






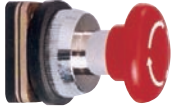



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# 22 and 30 mm Altech Metal Push Buttons



Part No. PBD

**Quality at a Competitive Price!**

## Pre-assembled or Ready to Assemble Control Stations



### Solutions for your applications

Backed by technical and industrial experience, we offer preassembled ready to install or assembled to order control stations. Altech offers several ranges of control stations. From a cost effective plastic enclosure assembled with 22 mm push buttons to a heavy duty cast aluminum enclosure assembled with 22 or 30mm push buttons, you will find the one that fits your application.



### High performance and Extensive range

**Our basic plastic or Pressure Die Cast aluminum (PDC)** enclosures are available with contact blocks mounted on the bracket behind the 22 mm operator or in the rear (base) of the enclosure (*see page 41*). Altech can assemble the control station to the customer specifications or it can be ordered unassembled. These enclosures are easy to assemble by using any Non-Illuminated operator with a maximum of 2 contacts per operator.

**Our plastic** enclosures on pages 34-35 can be customized to meet the customer's most demanding applications. These enclosures can be equipped with any 22 mm illuminated or Non-Illuminated operators. Use up to 2 contact blocks with the illuminated operators or up to 4 contact blocks with the Non-illuminated operators.

**Our Gravity Die Cast aluminum (GDC)** enclosures have an excellent resistance to mechanical shock and vibration. They can be equipped with any illuminated or Non-Illuminated operators. Use up to 2 contact blocks with the illuminated 22mm operators or up to 4 contact blocks with the Non-illuminated 22mm operators. This enclosure can be modified to accept any Non-illuminated 30mm operator or pilot light as well.



## Pre-assembled or Ready to Assemble Control Stations



### Application specific solutions

These products are suitable for a wide variety of applications. They have an excellent resistance to corrosion and cleaning agents. They are tolerant of high pressure cleaning without leakage. These enclosures combined with our push buttons offer an excellent price/performance ratio.

Our staff has the ability to take your requirements and rapidly turn them into a solution. We use the latest CAD system in our process. Prototypes are available for most application specific requirements.



### Safety and reliability

The majority of the enclosures meet all industrial application requirements from the most common to the most extreme.

They have international certifications such as UL, CE, etc. They conform to IEC standards, have a IP65 rating and NEMA Type 4X protection.

*Metal legend plates are engraved on both sides, one side in horizontal and the other side in a vertical orientation.*

### Save Time

Our control stations save you time, simplify and speed up your installation while maintaining the high quality and appearance of your equipment.

Mounting is easy, the only tool you need is a screwdriver.



# 30mm Metal Push Buttons

The Altech 30mm Push Button line include a complete selection of push buttons, pilot lights and selector switches and accessories. All properly assembled devices are UL and CE Recognized and they certified for NEMA type 4X applications. An internal seal provides watertight integrity and all components are corrosion resistant materials.

Our contact blocks are color coded for an easy assembly and identification (Red=S11, Yellow=S12). Illuminated or Non-Illuminated push buttons in various colors are available for quick delivery.

Selector Switches are available in a 2 or 3 position styles with and option for momentary or maintained function. The pilot lights are full voltage and LED and filament bubs are interchangeable.

Cast aluminum control stations are available to your specifications.

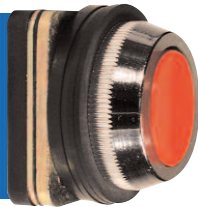
These Ø 30 control devices can be mounted in any position in panels of 1 to 6 mm (.039 - .236 in.) thickness.

## 30mm Non-Illuminated Metal Operators



Certified for  
**NEMA Type 4X**  
12 environment.

### Flush Non-Illuminated Momentary



Color	Function	Cat No.
<input type="checkbox"/> White	Momentary	AF1
<input type="checkbox"/> Black	Momentary	AF2
<input type="checkbox"/> Green	Momentary	AF3
<input type="checkbox"/> Red	Momentary	AF4
<input type="checkbox"/> Blue	Momentary	AF6
<input type="checkbox"/> Yellow	Momentary	AF8

### Booted Momentary



Color	Function	Cat No.
<input type="checkbox"/> White	Momentary	AB1
<input type="checkbox"/> Black	Momentary	AB2
<input type="checkbox"/> Green	Momentary	AB3
<input type="checkbox"/> Red	Momentary	AB4
<input type="checkbox"/> Blue	Momentary	AB6
<input type="checkbox"/> Yellow	Momentary	AB8

### Projecting Momentary



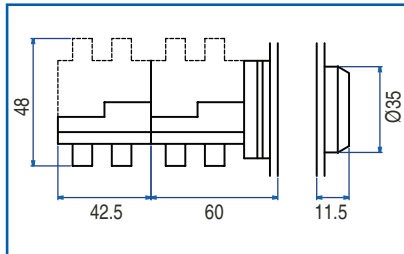
Color	Function	Cat No.
<input type="checkbox"/> White	Momentary	AP1
<input type="checkbox"/> Black	Momentary	AP2
<input type="checkbox"/> Green	Momentary	AP3
<input type="checkbox"/> Red	Momentary	AP4
<input type="checkbox"/> Blue	Momentary	AP6
<input type="checkbox"/> Yellow	Momentary	AP8

## 30mm Non-Illuminated Metal Operators

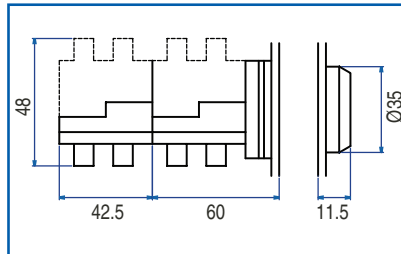
### Dimensional Drawings

All dimensions shown in millimeters.  
To convert to inches multiply by 0.03937

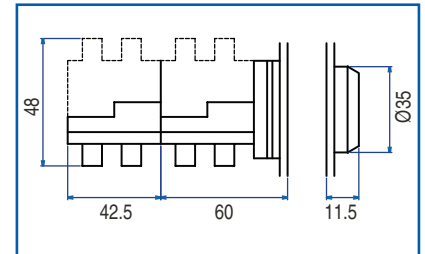
Flush Momentary



Booted Momentary



Projecting Momentary



### Contact Elements

#### Description

1 Normally Open + 1 Normally Closed  
Silver Contacts

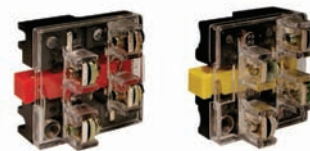
#### Cat. No.

S11

2 Normally Open + 2 Normally Closed  
Silver Contacts

S11 + S12

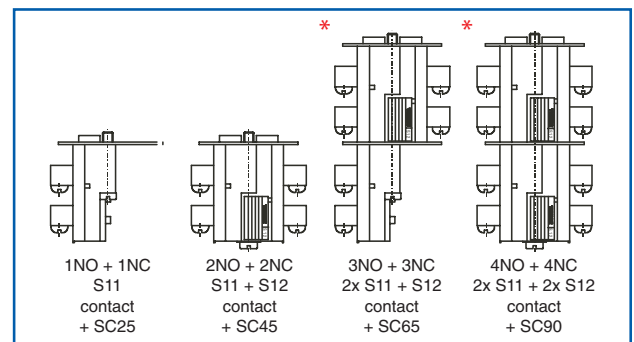
For additional contacts, see diagram at right.



