

Toggle Switches, Tiny, Part Number Matrix

MATERIAL SPECIFICATIONS:

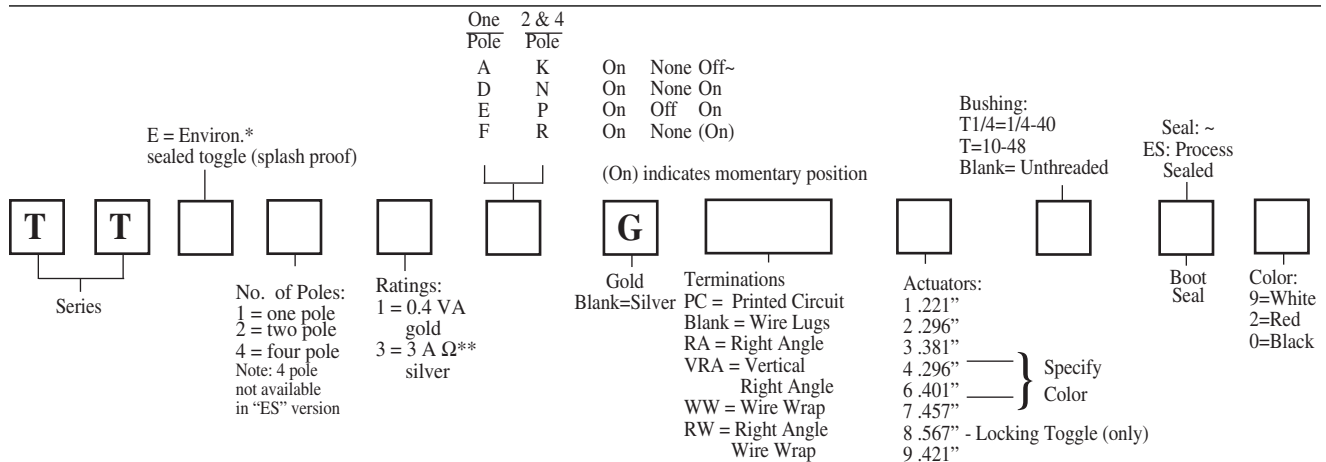
Contacts.....Gold over nickel or silver plate
Case Material.....Thermoplastic 94V-0
Terminals/Fixed Contacts.....Tin lead plate
Terminal Seal.....Epoxy on single pole, optional
on double pole
Process Seal.....ES version only (see page C16 - C17)

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)
Solder Heat Resistance.....See page M3-4
U.L. (File E-46765).....Silver only

TYPICAL PERFORMANCE CHARACTERISTICS:

Contact Rating..... Gold: 0.4 VA max. @ 20 VDC or peak AC
Silver (2 pos.): 3 A @ 125 VAC or 28 VDC
Silver (3 pos.): 2 A @ 125 VAC or 28 VDC
Initial Contact Resistance..... 20 Milliohms max.
Contact Timing..... Break before Make
Insulation Resistance..... 1,000 Megohms 500 VDC min.
Dielectric Strength..... 1,000 Volts RMS @ sea level
Plunger/Actuator Travel..... 26°
High Torque Bushing Shoulder..... Yes
Life Expectancy..... See chart below
Note: Hardware included with switch



Tiny toggle switch life expectancy chart

One Pole	0.4VA	80,000 (2 Pos.)	60,000 (3 Pos.)
Two Pole	3 Amp	20,000 (2 Pos.)	10,000 (3 Pos.)
Four Pole	0.4VA	80,000 (2 Pos.)	60,000 (3 Pos.)
	3 Amp	20,000 (2 Pos.)	10,000 (3 Pos.)

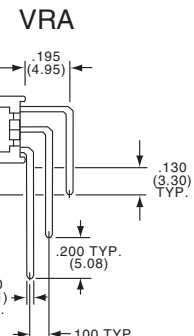
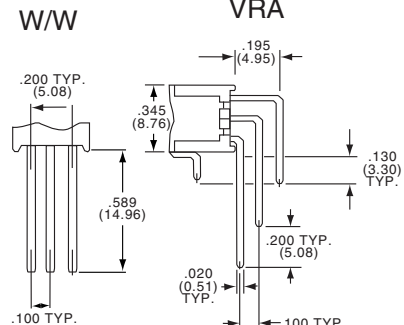
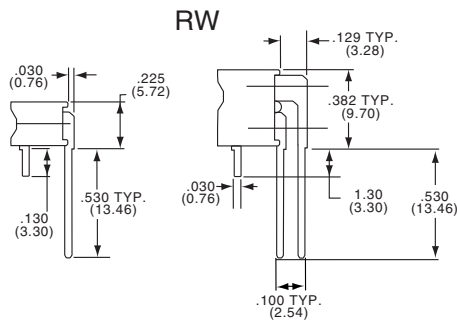
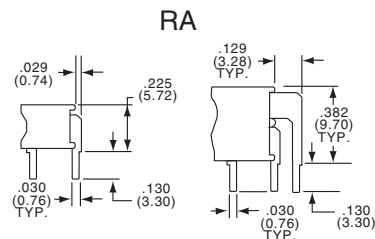
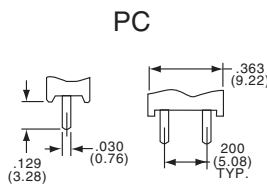
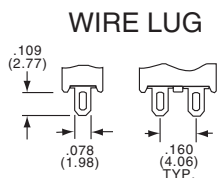
APPLICATION NOTE:

For surface mount termination, use the "TST" series on page C5.
For 3 pole refer to the MT Series on page C43

Actuator Dimensions shown with	
1,2,3,4,6	10-48 bushing
7,8,9	1/4-40 bushing

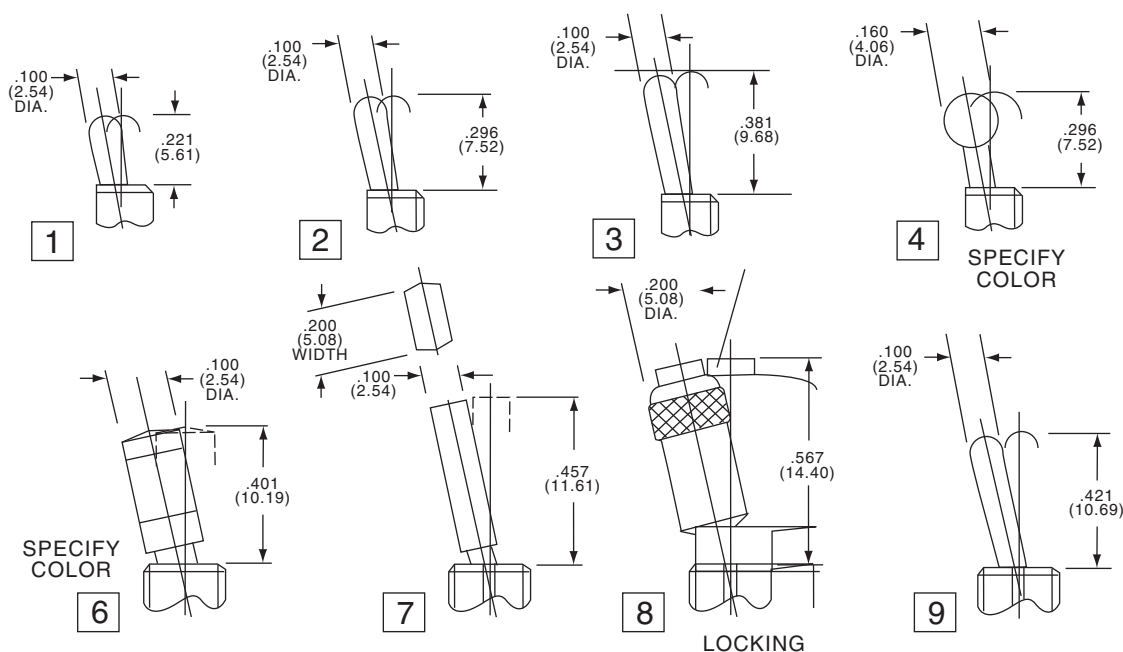
* Not available on 7 actuator or with VRA.
** Not available in RA.
Ω Available in PC & WL only.
~ Available in WL & PC only.

TERMINATIONS

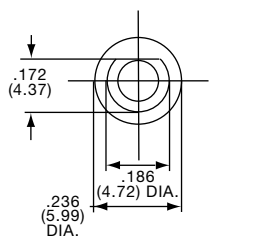
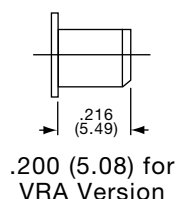


Toggle Switches, Tiny, Actuator and Bushing Options

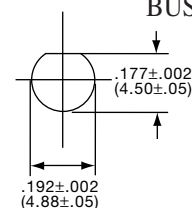
Toggle Cap
Series C-11*
Available



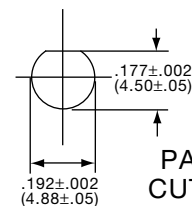
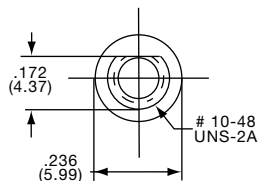
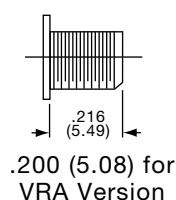
BLANK



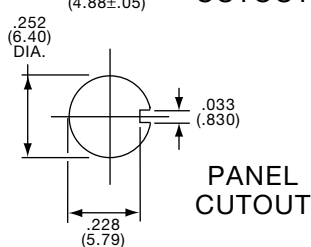
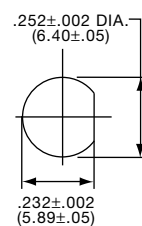
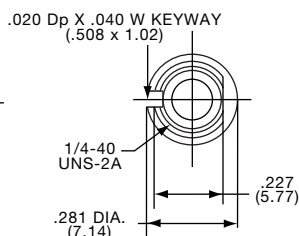
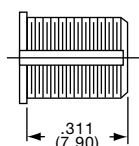
BUSHINGS



