

INDUSTRIAL CONTROLS

A01 SERIES Panel cut-out .630" (16mm)



SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE.

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Dimensions: first dimensions are in inches while mm are shown in brackets.

Tolerance: The general tolerance for dimensions in the A01 & A02 Series is $\pm .012"$ (0.3mm)

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INDUSTRIAL CONTROLS

A02 SERIES Panel cut-out .866" (22mm)



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A01 & A02 SERIES

INDUSTRIAL CONTROLS

PRODUCTS & FEATURES

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The A01 and A02 Series consist of:

- ◆ non-illuminated pushbutton switches
- ◆ illuminated pushbutton switches
- ◆ indicators
- ◆ 2 and 3 position keylock switches
- ◆ 2 and 3 position rotary lever switches
- ◆ emergency stop switches

... with rectangular, square or round operators.

Key features include:

- Environmental protection to IP65
- Totally modular construction
- 50,000 cycles min. electrical life
- Screen engraving or insertable legends on request
- Numerous agency approvals & markings -



Sub-assembly shows modular construction.

A01 Series

- ❑ Panel cut-out: .630" (16mm) dia.
- ❑ 1, 2, 3 and 4 poles
- ❑ Solder lug/quick connect terminals
- ❑ Gold plated silver contacts
- ❑ Current/voltage rating:
6A 250 VAC max. - 10 mA 5 VAC min.
- ❑ Lamp: filament, neon or multi-chip LED

A02 Series

- ❑ Panel cut-outs: .866" (22mm) dia. round or square and 1.160" x .846" (29.5mm x 21.5mm) rectangular
- ❑ 1 and 2 poles
- ❑ Screw terminals
- ❑ Silver contacts
- ❑ Current/voltage rating:
12 A 380 VAC - 16 A 250 VAC max.
25 mA 5 VAC min.
- ❑ Lamp: filament, neon or multi-chip LED or special multi-LED assembly

For back of panel safety, this series has a unique covered cable connection guard (see accessories).

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A01 & A02 SERIES

INDUSTRIAL CONTROLS

SPECIFICATIONS

	A01 Series	A02 Series
<p>ELECTRICAL</p> <p>Function: Current/voltage rating: Contact gap: Initial contact resistance: Insulation resistance: Dielectric strength: Electrical life: Insulation: Lamp life:</p>	<p>Momentary or maintained action 10 mA 5 VAC min. - 6 A 250 VAC max. .059" (1.5mm) 10 mΩ max. at 1 A 4 VDC 50 mΩ min. 750 V between open contacts 5,000 V live to accessible 50,000 cycles min. Class 2 LED: 60,000 hrs. min. to relative luminosity. Filament: approx 5,000 hrs. Neon: approx. 10,000 hrs.</p>	<p>Momentary or maintained action 25mA 5 VAC min. - 12 A 380 VAC or 16 A 250 VAC max. .059" (1.5mm)- 2 contact pairs w/ double break 10 mΩ max. at 1 A 4 VDC 50 mΩ min. 2,000 V between open contacts 4,000 V live to accessible 50,000 cycles min. Class 2 LED: 60,000 hrs. min. to relative luminosity. Filament: approx 5,000 hrs. Neon: approx. 10,000 hrs.</p>
<p>GENERAL</p> <p>Mechanical life (min.): Operating force (approx.): Operating temperature: Solder heat resistance: (IEC 68-2-20Tb, method 2) Operating humidity: Degree of environmental protection (IEC 529): Lamps: Switch terminals: Lamp terminals:</p>	<p>Momentary: 1 million cycles Maintained action: 100,000 cycles 9 - 36 oz. -20°C to +55°C 350°C, 5 seconds Up to 95% RH IP 65 front of panel IP 40 back of panel Midget grooved T1 3/4, filament, multi-chip LED or neon Solder/quick connect .110" (2.8mm) Solder/quick connect .110" (2.8mm)</p>	<p>Momentary: 1 million cycles Maintained action: 100,000 cycles Keylock & rotary: 100,000 cycles Keylock & rotary: 100,000 cycles 11 - 54 oz. -20°C to +85°C 350°C, 5 seconds Up to 95% RH IP 65 front of panel IP 40 back of panel Midget grooved T1 3/4, filament, multi-chip LED or neon or special multi-LED assembly M3 screws - wire 2 x .030" (0.75mm) - 2 max. M3 screws - flexible wire 2 x .098"² (mm²) max. Rigid wire .157"² (2mm²) max.</p>
<p>MATERIALS</p> <p>Operator body & parts: Switch body & cover: Actuator: Seals: Contacts: Contact carriers: Reflector, diffuser & screen: Retaining nut: Screws and clamps:</p>	<p>Flame retardant PBT Flame retardant PBT Flame retardant PBT Silicon rubber or Nitrile Gold plated silver Brass with silver plate and gold flash Flame retardant polycarbonate ABS -</p>	<p>Flame retardant polyetherimide Flame retardant PBT Flame retardant PBT Silicon rubber or Nitrile Silver Brass with silver plate Flame retardant polycarbonate ABS Zinc plated steel w/clear passivation</p>

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A01 SERIES

PUSHBUTTON SWITCHES, ILLUMINATED OR NON-ILLUMINATED

Panel cut-out .630" (16mm)

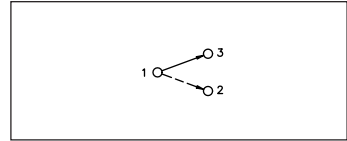
A pushbutton assembly requires:

Screen + Lamp (if illuminated) + Operator + Switchblock

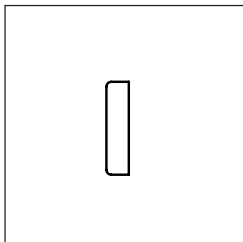
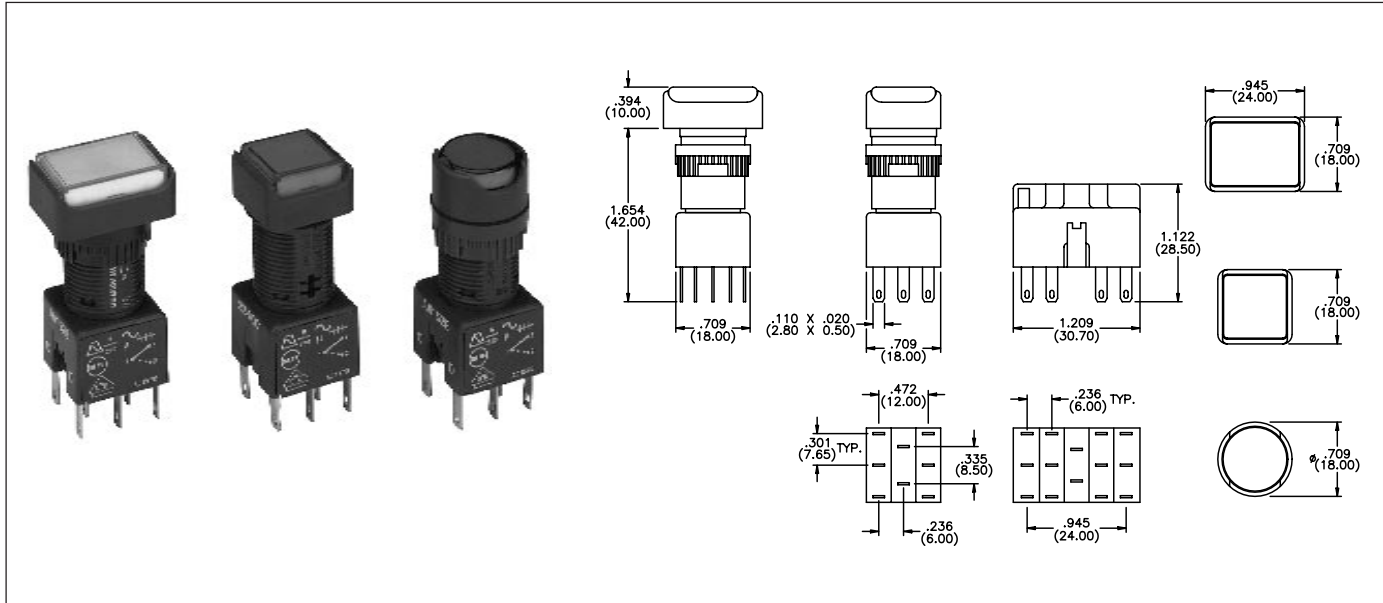
To order, select desired model numbers from tables below.

Example: IP65 rectangular pushbutton, single pole, maintained, red screen and 12V red LED = **A0161B, A0142M1, A0101X and A0151B**

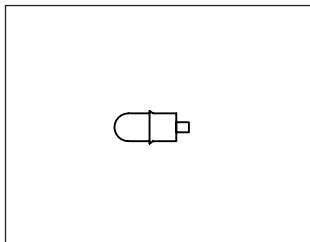
Switches are normally shipped unassembled. Consult factory if factory assembly is required.



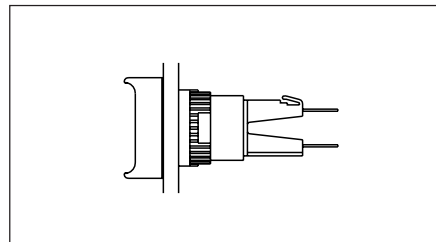
SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE.



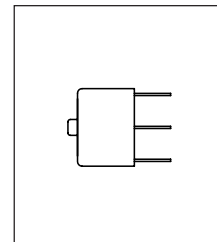
SCREEN		
Bezel	Color	Part no.
■	black	A0161A
■	red	A0161B
■	amber	A0161C
■	yellow	A0161D
■	green	A0161E
■	blue	A0161F
■	clear	A0161G
■	white	A0161J
■	black	A0162A
■	red	A0162B
■	amber	A0162C
■	yellow	A0162D
■	green	A0162E
■	blue	A0162F
■	clear	A0162G
■	white	A0162J
●	black	A0163A
●	red	A0163B
●	amber	A0163C
●	yellow	A0163D
●	green	A0163E
●	blue	A0163F
●	clear	A0163G
●	white	A0163J



LAMP		
Lamp	Voltage	Part no.
Filament	6.3V	A0141A
Filament	14V	A0141B
Filament	28V	A0141C
Filament	36V	A0141D
Filament	48V	A0141E
Filament	60V	A0141F
Neon	110V	A0143G
Neon	220V	A0143H
LED	6V red	A0142L1
LED	6V green	A0142L2
LED	6V amber	A0142L3
LED	12V red	A0142M1
LED	12V green	A0142M2
LED	12V amber	A0142M3
LED	12V blue	A0142M4
LED	12V white	A0142M5
LED	24V red	A0142N1
LED	24V green	A0142N2
LED	24V amber	A0142N3
LED	24V blue	A0142N4
LED	24V white	A0142N5
LED	48V red	A0142P1
LED	48V green	A0142P2
LED	48V amber	A0142P3



