ... 625	–
● Green	4.0	6.0	150	900	150	500	15	515 ... 520	–
● Yellow	4.0	6.0	150	600	150	500	15	585 ... 590	–
● Blue	4.0	6.0	250	500	250	400	15	465 ... 470	–
○ Clear	4.0	6.0	650	1050	380	720	15	–	8000 ... 12000

Note: The testing distance of illuminance is 2mm between top lens and sensor surface. Clean test environment, supply voltage at 50 / 60 Hz with harmonized wave and without high frequency.

## Compact range

### Technical data

#### Pilot light CL2

Color	Current		Illuminance		Anti-inductive peak voltage	Main wavelength	Color temperature
	mA Min.	Max.	lx Min.	Max.			
<b>Voltage range 6.3 V DC</b>							
● Red	13	16	45	250	2	620 ... 625	–
● Green	9.5	12.5	114	245	2	515 ... 520	–
● Yellow	13	16	65	210	2	585 ... 590	–
● Blue	9.5	12.5	8	35	2	465 ... 470	–
○ Clear	10	13	300	850	2	–	8000 ... 12000
<b>Voltage range 12 V DC</b>							
● Red	14	16	100	280	2	620 ... 625	–
● Green	12	14	165	310	2.5	515 ... 520	–
● Yellow	13.5	16	85	230	2.5	585 ... 590	–
● Blue	12	14	10	50	2.5	465 ... 470	–
○ Clear	12.5	14.5	480	850	2.5	–	8000 ... 12000
<b>Voltage range 24 V AC/ DC</b>							
● Red	14	16	75	240	6	620 ... 625	–
● Green	13.5	15	120	320	6	515 ... 520	–
● Yellow	14	16	55	230	6	585 ... 590	–
● Blue	13.5	15	8	30	6	465 ... 470	–
○ Clear	13.5	15	450	700	6	–	8000 ... 12000
<b>Voltage range 48 ... 60 V AC/ DC</b>							
● Red	14.5	16.5	75	200	7	620 ... 625	–
● Green	14.5	16.5	140	340	7	515 ... 520	–
● Yellow	14.5	16.5	55	330	7	585 ... 590	–
● Blue	14.5	16.5	10	45	7	465 ... 470	–
○ Clear	14.5	16.5	550	800	7	–	8000 ... 12000
<b>Voltage range 110 ... 130 V AC</b>							
● Red	14.5	17	85	340	20	620 ... 625	–
● Green	14.5	17	95	400	20	515 ... 520	–
● Yellow	14.5	17	85	250	20	585 ... 590	–
● Blue	14.5	17	8	30	20	465 ... 470	–
○ Clear	14.5	17	400	700	20	–	8000 ... 12000
<b>Voltage range 110 ... 130 V DC</b>							
● Red	7.5	9.5	40	110	20	620 ... 625	–
● Green	7.5	9.5	80	250	20	515 ... 520	–
● Yellow	7.5	9.5	45	165	20	585 ... 590	–
● Blue	7.5	9.5	6	35	20	465 ... 470	–
○ Clear	7.5	9.5	300	400	20	–	8000 ... 12000

Note: The testing distance of illuminance is 2mm between top lens and sensor surface. Clean test environment, supply voltage at 50 / 60 Hz with harmonized wave and without high frequency.

## Compact range

### Technical data

#### Pilot light CL2

Color	Current		Illuminance		Anti-inductive peak voltage	Main wavelength	Color temperature
	mA Min.	Max.	lx Min.	Max.	V	Nm	K
<b>Voltage range 220 V DC</b>							
● Red	5	6	15	85	20	620 ... 625	–
● Green	5	6	55	180	20	515 ... 520	–
● Yellow	5	6	15	115	20	585 ... 590	–
● Blue	5	6	5	35	20	465 ... 470	–
○ Clear	5	6	200	320	20	–	8000 ... 12000
<b>Voltage range 230 V AC</b>							
● Red	14.5	17	85	340	30	620 ... 625	–
● Green	14.5	17	95	400	35	515 ... 520	–
● Yellow	14.5	17	85	235	35	585 ... 590	–
● Blue	14.5	17	8	30	35	465 ... 470	–
○ Clear	14.5	17	400	700	35	–	8000 ... 12000
<b>Voltage range 380 ... 415 V AC</b>							
● Red	14.5	17	85	340	55	620 ... 625	–
● Green	14.5	17	95	400	65	515 ... 520	–
● Yellow	14.5	17	100	270	65	585 ... 590	–
● Blue	14.5	17	8	30	65	465 ... 470	–
○ Clear	14.5	17	400	700	65	–	8000 ... 12000
<b>Voltage range 230 V AC high anti-inductive voltage</b>							
● Red	14.5	17	55	255	60	620 ... 625	–
● Green	14.5	17	60	265	80	515 ... 520	–
● Yellow	14.5	17	45	210	70	585 ... 590	–
● Blue	14.5	17	5	25	80	465 ... 470	–
○ Clear	14.5	17	280	490	80	–	8000 ... 12000

Note: The testing distance of illuminance is 2mm between top lens and sensor surface. Clean test environment, supply voltage at 50 / 60 Hz with harmonized wave and without high frequency.

## Compact range

### Technical data

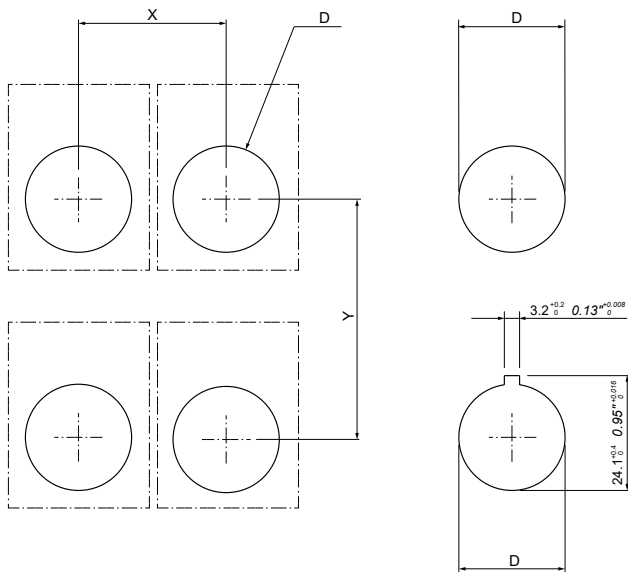
#### Buzzer CB

Color	Light and sound output	Current			Illuminance		Sound press level (dB/10cm)
		mA Min.		Max.	lx Min.	Max.	
<b>Voltage range 24 V AC/ DC</b>							
● Red	Pulsation	63	75	150	450		≥90
● Yellow	Pulsation	63	75	70	300		≥90
● Green	Continuous	43	53	150	600		≥90
● Black	Pulsation	58	72	–	–		≥90
● Black	Continuous	40	50	–	–		≥90
<b>Voltage range 110 ... 30 V AC</b>							
● Red	Pulsation	71	81	70	300		≥90
● Yellow	Pulsation	72	87	150	450		≥90
● Green	Continuous	50	60	150	600		≥90
● Black	Pulsation	42	54	–	–		≥90
● Black	Continuous	40	50	–	–		≥90
<b>Voltage range 110 ... 130 V DC</b>							
● Red	Pulsation	13	18	5	50		≥80
● Yellow	Pulsation	13	18	5	50		≥80
● Green	Continuous	13	18	15	100		≥80
● Black	Pulsation	13	18	–	–		≥80
● Black	Continuous	13	18	–	–		≥80
<b>Voltage range 230 V AC</b>							
● Red	Pulsation	70	84	150	450		≥90
● Yellow	Pulsation	72	82	70	300		≥90
● Green	Continuous	50	62	350	900		≥90
● Black	Pulsation	42	54	–	–		≥90
● Black	Continuous	43	53	–	–		≥90

Note: The testing distance of illuminance is 2mm between top lens and sensor surface. Clean test environment, supply voltage at 50 / 60 Hz with harmonized wave and without high frequency.  
Fluctuation of rated voltage: -10% to +10%.

## Compact range

### Drilling plan



Type	Description	X	Y	D		Panel thickness
				Ø mm	inch	
CP, CL, CSS, CB	Pushbutton, Pilot light, Selector switch, Buzzer	31 1.22"	50 1.97"	Ø 22.3 $^{+0.4}_0$	0.88" $^{+0.016}_0$	1.5 0.06" - 6 0.24"
CP, CL, CSS, CB	Pushbutton, Pilot light, Selector switch, Buzzer (with legend plate)	31 1.22"	55 2.17"	Ø 22.3 $^{+0.4}_0$	0.88" $^{+0.016}_0$	1.5 0.06" - 6 0.24"
CPM, CP6	Mushroom pushbutton, Heavy duty pushbutton	41 1.61"	55 2.17"	Ø 22.3 $^{+0.4}_0$	0.88" $^{+0.016}_0$	1.5 0.06" - 6 0.24"

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# Pilot devices

## Enclosures

### and assembled stations

#### **Ordering details**

119	Plastic enclosures for modular and compact range
120	Accessories for plastic enclosures
121	LED blocks for rear mounting
123	Legend plate holder
124	Legend plate for plastic enclosures MEP and CEP
125	Selector switches for vertical mounting
126	Assembled stations
127	Dimensions
128	Metal enclosures and accessories
<b>129</b>	<b>Dimensions</b>

## Enclosures



### Plastic enclosure for modular and compact

This enclosure can fit both modular and compact operators with the unique possibility to mount up to 5 contact blocks assigned to one operator.

Degree of protection: IP66 UL/ NEMA type 1, 3R, 4, 4X, 12, 13



### Compact plastic enclosure

The compact enclosure is one of the smallest on the market intended for compact operators.

Degree of protection: IP66, 67, 69K UL/ NEMA type 1, 3R, 4, 4X, 12, 13



### Metal enclosure

Metal line is made in addition to our plastic lines when metal is required. Featuring a high protection degree and large installation space.

Degree of protection: IP66, 67, 69K

### Assembled stations

We can also offer some of the most common assembled stations as a standard in combination with both modular and compact range.



# Enclosures

## Plastic enclosures for modular and compact range



### Description

When ordering complete enclosures:

- Select operators (modular or compact)
- For modular, select contact blocks and LED blocks for rear mounting (in accessories section)
- Per operator select between
  - One legend plate
  - One shroud (only for 1-seat)
  - One spacer
  - No accessory (only for compact range)
- Select cable gland

UL-listed applications: For end of line use only

According to the safety of machinery EN/ ISO 13850 emergency stop pushbuttons should be mounted on yellow background

Description	Color	Holes for cable gland	Type	Order code	Pkg qty	Weight (1 pce) kg
<b>Plastic enclosures</b>						
Empty plastic enclosures with stainless steel screws for modular and compact range						
1-seat	Dark grey / light grey	M20 and Pg 13.5/ Pg16 and (M20)	MEP1-0	1SFA611811R1000	1	0.15
1-seat	Yellow / light grey	M20 and Pg 13.5/ Pg16 and (M20)	MEPY1-0	1SFA611821R1000	1	0.15
2-seat	Dark grey / light grey	M20 and Pg 13.5/ Pg16 and (M20)	MEP2-0	1SFA611812R1000	1	0.17
3-seat	Dark grey / light grey	M20 and Pg 13.5/ Pg16 and (M20)	MEP3-0	1SFA611813R1000	1	0.20
4-seat	Dark grey / light grey	M25/ Pg 16 and (M20)	MEP4-0	1SFA611814R1000	1	0.23
6-seat	Dark grey / light grey	M25/ Pg 16 and (M20)	MEP6-0	1SFA611816R1000	1	0.30

### Shrouds

To be mounted on MEP1-seat enclosures or on panels

Yellow	MA1-8053	1SFA611920R8053	10	0.02
Grey	MA1-8152	1SFA611920R8152	10	0.02

### Compact plastic enclosures

Empty enclosure for compact range

1-seat	Yellow / light grey	M20 and Pg 13.5/ Pg16 and (M20)	CEPY1-0	1SFA619821R1000	1	0.072
1-seat	Dark grey / light grey	M20 and Pg 13.5/ Pg16 and (M20)	CEP1-0	1SFA619811R1000	1	0.072

### Shrouds

To be mounted on CEP-series of enclosures or on panel

Yellow	CA1-8053	1SFA619920R8053	1	0.016
Grey	CA1-8054	1SFA619920R8054	1	0.016

## Enclosures

### Accessories for plastic enclosures



MCB-10B

1SFC151378V0001



MCB-11B

1SFC151373V0001



MCB-02B

1SFC151374V0001



MCB-01BG

1SFC151375V0001



MA1-8129

1SFC151394V0001



MA5-8130

1SFC151395V0001



MA5-3001

MA5-300



MA1-8136

1SFC151393V0001

#### Description

To be used with MEP plastic enclosure or on DIN-rail

Description	Contacts	Type	Order code	Pkg qty	Weight (1 pce)
					kg



#### Contact blocks for rear mounting

Single contact block	1 0	MCB-10B	1SFA611610R2001	10	0.013
	0 1	MCB-01B	1SFA611610R2010	10	0.013
Double contact block	1 1	MCB-11B	1SFA611610R2011	10	0.026
	2 0	MCB-20B	1SFA611610R2002	10	0.026
	0 2	MCB-02B	1SFA611610R2020	10	0.026

#### Contact blocks with gold plated contacts

Single contact block	1 0	MCB-10BG	1SFA611610R2101	10	0.013
	0 1	MCB-01BG	1SFA611610R2110	10	0.013

#### Cable glands

Grey plastic, threaded outer sleeve with sealing ring included. Nut not included.

M25	MA5-3001	1SFA611925R3001	10	0.015
M20	MA5-3002	1SFA611925R3002	10	0.015
PG 13.5	MA5-3006	1SFA611925R3006	10	0.010
PG 16	MA5-3007	1SFA611925R3007	10	0.015

#### Nuts

Grey plastic, for cable glands above

M25	MA5-3003	1SFA611925R3003	10	0.005
M20	MA5-3004	1SFA611925R3004	10	0.005
PG 13.5	MA5-3008	1SFA611925R3008	10	0.001
PG 16	MA5-3009	1SFA611925R3009	10	0.001

#### Earthing terminal

For plastic enclosure	MA5-3005	1SFA611925R3005	10	0.005
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#### Sealing ring for operator hole

For plastic enclosure	MA1-8150	1SFA611920H8150	100	0.001
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#### Spacers

Needed when legend plates or shrouds are not used in plastic enclosures with rear mounted contact block. 1 mm thick.

Spacer	-	SK615516-1	10	0.002
Spacer for modular emergency stop	KA1-8045	1SFA616920R8045	10	0.004

#### Blanking plugs

Grey	MA1-8129	1SFA611920R8129	10	0.005
Black	MA1-8130	1SFA611920R8130	10	0.005
Light grey	MA1-8136	1SFA611920R8136	10	0.005

#### Adaptor

PG 16/ M20	MA5-3010	1SFA611925R3010	10	0.010
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## Enclosures

### LEDblocks for rear mounting



MLBL-00BW

1SFC151416V0001

#### Description

To be used in MEPplastic enclosure or on DIN-rail

Color	Rated current mA	Wave-length nm	Lumi-nance mcd	Type	Order code	Pkg qty	Weight (1 pce) kg
<b>Rated voltage 12 V DC (1)</b>							
● Red	12.0	620	320	MLBL-00BR	1SFA611621R2001	10	0.012
● Green	9.3	520	1500	MLBL-00BG	1SFA611621R2002	10	0.012
● Yellow	12.0	588	380	MLBL-00BY	1SFA611621R2003	10	0.012
● Blue	9.5	468	450	MLBL-00BL	1SFA611621R2004	10	0.012
○ White	9.3	(2)	600	MLBL-00BW	1SFA611621R2005	10	0.012
<b>Rated voltage 24 V AC/ DC (1)</b>							
● Red	9.9	620	250	MLBL-01BR	1SFA611621R2011	10	0.012
● Green	9.2	520	1500	MLBL-01BG	1SFA611621R2012	10	0.012
● Yellow	9.9	588	250	MLBL-01BY	1SFA611621R2013	10	0.012
● Blue	9.3	468	450	MLBL-01BL	1SFA611621R2014	10	0.012
○ White	9.2	(2)	600	MLBL-01BW	1SFA611621R2015	10	0.012
<b>Rated voltage 48 V AC/ DC (1)</b>							
● Red	10.0	620	260	MLBL-02BR	1SFA611621R2021	10	0.012
● Green	9.7	520	1500	MLBL-02BG	1SFA611621R2022	10	0.012
● Yellow	10.0	588	300	MLBL-02BY	1SFA611621R2023	10	0.012
● Blue	9.7	468	450	MLBL-02BL	1SFA611621R2024	10	0.012
○ White	9.7	(2)	600	MLBL-02BW	1SFA611621R2025	10	0.012
<b>Rated voltage 60 V AC/ DC (1)</b>							
● Red	13.0	620	350	MLBL-03BR	1SFA611621R2031	10	0.012
● Green	12.7	520	2000	MLBL-03BG	1SFA611621R2032	10	0.012
● Yellow	13.0	588	400	MLBL-03BY	1SFA611621R2033	10	0.012
● Blue	12.7	468	550	MLBL-03BL	1SFA611621R2034	10	0.012
○ White	12.7	(2)	750	MLBL-03BW	1SFA611621R2035	10	0.012
<b>Rated voltage 110 ... 130 V AC</b>							
● Red	8.6	620	200	MLBL-04BR	1SFA611621R2041	10	0.012
● Green	8.5	520	1200	MLBL-04BG	1SFA611621R2042	10	0.012
● Yellow	8.6	588	250	MLBL-04BY	1SFA611621R2043	10	0.012
● Blue	7.0	468	400	MLBL-04BL	1SFA611621R2044	10	0.012
○ White	7.0	(2)	500	MLBL-04BW	1SFA611621R2045	10	0.012
<b>Rated voltage 110 ... 130 V DC (1)</b>							
● Red	9.9	620	250	MLBL-05BR	1SFA611621R2051	10	0.012
● Green	9.8	520	1500	MLBL-05BG	1SFA611621R2052	10	0.012
● Yellow	9.9	588	300	MLBL-05BY	1SFA611621R2053	10	0.012
● Blue	9.8	468	450	MLBL-05BL	1SFA611621R2054	10	0.012
○ White	9.8	(2)	600	MLBL-05BW	1SFA611621R2055	10	0.012
<b>Rated voltage 220 V DC (1)</b>							
● Red	8.0	620	180	MLBL-06BR	1SFA611621R2061	10	0.012
● Green	8.0	520	110	MLBL-06BG	1SFA611621R2062	10	0.012
● Yellow	8.0	588	200	MLBL-06BY	1SFA611621R2063	10	0.012
● Blue	8.0	468	450	MLBL-06BL	1SFA611621R2064	10	0.012
○ White	8.0	(2)	600	MLBL-06BW	1SFA611621R2065	10	0.012

Note:

(1) Care should be taken for DC supply where + and - must be correctly connected. This is marked X1(+) and X2(-) on the product.

(2) X=0.31, Y=0.32 according to the ICI Chromaticity diagram.

For technical data, please refer to modular range section.

# Enclosures

## LEDblocks for rear mounting



MLBL-07BW

1SFC151416/0001

### Description

To be used in MEPlastic enclosure or on DIN-rail

Color	Rated current mA	Wave-length nm	Lumi-nance mcd	Type	Order code	Pkg qty	Weight (1 pce) kg
<b>Rated voltage 230 V AC</b>							
● Red	9.5	620	250	MLBL-07BR	1SFA611621R2071	10	0.012
● Green	9.4	520	1500	MLBL-07BG	1SFA611621R2072	10	0.012
● Yellow	9.5	588	300	MLBL-07BY	1SFA611621R2073	10	0.012
● Blue	8.2	468	450	MLBL-07BL	1SFA611621R2074	10	0.012
○ White	8.2	(2)	600	MLBL-07BW	1SFA611621R2075	10	0.012

<b>Rated voltage 380 V AC</b>							
● Red	10.2	620	250	MLBL-08BR	1SFA611621R2081	10	0.012
● Green	10.2	520	1500	MLBL-08BG	1SFA611621R2082	10	0.012
● Yellow	10.2	582	300	MLBL-08BY	1SFA611621R2083	10	0.012
● Blue	9.1	468	450	MLBL-08BL	1SFA611621R2084	10	0.012
○ White	9.1	(2)	600	MLBL-08BW	1SFA611621R2085	10	0.012

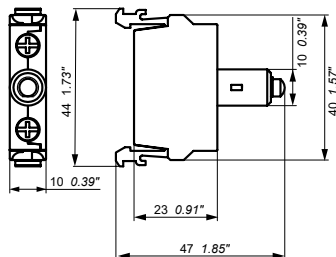
<b>Rated voltage 415 V AC</b>							
● Red	11.2	620	280	MLBL-09BR	1SFA611621R2091	10	0.012
● Green	11.2	520	1800	MLBL-09BG	1SFA611621R2092	10	0.012
● Yellow	11.2	588	350	MLBL-09BY	1SFA611621R2093	10	0.012
● Blue	9.9	468	500	MLBL-09BL	1SFA611621R2094	10	0.012
○ White	9.9	(2)	650	MLBL-09BW	1SFA611621R2095	10	0.012

Note:

(1)Careshould be taken for DCsupply where + and - must be correctly connected.This is marked X1(+)and X2(-)on the product.

(2)X=0.31,Y=0.32according to the ICIChromaticity diagram.

For technical data,please refer to modular range section.



MLBL

Dimensions (mm, inches)

# Enclosures

## Legend plate holders and inserts



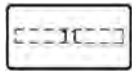
MA6-1060

1SFC151400V0001

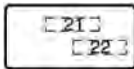


MA6-1061

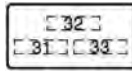
1SFC151380V0001



1-position insert



2-position insert



3-position insert

### Description

For Ø22mm operator, can be used with MEP plastic enclosures, laser marked with text or symbols. Inserts are made of plastic and aluminium laminate.

