NKK SERIES B PUSHBUTTON SWITCHES

MOMENTARY & ALTERNATE/ANTISTATIC/WASHABLE

TYPICAL SWITCH ORDERING EXAMPLE

BB 2 5 A V - F C

POLES	
1	SPDT
2	DPDT

CIRCUITS		
5	ON	(ON)
6	ON	ON
( ) = Momentary		

PLUNGER	
A	.213" Long

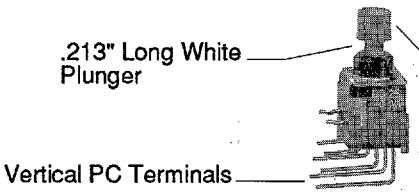
PC TERMINALS	
P	Straight
B	Straight w/Bracket
H	Right Angle w/Bracket
V	Vertical w/Bracket
W	Straight .744" Long (shown in toggle section)

CAPS	
F	.201" Diameter
H	.295" Diameter

CAP COLORS	
A	Black
B	White
C	Red

DESCRIPTION FOR TYPICAL ORDERING EXAMPLE (BB25AV-FC)

SERIES BB PUSHBUTTON



POLES AND CIRCUITS

POLE & THROW	MODEL	PLUNGER POSITION & TERMINAL NUMBERS ( ) = Momentary: Normal	Down
SPDT	BB15	ON	(ON)
	BB16	ON	ON
CONNECTED TERMINALS		2-3	2-1
SCHEMATIC		1 2 (COMM) 3	
DPDT	BB25	ON	(ON)
	BB26	ON	ON
CONNECTED TERMINALS		2-3 5-6	2-1 5-4
SCHEMATIC		1 2 (COMM) 3 4 5 6	

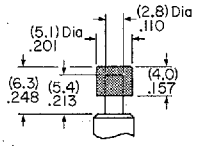
Terminal numbers are not actually on the switch.

TERMINALS

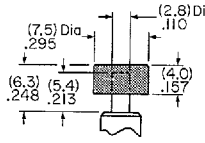
Terminal dimensions are in the following drawings. Note that the single pole alternate action model is in a double pole base.

OPTIONAL SLIP-ON CAPS

F AT475 .201" Dia. Cap



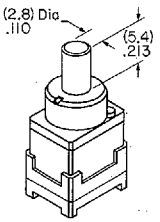
H AT496 .295" Dia. Cap



Material: Polycarbonate
Colors Available: **A** Black **B** White **C** Red
Freon or alcohol cleaning solvents are recommended for protection of polycarbonate parts.

PLUNGER

A .213" Long



Standard color: White

For other color options & plunger lengths, contact factory.

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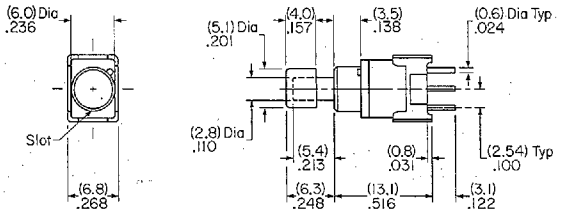
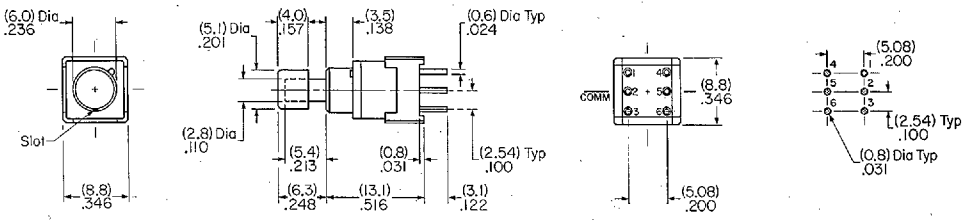
Single pole alternate action detail drawings and footprints are located at the end of the next page.