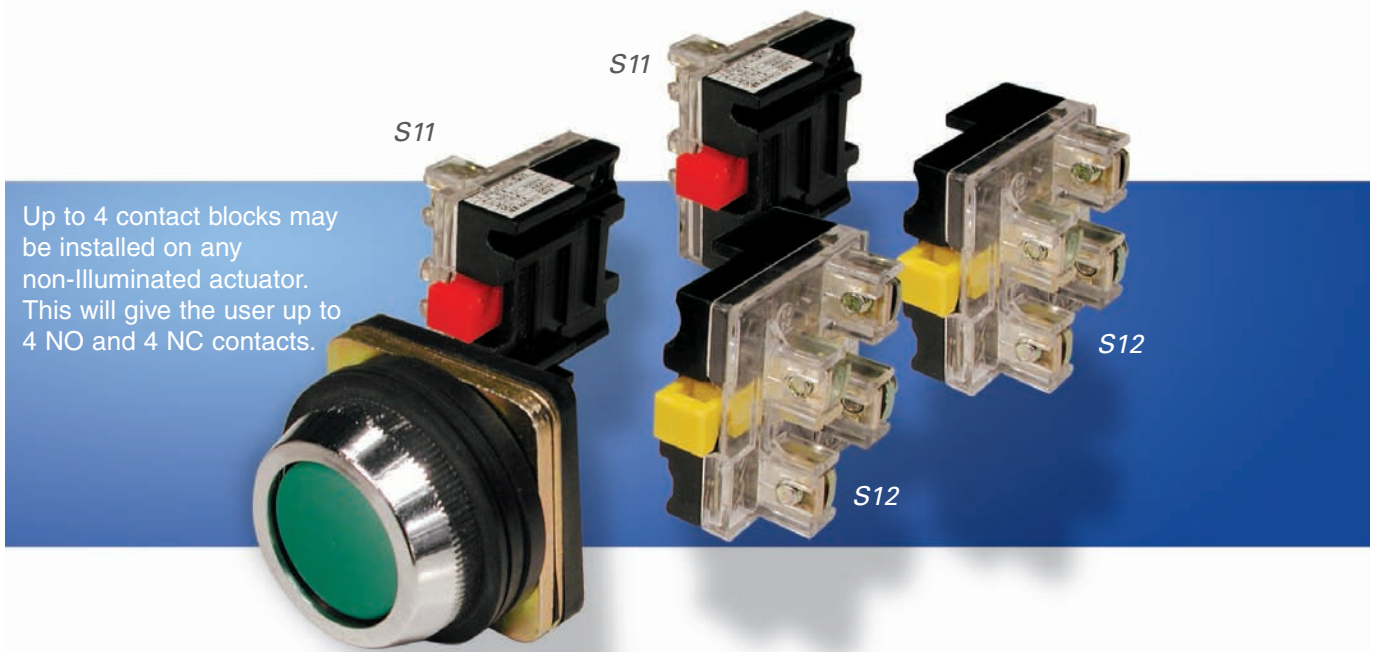
#### Contact Installation Screws

Type	Dimensions	Used with
SC25	M4 x 25 mm	S11
SC45	M4 x 45 mm	S11 + S12
SC65	M4 x 65 mm	2x S11 + S12
SC90	M4 x 90 mm	2x S11 + 2x S12

\* When using more than two contact blocks, additional screws must be purchased separately (SC45 and SC90).



### Exploded Assembly View



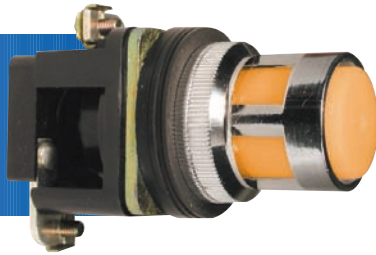
Up to 4 contact blocks may be installed on any non-illuminated actuator. This will give the user up to 4 NO and 4 NC contacts.

# 30mm Illuminated Metal Operators



Certified for  
**NEMA Type 4X**  
12 environment.

## Flush Illuminated Momentary



*Note:*  
All LED illuminated actuators and pilot lights at a specified voltage will operate on AC and DC.  
Except for 230V specify AC or DC type.



Replacement bulbs  
available.  
See page 54.



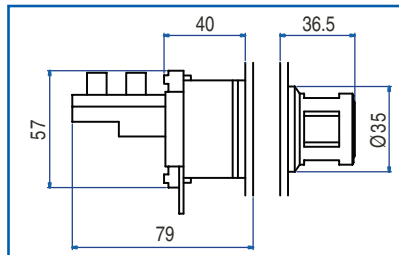
Color	Voltage	Cat No.
<b>24V AC/DC (filament bulb)</b>		
<input type="checkbox"/> White	24V AC/DC	ALF1-024
<input type="checkbox"/> Green	24V AC/DC	ALF3-024
<input type="checkbox"/> Red	24V AC/DC	ALF4-024
<input type="checkbox"/> Amber	24V AC/DC	ALF5-024
<input type="checkbox"/> Blue	24V AC/DC	ALF6-024
<input type="checkbox"/> Clear	24V AC/DC	ALF7-024
<input type="checkbox"/> Yellow	24V AC/DC	ALF8-024
<b>48V AC/DC (filament bulb)</b>		
<input type="checkbox"/> White	48V AC/DC	ALF1-048
<input type="checkbox"/> Green	48V AC/DC	ALF3-048
<input type="checkbox"/> Red	48V AC/DC	ALF4-048
<input type="checkbox"/> Amber	48V AC/DC	ALF5-048
<input type="checkbox"/> Blue	48V AC/DC	ALF6-048
<input type="checkbox"/> Clear	48V AC/DC	ALF7-048
<input type="checkbox"/> Yellow	48V AC/DC	ALF8-048
<b>110V AC/DC (filament bulb)</b>		
<input type="checkbox"/> White	110V AC/DC	ALF1-110
<input type="checkbox"/> Green	110V AC/DC	ALF3-110
<input type="checkbox"/> Red	110V AC/DC	ALF4-110
<input type="checkbox"/> Amber	110V AC/DC	ALF5-110
<input type="checkbox"/> Blue	110V AC/DC	ALF6-110
<input type="checkbox"/> Clear	110V AC/DC	ALF7-110
<input type="checkbox"/> Yellow	110V AC/DC	ALF8-110
<b>230V AC (filament bulb)</b>		
<input type="checkbox"/> White	230V AC	ALF1-230
<input type="checkbox"/> Green	230V AC	ALF3-230
<input type="checkbox"/> Red	230V AC	ALF4-230
<input type="checkbox"/> Amber	230V AC	ALF5-230
<input type="checkbox"/> Blue	230V AC	ALF6-230
<input type="checkbox"/> Clear	230V AC	ALF7-230
<input type="checkbox"/> Yellow	230V AC	ALF8-230
<i>230V DC version is available on request.</i>		
<b>24V AC/DC (LED bulb)</b>		
<input type="checkbox"/> White	24V AC/DC	ALF1LB-024
<input type="checkbox"/> Green	24V AC/DC	ALF3LB-024
<input type="checkbox"/> Red	24V AC/DC	ALF4LB-024
<input type="checkbox"/> Amber	24V AC/DC	ALF5LB-024
<input type="checkbox"/> Blue	24V AC/DC	ALF6LB-024
<input type="checkbox"/> Clear	24V AC/DC	ALF7LB-024
<input type="checkbox"/> Yellow	24V AC/DC	ALF8LB-024
<b>48V AC/DC (LED bulb)</b>		
<input type="checkbox"/> White	48V AC/DC	ALF1LB-048
<input type="checkbox"/> Green	48V AC/DC	ALF3LB-048
<input type="checkbox"/> Red	48V AC/DC	ALF4LB-048
<input type="checkbox"/> Amber	48V AC/DC	ALF5LB-048
<input type="checkbox"/> Blue	48V AC/DC	ALF6LB-048
<input type="checkbox"/> Clear	48V AC/DC	ALF7LB-048
<input type="checkbox"/> Yellow	48V AC/DC	ALF8LB-048
<b>110V AC/DC (LED bulb)</b>		
<input type="checkbox"/> White	110V AC/DC	ALF1LB-110
<input type="checkbox"/> Green	110V AC/DC	ALF3LB-110
<input type="checkbox"/> Red	110V AC/DC	ALF4LB-110
<input type="checkbox"/> Amber	110V AC/DC	ALF5LB-110
<input type="checkbox"/> Blue	110V AC/DC	ALF6LB-110
<input type="checkbox"/> Clear	110V AC/DC	ALF7LB-110
<input type="checkbox"/> Yellow	110V AC/DC	ALF8LB-110
<b>230V AC (LED bulb)</b>		
<input type="checkbox"/> White	230V AC	ALF1LB-230
<input type="checkbox"/> Green	230V AC	ALF3LB-230
<input type="checkbox"/> Red	230V AC	ALF4LB-230
<input type="checkbox"/> Amber	230V AC	ALF5LB-230
<input type="checkbox"/> Blue	230V AC	ALF6LB-230
<input type="checkbox"/> Clear	230V AC	ALF7LB-230
<input type="checkbox"/> Yellow	230V AC	ALF8LB-230
<i>230V DC version is available on request.</i>		

