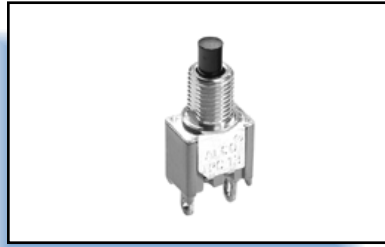
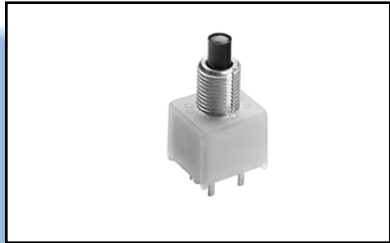


*TSP Series - Page D3*



*TP Series - Page D6*



*TP-ES Series - Page D13*



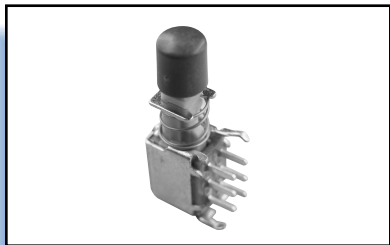
*APA Series - Page D16*



*MPA Series - Page D22*



*MSPM Series - Page D29*



*JLS Series - Page D29*



*BP Series - Page D31*

# PUSHBUTTON

**D**

Pushbutton Switches



**Pushbutton Switches, Tiny, Process Sealed**

**FEATURES:**

- High temperature plastics — liquid crystal polymer (LCP)
- Specifically designed for thru-hole and surface mount
- Tin-lead plated terminals
- Washable process sealed construction — internal actuator O-ring

**MATERIAL SPECIFICATIONS:**

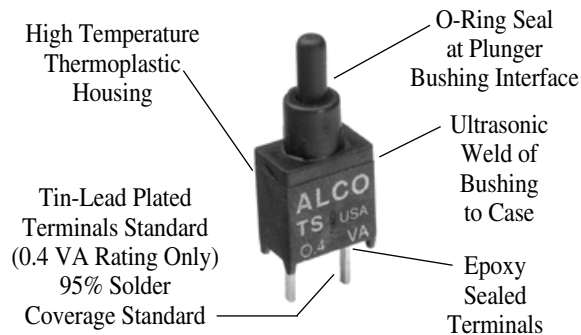
Contacts .....Copper Alloy with gold over nickel plating-  
 Case & Bushing .....Thermoplastic (LCP)  
 Actuator .....Glass reinforced nylon  
 Nickel Plating Inside .....Tin plating outside  
 Support Bracket .....Tin plated steel  
 Terminals .....Copper alloy with gold over nickel plating

**ENVIRONMENTAL SPECIFICATIONS:**

Operating Temperature..... -22°F to +185°F (-30°C to +85°C)  
 Storage Temperature.....-67°F to +185°F (-55°C to +85°C)

**TYPICAL PERFORMANCE CHARACTERISTICS:**

Contact Rating .....0.4 VA @ 20 VAC/DC  
 Initial Contact Resistance .....20 Milliohms max.  
 Insulation Resistance .....1,000 Megohms @ 500 VDC min.  
 Terminal Seal .....Epoxy  
 Actuator Travel.....0.035" (0.89)  
 Actuator Seal .....O-Ring  
 Dielectric Strength .....C - 1000 VDC RMS @ sea level  
 F - 500 VDC RMS @ sea level  
 Life Expectancy .....C - Up to 80,000 Cycles  
 F - Up to 60,000 Cycles

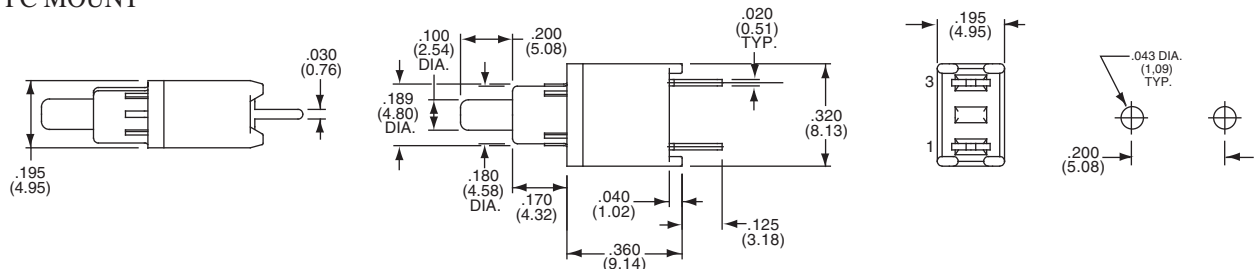


FUNCTION CHART			
The following functions available in single pole.			
<input type="checkbox"/> C	Function	2 Positions	Off (On)
SPST	Terminals Connected		<input type="checkbox"/> 1-3
Omit center terminal for function <input type="checkbox"/> C			
<input type="checkbox"/> F	Function	2 positions	On (On)
SPDT	Terminal Connected		<input type="checkbox"/> 1-2 <input type="checkbox"/> 2-3
Off Indicates a mechanical position with no electrical connection. (ON) INDICATES MOMENTARY ACTION			

**PART NUMBERING MATRIX**

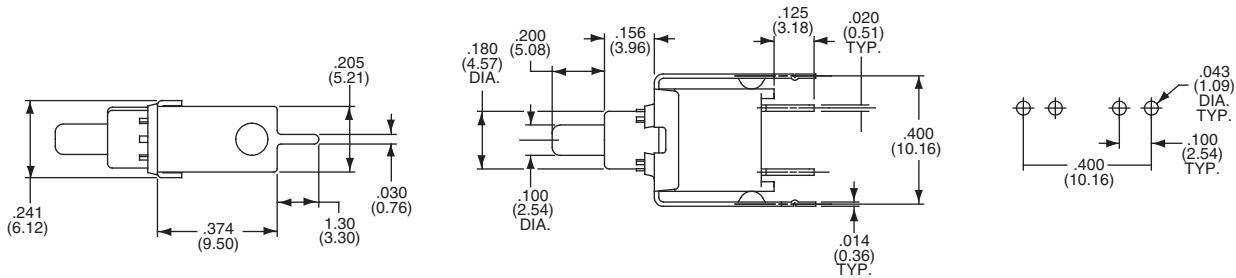
Model	Bushing (Plain)	Actuator	Poles	Rating	Function	Plating	Terminations	Colors
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		Std. .200" long F = Flush			C = Off (On) F = On (On)	PC = P.C. PCV = P.C. w/bracket RA = Right Angle VRA = Vertical Right Angle SPC = SurfaceMount SRA = Surface Mount R.A. SRAB = SurfaceMount R.A. Butt		0=Black 2=Red

**PC PC MOUNT**

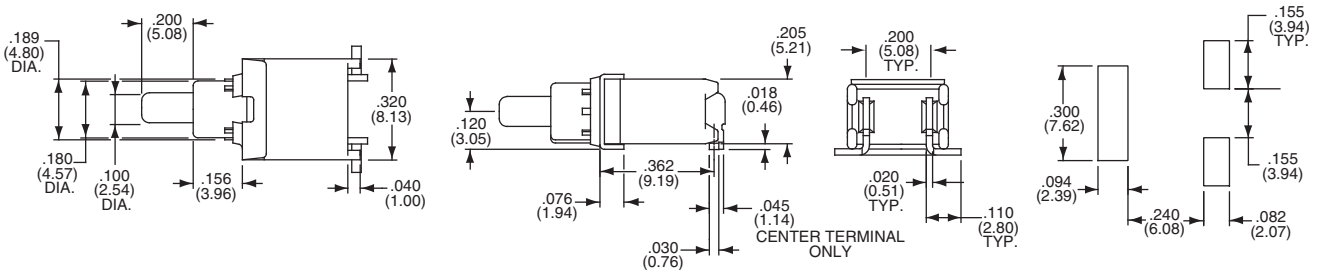


**Pushbutton Switches, Tiny, Process Sealed, Mounting Options**

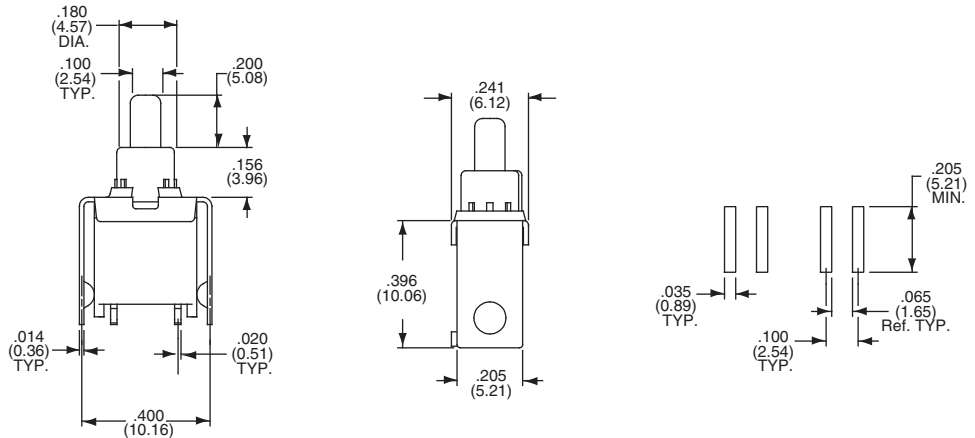
**PCV** PC WITH VERTICAL SUPPORT BRACKET