Description	Type	Order code	Pkg qty	Weight (1pce) kg
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### Legend plate holder

Grey plastic	MA6-1060	1SFA611930R1060	10	0.002
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### Insert

Without text or symbol	MA6-1061	1SFA611930R1061	10	0.001
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### 1-position inserts

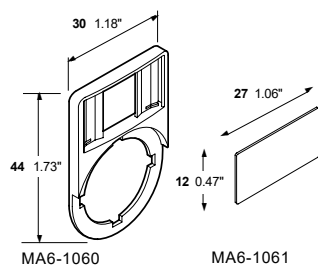
O	MA6-1062	1SFA611930R1062	10	0.001
I	MA6-1063	1SFA611930R1063	10	0.001
II	MA6-1064	1SFA611930R1064	10	0.001
→	MA6-1065	1SFA611930R1065	10	0.001
→→	MA6-1130	1SFA611930R1130	10	0.001
→→→	MA6-1131	1SFA611930R1131	10	0.001
Close	MA6-1132	1SFA611930R1132	10	0.001
Open	MA6-1133	1SFA611930R1133	10	0.001
On	MA6-1134	1SFA611930R1134	10	0.001
Off	MA6-1135	1SFA611930R1135	10	0.001
Fast	MA6-1136	1SFA611930R1136	10	0.001
Slow	MA6-1137	1SFA611930R1137	10	0.001
Down	MA6-1138	1SFA611930R1138	10	0.001
Up	MA6-1139	1SFA611930R1139	10	0.001
Start	MA6-1140	1SFA611930R1140	10	0.001
Stop	MA6-1141	1SFA611930R1141	10	0.001
Forward	MA6-1152	1SFA611930R1152	10	0.001
Reverse	MA6-1153	1SFA611930R1153	10	0.001

### 2-position inserts for selector switches

Pos.21	Pos.22				
O	I	MA6-1170	1SFA611930R1170	10	0.001
I	II	MA6-1171	1SFA611930R1171	10	0.001
→	→→	MA6-1172	1SFA611930R1172	10	0.001
Off	On	MA6-1173	1SFA611930R1173	10	0.001
Stop	Start	MA6-1174	1SFA611930R1174	10	0.001
Low	High	MA6-1175	1SFA611930R1175	10	0.001
Slow	Fast	MA6-1176	1SFA611930R1176	10	0.001
Close	Open	MA6-1177	1SFA611930R1177	10	0.001
Jog	Run	MA6-1178	1SFA611930R1178	10	0.001
Hand	Auto	MA6-1179	1SFA611930R1179	10	0.001

### 3-position inserts for selector switches

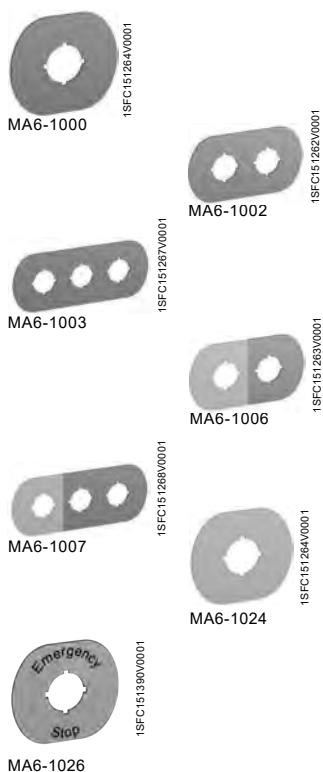
Pos.31	Pos.32	Pos.33				
←	O	→	MA6-1190	1SFA611930R1190	10	0.001
→	O	→→	MA6-1191	1SFA611930R1191	10	0.001
I	O	II	MA6-1192	1SFA611930R1192	10	0.001
Hand	O	Auto	MA6-1193	1SFA611930R1193	10	0.001
Slow	Off	Fast	MA6-1194	1SFA611930R1194	10	0.001



Dimensions (mm, inches)

## Enclosures

### Legend plates for plastic enclosures MEP and CEP



#### Legend plates for MEP plastic enclosures

For Ø 22 mm operator, plastic and aluminum laminate with adhesive back. Combine the emergency stop with the yellow legend plates without text to conform with safety of machinery standard EN/ISO 13850.

Description	Text symbol	Type	Order code	Pkg qty	Weight (1pce) kg
<b>Aluminum and plastic laminate</b>					
1-seat	without text	MA6-1000	1SFA611930R1000	1	0.004
2-seat	without text	MA6-1002	1SFA611930R1002	1	0.006
3-seat	without text	MA6-1003	1SFA611930R1003	1	0.008
4-seat	without text	MA6-1004	1SFA611930R1004	1	0.010
6-seat	without text	MA6-1005	1SFA611930R1005	1	0.012
1-seat	O	MA6-1012	1SFA611930R1012	1	0.004
1-seat	I	MA6-1013	1SFA611930R1013	1	0.004
2-seat	O I	MA6-1014	1SFA611930R1014	1	0.006
3-seat	O II	MA6-1015	1SFA611930R1015	1	0.008
3-seat	I O II	MA6-1016	1SFA611930R1016	1	0.008

#### Pos. 1 yellow plastic and aluminium laminate

2-seat	without text	MA6-1006	1SFA611930R1006	1	0.006
3-seat	without text	MA6-1007	1SFA611930R1007	1	0.008
4-seat	without text	MA6-1008	1SFA611930R1008	1	0.010
6-seat	without text	MA6-1009	1SFA611930R1009	1	0.012

#### Emergency stop legend plates for 1-seat enclosures

For horizontally mounted enclosures. Yellow plastic laminate. 66 x 59 mm.

Without text	MA6-1024	1SFA611930R1024	10	0.004
Nöd Stopp	MA6-1025	1SFA611930R1025	10	0.004
Emergency stop	MA6-1026	1SFA611930R1026	10	0.004
Not Aus	MA6-1027	1SFA611930R1027	10	0.004
ARRET D'URGENCE	MA6-1028	1SFA611930R1028	10	0.004
Hätäseis	MA6-1029	1SFA611930R1029	10	0.004

For vertically mounted enclosures. Yellow plastic laminate. 59 x 66 mm.

Nöd Stopp	MA6-1100	1SFA611930R1100	10	0.004
Emergency stop	MA6-1101	1SFA611930R1101	10	0.004
Not Aus	MA6-1102	1SFA611930R1102	10	0.004
ARRET D'URGENCE	MA6-1103	1SFA611930R1103	10	0.004
Hätäseis	MA6-1104	1SFA611930R1104	10	0.004

#### Legend plates for CEP plastic enclosures

For Ø 22 mm operator

Description	Text symbol	Type	Order code	Pkg qty	Weight (1pce) kg
<b>Emergency stop legend plates</b>					
Blacktext on yellow aluminum plate Ø 59 mm					
Without text		CA6-1024	1SFA619930R1024	10	0.004
Emergency stop		CA6-1026	1SFA619930R1026	10	0.004
Not Aus		CA6-1027	1SFA619930R1027	10	0.004

# Enclosures

## Selector switches for vertical mounting



### Description

When ordering complete vertically mounted enclosures:

- Select selector switches for vertical mounting
- Select contact blocks and LED blocks for rear mounting.

Per operator select between:

- One legend plate for vertical enclosures
- One spacer

Select cable gland.

Description	Color	Type	Order code	Pkg qty	Weight (1pce) kg
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### 2-position selector switch

Short handle, non-illuminated

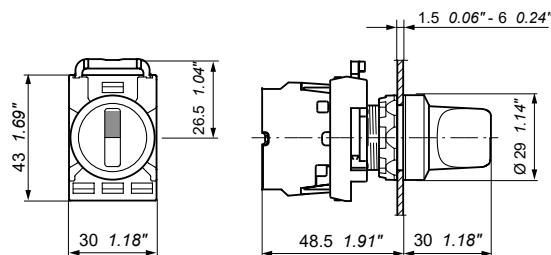
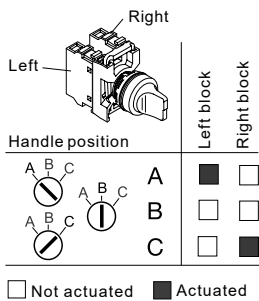
	● Black	M2SSV1-10B	1SFA611220R1006	10	0.015
	● Black	M2SSV2-10B	1SFA611221R1006	10	0.015
	● Black	M2SSV3-10B	1SFA611222R1006	10	0.015

### 3-position selector switch

Short handle, non-illuminated

	● Black	M3SSV1-10B	1SFA611230R1006	10	0.015
	● Black	M3SSV2-10B	1SFA611231R1006	10	0.015
	● Black	M3SSV3-10B	1SFA611232R1006	10	0.015

### Contacts actuated



M2SSV, M3SSV

Dimensions (mm, inches)

## Enclosures

### Assembled stations



MEPY1-1042

1SFC151415V0001



CEPY1-2001

1SFC151387V0001



MEP2-1001

1SFC151273V0001

#### Description

Assembled enclosures with emergency stop pushbuttons, yellow / light grey color designed according to the Safety of machinery standard EN/ISO 13850 for emergency stops.

Release method	Contacts	Type	Order code	Pkg qty	Weight (1 pce)
					kg



#### 1-seat plastic enclosures with 40 mm modular emergency stop pushbuttons

Yellow / light grey color

Twist release	0 2	MEPY1-1042	1SFA611821R1042	1	0.240
Twist release	2 1	MEPY1-1041	1SFA611821R1041	1	0.250
Pull release	0 2	MEPY1-1035	1SFA611821R1035	1	0.466
Twist release with plastic legend plate "Emergency stop"	0 2	MEPY1-1040	1SFA611821R1040	1	0.240

#### 1-seat plastic enclosures with 40 mm compact emergency stop pushbuttons

Yellow / light grey color

Twist release	0 2	CEPY1-1001	1SFA619821R1001	1	0.108
Pull release	0 2	CEPY1-1002	1SFA619821R1002	1	0.108
Key release	1 1	CEPY1-1006	1SFA619821R1006	1	0.105
Twist release, yellow shroud	0 2	CEPY1-2001	1SFA619821R2001	1	0.124
Pull release, yellow shroud	0 2	CEPY1-2002	1SFA619821R2002	1	0.124

#### 1-seat plastic enclosures with 40 mm compact emergency stop pushbuttons

Dark grey / light grey color

Twist release	1 1	CEP1-1001	1SFA619811R1001	1	0.108
Pull release	1 1	CEP1-1002	1SFA619811R1002	1	0.108
Twist release, grey shroud	1 1	CEP1-2001	1SFA619811R2001	1	0.124
Pull release, grey shroud	1 1	CEP1-2002	1SFA619811R2002	1	0.124

#### 2-seat plastic enclosure with modular pushbuttons

Dark grey / light grey

Two flush pushbuttons, momentary, black bezel

● Green	● Red	MEP2-1001	1SFA611812R1001	1	0.220
1 NO	1 NC				
I	0				

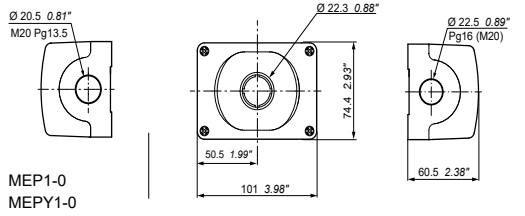


# Enclosures

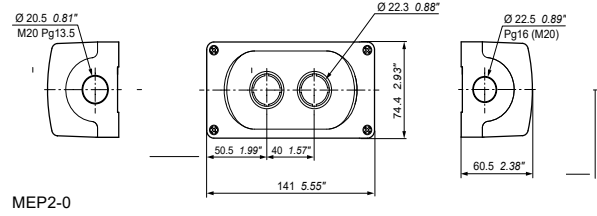
## Dimensions

### MEP plastic enclosures

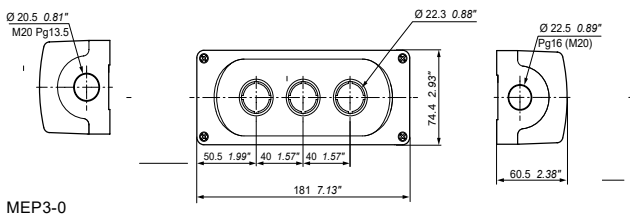
#### 1-seat



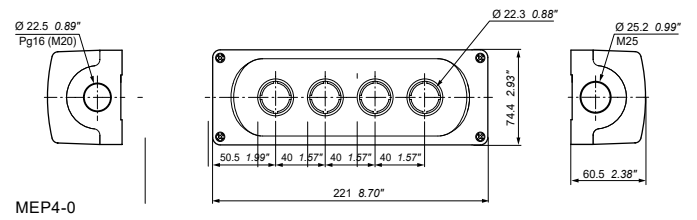
#### 2 seats



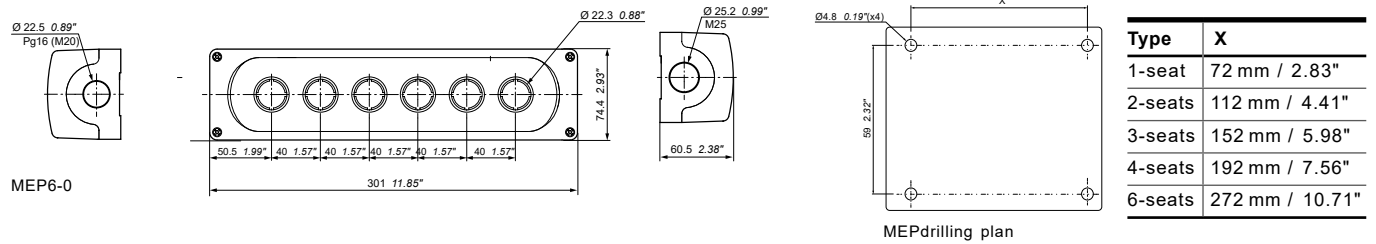
#### 3-seats



#### 4-seats

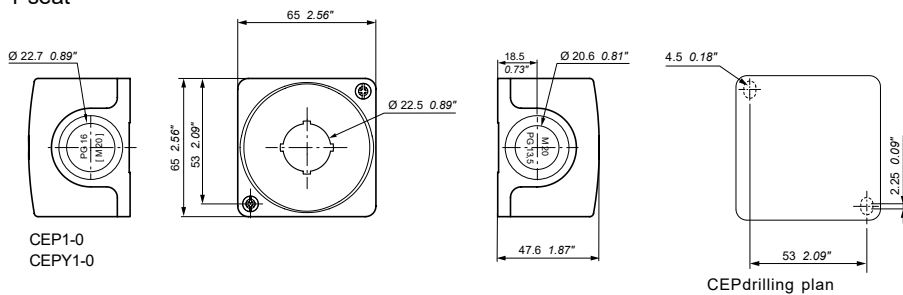


#### 6-seats



### CEP plastic enclosure for compact range

#### 1-seat



## Enclosures

### Metal enclosures and accessories



KEM

1SFC151309F0001



SK1707685

1SFC151488F0001



SK1750152

1SFC151489F0001



SK172105-AE

1SFC151490F0002



MA1-8129

1SFC151394V0001



MA1-8130

1SFC151395V0001



MA1-8136

1SFC151393V0001

#### Description

When ordering complete enclosure:

- Select operators
- Select contact blocks and LED blocks for front mounting and holder
- Select cable gland (holes for cable glands Pg 16)
- For 4- and 6-seat enclosure select blanking plate.

Description	Color	Type	Order code	Pkg qty	Weight (1pce) kg
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#### Empty cast aluminum enclosures for front mounted pilot devices.

Degree of protection IP66, IP67 and IP69K.

Seats	Color	Type	Order code	Pkg qty	Weight (1pce) kg
1-seat	Light grey	KEM1-0	SK616701-AA	1	0.40
2-seat	Light grey	KEM2-0	SK616702-AA	1	0.70
3-seat	Light grey	KEM3-0	SK616703-AA	1	0.80
4-seat	Light grey	KEM4-0	SK616704-AA	1	1.20
6-seat	Light grey	KEM6-0	SK616706-AA	1	1.40

#### Accessories

M	Pg	Diameter	Order code	Pkg qty	Weight (1pce) kg
---	----	----------	------------	---------	------------------

mm

#### Cable gland

Metal, threaded outer sleeve

22.5	16	8.5 ... 16	SK1707685	1	0.040
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#### Metal hexagon nut

For use with cable glands above

22.5	16		SK1750152	1	0.010
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#### Blanking plates without holes

Metal, black, for 4- and 6-seat metal enclosures

For flange opening	Suitable flange gasket	Order code	Pkg qty	Weight (1pce) kg
FL 13	SK1704536	SK172105-AA	1	0.010

Note: Flange gasket not included

#### Blanking plates with holes

Metal, black, for 4- and 6-seat metal enclosures

For flange opening	Suitable flange gasket	Order code	Pkg qty	Weight (1pce) kg
Two holes Hole centre distance 50 mm FL 13	M22.5 (Pg 16) SK1704536	SK172105-AD	1	0.110
Three holes Hole centre distance 38 mm FL 13	M22.5 (Pg 16) SK1704536	SK172105-AE	1	0.110

Note: Flange gasket not included

#### Flange gasket

FL 13	SK1704536		1	0.005
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#### Blanking plug

For 22 mm-hole

Grey	MA1-8129	1SFA611920R8129	10	0.005
Black	MA1-8130	1SFA611920R8130	10	0.005
Light grey	MA1-8136	1SFA611920R8136	10	0.005

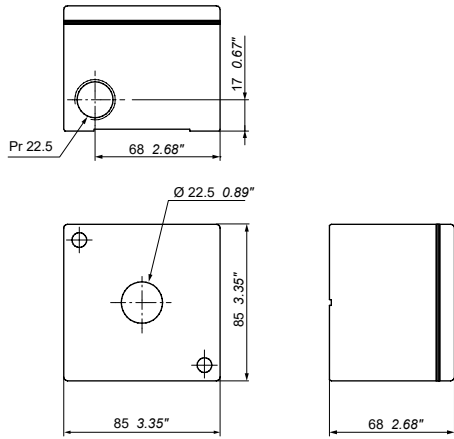
Note: Applicable to cover a 22mm-hole in an enclosure instead of an operator. Gasket and nut included.

# Enclosures

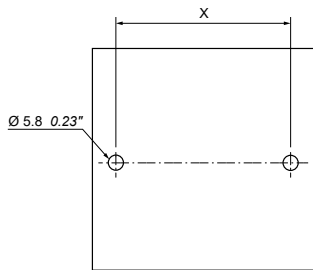
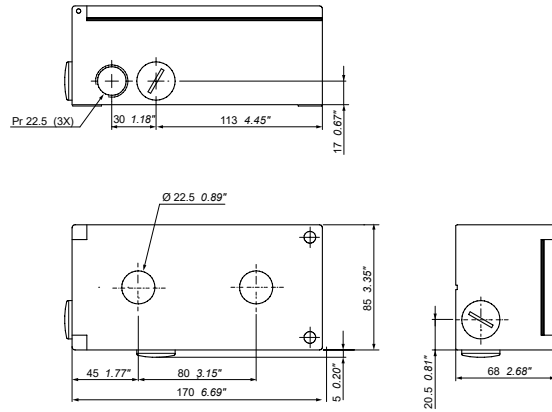
## Dimensions

### KEM metal enclosures

#### 1-seat



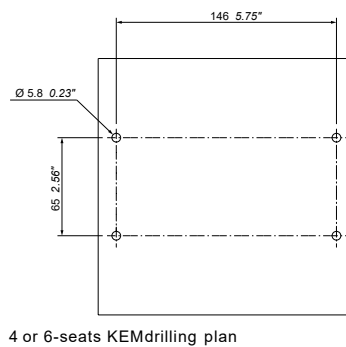
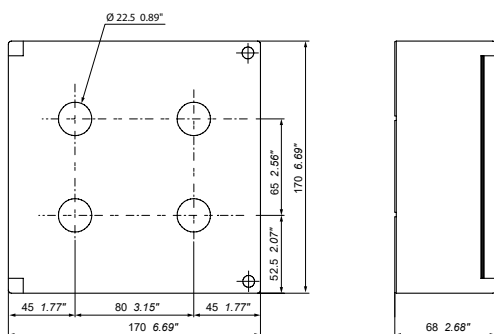
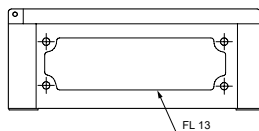
#### 2 and 3-seats KEM2-0, KEM3-0



Type	X
1-seat	67 mm / 2.64"
2 and 3-seats	146 mm / 5.75"

1, 2 and 3-seats KEMdrilling plan

#### 4 or 6-seats KEM4-0, KEM6-0



4 or 6-seats KEMdrilling plan



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# Legend plates and text caps

**132**    **Legend plates**

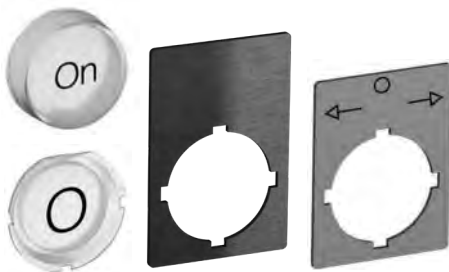
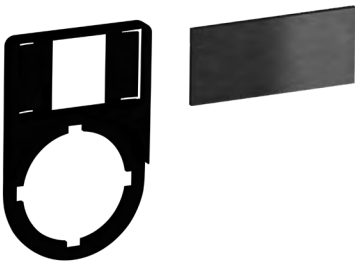
**136**    **Text caps**

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## Legend plates and text caps

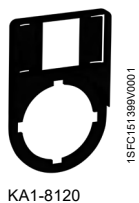


ABB offers a wide range of alternatives to label our products. Choose between marked aluminium legend plates, insert holders with a wide range of marked inserts or text caps to mount under the lens of the pilot device.

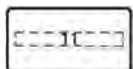


# Legend plates and text caps

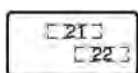
## Legend plate holder with inserts



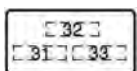
KA1-8120



1-position insert



2-position insert



3-position insert

### Description

For Ø 22 mm operators installed in panel or KEM metal enclosure, laser marked with text or symbols. Inserts made of plastic and aluminium laminate.

Description	Type	Order code	Pkg qty	Weight (1pce) kg
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### Legend plate holder

Black plastic	KA1-8120	1SFA616920R8120	100	0.002
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### Insert

Without text or symbol	KA1-8121	1SFA616920R8121	100	0.001
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### 1-position inserts

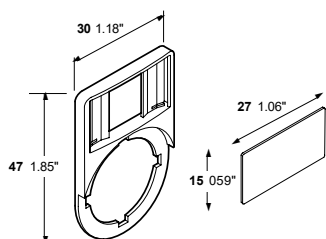
	Type	Order code	Pkg qty	Weight (1pce) kg
O	MA6-1032	1SFA611930R1032	10	0.001
I	MA6-1033	1SFA611930R1033	10	0.001
→	MA6-1034	1SFA611930R1034	10	0.001
→→	MA6-1035	1SFA611930R1035	10	0.001
Close	MA6-1036	1SFA611930R1036	10	0.001
Open	MA6-1037	1SFA611930R1037	10	0.001
On	MA6-1038	1SFA611930R1038	10	0.001
Off	MA6-1039	1SFA611930R1039	10	0.001
Fast	MA6-1040	1SFA611930R1040	10	0.001
Slow	MA6-1041	1SFA611930R1041	10	0.001
Down	MA6-1042	1SFA611930R1042	10	0.001
Up	MA6-1043	1SFA611930R1043	10	0.001
Start	MA6-1044	1SFA611930R1044	10	0.001
Stop	MA6-1045	1SFA611930R1045	10	0.001
Reset	MA6-1047	1SFA611930R1047	10	0.001
Run	MA6-1054	1SFA611930R1054	10	0.001
Fault	MA6-1058	1SFA611930R1058	10	0.001
Trip	MA6-1118	1SFA611930R1118	10	0.001
	MA6-1210	1SFA611930R1210	10	0.001

### 2-position inserts for selector switches

Pos. 21	Pos. 22	Type	Order code	Pkg qty	Weight (1pce) kg
O	I	MA6-1070	1SFA611930R1070	10	0.001
I	II	MA6-1071	1SFA611930R1071	10	0.001
Off	On	MA6-1073	1SFA611930R1073	10	0.001
Stop	Start	MA6-1074	1SFA611930R1074	10	0.001
Low	High	MA6-1075	1SFA611930R1075	10	0.001
Slow	Fast	MA6-1076	1SFA611930R1076	10	0.001
Close	Open	MA6-1077	1SFA611930R1077	10	0.001
Jog	Run	MA6-1078	1SFA611930R1078	10	0.001
Hand	Auto	MA6-1079	1SFA611930R1079	10	0.001

### 3-position inserts for selector switches

Pos.31	Pos.32	Pos.33	Type	Order code	Pkg qty	Weight (1pce) kg
→	O	→	MA6-1080	1SFA611930R1080	10	0.001
I	O	II	MA6-1082	1SFA611930R1082	10	0.001
Hand	O	Auto	MA6-1083	1SFA611930R1083	10	0.001
Slow	Off	Fast	MA6-1084	1SFA611930R1084	10	0.001
Man		Auto	MA6-1085	1SFA611930R1085	10	0.001
Man	Off	Auto	MA6-1086	1SFA611930R1086	10	0.001
O		I	MA6-1087	1SFA611930R1087	10	0.001



Dimensions (mm, inches)

## Legend plates and text caps

### Legend plates for emergency stop



1SFA616915R1005

1SFC151386V0001



SK615546-2

1SFC151386V0001

#### Description

For Ø 22 mm operators installed in panel or KEMmetal enclosure. Combine the emergency stops with the yellow legend plates without text to conform with the Safety machinery standard EN/ISO 13850.

