TYPICAL SWITCH ORDERING EXAMPLE

LB 1 5 S K W01 – 12 – CJ

POLES

1	SPDT
2	DPDT

CIRCUITS

5	ON	(ON)
( ) = Momentary		
6	ON	ON
Alternate Action with Latchdown		

SHAPES

S	Square
C	Round
R	Rectangular

HOUSING

K	Black
G	Gray

CONTACTS & TERMINALS

W01	Silver Contacts and Solder Lug/Quick Connect Terminals 3A @ 125/250V AC
G01	Gold Contacts and Solder Lug/Quick Connect Terminals 0.4VA @ 28V AC/DC

LAMPS

Incandescent Lamp used with Solid Cap

00	No Lamp
05	5-volt
12	12-volt
28	28-volt

Incandescent or Neon Lamp used with Insert Cap

00	No Lamp
01	110-volt Neon
05	5-volt Incandescent
12	12-volt Incandescent
28	28-volt Incandescent

Single Element LED used with Single Element LED Cap

10C	Single Element Red
10E	Single Element Yellow
10F	Single Element Green
10G	Single Element Blue (for JB cap only)

LED used with Spot Illuminated Cap

1C	Red Single Color
1E	Yellow Single Color
1F	Green Single Color
CF	Red/Green Bicolor

Nonilluminated Cap

00	No Lamp

CAP TYPES & COLOR COMBINATIONS

Solid Cap Lens/Filter Colors

BJ	White with Clear
CJ	Red with Clear
EJ	Yellow with Clear
FJ	Green with Clear
GJ	Blue with Clear

Insert Cap Lens/Filter Colors

JB	Clear with White
JC	Clear with Red
JE	Clear with Yellow
*JF	Clear with Green
*JG	Clear with Blue
* JF & JG not suitable with neon.	

Cap for Single Element LED Lens/Diffuser Colors

JB	Clear with White
JC	Clear with Red
JE	Clear with Yellow
JF	Clear with Green

Spot Illuminated Cap Cap Colors

A	Black	Available in square and round only.
B	White	
C	Red	
F	Green	

Nonilluminated Cap Colors

A	Black	E	Yellow	G	Blue
B	White	F	Green	H	Gray
C	Red				

DESCRIPTION FOR TYPICAL ORDERING EXAMPLE

LB15SKW01-12-CJ

12-volt Incandescent Lamp

SPDT ON-(ON) Circuit

Silver Contacts and Solder Lug/Quick Connect Terminals; rated 3A @ 125/250V AC

Solid Cap with Red Lens and Clear Filter

Square Shape

Black Housing

IMPORTANT:

Switches are supplied without UL & CSA marking unless specified. Specific models & ratings noted on General Specifications page.

General Specifications Dimensions

Series LB

Standard Size Pushbutton Switches

GENERAL SPECIFICATIONS

Electrical Capacity (Resistive Load)

Power Level (silver): 3A @ 125V AC or 3A @ 250V AC or 3A @ 30V DC
Logic Level (gold): 0.4VA maximum @ 28V AC/DC maximum
Note: See Supplement Index to find explanation of operating range.

Other Ratings

Contact Resistance: 50 milliohms maximum for silver; 100 milliohms maximum for gold
Insulation Resistance: 200 megohms minimum @ 500V DC
Dielectric Strength: 1,000V AC minimum between contacts; 1,500V AC minimum between contacts & case
Mechanical Life: 1,000,000 operations minimum for momentary circuit
200,000 operations minimum for maintained circuit
Electrical Life: 100,000 operations minimum
Nominal Operating Force: 450 grams
Contact Timing: Nonshorting (break-before-make)
Travel for Momentary Circuit: 1.9mm (.075") pretravel; 1.1mm (.043") overtravel; 3.0mm (.118") total travel
Travel for Maintained Circuit: 2.2mm (.087") pretravel; 0.8mm (.031") overtravel; 3.0mm (.118") total travel