OPERATOR			
Poles	Bezel	Description	Part no.
1 or 2	■	illum, momentary	A0101Y
1 or 2	■	illum, maintained	A0101X
1 or 2	■	non-illum, momentary	A0102Y
1 or 2	■	non-illum, maintained	A0102X
3 or 4	■	illum, momentary	A0103Y
3 or 4	■	illum, maintained	A0103X
3 or 4	■	non-illum, momentary	A0104Y
3 or 4	■	non-illum, maintained	A0104X
1 or 2	■	illum, momentary	A0105Y
1 or 2	■	illum, maintained	A0105X
1 or 2	■	non-illum, momentary	A0106Y
1 or 2	■	non-illum, maintained	A0106X
3 or 4	■	illum, momentary	A0107Y
3 or 4	■	illum, maintained	A0107X
3 or 4	■	non-illum, momentary	A0108Y
3 or 4	■	non-illum, maintained	A0108X
1 or 2	●	illum, momentary	A0109Y
1 or 2	●	illum, maintained	A0109X
1 or 2	●	non-illum, momentary	A0110Y
1 or 2	●	non-illum, maintained	A0110X
3 or 4	●	illum, momentary	A0111Y
3 or 4	●	illum, maintained	A0111X
3 or 4	●	non-illum, momentary	A0112Y
3 or 4	●	non-illum, maintained	A0112X



SWITCH BLOCK	
No. of poles	Part no.
Single pole	A0151B
Double pole	A0152B
Three pole	A0155B
Four pole	A0153B

FOR UNSEALED SWITCHES (IP40):
Add '01' to end of OPERATOR model number.

FOR SCREEN ENGRAVING OR INSERTABLE LEGENDS:
Contact factory.

Bezel: ■ rectangular ■ square ● round 'illum' - illuminated 'non-illum' - non-illuminated

A01 SERIES INDICATORS

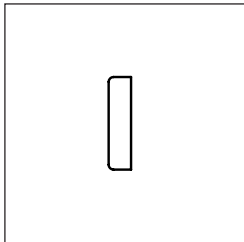
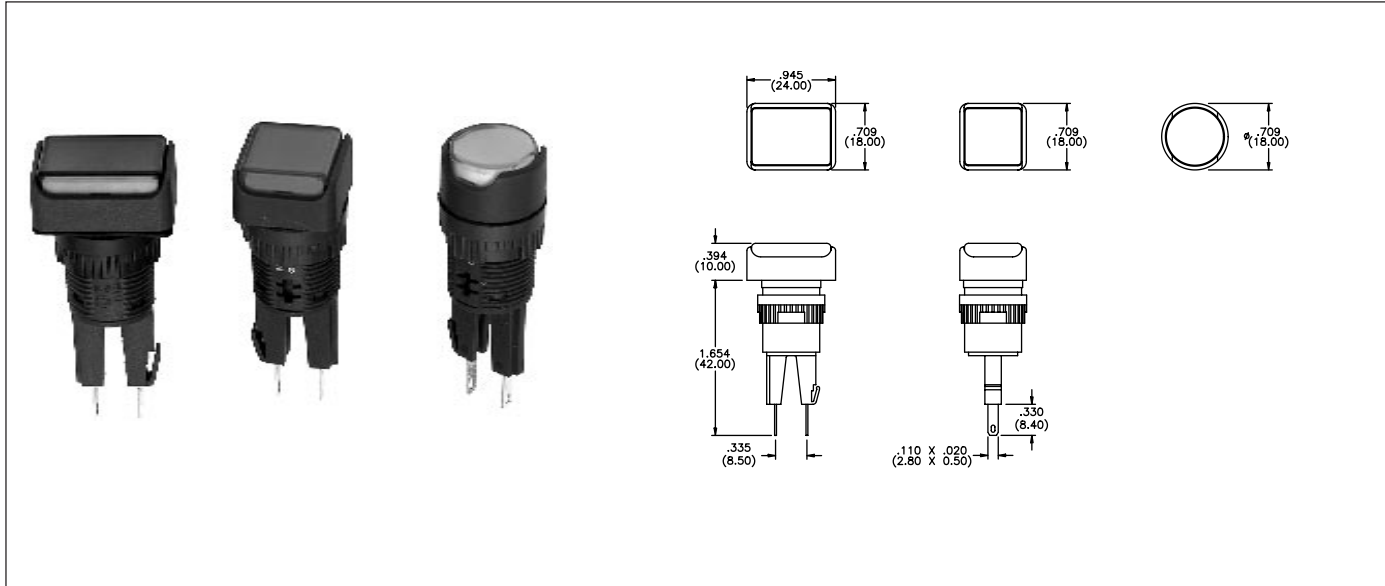
Panel cut-out .630" (16mm)

**An indicator assembly requires:
Screen + Lamp + Operator**

To order, select desired model numbers from tables below.

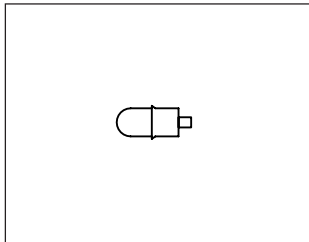
Example: IP65 rectangular indicator with red screen and 12V red LED =
A0161B, A0142M1 and A0171

Indicators are normally shipped unassembled. Consult factory if factory assembly is required.