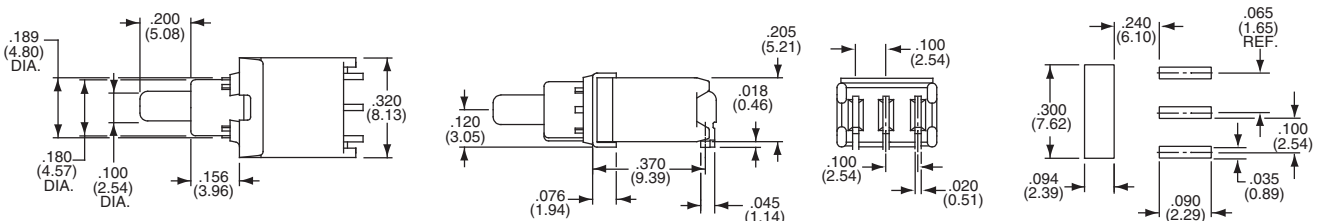
**SRA** SURFACE MOUNT RIGHT ANGLE "L" BEND



**SPC** SURFACE MOUNT WITH SUPPORT BRACKET



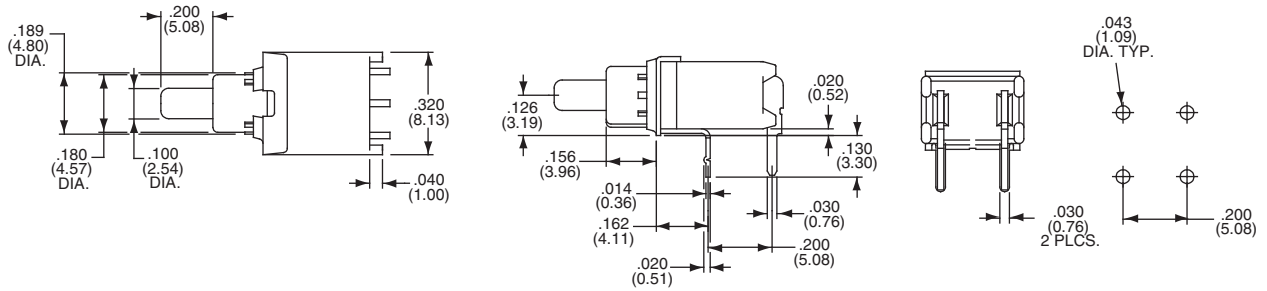
**SRAB** SURFACE MOUNT RIGHT ANGLE BUTT



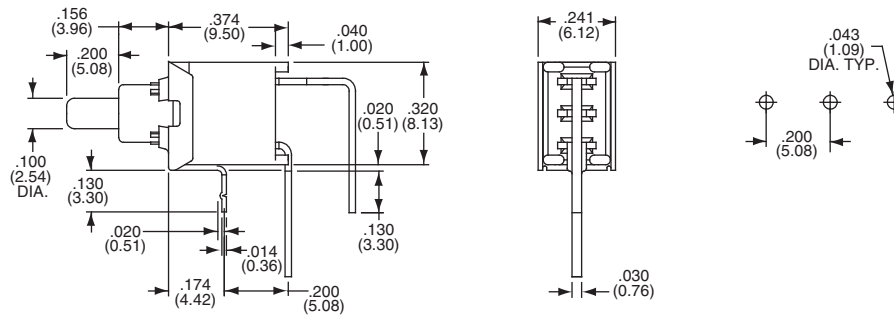
D  
TSP Series

**Pushbutton Switches, Tiny, Process Sealed Options**

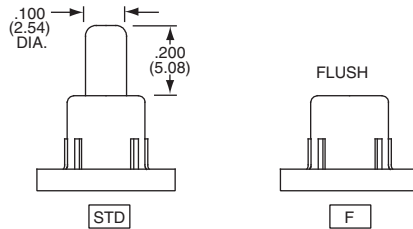
**RIGHT ANGLE RA**



**PC WITH VERTICAL SUPPORT BRACKET VRA**



**ACTUATORS**

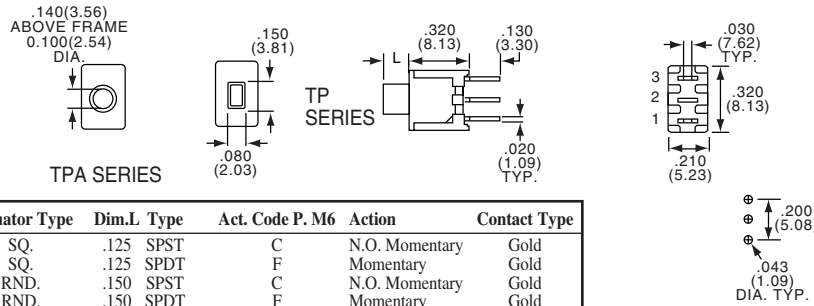


**D**  
TSP Series



**Pushbutton Switches, Tiny, Straight or Right Angle, Single or Dual Actuators**

SEE PAGE D6 FOR PRODUCT SPECIFICATIONS



SPST/SPDT



TP11CGPC0

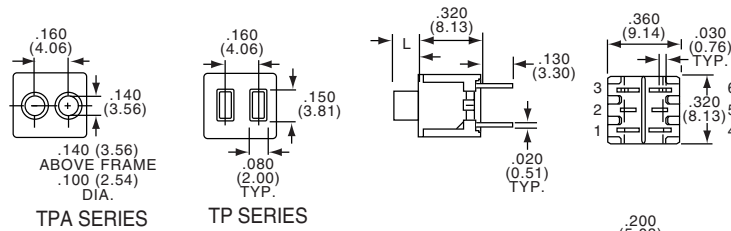


TPA11CGPC0

Model	Actuator Type	Dim.L	Type	Act. Code	P. M6	Action	Contact Type
TP11CGPC(*)	SQ.	.125	SPST	C		N.O. Momentary	Gold
TP11FGPC(*)	SQ.	.125	SPDT	F		Momentary	Gold
TPA11CGPC(*)	RND.	.150	SPST	C		N.O. Momentary	Gold
TPA11FGPC(*)	RND.	.150	SPDT	F		Momentary	Gold

(\*) Specify button color by adding suffix number: (0) Black, (2) Red.  
Note: No center terminal on "C" action switch.

D  
TP/TPA Series



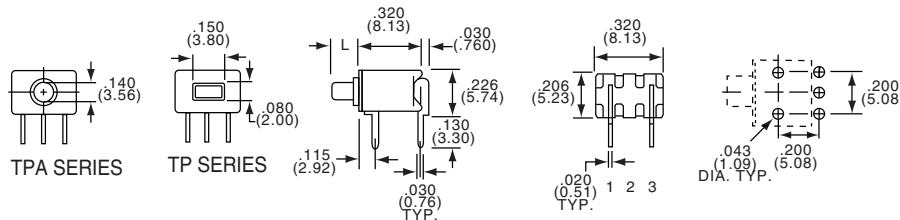
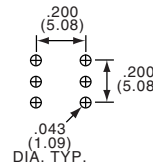
SPST/SPDT (DUAL)



TP21CCGPC0

Model	Actuator Type	Dim.L	Type	Act. Code	P. M6	Action	Contact Type
TP21CCGPC(*)	SQ.	.125	2xSPST	C		N.O. Momentary	Gold
TPA21CCGPC(*)	RND.	.150	2xSPST	C		N.O. Momentary	Gold
TPA21FFGPC(*)	RND.	.150	2xSPDT	F		Momentary	Gold

(\*) Specify button color by adding suffix number: (0) Black, (2) Red.  
Note: No center terminal on "C" action switch.



SPST/SPDT



TPA11CGRA



TP11CGRA

Model	Actuator Type	Dim.L	Type	Act. Code	P. M6	Action	Contact Type
TP11CGRA(*)	SQ.	.125	SPST	C		N.O. Momentary	Gold
TP11FGRA(*)	SQ.	.125	SPDT	F		Momentary	Gold
TPA11CGRA(*)	RND.	.150	SPST	C		N.O. Momentary	Gold
TPA11FGRA(*)	RND.	.150	SPDT	F		Momentary	Gold

(\*) Specify button color by adding suffix number: (0) Black, (2) Red.  
Note: No center terminal on "C" action switch.



**Pushbutton Switches, Tiny, Right Angle, Single or Dual Actuators**

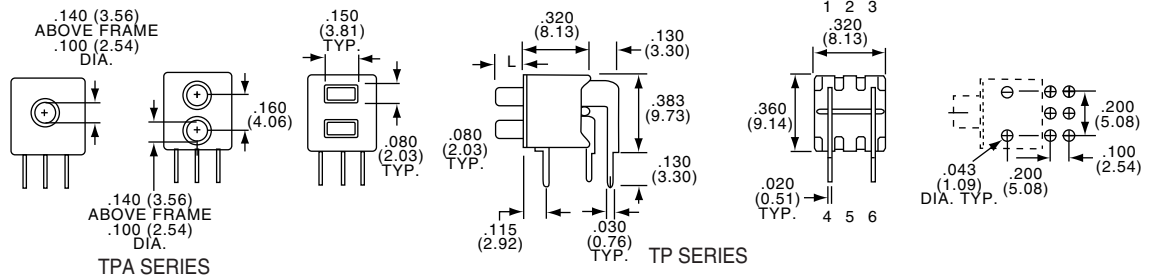
SEE PAGE D6 FOR PRODUCT SPECIFICATIONS

\* Refer to Page D6 for Additional Options \*  
TP/TPA Series



TP21CCGRA0

SPST/SPDT (DUAL)  
DPST



Model	Actuator Type	Dim.L	Type	Act. Code P. M6	Action	Contact Type
TP21CCGRA(*)	SQ.	.125	2xSPST	C	N.O. Momentary	Gold
TP21FFGRA(*)	SQ.	.125	2xSPDT	F	Momentary	Gold
TPA21MGRA(*)	RND.	.150	DPST	M	N.O. Momentary	Gold
TPA21CCGRA(*)	RND.	.150	2xSPST	C	N.O. Momentary	Gold
TPA21FFGRA(*)	RND.	.150	2xSPDT	F	Momentary	Gold

(\*) Specify button color by adding suffix number: (0) Black, (2) Red.  
Note: No center terminal on "C" or "M" action switch.