Legend plates made of laminate have adhesive back.

Description	Type	Order code	Pkg qty	Weight (1pce) kg
<b>Plastic Ø 70mm</b>				
Without text	–	1SFA616915R1038	10	0.003
Emergency stop	–	1SFA616915R1005	10	0.003
Not Aus	–	1SFA616915R6005	10	0.003
<b>Aluminium Ø 70 mm</b>				
Without text	–	SK615546-8	10	0.010
Nöd Stopp	–	SK615546-1	10	0.010
Emergency stop	–	SK615546-2	10	0.010
Not Aus	–	SK615546-3	10	0.010
ARRET D'URGENCE	–	SK615546-4	10	0.010
HÄTÅSEIS	–	SK615546-5	10	0.010
PARADA DE EMERGENCIA	–	SK615546-6	10	0.010
Nød Stop	–	SK615546-7	10	0.010
Emergency stop NOT AUSARRET D'URGENCE	–	SK615546-13	10	0.010
Noodstop	–	SK615546-15	10	0.010
<b>Aluminum laminate rectangular 59 x 39.5 mm</b>				
Without text	MA6-1010	1SFA611930R1010	10	0.005
Nöd stopp	MA6-1017	1SFA611930R1017	10	0.005
Not haus	MA6-1018	1SFA611930R1018	10	0.005
Emergency stop	MA6-1019	1SFA611930R1019	10	0.005
ARRET D'URGENCE	MA6-1020	1SFA611930R1020	10	0.005
Hätäseis	MA6-1021	1SFA611930R1021	10	0.005
PARADA DE EMERGENCIA	MA6-1022	1SFA611930R1022	10	0.005
<b>Plastic laminate rectangular 59 x 39.5 mm</b>				
Without text	MA6-1011	1SFA611930R1011	10	0.002
Emergency stop	MA6-1023	1SFA611930R1023	10	0.002



# Legend plates and text caps

## Legend plates for panels and KEM metal enclosures



MA16-1001

1SFC151382V0001



SK615552-14

SK615552-14



SK615550-6

SK615550-61



SK615552-25

SK615552-25



SK615550-81

SK615550-81



SK615562-82

SK615562-82

### Description

For Ø 22 mm operators, made of silver-greyaluminium.

Type	Order code	Pkg qty	Weight (1pce) kg
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#### Without text

Legend plate height 39 mm	MA16-1000	1SFA611940R1000	10	0.002
Legend plate height 44 mm	MA16-1001	1SFA611940R1001	10	0.002

#### 1-position engraved for selector switches and pushbuttons

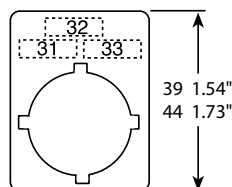
Legend plate height 39 mm

O	–	SK615550-61	10	0.002
I	–	SK615550-62	10	0.002
→	–	SK615562-12	10	0.002
→ →	–	SK615562-27	10	0.002
Close	–	SK615552-13	10	0.002
Down	–	SK615552-14	10	0.002
Emergency stop	–	SK615552-15	10	0.002
Fast	–	SK615552-16	10	0.002
Forward	–	SK615552-17	10	0.002
In	–	SK615550-29	10	0.002
Lower	–	SK615552-20	10	0.002
Off	–	SK615552-21	10	0.002
On	–	SK615552-22	10	0.002
Open	–	SK615552-23	10	0.002
Raise	–	SK615552-25	10	0.002
Reset	–	SK615552-27	10	0.002
Reverse	–	SK615552-28	10	0.002
Right	–	SK615552-40	10	0.002
Run	–	SK615552-29	10	0.002
Slow	–	SK615552-30	10	0.002
Start	–	SK615550-44	10	0.002
Stop	–	SK615552-31	10	0.002
Up	–	SK615552-32	10	0.002

#### 3-position engraved for selector switches

Legend plate height 39 mm

Pos.31	Pos.32	Pos.33		
I	O	II	–	SK615550-81
←	O	→	–	SK615562-82
→	O	→ →	–	SK615562-83
Hand	O	Auto	–	SK615550-80



3-position engraved  
Dimensions (mm,inches)

## Legend plates and text caps

### Text caps for illuminated pushbuttons and pilot lights



KTC1-1020

1SFC151298V0001



KTC1-9004

1SFC151298V0001



KTC1-1019

9IBA188913



KTC2-1020

1SFC151290V0001



KTC3-1019

9IBA188038



KTC3-1020

1SFC151294V0001

#### Description

To be mounted under the lens of illuminated pushbutton or pilot light to add symbol or text.

Choose only white text caps with illuminated products due to high opacity of the colored text caps.

Choose colored text caps in combination with clear lens.

Text/ symbol	Color	Type	Order code	Pkg qty	Weight (1pce) kg
<b>For flush pushbuttons</b>					
Without text	○ White	KTC1-9000	1SFA616901R9000	10	0.001
START	○ White	KTC6-1042	1SFA616906R1042	10	0.001
R	○ White	KTC1-9009	1SFA616901R9009	10	0.001
On	○ White	KTC1-1020	1SFA616901R1020	10	0.001
ON	○ White	KTC1-1039	1SFA616901R1039	10	0.001
	● Green	KTC6-1039	1SFA616906R1039	10	0.001
	● Black	KTC8-1039	1SFA616908R1039	10	0.001
Off	○ White	KTC1-1019	1SFA616901R1019	10	0.001
Stop	○ White	KTC1-1031	1SFA616901R1031	10	0.001
STOP	● Red	KTC4-1047	1SFA616904R1047	10	0.001
Reset	○ White	KTC1-1025	1SFA616901R1025	10	0.001
O	○ White	KTC1-9004	1SFA616901R9004	10	0.001
	● Red	KTC4-9004	1SFA616904R9004	10	0.001
	● Black	KTC8-9004	1SFA616908R9004	10	0.001
I	○ White	KTC1-9002	1SFA616901R9002	10	0.001
	● Green	KTC6-9002	1SFA616906R9002	10	0.001
	● Black	KTC8-9002	1SFA616908R9002	10	0.001
II	○ White	KTC1-9003	1SFA616901R9003	10	0.001
	● Black	KTC8-9003	1SFA616908R9003	10	0.001
III	○ White	KTC1-9028	1SFA616901R9028	10	0.001
+	● Black	KTC8-9011	1SFA616908R9011	10	0.001
-	● Black	KTC8-9012	1SFA616908R9012	10	0.001
↑	○ White	KTC1-9005	1SFA616901R9005	10	0.001
	● Black	KTC8-9005	1SFA616908R9005	10	0.001
⚡	● Black	KTC8-9015	1SFA616908R9015	10	0.001
↔	○ White	KTC1-9016	1SFA616901R9016	10	0.001
	● Black	KTC8-9016	1SFA616908R9016	10	0.001
→	○ White	KTC1-9006	1SFA616901R9006	10	0.001
⊕	● Black	KTC8-9018	1SFA616908R9018	10	0.001
⊙	○ White	KTC1-9020	1SFA616901R9020	10	0.001
↓	○ White	KTC1-9026	1SFA616901R9026	10	0.001
	● Black	KTC8-9026	1SFA616908R9026	10	0.001
<b>For extended pushbuttons</b>					
Without text	○ White	KTC2-9000	1SFA616902R9000	10	0.001
On	○ White	KTC2-1020	1SFA616902R1020	10	0.001
Off	● Red	KTC5-1040	1SFA616905R1040	10	0.001
Stop	○ White	KTC2-1031	1SFA616902R1031	10	0.001
STOP	● Red	KTC5-1047	1SFA616905R1047	10	0.001
Reset	○ White	KTC2-1025	1SFA616902R1025	10	0.001
O	● Red	KTC5-9004	1SFA616905R9004	10	0.001
I	○ White	KTC2-9002	1SFA616902R9002	10	0.001
II	○ White	KTC2-9003	1SFA616902R9003	10	0.001
III	○ White	KTC2-9028	1SFA616902R9028	10	0.001
↑	○ White	KTC2-9005	1SFA616902R9005	10	0.001
⚡	○ White	KTC2-9015	1SFA616902R9015	10	0.001
↔	○ White	KTC2-9016	1SFA616902R9016	10	0.001
→	○ White	KTC2-9006	1SFA616902R9006	10	0.001
<b>For pilot lights</b>					
Without text	○ White	KTC3-9000	1SFA616903R9000	10	0.001
On	○ White	KTC3-1020	1SFA616903R1020	10	0.001
ON	○ White	KTC3-1039	1SFA616903R1039	10	0.001
Off	○ White	KTC3-1019	1SFA616903R1019	10	0.001
I	○ White	KTC3-9002	1SFA616903R9002	10	0.001

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# Pilot devices

## Signal towers and signal beacons

	<b>Ordering details</b>
139	Signal towers and signal beacons
<b>141</b>	<b>Accessories</b>
<b>143</b>	<b>technical data</b>
<b>144</b>	<b>Dimensions and drilling plans</b>

## Signal towers and signal beacons



### Signal towers

- Fast mounting of signal elements using bayonet fixing
- Easy changing of bulbs for each module without tools
- Flexibility of signal element combination
- Up to 5 elements possible/up to 10 elements with bracket for 2-sided mounting
- High protection rating optical and audible signal elements with IP54
- LED elements for long life

### Signal beacons

- High protection rating IP65
- Cap consists of high impact polycarbonate (up to 20 J)
- Bulb change via inside of control box

### Simple fitting with quick fix system

Each signal tower module is equipped with a bayonet fixing with integral contact system. The modules are fastened together by aligning the corresponding white marks then with a gentle twist they are locked into place (see the figures).

### Signal towers and beacons

- Permanent light
- Blinking light
- Flashing light
- Audible
- LED permanent light
- LED blinking light
- LED rotating light

# Signal towers and signal beacons

## Signal towers - Light elements



KL70-401B

1SFC151507F0001



KL70-401Y

1SFC15108F0001



KA4-102...

1SFC151509F0001

### Description

When ordering:

- Select up to 5 light elements
- Select up to 10 elements if bracket for 2-sided mounting is used
- Select up to 2 audible element (optional)
- Select bulb (optional)
- Select terminal element for preferred mounting type
- Select accessories for preferred mounting type.

Color	Rated voltage	Type	Order code	Pkg qty	Weight (1pce) kg
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### Light element with integrated LED

● Red	24 V AC/ DC	Permanent light	KL70-305R	1SFA616070R3051	1	0.100
● Green	24 V AC/ DC	Permanent light	KL70-305G	1SFA616070R3052	1	0.100
● Yellow	24 V AC/ DC	Permanent light	KL70-305Y	1SFA616070R3053	1	0.100
● Blue	24 V AC/ DC	Permanent light	KL70-305L	1SFA616070R3054	1	0.100
○ Clear	24 V AC/ DC	Permanent light	KL70-305C	1SFA616070R3058	1	0.100
● Red	24 V AC/ DC	Blinking light	KL70-306R	1SFA616070R3061	1	0.100
● Green	24 V AC/ DC	Blinking light	KL70-306G	1SFA616070R3062	1	0.100
● Yellow	24 V AC/ DC	Blinking light	KL70-306Y	1SFA616070R3063	1	0.100
● Blue	24 V AC/ DC	Blinking light	KL70-306L	1SFA616070R3064	1	0.100
○ Clear	24 V AC/ DC	Blinking light	KL70-306C	1SFA616070R3068	1	0.100
● Red	24 V AC/ DC	Rotating light	KL70-307R	1SFA616070R3071	1	0.100
● Green	24 V AC/ DC	Rotating light	KL70-307G	1SFA616070R3072	1	0.100
● Yellow	24 V AC/ DC	Rotating light	KL70-307Y	1SFA616070R3073	1	0.100
● Blue	24 V AC/ DC	Rotating light	KL70-307L	1SFA616070R3074	1	0.100
○ Clear	24 V AC/ DC	Rotating light	KL70-307C	1SFA616070R3078	1	0.100
● Red	115 V AC	Blinking light	KL70-342R	1SFA616070R3421	1	0.100
● Green	115 V AC	Blinking light	KL70-342G	1SFA616070R3422	1	0.100
● Yellow	115 V AC	Blinking light	KL70-342Y	1SFA616070R3423	1	0.100
● Blue	115 V AC	Blinking light	KL70-342L	1SFA616070R3424	1	0.100
○ Clear	115 V AC	Blinking light	KL70-342C	1SFA616070R3428	1	0.100
● Red	230 V AC	Blinking light	KL70-352R	1SFA616070R3521	1	0.100
● Green	230 V AC	Blinking light	KL70-352G	1SFA616070R3522	1	0.100
● Yellow	230 V AC	Blinking light	KL70-352Y	1SFA616070R3523	1	0.100
● Blue	230 V AC	Blinking light	KL70-352L	1SFA616070R3524	1	0.100
○ Clear	230 V AC	Blinking light	KL70-352C	1SFA616070R3528	1	0.100

### Light element for bulb Ba 15d, bulb not included

● Red	12 ...230 VAC/ DC	Permanent light	KL70-401R	1SFA616070R4011	1	0.090
● Green	12 ...230 VAC/ DC	Permanent light	KL70-401G	1SFA616070R4012	1	0.090
● Yellow	12 ...230 VAC/ DC	Permanent light	KL70-401Y	1SFA616070R4013	1	0.090
● Blue	12 ...230 VAC/ DC	Permanent light	KL70-401L	1SFA616070R4014	1	0.090
○ Clear	12 ...230 VAC/ DC	Permanent light	KL70-401C	1SFA616070R4018	1	0.090

## Signal towers and signal beacons

### Signal towers - Bulbs and audible modules



KL70-401B

1SFC151507F0001



KL70-401Y

1SFC151508F0001



KA4-102...

1SFC151509F0001

#### Description

When ordering:

- Select up to 5 light elements
- Select up to 10 elements if bracket for -sided mounting is used
- Select up to 2 audible element (optional)
- Select bulb (optional)
- Select terminal element for preferred mounting type
- Select accessories for preferred mounting type.

Description	Rated voltage	Type	Order code	Pkg qty	Weight (1pce) kg
<b>Bulbs for light element</b>					
Bulb Ba 15d, 42 mm max 7 W					
For permanent or blinking light element	24 V AC/ DC, 5 W	KA4-1028	1SFA616923R1028	10	0.009
For permanent or blinking light element	115 V AC/DC, 5 W	KA4-1118	1SFA616923R1118	10	0.009
For permanent or blinking light element	230 V AC/DC, 5 W	KA4-1148	1SFA616923R1148	10	0.009
<b>LED bulbs Ba 15d, 40mA</b>					
● Red	24 V AC/ DC	KA4-1021	1SFA616924R1021	1	0.009
● Green	24 V AC/ DC	KA4-1022	1SFA616924R1022	1	0.009
● Yellow	24 V AC/ DC	KA4-1023	1SFA616924R1023	1	0.009
● Blue	24 V AC/ DC	KA4-1024	1SFA616924R1024	1	0.009
○ Clear	24 V AC/ DC	KA4-1025	1SFA616924R1025	1	0.009

#### Audible modules

##### Buzzer element

Adjustable tone, 85 dB

Continuous or pulsating tone	230 V AC	KB70-1201	1SFA616071R1201	1	0.120
Continuous or pulsating tone	24 V AC/DC	KB70-3001	1SFA616071R3001	1	0.110
Continuous or pulsating tone	115 V AC	KB70-3101	1SFA616071R3101	1	0.110

##### Siren element

Multi function 8 diff. Tones adjustable volume adjustable 100 dB	115 V AC	KS70-1104	1SFA616073R1104	1	0.130
Multi function 8 diff. Tones adjustable volume adjustable 100 dB	230 V AC	KS70-1204	1SFA616073R1204	1	0.120
Multi function 7 diff. Tones adjustable volume adjustable 100 dB	24 V DC	KS70-2004	1SFA616073R2004	1	0.120
Multi function 8 diff. Tones adjustable volume adjustable 100 dB	24 V AC/ DC	KS70-3004	1SFA616073R3004	1	0.120
Continuous tone alternating 108 dB	24 V DC	KS70-2002	1SFA616073R2002	1	0.150

# Signal towers and signal beacons

## Accessories



KT70-1001

1SFC151510F0001



KA70-1001

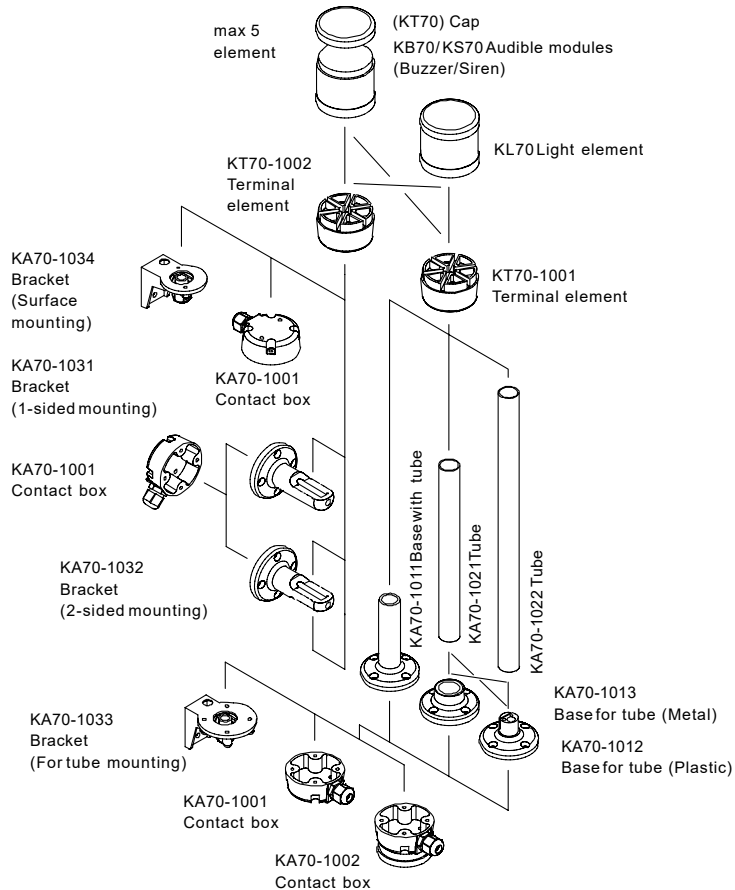
1SFC151511F0001



KA70-1034

1SFC151512F0001

Description	Type	Order code	Pkg qty	Weight (1pce) kg
<b>Terminal elements</b>				
For tube mounting, including cap	KT70-1001	1SFA616075R1001	1	0.150
For bracket or base, including cap	KT70-1002	1SFA616075R1002	1	0.150
<b>Special parts</b>				
<b>Contact box</b>				
Cable exit at side	KA70-1001	1SFA616077R1001	1	0.070
Magnetic base	KA70-1002	1SFA616077R1002	1	0.070
<b>Basewith tube</b>				
D=25 mm L=110 mm	KA70-1011	1SFA616077R1011	1	0.060
<b>Base for tube</b>				
D=25 mm, plastic	KA70-1012	1SFA616077R1012	1	0.030
D=25 mm, metal	KA70-1013	1SFA616077R1013	1	0.320
<b>Tube, anodized aluminum</b>				
D=25 mm L=250 mm	KA70-1021	1SFA616077R1021	1	0.080
D=25 mm L=400 mm	KA70-1022	1SFA616077R1022	1	0.120
D=25 mm L=800 mm	KA70-1023	1SFA616077R1023	1	0.240
<b>Bracket</b>				
1-sided mounting, max. 5 elements	KA70-1031	1SFA616077R1031	1	0.070
2-sided mounting, max. 10 elements	KA70-1032	1SFA616077R1032	1	0.070
For tube mounting	KA70-1033	1SFA616077R1033	1	0.070
For surface mounting	KA70-1034	1SFA616077R1034	1	0.070



## Signal towers and signal beacons

### Signal beacons



KSB-401G

1SFC151513F0001



KASB-100

1SFC151514F0001

#### Description

For panel mounting with hole diameter 37 mm, with optional anti-twist device.