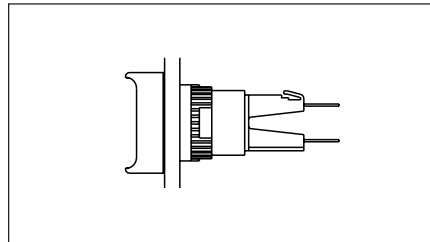
SCREEN

Bezel	Color	Part no.
■	black	A0161A
■	red	A0161B
■	amber	A0161C
■	yellow	A0161D
■	green	A0161E
■	blue	A0161F
■	clear	A0161G
■	white	A0161J
■	black	A0162A
■	red	A0162B
■	amber	A0162C
■	yellow	A0162D
■	green	A0162E
■	blue	A0162F
■	clear	A0162G
■	white	A0162J
●	black	A0163A
●	red	A0163B
●	amber	A0163C
●	yellow	A0163D
●	green	A0163E
●	blue	A0163F
●	clear	A0163G
●	white	A0163J



LAMP

Lamp	Voltage	Part no.
Filament	6.3V	A0141A
Filament	14V	A0141B
Filament	28V	A0141C
Filament	36V	A0141D
Filament	48V	A0141E
Filament	60V	A0141F
Neon	110V	A0143G
Neon	220V	A0143H
LED	6V red	A0142L1
LED	6V green	A0142L2
LED	6V amber	A0142L3
LED	12V red	A0142M1
LED	12V green	A0142M2
LED	12V amber	A0142M3
LED	12V blue	A0142M4
LED	12V white	A0142M5
LED	24V red	A0142N1
LED	24V green	A0142N2
LED	24V amber	A0142N3
LED	24V blue	A0142N4
LED	24V white	A0142N5
LED	48V red	A0142P1
LED	48V green	A0142P2
LED	48V amber	A0142P3



OPERATOR

Bezel	Description	Part no.
■	indicator	A0171
■	indicator	A0172
●	indicator	A0173

FOR UNSEALED INDICATORS (IP40):
Add '01' to end of OPERATOR model number.

FOR SCREEN ENGRAVING OR INSERTABLE LEGENDS:
Contact factory.

Bezel: ■ rectangular ■ square ● round

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A01 SERIES

ROTARY LEVER SWITCHES

Panel cut-out .630" (16mm)

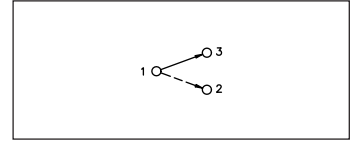
A rotary lever switch assembly requires:

Operator + Switchblock

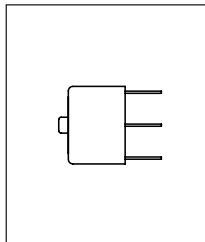
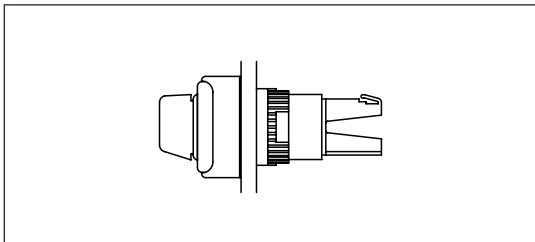
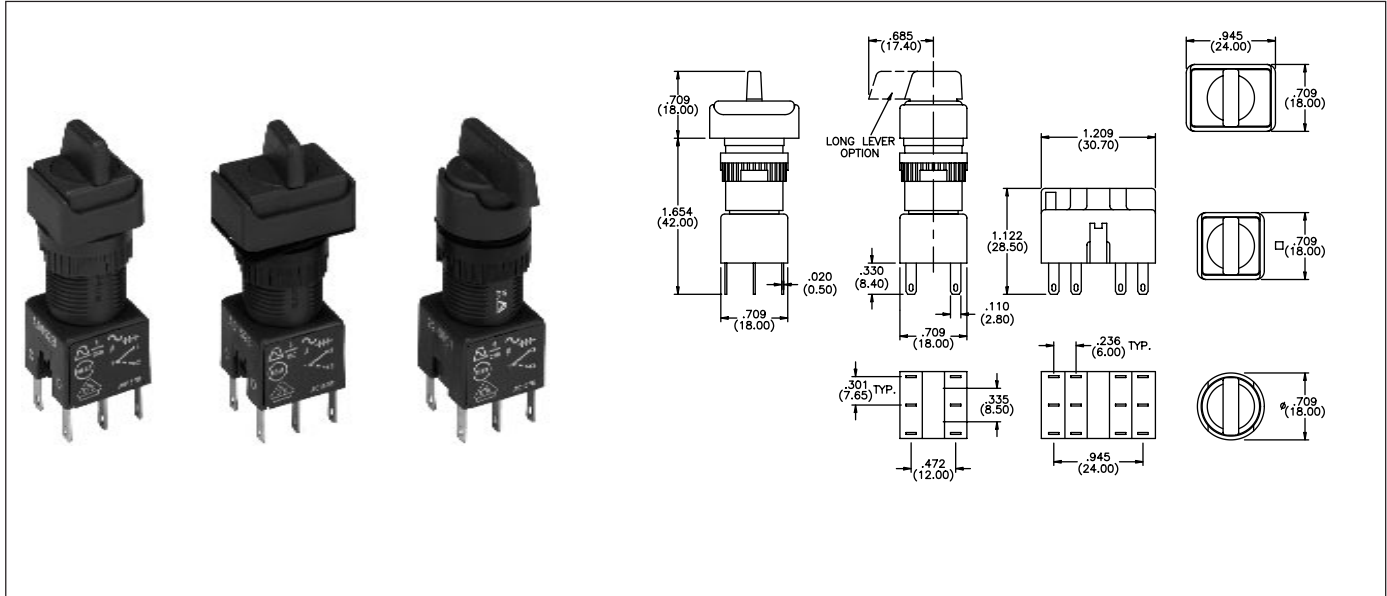
To order, select desired model numbers from tables below.