Materials & Finishes

Housing: Glass fiber reinforced polyamide
Snap-in Frame: Stainless steel
Movable Contact: Silver alloy or copper with gold plating over nickel plating
Stationary Contacts: Silver alloy or copper with gold plating over nickel plating
Base: Diallyl phthalate
Common Terminals: Phosphor bronze with silver or gold plating
End Terminals: Phosphor bronze with silver or gold plating
Lamp Terminals: Phosphor bronze with silver plating

Environmental Data

Operating Temp Range: -25°C through +50°C (-13°F through +122°F) for illuminated
-25°C through +70°C (-13°F through +158°F) for nonilluminated
Note: When used with a polyvinyl chloride splash cover, the lowest limit is 0°C (32°F)
Humidity: 93% humidity for 96 hours @ 40°C (104°F)
Vibration: 10 ~ 55Hz with peak-to-peak amplitude of 1.5mm traversing the frequency range & returning in 1 minute; 3 right angled directions for 2 hours
Shock: 50g acceleration (tested in 6 right angled directions, with 5 shocks in each direction)
Sealing: Not available for snap-in; see next section for panel seal.

Installation

Cap Installation Force: 0.4 kg (.88 lb) maximum downward force on actuator
Quick Connect Force: 5.4 kg (11.9 lbs) maximum downward force on connector
Soldering Time & Temperature: 3 seconds @ 350°C or 5 seconds @ 270°C
Process Seal: Not available

Standards & Certifications

Flammability Standards: UL94V-0 base
UL Recognized: All models recognized at 3A @ 125V or 250V AC or 0.4VA maximum @ 28V AC/DC maximum; UL File No. E44145
CSA Certified: All models certified at 3A @ 125V or 250V AC or 0.4VA maximum @ 28V AC/DC maximum; CSA File Nos. LR23535

Series LB

Standard Size Pushbutton Switches

POLES & CIRCUITS

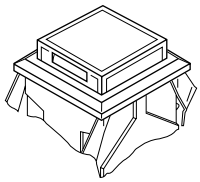
Pole	Model	Plunger Position ( ) = Momentary: Normal	Plunger Position ( ) = Momentary: Down	Connected Terminals: Normal	Connected Terminals: Down	Throw & Power/Lamp Schematics
SP	LB15 LB16*	ON ON	(ON) ON	1-3	1-2	SPDT 
DP	LB25 LB26*	ON ON	(ON) ON	1-3 4-6	1-2 4-5	DPDT 

Notes: Switch is marked with NC, NO, COM, L+, L-.
Lamp circuit is isolated and requires external power source.

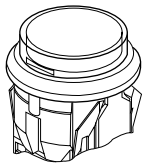
* When in latchdown position for the alternate circuit, cap position is 1.0mm (.039") above the built-in bezel.

SHAPES

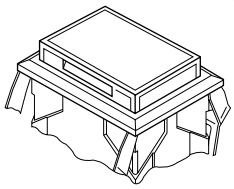
S **15.8mm Square**



C **21.7mm Diameter Round**



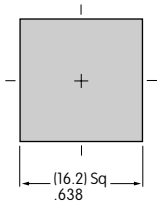
R **15.8mm x 22mm Rectangular**



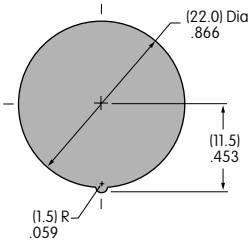
Panel Cutouts

Panel Thickness for Switches & Barriers: 1 ~ 4mm (.039" ~ .157")
Panel Thickness for Protective Guards & Splash Covers: 1 ~ 3.5mm (.039" ~ .138")

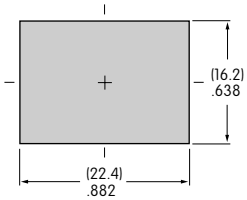
Cutout for 1 switch: 16.2mm x 16.2mm



Cutout for 1 switch with barriers is 16.2mm x 20.7mm.