Color	Rated voltage	Type	Order code	Pkg qty	Weight (1pce) kg
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#### Integrated LED

● Red	24 V AC/ DC	Permanent light	KSB-305R	1SFA616080R3051	1	0.140
● Green	24 V AC/ DC	Permanent light	KSB-305G	1SFA616080R3052	1	0.140
● Yellow	24 V AC/ DC	Permanent light	KSB-305Y	1SFA616080R3053	1	0.140
● Red	24 V AC/ DC	Blinking light	KSB-306R	1SFA616080R3061	1	0.140
● Green	24 V AC/ DC	Blinking light	KSB-306G	1SFA616080R3062	1	0.140
● Yellow	24 V AC/ DC	Blinking light	KSB-306Y	1SFA616080R3063	1	0.140
● Red	24 V AC/ DC	Rotating light	KSB-307R	1SFA616080R3071	1	0.140
● Green	24 V AC/ DC	Rotating light	KSB-307G	1SFA616080R3072	1	0.140
● Yellow	24 V AC/ DC	Rotating light	KSB-307Y	1SFA616080R3073	1	0.140
● Red	115 V AC	Permanent light	KSB-115R	1SFA616080R1151	1	0.140
● Green	115 V AC	Permanent light	KSB-115G	1SFA616080R1152	1	0.140
● Yellow	115 V AC	Permanent light	KSB-115Y	1SFA616080R1153	1	0.140

#### Integrated xenon tube

● Red	24 V DC	Flashing light	KSB-203R	1SFA616080R2031	1	0.140
● Green	24 V DC	Flashing light	KSB-203G	1SFA616080R2032	1	0.140
● Yellow	24 V DC	Flashing light	KSB-203Y	1SFA616080R2033	1	0.140
● Blue	24 V DC	Flashing light	KSB-203L	1SFA616080R2034	1	0.140
○ Clear	24 V DC	Flashing light	KSB-203C	1SFA616080R2038	1	0.140
● Red	115 V AC	Flashing light	KSB-113R	1SFA616080R1131	1	0.140
● Green	115 V AC	Flashing light	KSB-113G	1SFA616080R1132	1	0.140
● Yellow	115 V AC	Flashing light	KSB-113Y	1SFA616080R1133	1	0.140
● Blue	115 V AC	Flashing light	KSB-113L	1SFA616080R1134	1	0.140
○ Clear	115 V AC	Flashing light	KSB-113C	1SFA616080R1138	1	0.140
● Red	230 V AC	Flashing light	KSB-123R	1SFA616080R1231	1	0.140
● Green	230 V AC	Flashing light	KSB-123G	1SFA616080R1232	1	0.140
● Yellow	230 V AC	Flashing light	KSB-123Y	1SFA616080R1233	1	0.140
● Blue	230 V AC	Flashing light	KSB-123L	1SFA616080R1234	1	0.140
○ Clear	230 V AC	Flashing light	KSB-123C	1SFA616080R1238	1	0.140

#### For bulb Ba 15d, bulb not included

● Red	12 ... 240 V AC/ DC	Permanent light	KSB-401R	1SFA616080R4011	1	0.130
● Green	12 ... 240 V AC/ DC	Permanent light	KSB-401G	1SFA616080R4012	1	0.130
● Yellow	12 ... 240 V AC/ DC	Permanent light	KSB-401Y	1SFA616080R4013	1	0.130
● Blue	12 ... 240 V AC/ DC	Permanent light	KSB-401L	1SFA616080R4014	1	0.130
○ Clear	12 ... 240 V AC/ DC	Permanent light	KSB-401C	1SFA616080R4018	1	0.130

#### Bulbs for light element

Bulb Ba 15d, 42 mm

max 10 W for permanent light

	12 V AC/ DC, 7 W	KA3-1018	1SFA616922R1018	10	0.011
	24 V AC/ DC, 7 W	KA3-1028	1SFA616922R1028	10	0.011
	115 V AC/ DC, 7 W	KA3-1118	1SFA616922R1118	10	0.011
	220 ... 260 V AC/ DC, 7 ... 10 W	KA3-1148	1SFA616922R1148	10	0.011

#### Special parts

Anti-twist device	KASB-1000	1SFA616087R1000	1	0.005
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## Signal towers and signal beacons

### Technical data

#### Signal towers K70

##### Technical specifications

Housing and accessories	Polyamide, high impact, black
Dome	Polycarbonate, transparent
Fixing	Basemounting, tube Ø 25mm, bracket mounting
Socket	B 15 d, for bulb max. 7W
Connection	Screw connection up to 2.5 mm <sup>2</sup>
Number of modules possible 1-sided bracket	max. 5
Number of modules possible 2-sided bracket	max. 10

##### Degrees of protection

Light elements	IP 54	UL type 5
Audible elements	IP 54	UL type 5

##### Electrical data

Permanent light element	12 ... 240 V
Bulb socket B 15 d, max 7 W	Bulb not included

##### Flashing light element

	24 V DC	115 V AC	230 V AC
Flash frequency	1 Hz	1 Hz	1 Hz
Flash energy	2 Ws	2 Ws	2 Ws
Life duration	4 million flashes		
Current consumption	125 mA	22 mA	15 mA
Reduced for AS-Interface	80 mA	80 mA	80 mA
Starting current	< 0.5 A at 24 V		

##### LED permanent light element

	24 V AC/DC	115 V AC	230 V AC
Life duration	100 000 hours		
Current consumption	45 mA	25 mA	25 mA
Starting current	< 0.5 A at 24 V		

##### LED blinking light element

	24 V AC/DC	115 V AC	230 V AC
Life duration	100 000 hours		
Current consumption	25 mA	25 mA	25 mA
Starting current	< 0.5 A at 24 V		
Blink frequency	~1 Hz	~1 Hz	~1 Hz

##### LED rotation light element

	24 V AC/DC
Life duration	50 000 hours
Current consumption	40 mA
Starting current	< 0.5 A at 24 V
Rotation frequency	~120 r.p.m.

##### Temperature

Ambient temperature during operations	-20 to +50 °C
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#### Signal beacons KSB

##### Technical specifications

Housing and accessories	PC/ABS-blend, high impact, black
Dome	Polycarbonate, transparent
Fixing	Installation mounting for Ø 37mm, (PG 29)
Bulb socket	B 15 d, for bulb max. 10W
Bulb change	Via rear access with bayonet mechanism (Bulb not included)
Connection	Screw connection max 2.5 mm <sup>2</sup>
Degrees of protection	IP 65, UL type 5

##### Electrical data

##### Permanent light element

Operating voltage	max. 250 V
Life duration	100 000 hours
Bulb socket B 15 d, max 10 W	Bulb not included

##### LED version: Permanent light

	24 V AC/DC
Life duration	100 000 hours
Current consumption	45 mA

##### Flashing light element

	24 V AC/DC	115 V AC	230 V AC
Operating voltage	24 V AC/DC	115 V AC	230 V AC
Flash frequency	1 Hz	1 Hz	1 Hz
Flash energy	2 Ws	2 Ws	2 Ws
Life duration	4 million flashes		
Current consumption	125 mA	20 mA	35 mA
Starting current	< 0.5 A	< 0.5 A	< 0.5 A

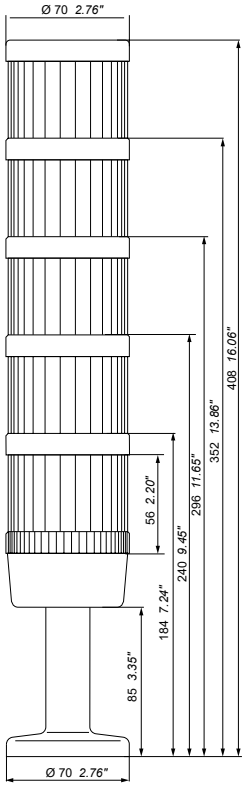
##### Temperature

Ambient temperature during operations	-20 to +50 °C
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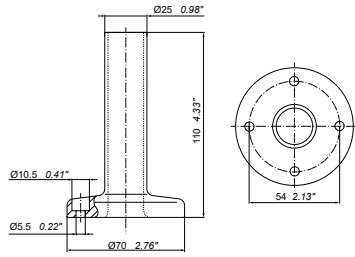
# Signal towers and signal beacons

## Dimensions and drilling plans

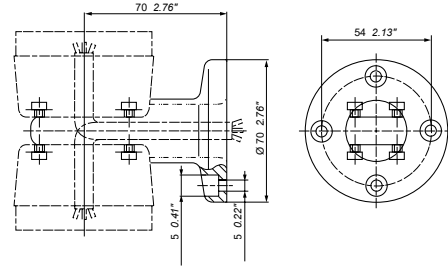
Signal towers K70



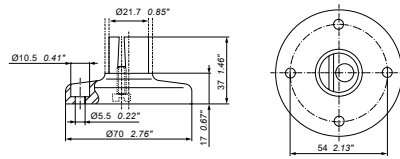
Basewith integrated tube



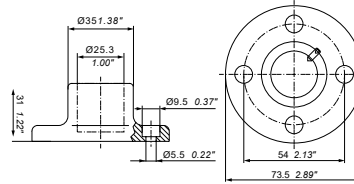
Bracket 2-sided mounting



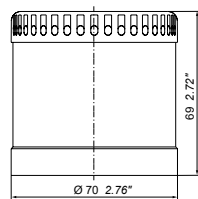
Base for tube, plastic



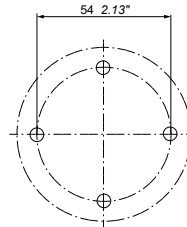
Base for tube, metal



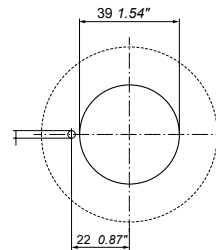
Audible module



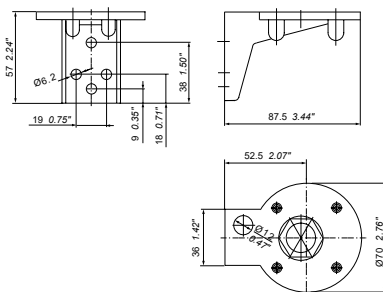
Drilling plan for signal towers K70



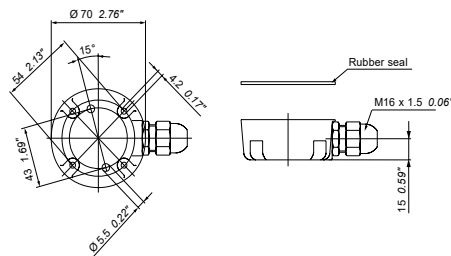
Drilling plan for signal beacons KSB



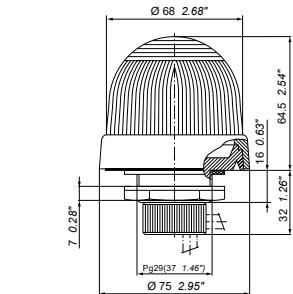
Bracket for tube mounting



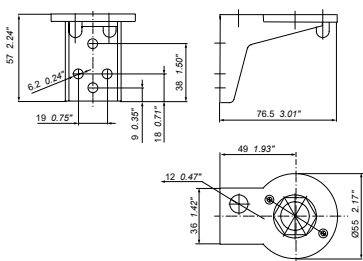
Contact box for cable exit at side



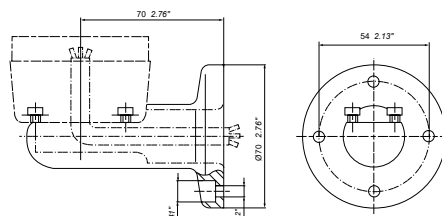
Signal beacons KSB



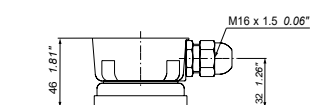
Bracket for surface mounting



Bracket 1-sided mounting



Contact box with magnetic base





## Color selection

### General technical data

#### Color selection according to IEC 60073

IEC60073 specifies coding principles for indicators and actuators and gives recommendation regarding the use of colors. An excerpt from the standard is given below. For detailed information, see the standard.

Meaning of colors – General principles			
Color	Safety of persons or environment	Condition of process	State of equipment
● Red	Danger	Emergency	Faulty
● Yellow	Warning/caution	Abnormal	Abnormal
● Green	Safe	Normal	Normal
● Blue	Mandatory significance		
○●● White, grey, black	No specific meaning assigned		

#### Non-illuminated actuators

##### Emergency Actuators

EMERGENCY STOP/OFF actuators shall be identified by the color RED.

#### STOP/ OFF actuators

WHITE, GREY and BLACK are the preferred colors for STOP/ OFF actuators, with the main preference being for BLACK. RED is also permitted. GREEN shall not be used.

#### START/ ON actuators

WHITE, GREY and BLACK are the preferred colors for START/ ON actuators, which cause the closing of switching devices and the equipment to start, with the main preference being for WHITE. GREEN is also permitted. RED shall not be used.

#### Use of WHITE and BLACK for specific meanings

Where the colors WHITE and BLACK are used to distinguish between START/ ON and STOP/ OFF actuators, then the color WHITE shall be used for START/ ON actuators and the color BLACK shall be used for STOP/ OFF actuators.

#### The same actuators serving for START/ STOP or ON/ OFF

WHITE, GREY and BLACK are the preferred colors for actuators which, when actuated several times, act alternately as a START/ ON and STOP/ OFF actuator.

The colors YELLOW and GREEN shall not be used. The color RED shall be used only in cases where the same actuator, other than a pushbutton, is used for both EMERGENCY STOP/ OFF and normal operation.

WHITE, GREY and BLACK are preferred colors for actuators which cause a movement while they are actuated and stop the movement when they are released (such as inching or jogging actuators). GREEN is also permitted. RED shall not be used.

#### RESET actuators

RESET actuators (used, for example, with protective relays) shall be BLUE, WHITE, GREY or BLACK, except RESET actuators which also act as STOP/ OFF actuators. The color of such STOP/ OFF actuators shall be in accordance with STOP/ OFF actuators above.

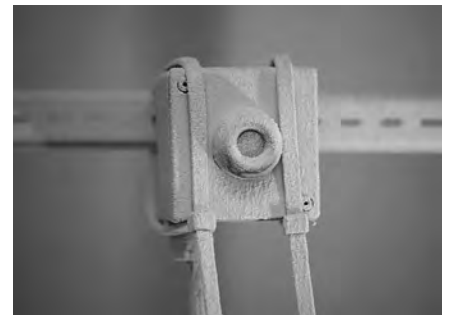
## Degrees of protection

### General technical data

In an installation, the degree of protection required for electrical equipment depends on the environmental characteristics.

The degree of protection, ensured by the enclosure of equipment or by the cubicle containing the equipment is expressed by the IP code which gives the level of protection against access to hazardous parts, the ingress of foreign bodies and/or the ingress of water, in compliance with IEC60529, IEC60947-1. Besides the IP symbol, the complete code has two figures followed (optionally) by two additional letters. A short description of the elements used in IP coding is given below.

First figure	Specifications for installation protection	Protection of persons
	Against ingress of foreign bodies	Against access to hazardous parts with:
IP 0	No protection	No protection
1	Diameter > 50 mm	Back of hand
2	Diameter > 12.5 mm	Finger
3	Diameter > 2.5 mm	Tool
4	Diameter > 1 mm	Wire
5	Limited protection against dust	Wire
6	Total protection against dust	Wire
Second figure	Against entrance of water having a harmful effect	
0	No protection	
1	Vertical dripping	
2	Dripping at a vertical angle of < 15°	
3	Rain at a vertical angle of < 60°	
4	Splashing	
5	Low pressure water jet	
6	Powerful water jets	
7	Temporary immersion	
8	Permanent immersion	
9K*	High pressure, high temperature washdown	



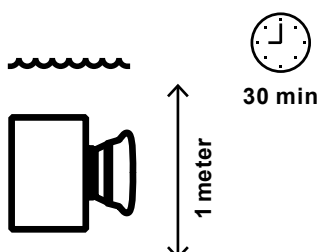
Note: the type of enclosure or cubicle in which the equipment must be installed prevails with respect to the degree of protection.

(\*) According to DIN 400 50-9.

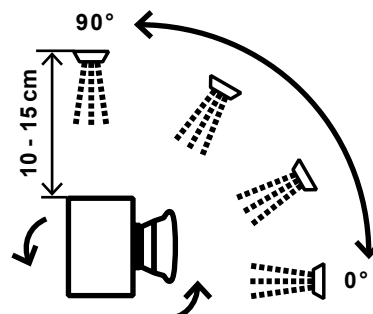
## Water tests

### IP67

The product is submerged



### IP69K











## Index

## Order code classification

Order code	Type	Page	Order code	Type	Page	Order code	Type	Page
1SFA611210R3007	M3SS1-30U	2/28	1SFA611214R2108	M3SS5-21C	2/34	1SFA611281R2003	M2SSK2-203	2/35
1SFA611210R3101	M3SS1-31R	2/33	1SFA611214R3001	M3SS5-30R	2/29	1SFA611281R3001	M2SSK2-301	2/35
1SFA611210R3102	M3SS1-31G	2/33	1SFA611214R3006	M3SS5-30B	2/29	1SFA611281R3002	M2SSK2-302	2/35
1SFA611210R3103	M3SS1-31Y	2/33	1SFA611214R3102	M3SS5-31G	2/34	1SFA611281R3003	M2SSK2-303	2/35
1SFA611210R3104	M3SS1-31L	2/33	1SFA611214R3108	M3SS5-31C	2/34	1SFA611281R3004	M2SSK2-304	2/35
1SFA611210R3108	M3SS1-31C	2/33	1SFA611215R1001	M3SS6-10R	2/29	1SFA611282R1001	M2SSK3-101	2/35
1SFA611211R1001	M3SS2-10R	2/28	1SFA611215R1006	M3SS6-10B	2/29	1SFA611282R1002	M2SSK3-102	2/35
1SFA611211R1006	M3SS2-10B	2/28	1SFA611215R1007	M3SS6-10U	2/29	1SFA611282R1003	M2SSK3-103	2/35
1SFA611211R1007	M3SS2-10U	2/28	1SFA611215R1101	M3SS6-11R	2/34	1SFA611282R1004	M2SSK3-104	2/35
1SFA611211R1101	M3SS2-11R	2/33	1SFA611215R1102	M3SS6-11G	2/34	1SFA611282R3001	M2SSK3-301	2/35
1SFA611211R1102	M3SS2-11G	2/33	1SFA611215R1103	M3SS6-11Y	2/34	1SFA611282R3002	M2SSK3-302	2/35
1SFA611211R1103	M3SS2-11Y	2/33	1SFA611215R1104	M3SS6-11L	2/34	1SFA611282R3003	M2SSK3-303	2/35
1SFA611211R1104	M3SS2-11L	2/33	1SFA611215R1108	M3SS6-11C	2/34	1SFA611282R3004	M2SSK3-304	2/35
1SFA611211R1108	M3SS2-11C	2/33	1SFA611215R2006	M3SS6-20B	2/29	1SFA611283R1001	M3SSK1-101	2/36
1SFA611211R2001	M3SS2-20R	2/28	1SFA611215R2102	M3SS6-21G	2/34	1SFA611283R1002	M3SSK1-102	2/36
1SFA611211R2006	M3SS2-20B	2/28	1SFA611215R2103	M3SS6-21Y	2/34	1SFA611283R1003	M3SSK1-103	2/36
1SFA611211R2007	M3SS2-20U	2/28	1SFA611215R3006	M3SS6-30B	2/29	1SFA611283R1004	M3SSK1-104	2/36
1SFA611211R2101	M3SS2-21R	2/33	1SFA611215R3104	M3SS6-31L	2/34	1SFA611283R2001	M3SSK1-201	2/36
1SFA611211R2102	M3SS2-21G	2/33	1SFA611216R1001	M3SS7-10R	2/28	1SFA611283R3001	M3SSK1-301	2/36
1SFA611211R2103	M3SS2-21Y	2/33	1SFA611216R1006	M3SS7-10B	2/28	1SFA611283R3002	M3SSK1-302	2/36
1SFA611211R2104	M3SS2-21L	2/33	1SFA611216R1007	M3SS7-10U	2/28	1SFA611283R3003	M3SSK1-303	2/36
1SFA611211R2108	M3SS2-21C	2/33	1SFA611216R1101	M3SS7-11R	2/33	1SFA611283R3004	M3SSK1-304	2/36
1SFA611211R3001	M3SS2-30R	2/28	1SFA611216R1102	M3SS7-11G	2/33	1SFA611284R1001	M3SSK2-101	2/36
1SFA611211R3006	M3SS2-30B	2/28	1SFA611216R1103	M3SS7-11Y	2/33	1SFA611284R1002	M3SSK2-102	2/36
1SFA611211R3101	M3SS2-31R	2/33	1SFA611216R1104	M3SS7-11L	2/33	1SFA611284R1003	M3SSK2-103	2/36
1SFA611211R3102	M3SS2-31G	2/33	1SFA611216R1108	M3SS7-11C	2/33	1SFA611284R1004	M3SSK2-104	2/36
1SFA611211R3104	M3SS2-31L	2/33	1SFA611216R2001	M3SS7-20R	2/28	1SFA611284R3001	M3SSK2-301	2/36
1SFA611211R3108	M3SS2-31C	2/33	1SFA611216R2006	M3SS7-20B	2/28	1SFA611285R1001	M3SSK3-101	2/36
1SFA611212R1001	M3SS3-10R	2/28	1SFA611216R2102	M3SS7-21G	2/33	1SFA611285R1002	M3SSK3-102	2/36
1SFA611212R1006	M3SS3-10B	2/28	1SFA611216R2104	M3SS7-21L	2/33	1SFA611285R1003	M3SSK3-103	2/36
1SFA611212R1007	M3SS3-10U	2/28	1SFA611216R2108	M3SS7-21C	2/33	1SFA611285R1004	M3SSK3-104	2/36
1SFA611212R1101	M3SS3-11R	2/33	1SFA611216R3006	M3SS7-30B	2/28	1SFA611285R3001	M3SSK3-301	2/36
1SFA611212R1102	M3SS3-11G	2/33	1SFA611216R3102	M3SS7-31G	2/33	1SFA611285R3002	M3SSK3-302	2/36
1SFA611212R1103	M3SS3-11Y	2/33	1SFA611216R3108	M3SS7-31C	2/33	1SFA611285R3003	M3SSK3-303	2/36
1SFA611212R1104	M3SS3-11L	2/33	1SFA611217R1001	M3SS8-10R	2/29	1SFA611286R1001	M3SSK4-101	2/36
1SFA611212R1108	M3SS3-11C	2/33	1SFA611217R1006	M3SS8-10B	2/29	1SFA611286R1002	M3SSK4-102	2/36
1SFA611212R2006	M3SS3-20B	2/28	1SFA611217R1007	M3SS8-10U	2/29	1SFA611286R3001	M3SSK4-301	2/36
1SFA611212R2007	M3SS3-20U	2/28	1SFA611217R1101	M3SS8-11R	2/34	1SFA611286R3002	M3SSK4-302	2/36
1SFA611212R2101	M3SS3-21R	2/33	1SFA611217R1102	M3SS8-11G	2/34	1SFA611286R3003	M3SSK4-303	2/36
1SFA611212R2102	M3SS3-21G	2/33	1SFA611217R1103	M3SS8-11Y	2/34	1SFA611287R1001	M3SSK5-101	2/36
1SFA611212R2108	M3SS3-21C	2/33	1SFA611217R1104	M3SS8-11L	2/34	1SFA611287R1003	M3SSK5-103	2/36
1SFA611212R3006	M3SS3-30B	2/28	1SFA611217R1108	M3SS8-11C	2/34	1SFA611287R3001	M3SSK5-301	2/36
1SFA611212R3108	M3SS3-31C	2/33	1SFA611217R1108	M3SS8-11C	2/34	1SFA611288R1001	M3SSK6-101	2/36
1SFA611212R3006	M3SS3-30B	2/28	1SFA611217R2006	M3SS8-20B	2/29	1SFA611289R1001	M2SSK4-101	2/35
1SFA611212R3101	M3SS3-10R	2/29	1SFA611217R2101	M3SS8-21R	2/34	1SFA611300R1006	MTS1-10B	2/41
1SFA611213R1006	M3SS4-10B	2/29	1SFA611217R2102	M3SS8-21G	2/34	1SFA611300R2006	MTS1-20B	2/41
1SFA611213R1007	M3SS4-10U	2/29	1SFA611217R3001	M3SS8-30B	2/29	1SFA611300R3006	MTS1-30B	2/41
1SFA611213R1101	M3SS4-11R	2/34	1SFA611217R3101	M3SS8-31R	2/34	1SFA611301R1006	MTS2-10B	2/41
1SFA611213R1102	M3SS4-11G	2/34	1SFA611217R3102	M3SS8-31G	2/34	1SFA611301R2006	MTS2-20B	2/41
1SFA611213R1103	M3SS4-11Y	2/34	1SFA611220R1006	M2SSV1-10B	4/125	1SFA611301R3006	MTS2-30B	2/41
1SFA611213R1104	M3SS4-11L	2/34	1SFA611221R1006	M2SSV2-10B	4/125	1SFA611302R1006	MTS3-10B	2/41
1SFA611213R1108	M3SS4-11C	2/34	1SFA611222R1006	M2SSV3-10B	4/125	1SFA611302R2006	MTS3-20B	2/41
1SFA611213R2001	M3SS4-20R	2/29	1SFA611223R1006	M3SSV1-10B	4/125	1SFA611302R3006	MTS3-30B	2/41
1SFA611213R2006	M3SS4-20B	2/29	1SFA611231R1006	M3SSV2-10B	4/125	1SFA611400R1001	ML1-100R	2/25
1SFA611213R2007	M3SS4-20U	2/29	1SFA611232R1006	M3SSV3-10B	4/125	1SFA611400R1002	ML1-100G	2/25
1SFA611213R2101	M3SS4-21R	2/34	1SFA611250R1006	M3SSC1-10B	2/30	1SFA611400R1003	ML1-100Y	2/25
1SFA611213R2102	M3SS4-21G	2/34	1SFA611250R3006	M3SSC1-30B	2/30	1SFA611400R1004	ML1-100L	2/25
1SFA611213R2103	M3SS4-21Y	2/34	1SFA611251R1006	M3SSC2-10B	2/30	1SFA611400R1005	ML1-100W	2/25
1SFA611213R2104	M3SS4-21L	2/34	1SFA611251R3006	M3SSC2-30B	2/30	1SFA611400R1008	ML1-100C	2/25
1SFA611213R2108	M3SS4-21C	2/34	1SFA611252R1006	M3SSC3-10B	2/30	1SFA611410R1006	MT-1B	2/37
1SFA611213R3006	M3SS4-30B	2/29	1SFA611252R3006	M3SSC3-30B	2/30	1SFA611410R1056	MT-105B	2/37
1SFA611213R3101	M3SS4-31R	2/34	1SFA611256R1006	M3SSC7-10B	2/30	1SFA611410R1106	MT-110B	2/37
1SFA611213R3108	M3SS4-31C	2/34	1SFA611256R3006	M3SSC7-30B	2/30	1SFA611410R1506	MT-150B	2/37
1SFA611214R1001	M3SS5-10R	2/29	1SFA611280R1001	M2SSK1-101	2/35	1SFA611410R2006	MT-2B	2/37
1SFA611214R1006	M3SS5-10B	2/29	1SFA611280R1002	M2SSK1-102	2/35	1SFA611410R2056	MT-205B	2/37
1SFA611214R1007	M3SS5-10U	2/29	1SFA611280R1003	M2SSK1-103	2/35	1SFA611410R2106	MT-210B	2/37
1SFA611214R1101	M3SS5-11R	2/34	1SFA611280R1004	M2SSK1-104	2/35	1SFA611410R2506	MT-250B	2/37
1SFA611214R1102	M3SS5-11G	2/34	1SFA611280R2001	M2SSK1-201	2/35	1SFA611410R3006	MT-3B	2/37
1SFA611214R1103	M3SS5-11Y	2/34	1SFA611280R3001	M2SSK1-301	2/35	1SFA611410R3056	MT-305B	2/37
1SFA611214R1104	M3SS5-11L	2/34	1SFA611280R3002	M2SSK1-302	2/35	1SFA611410R3106	MT-310B	2/37
1SFA611214R1108	M3SS5-11C	2/34	1SFA611280R3003	M2SSK1-303	2/35	1SFA611410R3506	MT-350B	2/37
1SFA611214R2006	M3SS5-20B	2/29	1SFA611280R3004	M2SSK1-304	2/35	1SFA611510R1101	MPMT3-11R	2/23
1SFA611214R2007	M3SS5-20U	2/29	1SFA611281R1001	M2SSK2-101	2/35	1SFA611511R1101	MPMP3-11R	2/23
1SFA611214R2101	M3SS5-21R	2/34	1SFA611281R1002	M2SSK2-102	2/35	1SFA611513R1001	MPMT4-10R	2/23
1SFA611214R2102	M3SS5-21G	2/34	1SFA611281R1003	M2SSK2-103	2/35	1SFA611513R1101	MPMT4-11R	2/23
1SFA611214R2103	M3SS5-21Y	2/34	1SFA611281R1004	M2SSK2-104	2/35	1SFA611514R1001	MPMP4-10R	2/23
1SFA611214R2104	M3SS5-21L	2/34	1SFA611281R2001	M2SSK2-201	2/35	1SFA611514R1101	MPMP4-11R	2/23