## 30mm Illuminated Metal Operators

### Dimensional Drawings

All dimensions shown in millimeters.  
To convert to inches multiply by 0.03937

Flush Illuminated Momentary



### Contact Elements

#### Description

1 Normally Open + 1 Normally Closed  
Silver Contacts

#### Cat. No.

S11

2 Normally Open + 2 Normally Closed  
Silver Contacts

S11 + S12

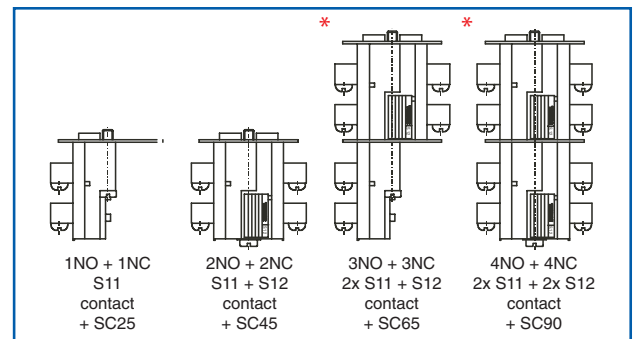
For additional contacts, see diagram at right.



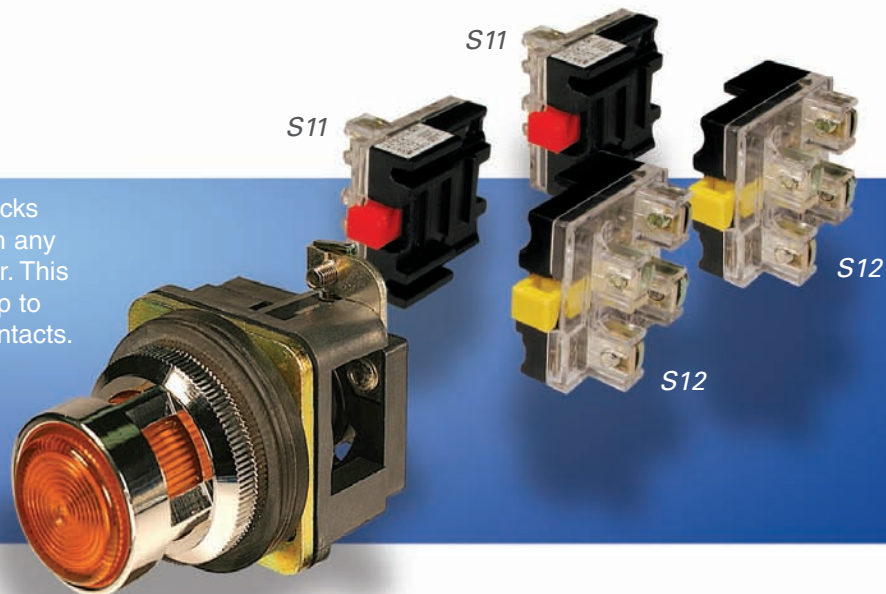
#### Contact Installation Screws

Type	Dimensions	Used with
SC25	M4 x 25 mm	S11
SC45	M4 x 45 mm	S11 + S12
SC65	M4 x 65 mm	2x S11 + S12
SC90	M4 x 90 mm	2x S11 + 2x S12

\* When using more than two contact blocks, additional screws must be purchased separately (SC45 and SC90).



### Exploded Assembly View



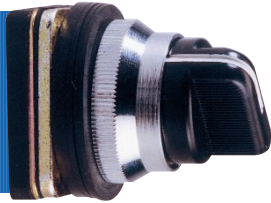
Up to 4 contact blocks may be installed on any illuminated actuator. This will give the user up to 2 NO and 2 NC contacts.

# 30mm Selector Switch Metal Operators



Certified for  
**NEMA Type 4X**  
12 environment.

## Selector Maintained & Momentary



Other colors available upon request. Please contact Altech for further information and part numbers.

### Color

### Cat No.

#### 2 Position Maintained

■ Black	AS2-2P
---------	--------

#### 3 Position Maintained

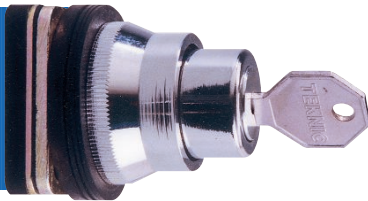
■ Black	AS2-3P
---------	--------

#### 2 Position Momentary

■ Black	AS2-2PSR
---------	----------

## Key Selector Switch

*Keyed Alike*



To be used for applications where single or multiple operators are used, but the same key configurations are required. Standard key selector switches have the same key configuration (Cat. No. KY30).