Cutout for 1 switch: 16.2mm x 22.4mm



Cutout for 1 switch with barriers is 16.2mm x 26.9mm.

HOUSING

Housing Colors Available:

K Black

G Gray

CONTACT MATERIALS, RATINGS, & TERMINALS

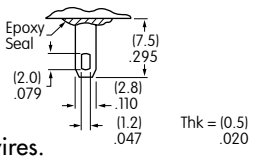
W01 **Silver Contacts** — **Power Level** **3A @ 125V AC & 250V AC**

G01 **Gold Contacts** — **Logic Level** **0.4VA max. @ 28V AC/DC max.**

See Supplement for complete explanation of operating range.

Solder Lug/Quick Connect

The 1.2mm x 2mm oblong hole accommodates one solid 18-gauge wire or two solid or stranded 20-gauge wires.



LAMP CODES & SPECIFICATIONS

Electrical specifications are determined at a basic temperature of 25°C.
Lamp circuit is independent of switch operation.

Single color LEDs are colored in OFF state. Bicolor LED is translucent white in OFF state.

For dimension drawings of lamps see Accessories & Hardware Index.

If the source voltage is greater than rated voltage, a ballast resistor is required.
The ballast resistor calculation and more lamp detail are shown in the Supplement; see Supplement Index.

Incandescent Lamp for Solid Colored and Colored Insert Caps

AT607

T-1 Standard Bi-pin

		05	12	28 *
Voltage	V	5V AC	12V AC	28V AC
Current	I	115mA	60mA	24mA
Endurance	Hours	7,000 average		

* Lamp life is significantly reduced in applications with DC current, high shock, vibration, or continuous illumination.

Neon Lamp for Colored Insert Cap

AT607N

T-1 Standard Bi-pin

		01
Voltage	V	110V AC
Current	I	1.5mA
Endurance	Hours	10,000 average
Recommended Resistors: 33K ohms for 110V AC		100K ohms for 220V AC

Single Element LED for LED Caps

AT614 Red, Yellow, Green

T-1½ Cylindrical

AT625 Blue

T-1 Standard Bi-pin

		Color	10C Red	10E Yellow	10F Green	10G Blue
Forward Peak Current	I_{FM}		50mA	50mA	50mA	30mA
Continuous Forward Current	I_F		40mA	40mA	40mA	20mA
Forward Voltage	V_F		1.75V	2.35V	2.35V	3.6
Reverse Peak Voltage	V_{RM}		4V	4V	4V	5V
Current Reduction Rate Above 25°C	ΔI_F		0.67mA/°C	0.67mA/°C	0.67mA/°C	0.50mA/°C

LED for Spot Illuminated Caps

LED factory assembled in Spot Illuminated Caps; **Not Available Separately**

			Single Color			Bicolor
		Color	1C Red	1E Yellow	1F Green	CF Red/Green
Forward Peak Current	I_{FM}		10mA	30mA	30mA	30mA
Continuous Forward Current	I_F		8mA	24mA	24mA	25mA
Forward Voltage	V_F		1.9V	2.0V	2.1V	2.1V
Reverse Peak Voltage	V_{RM}		5V	5V	5V	—
Current Reduction Rate Above 25°C	ΔI_F		0.13mA/°C	0.40mA/°C	0.40mA/°C	0.33mA/°C

00 **No Lamp** Code 00 indicates that no lamp is used.