# Index

## Order code classification

Order code	Type	Page
1SFA611520R1001	MPET3-10R	2/23
1SFA611520R1006	MPET3-10B	2/24
1SFA611521R1001	MPEP3-10R	2/23
1SFA611521R1006	MPEP3-10B	2/24
1SFA611522R1101	MPEK3-11R	2/23
1SFA611522R1106	MPEK3-11B	2/24
1SFA611522R1201	MPEK3-12R	2/23
1SFA611522R1301	MPEK3-13R	2/23
1SFA611523R1001	MPET4-10R	2/23
1SFA611523R1006	MPET4-10B	2/24
1SFA611524R1001	MPEP4-10R	2/23
1SFA611524R1006	MPEP4-10B	2/24
1SFA611525R1101	MPEK4-11R	2/23
1SFA611525R1106	MPEK4-11B	2/24
1SFA611525R1201	MPEK4-12R	2/23
1SFA611525R1301	MPEK4-13R	2/23
1SFA611601R1100	MCBH5-00	2/43
1SFA611605R1100	MCBH-00	2/43
1SFA611610R1001	MCB-10	2/43
1SFA611610R1002	MCB-20	2/43
1SFA611610R1010	MCB-01	2/43
1SFA611610R1011	MCB-11	2/43
1SFA611610R1020	MCB-02	2/43
1SFA611610R1101	MCB-10G	2/43
1SFA611610R1110	MCB-01G	2/43
1SFA611610R2001	MCB-10B	4/120
1SFA611610R2002	MCB-20B	4/120
1SFA611610R2010	MCB-01B	4/120
1SFA611610R2011	MCB-11B	4/120
1SFA611610R2020	MCB-02B	4/120
1SFA611610R2101	MCB-10BG	4/120
1SFA611610R2110	MCB-01BG	4/120
1SFA611612R1001	MCBL-01	2/43
1SFA611612R1010	MCBL-10	2/43
1SFA611621R1001	MLBL-00R	2/44
1SFA611621R1002	MLBL-00G	2/44
1SFA611621R1003	MLBL-00Y	2/44
1SFA611621R1004	MLBL-00L	2/44
1SFA611621R1005	MLBL-00W	2/44
1SFA611621R1011	MLBL-01R	2/44
1SFA611621R1012	MLBL-01G	2/44
1SFA611621R1013	MLBL-01Y	2/44
1SFA611621R1014	MLBL-01L	2/44
1SFA611621R1015	MLBL-01W	2/44
1SFA611621R1021	MLBL-02R	2/44
1SFA611621R1022	MLBL-02G	2/44
1SFA611621R1023	MLBL-02Y	2/44
1SFA611621R1024	MLBL-02L	2/44
1SFA611621R1025	MLBL-02W	2/44
1SFA611621R1031	MLBL-03R	2/44
1SFA611621R1032	MLBL-03G	2/44
1SFA611621R1033	MLBL-03Y	2/44
1SFA611621R1034	MLBL-03L	2/44
1SFA611621R1035	MLBL-03W	2/44
1SFA611621R1041	MLBL-04R	2/44
1SFA611621R1042	MLBL-04G	2/44
1SFA611621R1043	MLBL-04Y	2/44
1SFA611621R1044	MLBL-04L	2/44
1SFA611621R1045	MLBL-04W	2/44
1SFA611621R1051	MLBL-05R	2/44
1SFA611621R1052	MLBL-05G	2/44
1SFA611621R1053	MLBL-05Y	2/44
1SFA611621R1054	MLBL-05L	2/44
1SFA611621R1055	MLBL-05W	2/44
1SFA611621R1061	MLBL-06R	2/44
1SFA611621R1062	MLBL-06G	2/44
1SFA611621R1063	MLBL-06Y	2/44
1SFA611621R1064	MLBL-06L	2/44
1SFA611621R1065	MLBL-06W	2/44
1SFA611621R1071	MLBL-07R	2/45
1SFA611621R1072	MLBL-07G	2/45
1SFA611621R1073	MLBL-07Y	2/45
1SFA611621R1074	MLBL-07L	2/45
1SFA611621R1075	MLBL-07W	2/45
1SFA611621R1081	MLBL-08R	2/45
1SFA611621R1082	MLBL-08G	2/45

Order code	Type	Page
1SFA611621R1083	MLBL-08Y	2/45
1SFA611621R1084	MLBL-08L	2/45
1SFA611621R1085	MLBL-08W	2/45
1SFA611621R1091	MLBL-09R	2/45
1SFA611621R1092	MLBL-09G	2/45
1SFA611621R1093	MLBL-09Y	2/45
1SFA611621R1094	MLBL-09L	2/45
1SFA611621R1095	MLBL-09W	2/45
1SFA611621R1991	MLBL-99R	2/45
1SFA611621R1992	MLBL-99G	2/45
1SFA611621R1993	MLBL-99Y	2/45
1SFA611621R1994	MLBL-99L	2/45
1SFA611621R1995	MLBL-99W	2/45
1SFA611621R2001	MLBL-00BR	4/121
1SFA611621R2002	MLBL-00BG	4/121
1SFA611621R2003	MLBL-00BY	4/121
1SFA611621R2004	MLBL-00BL	4/121
1SFA611621R2005	MLBL-00BW	4/121
1SFA611621R2011	MLBL-01BR	4/121
1SFA611621R2012	MLBL-01BG	4/121
1SFA611621R2013	MLBL-01BY	4/121
1SFA611621R2014	MLBL-01BL	4/121
1SFA611621R2015	MLBL-01BW	4/121
1SFA611621R2021	MLBL-02BR	4/121
1SFA611621R2022	MLBL-02BG	4/121
1SFA611621R2023	MLBL-02BY	4/121
1SFA611621R2024	MLBL-02BL	4/121
1SFA611621R2025	MLBL-02BW	4/121
1SFA611621R2031	MLBL-03BR	4/121
1SFA611621R2032	MLBL-03BG	4/121
1SFA611621R2033	MLBL-03BY	4/121
1SFA611621R2034	MLBL-03BL	4/121
1SFA611621R2035	MLBL-03BW	4/121
1SFA611621R2041	MLBL-04BR	4/121
1SFA611621R2042	MLBL-04BG	4/121
1SFA611621R2043	MLBL-04BY	4/121
1SFA611621R2044	MLBL-04BL	4/121
1SFA611621R2045	MLBL-04BW	4/121
1SFA611621R2051	MLBL-05BR	4/121
1SFA611621R2052	MLBL-05BG	4/121
1SFA611621R2053	MLBL-05BY	4/121
1SFA611621R2054	MLBL-05BL	4/121
1SFA611621R2055	MLBL-05BW	4/121
1SFA611621R2061	MLBL-06BR	4/121
1SFA611621R2062	MLBL-06BG	4/121
1SFA611621R2063	MLBL-06BY	4/121
1SFA611621R2064	MLBL-06BL	4/121
1SFA611621R2065	MLBL-06BW	4/121
1SFA611621R2071	MLBL-07BR	4/122
1SFA611621R2072	MLBL-07BG	4/122
1SFA611621R2073	MLBL-07BY	4/122
1SFA611621R2074	MLBL-07BL	4/122
1SFA611621R2075	MLBL-07BW	4/122
1SFA611621R2081	MLBL-08BR	4/122
1SFA611621R2082	MLBL-08BG	4/122
1SFA611621R2083	MLBL-08BY	4/122
1SFA611621R2084	MLBL-08BL	4/122
1SFA611621R2085	MLBL-08BW	4/122
1SFA611621R2091	MLBL-09BR	4/122
1SFA611621R2092	MLBL-09BG	4/122
1SFA611621R2093	MLBL-09BY	4/122
1SFA611621R2094	MLBL-09BL	4/122
1SFA611621R2095	MLBL-09BW	4/122
1SFA611621R3041	MLBL-04AR	2/44
1SFA611621R3042	MLBL-04AG	2/44
1SFA611621R3043	MLBL-04AY	2/44
1SFA611621R3044	MLBL-04AL	2/44
1SFA611621R3045	MLBL-04AW	2/44
1SFA611630R1002	MDB-2	2/47
1SFA611701R4006	MJS1-40B	2/40
1SFA611701R6006	MJS1-60B	2/40
1SFA611702R4006	MJS2-40B	2/40
1SFA611702R6006	MJS2-60B	2/40
1SFA611703R4006	MJS3-40B	2/40
1SFA611703R6006	MJS3-60B	2/40
1SFA611704R4006	MJS4-40B	2/40

Order code	Type	Page
1SFA611704R6006	MJS4-60B	2/40
1SFA611705R4006	MJS5-40B	2/40
1SFA611705R6006	MJS5-60B	2/40
1SFA611706R4006	MJS6-40B	2/40
1SFA611706R6006	MJS6-60B	2/40
1SFA611707R4006	MJS7-40B	2/40
1SFA611707R6006	MJS7-60B	2/40
1SFA611708R4006	MJS8-40B	2/40
1SFA611708R6006	MJS8-60B	2/40
1SFA611709R4006	MJS9-40B	2/40
1SFA611709R6006	MJS9-60B	2/40
1SFA611710R6006	MJS10-60B	2/40
1SFA611711R4006	MJS11-40B	2/40
1SFA611711R6006	MJS11-60B	2/40
1SFA611712R4006	MJS12-40B	2/40
1SFA611712R6006	MJS12-60B	2/40
1SFA611811R1000	MEP1-0	4/119
1SFA611812R1000	MEP2-0	4/119
1SFA611812R1001	MEP2-1001	4/126
1SFA611813R1000	MEP3-0	4/119
1SFA611814R1000	MEP4-0	4/119
1SFA611816R1000	MEP6-0	4/119
1SFA611821R1000	MEPY1-0	4/119
1SFA611821R1035	MEPY1-1035	4/126
1SFA611821R1040	MEPY1-1040	4/126
1SFA611821R1041	MEPY1-1041	4/126
1SFA611821R1042	MEPY1-1042	4/126
1SFA611920H8150	MA1-8150	4/120
1SFA611920R8001	MA1-8001	2/47
1SFA611920R8002	MA1-8002	2/46
1SFA611920R8015	MA1-8015	2/47
1SFA611920R8019	MA1-8019	2/47
1SFA611920R8052	MA1-8052	2/46
1SFA611920R8053	MA1-8053	2/46
1SFA611920R8074	MA1-8074	2/46
1SFA611920R8126	MA1-8126	2/46
1SFA611920R8128	MA1-8128	2/46
1SFA611920R8129	MA1-8129	4/120
1SFA611920R8130	MA1-8130	4/120
1SFA611920R8131	MA1-8131	2/47
1SFA611920R8136	MA1-8136	4/120
1SFA611920R8137	MA1-8137	2/40
1SFA611920R8138	MA1-8138	2/40
1SFA611920R8139	MA1-8139	2/19
1SFA611920R8149	MA1-8149	2/47
1SFA611920R8152	MA1-8152	2/46
1SFA611920R8153	MA1-8153	2/46
1SFA611925R3001	MA5-3001	4/120
1SFA611925R3002	MA5-3002	4/120
1SFA611925R3003	MA5-3003	4/120
1SFA611925R3004	MA5-3004	4/120
1SFA611925R3005	MA5-3005	4/120
1SFA611925R3006	MA5-3006	4/120
1SFA611925R3007	MA5-3007	4/120
1SFA611925R3008	MA5-3008	4/120
1SFA611925R3009	MA5-3009	4/120
1SFA611925R3010	MA5-3010	4/120
1SFA611930R1000	MA6-1000	4/124
1SFA611930R1002	MA6-1002	4/124
1SFA611930R1003	MA6-1003	4/124
1SFA611930R1004	MA6-1004	4/124
1SFA611930R1005	MA6-1005	4/124
1SFA611930R1006	MA6-1006	4/124
1SFA611930R1007	MA6-1007	4/124
1SFA611930R1008	MA6-1008	4/124
1SFA611930R1009	MA6-1009	4/124
1SFA611930R1010	MA6-1010	5/134
1SFA611930R1011	MA6-1011	5/134
1SFA611930R1012	MA6-1012	4/124
1SFA611930R1013	MA6-1013	4/124
1SFA611930R1014	MA6-1014	4/124
1SFA611930R1015	MA6-1015	4/124
1SFA611930R1016	MA6-1016	4/124
1SFA611930R1017	MA6-1017	5/134
1SFA611930R1018	MA6-1018	5/134
1SFA611930R1019	MA6-1019	5/134

# Index

## Order code classification

Order code	Type	Page
1SFA611930R1020	MA6-1020	5/134
1SFA611930R1021	MA6-1021	5/134
1SFA611930R1022	MA6-1022	5/134
1SFA611930R1023	MA6-1023	5/134
1SFA611930R1024	MA6-1024	4/124
1SFA611930R1025	MA6-1025	4/124
1SFA611930R1026	MA6-1026	4/124
1SFA611930R1027	MA6-1027	4/124
1SFA611930R1028	MA6-1028	4/124
1SFA611930R1029	MA6-1029	4/124
1SFA611930R1032	MA6-1032	5/133
1SFA611930R1033	MA6-1033	5/133
1SFA611930R1034	MA6-1034	5/133
1SFA611930R1035	MA6-1035	5/133
1SFA611930R1036	MA6-1036	5/133
1SFA611930R1037	MA6-1037	5/133
1SFA611930R1038	MA6-1038	5/133
1SFA611930R1039	MA6-1039	5/133
1SFA611930R1040	MA6-1040	5/133
1SFA611930R1041	MA6-1041	5/133
1SFA611930R1042	MA6-1042	5/133
1SFA611930R1043	MA6-1043	5/133
1SFA611930R1044	MA6-1044	5/133
1SFA611930R1045	MA6-1045	5/133
1SFA611930R1047	MA6-1047	5/133
1SFA611930R1054	MA6-1054	5/133
1SFA611930R1058	MA6-1058	5/133
1SFA611930R1060	MA6-1060	4/123
1SFA611930R1061	MA6-1061	4/123
1SFA611930R1062	MA6-1062	4/123
1SFA611930R1063	MA6-1063	4/123
1SFA611930R1064	MA6-1064	4/123
1SFA611930R1065	MA6-1065	4/123
1SFA611930R1070	MA6-1070	5/133
1SFA611930R1071	MA6-1071	5/133
1SFA611930R1073	MA6-1073	5/133
1SFA611930R1074	MA6-1074	5/133
1SFA611930R1075	MA6-1075	5/133
1SFA611930R1076	MA6-1076	5/133
1SFA611930R1077	MA6-1077	5/133
1SFA611930R1078	MA6-1078	5/133
1SFA611930R1079	MA6-1079	5/133
1SFA611930R1080	MA6-1080	5/133
1SFA611930R1082	MA6-1082	5/133
1SFA611930R1083	MA6-1083	5/133
1SFA611930R1084	MA6-1084	5/133
1SFA611930R1085	MA6-1085	5/133
1SFA611930R1086	MA6-1086	5/133
1SFA611930R1087	MA6-1087	5/133
1SFA611930R1100	MA6-1100	4/124
1SFA611930R1101	MA6-1101	4/124
1SFA611930R1102	MA6-1102	4/124
1SFA611930R1103	MA6-1103	4/124
1SFA611930R1104	MA6-1104	4/124
1SFA611930R1118	MA6-1118	5/133
1SFA611930R1130	MA6-1130	4/123
1SFA611930R1131	MA6-1131	4/123
1SFA611930R1132	MA6-1132	4/123
1SFA611930R1133	MA6-1133	4/123
1SFA611930R1134	MA6-1134	4/123
1SFA611930R1135	MA6-1135	4/123
1SFA611930R1136	MA6-1136	4/123
1SFA611930R1137	MA6-1137	4/123
1SFA611930R1138	MA6-1138	4/123
1SFA611930R1139	MA6-1139	4/123
1SFA611930R1140	MA6-1140	4/123
1SFA611930R1141	MA6-1141	4/123
1SFA611930R1152	MA6-1152	4/123
1SFA611930R1153	MA6-1153	4/123
1SFA611930R1170	MA6-1170	4/123
1SFA611930R1171	MA6-1171	4/123
1SFA611930R1172	MA6-1172	4/123
1SFA611930R1173	MA6-1173	4/123
1SFA611930R1174	MA6-1174	4/123
1SFA611930R1175	MA6-1175	4/123
1SFA611930R1176	MA6-1176	4/123

Order code	Type	Page
1SFA611930R1177	MA6-1177	4/123
1SFA611930R1178	MA6-1178	4/123
1SFA611930R1179	MA6-1179	4/123
1SFA611930R1190	MA6-1190	4/123
1SFA611930R1191	MA6-1191	4/123
1SFA611930R1192	MA6-1192	4/123
1SFA611930R1193	MA6-1193	4/123
1SFA611930R1194	MA6-1194	4/123
1SFA611930R1210	MA6-1210	5/133
1SFA611930R1240	MA6-1240	2/40
1SFA611930R1241	MA6-1241	2/40
1SFA611930R1242	MA6-1242	2/40
1SFA611930R1252	MA6-1252	2/37
1SFA611940R1000	MA16-1000	5/135
1SFA611940R1001	MA16-1001	5/135
1SFA616070R3051	KL70-305R	6/139
1SFA616070R3052	KL70-305G	6/139
1SFA616070R3053	KL70-305Y	6/139
1SFA616070R3054	KL70-305L	6/139
1SFA616070R3058	KL70-305C	6/139
1SFA616070R3061	KL70-306R	6/139
1SFA616070R3062	KL70-306G	6/139
1SFA616070R3063	KL70-306Y	6/139
1SFA616070R3064	KL70-306L	6/139
1SFA616070R3068	KL70-306C	6/139
1SFA616070R3071	KL70-307R	6/139
1SFA616070R3072	KL70-307G	6/139
1SFA616070R3073	KL70-307Y	6/139
1SFA616070R3074	KL70-307L	6/139
1SFA616070R3078	KL70-307C	6/139
1SFA616070R3421	KL70-342R	6/139
1SFA616070R3422	KL70-342G	6/139
1SFA616070R3423	KL70-342Y	6/139
1SFA616070R3424	KL70-342L	6/139
1SFA616070R3428	KL70-342C	6/139
1SFA616070R3521	KL70-352R	6/139
1SFA616070R3522	KL70-352G	6/139
1SFA616070R3523	KL70-352Y	6/139
1SFA616070R3524	KL70-352L	6/139
1SFA616070R3528	KL70-352C	6/139
1SFA616070R4011	KL70-401R	6/139
1SFA616070R4012	KL70-401G	6/139
1SFA616070R4013	KL70-401Y	6/139
1SFA616070R4014	KL70-401L	6/139
1SFA616070R4018	KL70-401C	6/139
1SFA616071R1201	KB70-1201	6/140
1SFA616071R3001	KB70-3001	6/140
1SFA616071R3101	KB70-3101	6/140
1SFA616073R1104	KS70-1104	6/140
1SFA616073R1204	KS70-1204	6/140
1SFA616073R2002	KS70-2002	6/140
1SFA616073R2004	KS70-2004	6/140
1SFA616073R3004	KS70-3004	6/140
1SFA616075R1001	KT70-1001	6/141
1SFA616075R1002	KT70-1002	6/141
1SFA616077R1001	KA70-1001	6/141
1SFA616077R1002	KA70-1002	6/141
1SFA616077R1011	KA70-1011	6/141
1SFA616077R1012	KA70-1012	6/141
1SFA616077R1013	KA70-1013	6/141
1SFA616077R1021	KA70-1021	6/141
1SFA616077R1022	KA70-1022	6/141
1SFA616077R1023	KA70-1023	6/141
1SFA616077R1031	KA70-1031	6/141
1SFA616077R1032	KA70-1032	6/141
1SFA616077R1033	KA70-1033	6/141
1SFA616077R1034	KA70-1034	6/141
1SFA616080R1131	KSB-113R	6/142
1SFA616080R1132	KSB-113G	6/142
1SFA616080R1133	KSB-113Y	6/142
1SFA616080R1134	KSB-113L	6/142
1SFA616080R1138	KSB-113C	6/142
1SFA616080R1151	KSB-115R	6/142
1SFA616080R1152	KSB-115G	6/142
1SFA616080R1153	KSB-115Y	6/142
1SFA616080R1231	KSB-123R	6/142