### Function

### Key Removal

### Cat No.

#### 2 Position

Maintained	↕	Left/Right	AK2-2PB
Momentary	↕	Left	AK2-2POSR
Maintained	↕	Right	AK2-2PI
Maintained	↕	Left	AK2-2PO

#### 3 Position

Maintained	↕	Left/Right	AK2-3PB
Maintained	↕	Center	AK2-3PC



### Replacement Key

**KY30**

## Key Selector Switch

*Keyed Differently*



To be used for applications where multiple operators are used, but different key configurations are required. Each cat. no. have different key configurations.

### Function

### Key Removal

### Cat No.

#### 2 Position

Maintained	↕	Left	AK2-2PO-KD
Momentary	↕	Left	AK2-2PO-KD1
Maintained	↕	Left	AK2-2PO-KD2
Maintained	↕	Left	AK2-2PO-KD4
Maintained	↕	Left	AK2-2PO-KD5

#### 3 Position

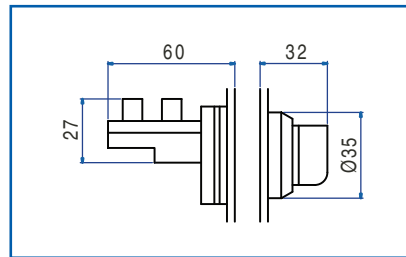
Maintained	↕	Center	AK2-3PC-KD
Maintained	↕	Center	AK2-3PC-KD1
Maintained	↕	Center	AK2-3PC-KD2
Maintained	↕	Center	AK2-3PC-KD3

## 30mm Selector Switch Metal Operators

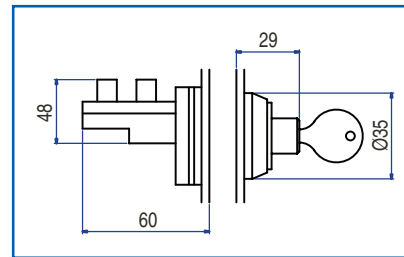
### Dimensional Drawings

All dimensions shown in millimeters.  
To convert to inches multiply by 0.03937

Flush Maintained and Momentary



Key Selector



### Contact Elements

#### Description

1 Normally Open + 1 Normally Closed  
Silver Contacts

#### Cat. No.

S11

2 Normally Open + 2 Normally Closed  
Silver Contacts

S11 + S12

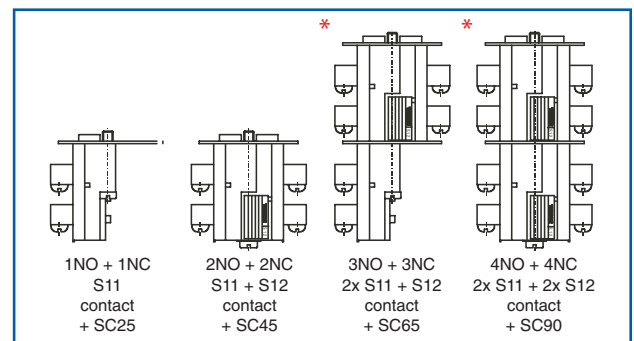
For additional contacts, see diagram at right.



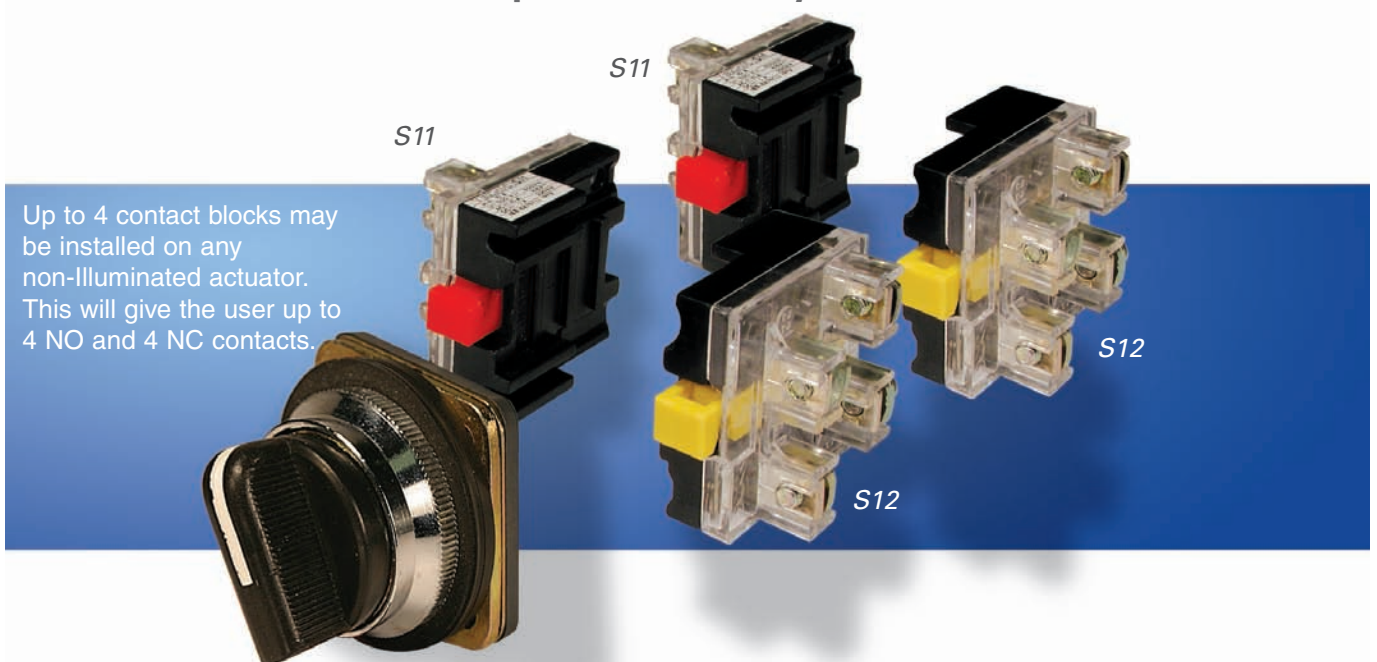
#### Contact Installation Screws

Type	Dimensions	Used with
SC25	M4 x 25 mm	S11
SC45	M4 x 45 mm	S11 + S12
SC65	M4 x 65 mm	2x S11 + S12
SC90	M4 x 90 mm	2x S11 + 2x S12

\* When using more than two contact blocks, additional screws must be purchased separately (SC45 and SC90).



### Exploded Assembly View



# 30mm Non-Illuminated Metal Operators



Certified for  
**NEMA Type 4X**  
12 environment.

## Mushroom with Key



All keys are “keyed alike”. Different keys are available on request.  
Other colors are available on request.

Color	Function	Cat No.
-------	----------	---------

### Press to Lock, Key to Release

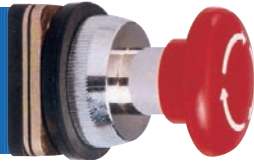
■ Black	Maintained	AMLKB2
■ Red	Maintained	AMLKB4

### Key to Lock, Key to Release

■ Black	Maintained	AMKB2
■ Red	Maintained	AMKB4

## Mushroom with Indicating Arrows

(Press to lock, turn to release.)



