



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



Table of Contents

22mm Push Buttons



Introduction - 4-5
22mm Non-Illuminated Metal Operators 6-7



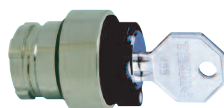
22mm Non-Illuminated Mushroom Metal Operators 8-11



22mm LED Illuminated Mushroom Metal Operators 12-13



22mm Twin Touch Non-Illuminated and LED Illuminated Metal Operators 14-15



22mm Non-Illuminated Metal Selector Switch Operators 16-17



22mm LED Illuminated Metal Selector Switches 18-19



22mm LED Illuminated Projecting Metal Operator 20-21



22mm LED Illuminated Flush Metal Operators 22-23



22mm LED Metal Pilot Lights 24

22mm Specifications - 25



Economy Non-Illuminated Plastic Push Buttons 26-27



Unibody LED Illuminated Plastic Pilot Lights 28-29



22mm Plastic Enclosures, Control Boxes & Installation Instructions 30-35



22mm Aluminum Enclosures 36-37



22mm Push Button Accessories & Switch Contacts 38-41



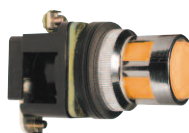
Pre-assembled or Ready to Assemble Control Stations 42-43

30mm Metal Push Buttons

Introduction - 44



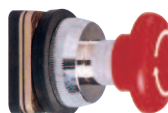
30mm Non-Illuminated Metal Operators 44-45



30mm LED Illuminated Metal Operators 46-47



30mm Non-Illuminated Metal Selector Switches 48-49



30mm Non-Illuminated Mushroom Metal Operators 50-51



30mm Metal Pilot Lights 52



30mm Aluminum Enclosures 53



30mm Push Button Accessories, Contact Blocks & Technical Notes 54-56

Index - 57-60

Terms and Conditions - 62

22 and 30 mm Altech Metal Push Buttons



Part No. PBD

Quality at a Competitive Price!

22mm Metal Push Buttons

Control and Signalling devices Ø 22.5mm

This range of Ø 22.5mm push buttons, selector switches, illuminated switches, illuminated selector switches and pilot lights have been designed to provide the following features:

- Economy of space
- Self-wiping contacts
- Safe operation
- Simple to mount (screw driver is all that is required)
- Fixing method unaffected by excessive vibration-unit does not loosen
- Protection against electric shock (unit grounded)
- Aesthetically pleasing
- Heavy-duty construction
- Shrouded terminals
- Flame resistant materials
- Use of LEDs for long life and minimum maintenance

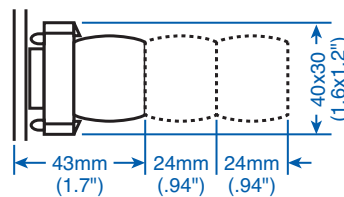
Actuators

The circular actuators have chrome plated metal bezels, and are interchangeable with different contact elements. Custom colors and finishes (black, silver satin, etc.) are available.

Contact Elements

The contact elements are double break and have self-wiping contacts. The elements are interchangeable and can be stacked without additional hardware. 1 to 6 elements (NO or NC) can be used with non-illuminated actuators, whereas, 1 to 4 elements (NO or NC) can be used for illuminated actuators. Gold plated NO and NC contact elements for low voltage, low current switching circuits < 25 mA, are available.

Multiple Switch Contact Assembly



LED Illuminated Actuators and Pilot Lights

LED illuminated actuators & pilot lights are supplied with LED in bayonet cap suitable for operating at various voltages. LED bulbs with bayonet cap are constructed in the standard BA9S design.

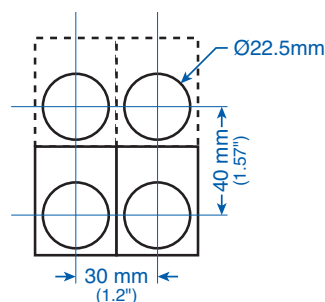
Terminals

Contact elements and pilot lights are designed to have shrouded terminals with combination flat/phillips screws.

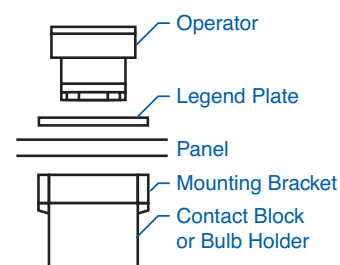
Mounting

These Ø 22.5 control devices can be mounted in any position in panels of 1 to 6 mm (.039 - .236 in.) thickness. We recommend minimum fixing centers of 30 x 40mm (1.2 x 1.57 inches). However, the dimensions and configuration should be decided on the basis of the application. The actuators and the lens assemblies lock on to the holding bracket using a bayonet type of fixing which enables a simple and fast assembly. The complete assembly is locked into position on the panel by two M4 pointed screws on the bracket, tightened equally from the rear. The screws should be tightened to such an extent as to pierce through the paint on the panel from inside. These screws also ensure the grounding of the unit.

Panel Cutout with minimum space requirements



Sample Push Button Assembly



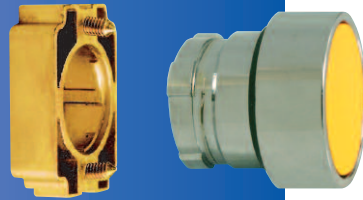
22mm Non-Illuminated Metal Operators



Certified for
NEMA Type 4X
12 environment.

Flush

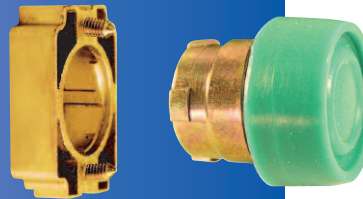
*Momentary
with mounting bracket*



Color	Cat No.
<input type="checkbox"/> White	2AF1
<input type="checkbox"/> Black	2AF2
<input type="checkbox"/> Green	2AF3
<input type="checkbox"/> Red	2AF4
<input type="checkbox"/> Blue	2AF6
<input type="checkbox"/> Yellow	2AF8

Booted

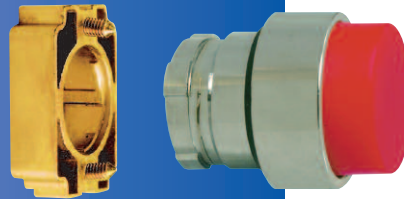
*Momentary
with mounting bracket*



Color	Cat No.
<input type="checkbox"/> White	2AB1
<input type="checkbox"/> Black	2AB2
<input type="checkbox"/> Green	2AB3
<input type="checkbox"/> Red	2AB4
<input type="checkbox"/> Blue	2AB6
<input type="checkbox"/> Yellow	2AB8

Projecting

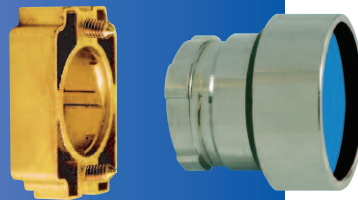
*Momentary
with mounting bracket*



Color	Cat No.
<input type="checkbox"/> White	2AP1
<input type="checkbox"/> Black	2AP2
<input type="checkbox"/> Green	2AP3
<input type="checkbox"/> Red	2AP4
<input type="checkbox"/> Blue	2AP6
<input type="checkbox"/> Yellow	2AP8

Recessed

*Momentary
with mounting bracket*



Color	Cat No.
<input type="checkbox"/> White	2AF1RH
<input type="checkbox"/> Black	2AF2RH
<input type="checkbox"/> Green	2AF3RH
<input type="checkbox"/> Red	2AF4RH
<input type="checkbox"/> Blue	2AF6RH
<input type="checkbox"/> Yellow	2AF8RH



All above operators available with remote attachment. Standard length is 50mm (2 in.), other lengths available upon request. Contact Altech for Part Number.

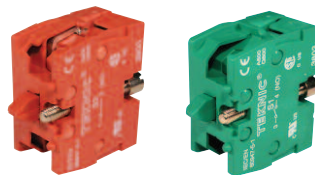


Markings on Request



Altech Push Buttons are available in a variety of markings, including molded arrows. Please contact Altech for further information and part numbers.

Switch Contacts (sold separately)



- Heavy-duty contact blocks with mounting screws. Blocks can be stacked 2 blocks across by 3 blocks deep for a total of 6 circuits.
- Contact blocks are available with silver contacts or gold plated contacts
- Self-wiping contacts

Panel Mount

Normally Open Silver	S1
Normally Closed Silver	S2
Normally Open Gold Plated	S3
Normally Closed Gold Plated	S4

Base Mount*

Normally Open Silver	S5
Normally Closed Silver	S6
Normally Open Gold Plated	S7
Normally Closed Gold Plated	S8

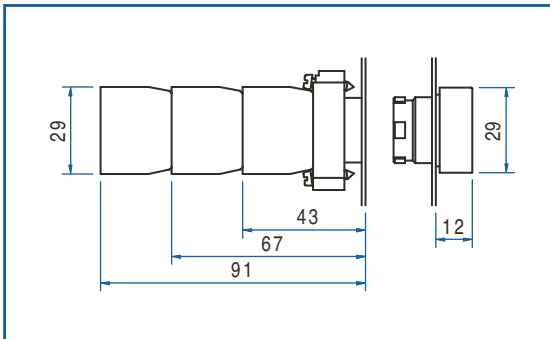
* For use with non-illuminated operators in thermoplastic or aluminum enclosures listed on pages 30 and 36-37.

22mm Non-Illuminated Metal Operators

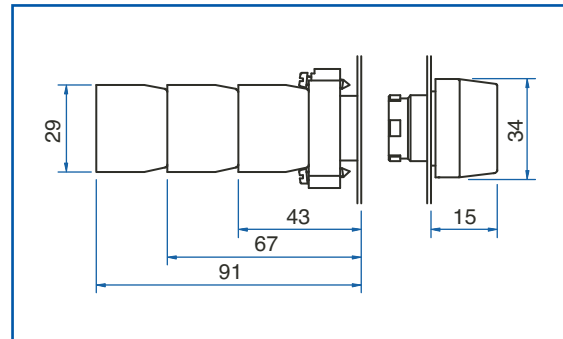
Dimensional Drawings

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

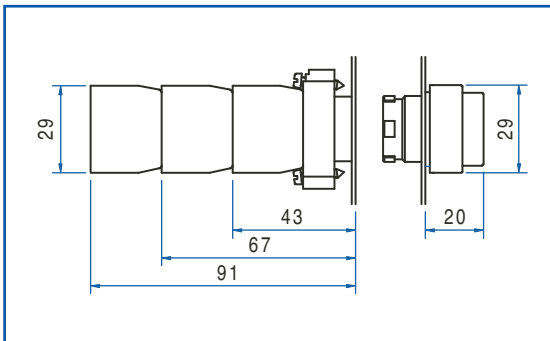
Non-Illuminated Flush



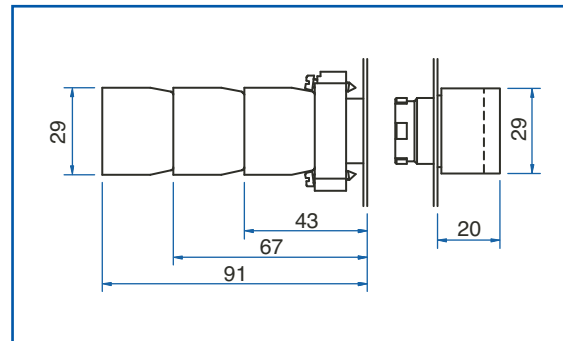
Non-Illuminated Booted



Non-Illuminated Projecting

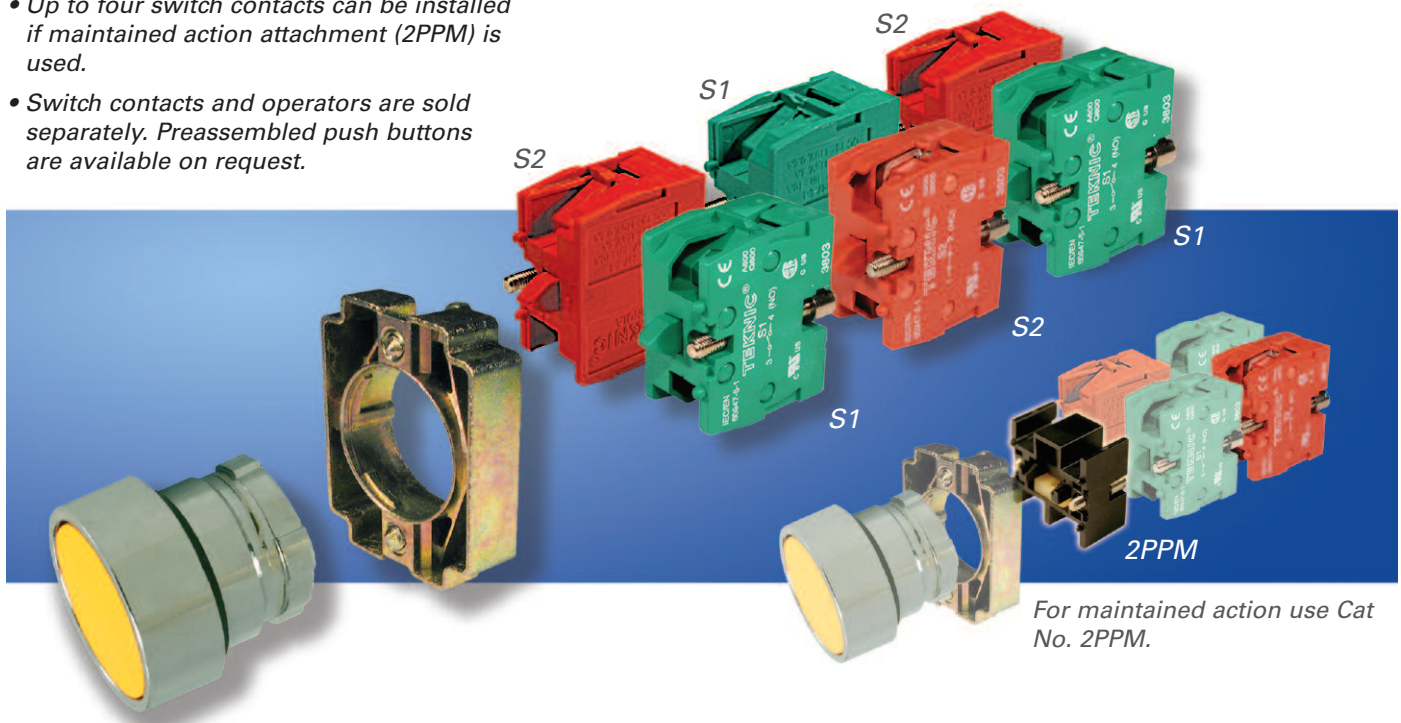


Non-Illuminated Recessed



Exploded Assembly View

- Up to six switch contacts can be installed on any non-illuminated operator.
- Up to four switch contacts can be installed if maintained action attachment (2PPM) is used.
- Switch contacts and operators are sold separately. Preassembled push buttons are available on request.