P — Straight Terminals without Bracket/Single Pole — For Single Pole Momentary



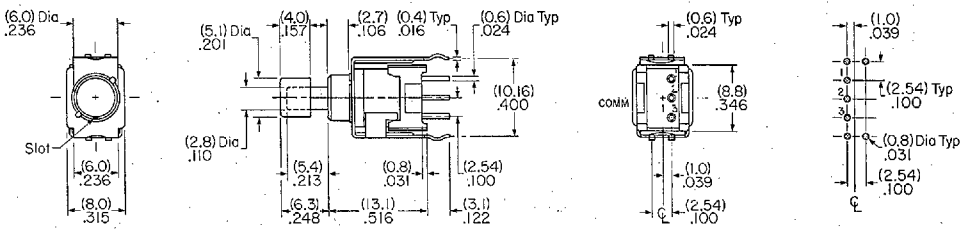
BB15AP-FA Model Shown

P — Straight Terminals without Bracket/Double Pole — For DP Momentary or SP & DP Alternate Action



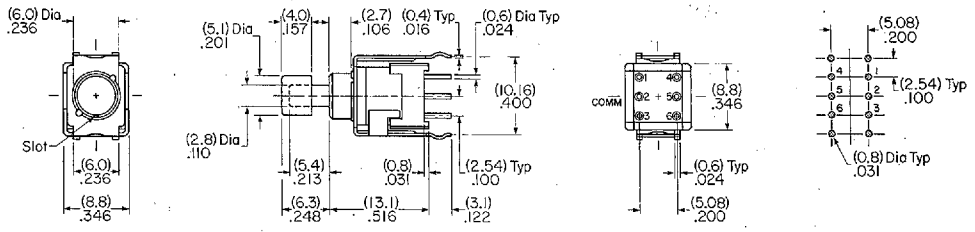
BB25AP-FA Model Shown

B — Straight Terminals with Bracket/Single Pole — For SP Momentary



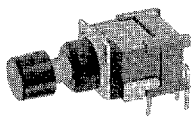
BB15AB-FA Model Shown

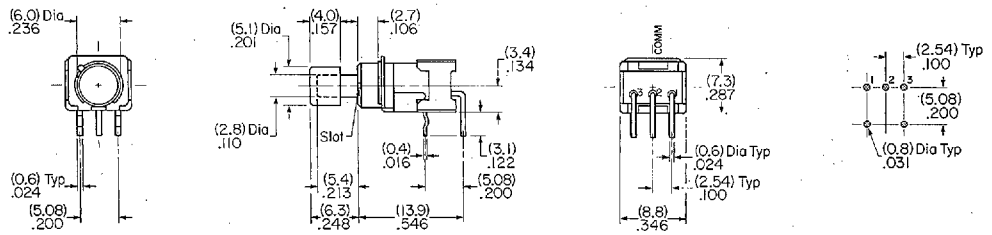
B — Straight Terminals with Bracket/Double Pole — For DP Momentary or SP & DP Alternate Action



BB25AB-FA Model Shown

H — Right Angle Terminals with Bracket/Single Pole — For Single Pole Momentary





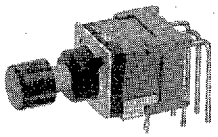
BB15AH-FA Model Shown

NKK® SERIES B PUSHBUTTON SWITCHES

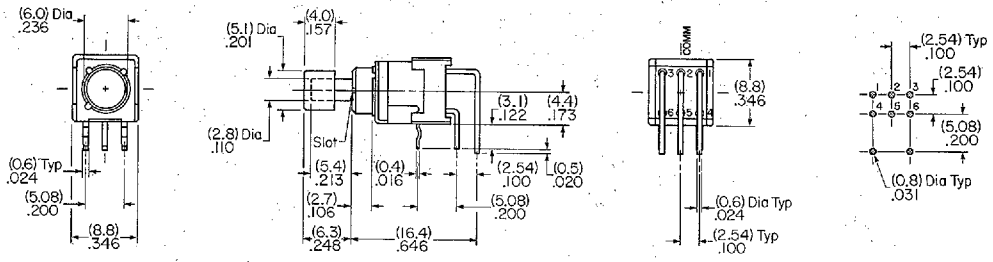
MOMENTARY & ALTERNATE/ANTISTATIC/WASHABLE