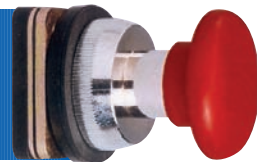
Other colors are available on request.

Color	Function	Cat No.
-------	----------	---------

### Press to Lock, Turn to Release

■ Black	Maintained	AML2
■ Red	Maintained	AML4

## Mushroom Momentary



Color	Function	Cat No.
-------	----------	---------

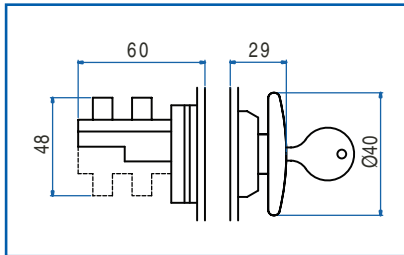
□ White	Momentary	AM1
■ Black	Momentary	AM2
■ Green	Momentary	AM3
■ Red	Momentary	AM4
■ Blue	Momentary	AM6
■ Yellow	Momentary	AM8

## 30mm Non-Illuminated Metal Operators

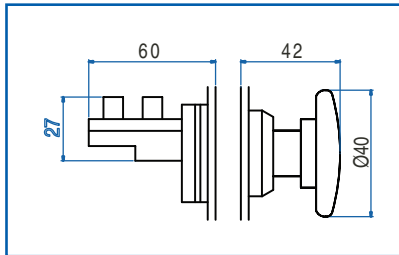
### Dimensional Drawings

All dimensions shown in millimeters.  
To convert to inches multiply by 0.03937

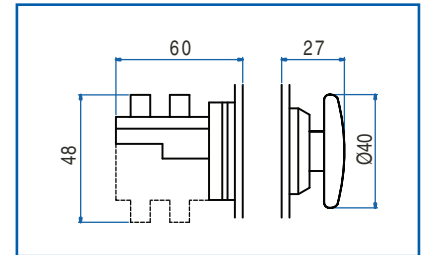
Mushroom with Key



Mushroom with Indicating Arrows



Mushroom Momentary



### Contact Elements

#### Description

1 Normally Open + 1 Normally Closed  
Silver Contacts

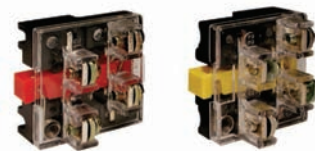
#### Cat. No.

S11

2 Normally Open + 2 Normally Closed  
Silver Contacts

S11 + S12

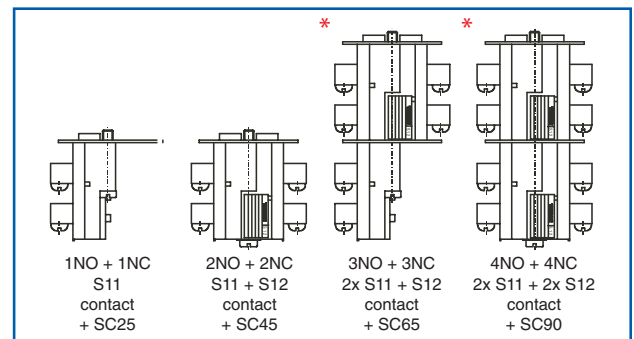
For additional contacts, see diagram at right.



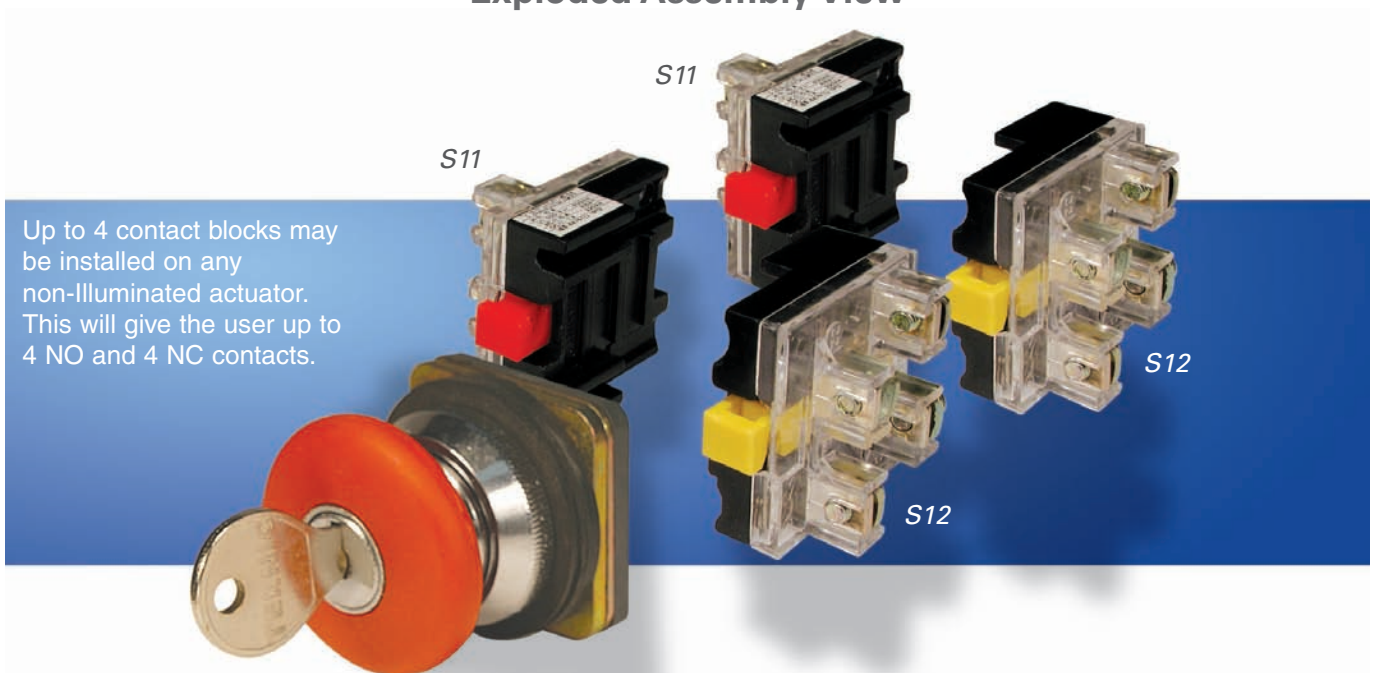
#### Contact Installation Screws

Type	Dimensions	Used with
SC25	M4 x 25 mm	S11
SC45	M4 x 45 mm	S11 + S12
SC65	M4 x 65 mm	2x S11 + S12
SC90	M4 x 90 mm	2x S11 + 2x S12

\* When using more than two contact blocks, additional screws must be purchased separately (SC45 and SC90).



### Exploded Assembly View



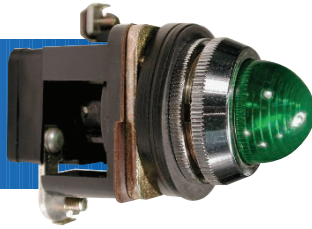
Up to 4 contact blocks may be installed on any non-illuminated actuator. This will give the user up to 4 NO and 4 NC contacts.