For maintained action use Cat No. 2PPM.

22mm Non-Illuminated Mushroom Metal Operators



Certified for
NEMA Type 4X
12 environment.

Mushroom

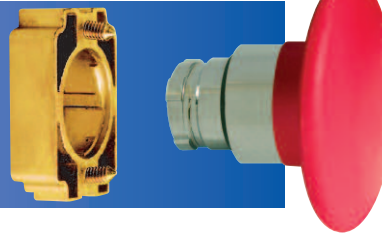
*Momentary
with mounting bracket*



Color	Description	Cat No.
☐ White	40mm, Head	2AM1
■ Black	40mm, Head	2AM2
■ Green	40mm, Head	2AM3
■ Red	40mm, Head	2AM4
■ Blue	40mm, Head	2AM6
■ Yellow	40mm, Head	2AM8

Mushroom

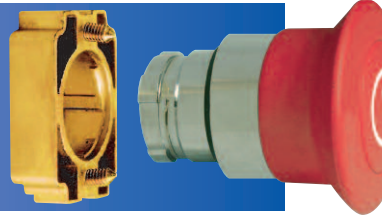
*Momentary Large
with mounting bracket*



Color	Description	Cat No.
☐ White	60mm, Head	2AMJ1
■ Black	60mm, Head	2AMJ2
■ Green	60mm, Head	2AMJ3
■ Red	60mm, Head	2AMJ4
■ Blue	60mm, Head	2AMJ6
■ Yellow	60mm, Head	2AMJ8

Mushroom

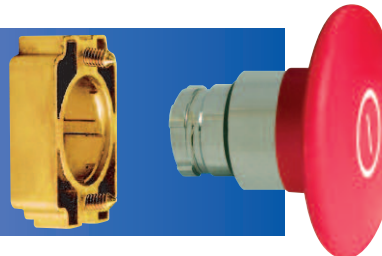
*Push-Pull
with mounting bracket*



Color	Description	Cat No.
☐ White	40mm, Head	2AMPP1
■ Black	40mm, Head	2AMPP2
■ Green	40mm, Head	2AMPP3
■ Red	40mm, Head	2AMPP4
■ Blue	40mm, Head	2AMPP6
■ Yellow	40mm, Head	2AMPP8

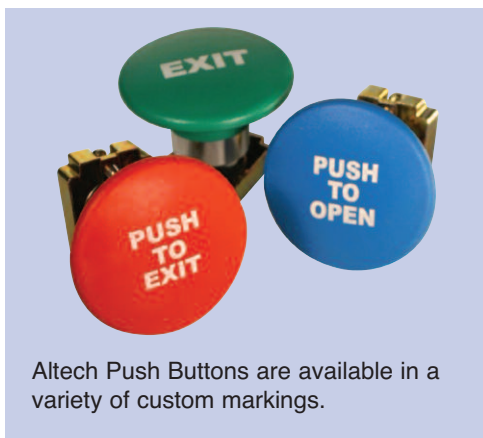
Mushroom

*Push-Pull Large
with mounting bracket*



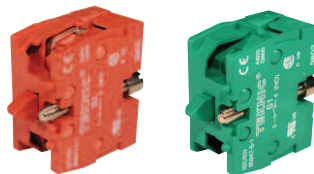
Color	Description	Cat No.
☐ White	60mm, Head	2AMPPJ1
■ Black	60mm, Head	2AMPPJ2
■ Green	60mm, Head	2AMPPJ3
■ Red	60mm, Head	2AMPPJ4
■ Blue	60mm, Head	2AMPPJ6
■ Yellow	60mm, Head	2AMPPJ8

Markings on Request



Switch Contacts

(sold separately)



- Heavy-duty contact blocks with mounting screws. Blocks can be stacked 2 blocks across by 3 blocks deep for a total of 6 circuits.
- Contact blocks are available with silver contacts or gold plated contacts
- Self-wiping contacts

Panel Mount

Normally Open Silver	S1
Normally Closed Silver	S2
Normally Open Gold Plated	S3
Normally Closed Gold Plated	S4

Base Mount*

Normally Open Silver	S5
Normally Closed Silver	S6
Normally Open Gold Plated	S7
Normally Closed Gold Plated	S8

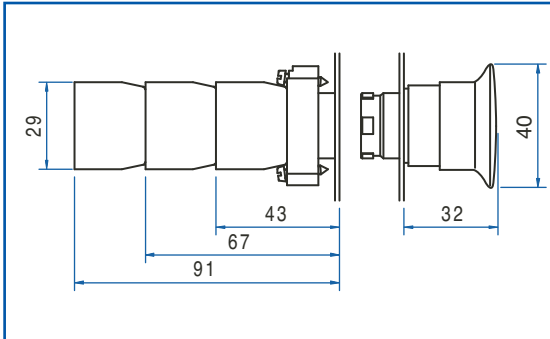
* For use with non-illuminated operators in thermoplastic or aluminum enclosures listed on pages 30 and 36-37.

22mm Non-Illuminated Mushroom Metal Operators

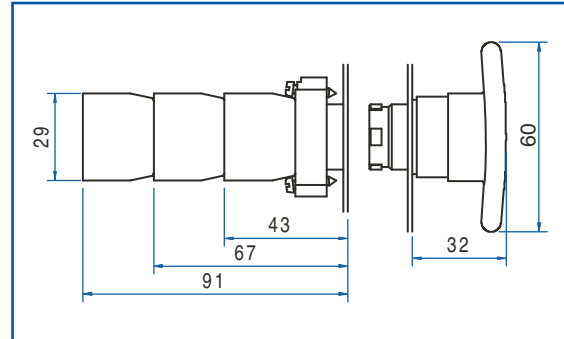
Dimensional Drawings

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

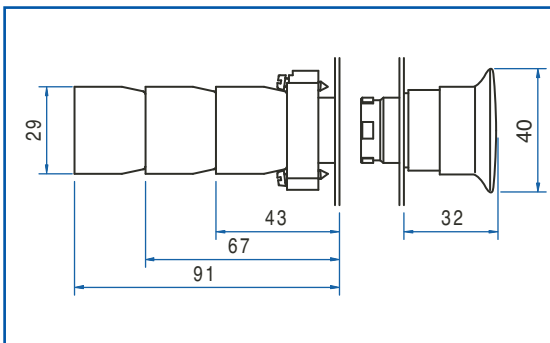
Mushroom Momentary



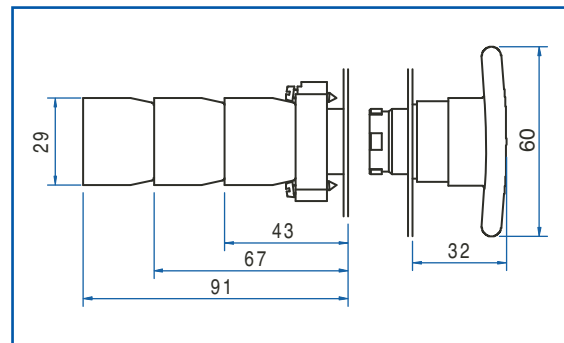
Mushroom Momentary Large



Mushroom Push-Pull

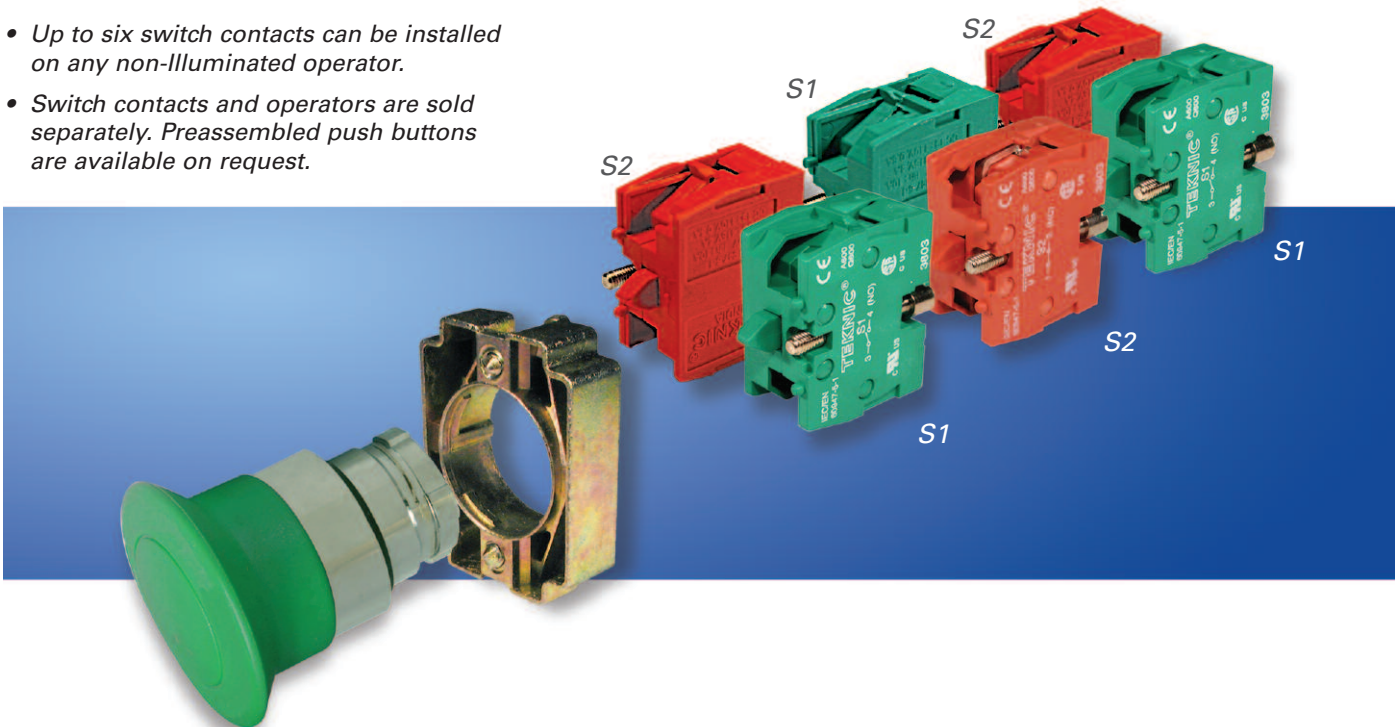


Mushroom Push-Pull Large



Exploded Assembly View

- Up to six switch contacts can be installed on any non-illuminated operator.
- Switch contacts and operators are sold separately. Preassembled push buttons are available on request.

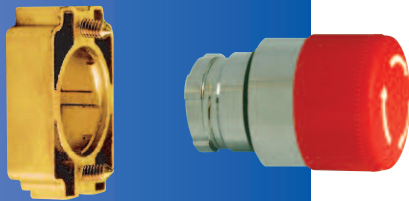


22mm Non-Illuminated Mushroom Metal Operators



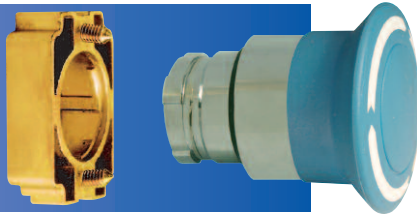
Certified for
NEMA Type 4X
12 environment.