**Pushbutton Switches, Tiny, Straight or Right Angle, Unthreaded or 10-48 Bushing**

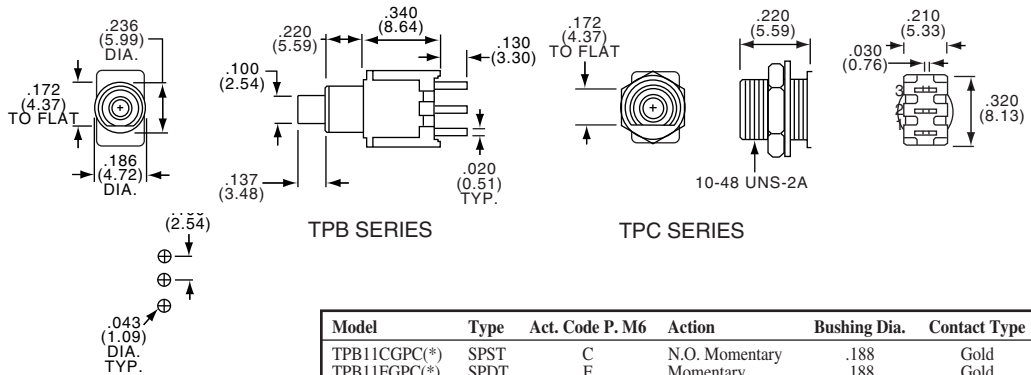
SPST/SPDT



TPB11CGPC



TPC11FGPC



Model	Type	Act. Code P. M6	Action	Bushing Dia.	Contact Type
TPB11CGPC(*)	SPST	C	N.O. Momentary	.188	Gold
TPB11FGPC(*)	SPDT	F	Momentary	.188	Gold
TPC11CGPC(*)	SPST	C	N.O. Momentary	10-48	Gold
TPC11FGPC(*)	SPDT	F	Momentary	10-48	Gold

(\*) Specify button color by adding suffix number: (0) Black, (2) Red.  
Note: No center terminal on "C" action switch.

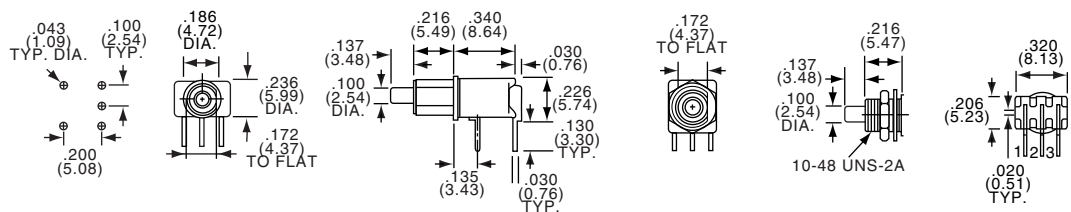
DPST/DPDT



TPB11CGRA



TPC11CGRA



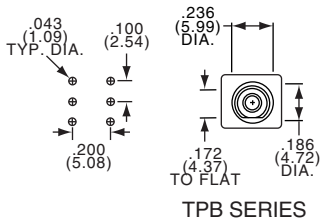
Model	Type	Act. Code P. M6	Action	Bushing Dia.	Contact Type
TPB11CGRA(*)	SPST	C	N.O. Momentary	.188	Gold
TPB11FGRA(*)	SPDT	F	Momentary	.188	Gold
TPC11CGRA(*)	SPST	C	N.O. Momentary	10-48	Gold
TPC11FGRA(*)	SPDT	F	Momentary	10-48	Gold

(\*) Specify button color by adding suffix number: (0) Black, (2) Red.  
Note: No center terminal on "C" action switch.

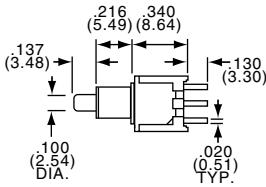


**Pushbutton Switches, Tiny, Straight or Right Angle, Unthreaded or 10-48 Bushing**

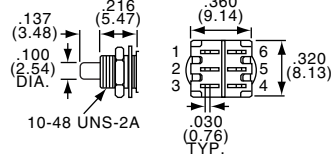
SEE PAGE D6 FOR PRODUCT SPECIFICATIONS  
DPST/DPDT



TPB SERIES



TPC SERIES



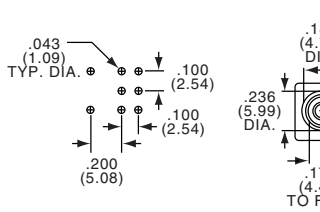
TPB21MGPC



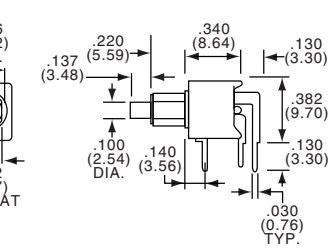
TPC21RGPC

Model	Type	Act. Code P. M6	Action	Bushing Dia.	Contact Type
TPB21MGPC(*)	DPST	M	N.O. Momentary	.188	Gold
TPB21RGPC(*)	DPDT	R	Momentary	.188	Gold
TPC21MGPC(*)	DPST	M	N.O. Momentary	10-48	Gold
TPC21RGPC(*)	DPDT	R	Momentary	10-48	Gold

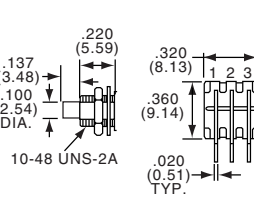
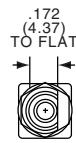
(\*) Specify button color by adding suffix number: (0) Black, (2) Red.  
Note: No center terminal on "M" action switch.



TPB SERIES



TPC SERIES



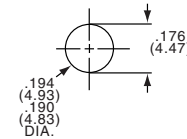
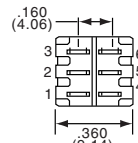
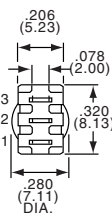
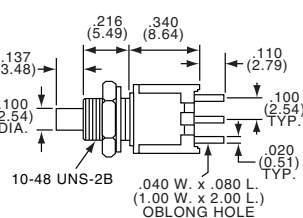
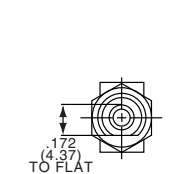
DPST/DPDT



TPC21MGRA

Model	Type	Act. Code P. M6	Action	Bushing Dia.	Contact Type
TPB21MGRA(*)	DPST	M	N.O. Momentary	.188	Gold
TPB21RGRA(*)	DPDT	R	Momentary	.188	Gold
TPC21MGRA(*)	DPST	M	N.O. Momentary	10-48	Gold
TPC21RGRA(*)	DPDT	R	Momentary	10-48	Gold

(\*) Specify button color by adding suffix number: (0) Black, (2) Red.  
Note: No center terminal on "M" action switch.



1 & 2 POLE



TPC23M



TPC13C

Model	Type	Act. Code P. M6	Action	Contact Type
TPC13C(*)	SPST	C	N.O. Momentary	Silver
TPC13F(*)	SPDT	F	Momentary	Silver
TPC23M(*)	DPST	M	N.O. Momentary	Silver
TPC23R(*)	DPDT	R	Momentary	Silver

(\*) Specify button color by adding suffix number: (0) Black, (2) Red.  
Note: No center terminal on "C" or "M" action switches.



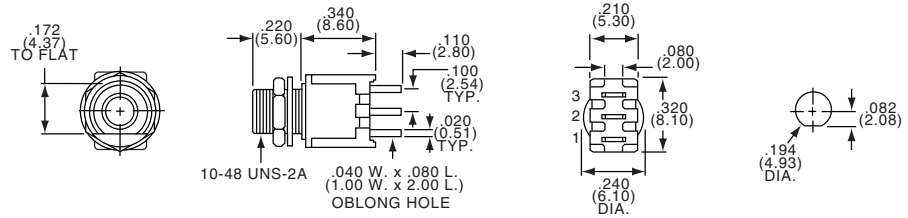
**Pushbutton Switches, Tiny, Straight or Right Angle, Flush Actuator**

SEE PAGE D6 FOR PRODUCT SPECIFICATIONS

SPST/SPDT  
Wire Lugs 10-48 Bushing



TPCF13C



Model	Silver Contacts	Type	Act. Code P. M6	Action	Bushing Type
TPCF13C(*)		SPST	C	N.O. Momentary	Threaded
TPCF13F(*)		SPDT	F	Momentary	Threaded

(\*) Specify button color by adding suffix numbers: (0) Black, (2) Red.  
Note: No center terminal on "C" action switch.