# 30mm Metal Pilot Lights



Certified for  
**NEMA Type 4X**  
12 environment.

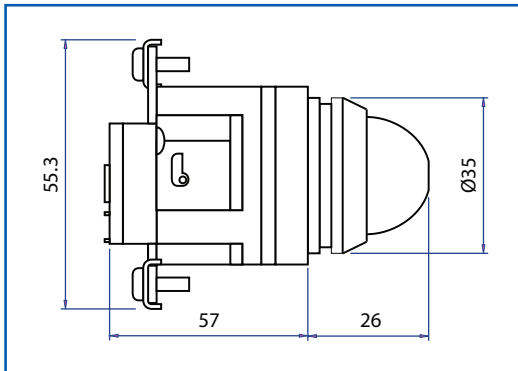
## Pilot Light



*Note:*  
All LED pilot lights and illuminated actuators at a specified voltage will operate on AC and DC.  
Except for 230V specify AC or DC type.

## Dimensional Drawings

Pilot Light



Replacement bulbs  
available.  
See page 54.



### Filament Bulb

Color	Voltage	Cat No.
<b>24V AC/DC (filament bulb)</b>		
<input type="checkbox"/> White	24V AC/DC	PLB1-024
<input checked="" type="checkbox"/> Green	24V AC/DC	PLB3-024
<input checked="" type="checkbox"/> Red	24V AC/DC	PLB4-024
<input checked="" type="checkbox"/> Amber	24V AC/DC	PLB5-024
<input checked="" type="checkbox"/> Blue	24V AC/DC	PLB6-024
<input type="checkbox"/> Clear	24V AC/DC	PLB7-024
<input checked="" type="checkbox"/> Yellow	24V AC/DC	PLB8-024
<b>48V AC/DC (filament bulb)</b>		
<input type="checkbox"/> White	48V AC/DC	PLB1-048
<input checked="" type="checkbox"/> Green	48V AC/DC	PLB3-048
<input checked="" type="checkbox"/> Red	48V AC/DC	PLB4-048
<input checked="" type="checkbox"/> Amber	48V AC/DC	PLB5-048
<input checked="" type="checkbox"/> Blue	48V AC/DC	PLB6-048
<input type="checkbox"/> Clear	48V AC/DC	PLB7-048
<input checked="" type="checkbox"/> Yellow	48V AC/DC	PLB8-048
<b>110V AC/DC (filament bulb)</b>		
<input type="checkbox"/> White	110V AC/DC	PLB1-110
<input checked="" type="checkbox"/> Green	110V AC/DC	PLB3-110
<input checked="" type="checkbox"/> Red	110V AC/DC	PLB4-110
<input checked="" type="checkbox"/> Amber	110V AC/DC	PLB5-110
<input checked="" type="checkbox"/> Blue	110V AC/DC	PLB6-110
<input type="checkbox"/> Clear	110V AC/DC	PLB7-110
<input checked="" type="checkbox"/> Yellow	110V AC/DC	PLB8-110
<b>230V AC/DC (filament bulb)</b>		
<input type="checkbox"/> White	230V AC/DC	PLB1-230
<input checked="" type="checkbox"/> Green	230V AC/DC	PLB3-230
<input checked="" type="checkbox"/> Red	230V AC/DC	PLB4-230
<input checked="" type="checkbox"/> Amber	230V AC/DC	PLB5-230
<input checked="" type="checkbox"/> Blue	230V AC/DC	PLB6-230
<input type="checkbox"/> Clear	230V AC/DC	PLB7-230
<input checked="" type="checkbox"/> Yellow	230V AC/DC	PLB8-230

### LED Bulb

Color	Voltage	Cat No.
<b>24V AC/DC (LED bulb)</b>		
<input type="checkbox"/> White	24V AC/DC	PLB1LB-024
<input checked="" type="checkbox"/> Green	24V AC/DC	PLB3LB-024
<input checked="" type="checkbox"/> Red	24V AC/DC	PLB4LB-024
<input checked="" type="checkbox"/> Amber	24V AC/DC	PLB5LB-024
<input checked="" type="checkbox"/> Blue	24V AC/DC	PLB6LB-024
<input type="checkbox"/> Clear	24V AC/DC	PLB7LB-024
<input checked="" type="checkbox"/> Yellow	24V AC/DC	PLB8LB-024
<b>48V AC/DC (LED bulb)</b>		
<input type="checkbox"/> White	48V AC/DC	PLB1LB-048
<input checked="" type="checkbox"/> Green	48V AC/DC	PLB3LB-048
<input checked="" type="checkbox"/> Red	48V AC/DC	PLB4LB-048
<input checked="" type="checkbox"/> Amber	48V AC/DC	PLB5LB-048
<input checked="" type="checkbox"/> Blue	48V AC/DC	PLB6LB-048
<input type="checkbox"/> Clear	48V AC/DC	PLB7LB-048
<input checked="" type="checkbox"/> Yellow	48V AC/DC	PLB8LB-048
<b>110V AC/DC (LED bulb)</b>		
<input type="checkbox"/> White	110V AC/DC	PLB1LB-110
<input checked="" type="checkbox"/> Green	110V AC/DC	PLB3LB-110
<input checked="" type="checkbox"/> Red	110V AC/DC	PLB4LB-110
<input checked="" type="checkbox"/> Amber	110V AC/DC	PLB5LB-110
<input checked="" type="checkbox"/> Blue	110V AC/DC	PLB6LB-110
<input type="checkbox"/> Clear	110V AC/DC	PLB7LB-110
<input checked="" type="checkbox"/> Yellow	110V AC/DC	PLB8LB-110
<b>230V AC (LED bulb)</b>		
<input type="checkbox"/> White	230V AC	PLB1LB-230
<input checked="" type="checkbox"/> Green	230V AC	PLB3LB-230
<input checked="" type="checkbox"/> Red	230V AC	PLB4LB-230
<input checked="" type="checkbox"/> Amber	230V AC	PLB5LB-230
<input checked="" type="checkbox"/> Blue	230V AC	PLB6LB-230
<input type="checkbox"/> Clear	230V AC	PLB7LB-230
<input checked="" type="checkbox"/> Yellow	230V AC	PLB8LB-230

230V DC version is available on request.