Mushroom
Push-Turn Small
with mounting bracket



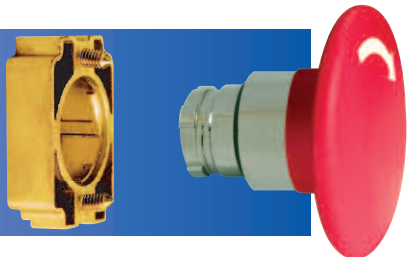
Color	Description	Cat No.
□ White	30 mm, Head	2AMLS1
■ Black	30 mm, Head	2AMLS2
■ Green	30 mm, Head	2AMLS3
■ Red	30 mm, Head	2AMLS4
■ Blue	30 mm, Head	2AMLS6
■ Yellow	30 mm, Head	2AMLS8

Mushroom
Push-Turn
with mounting bracket



Color	Description	Cat No.
□ White	40mm, Head	2AML1
■ Black	40mm, Head	2AML2
■ Green	40mm, Head	2AML3
■ Red	40mm, Head	2AML4
■ Blue	40mm, Head	2AML6
■ Yellow	40mm, Head	2AML8

Mushroom
Push-Turn Large
with mounting bracket



Color	Description	Cat No.
□ White	60mm, Head	2AMLJ1
■ Black	60mm, Head	2AMLJ2
■ Green	60mm, Head	2AMLJ3
■ Red	60mm, Head	2AMLJ4
■ Blue	60mm, Head	2AMLJ6
■ Yellow	60mm, Head	2AMLJ8

Mushroom
with Key Release
with mounting bracket



Color	Description	Cat No.
□ White	40mm, Head	2AMLKB1
■ Black	40mm, Head	2AMLKB2
■ Green	40mm, Head	2AMLKB3
■ Red	40mm, Head	2AMLKB4
■ Blue	40mm, Head	2AMLKB6
■ Yellow	40mm, Head	2AMLKB8

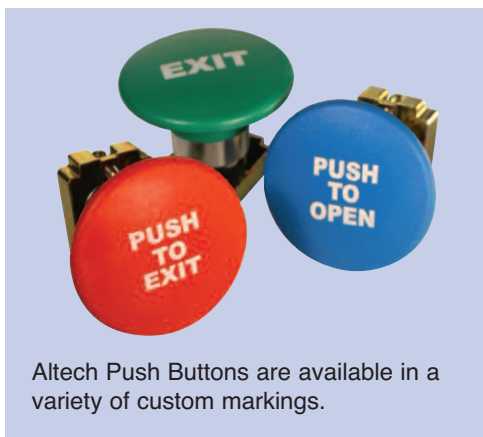
All keys are "keyed alike". Different keys are available on request.



Replacement Key

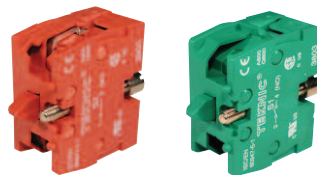
2KY455

Markings on Request



Altech Push Buttons are available in a variety of custom markings.

Switch Contacts *(sold separately)*



- Heavy-duty contact blocks with mounting screws. Blocks can be stacked 2 blocks across by 3 blocks deep for a total of 6 circuits.
- Contact blocks are available with silver contacts or gold plated contacts
- Self-wiping contacts

Panel Mount

Normally Open Silver	S1
Normally Closed Silver	S2
Normally Open Gold Plated	S3
Normally Closed Gold Plated	S4

Base Mount*

Normally Open Silver	S5
Normally Closed Silver	S6
Normally Open Gold Plated	S7
Normally Closed Gold Plated	S8

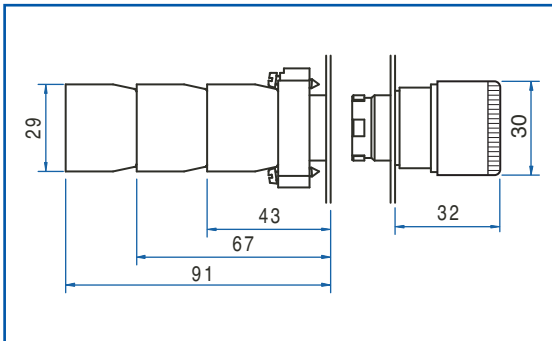
* For use with non-illuminated operators in thermoplastic or aluminum enclosures listed on pages 30 and 36-37.

22mm Non-Illuminated Mushroom Metal Operators

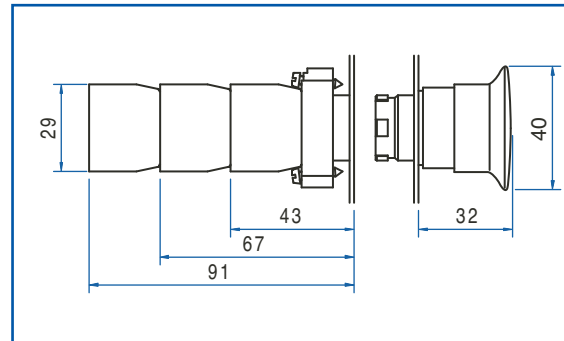
Dimensional Drawings

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

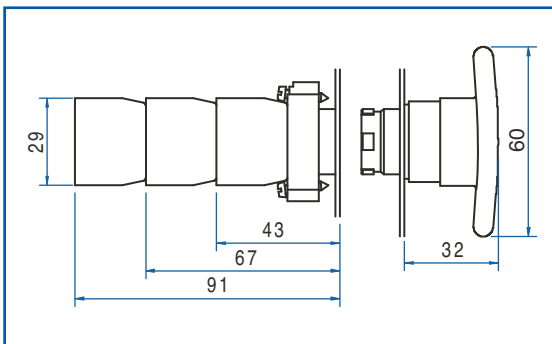
Mushroom Push-Turn Small



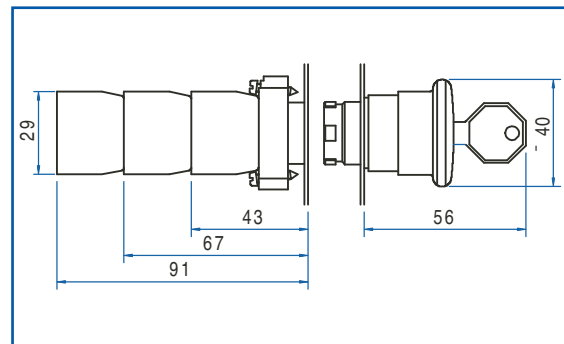
Mushroom Push-Turn



Mushroom Push-Turn Large

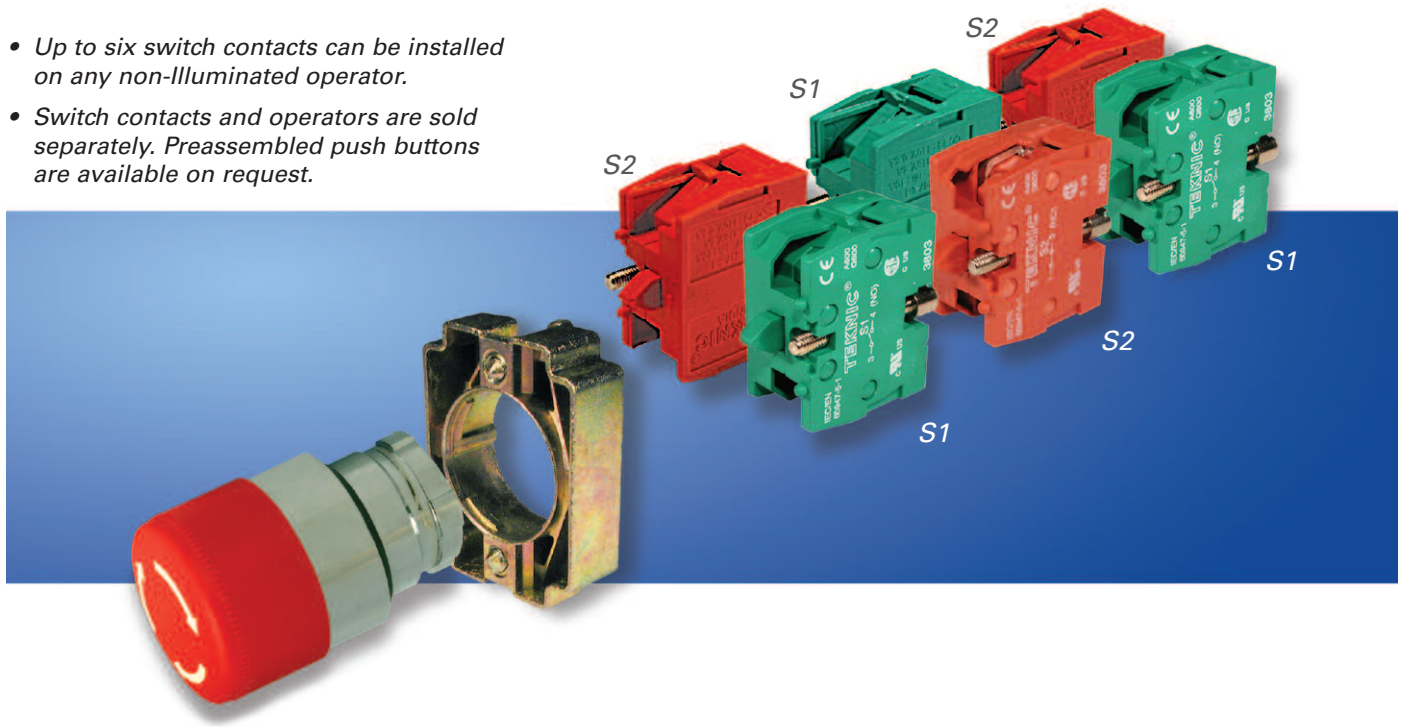


Mushroom with Key Release



Exploded Assembly View

- Up to six switch contacts can be installed on any non-illuminated operator.
- Switch contacts and operators are sold separately. Preassembled push buttons are available on request.



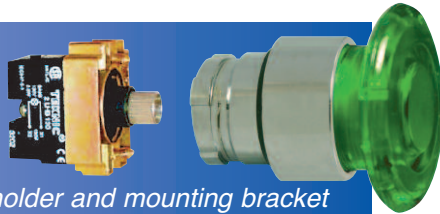
22mm LED Illuminated Mushroom Metal Operators



Certified for
NEMA Type 4X
12 environment.

Mushroom Illuminated Momentary

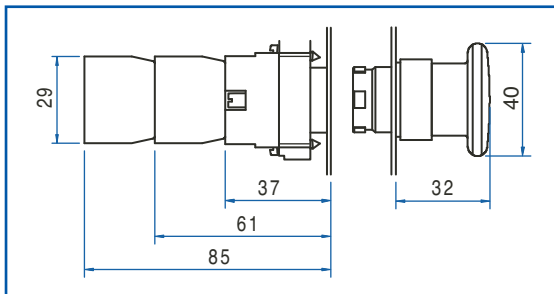
with LED bulb, bulb holder and mounting bracket



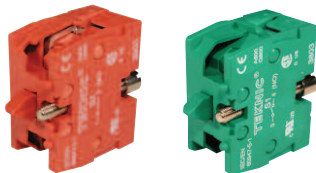
Dimensional Drawings

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

Illuminated Mushroom Momentary



Switch Contacts (sold separately)



- Heavy-duty contact blocks with mounting screws. Blocks can be stacked 2 blocks across by 3 blocks deep for a total of 6 circuits.
- Contact blocks are available with silver contacts or gold plated contacts
- Self-wiping contacts

Panel Mount

Normally Open Silver	S1
Normally Closed Silver	S2
Normally Open Gold Plated	S3
Normally Closed Gold Plated	S4

Base Mount*

Normally Open Silver	S5
Normally Closed Silver	S6
Normally Open Gold Plated	S7
Normally Closed Gold Plated	S8

* For use with non-illuminated operators in thermoplastic or aluminum enclosures listed on pages 30 and 36-37.

Color Description Cat No.

Color	Description	Cat No.
12V AC/DC		
White	40mm Head, 12VAC/DC	2ALM1LB-012
Green	40mm Head, 12VAC/DC	2ALM3LB-012
Red	40mm Head, 12VAC/DC	2ALM4LB-012
Amber	40mm Head, 12VAC/DC	2ALM5LB-012
Blue	40mm Head, 12VAC/DC	2ALM6LB-012
Clear	40mm Head, 12VAC/DC	2ALM7LB-012
Yellow	40mm Head, 12VAC/DC	2ALM8LB-012

24V AC/DC		
White	40mm Head, 24VAC/DC	2ALM1LB-024
Green	40mm Head, 24VAC/DC	2ALM3LB-024
Red	40mm Head, 24VAC/DC	2ALM4LB-024
Amber	40mm Head, 24VAC/DC	2ALM5LB-024
Blue	40mm Head, 24VAC/DC	2ALM6LB-024
Clear	40mm Head, 24VAC/DC	2ALM7LB-024
Yellow	40mm Head, 24VAC/DC	2ALM8LB-024

48V AC/DC		
White	40mm Head, 48VAC/DC	2ALM1LB-048
Green	40mm Head, 48VAC/DC	2ALM3LB-048
Red	40mm Head, 48VAC/DC	2ALM4LB-048
Amber	40mm Head, 48VAC/DC	2ALM5LB-048
Blue	40mm Head, 48VAC/DC	2ALM6LB-048
Clear	40mm Head, 48VAC/DC	2ALM7LB-048
Yellow	40mm Head, 48VAC/DC	2ALM8LB-048

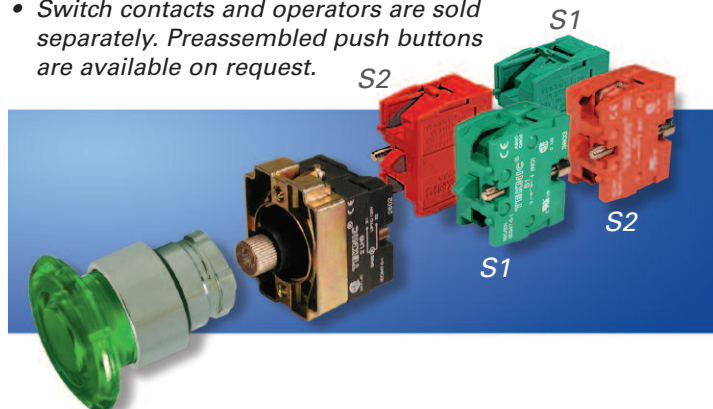
110V AC*		
White	40mm Head, 110VAC*	2ALM1LB-110
Green	40mm Head, 110VAC*	2ALM3LB-110
Red	40mm Head, 110VAC*	2ALM4LB-110
Amber	40mm Head, 110VAC*	2ALM5LB-110
Blue	40mm Head, 110VAC*	2ALM6LB-110
Clear	40mm Head, 110VAC*	2ALM7LB-110
Yellow	40mm Head, 110VAC*	2ALM8LB-110

230V AC*		
White	40mm Head, 230VAC*	2ALM1LB-230
Green	40mm Head, 230VAC*	2ALM3LB-230
Red	40mm Head, 230VAC*	2ALM4LB-230
Amber	40mm Head, 230VAC*	2ALM5LB-230
Blue	40mm Head, 230VAC*	2ALM6LB-230
Clear	40mm Head, 230VAC*	2ALM7LB-230
Yellow	40mm Head, 230VAC*	2ALM8LB-230

*110V DC and 230V DC version is available on request.