Series LB

Standard Size Pushbutton Switches

CAP TYPES & COLOR COMBINATIONS

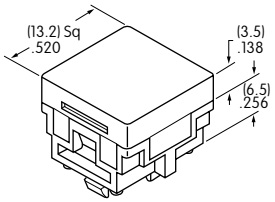
Color Codes: **A** Black **B** White **C** Red **E** Yellow **F** Green **G** Blue **J** Clear

Solid Cap for Incandescent Lamp

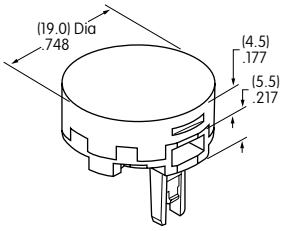
Lens/Filter Colors Available:

BJ
CJ
EJ
FJ
GJ

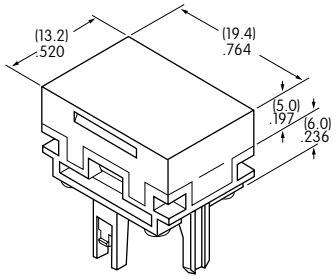
AT476 Square

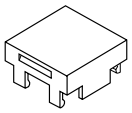


AT4012 Round

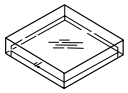


AT4026 Rectangular

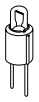




Translucent Colored Lens



Transparent Clear Filter



Lamp AT607

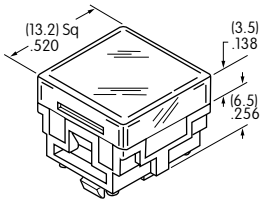
Material: Polycarbonate Finish: Glossy

Insert Cap for Incandescent or Neon Lamp

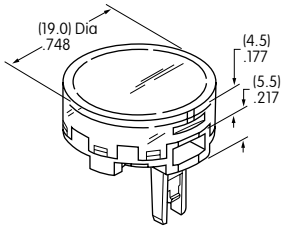
Lens/Filter Colors Available:

JB
JC
JE
JF
JG

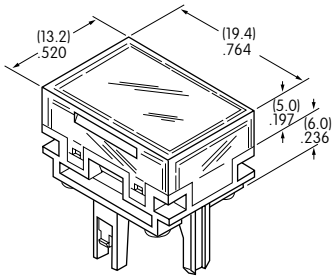
AT477 Square

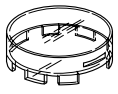


AT4013 Round

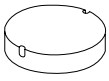


AT4027 Rectangular



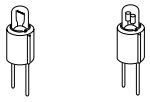


Transparent Clear Lens



Translucent Colored Filter

JF & JG not suitable with neon.



Lamps AT607 or AT607N

Material: Polycarbonate Finish: Glossy

Series LB

Standard Size Pushbutton Switches

CAP TYPES & COLOR COMBINATIONS

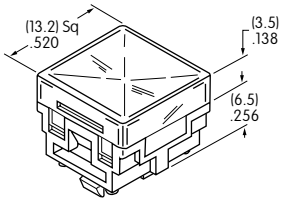
Color Codes: **A** Black **B** White **C** Red **E** Yellow **F** Green **G** Blue **J** Clear

Cap for Single Element LED

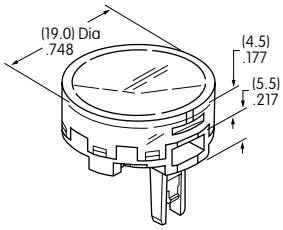
Lens/Diffuser Colors Available:

JB
JC
JE
JF

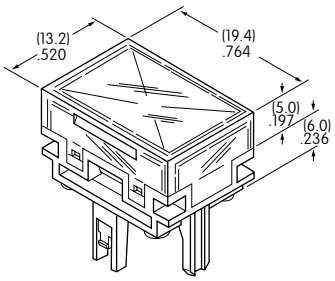
AT478 Square

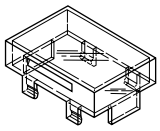


AT4014 Round

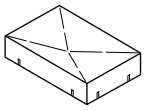


AT4028 Rectangular





Transparent Clear Lens



Translucent Colored Diffuser

LED AT614

LED AT625

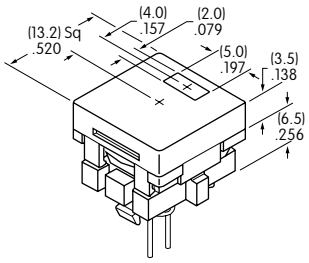
Material: Polycarbonate
Finish: Glossy

Spot Illuminated Cap with LED

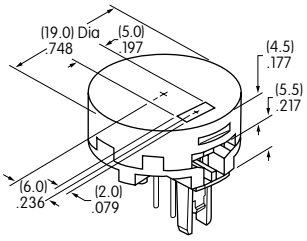
Cap Colors Available:

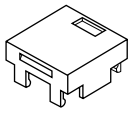
A
B
C
F

AT480 Square

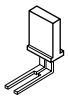


AT4016 Round





Cap with Window



Factory Assembled LED

Material: Polycarbonate
Finish: Glossy

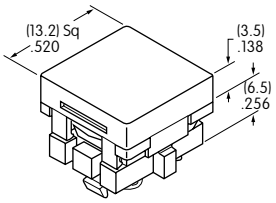
When ordering spot illuminated cap separately, LED color must be specified.
Examples: AT480CA (red LED, black cap); AT4016CFB (red/green bicolored LED, white cap)

Nonilluminated Cap

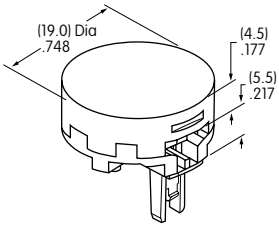
Cap Colors Available:

A
B
C
E
F
G
H

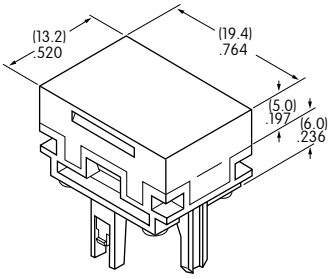
AT484 Square

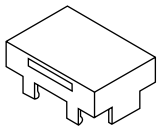


AT4017 Round



AT4030 Rectangular





Cap

No Lamp

Material: Polycarbonate
Finish: Glossy

Series LB

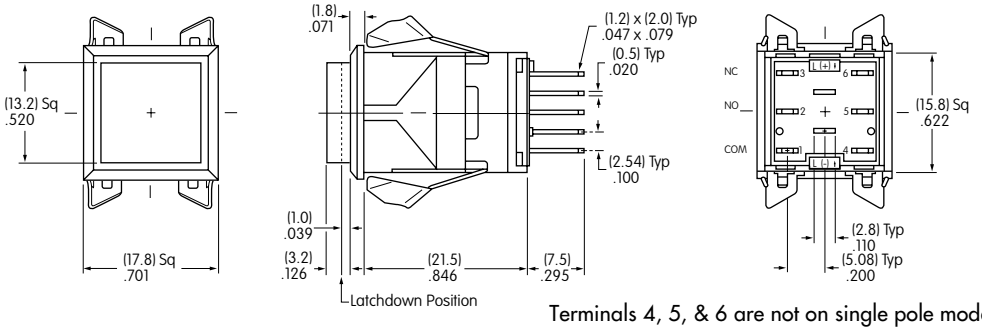
Standard Size Pushbutton Switches

TYPICAL SWITCH DIMENSIONS

Square

LB15SKW01-12-CJ

Single & Double Pole

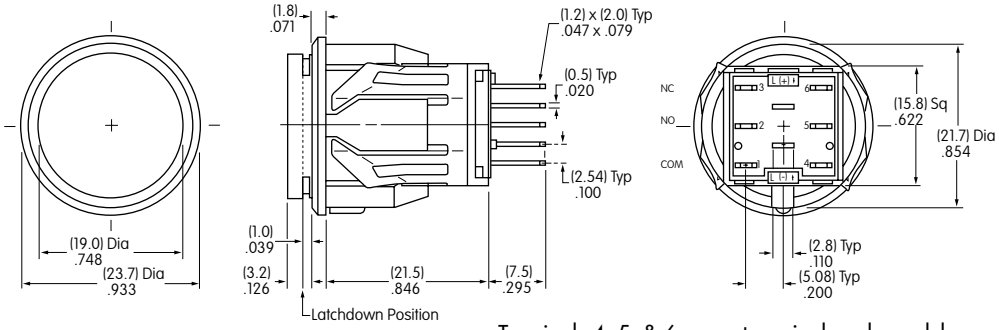


Terminals 4, 5, & 6 are not on single pole models.