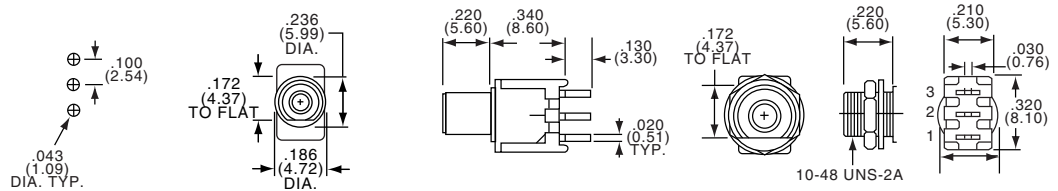
SPST/SPDT  
PC 10-48 Bushing



TPBF11FGPC



TPCF11CGPC



TPB SERIES

TPC SERIES

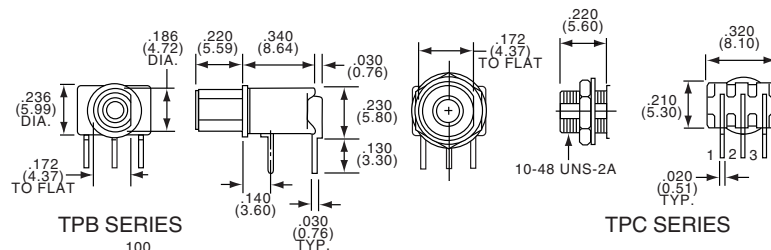
Model	Gold Contacts	Type	Act. Code P. M6	Action	Bushing Type
TPBF11CGPC(*)		SPST	C	N.O. Momentary	Unthreaded
TPBF11FGPC(*)		SPDT	F	Momentary	Unthreaded
TPCF11CGPC(*)		SPST	C	N.O. Momentary	Threaded
TPCF11FGPC(*)		SPDT	F	Momentary	Threaded

(\*) Specify button color by adding suffix numbers: (0) Black, (2) Red.  
Note: No center terminal on "C" action switch.

SPST/SPDT  
RA 10-48 Bushing

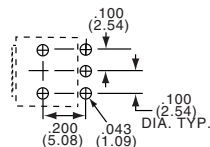


TPBF11CGRA



TPB SERIES

TPC SERIES

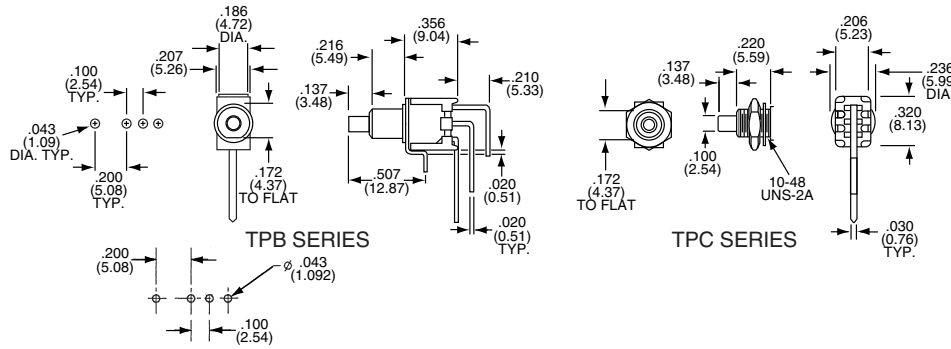


Model	Gold Contacts	Type	Act. Code P. M6	Action	Bushing Type
TPBF11CGRA(*)		SPST	C	N.O. Momentary	Unthreaded
TPBF11FGRA(*)		SPDT	F	Momentary	Unthreaded
TPCF11CGRA(*)		SPST	C	N.O. Momentary	Threaded
TPCF11FGRA(*)		SPDT	F	Momentary	Threaded

(\*) Specify button color by adding suffix numbers: (0) Black, (2) Red.  
Note: No center terminal on "C" action switch.

**Pushbutton Switches, Tiny, Vertical Right Angle, Unthreaded or 10-48 Bushing**

SEE PAGE D6 FOR PRODUCT SPECIFICATIONS



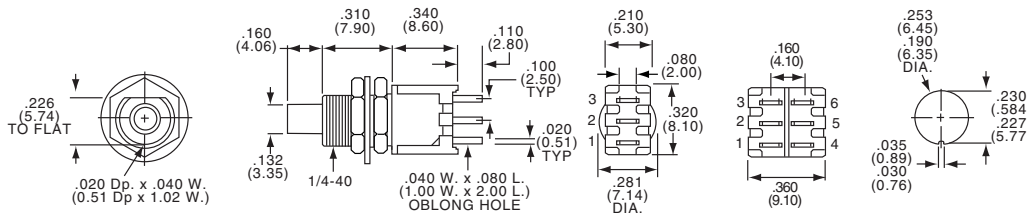
TPB11FGVRA

Model	Type	Act. Code	P. M6	Action	Contact Type
TPB11CGVRA(*)	SPST	C		N.O. Momentary	Gold
TPB11FGVRA(*)	SPDT	F		Momentary	Gold
TPC11CGVRA(*)	SPST	C		N.O. Momentary	Gold
TPC11FGVRA(*)	SPDT	F		Momentary	Gold

(\*) Specify button color by adding suffix number: (0) Black, (2) Red.  
 Note: No center terminal on "C" action switches.

**D**  
TP Series

**Pushbutton Switches, Tiny, Vertical, Unthreaded or 1/4-40 Bushing**



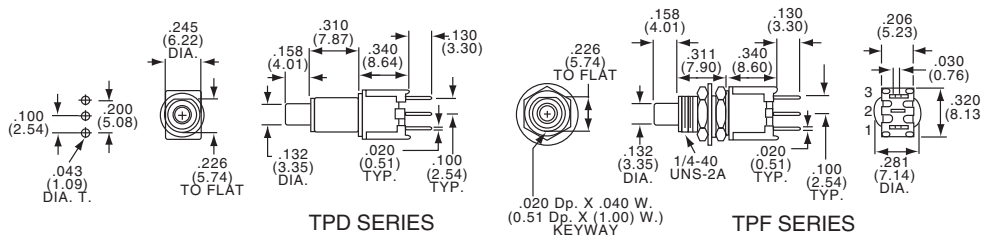
1 & 2 POLE

TPF23M

TPF13C

Model	Type	Act. Code	P. M6	Action	Contact Type
TPF13C(*)	SPST	C		N.O. Momentary	Silver
TPF13F(*)	SPDT	F		Momentary	Silver
TPF23M(*)	DPST	M		N.O. Momentary	Silver
TPF23R(*)	DPDT	R		Momentary	Silver

(\*) Specify button color by adding suffix number: (0) Black, (2) Red.  
 Note: No center terminal on "C" or "M" action switches.



SPST/SPDT

TPD11CGPC

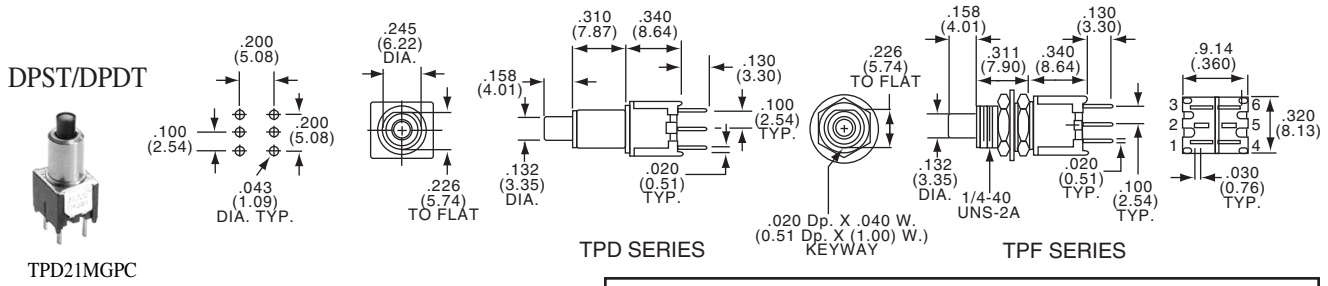
Model	Type	Act. Code	P. M6	Action	Bushing Dia.	Contact Type
TPD11CGPC(*)	SPST	C		N.O. Momentary	.250	Gold
TPD11FGPC(*)	SPDT	F		Momentary	.250	Gold
TPF11CGPC(*)	SPST	C		N.O. Momentary	1/4-40	Gold
TPF11FGPC(*)	SPDT	F		Momentary	1/4-40	Gold

(\*) Specify button color by adding suffix number: (0) Black, (2) Red.  
 NOTE: No center terminal on "C" action switch.



**Pushbutton Switches, Tiny, Vertical or Right Angle, Unthreaded or 1/4-40 Bushing**

SEE PAGE D6 FOR PRODUCT SPECIFICATIONS



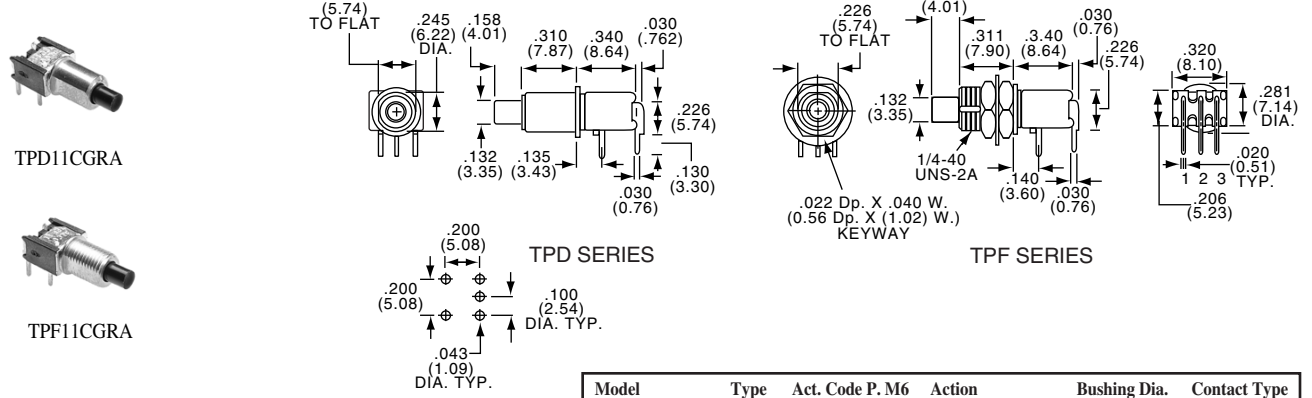
Model	Type	Act. Code	P. M6	Action	Bushing Dia.	Contact Type
TPD21MGPC(*)	DPST	M		N.O. Momentary	.250	Gold
TPD21RGPC(*)	DPDT	R		Momentary	.250	Gold
TPF21MGPC(*)	DPST	M		N.O. Momentary	1/4-40	Gold
TPF21RGPC(*)	DPDT	R		Momentary	1/4-40	Gold

(\*) Specify button color by adding suffix number: (0) Black, (2) Red.  
 Note: No center terminals on "M" Action switches.