Exploded Assembly View

- Up to four switch contacts can be installed with any illuminated operators.
- Switch contacts and operators are sold separately. Preassembled push buttons are available on request.



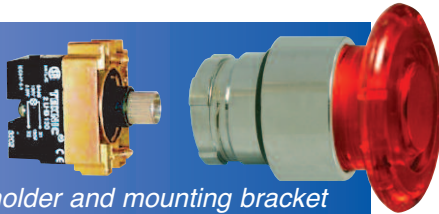
22mm LED Illuminated Mushroom Metal Operators



Certified for
NEMA Type 4X
12 environment.

Mushroom Illuminated Push-Pull

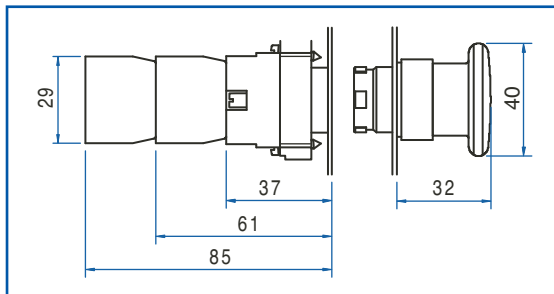
with LED bulb, bulb holder and mounting bracket



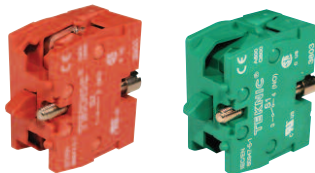
Dimensional Drawings

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

Illuminated Mushroom Push-Pull



Switch Contacts (sold separately)



- Heavy-duty contact blocks with mounting screws. Blocks can be stacked 2 blocks across by 3 blocks deep for a total of 6 circuits.
- Contact blocks are available with silver contacts or gold plated contacts
- Self-wiping contacts

Panel Mount

Normally Open Silver	S1
Normally Closed Silver	S2
Normally Open Gold Plated	S3
Normally Closed Gold Plated	S4

Base Mount*

Normally Open Silver	S5
Normally Closed Silver	S6
Normally Open Gold Plated	S7
Normally Closed Gold Plated	S8

* For use with non-illuminated operators in thermoplastic or aluminum enclosures listed on pages 30 and 36-37.

Color Description Cat No.

12V AC/DC		
<input type="checkbox"/>	White	40mm Head, 12VAC/DC 2ALMPP1LB-012
<input type="checkbox"/>	Green	40mm Head, 12VAC/DC 2ALMPP3LB-012
<input type="checkbox"/>	Red	40mm Head, 12VAC/DC 2ALMPP4LB-012
<input type="checkbox"/>	Amber	40mm Head, 12VAC/DC 2ALMPP5LB-012
<input type="checkbox"/>	Blue	40mm Head, 12VAC/DC 2ALMPP6LB-012
<input type="checkbox"/>	Clear	40mm Head, 12VAC/DC 2ALMPP7LB-012
<input type="checkbox"/>	Yellow	40mm Head, 12VAC/DC 2ALMPP8LB-012

24V AC/DC		
<input type="checkbox"/>	White	40mm Head, 24VAC/DC 2ALMPP1LB-024
<input type="checkbox"/>	Green	40mm Head, 24VAC/DC 2ALMPP3LB-024
<input type="checkbox"/>	Red	40mm Head, 24VAC/DC 2ALMPP4LB-024
<input type="checkbox"/>	Amber	40mm Head, 24VAC/DC 2ALMPP5LB-024
<input type="checkbox"/>	Blue	40mm Head, 24VAC/DC 2ALMPP6LB-024
<input type="checkbox"/>	Clear	40mm Head, 24VAC/DC 2ALMPP7LB-024
<input type="checkbox"/>	Yellow	40mm Head, 24VAC/DC 2ALMPP8LB-024

48V AC/DC		
<input type="checkbox"/>	White	40mm Head, 48VAC/DC 2ALMPP1LB-048
<input type="checkbox"/>	Green	40mm Head, 48VAC/DC 2ALMPP3LB-048
<input type="checkbox"/>	Red	40mm Head, 48VAC/DC 2ALMPP4LB-048
<input type="checkbox"/>	Amber	40mm Head, 48VAC/DC 2ALMPP5LB-048
<input type="checkbox"/>	Blue	40mm Head, 48VAC/DC 2ALMPP6LB-048
<input type="checkbox"/>	Clear	40mm Head, 48VAC/DC 2ALMPP7LB-048
<input type="checkbox"/>	Yellow	40mm Head, 48VAC/DC 2ALMPP8LB-048

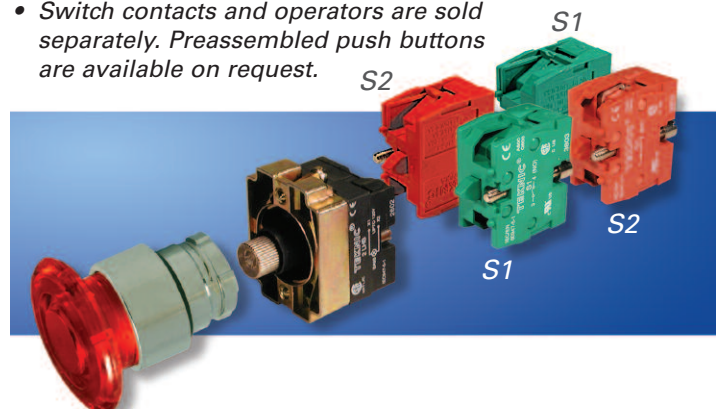
110V AC*		
<input type="checkbox"/>	White	40mm Head, 110VAC* 2ALMPP1LB-110
<input type="checkbox"/>	Green	40mm Head, 110VAC* 2ALMPP3LB-110
<input type="checkbox"/>	Red	40mm Head, 110VAC* 2ALMPP4LB-110
<input type="checkbox"/>	Amber	40mm Head, 110VAC* 2ALMPP5LB-110
<input type="checkbox"/>	Blue	40mm Head, 110VAC* 2ALMPP6LB-110
<input type="checkbox"/>	Clear	40mm Head, 110VAC* 2ALMPP7LB-110
<input type="checkbox"/>	Yellow	40mm Head, 110VAC* 2ALMPP8LB-110

230V AC*		
<input type="checkbox"/>	White	40mm Head, 230VAC* 2ALMPP1LB-230
<input type="checkbox"/>	Green	40mm Head, 230VAC* 2ALMPP3LB-230
<input type="checkbox"/>	Red	40mm Head, 230VAC* 2ALMPP4LB-230
<input type="checkbox"/>	Amber	40mm Head, 230VAC* 2ALMPP5LB-230
<input type="checkbox"/>	Blue	40mm Head, 230VAC* 2ALMPP6LB-230
<input type="checkbox"/>	Clear	40mm Head, 230VAC* 2ALMPP7LB-230
<input type="checkbox"/>	Yellow	40mm Head, 230VAC* 2ALMPP8LB-230

*110V DC and 230V DC version is available on request.

Exploded Assembly View

- Up to four switch contacts can be installed with any illuminated operators.
- Switch contacts and operators are sold separately. Preassembled push buttons are available on request.



22mm Twin Touch Metal Non-Illuminated Operators



Certified for
NEMA Type 4X
12 environment.

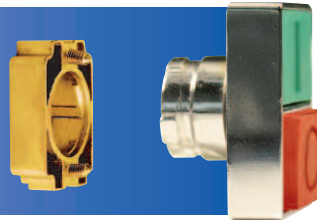
Twin Touch/ Not Marked *with mounting bracket*



Arrows marking available upon request.

Color	Description	Cat No.
	GREEN-RED Flush	2ATF3-F4
	YELLOW-BLACK Flush	2ATF8-F2
	BLACK-WHITE Flush	2ATF2-F1
	GREEN-RED Green Flush, Red Projecting	2ATF3-P4
	YELLOW-BLACK Yellow Flush, Black Projecting	2ATF8-P2
	WHITE-BLACK White Flush, Black Projecting	2ATF1-P2

Twin Touch I-O Marked *with mounting bracket*



Arrows marking available upon request.

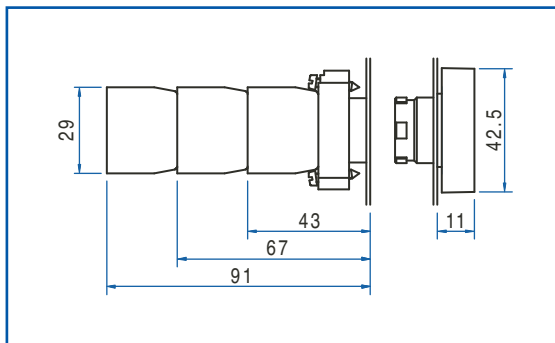
Color	Description	Cat No.
	GREEN-RED Flush	2ATF3-F4-IO
	YELLOW-BLACK Flush	2ATF8-F2-IO
	BLACK-WHITE* Flush	2ATF2-F1-IO
	GREEN-RED Green Flush, Red Projecting	2ATF3-P4-IO
	YELLOW-BLACK Yellow Flush, Black Projecting	2ATF8-P2-IO
	WHITE-BLACK* White Flush, Black Projecting	2ATF1-P2-IO

*Comply with vision impaired requirements.

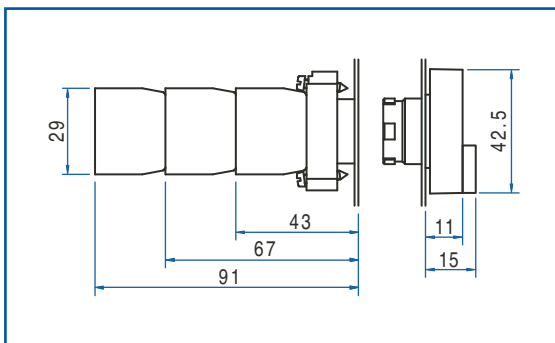
Dimensional Drawings

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

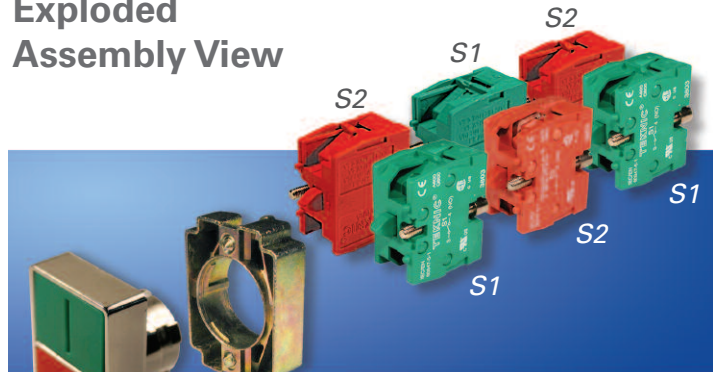
Twin Touch/ Flush



Twin Touch/ Flush/ Projecting

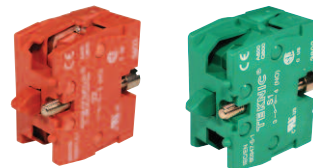


Exploded Assembly View



- Up to four switch contacts can be installed with any illuminated operators.
- Switch contacts and operators are sold separately. Preassembled push buttons are available on request.

Switch Contacts *(sold separately)*



- Heavy-duty contact blocks with mounting screws. Blocks can be stacked 2 blocks across by 3 blocks deep for a total of 6 circuits.
- Contact blocks are available with silver contacts or gold plated contacts
- Self-wiping contacts

	Panel Mount Cat No.	Base Mount* Cat No.
Normally Open Silver	S1	S5
Normally Closed Silver	S2	S6
Normally Open Gold plated	S3	S7
Normally Closed Gold plated	S4	S8

*For use with non-illuminated operators in thermoplastic or aluminum enclosures listed on pages 30 and 36-37.

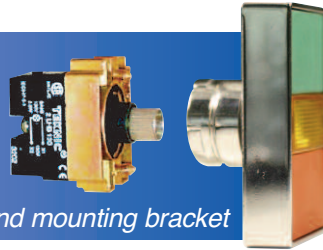
22mm Twin Touch Metal LED Illuminated Operators



Certified for
NEMA Type 4X
12 environment.