H Right Angle Terminals with Bracket/Double Pole

For DP Momentary or SP & DP Alternate Action

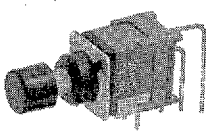


BB25AH-FA Model Shown

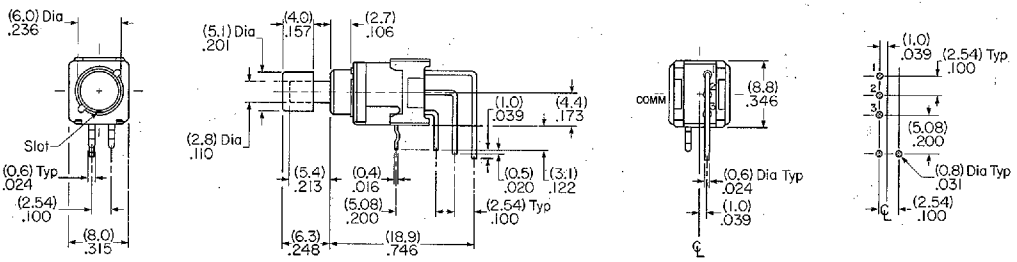


V Vertical Terminals with Bracket/Single Pole

For SP Momentary

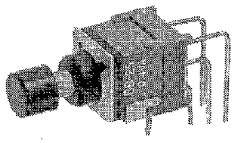


BB15AV-FA Model Shown

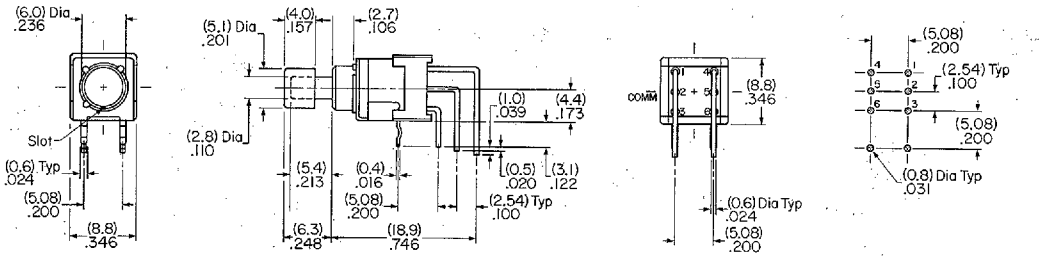


V Vertical Terminals with Bracket/Double Pole

For DP Momentary or SP & DP Alternate Action



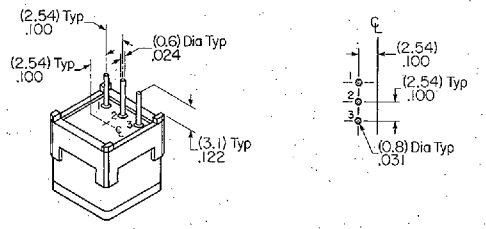
BB25AV-FA Model Shown



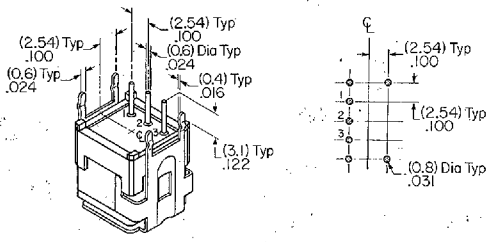
TERMINAL DETAIL & FOOTPRINTS FOR SINGLE POLE ALTERNATE ACTION MODELS

All alternate action models have double pole bases.

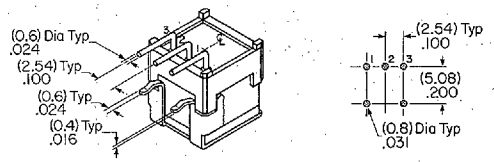
P Straight Terminals



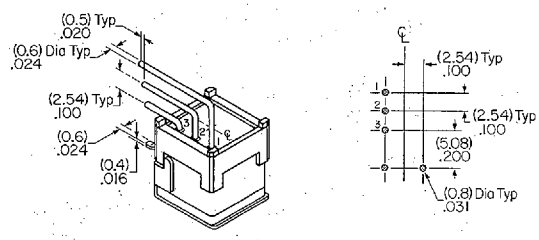
B Straight Terminals with Bracket



H Right Angle Terminals with Bracket



V Vertical with Bracket



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NKK® SERIES B PUSHBUTTON SWITCHES