D

TPD/TPF Series

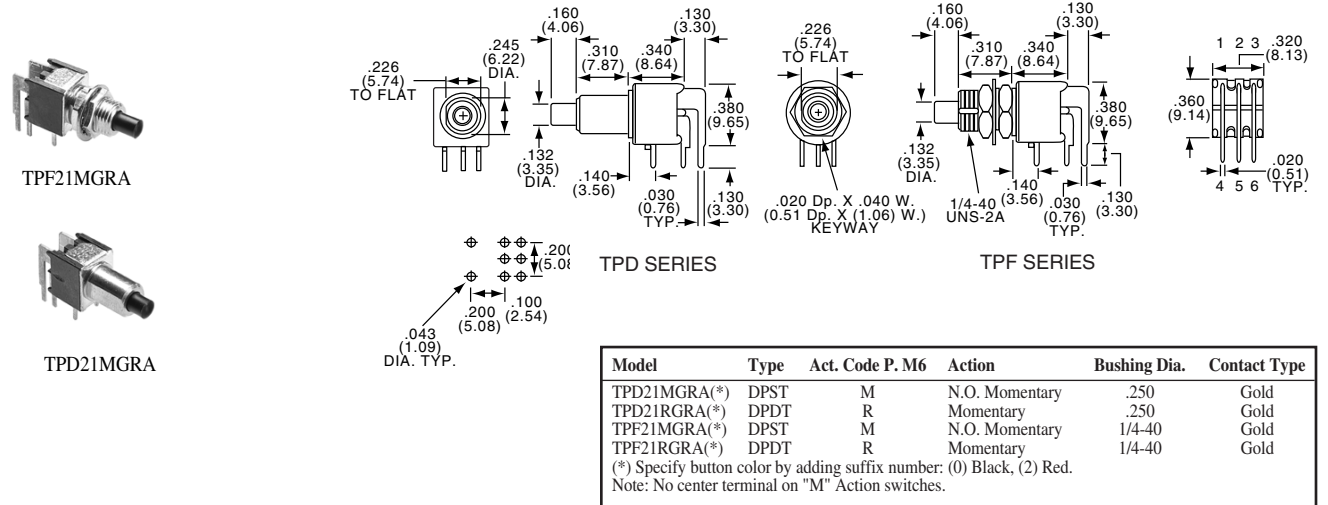
**SPST/SPDT**



Model	Type	Act. Code	P. M6	Action	Bushing Dia.	Contact Type
TPD11CGRA(*)	SPST	C		N.O. Momentary	.250	Gold
TPD11FGRA(*)	SPDT	F		Momentary	.250	Gold
TPF11CGRA(*)	SPDT	C		N.O. Momentary	1/4-40	Gold
TPF11FGRA(*)	SPDT	F		Momentary	1/4-40	Gold

(\*) Specify button color by adding suffix number: (0) Black, (2) Red.  
 Note: No center terminal on "C" action switch.

**DPST/DPDT**



Model	Type	Act. Code	P. M6	Action	Bushing Dia.	Contact Type
TPD21MGRA(*)	DPST	M		N.O. Momentary	.250	Gold
TPD21RGRA(*)	DPDT	R		Momentary	.250	Gold
TPF21MGRA(*)	DPST	M		N.O. Momentary	1/4-40	Gold
TPF21RGRA(*)	DPDT	R		Momentary	1/4-40	Gold

(\*) Specify button color by adding suffix number: (0) Black, (2) Red.  
 Note: No center terminal on "M" Action switches.

**Pushbutton Switches, Tiny, Process Sealed, Straight**

SEE PAGE D6 FOR PRODUCT SPECIFICATIONS

\* Refer to Page D6 for Additional Options \*

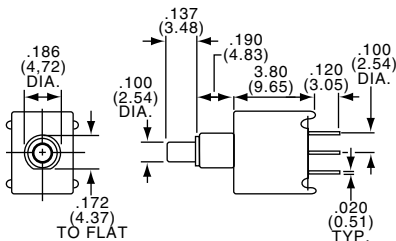
**SPST/SPDT**



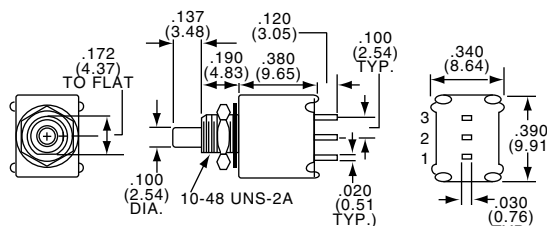
TPB11CGPCES



TPC11CGPCES



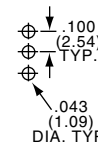
TPB SERIES



TPC SERIES

Model	Type	Act. Code	P. M6	Action	Bushing Dia.	Contact Type
TPB11CGPCES(*)	SPST	C		N.O. Momentary	.188	Gold
TPB11FGPCES(*)	SPDT	F		Momentary	.188	Gold
TPC11CGPCES(*)	SPST	C		N.O. Momentary	10-48	Gold
TPC11FGPCES(*)	SPDT	F		Momentary	10-48	Gold

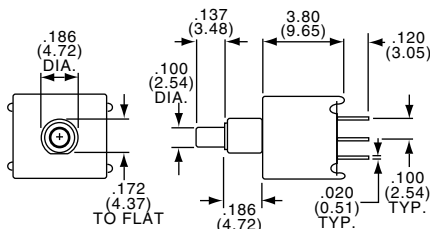
(\*) Specify button color by adding suffix number: (0) Black, (2) Red.  
Note: No center terminal on "C" action switch.



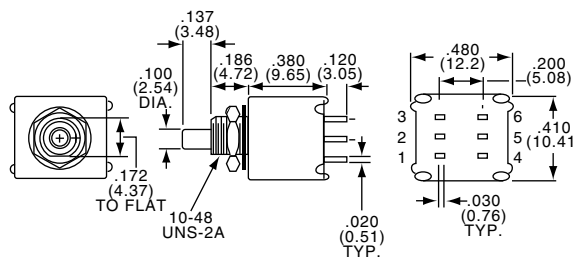
**DPST/DPDT**



TPB21RGPCEs



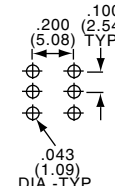
TPB SERIES



TPC SERIES

Model	Type	Act. Code	P. M6	Action	Bushing Dia.	Contact Type
TPB21MGPCEs(*)	DPST	M		N.O. Momentary	.188	Gold
TPB21RGPCEs(*)	DPDT	R		Momentary	.188	Gold
TPC21MGPCEs(*)	DPST	M		N.O. Momentary	10-48	Gold
TPC21RGPCEs(*)	DPDT	R		Momentary	10-48	Gold

(\*) Specify button color by adding suffix number: (0) Black, (2) Red.  
Note: No center terminal on "M" action switch.



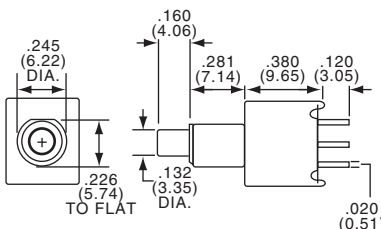
**SPST/SPDT**



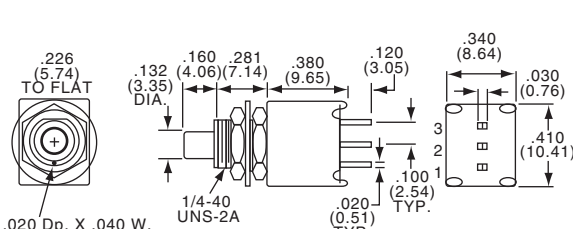
TPD11CGPCES



TPF11CGPCES



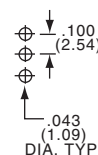
TPD SERIES



TPF SERIES

Model	Type	Act. Code	P. M6	Action	Bushing Dia.	Contact Type
TPD11CGPCES(*)	SPST	C		N.O. Momentary	.250	Gold
TPD11FGPCES(*)	SPDT	D		Momentary	.250	Gold
TPF11CGPCES(*)	SPST	C		N.O. Momentary	.250	Gold
TPF11FGPCES(*)	SPDT	F		Momentary	.250	Gold