Illuminated Center Twin Touch/ Not Marked

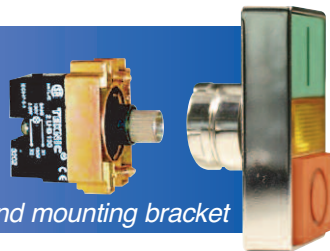
with LED bulb, bulb holder and mounting bracket



Arrows marking available upon request.
Other lense colors available upon request.

Illuminated Center Twin Touch/ I-O Marked

with LED bulb, bulb holder and mounting bracket

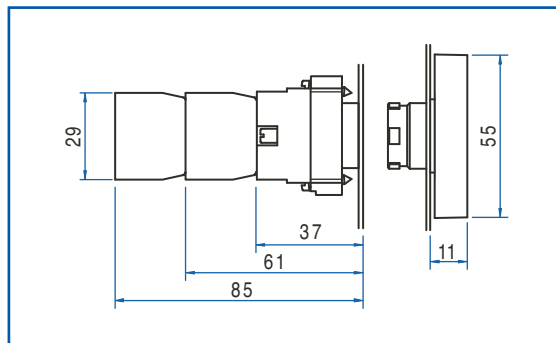


Arrows marking available upon request.
Other lense colors available upon request.

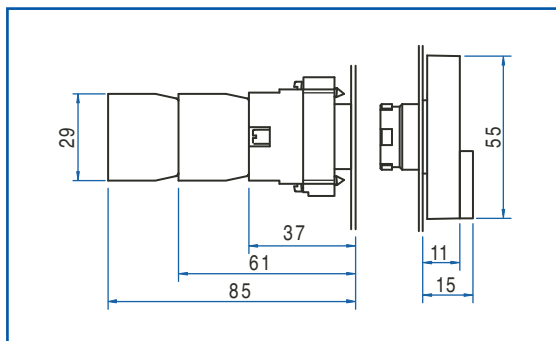
Dimensional Drawings

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

Illuminated Twin Touch/ Flush



Illuminated Twin Touch/ Flush/ Projecting



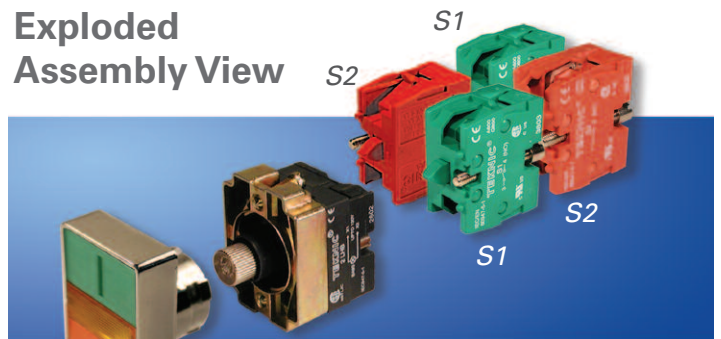
Color	Description	Cat No.
GREEN-RED, Flush, Illuminated Center		
	Amber 12VAC/DC	2ATL5LB F3F4-012
	Amber 24VAC/DC	2ATL5LB F3F4-024
	Amber 48VAC/DC	2ATL5LB F3F4-048
	Amber 110VAC**	2ATL5LB F3F4-110
	Amber 230VAC**	2ATL5LB F3F4-230
GREEN-RED, Green Flush/ Red Projecting, Illuminated center		
	Amber 12VAC/DC	2ATL5LB F3P4-012
	Amber 24VAC/DC	2ATL5LB F3P4-024
	Amber 48VAC/DC	2ATL5LB F3P4-048
	Amber 110VAC**	2ATL5LB F3P4-110
	Amber 230VAC**	2ATL5LB F3P4-230

Color	Description	Cat No.
GREEN-RED, Flush, Illuminated Center		
	Amber 12VAC/DC	2ATL5LB F3F4-IO-012
	Amber 24VAC/DC	2ATL5LB F3F4-IO-024
	Amber 48VAC/DC	2ATL5LB F3F4-IO-048
	Amber 110VAC**	2ATL5LB F3F4-IO-110
	Amber 230VAC**	2ATL5LB F3F4-IO-230
GREEN-RED, Green Flush/ Red Projecting, Illuminated Center		
	Amber 12VAC/DC	2ATL5LB F3P4-IO-012
	Amber 24VAC/DC	2ATL5LB F3P4-IO-024
	Amber 48VAC/DC	2ATL5LB F3P4-IO-048
	Amber 110VAC**	2ATL5LB F3P4-IO-110
	Amber 230VAC**	2ATL5LB F3P4-IO-230
WHITE-BLACK*, Flush, Illuminated Center		
	Amber 12VAC/DC	2ATL5LB F2F1-IO-012
	Amber 24VAC/DC	2ATL5LB F2F1-IO-024
	Amber 48VAC/DC	2ATL5LB F2F1-IO-048
	Amber 110VAC**	2ATL5LB F2F1-IO-110
	Amber 230VAC**	2ATL5LB F2F1-IO-230

* Comply with vision impaired requirements.

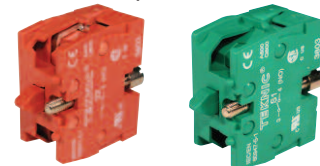
** 110V DC and 230V DC version is available on request.

Exploded Assembly View



- Up to four switch contacts can be installed with any illuminated operators.
- Switch contacts and operators are sold separately. Preassembled push buttons are available on request.

Switch Contacts (sold separately)



	Panel Mount Cat No.	Base Mount* Cat No.
Normally Open Silver	S1	S5
Normally Closed Silver	S2	S6
Normally Open Gold plated	S3	S7
Normally Closed Gold plated	S4	S8

* For use with non-illuminated operators in thermoplastic or aluminum enclosures listed on pages 30 and 36-37.

22mm Non-Illuminated Metal Selector Switch Operators



Certified for
NEMA Type 4X
12 environment.

Key Selector

with mounting bracket



Other key combinations and colors are available on request.
All keys are "keyed alike". Different keys are available on request.

Color	Description	Key Removal	Cat No.
■ Black	Maintained	Left/Right	2AK2-01
■ Black	Maintained	Left	2AK2-02
■ Black	Maintained	Right	2AK2-03
■ Black	Spring Return	Left	2AK2-04
■ Black	Maintained	Left/Right	2AK2-05
■ Black	Maintained	All	2AK2-06
■ Black	Maintained	Center	2AK2-07
■ Black	Spring Return	Center	2AK2-08
■ Black	Spring Return	Center	2AK2-09
■ Black	Spring Return	Center	2AK2-10
■ Black	Maintained	Left	2AK2-11



Replacement Key

2KY455

Selector

with mounting bracket



Other colors are available on request.

Color	Description	Cat No.
■ Black	Maintained	2AS2-1
■ Black	Spring Return	2AS2-2
■ Black	Maintained	2AS2-3
■ Black	Spring Return	2AS2-4
■ Black	Spring Return	2AS2-5
■ Black	Spring Return	2AS2-6

Extended Selector

with mounting bracket



Other colors are available on request.

Color	Description	Cat No.
■ Black	Maintained	2AS2E-1
■ Black	Spring Return	2AS2E-2
■ Black	Maintained	2AS2E-3
■ Black	Spring Return	2AS2E-4
■ Black	Spring Return	2AS2E-5
■ Black	Spring Return	2AS2E-6

Switch Contacts

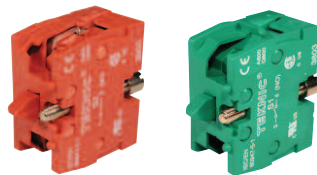
(sold separately)



Markings on Request



Altech Push Buttons are available in a variety of markings, including molded arrows. Please contact Altech for further information and part numbers.



- Heavy-duty contact blocks with mounting screws. Blocks can be stacked 2 blocks across by 3 blocks deep for a total of 6 circuits.
- Contact blocks are available with silver contacts or gold plated contacts
- Self-wiping contacts

Panel Mount

Normally Open Silver	S1
Normally Closed Silver	S2
Normally Open Gold Plated	S3
Normally Closed Gold Plated	S4

Base Mount*

Normally Open Silver	S5
Normally Closed Silver	S6
Normally Open Gold Plated	S7
Normally Closed Gold Plated	S8

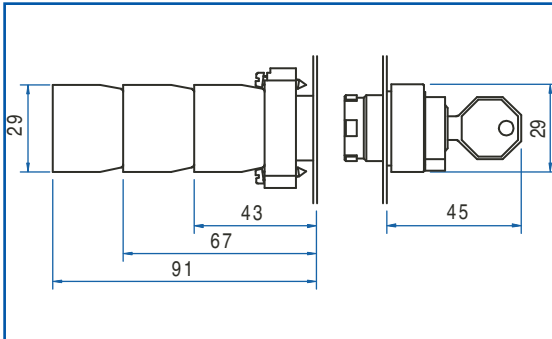
* For use with non-illuminated operators in thermoplastic or aluminum enclosures listed on pages 30 and 36-37.

22mm Non-Illuminated Metal Selector Switch Operators

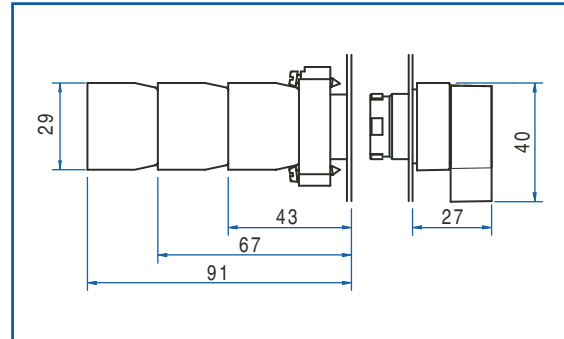
Dimensional Drawings

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

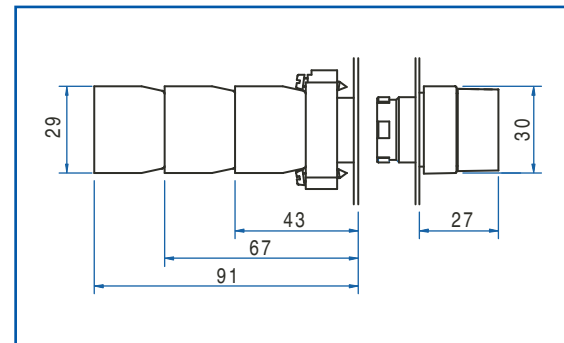
Key Selector



Extended Selector



Selector



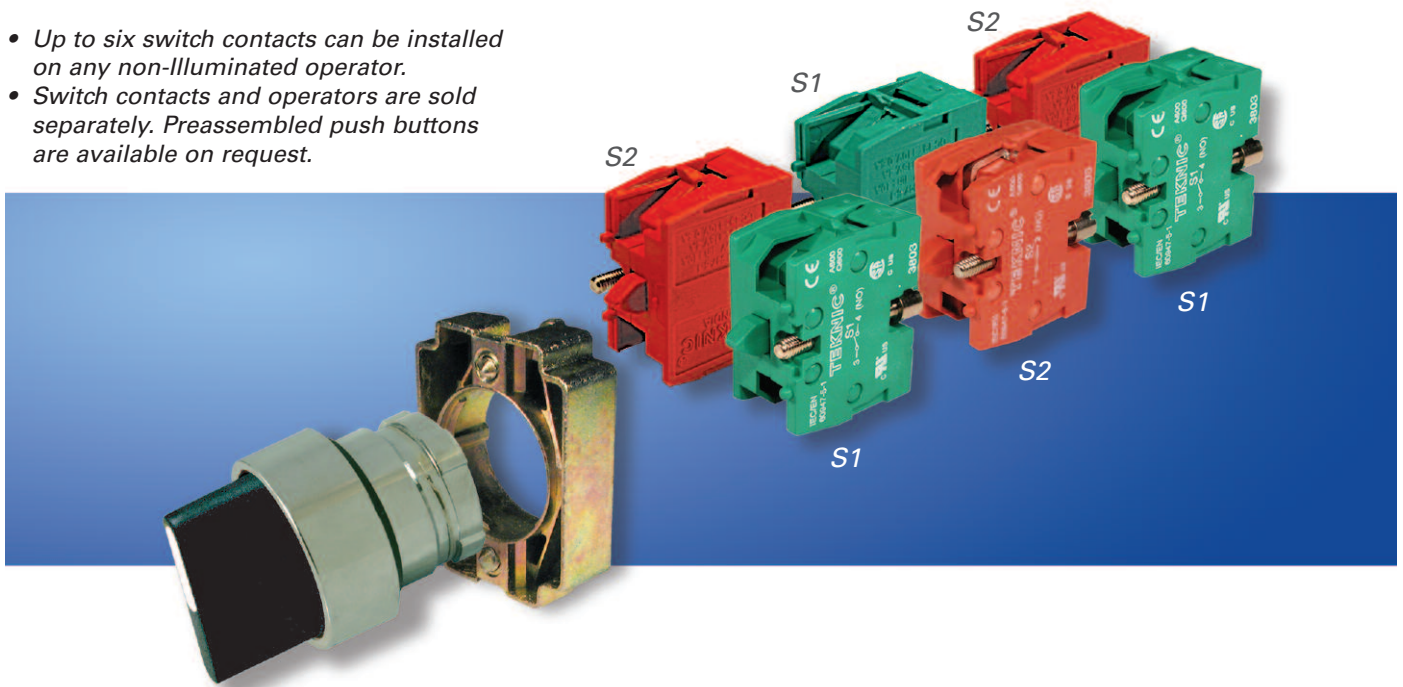
3 POSITION
SELECTOR SWITCH
CONTACT BLOCK GUIDE

			CONTACTOR BLOCK GUIDE
↻	↑	↻	
×	○	○	1 NO (left)
○	×	○	2 NC in series (side x side)
○	○	×	1 NO (right)
×	×	○	1 NC (right)
○	×	×	1 NC (left)
×	○	×	2 NO in parallel (side x side)

(Left or right as seen from front of operator)

Exploded Assembly View

- Up to six switch contacts can be installed on any non-illuminated operator.
- Switch contacts and operators are sold separately. Preassembled push buttons are available on request.