A-25-21

MOMENTARY & ALTERNATE/ANTISTATIC/WASHABLE

GENERAL SPECIFICATIONS

Electrical Capacity: **(Resistive Load)**	0.4VA maximum @ 28V AC/DC maximum (Applicable Range 0.1mA ~ 0.1A @ 20mV ~ 28V)
Contact Resistance:	50 milliohms maximum
Insulation Resistance:	500 megohms minimum @ 500V DC
Dielectric Strength:	500V AC minimum
Mechanical Life:	50,000 operations min (momentary); 25,000 operations min (alternate action)
Electrical Life:	50,000 operations min (momentary); 25,000 operations min (alternate action)
Ambient Temp Range:	-25°C through +70°C (-13°F through +158°F)
Travel:	Momentary: Pretravel 0.7mm (.028"); Overtravel 0.4mm (.016"); Total 1.1mm (.043") Alternate: Pretravel 1.0mm (.039"); Overtravel 1.0mm (.039"); Total 2.0mm (.079")
Nominal Operating Force:	260 grams (momentary); 300 grams (alternate action)

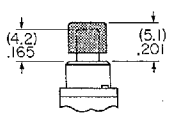
MATERIALS & FINISHES

Plunger	Polyacetal
Bushing	Carbon blended polyamide
Case Housing	Glass fiber reinforced polyamide
Support Bracket	Tin plated phosphor bronze
Movable Contact	Phosphor bronze with gold plating over silver plating
Stationary Contacts	Brass with gold plating over nickel undercoating
Terminals	Brass with gold plating over nickel undercoating

SEALED FOR WASHABILITY

Sealed-body construction permits Series B pushbutton switches to be subjected to time- and money-saving automated soldering techniques. They can be safely cleaned of flux without fear of compromising operating characteristics; **the actuator must be in UP position during washing and cap removal.** Alcohol cleaning solvents are recommended.

LATCHDOWN DIMENSIONS



The latchdown feature on maintained circuits provides visible, audible, and tactile feedback.

NKK® SERIES B

SUPER-SUBMINIATURE/PCB/ANTISTATIC/WASHABLE

A-25-13

DISTINCTIVE FEATURES

World's first to be approved by International Electrotechnical Commission's Quality Assessment System

Available with toggles, paddles, and pushbuttons.

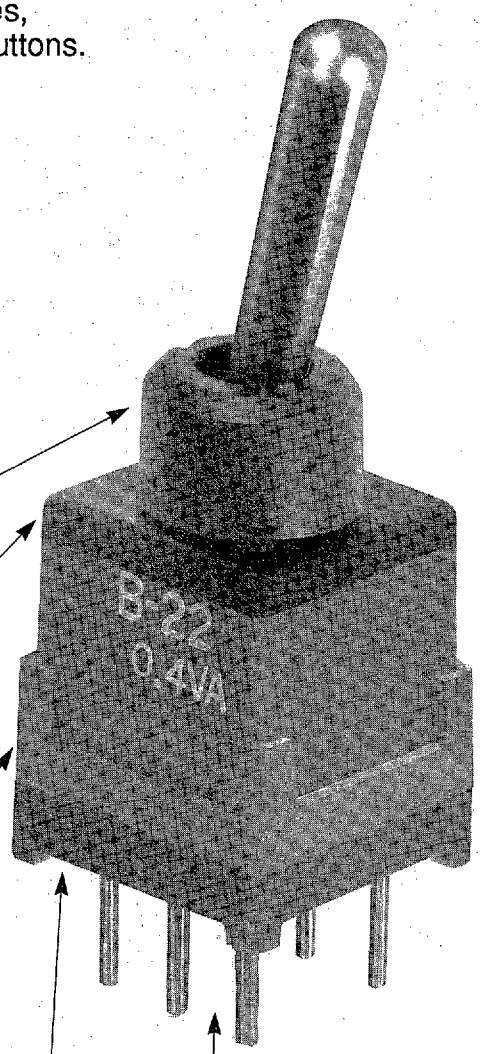
Industry's smallest alternate action pushbutton

Locking lever mechanism offered as a toggle option.

Smooth round 6mm diameter bushing simplifies panel layout.

Antistatic superstructure prevents static discharge to the contacts.

Patented Sliding Twin Crossbar (STC) contact mechanism provides smoother, positive detent and more reliable logic-level operation.



Actual Size

Totally sealed body prevents contact contamination and allows wave soldering and washing.

.100" x .100" terminal spacing conforms to standard PC board grids.