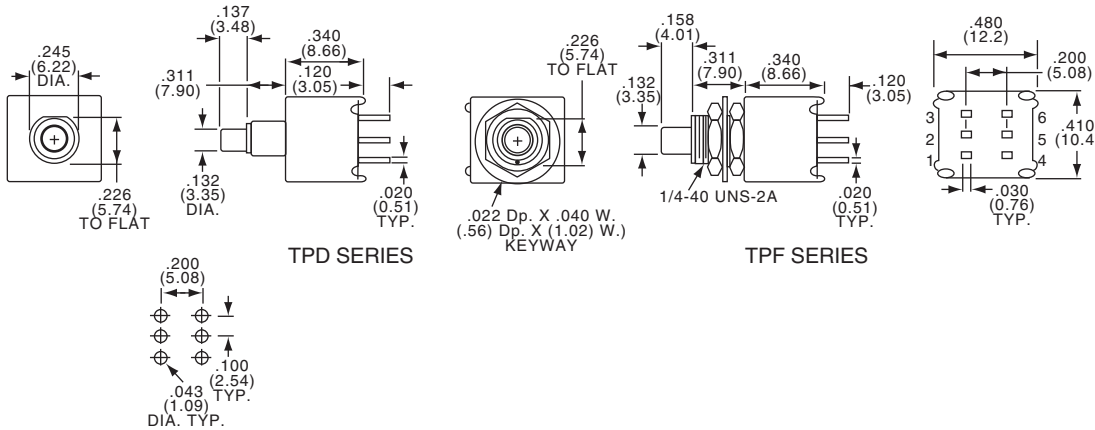
(\*) Specify button color by adding suffix number: (0) Black, (2) Red.  
Note: No center terminal on "C" action switch.



**Pushbutton Switches, Tiny, Process Sealed, Straight or Right Angle**

SEE PAGE D6 FOR PRODUCT SPECIFICATIONS

DPST/DPDT

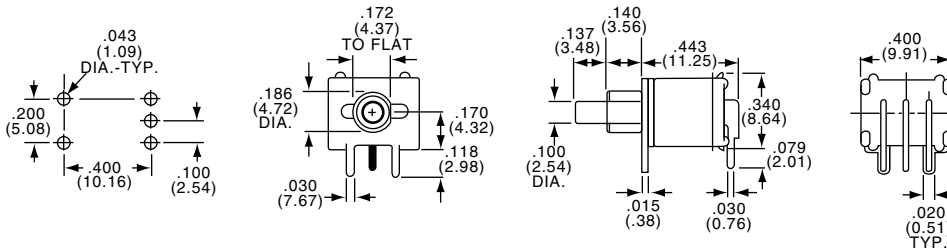


TPD21MGPCES

Model	Type	Act. Code	P. M6	Action	Bushing Dia.	Contact Type
TPD21MGPCES(*)	DPST	M		N.O. Momentary	.250	Gold
TPD21RGPCES(*)	DPDT	R		Momentary	.250	Gold
TPF21MGPCES(*)	DPST	M		N.O. Momentary	1/4-40	Gold
TPF21RGPCES(*)	DPDT	R		Momentary	1/4-40	Gold

(\*) Specify button color by adding suffix number: (0) Black, (2) Red.  
Note: No center terminal on "M" action switch.

SPST/SPDT

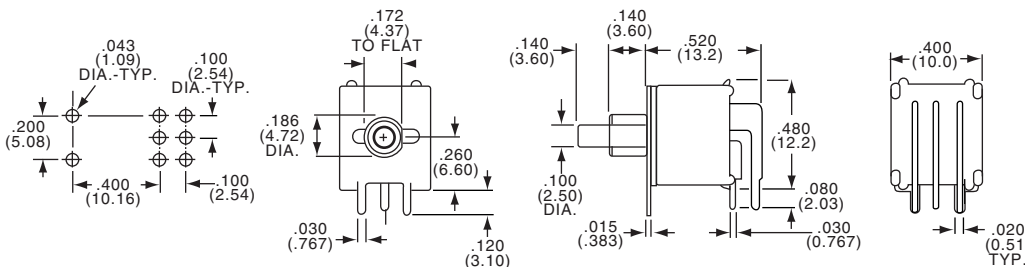


TPB11CGRAES

Model	Type	Act. Code	P. M6	Action	Bushing Dia.	Contact Type
TPB11CGRAES(*)	SPST	C		N.O. Momentary	.188	Gold
TPB11FGRAES(*)	SPDT	F		Momentary	.188	Gold

(\*) Specify button color by adding suffix number: (0) Black, (2) Red.  
Note: No center terminal on "C" action switch.

DPST/DPDT



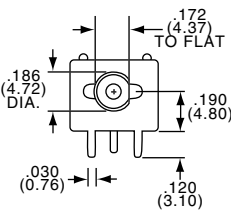
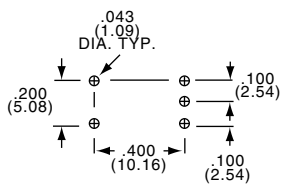
Model	Type	Act. Code	P. M6	Action	Bushing Dia.	Contact Type
TPB21MGRRAES(*)	DPST	M		N.O. Momentary	.188	Gold
TPB21RGRRAES(*)	DPDT	R		Momentary	.188	Gold

(\*) Specify button color by adding suffix number: (0) Black, (2) Red.  
Note: No center terminal on "M" action switch.

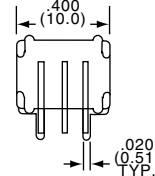
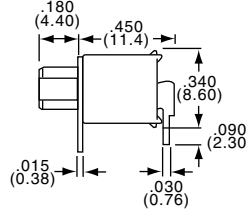
D  
TP-ES Series

**Pushbutton Switches, Tiny, Process Sealed, Flush Actuator, Straight or Right Angle**

SEE PAGE D6 FOR PRODUCT SPECIFICATIONS



TPBF Series



SPST/SPDT

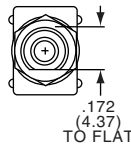
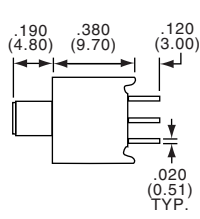
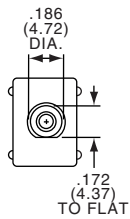
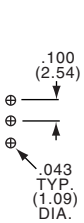


TPBF11CGRAESO

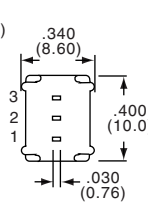
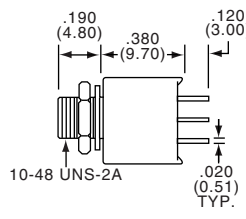
Model	Type	Act. Code P. M6	Action
TPBF11CGRAES(*)	SPST	C	N.O. Momentary
TPBF11FGRAES(*)	SPDT	F	Momentary

(\*) Specify button color by adding suffix numbers: (0) Black, (2) Red.

Note: No center terminal on "C" Action switches.



TPBF Series



TPCF Series

SPST/SPDT



TPBF11CGPCES

Model	Type	Act. Code P. M6	Action
TPBF11CGPCES(*)	SPST	C	N.O. Momentary
TPBF11FGPCES(*)	SPDT	F	Momentary
TPCF11FGPCES(*)	SPDT	F	Momentary

(\*) Specify button color by adding suffix numbers: (0) Black, (2) Red.  
Note: No center terminal on "C" action switch.

**Pushbutton Switches, .120 Actuator, Straight**

**MATERIAL SPECIFICATIONS:**

Contacts .....Gold plate  
 Case Material .....Polyester  
 Actuator Material .....Polyester, black  
 Terminal Seal .....Epoxy

**ENVIRONMENTAL SPECIFICATIONS:**

Operating Temperature.....-4°F to +176°F (-20°C to +80°C)  
 Storage Temperature.....-40°F to +176°F (-40°C to +80°C)

**TYPICAL PERFORMANCE CHARACTERISTICS:**

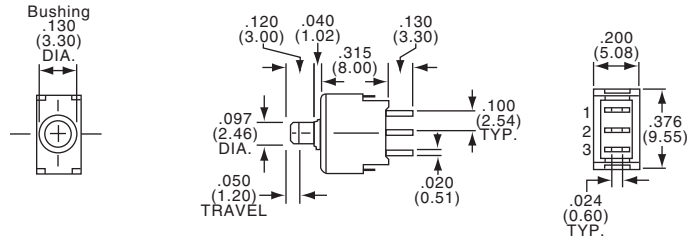
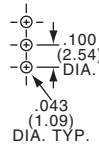
Contact Rating .....0.4 VA Max. @ 20 VDC or peak AC  
 Initial Contact Resistance .....50 Milliohms max.  
 Contact Timing .....Break-before-make  
 Insulation Resistance .....1,000 Megohms @ 500 VDC min.  
 Dielectric Strength .....500 Volts RMS @ sea level  
 Actuator Travel......050" (1.27)  
 Life Expectancy .....Up to 10,000 Cycles

FOR SEALED VERSIONS SEE PAGES D19 AND D20

**SPST/SPDT**



APA1BGPC



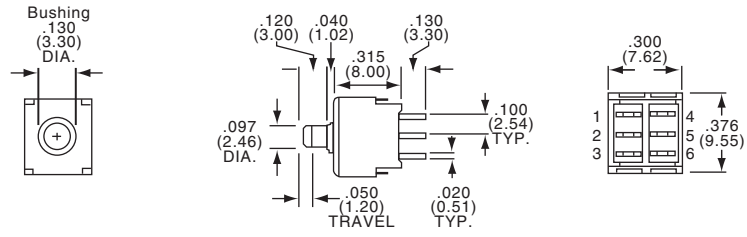
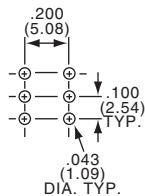
Part Number					
Tyco Electronics	Alcoswitch	Type	Action		
1437567-2	APA1BGPC	SPST	N.C. Momentary	1-3	(—)
1437567-3	APA1CGPC	SPST	N.O. Momentary	—	(1-3)
1437567-5	APA1FGPC	SPDT	Momentary	2-3	(2-1)

Note: No center terminals on "B" or "C" action switches.