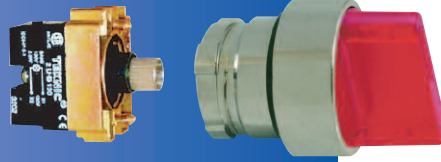
22mm LED Illuminated Metal Selector Switch Operators



Certified for
NEMA Type 4X
12 environment.

Selector

with bulb holder,
LED bulb and
mounting bracket



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

XXX = Voltage Codes

012	=	12VAC/DC
024	=	24VAC/DC
048	=	48VAC/DC
110	=	110VAC
110D	=	110VDC
230	=	230VAC
230D	=	230VDC

**SAMPLE
ASSEMBLY**



Push button assemblies are available
in a variety of custom configurations.



Replacement
bulbs available.
See page 39.

Color Function Cat No.

2 Position

<input type="checkbox"/>	White		Maintained	2ASL1LB-1-XXX
<input type="checkbox"/>	Green		Maintained	2ASL3LB-1-XXX
<input type="checkbox"/>	Red		Maintained	2ASL4LB-1-XXX
<input type="checkbox"/>	Amber		Maintained	2ASL5LB-1-XXX
<input type="checkbox"/>	Blue		Maintained	2ASL6LB-1-XXX
<input type="checkbox"/>	Clear		Maintained	2ASL7LB-1-XXX
<input type="checkbox"/>	Yellow		Maintained	2ASL8LB-1-XXX

2 Position

<input type="checkbox"/>	White		Spring Return	2ASL1LB-2-XXX
<input type="checkbox"/>	Green		Spring Return	2ASL3LB-2-XXX
<input type="checkbox"/>	Red		Spring Return	2ASL4LB-2-XXX
<input type="checkbox"/>	Amber		Spring Return	2ASL5LB-2-XXX
<input type="checkbox"/>	Blue		Spring Return	2ASL6LB-2-XXX
<input type="checkbox"/>	Clear		Spring Return	2ASL7LB-2-XXX
<input type="checkbox"/>	Yellow		Spring Return	2ASL8LB-2-XXX

3 Position

<input type="checkbox"/>	White		Maintained	2ASL1LB-3-XXX
<input type="checkbox"/>	Green		Maintained	2ASL3LB-3-XXX
<input type="checkbox"/>	Red		Maintained	2ASL4LB-3-XXX
<input type="checkbox"/>	Amber		Maintained	2ASL5LB-3-XXX
<input type="checkbox"/>	Blue		Maintained	2ASL6LB-3-XXX
<input type="checkbox"/>	Clear		Maintained	2ASL7LB-3-XXX
<input type="checkbox"/>	Yellow		Maintained	2ASL8LB-3-XXX

3 Position, spring return from left and right

<input type="checkbox"/>	White		Spring Return	2ASL1LB-4-XXX
<input type="checkbox"/>	Green		Spring Return	2ASL3LB-4-XXX
<input type="checkbox"/>	Red		Spring Return	2ASL4LB-4-XXX
<input type="checkbox"/>	Amber		Spring Return	2ASL5LB-4-XXX
<input type="checkbox"/>	Blue		Spring Return	2ASL6LB-4-XXX
<input type="checkbox"/>	Clear		Spring Return	2ASL7LB-4-XXX
<input type="checkbox"/>	Yellow		Spring Return	2ASL8LB-4-XXX

3 Position, spring return from right

<input type="checkbox"/>	White		Spring Return	2ASL1LB-5-XXX
<input type="checkbox"/>	Green		Spring Return	2ASL3LB-5-XXX
<input type="checkbox"/>	Red		Spring Return	2ASL4LB-5-XXX
<input type="checkbox"/>	Amber		Spring Return	2ASL5LB-5-XXX
<input type="checkbox"/>	Blue		Spring Return	2ASL6LB-5-XXX
<input type="checkbox"/>	Clear		Spring Return	2ASL7LB-5-XXX
<input type="checkbox"/>	Yellow		Spring Return	2ASL8LB-5-XXX

3 Position, spring return from left




<input type="checkbox"/>	White		Spring Return	2ASL1LB-6-XXX
<input type="checkbox"/>	Green		Spring Return	2ASL3LB-6-XXX
<input type="checkbox"/>	Red		Spring Return	2ASL4LB-6-XXX
<input type="checkbox"/>	Amber		Spring Return	2ASL5LB-6-XXX
<input type="checkbox"/>	Blue		Spring Return	2ASL6LB-6-XXX
<input type="checkbox"/>	Clear		Spring Return	2ASL7LB-6-XXX
<input type="checkbox"/>	Yellow		Spring Return	2ASL8LB-6-XXX

22mm LED Illuminated Metal Selector Switch Operators

Dimensional Drawings

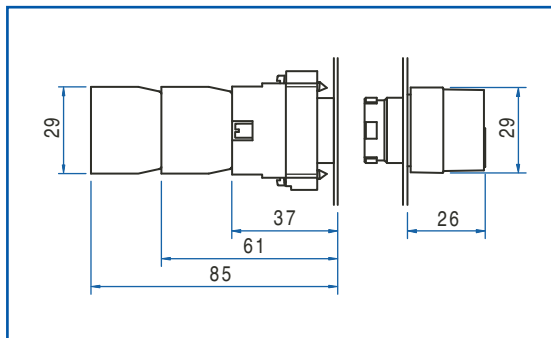
All dimensions shown in millimeters.
To convert to inches multiply by 0.03937

3 POSITION SELECTOR SWITCH CONTACT BLOCK GUIDE

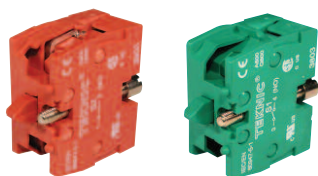
			CONTACTOR BLOCK GUIDE
x	o	o	1 NO (left)
o	x	o	2 NC in series (side x side)
o	o	x	1 NO (right)
x	x	o	1 NC (right)
o	x	x	1 NC (left)
x	o	x	2 NO in parallel (side x side)

(Left or right as seen from front of operator)

Illuminated Selector



Switch Contacts (sold separately)



- Heavy-duty contact blocks with mounting screws. Blocks can be stacked 2 blocks across by 3 blocks deep for a total of 6 circuits.
- Contact blocks are available with silver contacts or gold plated contacts
- Self-wiping contacts

Panel Mount

- Normally Open Silver **S1**
- Normally Closed Silver **S2**
- Normally Open Gold Plated **S3**
- Normally Closed Gold Plated **S4**

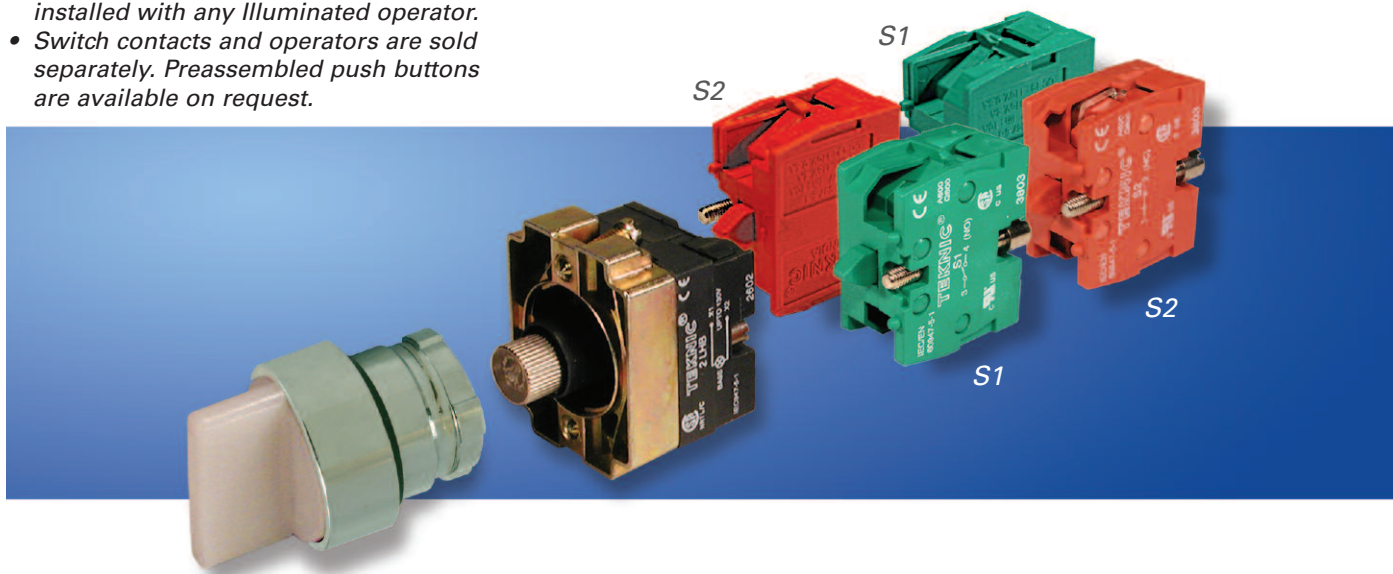
Base Mount*

- Normally Open Silver **S5**
- Normally Closed Silver **S6**
- Normally Open Gold Plated **S7**
- Normally Closed Gold Plated **S8**

* For use with non-illuminated operators in thermoplastic or aluminum enclosures listed on pages 30 and 36-37.

Exploded Assembly View

- Up to four switch contacts can be installed with any Illuminated operator.
- Switch contacts and operators are sold separately. Preassembled push buttons are available on request.



22mm LED Illuminated Metal Projecting Operators



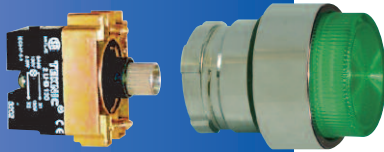
UL US
E225660



Certified for
NEMA Type 4X
12 environment.

Projecting Momentary

with bulb, bulb holder
and mounting bracket



**SAMPLE
ASSEMBLY**



Replacement bulbs
available.
See page 39.

Color	Voltage	Cat No.
-------	---------	---------

12V AC/DC		
<input type="checkbox"/>	White	12V AC/DC 2ALP1LB-012
<input checked="" type="checkbox"/>	Green	12V AC/DC 2ALP3LB-012
<input checked="" type="checkbox"/>	Red	12V AC/DC 2ALP4LB-012
<input checked="" type="checkbox"/>	Amber	12V AC/DC 2ALP5LB-012
<input checked="" type="checkbox"/>	Blue	12V AC/DC 2ALP6LB-012
<input type="checkbox"/>	Clear	12V AC/DC 2ALP7LB-012
<input checked="" type="checkbox"/>	Yellow	12V AC/DC 2ALP8LB-012

24V AC/DC

<input type="checkbox"/>	White	24V AC/DC 2ALP1LB-024
<input checked="" type="checkbox"/>	Green	24V AC/DC 2ALP3LB-024
<input checked="" type="checkbox"/>	Red	24V AC/DC 2ALP4LB-024
<input checked="" type="checkbox"/>	Amber	24V AC/DC 2ALP5LB-024
<input checked="" type="checkbox"/>	Blue	24V AC/DC 2ALP6LB-024
<input type="checkbox"/>	Clear	24V AC/DC 2ALP7LB-024
<input checked="" type="checkbox"/>	Yellow	24V AC/DC 2ALP8LB-024

48V AC/DC

<input type="checkbox"/>	White	48V AC/DC 2ALP1LB-048
<input checked="" type="checkbox"/>	Green	48V AC/DC 2ALP3LB-048
<input checked="" type="checkbox"/>	Red	48V AC/DC 2ALP4LB-048
<input checked="" type="checkbox"/>	Amber	48V AC/DC 2ALP5LB-048
<input checked="" type="checkbox"/>	Blue	48V AC/DC 2ALP6LB-048
<input type="checkbox"/>	Clear	48V AC/DC 2ALP7LB-048
<input checked="" type="checkbox"/>	Yellow	48V AC/DC 2ALP8LB-048

110V AC

<input type="checkbox"/>	White	110V AC 2ALP1LB-110
<input checked="" type="checkbox"/>	Green	110V AC 2ALP3LB-110
<input checked="" type="checkbox"/>	Red	110V AC 2ALP4LB-110
<input checked="" type="checkbox"/>	Amber	110V AC 2ALP5LB-110
<input checked="" type="checkbox"/>	Blue	110V AC 2ALP6LB-110
<input type="checkbox"/>	Clear	110V AC 2ALP7LB-110
<input checked="" type="checkbox"/>	Yellow	110V AC 2ALP8LB-110