Round

LB16CKW01-12-CJ

Single & Double Pole

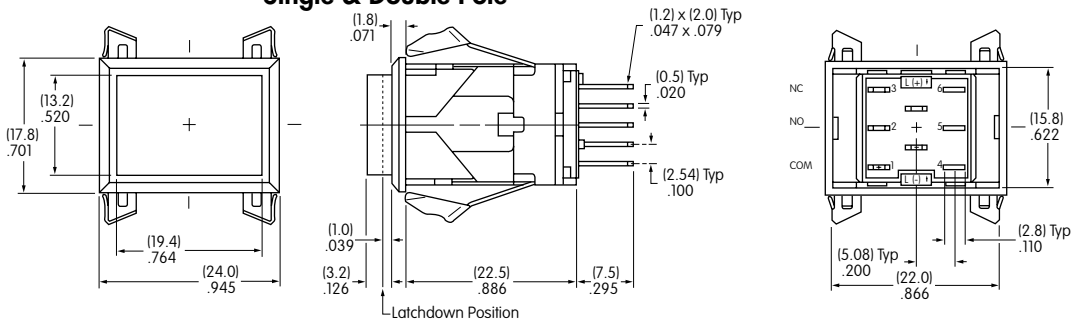


Terminals 4, 5, & 6 are not on single pole models.

Rectangular

LB26RGW01-12-CJ

Single & Double Pole

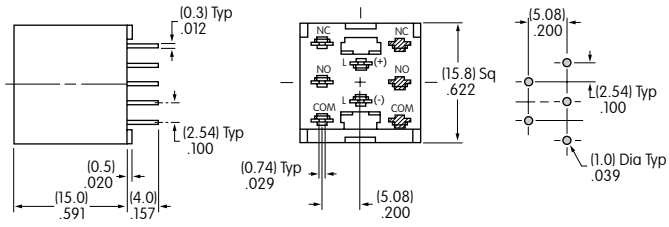


Terminals 4, 5, & 6 are not on single pole models.

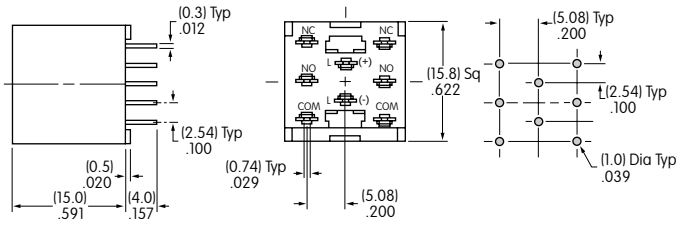
OPTIONAL ACCESSORIES

PCB Adaptors

AT711 Single Pole • Straight PC Terminals



AT712 Double Pole • Straight PC Terminals

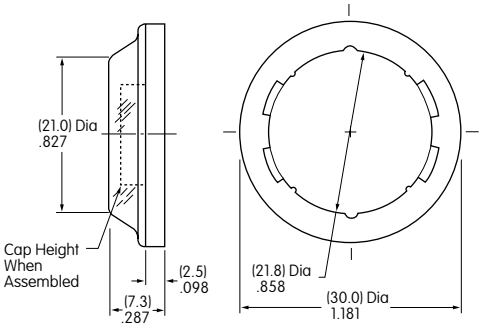


Note: Order adaptors separately.