Example: IP65 rectangular rotary switch with long lever, single pole, 2 positions maintained = **A019101 and A0151B**

Switches are normally shipped unassembled. Consult factory if factory assembly is required.



SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE.



OPERATOR

Poles	Bezel	Description	Short lever	Long lever
1 or 2	■	2 pos, maintained	A019201	A019101
1 or 2	■	2 pos, momentary	A019202	A019102
3 or 4	■	2 pos, maintained	A019203	A019103
3 or 4	■	2 pos, momentary	A019204	A019104
1 or 2	■	3 pos, maintained	A019205	A019105
1 or 2	■	3 pos, momentary	A019206	A019106
1 or 2	■	3 pos, mainB, momC	A019207	A019107
1 or 2	■	3 pos, mainC, momB	A019208	A019108
1 or 2	■	2 pos, maintained	A019401	A019301
1 or 2	■	2 pos, momentary	A019402	A019302
3 or 4	■	2 pos, maintained	A019403	A019303
3 or 4	■	2 pos, momentary	A019404	A019304
1 or 2	■	3 pos, maintained	A019405	A019305
1 or 2	■	3 pos, momentary	A019406	A019306
1 or 2	■	3 pos, mainB, momC	A019407	A019307
1 or 2	■	3 pos, mainC, momB	A019408	A019308
1 or 2	●	2 pos, maintained	A019601	A019501
1 or 2	●	2 pos, momentary	A019602	A019502
3 or 4	●	2 pos, maintained	A019603	A019503
3 or 4	●	2 pos, momentary	A019604	A019504
1 or 2	●	3 pos, maintained	A019605	A019505
1 or 2	●	3 pos, momentary	A019606	A019506
1 or 2	●	3 pos, mainB, momC	A019607	A019507
1 or 2	●	3 pos, mainC, momB	A019608	A019508

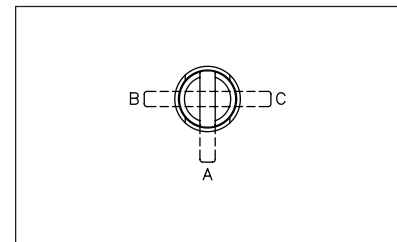
Bezel: ■ rectangular ■ square ● round 'pos' - position 'mainB' - maintained position B 'momC' - momentary position C

SWITCH BLOCK

No. of poles	Part no.
Single pole	A0151B
Double pole	A0152B
Three pole	A0155B
Four pole	A0153B

FOR UNSEALED SWITCHES (IP40):
Add '01' to end of OPERATOR model number.

LEVER POSITIONS



Lever rotation - 2 position switches

The model numbers shown are for switches with counterclockwise lever rotation. For clockwise rotation, replace:

- 01 with 09**
- 02 with 10**
- 03 with 11**
- 04 with 12**

at the end of the model number.

A01 SERIES

KEYLOCK SWITCHES

Panel cut-out .630" (16mm)

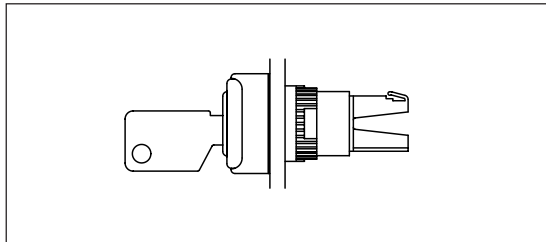
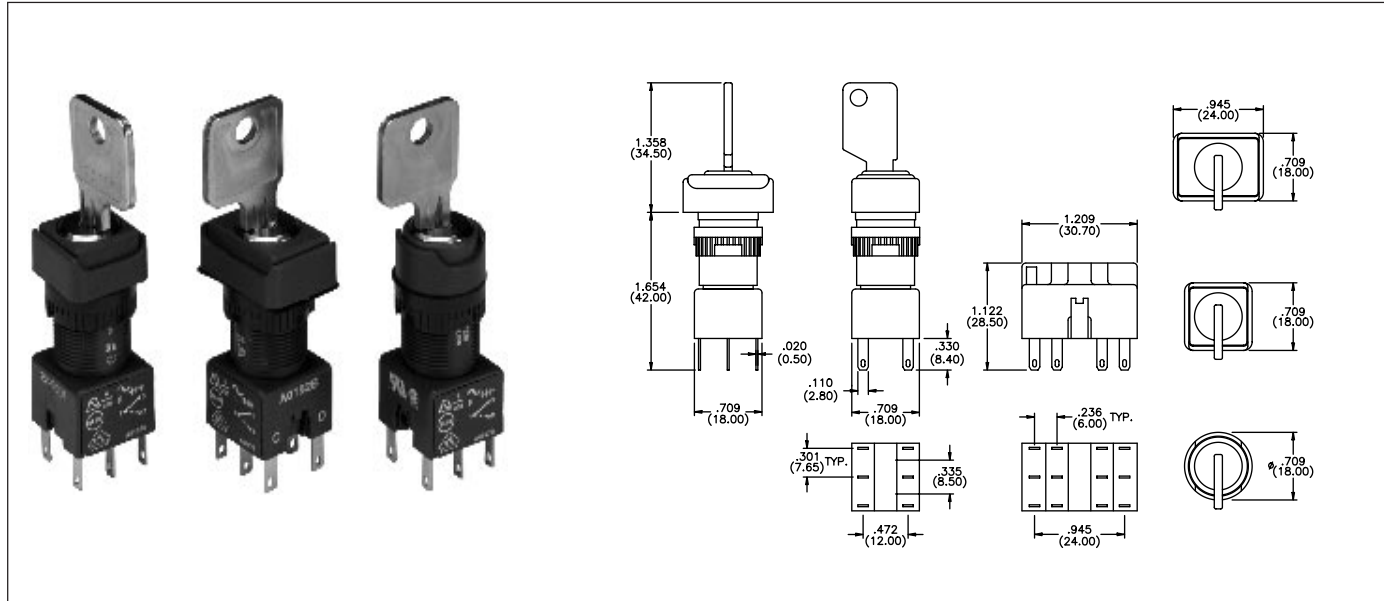
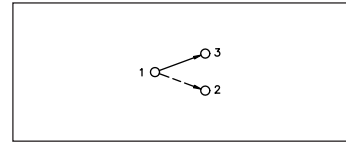
A keylock switch assembly requires:

Operator + Switchblock

To order, select desired model numbers from tables below.

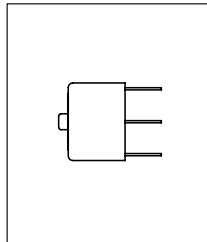
Example: Rectangular keylock switch, single pole, 2 positions maintained = **A018101 and A0151B**

Switches are normally shipped unassembled. Consult factory if factory assembly is required.



OPERATOR

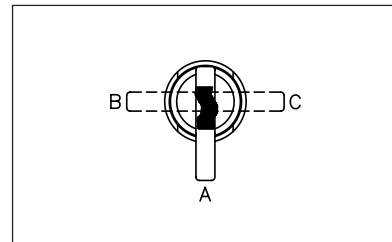
Poles	Bezel	Description	Part no.	Key removable
1 or 2	■	2 pos, maintained	A018101	A - C
1 or 2	■	2 pos, momentary	A018102	A
3 or 4	■	2 pos, maintained	A018103	A - C
3 or 4	■	2 pos, momentary	A018104	A
1 or 2	■	3 pos, maintained	A018105	A - B - C
1 or 2	■	3 pos, momentary	A018106	A
1 or 2	■	3 pos, mainB, momC	A018107	A - B
1 or 2	■	3 pos, mainC, momB	A018108	A - C
1 or 2	■	2 pos, maintained	A018201	A - C
1 or 2	■	2 pos, momentary	A018202	A
3 or 4	■	2 pos, maintained	A018203	A - C
3 or 4	■	2 pos, momentary	A018204	A
1 or 2	■	3 pos, maintained	A018205	A - B - C
1 or 2	■	3 pos, momentary	A018206	A
1 or 2	■	3 pos, mainB, momC	A018207	A - B
1 or 2	■	3 pos, mainC, momB	A018208	A - C
1 or 2	●	2 pos, maintained	A018301	A - C
1 or 2	●	2 pos, momentary	A018302	A
3 or 4	●	2 pos, maintained	A018303	A - C
3 or 4	●	2 pos, momentary	A018304	A
1 or 2	●	3 pos, maintained	A018305	A - B - C
1 or 2	●	3 pos, momentary	A018306	A
1 or 2	●	3 pos, mainC, momB	A018307	A -



SWITCH BLOCK

No. of poles	Part no.
Single pole	A0151B
Double pole	A0152B
Three pole	A0155B
Four pole	A0153B

KEY POSITIONS



Key rotation - 2 position switches

The model numbers shown are for switches with counterclockwise key rotation. For clockwise rotation, replace:

- 01** with **25**
- 02** with **24**
- 03** with **27**
- 04** with **28**

at the end of model number.

2 standard keys are supplied.
20 key barrel types available from stock.

FOR UNSEALED SWITCHES (IP40):
Add '01' to end of OPERATOR model number.

NON-REMOVABLE KEY POSITIONS:
Contact factory.

Bezel: ■ rectangular ■ square ● round 'pos' - position 'mainB' - maintained position B 'momC' - momentary position C

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A01 SERIES

EMERGENCY STOP SWITCHES & MUSHROOM HEAD PUSHBUTTONS

Panel cut-out .630" (16mm)

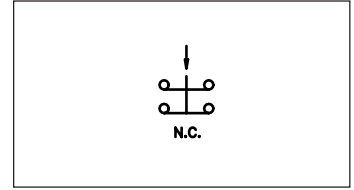
EMERGENCY STOP SWITCHES

- Highly visible .944" (24mm) dia. red mushroom actuator
- Highly reliable positive break switch
- Push to shut switch 'off', twist to reset to 'on'