Order code	Type	Page
1SFA616080R1232	KSB-123G	6/142
1SFA616080R1233	KSB-123Y	6/142
1SFA616080R1234	KSB-123L	6/142
1SFA616080R1238	KSB-123C	6/142
1SFA616080R2031	KSB-203R	6/142
1SFA616080R2032	KSB-203G	6/142
1SFA616080R2033	KSB-203Y	6/142
1SFA616080R2034	KSB-203L	6/142
1SFA616080R2038	KSB-203C	6/142
1SFA616080R3051	KSB-305R	6/142
1SFA616080R3052	KSB-305G	6/142
1SFA616080R3053	KSB-305Y	6/142
1SFA616080R3061	KSB-306R	6/142
1SFA616080R3062	KSB-306G	6/142
1SFA616080R3063	KSB-306Y	6/142
1SFA616080R3071	KSB-307R	6/142
1SFA616080R3072	KSB-307G	6/142
1SFA616080R3073	KSB-307Y	6/142
1SFA616080R4011	KSB-401R	6/142
1SFA616080R4012	KSB-401G	6/142
1SFA616080R4013	KSB-401Y	6/142
1SFA616080R4014	KSB-401L	6/142
1SFA616080R4018	KSB-401C	6/142
1SFA616087R1000	KASB-1000	6/142
1SFA616105R4001	KP6-40R	2/25
1SFA616105R4002	KP6-40G	2/25
1SFA616105R4006	KP6-40B	2/25
1SFA616160R1001	KPR1-100R	2/38
1SFA616160R1002	KPR1-100G	2/38
1SFA616160R1003	KPR1-100Y	2/38
1SFA616160R1004	KPR1-100L	2/38
1SFA616160R1005	KPR1-100W	2/38
1SFA616160R1006	KPR1-100B	2/38
1SFA616160R1014	KPR1-101L	2/38
1SFA616160R1015	KPR1-101W	2/38
1SFA616160R1021	KPR1-102G	2/38
1SFA616160R1025	KPR1-102W	2/38
1SFA616160R1032	KPR1-103G	2/38
1SFA616160R1035	KPR1-103W	2/38
1SFA616160R1046	KPR1-104B	2/38
1SFA616161R1001	KPR2-100R	2/38
1SFA616161R1005	KPR2-100L	2/38
1SFA616161R1006	KPR2-100B	2/38
1SFA616161R1051	KPR2-105R	2/38
1SFA616161R1056	KPR2-105B	2/38
1SFA616162R1001	KPR3-100R	2/39
1SFA616162R1002	KPR3-100G	2/39
1SFA616162R1003	KPR3-100Y	2/39
1SFA616162R1004	KPR3-100L	2/39
1SFA616162R1005	KPR3-100W	2/39
1SFA616162R1006	KPR3-100B	2/39
1SFA616162R1014	KPR3-101L	2/39
1SFA616162R1015	KPR3-101W	2/39
1SFA616162R1025	KPR3-102W	2/39
1SFA616162R1032	KPR3-103G	2/39
1SFA616162R1046	KPR3-104B	2/39
1SFA616162R1062	KPR3-106G	2/39
1SFA616163R1001	KPR4-100R	2/39
1SFA616163R1015	KPR4-100W	2/39
1SFA616163R1006	KPR4-100B	2/39
1SFA616163R1051	KPR4-105R	2/39
1SFA616163R1056	KPR4-105B	2/39
1SFA616901R1019	KTC1-1019	5/136
1SFA616901R1020	KTC1-1020	5/136
1SFA616901R1025	KTC1-1025	5/136
1SFA616901R1031	KTC1-1031	5/136
1SFA616901R1039	KTC1-1039	5/136
1SFA616901R9000	KTC1-9000	5/136
1SFA616901R9002	KTC1-9002	5/136
1SFA616901R9003	KTC1-9003	5/136
1SFA616901R9004	KTC1-9004	5/136
1SFA616901R9005	KTC1-9005	5/136
1SFA616901R9006	KTC1-9006	5/136
1SFA616901R9009	KTC1-9009	5/136
1SFA616901R9016	KTC1-9016	5/136
1SFA616901R9020	KTC1-9020	5/136

## Index

## Order code classification

Order code	Type	Page
1SFA616901R9026	KTC1-9026	5/136
1SFA616901R9028	KTC1-9028	5/136
1SFA616902R1020	KTC2-1020	5/136
1SFA616902R1025	KTC2-1025	5/136
1SFA616902R1031	KTC2-1031	5/136
1SFA616902R9000	KTC2-9000	5/136
1SFA616902R9002	KTC2-9002	5/136
1SFA616902R9003	KTC2-9003	5/136
1SFA616902R9005	KTC2-9005	5/136
1SFA616902R9006	KTC2-9006	5/136
1SFA616902R9015	KTC2-9015	5/136
1SFA616902R9016	KTC2-9016	5/136
1SFA616902R9028	KTC2-9028	5/136
1SFA616903R1019	KTC3-1019	5/136
1SFA616903R1020	KTC3-1020	5/136
1SFA616903R1039	KTC3-1039	5/136
1SFA616903R9000	KTC3-9000	5/136
1SFA616903R9002	KTC3-9002	5/136
1SFA616904R1047	KTC4-1047	5/136
1SFA616904R9004	KTC4-9004	5/136
1SFA616905R1040	KTC5-1040	5/136
1SFA616905R1047	KTC5-1047	5/136
1SFA616905R9004	KTC5-9004	5/136
1SFA616906R1039	KTC6-1039	5/136
1SFA616906R1042	KTC6-1042	5/136
1SFA616906R9002	KTC6-9002	5/136
1SFA616908R1039	KTC8-1039	5/136
1SFA616908R9002	KTC8-9002	5/136
1SFA616908R9003	KTC8-9003	5/136
1SFA616908R9004	KTC8-9004	5/136
1SFA616908R9005	KTC8-9005	5/136
1SFA616908R9011	KTC8-9011	5/136
1SFA616908R9012	KTC8-9012	5/136
1SFA616908R9015	KTC8-9015	5/136
1SFA616908R9016	KTC8-9016	5/136
1SFA616908R9018	KTC8-9018	5/136
1SFA616908R9026	KTC8-9026	5/136
1SFA616915R1005	-	5/134
1SFA616915R1038	-	5/134
1SFA616915R6005	-	5/134
1SFA616920R8005	KA1-8005	2/25
1SFA616920R8010	KA1-8010	2/46
1SFA616920R8020	KA1-8020	2/46
1SFA616920R8021	KA1-8021	2/46
1SFA616920R8022	KA1-8022	2/46
1SFA616920R8023	KA1-8023	2/46
1SFA616920R8024	KA1-8024	2/46
1SFA616920R8027	KA1-8027	2/46
1SFA616920R8028	KA1-8028	2/46
1SFA616920R8029	KA1-8029	2/46
1SFA616920R8045	KA1-8045	4/120
1SFA616920R8046	KA1-8046	2/38
1SFA616920R8047	KA1-8047	2/38
1SFA616920R8072	KA1-8072	3/108
1SFA616920R8073	KA1-8073	2/46
1SFA616920R8080	KA1-8080	2/46
1SFA616920R8120	KA1-8120	5/133
1SFA616920R8121	KA1-8121	5/133
1SFA616921R2011	KA2-2011	3/104
1SFA616921R2012	KA2-2012	3/104
1SFA616921R2013	KA2-2013	3/104
1SFA616921R2014	KA2-2014	3/104
1SFA616921R2015	KA2-2015	3/104
1SFA616921R2021	KA2-2021	3/104
1SFA616921R2022	KA2-2022	3/104
1SFA616921R2023	KA2-2023	3/104
1SFA616921R2024	KA2-2024	3/104
1SFA616921R2025	KA2-2025	3/104
1SFA616921R2031	KA2-2031	3/104
1SFA616921R2032	KA2-2032	3/104
1SFA616921R2033	KA2-2033	3/104
1SFA616921R2034	KA2-2034	3/104
1SFA616921R2035	KA2-2035	3/104
1SFA616921R2041	KA2-2041	3/104
1SFA616921R2042	KA2-2042	3/104
1SFA616921R2043	KA2-2043	3/104

Order code	Type	Page
1SFA616921R2044	KA2-2044	3/104
1SFA616921R2045	KA2-2045	3/104
1SFA616921R2051	KA2-2051	3/104
1SFA616921R2052	KA2-2052	3/104
1SFA616921R2053	KA2-2053	3/104
1SFA616921R2054	KA2-2054	3/104
1SFA616921R2055	KA2-2055	3/104
1SFA616921R2131	KA2-2131	3/104
1SFA616921R2132	KA2-2132	3/104
1SFA616921R2133	KA2-2133	3/104
1SFA616921R2134	KA2-2134	3/104
1SFA616921R2135	KA2-2135	3/104
1SFA616921R2141	KA2-2141	3/104
1SFA616921R2142	KA2-2142	3/104
1SFA616921R2143	KA2-2143	3/104
1SFA616921R2144	KA2-2144	3/104
1SFA616921R2145	KA2-2145	3/104
1SFA616921R2221	KA2-2221	3/104
1SFA616921R2222	KA2-2222	3/104
1SFA616921R2223	KA2-2223	3/104
1SFA616921R2224	KA2-2224	3/104
1SFA616921R2225	KA2-2225	3/104
1SFA616921R2231	KA2-2231	3/104
1SFA616921R2232	KA2-2232	3/104
1SFA616921R2233	KA2-2233	3/104
1SFA616921R2234	KA2-2234	3/104
1SFA616921R2235	KA2-2235	3/104
1SFA616922R1018	KA3-1018	6/142
1SFA616922R1028	KA3-1028	6/142
1SFA616922R1118	KA3-1118	6/142
1SFA616922R1148	KA3-1148	6/142
1SFA616923R1028	KA4-1028	6/140
1SFA616923R1118	KA4-1118	6/140
1SFA616923R1148	KA4-1148	6/140
1SFA616924R1021	KA4-1021	6/140
1SFA616924R1022	KA4-1022	6/140
1SFA616924R1023	KA4-1023	6/140
1SFA616924R1024	KA4-1024	6/140
1SFA616924R1025	KA4-1025	6/140
1SFA619100R1011	CP1-10R-10	3/89
1SFA619100R1012	CP1-10G-10	3/89
1SFA619100R1013	CP1-10Y-10	3/89
1SFA619100R1014	CP1-10L-10	3/89
1SFA619100R1015	CP1-10W-10	3/89
1SFA619100R1016	CP1-10B-10	3/89
1SFA619100R1021	CP1-10R-20	3/89
1SFA619100R1022	CP1-10G-20	3/89
1SFA619100R1023	CP1-10Y-20	3/89
1SFA619100R1024	CP1-10L-20	3/89
1SFA619100R1025	CP1-10W-20	3/89
1SFA619100R1026	CP1-10B-20	3/89
1SFA619100R1041	CP1-10R-01	3/89
1SFA619100R1046	CP1-10B-01	3/89
1SFA619100R1051	CP1-10R-02	3/89
1SFA619100R1056	CP1-10B-02	3/89
1SFA619100R1071	CP1-10R-11	3/89
1SFA619100R1072	CP1-10G-11	3/89
1SFA619100R1073	CP1-10Y-11	3/89
1SFA619100R1074	CP1-10L-11	3/89
1SFA619100R1075	CP1-10W-11	3/89
1SFA619100R1076	CP1-10B-11	3/89
1SFA619100R1111	CP1-11R-10	3/93
1SFA619100R1112	CP1-11G-10	3/93
1SFA619100R1113	CP1-11Y-10	3/93
1SFA619100R1114	CP1-11L-10	3/93
1SFA619100R1118	CP1-11C-10	3/93
1SFA619100R1141	CP1-11R-01	3/93
1SFA619100R1211	CP1-12R-10	3/93
1SFA619100R1212	CP1-12G-10	3/93
1SFA619100R1213	CP1-12Y-10	3/93
1SFA619100R1214	CP1-12L-10	3/93
1SFA619100R1218	CP1-12C-10	3/93
1SFA619100R1241	CP1-12R-01	3/93
1SFA619100R1311	CP1-13R-10	3/93
1SFA619100R1312	CP1-13G-10	3/93
1SFA619100R1313	CP1-13Y-10	3/93

Order code	Type	Page
1SFA619100R1314	CP1-13L-10	3/93
1SFA619100R1318	CP1-13C-10	3/93
1SFA619100R1341	CP1-13R-01	3/93
1SFA619100R3011	CP1-30R-10	3/89
1SFA619100R3012	CP1-30G-10	3/89
1SFA619100R3013	CP1-30Y-10	3/89
1SFA619100R3014	CP1-30L-10	3/89
1SFA619100R3015	CP1-30W-10	3/89
1SFA619100R3016	CP1-30B-10	3/89
1SFA619100R3021	CP1-30R-20	3/89
1SFA619100R3022	CP1-30G-20	3/89
1SFA619100R3023	CP1-30Y-20	3/89
1SFA619100R3024	CP1-30L-20	3/89
1SFA619100R3025	CP1-30W-20	3/89
1SFA619100R3026	CP1-30B-20	3/89
1SFA619100R3027	CP1-30R-01	3/89
1SFA619100R3046	CP1-30B-01	3/89
1SFA619100R3051	CP1-30R-02	3/89
1SFA619100R3056	CP1-30B-02	3/89
1SFA619100R3221	CP1-30R-11	3/89
1SFA619100R3072	CP1-30G-11	3/89
1SFA619100R3073	CP1-30Y-11	3/89
1SFA619100R3074	CP1-30L-11	3/89
1SFA619100R3075	CP1-30W-11	3/89
1SFA619100R3076	CP1-30B-11	3/89
1SFA619100R3111	CP1-31R-10	3/93
1SFA619100R3112	CP1-31G-10	3/93
1SFA619100R3113	CP1-31Y-10	3/93
1SFA619100R3114	CP1-31L-10	3/93
1SFA619100R3118	CP1-31C-10	3/93
1SFA619100R3141	CP1-31R-01	3/93
1SFA619100R3144	CP1-31L-01	3/93
1SFA619101R1011	CP2-10R-10	3/90
1SFA619101R1012	CP2-10G-10	3/90
1SFA619101R1013	CP2-10Y-10	3/90
1SFA619101R1014	CP2-10L-10	3/90
1SFA619101R1015	CP2-10W-10	3/90
1SFA619101R1016	CP2-10B-10	3/90
1SFA619101R1021	CP2-10R-20	3/90
1SFA619101R1022	CP2-10G-20	3/90
1SFA619101R1023	CP2-10Y-20	3/90
1SFA619101R1024	CP2-10L-20	3/90
1SFA619101R1025	CP2-10W-20	3/90
1SFA619101R1026	CP2-10B-20	3/90
1SFA619101R1041	CP2-10R-01	3/90
1SFA619101R1046	CP2-10B-01	3/90
1SFA619101R1051	CP2-10R-02	3/90
1SFA619101R1056	CP2-10B-02	3/90
1SFA619101R1071	CP2-10R-11	3/90
1SFA619101R1072	CP2-10G-11	3/90
1SFA619101R1073	CP2-10Y-11	3/90
1SFA619101R1074	CP2-10L-11	3/90
1SFA619101R1075	CP2-10W-11	3/90
1SFA619101R1076	CP2-10B-11	3/90
1SFA619101R1111	CP2-11R-10	3/94
1SFA619101R1112	CP2-11G-10	3/94
1SFA619101R1113	CP2-11Y-10	3/94
1SFA619101R1114	CP2-11L-10	3/94
1SFA619101R1118	CP2-11C-10	3/94
1SFA619101R1141	CP2-11R-01	3/94
1SFA619101R1211	CP2-12R-10	3/94
1SFA619101R1212	CP2-12G-10	3/94
1SFA619101R1213	CP2-12Y-10	3/94
1SFA619101R1214	CP2-12L-10	3/94
1SFA619101R1218	CP2-12C-10	3/94
1SFA619101R1241	CP2-12R-01	3/94
1SFA619101R1311	CP2-13R-10	3/94
1SFA619101R1312	CP2-13G-10	3/94
1SFA619101R1313	CP2-13Y-10	3/94
1SFA619101R1314	CP2-13L-10	3/94
1SFA619101R1318	CP2-13C-10	3/94
1SFA619101R1341	CP2-13R-01	3/94
1SFA619101R3011	CP2-30R-10	3/90
1SFA619101R3012	CP2-30G-10	3/90
1SFA619101R3014	CP2-30L-10	3/90
1SFA619101R3015	CP2-30W-10	3/90