# 30mm Aluminum Enclosures

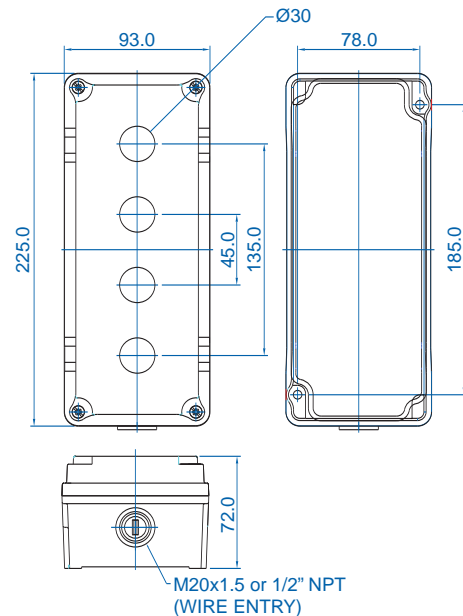
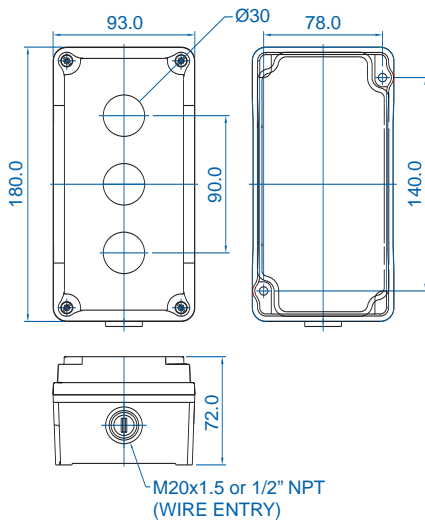
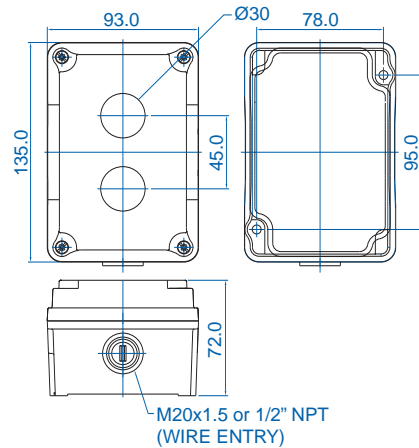
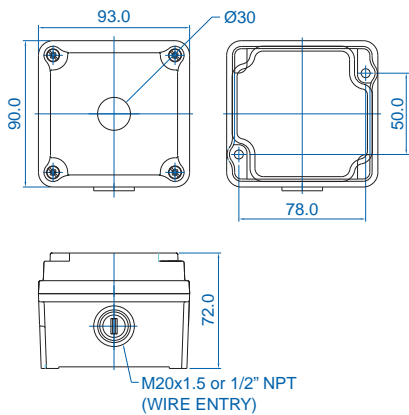


Certified for  
**NEMA Type 4X**  
12 environment.

## Aluminum Gravity Die Cast



Cat. No.	Operator Capacity	Color Top/ Bottom	Construction	Dimensions (LxWxH) mm (in.)	Cable Entry Size	Mounting Hole Dia.
1003A13	1	Black/Pebble Gray (RAL 7032)	GDC Aluminum	93 x 90x72 (3.66x3.54x2.83)	2xM20	2 X 6mm
1004C13	2	Black/Pebble Gray (RAL 7032)	GDC Aluminum	93x135x72 (3.66x5.32x2.83)	2xM20	2 X 6mm
1005E13	3	Black/Pebble Gray (RAL 7032)	GDC Aluminum	93x180x72 (3.66x7.09x2.83)	2xM20	2 X 6mm
1004G13	4	Black/Pebble Gray (RAL 7032)	GDC Aluminum	93x225x72 (3.66x8.86x2.83)	2xM20	2 X 6mm
1005A13	1	Black/Pebble Gray (RAL 7032)	GDC Aluminum	93 x 90x72 (3.66x3.54x2.83)	2x1/2"-14 NPT	2 X 6mm
1006C13	2	Black/Pebble Gray (RAL 7032)	GDC Aluminum	93x135x72 (3.66x5.32x2.83)	2x1/2"-14 NPT	2 X 6mm
1007E13	3	Black/Pebble Gray (RAL 7032)	GDC Aluminum	93x180x72 (3.66x7.09x2.83)	2x1/2"-14 NPT	2 X 6mm
1006G13	4	Black/Pebble Gray (RAL 7032)	GDC Aluminum	93x225x72 (3.66x8.86x2.83)	2x1/2"-14 NPT	2 X 6mm



All dimensions shown in millimeters.  
To convert to inches multiply by 0.03937

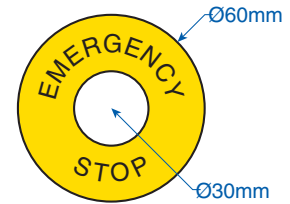
# 30mm Push Button Accessories



Metal legend plates are engraved in horizontal and vertical orientations, one per side.



**EMERGENCY STOP**  
LP41  
Legend plate Ø 60mm  
yellow with black text.



Title	Cat No.
AUTO	LP09
CLOSE	LP08
DOWN	LP07
EMERGENCY STOP	LP41
FAST	LP12
HAND	LP10
HAND, O, AUTO	LP36
INCH	LP14
LEFT	LP18
OFF	LP16
ON	LP15
OPEN	LP07

Title	Cat No.
OVER	LP74
POWER ON	LP20
RESET	LP13
REVERSE	LP04
RIGHT	LP17
RUN	LP24
SLOW	LP11
START	LP01
STOP	LP02
TRIP	LP19
UNDER LOAD	LP108



## Replacement LED Bulbs

Color	Voltage	Cat No.	Color	Voltage	Cat No.
<b>12V AC/DC</b>			<b>110V AC/DC</b>		
<input type="checkbox"/> White	12V AC/DC	MCB15112	<input type="checkbox"/> White	110V AC/DC	MCB151110
<input checked="" type="checkbox"/> Green	12V AC/DC	MCB15312	<input checked="" type="checkbox"/> Green	110V AC/DC	MCB153110
<input checked="" type="checkbox"/> Red	12V AC/DC	MCB15412	<input checked="" type="checkbox"/> Red	110V AC/DC	MCB154110
<input checked="" type="checkbox"/> Amber	12V AC/DC	MCB15512	<input checked="" type="checkbox"/> Amber	110V AC/DC	MCB155110
<input checked="" type="checkbox"/> Blue	12V AC/DC	MCB15612	<input checked="" type="checkbox"/> Blue	110V AC/DC	MCB156110
<input checked="" type="checkbox"/> Yellow	12V AC/DC	MCB15812	<input checked="" type="checkbox"/> Yellow	110V AC/DC	MCB158110
<b>24V AC/DC</b>			<b>230V AC</b>		
<input type="checkbox"/> White	24V AC/DC	MCB15124	<input type="checkbox"/> White	230V AC	MCB151230
<input checked="" type="checkbox"/> Green	24V AC/DC	MCB15324	<input checked="" type="checkbox"/> Green	230V AC	MCB153230
<input checked="" type="checkbox"/> Red	24V AC/DC	MCB15424	<input checked="" type="checkbox"/> Red	230V AC	MCB154230
<input checked="" type="checkbox"/> Amber	24V AC/DC	MCB15524	<input checked="" type="checkbox"/> Amber	230V AC	MCB155230
<input checked="" type="checkbox"/> Blue	24V AC/DC	MCB15624	<input checked="" type="checkbox"/> Blue	230V AC	MCB156230
<input checked="" type="checkbox"/> Yellow	24V AC/DC	MCB15824	<input checked="" type="checkbox"/> Yellow	230V AC	MCB158230
<b>48V AC/DC</b>			<b>230V DC</b>		
<input type="checkbox"/> White	48V AC/DC	MCB15148	<input type="checkbox"/> White	230V DC	MCB151230D
<input checked="" type="checkbox"/> Green	48V AC/DC	MCB15348	<input checked="" type="checkbox"/> Green	230V DC	MCB153230D
<input checked="" type="checkbox"/> Red	48V AC/DC	MCB15448	<input checked="" type="checkbox"/> Red	230V DC	MCB154230D
<input checked="" type="checkbox"/> Amber	48V AC/DC	MCB15548	<input checked="" type="checkbox"/> Amber	230V DC	MCB155230D
<input checked="" type="checkbox"/> Blue	48V AC/DC	MCB15648	<input checked="" type="checkbox"/> Blue	230V DC	MCB156230D
<input checked="" type="checkbox"/> Yellow	48V AC/DC	MCB15848	<input checked="" type="checkbox"/> Yellow	230V DC	MCB158230D