**DPST/DPDT**



APA2MGPC



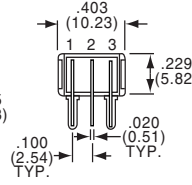
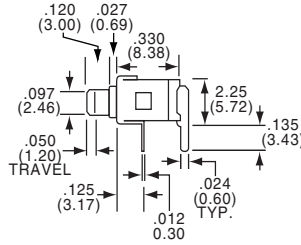
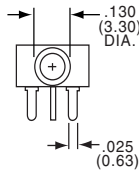
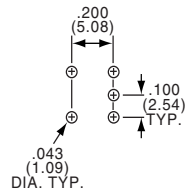
Part Number					
Tyco Electronics	Alcoswitch	Type	Action		
—	APA2LGPC	DPST	N.C. Momentary	1-3, 4-6	(—)
1437567-7	APA2MGPC	DPST	N.O. Momentary	—	(1-3, 4-6)
1437567-9	APA2RGPC	DPDT	Momentary	2-3, 5-6	(2-1, 5-4)

Note: No center terminals on "L" or "M" action switches.



**Pushbutton Switches, .120 Actuator, Right Angle**

SPST/SPDT



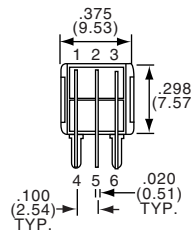
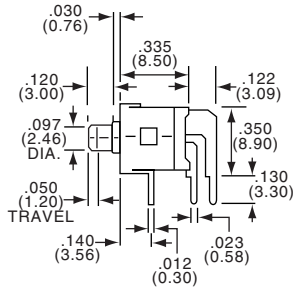
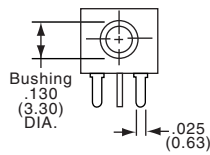
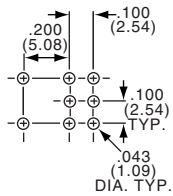
APA1FGRA

Part Number					
Tyco Electronics	Alcoswitch	Type	Action		
—	APA1BGRA	SPST	N.C. Momentary	1-3	(—)
1437567-4	APA1CGRA	SPST	N.O. Momentary	—	(1-3)
1437567-6	APA1FGRA	SPDT	Momentary	2-3	(2-1)

Note: No center terminals on "B" or "C" action switches.

**D**  
APA Series

DPST/DPDT



APA2RGRA

Part Number					
Tyco Electronics	Alcoswitch	Type	Action		
1437567-8	APA2MGRA	DPST	N.O. Momentary	—	(1-3, 4-6)
1-1437567-0	APA2RGRA	DPDT	Momentary	2-3, 5-6	(2-1, 5-4)

Note: No center terminals on "M" action switches.

**Pushbutton Switches, .157 Actuator, Vertical or Right Angle**

**MATERIAL SPECIFICATIONS:**

Contacts .....Gold plate  
 Case Material .....Polyester  
 Actuator Material .....Polyester, black  
 Terminal Seal .....Epoxy

**ENVIRONMENTAL SPECIFICATIONS:**

Operating Temperature.....-4°F to +176°F (-20°C to +80°C)  
 Storage Temperature.....-40°F to +176°F (-40°C to +80°C)

**TYPICAL PERFORMANCE CHARACTERISTICS:**

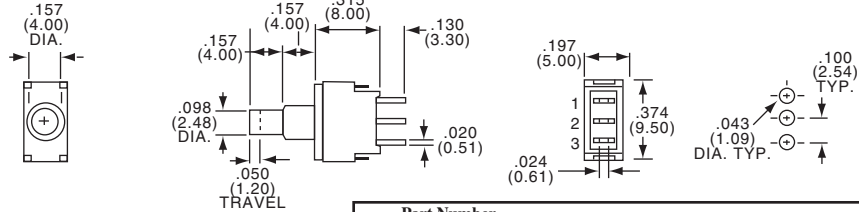
Contact Rating .....0.4 VA Max. @ 20 VDC or peak AC  
 Initial Contact Resistance .....50 Milliohms max.  
 Contact Timing .....Break-before-make  
 Insulation Resistance .....1,000 Megohms @ 500 VDC min.  
 Dielectric Strength .....500 Volts RMS @ sea level  
 Actuator Travel.....0.050" (1.27)  
 Life Expectancy .....Up to 10,000 Cycles

FOR SEALED VERSIONS SEE PAGES D19 AND D20

**SPST/SPDT**



APB1BGPC



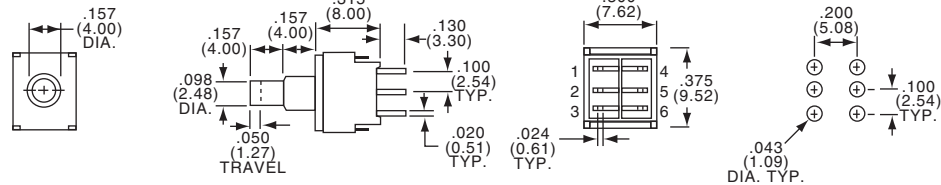
Part Number		Type	Action		
Tyco Electronics	Alcoswitch				
1-1437567-1	APB1BGPC	SPST	N.C. Momentary	1-3	(—)
1-1437567-2	APB1CGPC	SPST	N.O. Momentary	—	(1-3)
1-1437567-4	APB1FGPC	SPDT	Momentary	2-3	(2-1)

Note: No center terminal on "B" and "C" action switches.

**DPST/DPDT**



APB2RGPC



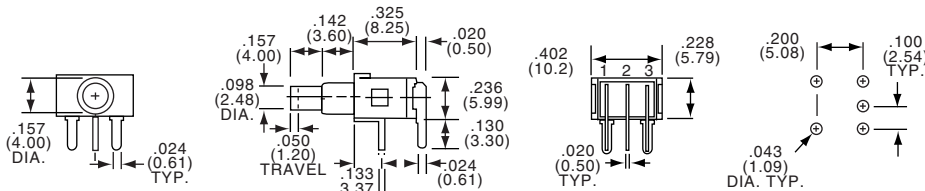
Part Number		Type	Action		
Tyco Electronics	Alcoswitch				
—	APB2LGPC	DPST	N.C. Momentary	1-3, 4-6	(—)
1-1437567-7	APB2RGPC	DPDT	Momentary	2-3, 5-6	(2-1, 5-4)

Note: No center terminal on "L" action switches.

**SPST/SPDT**



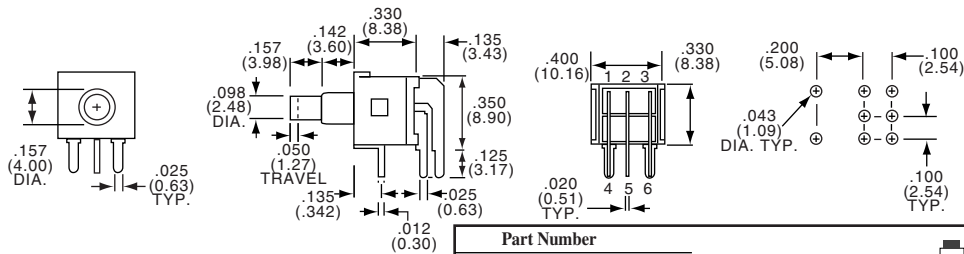
APB1FGRA



Part Number		Type	Action		
Tyco Electronics	Alcoswitch				
—	APB1BGRA	SPST	N.C. Momentary	1-3	(—)
1-1437567-3	APB1CGRA	SPST	N.O. Momentary	—	(1-3)
1-1437567-5	APB1FGRA	SPDT	Momentary	2-3	(2-1)

Note: No center terminal on "B" and "C" action switches.

**DPST/DPDT**



Part Number		Type	Action		
Tyco Electronics	Alcoswitch				
1-1437567-6	APB2MGRA	DPST	N.O. Momentary	—	(1-3, 4-6)
—	APB2RGRA	DPDT	Momentary	2-3, 5-6	(2-1, 5-4)

Note: No center terminal on "M" action switches.