110V DC

<input type="checkbox"/>	White	110V DC 2ALP1LB-110D
<input checked="" type="checkbox"/>	Green	110V DC 2ALP3LB-110D
<input checked="" type="checkbox"/>	Red	110V DC 2ALP4LB-110D
<input checked="" type="checkbox"/>	Amber	110V DC 2ALP5LB-110D
<input checked="" type="checkbox"/>	Blue	110V DC 2ALP6LB-110D
<input type="checkbox"/>	Clear	110V DC 2ALP7LB-110D
<input checked="" type="checkbox"/>	Yellow	110V DC 2ALP8LB-110D

230V AC

<input type="checkbox"/>	White	230V AC 2ALP1LB-230
<input checked="" type="checkbox"/>	Green	230V AC 2ALP3LB-230
<input checked="" type="checkbox"/>	Red	230V AC 2ALP4LB-230
<input checked="" type="checkbox"/>	Amber	230V AC 2ALP5LB-230
<input checked="" type="checkbox"/>	Blue	230V AC 2ALP6LB-230
<input type="checkbox"/>	Clear	230V AC 2ALP7LB-230
<input checked="" type="checkbox"/>	Yellow	230V AC 2ALP8LB-230

230V DC

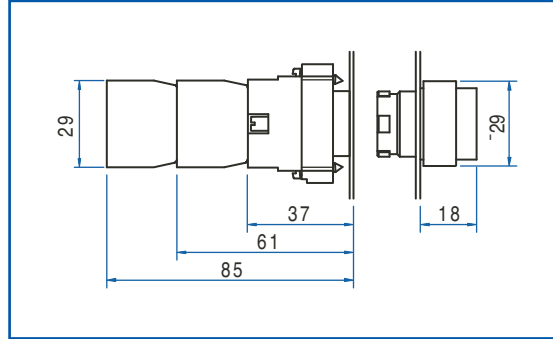
<input type="checkbox"/>	White	230V DC 2ALP1LB-230D
<input checked="" type="checkbox"/>	Green	230V DC 2ALP3LB-230D
<input checked="" type="checkbox"/>	Red	230V DC 2ALP4LB-230D
<input checked="" type="checkbox"/>	Amber	230V DC 2ALP5LB-230D
<input checked="" type="checkbox"/>	Blue	230V DC 2ALP6LB-230D
<input type="checkbox"/>	Clear	230V DC 2ALP7LB-230D
<input checked="" type="checkbox"/>	Yellow	230V DC 2ALP8LB-230D

22mm LED Illuminated Metal Projecting Operators

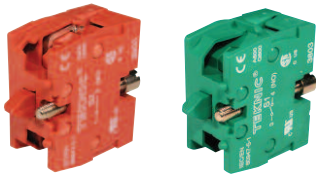
Dimensional Drawings

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

Projecting Momentary



Switch Contacts *(sold separately)*



- Heavy-duty contact blocks with mounting screws. Blocks can be stacked 2 blocks across by 3 blocks deep for a total of 6 circuits.
- Contact blocks are available with silver contacts or gold plated contacts
- Self-wiping contacts

Panel Mount

Normally Open Silver	S1
Normally Closed Silver	S2
Normally Open Gold Plated	S3
Normally Closed Gold Plated	S4

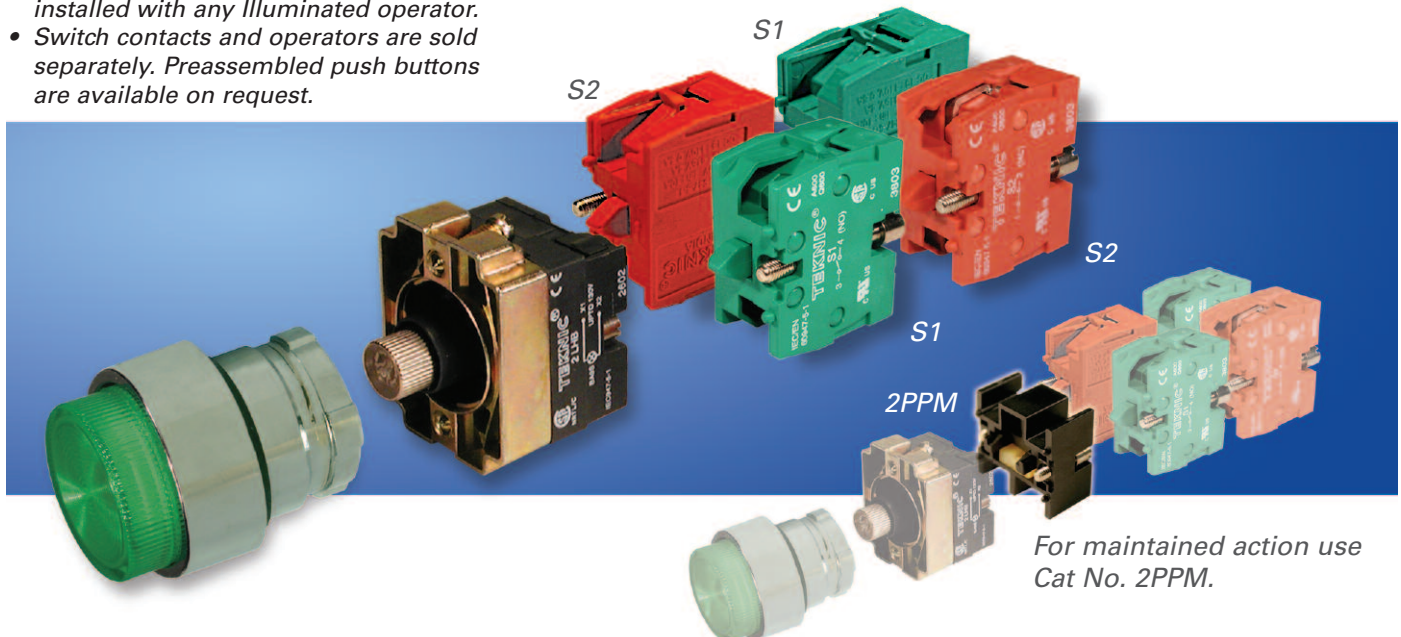
Base Mount*

Normally Open Silver	S5
Normally Closed Silver	S6
Normally Open Gold Plated	S7
Normally Closed Gold Plated	S8

* For use with non-illuminated operators in thermoplastic or aluminum enclosures listed on pages 30 and 36-37.

Exploded Assembly View

- Up to four switch contacts can be installed with any illuminated operator.
- Switch contacts and operators are sold separately. Preassembled push buttons are available on request.



For maintained action use
Cat No. 2PPM.

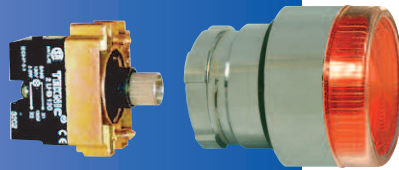
22mm LED Illuminated Metal Flush Operators



Certified for
NEMA Type 4X
12 environment.

Flush Momentary

with bulb, bulb holder
and mounting bracket



**SAMPLE
ASSEMBLY**



Replacement bulbs
available.
See page 39.

Color	Voltage	Cat No.
-------	---------	---------

12V AC/DC			
<input type="checkbox"/>	White	12V AC/DC	2ALF1LB-012
<input checked="" type="checkbox"/>	Green	12V AC/DC	2ALF3LB-012
<input checked="" type="checkbox"/>	Red	12V AC/DC	2ALF4LB-012
<input checked="" type="checkbox"/>	Amber	12V AC/DC	2ALF5LB-012
<input checked="" type="checkbox"/>	Blue	12V AC/DC	2ALF6LB-012
<input type="checkbox"/>	Clear	12V AC/DC	2ALF7LB-012
<input checked="" type="checkbox"/>	Yellow	12V AC/DC	2ALF8LB-012

24V AC/DC			
<input type="checkbox"/>	White	24V AC/DC	2ALF1LB-024
<input checked="" type="checkbox"/>	Green	24V AC/DC	2ALF3LB-024
<input checked="" type="checkbox"/>	Red	24V AC/DC	2ALF4LB-024
<input checked="" type="checkbox"/>	Amber	24V AC/DC	2ALF5LB-024
<input checked="" type="checkbox"/>	Blue	24V AC/DC	2ALF6LB-024
<input type="checkbox"/>	Clear	24V AC/DC	2ALF7LB-024
<input checked="" type="checkbox"/>	Yellow	24V AC/DC	2ALF8LB-024

48V AC/DC			
<input type="checkbox"/>	White	48V AC/DC	2ALF1LB-048
<input checked="" type="checkbox"/>	Green	48V AC/DC	2ALF3LB-048
<input checked="" type="checkbox"/>	Red	48V AC/DC	2ALF4LB-048
<input checked="" type="checkbox"/>	Amber	48V AC/DC	2ALF5LB-048
<input checked="" type="checkbox"/>	Blue	48V AC/DC	2ALF6LB-048
<input type="checkbox"/>	Clear	48V AC/DC	2ALF7LB-048
<input checked="" type="checkbox"/>	Yellow	48V AC/DC	2ALF8LB-048

110V AC			
<input type="checkbox"/>	White	110V AC	2ALF1LB-110
<input checked="" type="checkbox"/>	Green	110V AC	2ALF3LB-110
<input checked="" type="checkbox"/>	Red	110V AC	2ALF4LB-110
<input checked="" type="checkbox"/>	Amber	110V AC	2ALF5LB-110
<input checked="" type="checkbox"/>	Blue	110V AC	2ALF6LB-110
<input type="checkbox"/>	Clear	110V AC	2ALF7LB-110
<input checked="" type="checkbox"/>	Yellow	110V AC	2ALF8LB-110

110V DC			
<input type="checkbox"/>	White	110V DC	2ALF1LB-110D
<input checked="" type="checkbox"/>	Green	110V DC	2ALF3LB-110D
<input checked="" type="checkbox"/>	Red	110V DC	2ALF4LB-110D
<input checked="" type="checkbox"/>	Amber	110V DC	2ALF5LB-110D
<input checked="" type="checkbox"/>	Blue	110V DC	2ALF6LB-110D
<input type="checkbox"/>	Clear	110V DC	2ALF7LB-110D
<input checked="" type="checkbox"/>	Yellow	110V DC	2ALF8LB-110D

230V AC			
<input type="checkbox"/>	White	230V AC	2ALF1LB-230
<input checked="" type="checkbox"/>	Green	230V AC	2ALF3LB-230
<input checked="" type="checkbox"/>	Red	230V AC	2ALF4LB-230
<input checked="" type="checkbox"/>	Amber	230V AC	2ALF5LB-230
<input checked="" type="checkbox"/>	Blue	230V AC	2ALF6LB-230
<input type="checkbox"/>	Clear	230V AC	2ALF7LB-230
<input checked="" type="checkbox"/>	Yellow	230V AC	2ALF8LB-230

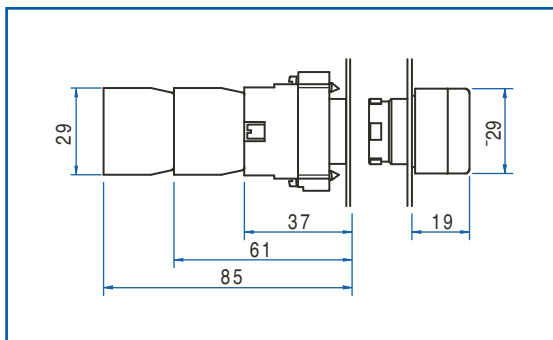
230V DC			
<input type="checkbox"/>	White	230V DC	2ALF1LB-230D
<input checked="" type="checkbox"/>	Green	230V DC	2ALF3LB-230D
<input checked="" type="checkbox"/>	Red	230V DC	2ALF4LB-230D
<input checked="" type="checkbox"/>	Amber	230V DC	2ALF5LB-230D
<input checked="" type="checkbox"/>	Blue	230V DC	2ALF6LB-230D
<input type="checkbox"/>	Clear	230V DC	2ALF7LB-230D
<input checked="" type="checkbox"/>	Yellow	230V DC	2ALF8LB-230D

22mm LED Illuminated Metal Flush Operators

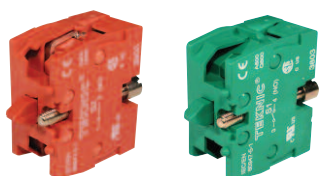
Dimensional Drawings

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

Flush Momentary



Switch Contacts *(sold separately)*



- Heavy-duty contact blocks with mounting screws. Blocks can be stacked 2 blocks across by 3 blocks deep for a total of 6 circuits.
- Contact blocks are available with silver contacts or gold plated contacts
- Self-wiping contacts

Panel Mount

- Normally Open Silver **S1**
- Normally Closed Silver **S2**
- Normally Open Gold Plated **S3**
- Normally Closed Gold Plated **S4**