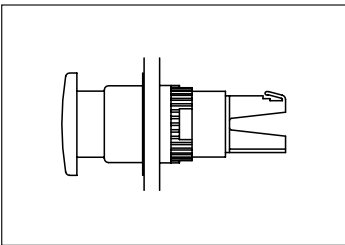
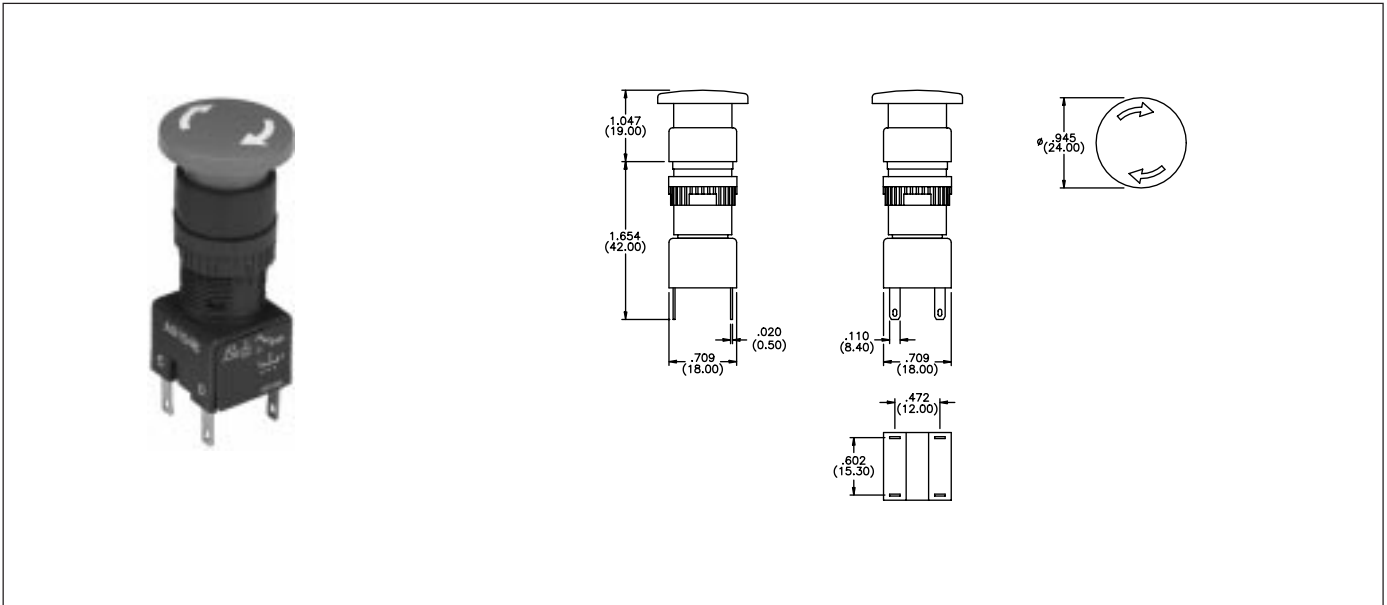
An emergency stop switch assembly requires: Operator + Switch block

To order, specify with single pole or double pole switch block. Approved to UL1054/EN 60947

Switches are normally shipped unassembled. Consult factory if factory assembly is required.

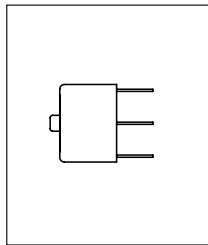


SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE.



OPERATOR

Bezel	Description	Part no.
●	Emergency stop	A01ES



SWITCH BLOCK

No. of poles	Part no.
Single pole	A0150B
Double pole	A0154B

ACCESSORY

2.362" (60mm) dia.
Self Adhesive Label



Description	Part no.
Yellow label with text	A01YL1
Yellow label	A01YL2

MUSHROOM HEAD PUSHBUTTONS

OPERATOR

Bezel	Description	Part no.
●	Red momentary operator	A01MMB
●	Black momentary operator	A01MMA
●	Red maintained operator	A01MXB
●	Black maintained operator	A01MXA

SWITCH BLOCK

No. of poles	Part no.
Single pole	A0151B
Double pole	A0152B
Three pole	A0155B
Four pole	A0153B

For other colors, contact factory.

Bezel: ● round

Momentary and maintained function mushroom head pushbutton actuators.

Momentary version is un-marked.

Dimensions of mushroom head pushbuttons are the same as emergency stop switches (above).

**Mushroom head pushbutton assembly requires:
Operator + Switchblock**

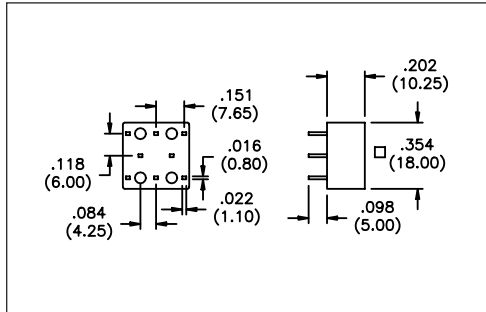
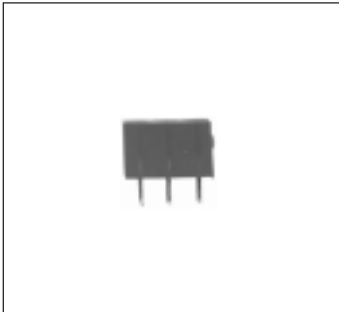
FOR UNSEALED SWITCHES (IP40): Add '01' to end of OPERATOR model number.