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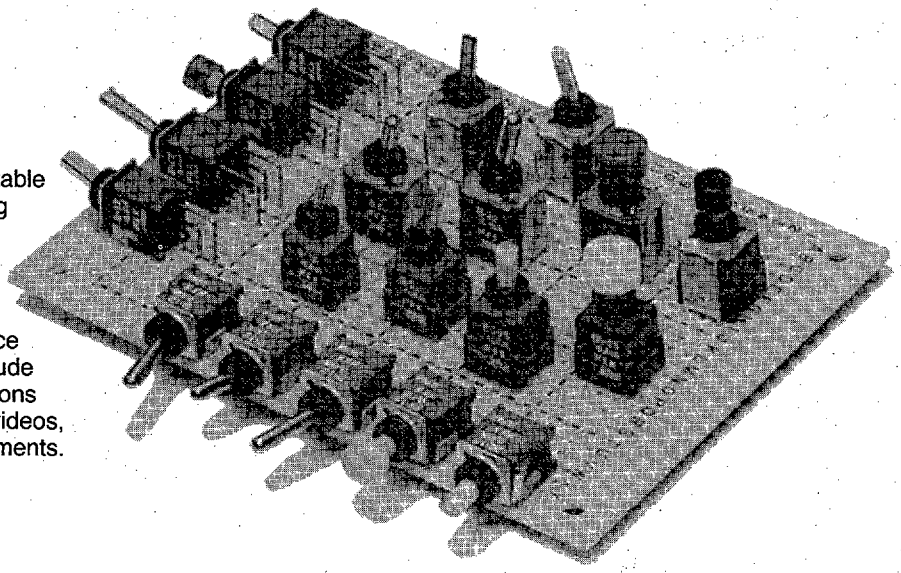
NKK® SERIES B

SUPER-SUBMINIATURE/PCB/ANTISTATIC/WASHABLE

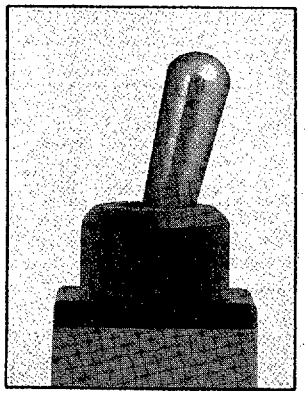
APPLICATIONS

- **Toggles**
- **Pushbuttons**

Ultraminiaturized B Series PC mountable switches feature an antistatic bushing which is smooth and round, Sliding Twin Crossbar (STC) contacts and sealed construction. They are recommended for use in products where reliability is essential and space is restricted. Typical applications include computers, peripherals, communications systems, medical equipment, home videos, cameras and small measuring instruments.

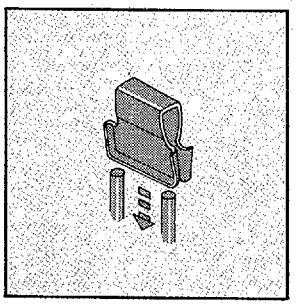


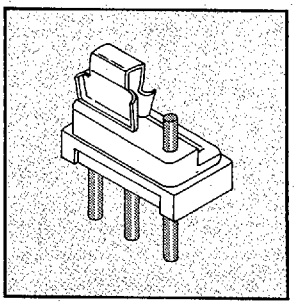
ANTISTATIC CONSTRUCTION



The switch is grounded to the PC board by means of the carbon impregnated bushing and the support bracket. Static electricity from an operator's touch travels a safe path from actuator through the bushing and bracket to the PC board, rather than traveling into the contacts.

STC CONTACT MECHANISM





NKK's patented, award-winning STC contact mechanism offers benefits unavailable in conventional mechanisms. The movable twin contact surfaces pinch the stationary contacts to provide increased contact stability and unparalleled logic-level reliability. Continued reliability is assured since the gold-plated contacts are wiped clean with each actuation. Furthermore, if one side of the twin contacts should fail to conduct, the other side functions as a backup, or fail-safe path for the current. The combination of rounded movable and stationary contacts provides smooth contact feel previously unavailable in sliding contact type mechanisms.

SEALED FOR WASHABILITY

Sealed-body construction permits Series B switches to be subjected to time- and money-saving automated soldering techniques. As a result, they can be safely cleaned of flux without fear of compromising operating characteristics.