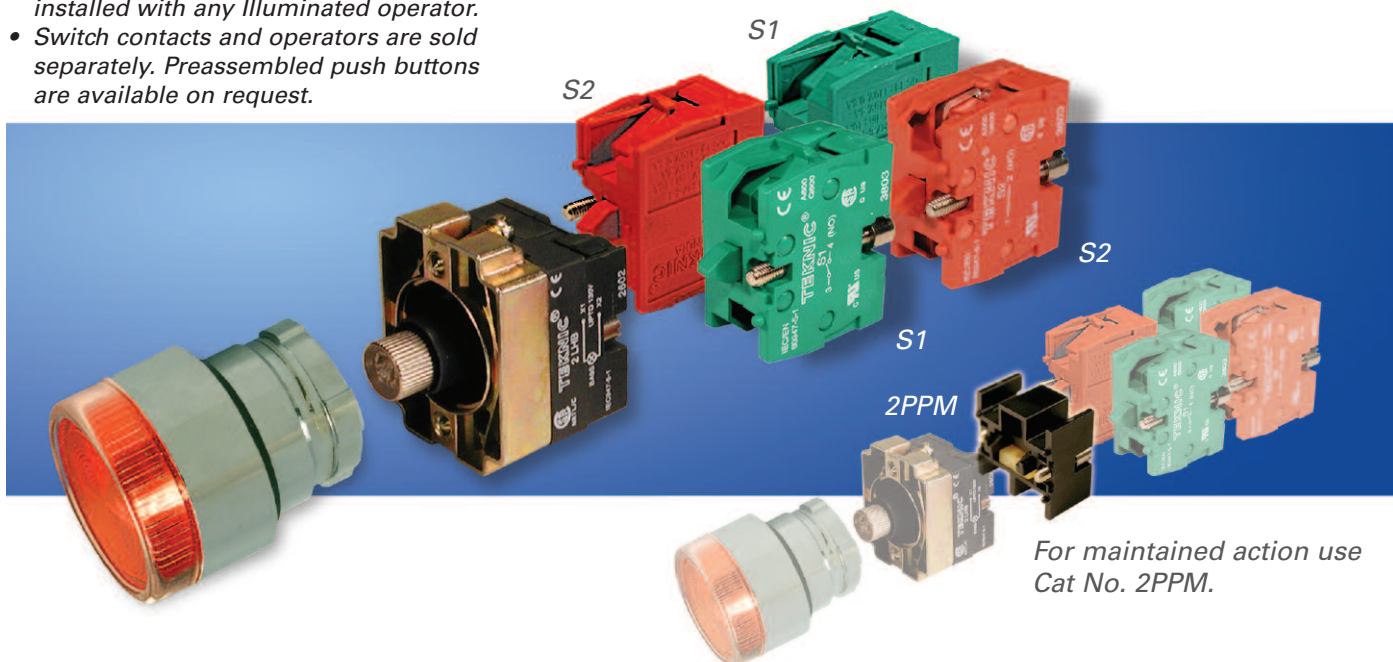
Base Mount*

- Normally Open Silver **S5**
- Normally Closed Silver **S6**
- Normally Open Gold Plated **S7**
- Normally Closed Gold Plated **S8**

* For use with non-illuminated operators in thermoplastic or aluminum enclosures listed on pages 30 and 36-37.

Exploded Assembly View

- Up to four switch contacts can be installed with any illuminated operator.
- Switch contacts and operators are sold separately. Preassembled push buttons are available on request.



For maintained action use Cat No. 2PPM.

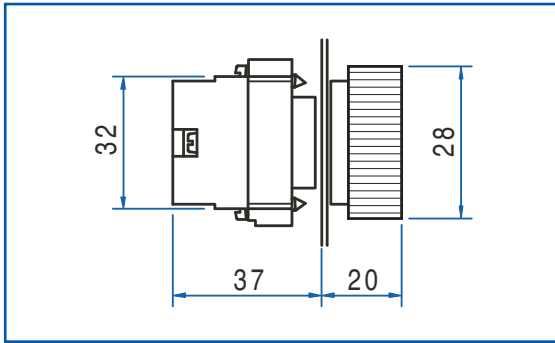
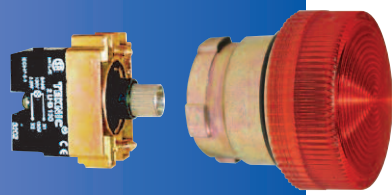
22mm LED Metal Pilot Lights



Certified for
NEMA Type 4X
12 environment.

Pilot Light

with bulb, bulb holder
and mounting bracket



Replacement bulbs
available.
See page 39.

Color	Voltage	Cat No.
-------	---------	---------

12V AC/DC		
White	12V AC/DC	2PLB1LB-012
Green	12V AC/DC	2PLB3LB-012
Red	12V AC/DC	2PLB4LB-012
Amber	12V AC/DC	2PLB5LB-012
Blue	12V AC/DC	2PLB6LB-012
Clear	12V AC/DC	2PLB7LB-012
Yellow	12V AC/DC	2PLB8LB-012

24V AC/DC		
White	24V AC/DC	2PLB1LB-024
Green	24V AC/DC	2PLB3LB-024
Red	24V AC/DC	2PLB4LB-024
Amber	24V AC/DC	2PLB5LB-024
Blue	24V AC/DC	2PLB6LB-024
Clear	24V AC/DC	2PLB7LB-024
Yellow	24V AC/DC	2PLB8LB-024

48V AC/DC		
White	48V AC/DC	2PLB1LB-048
Green	48V AC/DC	2PLB3LB-048
Red	48V AC/DC	2PLB4LB-048
Amber	48V AC/DC	2PLB5LB-048
Blue	48V AC/DC	2PLB6LB-048
Clear	48V AC/DC	2PLB7LB-048
Yellow	48V AC/DC	2PLB8LB-048

110V AC		
White	110V AC	2PLB1LB-110
Green	110V AC	2PLB3LB-110
Red	110V AC	2PLB4LB-110
Amber	110V AC	2PLB5LB-110
Blue	110V AC	2PLB6LB-110
Clear	110V AC	2PLB7LB-110
Yellow	110V AC	2PLB8LB-110

110V DC		
White	110V DC	2PLB1LB-110D
Green	110V DC	2PLB3LB-110D
Red	110V DC	2PLB4LB-110D
Amber	110V DC	2PLB5LB-110D
Blue	110V DC	2PLB6LB-110D
Clear	110V DC	2PLB7LB-110D
Yellow	110V DC	2PLB8LB-110D

230V AC		
White	230V AC	2PLB1LB-230
Green	230V AC	2PLB3LB-230
Red	230V AC	2PLB4LB-230
Amber	230V AC	2PLB5LB-230
Blue	230V AC	2PLB6LB-230
Clear	230V AC	2PLB7LB-230
Yellow	230V AC	2PLB8LB-230

230V DC		
White	230V DC	2PLB1LB-230D
Green	230V DC	2PLB3LB-230D
Red	230V DC	2PLB4LB-230D
Amber	230V DC	2PLB5LB-230D
Blue	230V DC	2PLB6LB-230D
Clear	230V DC	2PLB7LB-230D
Yellow	230V DC	2PLB8LB-230D

22mm Specifications

Electrical and Mechanical Characteristics

Standard conformity:	IEC 60947-5-1
Approvals:	VDE0660 CSA - C22.2 No. 14-95 UL508 IEC 947 - 5 (1) 1990, IS 13947 ASTA UK certified as per IEC 947 - 5 - (1) 1990
Degree of protection:	IP 65 as per IEC 529 NEMA Type 4X, 12 as per UL50
Temperature Range:	- 25°C to + 70°C (-13°F to +158°F)

Contact Block

Rated voltage:	600V AC /DC
Rated current:	10A AC / 2.5A DC
Contact operation:	self-wiping, slow break NO or NC
UL508 rating (pilot duty):	
CSA - C22.2 No. 14-95:	A600: 10A; 600V AC Q600: 2.5A; 600V DC
Make and break capacity	
IEC 947 - 5 - (1) 1990:	AC 15 4A, 415V AC DC 13 0.5A, 110V DC
Terminal capacity:	minimum 20 AWG (0.5 mm ²) maximum 2x16 AWG (2 x 1.5 mm ²) or 14 AWG (2.5 mm ²)
Terminal marking:	1-2 for NC, 3-4 for NO
Short circuit protection:	10A cartridge fuse HRC type, rated for resistive loads
Mechanical life:	1 million operations

Modules for Pilot Lights & Illuminated Switches with LED Bulbs

Current consumption (applicable to all colors)	
24 VAC/DC, 100 VAC & 240 VAC:	max. 20 mA
110 VDC:	max. 15 mA
220 VDC:	max. 10 mA
Service life (at nominal voltage and at ambient temperature of 25°C):	100,000 hours
Voltage limits (nominal voltage):	<20% of rated voltage>
Short circuit protection:	on specific request
Terminal capacity:	min. 1 x 0.5 mm ² (20 AWG), max. 2 x 1.5 mm ² (2x16 AWG) or 1 x 2.5 mm ² (1x14 AWG)

Economy Non-Illuminated Plastic Push Buttons



Momentary



Maintained



Color	Description & Function	Cat No.
-------	------------------------	---------

Momentary

White	Flush, 1NO Contact	3PSF110
Black	Flush, 1NO Contact	3PSF210
Green	Flush, 1NO Contact	3PSF310
Red	Flush, 1NO Contact	3PSF410
Blue	Flush, 1NO Contact	3PSF610
Yellow	Flush, 1NO Contact	3PSF810
White	Flush, 1NC Contact	3PSF101
Black	Flush, 1NC Contact	3PSF201
Green	Flush, 1NC Contact	3PSF301
Red	Flush, 1NC Contact	3PSF401
Blue	Flush, 1NC Contact	3PSF601
Yellow	Flush, 1NC Contact	3PSF801
White	Flush, 1NO + 1NC Contact	3PSF111
Black	Flush, 1NO + 1NC Contact	3PSF211
Green	Flush, 1NO + 1NC Contact	3PSF311
Red	Flush, 1NO + 1NC Contact	3PSF411
Blue	Flush, 1NO + 1NC Contact	3PSF611
Yellow	Flush, 1NO + 1NC Contact	3PSF811
White	Flush, 2NO Contact	3PSF120
Black	Flush, 2NO Contact	3PSF220
Green	Flush, 2NO Contact	3PSF320
Red	Flush, 2NO Contact	3PSF420
Blue	Flush, 2NO Contact	3PSF620
Yellow	Flush, 2NO Contact	3PSF820
White	Flush, 2NC Contact	3PSF102
Black	Flush, 2NC Contact	3PSF202
Green	Flush, 2NC Contact	3PSF302
Red	Flush, 2NC Contact	3PSF402
Blue	Flush, 2NC Contact	3PSF602
Yellow	Flush, 2NC Contact	3PSF802

Maintained

White	Flush, 1NO Push-Push	3PSFPP110
Black	Flush, 1NO Push-Push	3PSFPP210
Green	Flush, 1NO Push-Push	3PSFPP310
Red	Flush, 1NO Push-Push	3PSFPP410
Blue	Flush, 1NO Push-Push	3PSFPP610
Yellow	Flush, 1NO Push-Push	3PSFPP810
White	Flush, 1NC Push-Push	3PSFPP101
Black	Flush, 1NC Push-Push	3PSFPP201
Green	Flush, 1NC Push-Push	3PSFPP301
Red	Flush, 1NC Push-Push	3PSFPP401
Blue	Flush, 1NC Push-Push	3PSFPP601
Yellow	Flush, 1NC Push-Push	3PSFPP801
White	Flush, 1NO + 1NC Push-Push	3PSFPP111
Black	Flush, 1NO + 1NC Push-Push	3PSFPP211
Green	Flush, 1NO + 1NC Push-Push	3PSFPP311
Red	Flush, 1NO + 1NC Push-Push	3PSFPP411
Blue	Flush, 1NO + 1NC Push-Push	3PSFPP611
Yellow	Flush, 1NO + 1NC Push-Push	3PSFPP811
White	Flush, 2NO Push-Push	3PSPP120
Black	Flush, 2NO Push-Push	3PSPP220
Green	Flush, 2NO Push-Push	3PSPP320
Red	Flush, 2NO Push-Push	3PSPP420
Blue	Flush, 2NO Push-Push	3PSPP620
Yellow	Flush, 2NO Push-Push	3PSPP820
White	Flush, 2NC Push-Push	3PSPP102
Black	Flush, 2NC Push-Push	3PSPP202
Green	Flush, 2NC Push-Push	3PSPP302
Red	Flush, 2NC Push-Push	3PSPP402
Blue	Flush, 2NC Push-Push	3PSPP602
Yellow	Flush, 2NC Push-Push	3PSPP802

Economy Non-Illuminated Plastic Push Buttons Specifications

A. Mechanical Characteristics

Contact Operation	NO/NC Slow Break
Operating Travel	Changing NC status = 2mm Changing NO status = 2mm Total travel = 3.5mm
Operating Force for 3PSF Series	Changing NC status = 4.22mm Changing NO status = 5.60mm Travel required to change NC status = 0.65mm Travel required to change NO status = 1.65 to 1.98mm Total travel = 3.8mm
Contact Configurations	1NO; 1NO + 1NC; 2NC
Terminal Torque	0.5Nm / 4.5lbs. in.

B. Mechanical Durability

Push Button, Spring Return	1 Million Operations
Push-Push Type	100,000 Operations
Applicable Standard	UL508; IS13947-5-1; CSA 22.2
Degree of Protection	IP65 (as per IS 13947)
Temperature Range	-25° to +85°C (-13°F to 180°F)

C. Electrical Characteristics

Rating	<p><i>For AC:</i> C300= 120V, make current 15A & break current 1.5A (thermal current=2.5A)</p> <p><i>For DC:</i> R300= 125V, make or break current 0.22A (thermal current=1.0A)</p>
Terminal Capacity for wiring	2 X 1.5mm ² ; 1 X 0.5mm ² (min); 1 X 2.5mm ² (max)
Contact Material	<ul style="list-style-type: none"> • Moving contact = Phosphor Bronze • Fixed Contact = Brass silver plated 2 microns
Short Circuit Protection	4A fuse
Dielectric Test	2.5KV
Rated insulation Resistance	500M ohm
Rated Thermal Current	2.5A

Dimensional Drawings

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