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A01 SERIES

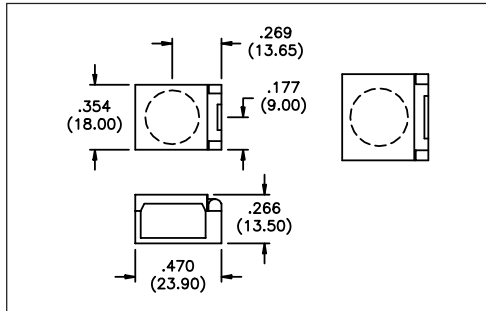
ACCESSORIES

PRINTED CIRCUIT BOARD SOCKET



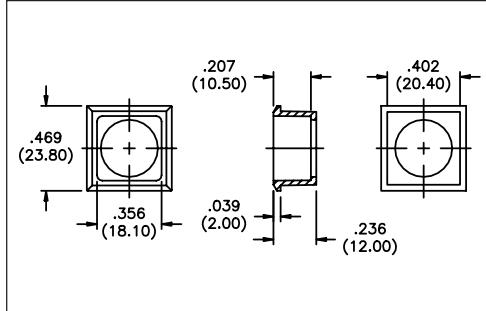
Single pole, non-illuminated	A01PC1
Double pole, non-illuminated	A01PC2
Single pole, illuminated	A01PC3
Double pole, illuminated	A01PC4
Indicator	A01PC5

FLAPGUARDS



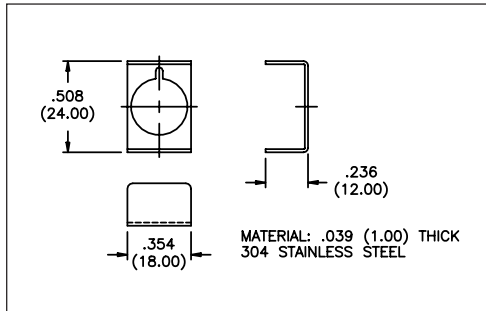
Rectangular bezel	A01FG1
Round/square bezel	A01FG2

FLUSH MOUNTING BEZELS



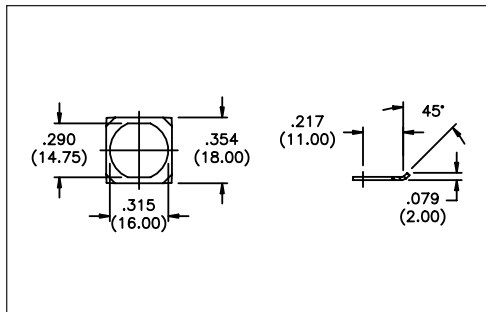
Rectangular bezel	A01FM1
Round/square bezel	A01FM
Rectangular washer	A01FM1 washer
Round/square washer	A01FM washer

METAL GUARDS



Rectangular bezel	A01MG1
Round/square bezel	A01MG

ANTI-ROTATION RING



Lock washer	A01LW
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SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE.

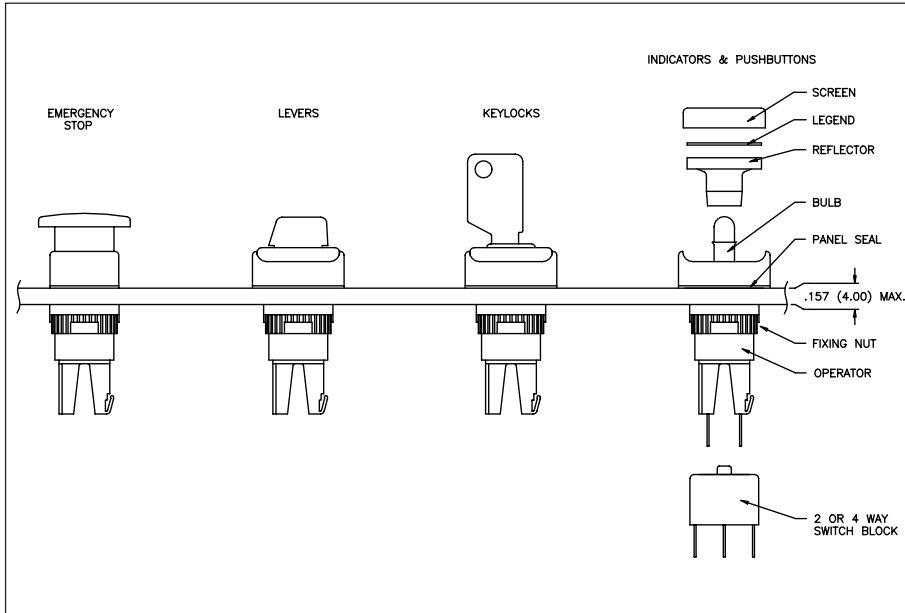
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A01 SERIES

INDUSTRIAL CONTROLS

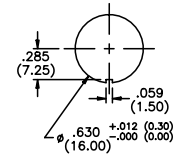
INSTALLATION & TOOLS

MODULAR CONSTRUCTION / PANEL MOUNTING

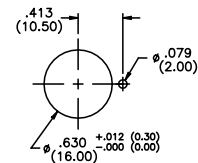


PANEL CUT-OUTS

Round & square operators



Rectangular operators



Max. panel thickness: .156" (4mm)

PANEL MOUNTING ASSEMBLY

- Drill or punch hole per panel cut-outs above.
- Assemble front operator through hole and assemble fixing nut finger tight.
- Wire switch block as required and slide onto operator until latch engages.
- Assemble bulb, if required, using tool number 30-0002.
- Snap the screen onto the reflector assembly with legend in between, if required. Then snap onto front of operator, taking care to line up the locating slot with the polarizing dot to prevent damaging the seal.

TO REMOVE BULB

Remove reflector/screen assembly by inserting tool number 30-0006 between the bezel finger guard and the screen to engage the slot and pulling. Use the bulb extractor to remove the bulb.

SWITCH BLOCK

To assemble switch block to operator, carefully line up switch block with operator then slide onto front of operator. Insure the latch is fully engaged correctly onto the switch block.

To remove the switch block, depress the latch and slide the switch block off the operator.

FIXING NUT KEY



30-0001

BULB REMOVER



30-0002

SCREEN REMOVER



30-0006

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