# Index

## Order code classification

Order code	Type	Page	Order code	Type	Page	Order code	Type	Page
1SFA619101R3016	CP2-30B-10	3/90	1SFA619103R1022	CP4-10G-20	3/92	1SFA619211R3026	C3SS2-30B-20	3/106
1SFA619101R3021	CP2-30R-20	3/90	1SFA619103R1026	CP4-10B-20	3/92	1SFA619211R3076	C3SS2-30B-11	3/106
1SFA619101R3022	CP2-30G-20	3/90	1SFA619103R1041	CP4-10R-01	3/92	1SFA619212R1026	C3SS3-10B-20	3/106
1SFA619101R3023	CP2-30Y-20	3/90	1SFA619103R1051	CP4-10R-02	3/92	1SFA619212R1076	C3SS3-10B-11	3/106
1SFA619101R3024	CP2-30L-20	3/90	1SFA619103R1056	CP4-10B-02	3/92	1SFA619212R3026	C3SS3-30B-20	3/106
1SFA619101R3025	CP2-30W-20	3/90	1SFA619103R1071	CP4-10R-11	3/92	1SFA619212R3076	C3SS3-30B-11	3/106
1SFA619101R3026	CP2-30B-20	3/90	1SFA619103R1072	CP4-10G-11	3/92	1SFA619213R1026	C3SS4-10B-20	3/106
1SFA619101R3041	CP2-30Y-01	3/90	1SFA619103R1073	CP4-11Y-11	3/92	1SFA619213R1076	C3SS4-10B-11	3/106
1SFA619101R3046	CP2-30B-01	3/90	1SFA619103R1074	CP4-10L-11	3/92	1SFA619214R1026	C3SS5-10B-20	3/106
1SFA619101R3051	CP2-30R-02	3/90	1SFA619103R1075	CP4-10W-11	3/92	1SFA619214R1076	C3SS5-10B-11	3/106
1SFA619101R3071	CP2-30R-11	3/90	1SFA619103R1076	CP4-10B-11	3/92	1SFA619214R3026	C3SS5-30B-20	3/106
1SFA619101R3072	CP2-30G-11	3/90	1SFA619103R1111	CP4-11R-10	3/96	1SFA619214R3076	C3SS5-30B-11	3/106
1SFA619101R3073	CP2-30Y-11	3/90	1SFA619103R1112	CP4-11G-10	3/96	1SFA619215R1026	C3SS6-10B-20	3/106
1SFA619101R3076	CP2-30B-11	3/90	1SFA619103R1113	CP4-11Y-10	3/96	1SFA619216R1026	C3SS7-10B-20	3/106
1SFA619102R1011	CP3-10R-10	3/91	1SFA619103R1114	CP4-11L-10	3/96	1SFA619216R1076	C3SS7-10B-11	3/106
1SFA619102R1012	CP3-10G-10	3/91	1SFA619103R1118	CP4-11C-10	3/96	1SFA619216R3026	C3SS7-10B-20	3/106
1SFA619102R1013	CP3-10Y-10	3/91	1SFA619103R1141	CP4-11R-01	3/96	1SFA619217R1026	C3SS8-10B-20	3/106
1SFA619102R1014	CP3-10L-10	3/91	1SFA619103R1211	CP4-12R-10	3/96	1SFA619402R1001	CL-100R	3/103
1SFA619102R1015	CP3-10W-10	3/91	1SFA619103R1212	CP4-12G-10	3/96	1SFA619402R1002	CL-100G	3/103
1SFA619102R1016	CP3-10B-10	3/91	1SFA619103R1213	CP4-11R-10	3/96	1SFA619402R1003	CL-100Y	3/103
1SFA619102R1021	CP3-10R-20	3/91	1SFA619103R1214	CP4-12L-10	3/96	1SFA619402R1004	CL-100L	3/103
1SFA619102R1022	CP3-10G-20	3/91	1SFA619103R1218	CP4-12C-10	3/96	1SFA619402R1005	CL-100W	3/103
1SFA619102R1023	CP3-10Y-20	3/91	1SFA619103R1241	CP4-12R-01	3/96	1SFA619402R1008	CL-100C	3/103
1SFA619102R1024	CP3-10L-20	3/91	1SFA619103R1311	CP4-13R-10	3/96	1SFA619403R5011	CL2-501R	3/101
1SFA619102R1025	CP3-10W-20	3/91	1SFA619103R1312	CP4-13G-10	3/96	1SFA619403R5012	CL2-501G	3/101
1SFA619102R1026	CP3-10B-20	3/91	1SFA619103R1313	CP4-13Y-10	3/96	1SFA619403R5013	CL2-501Y	3/101
1SFA619102R1041	CP3-10R-01	3/91	1SFA619103R1314	CP4-13L-10	3/96	1SFA619403R5014	CL2-501L	3/101
1SFA619102R1046	CP3-10B-01	3/91	1SFA619103R1318	CP4-13C-10	3/96	1SFA619403R5018	CL2-501C	3/101
1SFA619102R1051	CP3-10R-02	3/91	1SFA619103R1341	CP4-13R-01	3/96	1SFA619403R5021	CL2-502R	3/101
1SFA619102R1056	CP3-10B-02	3/91	1SFA619103R3012	CP4-30G-10	3/92	1SFA619403R5022	CL2-502G	3/101
1SFA619102R1071	CP3-10R-11	3/91	1SFA619103R3022	CP4-30G-20	3/92	1SFA619403R5023	CL2-502Y	3/101
1SFA619102R1072	CP3-10G-11	3/91	1SFA619103R3071	CP4-30R-11	3/92	1SFA619403R5024	CL2-502L	3/101
1SFA619102R1073	CP3-10Y-11	3/91	1SFA619105R1021	CP6-10R-20	3/100	1SFA619403R5028	CL2-502C	3/101
1SFA619102R1074	CP3-10L-11	3/91	1SFA619105R1022	CP6-10G-20	3/100	1SFA619403R5061	CL2-506R	3/101
1SFA619102R1075	CP3-10W-11	3/91	1SFA619105R1026	CP6-10B-20	3/100	1SFA619403R5062	CL2-506G	3/101
1SFA619102R1076	CP3-10B-11	3/91	1SFA619105R1051	CP6-10R-02	3/100	1SFA619403R5063	CL2-506Y	3/101
1SFA619102R1111	CP3-11R-10	3/95	1SFA619105R1056	CP6-10B-02	3/100	1SFA619403R5064	CL2-506L	3/101
1SFA619102R1112	CP3-11G-10	3/95	1SFA619105R1071	CP6-10R-11	3/100	1SFA619403R5068	CL2-506C	3/101
1SFA619102R1113	CP3-11Y-10	3/95	1SFA619105R1072	CP6-10G-11	3/100	1SFA619403R5071	CL2-507R	3/101
1SFA619102R1114	CP3-11L-10	3/95	1SFA619105R1076	CP6-10B-11	3/100	1SFA619403R5072	CL2-507G	3/101
1SFA619102R1118	CP3-11C-10	3/95	1SFA619126R1071	CPM3-10R-11	3/97	1SFA619403R5073	CL2-507Y	3/101
1SFA619102R1141	CP3-11R-01	3/95	1SFA619126R1072	CPM3-10G-11	3/97	1SFA619403R5074	CL2-507L	3/101
1SFA619102R1211	CP3-12R-10	3/95	1SFA619126R1073	CPM3-10Y-11	3/97	1SFA619403R5078	CL2-507C	3/101
1SFA619102R1212	CP3-12G-10	3/95	1SFA619126R1074	CPM3-10L-11	3/97	1SFA619403R5131	CL2-513R	3/101
1SFA619102R1213	CP3-12Y-10	3/95	1SFA619126R1076	CPM3-10B-11	3/97	1SFA619403R5132	CL2-513G	3/101
1SFA619102R1214	CP3-12L-10	3/95	1SFA619200R1016	C2SS1-10B-10	3/105	1SFA619403R5133	CL2-513Y	3/101
1SFA619102R1218	CP3-12C-10	3/95	1SFA619200R1026	C2SS1-10B-20	3/105	1SFA619403R5134	CL2-513L	3/101
1SFA619102R1241	CP3-12R-01	3/95	1SFA619200R1046	C2SS1-10B-01	3/105	1SFA619403R5138	CL2-513C	3/101
1SFA619102R1311	CP3-13R-10	3/95	1SFA619200R1076	C2SS1-10B-11	3/105	1SFA619403R5151	CL2-515R	3/101
1SFA619102R1312	CP3-13G-10	3/95	1SFA619200R3016	C2SS1-30B-10	3/105	1SFA619403R5152	CL2-515G	3/101
1SFA619102R1313	CP3-13Y-10	3/95	1SFA619200R3026	C2SS1-30B-20	3/105	1SFA619403R5153	CL2-515Y	3/101
1SFA619102R1314	CP3-13L-10	3/95	1SFA619200R3046	C2SS1-30B-01	3/105	1SFA619403R5154	CL2-515L	3/101
1SFA619102R1318	CP3-13C-10	3/95	1SFA619200R3076	C2SS1-30B-11	3/105	1SFA619403R5158	CL2-515C	3/101
1SFA619102R1341	CP3-13R-01	3/95	1SFA619201R1016	C2SS2-10B-10	3/105	1SFA619403R5201	CL2-520R	3/102
1SFA619102R3012	CP3-30G-10	3/91	1SFA619201R1026	C2SS2-10B-20	3/105	1SFA619403R5202	CL2-520G	3/102
1SFA619102R3015	CP3-30W-10	3/91	1SFA619201R1046	C2SS2-10B-01	3/105	1SFA619403R5203	CL2-520Y	3/102
1SFA619102R3016	CP3-30B-10	3/91	1SFA619201R1076	C2SS2-10B-11	3/105	1SFA619403R5204	CL2-520L	3/102
1SFA619102R3021	CP3-30R-20	3/91	1SFA619201R3016	C2SS2-30B-10	3/105	1SFA619403R5208	CL2-520C	3/102
1SFA619102R3022	CP3-30G-20	3/91	1SFA619201R3026	C2SS2-30B-20	3/105	1SFA619403R5231	CL2-523R	3/102
1SFA619102R3023	CP3-30Y-20	3/91	1SFA619201R3046	C2SS2-30B-01	3/105	1SFA619403R5232	CL2-523G	3/102
1SFA619102R3024	CP3-30L-20	3/91	1SFA619201R3076	C2SS2-30B-11	3/105	1SFA619403R5233	CL2-523Y	3/102
1SFA619102R3025	CP3-30W-20	3/91	1SFA619202R1016	C2SS3-10B-10	3/105	1SFA619403R5234	CL2-523L	3/102
1SFA619102R3026	CP3-30B-20	3/91	1SFA619202R1026	C2SS3-10B-20	3/105	1SFA619403R5238	CL2-523C	3/102
1SFA619102R3041	CP3-30Y-01	3/91	1SFA619202R1046	C2SS3-10B-01	3/105	1SFA619403R5421	CL2-542R	3/102
1SFA619102R3046	CP3-30B-01	3/91	1SFA619202R1076	C2SS3-10B-11	3/105	1SFA619403R5422	CL2-542G	3/102
1SFA619102R3071	CP3-30R-11	3/91	1SFA619202R3016	C2SS3-30B-10	3/105	1SFA619403R5423	CL2-542Y	3/102
1SFA619102R3072	CP3-30G-11	3/91	1SFA619202R3026	C2SS3-30B-20	3/105	1SFA619403R5424	CL2-542L	3/102
1SFA619102R3075	CP3-30W-11	3/91	1SFA619202R3076	C2SS3-30B-11	3/105	1SFA619403R5428	CL2-542C	3/102
1SFA619102R3076	CP3-30B-11	3/91	1SFA619204R3016	C2SS5-30B-10	3/105	1SFA619403R6231	CL2-623R	3/102
1SFA619103R1011	CP4-10R-10	3/92	1SFA619204R3076	C2SS5-30B-11	3/105	1SFA619403R6232	CL2-623G	3/102
1SFA619103R1012	CP4-10G-10	3/92	1SFA619210R1026	C3SS1-10B-20	3/106	1SFA619403R6233	CL2-623Y	3/102
1SFA619103R1013	CP4-10Y-10	3/92	1SFA619210R1076	C3SS1-10B-11	3/106	1SFA619403R6234	CL2-623L	3/102
1SFA619103R1014	CP4-10L-10	3/92	1SFA619210R3026	C3SS1-30B-20	3/106	1SFA619403R6238	CL2-623C	3/102
1SFA619103R1015	CP4-10W-10	3/92	1SFA619210R3076	C3SS1-30B-11	3/106	1SFA619500R1041	CE3T-10R-01	3/98
1SFA619103R1016	CP4-10B-10	3/92	1SFA619211R1026	C3SS2-10B-20	3/106	1SFA619500R1046	CE3T-10B-01	3/99
1SFA619103R1021	CP4-10R-20	3/92	1SFA619211R1076	C3SS2-10B-11	3/106	1SFA619500R1051	CE3T-10R-02	3/98

# Index

## Order code classification

Order code	Type	Page
1SFA619500R1071	CE3T-10R-11	3/98
1SFA619500R1076	CE3T-10B-11	3/99
1SFA619501R1041	CE3P-10R-01	3/98
1SFA619501R1051	CE3P-10R-02	3/98
1SFA619501R1071	CE3P-10R-11	3/98
1SFA619501R1076	CE3P-10B-11	3/99
1SFA619502R1041	CE3K1-10R-01	3/98
1SFA619502R1051	CE3K1-10R-02	3/98
1SFA619502R1071	CE3K1-10R-11	3/98
1SFA619502R1076	CE3K1-10B-11	3/99
1SFA619550R1016	CE4T-10B-10	3/99
1SFA619550R1026	CE4T-10B-20	3/99
1SFA619550R1041	CE4T-10R-01	3/98
1SFA619550R1046	CE4T-10B-01	3/99
1SFA619550R1051	CE4T-10R-02	3/98
1SFA619550R1056	CE4T-10B-02	3/99
1SFA619550R1071	CE4T-10R-11	3/98
1SFA619550R1076	CE4T-10B-11	3/99
1SFA619551R1041	CE4P-10R-01	3/98
1SFA619551R1051	CE4P-10R-02	3/98
1SFA619551R1071	CE4P-10R-11	3/98
1SFA619551R1076	CE4P-10B-11	3/99
1SFA619552R1041	CE4K1-10R-01	3/98
1SFA619552R1051	CE4K1-10R-02	3/98
1SFA619552R1071	CE4K1-10R-11	3/98
1SFA619552R1076	CE4K1-10B-11	3/99
1SFA619600R6002	CB1-600G	3/107
1SFA619600R6012	CB1-601G	3/107
1SFA619600R6022	CB1-602G	3/107
1SFA619600R6032	CB1-603G	3/107
1SFA619600R6101	CB1-610R	3/107
1SFA619600R6103	CB1-610Y	3/107
1SFA619600R6111	CB1-611R	3/107
1SFA619600R6113	CB1-611Y	3/107
1SFA619600R6121	CB1-612R	3/107
1SFA619600R6123	CB1-612Y	3/107
1SFA619600R6131	CB1-613R	3/107
1SFA619600R6133	CB1-613Y	3/107
1SFA619600R6206	CB1-620B	3/107
1SFA619600R6216	CB1-621B	3/107
1SFA619600R6226	CB1-622B	3/107
1SFA619600R6236	CB1-623B	3/107
1SFA619600R6306	CB1-630B	3/107
1SFA619600R6316	CB1-631B	3/107
1SFA619600R6326	CB1-632B	3/107
1SFA619600R6336	CB1-633B	3/107
1SFA619811R1000	CEP1-0	4/119
1SFA619811R1001	CEP1-1001	4/126
1SFA619811R1002	CEP1-1002	4/126
1SFA619811R2001	CEP1-2001	4/126
1SFA619811R2002	CEP1-2002	4/126
1SFA619821R1000	CEPY1-0	4/119
1SFA619821R1001	CEPY1-1001	4/126
1SFA619821R1002	CEPY1-1002	4/126
1SFA619821R1006	CEPY1-1006	4/126
1SFA619821R2001	CEPY1-2001	4/126
1SFA619821R2002	CEPY1-2002	4/126
1SFA619920R8053	CA1-8053	3/108
1SFA619920R8054	CA1-8054	3/108
1SFA619920R8077	CA1-8077	3/108
1SFA619920R8078	CA1-8078	3/108
1SFA619920R8080	CA1-8080	3/109
1SFA619930R1024	CA6-1024	4/124
1SFA619930R1026	CA6-1026	4/124
1SFA619930R1027	CA6-1027	4/124
SK615502-D	-	2/46
SK615512-1	-	2/46
SK615516-1	-	4/120
SK615546-1	-	5/134
SK615546-13	-	5/134
SK615546-15	-	5/134
SK615546-2	-	5/134
SK615546-3	-	5/134
SK615546-4	-	5/134
SK615546-5	-	5/134
SK615546-6	-	5/134

Order code	Type	Page
SK615546-7	-	5/134
SK615546-8	-	5/134
SK615550-29	-	5/135
SK615550-44	-	5/135
SK615550-61	-	5/135
SK615550-62	-	5/135
SK615550-80	-	5/135
SK615550-81	-	5/135
SK615552-13	-	5/135
SK615552-14	-	5/135
SK615552-15	-	5/135
SK615552-16	-	5/135
SK615552-17	-	5/135
SK615552-20	-	5/135
SK615552-21	-	5/135
SK615552-22	-	5/135
SK615552-23	-	5/135
SK615552-25	-	5/135
SK615552-27	-	5/135
SK615552-28	-	5/135
SK615552-29	-	5/135
SK615552-30	-	5/135
SK615552-31	-	5/135
SK615552-32	-	5/135
SK615552-40	-	5/135
SK615562-12	-	5/135
SK615562-27	-	5/135
SK615562-82	-	5/135
SK615562-83	-	5/135
SK615562-87	-	2/37
SK615562-88	-	2/37
SK616016-2	-	2/46
SK616701-AA	KEM1-0	4/128
SK616702-AA	KEM2-0	4/128
SK616703-AA	KEM3-0	4/128
SK616704-AA	KEM4-0	4/128
SK616706-AA	KEM6-0	4/128

Order code	Type	Page
------------	------	------

# Index

## Type classification

Type	Order code	Page
-	SK615502-D	2/46
-	SK615512-1	2/46
-	SK615516-1	4/120
-	SK616016-2	2/46
080CPN	1SFA170190R8000	3/80
080CPR	1SFA170191R8000	3/80
080CPT	1SFA170198R8000	3/80
080CPV	1SFA170192R8000	3/80
080SP1	1SFA170801R1001	3/81
080SP12	1SFA170808R1012	3/81
080SP12SF	1SFA170858R4000	3/82
080SP12SFC	1SFA170856R2000	3/82
080SP12SFE	1SFA170857R3012	3/81
080SP18	1SFA170809R1018	3/81
080SP18SF	1SFA170861R4000	3/82
080SP18SFC	1SFA170859R2000	3/82
080SP1M	1SFA170831R1001	3/81
080SP1MSF	1SFA170840R4000	3/82
080SP1MSFC	1SFA170838R2000	3/82
080SP1MSFE	1SFA170803R3001	3/81
080SP1SF	1SFA170837R4000	3/82
080SP1SFC	1SFA170835R2000	3/82
080SP1SFE	1SFA170836R3001	3/81
080SP2	1SFA170802R1002	3/81
080SP24	1SFA170810R1024	3/81
080SP2M	1SFA170832R1002	3/81
080SP2MSF	1SFA170846R4000	3/82
080SP2MSFC	1SFA170844R2000	3/82
080SP2SF	1SFA170843R4000	3/82
080SP2SFC	1SFA170841R2000	3/82
080SP2SFE	1SFA170842R3002	3/81
080SP3	1SFA170803R1003	3/81
080SP3SF	1SFA170849R4000	3/82
080SP3SFC	1SFA170847R2000	3/82
080SP3SFE	1SFA170848R3003	3/81
080SP4	1SFA170804R1004	3/81
080SP4M	1SFA170834R1004	3/81
080SP4SFE	1SFA170850R3004	3/81
080SP6	1SFA170806R1006	3/81
080SP6SFE	1SFA170852R3006	3/81
080SP8	1SFA170807R1008	3/81
080SP8SF	1SFA170855R4000	3/82
080SP8SFC	1SFA170853R2000	3/82
080SP8SFE	1SFA170854R3008	3/81
BA9S110LEDB	1SFA187180R1045	3/ 78
BA9S110LEDG	1SFA187181R1043	3/ 78
BA9S110LEDL	1SFA187182R1045	3/ 78
BA9S110LEDR	1SFA187183R1041	3/ 78
BA9S110LEDV	1SFA187184R1042	3/ 78
BA9S12LEDB	1SFA187165R1015	3/ 78
BA9S12LEDG	1SFA187166R1013	3/ 78
BA9S12LEDL	1SFA187167R1014	3/ 78
BA9S12LEDR	1SFA187168R1011	3/ 78
BA9S12LEDV	1SFA187169R1012	3/ 78
BA9S130LED	1SFA187190R1045	3/ 78
BA9S230LEDB	1SFA187185R1055	3/ 78
BA9S230LEDG	1SFA187186R1053	3/ 78
BA9S230LEDL	1SFA187187R1054	3/ 78
BA9S230LEDR	1SFA187188R1051	3/ 78
BA9S230LEDV	1SFA187189R1052	3/ 78
BA9S24LEDB	1SFA187170R1025	3/ 78
BA9S24LEDG	1SFA187171R1023	3/ 78
BA9S24LEDL	1SFA187172R1024	3/ 78
BA9S24LEDR	1SFA187173R1021	3/ 78
BA9S24LEDV	1SFA187174R1022	3/ 78
BA9S48LEDB	1SFA187175R1035	3/ 78
BA9S48LEDG	1SFA187176R1033	3/ 78
BA9S48LEDL	1SFA187177R1034	3/ 78
BA9S48LEDR	1SFA187178R1031	3/ 78
BA9S48LEDV	1SFA187179R1032	3/ 78
BA9S60LED	1SFA187191R1045	3/ 78
BA9S6LEDB	1SFA187160R1005	3/ 78
BA9S6LEDG	1SFA187161R1003	3/ 78
BA9S6LEDL	1SFA187162R1001	3/ 78
BA9S6LEDR	1SFA187163R1001	3/ 78
BA9S6LEDV	1SFA187164R1002	3/ 78

Type	Order code	Page
C2SS1-10B-01	1SFA619200R1046	3/105
C2SS1-10B-10	1SFA619200R1016	3/105
C2SS1-10B-11	1SFA619200R1076	3/105
C2SS1-10B-20	1SFA619200R1026	3/105
C2SS1-30B-01	1SFA619200R3046	3/105
C2SS1-30B-10	1SFA619200R3016	3/105
C2SS1-30B-11	1SFA619200R3076	3/105
C2SS1-30B-20	1SFA619200R3026	3/105
C2SS2-10B-01	1SFA619201R1046	3/105
C2SS2-10B-10	1SFA619201R1016	3/105
C2SS2-10B-11	1SFA619201R1076	3/105
C2SS2-10B-20	1SFA619201R1026	3/105
C2SS2-30B-01	1SFA619201R3046	3/105
C2SS2-30B-10	1SFA619201R3016	3/105
C2SS2-30B-11	1SFA619201R3076	3/105
C2SS2-30B-20	1SFA619201R3026	3/105
C2SS3-10B-01	1SFA619202R1046	3/105
C2SS3-10B-10	1SFA619202R1016	3/105
C2SS3-10B-11	1SFA619202R1076	3/105
C2SS3-10B-20	1SFA619202R1026	3/105
C2SS3-30B-10	1SFA619202R3016	3/105
C2SS3-30B-11	1SFA619202R3076	3/105
C2SS3-30B-20	1SFA619202R3026	3/105
C2SS5-30B-10	1SFA619204R3016	3/105
C2SS5-30B-11	1SFA619204R3076	3/105
C3SS1-10B-11	1SFA619210R1076	3/106
C3SS1-10B-20	1SFA619210R1026	3/106
C3SS1-30B-11	1SFA619210R3076	3/106
C3SS1-30B-20	1SFA619210R3026	3/106
C3SS2-10B-11	1SFA619211R1076	3/106
C3SS2-10B-20	1SFA619211R1026	3/106
C3SS2-30B-11	1SFA619211R3076	3/106
C3SS2-30B-20	1SFA619211R3026	3/106
C3SS3-10B-11	1SFA619212R1076	3/106
C3SS3-10B-20	1SFA619212R1026	3/106
C3SS3-30B-11	1SFA619212R3076	3/106
C3SS3-30B-20	1SFA619212R3026	3/106
C3SS4-10B-11	1SFA619213R1076	3/106
C3SS4-10B-20	1SFA619213R1026	3/106
C3SS5-10B-11	1SFA619214R1076	3/106
C3SS5-10B-20	1SFA619214R1026	3/106
C3SS5-30B-11	1SFA619214R3076	3/106
C3SS5-30B-20	1SFA619214R3026	3/106
C3SS6-10B-20	1SFA619215R1026	3/106
C3SS7-10B-11	1SFA619216R1076	3/106
C3SS7-10B-20	1SFA619216R1026	3/106
C3SS7-30B-20	1SFA619216R3026	3/106
C3SS8-10B-20	1SFA619217R1026	3/106
CA1-8053	1SFA619920R8053	3/108
CA1-8054	1SFA619920R8054	3/108
CA1-8077	1SFA619920R8077	3/108
CA1-8078	1SFA619920R8078	3/108
CA1-8080	1SFA619920R8080	3/109
CA6-1024	1SFA619930R1024	4/124
CA6-1026	1SFA619930R1026	4/124
CA6-1027	1SFA619930R1027	4/124
CB1-600G	1SFA619600R6002	3/ 107
CB1-601G	1SFA619600R6012	3/ 107
CB1-602G	1SFA619600R6022	3/ 107
CB1-603G	1SFA619600R6032	3/ 107
CB1-610R	1SFA619600R6101	3/ 107
CB1-610Y	1SFA619600R6103	3/ 107
CB1-611R	1SFA619600R6111	3/ 107
CB1-611Y	1SFA619600R6113	3/ 107
CB1-612R	1SFA619600R6121	3/ 107
CB1-612Y	1SFA619600R6123	3/ 107
CB1-613R	1SFA619600R6131	3/ 107
CB1-613Y	1SFA619600R6133	3/ 107
CB1-620B	1SFA619600R6206	3/ 107
CB1-621B	1SFA619600R6216	3/ 107
CB1-622B	1SFA619600R6226	3/ 107
CB1-623B	1SFA619600R6236	3/ 107
CB1-630B	1SFA619600R6306	3/ 107
CB1-631B	1SFA619600R6316	3/ 107
CB1-632B	1SFA619600R6326	3/ 107
CB1-633B	1SFA619600R6336	3/ 107