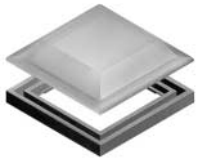
OPTIONAL ACCESSORIES

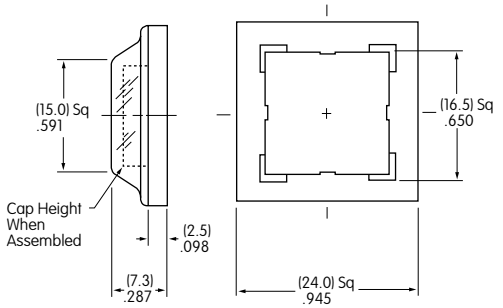
Splash Covers

AT4002 Round

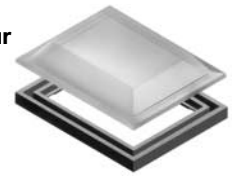


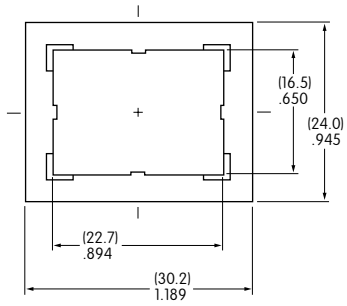
AT4001 Square





AT4011 Rectangular



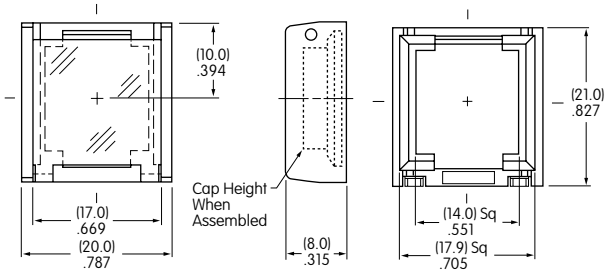


Material: PVC with polyethylene gasket
PVC loses pliability below 0°C (32°F).

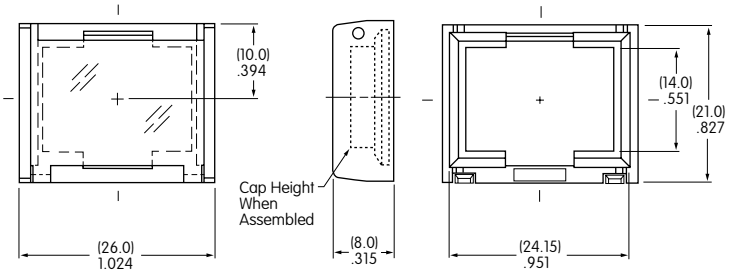
Splash Covers reduce depth of switch behind panel by .020".

Protective Guards

AT499 Square



AT4057 Rectangular

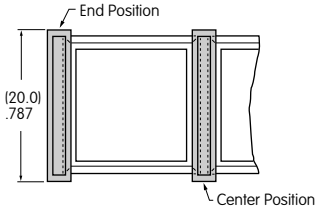


Material: Polyamide

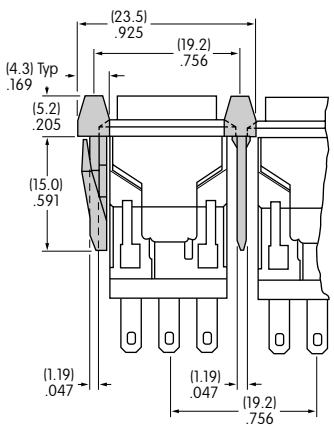
Protective Guards reduce depth of switch behind panel by .020".

Barriers

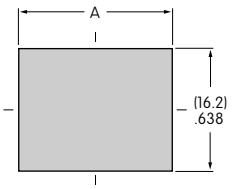
AT497 End **AT498 Center**



Material: Polyamide



Cutouts for More Than 1 Switch



Square
A = .752" x Number of Switches + .051"
Rectangular
A = .996" x Number of Switches + .051"