## Filament Bulbs

Color	Voltage	Cat No.
<input type="checkbox"/> Clear	12V AC/DC	BA15D12
<input type="checkbox"/> Clear	24V AC/DC	BA15D24
<input type="checkbox"/> Clear	48V AC/DC	BA15D48
<input type="checkbox"/> Clear	110V AC/DC	BA15D110
<input type="checkbox"/> Clear	230V AC/DC	BA15D220

## Maximum Power Consumption:

LED		FILAMENT BULBS	
Supply Voltage	Power (max) in Watts	Power (max) in Watts	Current
12V	0.5W	2W	max 166mA
24V	0.5W	2W	max 85mA
48V	0.5W	5W	max 105mA
110V	0.5W	5W	max 45mA
240V	1W	6W	max 25mA

These bulbs are available in various colors and voltages. LED based bulbs are a direct replacement for filament bulbs and do not require having to change any other components in your existing operator or pilot light.

These bulbs use high brightness LED chips which last for more than 100,000 hours and consume very little power. Heat generated by LED based bulbs is negligible, therefore no damage to the body of the lamp or any operator in case of illuminated push buttons occurs.

These bulbs can be used to replace 12V, 24V, 48V, 110V and 240V in AC or DC circuits directly. LED color indication is given on the bulb for easy identification.

## 30mm Push Button Accessories

### Lenses and Replacement Boots

Lenses for pilot lights



Color	Cat No.
<input type="checkbox"/> White	PLL1
<input checked="" type="checkbox"/> Green	PLL3
<input checked="" type="checkbox"/> Red	PLL4
<input checked="" type="checkbox"/> Amber	PLL5
<input checked="" type="checkbox"/> Blue	PLL6
<input checked="" type="checkbox"/> Clear	PLL7
<input checked="" type="checkbox"/> Yellow	PLL8

Lenses for illuminated actuators

Color	Cat No.
<input type="checkbox"/> White	ALL1
<input checked="" type="checkbox"/> Green	ALL3
<input checked="" type="checkbox"/> Red	ALL4
<input checked="" type="checkbox"/> Amber	ALL5
<input checked="" type="checkbox"/> Blue	ALL6
<input checked="" type="checkbox"/> Clear	ALL7
<input checked="" type="checkbox"/> Yellow	ALL8



### Padlock

For mushroom actuator: Cat. No. PAM  
For projecting actuator: Cat. No. PAP



### Actuator Lock Plate

Cat. No.: ALP101

### Rubber Boots for Booted Actuators



Color	Cat No.
<input type="checkbox"/> White	BT1
<input checked="" type="checkbox"/> Black	BT2
<input checked="" type="checkbox"/> Green	BT3
<input checked="" type="checkbox"/> Red	BT4
<input checked="" type="checkbox"/> Blue	BT6
<input checked="" type="checkbox"/> Yellow	BT8



### 1.2mm Actuator Rubber Washer

Cat. No.: ARW1.2

### 3.2mm Actuator Rubber Washer

Cat. No.: ARW3.2



### Replacement Key

Cat. No.: KY30



### Bulb Extractor

Cat. No.: 2BA9SE

### Contact Block Installation Screws



Cat #.	Dimensions	Used With
SC25	M4 x 25 mm	S11 only
SC45	M4 x 45 mm	S11 + S12 (2NO + 2NC)
SC65	M4 x 65 mm	2 x S11 + S12 (3NO + 3NC)
SC90	M4 x 90 mm	2 x S11 + 2 x S12 (4NO+4NC)

## Contact Elements

### Description

1 Normally Open + 1 Normally Closed Silver Contacts

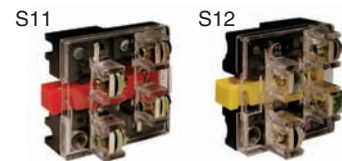
### Cat. No.

S11

2 Normally Open + 2 Normally Closed Silver Contacts

S11 + S12

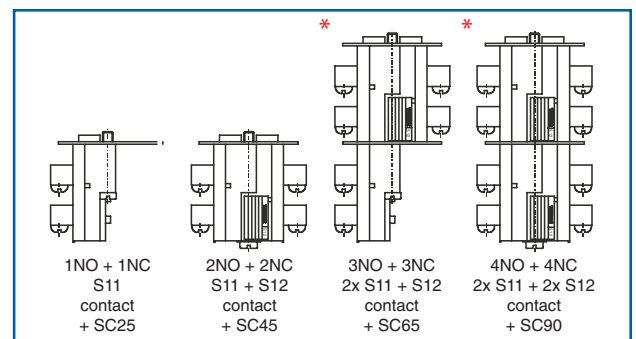
For additional contacts, see diagram at right.



### Contact Installation Screws

Type	Dimensions	Used with
SC25	M4 x 25 mm	S11
SC45	M4 x 45 mm	S11 + S12
SC65	M4 x 65 mm	2x S11 + S12
SC90	M4 x 90 mm	2x S11 + 2x S12

\* When using more than two contact blocks, additional screws must be purchased separately (SC45 and SC90).



## 30mm Technical Notes

### Characteristics

#### Environment

Temperature Range		-25°C to +70°C (-13°F to +158°F)
Degree of protection:	IEC 529 UL50	IP65 NEMA Type 4X, 12
Mechanical Life	All push buttons except maintained mushroom maintained mushroom	1 million of cycles  0.3 million of cycles

#### Mechanical Characteristics of contact elements

Contact Operation	NO+NC	Double break, self-wiping
Rated Insulation Voltage		500 V AC
Operating Travel	Push buttons	Changing NC state 2.4mm Changing NO state 4.3mm Travel 8.7mm
Terminal Capacity	Wiring	2x1.5 sq.mm (2x16 AWG) or 1x2.5 sq.mm (14 AWG)
Contact Material	Bimetal (Cu/Ag)	Standard single element
Short Circuit Protection		10A HRC fuse
Rated Make Break	UL508, AC600V, 1.2A DC 600V, 0.1A ratings	standard block with screw clamp terminals 415V, 10A standard block with screw clamp terminals 220V, 2A
Dielectric Strength	Push Buttons, Pilot Lights	2500V for 1 minute