Type	Order code	Page
CE3K1-10B-11	1SFA619502R1076	3/99
CE3K1-10R-01	1SFA619502R1041	3/98
CE3K1-10R-02	1SFA619502R1051	3/98
CE3K1-10R-11	1SFA619502R1071	3/98
CE3P-10B-11	1SFA619501R1076	3/99
CE3P-10R-01	1SFA619501R1041	3/98
CE3P-10R-02	1SFA619501R1051	3/98
CE3P-10R-11	1SFA619501R1071	3/98
CE3T-10B-01	1SFA619500R1046	3/99
CE3T-10B-11	1SFA619500R1076	3/99
CE3T-10R-01	1SFA619500R1041	3/98
CE3T-10R-02	1SFA619500R1051	3/98
CE3T-10R-11	1SFA619500R1071	3/98
CE4K1-10B-11	1SFA619552R1076	3/99
CE4K1-10R-01	1SFA619552R1041	3/98
CE4K1-10R-02	1SFA619552R1051	3/98
CE4K1-10R-11	1SFA619552R1071	3/98
CE4P-10B-11	1SFA619551R1076	3/99
CE4P-10R-01	1SFA619551R1041	3/98
CE4P-10R-02	1SFA619551R1051	3/98
CE4P-10R-11	1SFA619551R1071	3/98
CE4T-10B-01	1SFA619550R1046	3/99
CE4T-10B-02	1SFA619550R1056	3/99
CE4T-10B-10	1SFA619550R1016	3/99
CE4T-10B-11	1SFA619550R1076	3/99
CE4T-10B-20	1SFA619550R1026	3/99
CE4T-10R-01	1SFA619550R1041	3/98
CE4T-10R-02	1SFA619550R1051	3/98
CE4T-10R-11	1SFA619550R1071	3/98
CEP1-0	1SFA619811R1000	4/119
CEP1-1001	1SFA619811R1001	4/126
CEP1-1002	1SFA619811R1002	4/126
CEP1-2001	1SFA619811R2001	4/126
CEP1-2002	1SFA619811R2002	4/126
CEPY1-0	1SFA619821R1000	4/119
CEPY1-1001	1SFA619821R1001	4/126
CEPY1-1002	1SFA619821R1002	4/126
CEPY1-1006	1SFA619821R1006	4/126
CEPY1-2001	1SFA619821R2001	4/126
CEPY1-2002	1SFA619821R2002	4/126
CL-100C	1SFA619402R1008	3/ 103
CL-100G	1SFA619402R1002	3/ 103
CL-100L	1SFA619402R1004	3/ 103
CL-100R	1SFA619402R1001	3/ 103
CL-100W	1SFA619402R1005	3/ 103
CL-100Y	1SFA619402R1003	3/ 103
CL2-501C	1SFA619403R5018	3/101
CL2-501G	1SFA619403R5012	3/101
CL2-501L	1SFA619403R5014	3/101
CL2-501R	1SFA619403R5011	3/101
CL2-501Y	1SFA619403R5013	3/101
CL2-502C	1SFA619403R5028	3/101
CL2-502G	1SFA619403R5022	3/101
CL2-502L	1SFA619403R5024	3/101
CL2-502R	1SFA619403R5021	3/101
CL2-502Y	1SFA619403R5023	3/101
CL2-506C	1SFA619403R5068	3/101
CL2-506G	1SFA619403R5062	3/101
CL2-506L	1SFA619403R5064	3/101
CL2-506R	1SFA619403R5061	3/101
CL2-506Y	1SFA619403R5063	3/101
CL2-507C	1SFA619403R5078	3/101
CL2-507G	1SFA619403R5072	3/101
CL2-507L	1SFA619403R5074	3/101
CL2-507R	1SFA619403R5071	3/101
CL2-507Y	1SFA619403R5073	3/101
CL2-513C	1SFA619403R5138	3/101
CL2-513G	1SFA619403R5132	3/101
CL2-513L	1SFA619403R5134	3/101
CL2-513R	1SFA619403R5131	3/101
CL2-513Y	1SFA619403R5133	3/101
CL2-515C	1SFA619403R5158	3/101
CL2-515G	1SFA619403R5152	3/101
CL2-515L	1SFA619403R5154	3/101
CL2-515R	1SFA619403R5151	3/101
CL2-515Y	1SFA619403R5153	3/101

# Index

## Type classification

Type	Order code	Page
CL2-520C	1SFA619403R5208	3/102
CL2-520G	1SFA619403R5202	3/102
CL2-520L	1SFA619403R5204	3/102
CL2-520R	1SFA619403R5201	3/102
CL2-520Y	1SFA619403R5203	3/102
CL2-523C	1SFA619403R5238	3/102
CL2-523G	1SFA619403R5232	3/102
CL2-523L	1SFA619403R5234	3/102
CL2-523R	1SFA619403R5231	3/102
CL2-523Y	1SFA619403R5233	3/102
CL2-542C	1SFA619403R5428	3/102
CL2-542G	1SFA619403R5422	3/102
CL2-542L	1SFA619403R5424	3/102
CL2-542R	1SFA619403R5421	3/102
CL2-542Y	1SFA619403R5423	3/102
CL2-623C	1SFA619403R6238	3/102
CL2-623G	1SFA619403R6232	3/102
CL2-623L	1SFA619403R6234	3/102
CL2-623R	1SFA619403R6231	3/102
CL2-623Y	1SFA619403R6233	3/102
CP1-10B-01	1SFA619100R1046	3/89
CP1-10B-02	1SFA619100R1056	3/89
CP1-10B-10	1SFA619100R1016	3/89
CP1-10B-11	1SFA619100R1076	3/89
CP1-10B-20	1SFA619100R1026	3/89
CP1-10G-10	1SFA619100R1012	3/89
CP1-10G-11	1SFA619100R1072	3/89
CP1-10G-20	1SFA619100R1022	3/89
CP1-10L-10	1SFA619100R1014	3/89
CP1-10L-11	1SFA619100R1074	3/89
CP1-10L-20	1SFA619100R1024	3/89
CP1-10R-01	1SFA619100R1041	3/89
CP1-10R-02	1SFA619100R1051	3/89
CP1-10R-10	1SFA619100R1011	3/89
CP1-10R-11	1SFA619100R1071	3/89
CP1-10R-20	1SFA619100R1021	3/89
CP1-10W-10	1SFA619100R1015	3/89
CP1-10W-11	1SFA619100R1075	3/89
CP1-10W-20	1SFA619100R1025	3/89
CP1-10Y-10	1SFA619100R1013	3/89
CP1-10Y-11	1SFA619100R1073	3/89
CP1-10Y-20	1SFA619100R1023	3/89
CP1-11C-10	1SFA619100R1118	3/93
CP1-11G-10	1SFA619100R1112	3/93
CP1-11L-10	1SFA619100R1114	3/93
CP1-11R-01	1SFA619100R1141	3/93
CP1-11R-10	1SFA619100R1111	3/93
CP1-11Y-10	1SFA619100R1113	3/93
CP1-12C-10	1SFA619100R1218	3/93
CP1-12G-10	1SFA619100R1212	3/93
CP1-12L-10	1SFA619100R1214	3/93
CP1-12R-01	1SFA619100R1241	3/93
CP1-12R-10	1SFA619100R1211	3/93
CP1-12Y-10	1SFA619100R1213	3/93
CP1-13C-10	1SFA619100R1318	3/93
CP1-13G-10	1SFA619100R1312	3/93
CP1-13L-10	1SFA619100R1314	3/93
CP1-13R-01	1SFA619100R1341	3/93
CP1-13R-10	1SFA619100R1311	3/93
CP1-13Y-10	1SFA619100R1313	3/93
CP1-30B-01	1SFA619100R3046	3/89
CP1-30B-02	1SFA619100R3056	3/89
CP1-30B-10	1SFA619100R3016	3/89
CP1-30B-11	1SFA619100R3076	3/89
CP1-30B-20	1SFA619100R3026	3/89
CP1-30G-10	1SFA619100R3012	3/89
CP1-30G-11	1SFA619100R3072	3/89
CP1-30G-20	1SFA619100R3022	3/89
CP1-30L-10	1SFA619100R3014	3/89
CP1-30L-11	1SFA619100R3074	3/89
CP1-30L-20	1SFA619100R3024	3/89
CP1-30R-01	1SFA619100R3041	3/89
CP1-30R-02	1SFA619100R3051	3/89
CP1-30R-10	1SFA619100R3011	3/89
CP1-30R-11	1SFA619100R3071	3/89
CP1-30R-20	1SFA619100R3021	3/89

Type	Order code	Page
CP1-30W-10	1SFA619100R3015	3/89
CP1-30W-11	1SFA619100R3075	3/89
CP1-30W-20	1SFA619100R3025	3/89
CP1-30Y-10	1SFA619100R3013	3/89
CP1-30Y-11	1SFA619100R3073	3/89
CP1-30Y-20	1SFA619100R3023	3/89
CP1-31C-10	1SFA619100R3118	3/93
CP1-31G-10	1SFA619100R3112	3/93
CP1-31L-01	1SFA619100R3144	3/93
CP1-31L-10	1SFA619100R3114	3/93
CP1-31R-01	1SFA619100R3141	3/93
CP1-31R-10	1SFA619100R3111	3/93
CP1-31Y-10	1SFA619100R3113	3/93
CP2-10B-01	1SFA619101R1046	3/90
CP2-10B-02	1SFA619101R1056	3/90
CP2-10B-10	1SFA619101R1016	3/90
CP2-10B-11	1SFA619101R1076	3/90
CP2-10B-20	1SFA619101R1026	3/90
CP2-10G-10	1SFA619101R1012	3/90
CP2-10G-11	1SFA619101R1072	3/90
CP2-10G-20	1SFA619101R1022	3/90
CP2-10L-10	1SFA619101R1014	3/90
CP2-10L-11	1SFA619101R1074	3/90
CP2-10L-20	1SFA619101R1024	3/90
CP2-10R-01	1SFA619101R1041	3/90
CP2-10R-02	1SFA619101R1051	3/90
CP2-10R-10	1SFA619101R1011	3/90
CP2-10R-11	1SFA619101R1071	3/90
CP2-10R-20	1SFA619101R1021	3/90
CP2-10W-10	1SFA619101R1015	3/90
CP2-10W-11	1SFA619101R1075	3/90
CP2-10W-20	1SFA619101R1025	3/90
CP2-10Y-10	1SFA619101R1013	3/90
CP2-10Y-11	1SFA619101R1073	3/90
CP2-10Y-20	1SFA619101R1023	3/90
CP2-11C-10	1SFA619101R1118	3/94
CP2-11G-10	1SFA619101R1112	3/94
CP2-11L-10	1SFA619101R1114	3/94
CP2-11R-01	1SFA619101R1141	3/94
CP2-11R-10	1SFA619101R1111	3/94
CP2-11Y-10	1SFA619101R1113	3/94
CP2-12C-10	1SFA619101R1218	3/94
CP2-12G-10	1SFA619101R1212	3/94
CP2-12L-10	1SFA619101R1214	3/94
CP2-12R-01	1SFA619101R1241	3/94
CP2-12R-10	1SFA619101R1211	3/94
CP2-12Y-10	1SFA619101R1213	3/94
CP2-13C-10	1SFA619101R1318	3/94
CP2-13G-10	1SFA619101R1312	3/94
CP2-13L-10	1SFA619101R1314	3/94
CP2-13R-01	1SFA619101R1341	3/94
CP2-13R-10	1SFA619101R1311	3/94
CP2-13Y-10	1SFA619101R1313	3/94
CP2-30B-01	1SFA619101R3046	3/90
CP2-30B-10	1SFA619101R3016	3/90
CP2-30B-11	1SFA619101R3076	3/90
CP2-30B-20	1SFA619101R3026	3/90
CP2-30G-10	1SFA619101R3012	3/90
CP2-30G-11	1SFA619101R3072	3/90
CP2-30G-20	1SFA619101R3022	3/90
CP2-30L-10	1SFA619101R3014	3/90
CP2-30L-20	1SFA619101R3024	3/90
CP2-30R-01	1SFA619101R3041	3/90
CP2-30R-02	1SFA619101R3051	3/90
CP2-30R-10	1SFA619101R3011	3/90
CP2-30R-11	1SFA619101R3071	3/90
CP2-30R-20	1SFA619101R3021	3/90
CP2-30W-10	1SFA619101R3015	3/90
CP2-30W-20	1SFA619101R3025	3/90
CP2-30Y-11	1SFA619101R3073	3/90
CP2-30Y-20	1SFA619101R3023	3/90
CP3-10B-01	1SFA619102R1046	3/91
CP3-10B-02	1SFA619102R1056	3/91
CP3-10B-10	1SFA619102R1016	3/91
CP3-10B-11	1SFA619102R1076	3/91
CP3-10B-20	1SFA619102R1026	3/91

Type	Order code	Page
CP3-10G-10	1SFA619102R1012	3/91
CP3-10G-11	1SFA619102R1072	3/91
CP3-10G-20	1SFA619102R1022	3/91
CP3-10L-10	1SFA619102R1014	3/91
CP3-10L-11	1SFA619102R1074	3/91
CP3-10L-20	1SFA619102R1024	3/91
CP3-10R-01	1SFA619102R1041	3/91
CP3-10R-02	1SFA619102R1051	3/91
CP3-10R-10	1SFA619102R1011	3/91
CP3-10R-11	1SFA619102R1071	3/91
CP3-10R-20	1SFA619102R1021	3/91
CP3-10W-10	1SFA619102R1015	3/91
CP3-10W-11	1SFA619102R1075	3/91
CP3-10W-20	1SFA619102R1025	3/91
CP3-10Y-10	1SFA619102R1013	3/91
CP3-10Y-11	1SFA619102R1073	3/91
CP3-10Y-20	1SFA619102R1023	3/91
CP3-11C-10	1SFA619102R1118	3/95
CP3-11G-10	1SFA619102R1112	3/95
CP3-11L-10	1SFA619102R1114	3/95
CP3-11R-01	1SFA619102R1141	3/95
CP3-11R-10	1SFA619102R1111	3/95
CP3-11Y-10	1SFA619102R1113	3/95
CP3-12C-10	1SFA619102R1218	3/95
CP3-12G-10	1SFA619102R1212	3/95
CP3-12L-10	1SFA619102R1214	3/95
CP3-12R-01	1SFA619102R1241	3/95
CP3-12R-10	1SFA619102R1211	3/95
CP3-12Y-10	1SFA619102R1213	3/95
CP3-13C-10	1SFA619102R1318	3/95
CP3-13G-10	1SFA619102R1312	3/95
CP3-13L-10	1SFA619102R1314	3/95
CP3-13R-01	1SFA619102R1341	3/95
CP3-13R-10	1SFA619102R1311	3/95
CP3-13Y-10	1SFA619102R1313	3/95
CP3-30B-01	1SFA619102R3046	3/91
CP3-30B-10	1SFA619102R3016	3/91
CP3-30B-11	1SFA619102R3076	3/91
CP3-30B-20	1SFA619102R3026	3/91
CP3-30G-10	1SFA619102R3012	3/91
CP3-30G-11	1SFA619102R3072	3/91
CP3-30G-20	1SFA619102R3022	3/91
CP3-30L-20	1SFA619102R3024	3/91
CP3-30R-01	1SFA619102R3041	3/91
CP3-30R-11	1SFA619102R3071	3/91
CP3-30R-20	1SFA619102R3021	3/91
CP3-30W-10	1SFA619102R3015	3/91
CP3-30W-11	1SFA619102R3075	3/91
CP3-30W-20	1SFA619102R3025	3/91
CP3-30Y-20	1SFA619102R3023	3/91
CP4-10B-02	1SFA619103R1056	3/92
CP4-10B-10	1SFA619103R1016	3/92
CP4-10B-11	1SFA619103R1076	3/92
CP4-10B-20	1SFA619103R1026	3/92
CP4-10G-10	1SFA619103R1012	3/92
CP4-10G-11	1SFA619103R1072	3/92
CP4-10G-20	1SFA619103R1022	3/92
CP4-10L-10	1SFA619103R1014	3/92
CP4-10L-11	1SFA619103R1074	3/92
CP4-10R-01	1SFA619103R1041	3/92
CP4-10R-02	1SFA619103R1051	3/92
CP4-10R-10	1SFA619103R1011	3/92
CP4-10R-11	1SFA619103R1071	3/92
CP4-10R-20	1SFA619103R1021	3/92
CP4-10W-10	1SFA619103R1015	3/92
CP4-10W-11	1SFA619103R1075	3/92
CP4-10Y-10	1SFA619103R1013	3/92
CP4-10Y-11	1SFA619103R1073	3/92
CP4-11C-10	1SFA619103R1118	3/96
CP4-11G-10	1SFA619103R1112	3/96
CP4-11L-10	1SFA619103R1114	3/96
CP4-11R-01	1SFA619103R1141	3/96
CP4-11R-10	1SFA619103R1111	3/96
CP4-11Y-10	1SFA619103R1113	3/96
CP4-12C-10	1SFA619103R1218	3/96
CP4-12G-10	1SFA619103R1212	3/96















# Index

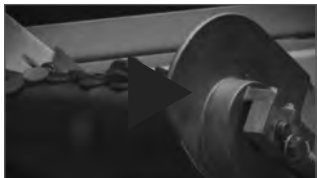
## Type classification

Type	Order code	Page	Type	Order code	Page	Type	Order code	Page
P9MSCI0C37	1SFA192162R9006	3/68	P9MSVZ1N	1SFA184383R9006	3/64			
P9MSCI0C95	1SFA184403R9006	3/68	P9MSVZ3N	1SFA184391R9006	3/64			
P9MSCI0E01	1SFA192165R9006	3/68	P9MSVZ5N	1SFA184387R9006	3/64			
P9MSCI0E95	1SFA184404R9006	3/68	P9PDNFO	1SFA187055R1300	3/77			
P9MSCI0N95	1SFA184405R9006	3/68	P9PDNFO-AA	1SFA215834R1300	3/77			
P9MSCI5C01	1SFA192255R9006	3/68	P9PDNV0	1SFA187020R1080	3/77			
P9MSCI5C37	1SFA192267R9006	3/68	P9PDNV0-AA	1SFA215831R1000	3/77			
P9MSCI5C95	1SFA184410R9006	3/68	P9PDTV0	1SFA187027R8000	3/77			
P9MSCX0A95	1SFA184468R9006	3/71	P9PLFVDA	1SFA197018R1019	3/79			
P9MSCX0Z01	1SFA193335R9006	3/71	P9PLFVDB	1SFA197019R1015	3/79			
P9MSCX0Z95	1SFA184482R9006	3/71	P9PLFVDG	1SFA197020R1013	3/79			
P9MSCZ0A95	1SFA184433R9006	3/69	P9PLFVDL	1SFA197021R1014	3/79			
P9MSCZ0C95	1SFA184434R9006	3/69	P9PLFVDR	1SFA197022R1011	3/79			
P9MSCZ0H95	1SFA184436R9006	3/69	P9PLFVDV	1SFA197023R1012	3/79			
P9MSCZ0N95	1SFA184438R9006	3/69	P9PLFVJB	1SFA197025R1045	3/79			
P9MSCZ0T01	1SFA192690R9006	3/69	P9PLFVJG	1SFA197026R1043	3/79			
P9MSCZ0T37	1SFA192702R9006	3/69	P9PLFVJR	1SFA197028R1041	3/79			
P9MSCZ0T95	1SFA184439R9006	3/69	P9PLFVNB	1SFA197031R1075	3/79			
P9MSCZ1C95	1SFA184449R9006	3/69	P9PLFVNG	1SFA197032R1073	3/79			
P9MSCZ1N95	1SFA184451R9006	3/69	P9PLFVNR	1SFA197034R1071	3/79			
P9MSCZ3C01	1SFA193110R9006	3/70	P9PLNVDB	1SFA197001R1015	3/79			
P9MSCZ3C95	1SFA184467R9006	3/70	P9PLNVDG	1SFA197002R1013	3/79			
P9MSCZ5A01	1SFA193020R9006	3/70	P9PLNVDL	1SFA197003R1014	3/79			
P9MSCZ5A95	1SFA184461R9006	3/70	P9PLNVDR	1SFA197004R1011	3/79			
P9MSCZ5C95	1SFA184462R9006	3/70	P9PLNVDV	1SFA197005R1012	3/79			
P9MSCZ5H01	1SFA193050R9006	3/70	P9PLNVJB	1SFA197007R1045	3/79			
P9MSLD0A	1SFA184595R9109	3/63	P9PLNVJG	1SFA197008R1043	3/79			
P9MSLD0B	1SFA184597R9105	3/63	P9PLNVJL	1SFA197009R1044	3/79			
P9MSLD0G	1SFA184593R9103	3/63	P9PLNVJR	1SFA197010R1041	3/79			
P9MSLD0L	1SFA184596R9104	3/63	P9PLNVJV	1SFA197011R1042	3/79			
P9MSLD0R	1SFA184591R9101	3/63	P9PLNVNB	1SFA197013R1075	3/79			
P9MSLD0V	1SFA184592R9102	3/63	P9PLNVNG	1SFA197014R1073	3/79			
P9MSLZ0A	1SFA184605R9109	3/65	P9PLNVNL	1SFA197015R1074	3/79			
P9MSLZ0B	1SFA184607R9105	3/65	P9PLNVNR	1SFA197016R1071	3/79			
P9MSLZ0G	1SFA184603R9103	3/65	P9PLNVNV	1SFA197017R1072	3/79			
P9MSLZ0L	1SFA184606R9104	3/65						
P9MSLZ0R	1SFA184601R9101	3/65						
P9MSLZ0V	1SFA184602R9102	3/65						
P9MSLZ1B	1SFA184617R9105	3/65						
P9MSLZ1G	1SFA184613R9103	3/65						
P9MSLZ1R	1SFA184611R9101	3/65						
P9MSLZ1V	1SFA184612R9102	3/65						
P9MSLZ3A	1SFA184635R9109	3/65						
P9MSLZ3B	1SFA184637R9105	3/65						
P9MSLZ3G	1SFA184633R9103	3/65						
P9MSLZ3L	1SFA184636R9104	3/65						
P9MSLZ3R	1SFA184631R9101	3/65						
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P9MSLZ5V	1SFA184622R9102	3/65						
P9MSMD0N	1SFA184110R9006	3/62						
P9MSMD0R	1SFA184111R9001	3/62						
P9MSMD5N	1SFA184140R9006	3/62						
P9MSMD5R	1SFA184141R9001	3/62						
P9MSMI0N	1SFA184120R9006	3/62						
P9MSMI5N	1SFA184150R9006	3/62						
P9MSMI5R	1SFA184151R9001	3/62						
P9MSMW0N	1SFA184360R9006	3/67						
P9MSMX0N	1SFA184397R9006	3/66						
P9MSMX5N	1SFA184340R9006	3/66						
P9MSMY0N	1SFA184350R9006	3/67						
P9MSMY0R	1SFA184351R9001	3/67						
P9MSMZ0N	1SFA184200R9006	3/64						
P9MSMZ0R	1SFA184201R9001	3/64						
P9MSMZ1N	1SFA184240R9006	3/64						
P9MSMZ1R	1SFA184241R9001	3/64						
P9MSMZ3N	1SFA184320R9006	3/64						
P9MSMZ3R	1SFA184321R9001	3/64						
P9MSMZ5N	1SFA184280R9006	3/64						
P9MSVD0N	1SFA184370R9006	3/62						
P9MSVD5N	1SFA184373R9006	3/62						
P9MSVION	1SFA184371R9006	3/62						
P9MSVI5N	1SFA184374R9006	3/62						
P9MSVX0N	1SFA184392R9006	3/66						
P9MSVX5N	1SFA184393R9006	3/66						
P9MSVZ0N	1SFA184379R9006	3/64						

# Marketing materials

## Videos

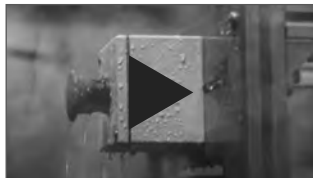
Watch our videos to learn more about our product range



ABBPilot devices manufacturing



Modular range assembly



IPX6 water spray test



IPX7 submersion test



## Web

<http://new.abb.com/low-voltage/products/pilot-devices>

### Customer cases



EA EAutomation Europe



Duztech Sweden



LED Controls Great Britain



## Catalogs

Find our catalogs on the web



Complete offering  
Catalog number: 1SFC151007C0201



Core offering  
Catalog number: 1SFC151006C0201



## Data sheet

For direct product details information, use product type or order code



<http://new.abb.com/products/> **product type or order code**

Ex: <http://new.abb.com/products/> ML1-100R  
<http://new.abb.com/products/> 1SFA611400R1001

## 3D models

Download and view our products in 2D or 3D (STEP,IGES,...)with Cadenas 3D-models



<http://abb-control-products.partcommunity.com/> 3d-cad-models/





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