APB Series

**Pushbutton Switches, Process Sealed, .157 Actuator, Straight, Retention Terminal**

**MATERIAL SPECIFICATIONS:**

Contacts .....Gold plated  
 Case Material .....Polyester  
 Actuator Material .....Polyester, black  
 Terminals/Fixed Contacts.....Copper alloy  
 Terminal Seal .....Epoxy

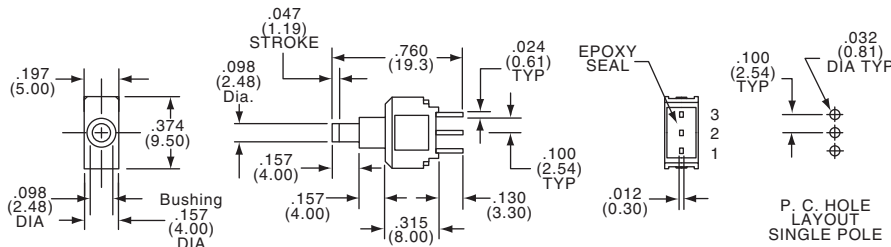
**TYPICAL PERFORMANCE CHARACTERISTICS:**

Contact Rating .....0.4 VA Max. @ 20 VDC or peak AC  
 Initial Contact Resistance .....50 Milliohms max.  
 Insulation Resistance .....500 Megohms @ 250 VDC min.  
 Dielectric Strength .....500 Volts RMS @ sea level  
 Actuator Travel.....0.047" (1.19)  
 Life Expectancy .....Up to 10,000 Cycles

**ENVIRONMENTAL SPECIFICATIONS:**

Operating Temperature.....-4°F to +176°F (-20°C to +80°C)  
 Storage Temperature.....-40°F to +176°F (-40°C to +80°C)

SPDT

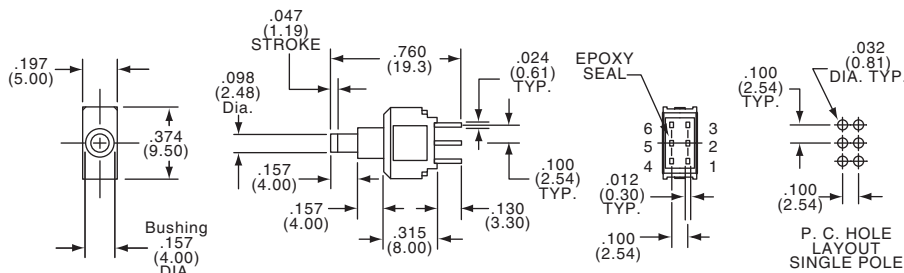


**D**  
**APBE Series**

Part Number					
Tyco Electronics	Alcoswitch	Type			Contact Type
1-1437567-8	APBE1FGPC	SPDT	On	(On)	Gold
Terminals Connected:			2-3	(2-1)	
(On) indicates momentary position.					

DPDT

Extra compact double pole saves PCB real estate.



Part Number					
Tyco Electronics	Alcoswitch	Type			Contact Type
2-1437567-0	APBE2RGPC	DPDT	On	(On)	Gold
Terminals Connected:			2-3 & 5-6	(2-1 & 5-4)	
(On) indicates momentary position.					

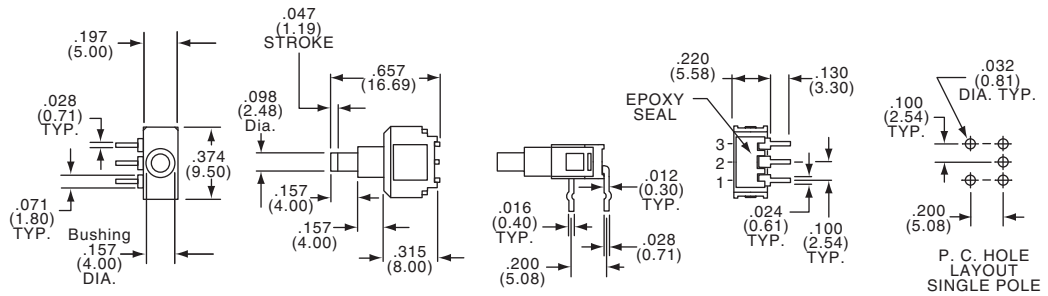
**Pushbutton Switches, Process Sealed, .157 Actuator, Retention Terminal, Right Angle**

SEE PAGE D19 FOR PRODUCT SPECIFICATIONS.

SPDT



APBE1FGRA



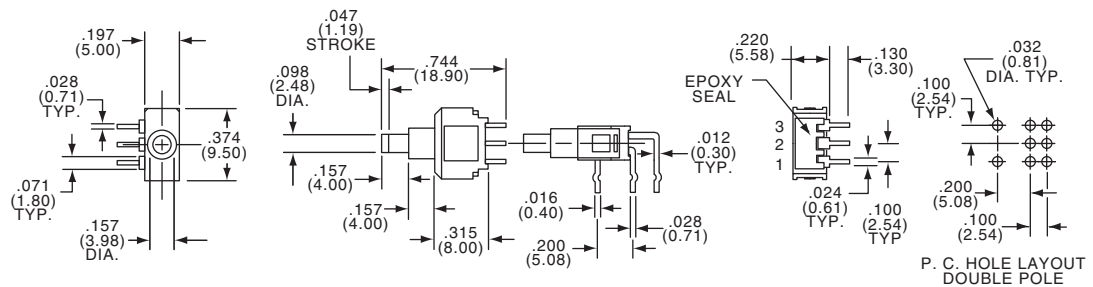
Part Number					
Tyco Electronics	Alcoswitch	Type			Contact Type
1-1437567-9	APBE1FGRA	SPDT	On	(On)	Gold
Terminals Connected:			2-3	(2-1)	
(On) indicates momentary position.					

DPDT

Extra compact double pole saves PCB real estate.



APBE2RGRA



Part Number					
Tyco Electronics	Alcoswitch	Type			Contact Type
2-1437567-1	APBE2RGRA	DPDT	On	(On)	Gold
Terminals Connected:			2-3 & 5-6	(2-1 & 5-4)	
(On) indicates momentary position.					

D  
APBE Series

**Pushbutton Switches, Sub-Miniature, Panel Mount**

**MPA3 Series**

**MATERIAL SPECIFICATIONS:**

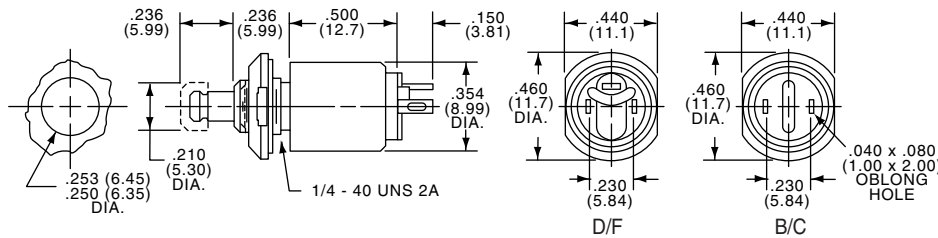
Contacts .....Silver clad  
 Case Material .....Thermoset  
 Actuator Material .....Polyamide  
 Terminals .....Silver plate

**ENVIRONMENTAL SPECIFICATIONS:**

Operating Temperature.....-4°F to +158°F (-20°C to +70°C)  
 Storage Temperature.....-40°F to +176°F (-40°C to +80°C)  
 Solder Heat Resistance .....See page M3-4

**TYPICAL PERFORMANCE CHARACTERISTICS:**

Contact Rating .....3 A @ 125 VAC  
 Initial Contact Resistance .....20 Milliohms max.  
 Contact Timing .....Break-before-make  
 Insulation Resistance .....1,000 Megohms min.  
 Dielectric Strength .....1,000 Volts RMS @ sea level  
 Actuation Force .....10 oz. SPST, 16 oz. SPDT average  
 Actuator Travel.....100" (2.54)  
 Life Expectancy .....Up to 10,000 Cycles  
 Note: Hardware included with switches



SPST/SPDT



MPA103C

Part Number					
Tyco Electronics	Alcoswitch	Type	Act. Code P. M6	Action	Contact Rating
2-1437567-4	MPA103B	SPST	14	N. C. Momentary	3 Amps
2-1437567-5	MPA103C	SPST	13	N. O. Momentary	3 Amps
2-1437567-6	MPA103D	SPDT	16	Push on/push off- (tactile)	3 Amps
2-1437567-7	MPA103F	SPDT	15	Momentary - (tactile)	3 Amps

Black Cap supplied. Other colors available, order separately.  
 (See Cap C5 and C8 on Page D32.)

**MPB Series**

**Pushbutton Switches, Miniature, Over-Travel**

**MATERIAL SPECIFICATIONS:**

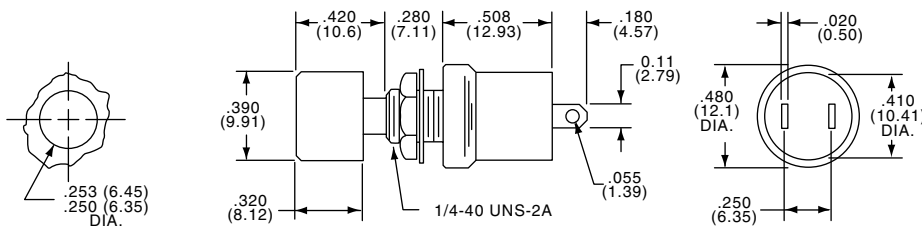
Contacts .....Silver plate  
 Case Material .....Thermoset  
 Actuator Material .....Polyamide  
 Terminals .....Silver plate

**ENVIRONMENTAL SPECIFICATIONS:**

Operating Temperature.....+14°F to +140°F (-10°C to +60°C)  
 Storage Temperature.....+5°F to +158°F (-15°C to +70°C)  
 Solder Heat Resistance .....See page M3-4

**TYPICAL PERFORMANCE CHARACTERISTICS:**

Contact Rating .....3 A @ 125 VAC  
 Initial Contact Resistance .....20 Milliohms max.  
 Insulation Resistance .....1,000 Megohms min.  
 Dielectric Strength .....1,000 Volts RMS @ sea level  
 Actuator Travel.....100" (2.54) Overtravel .059" (1.5mm)  
 Life Expectancy .....20,000 Cycles  
 Note: Hardware included with switches



SPST



MPB103B

Part Number					
Tyco Electronics	Alcoswitch	Type	Act. Code P. M6	Action	Actuator Color
3-1437567-9	MPB103B	SPST	14	N.C. Momentary	Black
4-1437567-0	MPB103C	SPST	13	N.O. Momentary	Red

MPA3 and MPB Series