T

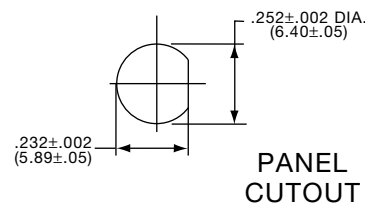
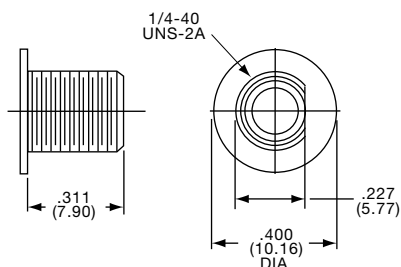


T1/4

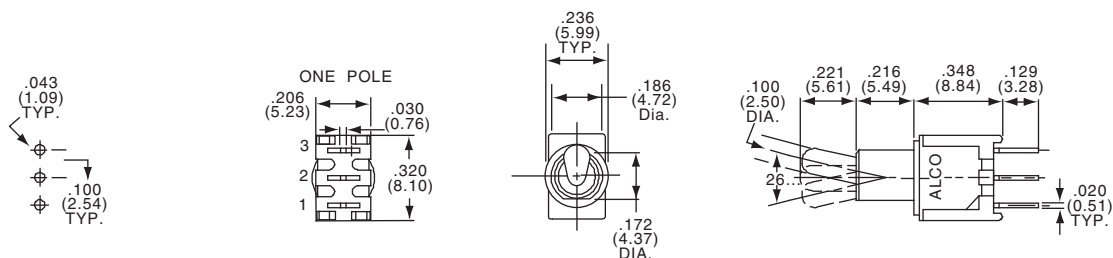


*T1/4

*VERSION USED
ON TTE(Enviromental
Sealed) Series



Toggle Switches, Tiny, Vertical, PC Mount



1 POLE

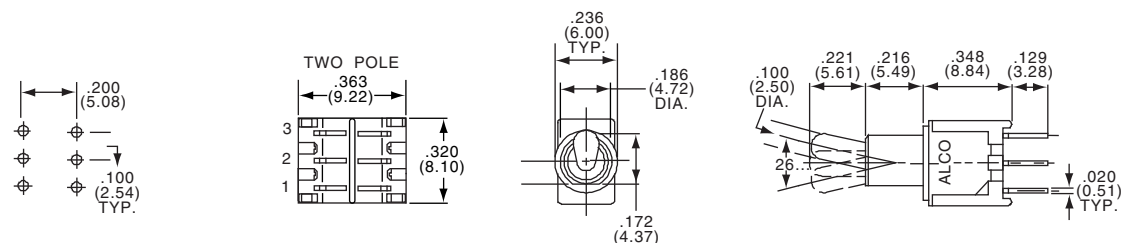
For Terminal Connections refer to Code Chart (see page M5-6)



TT11DGPC1

Tyco Electronics	Alcoswitch	Type	Act. Code P. M5	On	None	Off
2-1437561-3	TT11AGPC1	SPST	A	On	None	Off
2-1437561-6	TT11DGPC1	SPDT	D	On	None	On
5-1437561-1	TT11EGPC1	SPDT	E	On	Off	On

Note: No center terminal on "A" switches



2 POLE

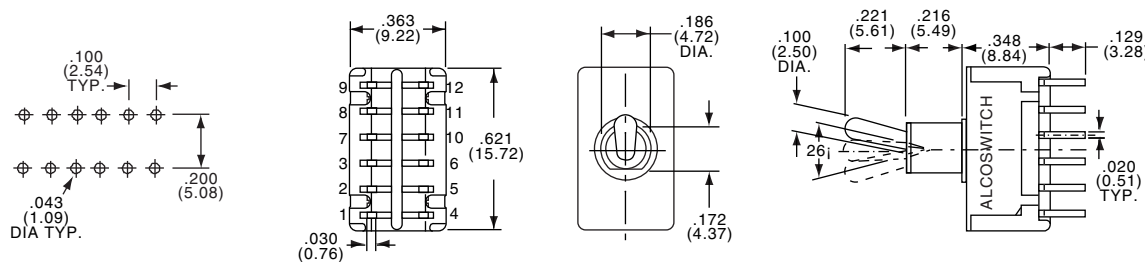
For Terminal Connections refer to Code Chart (see page M5-6)



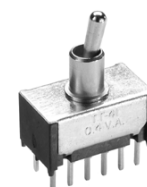
TT21NGPC1

Tyco Electronics	Alcoswitch	Type	Act. Code P. M5	On	None	Off
9-1437561-9	TT21KGPC1	DPST	K	On	None	Off
1437562-3	TT21NGPC1	DPDT	N	On	None	On
3-1437562-4	TT21PGPC1	DPDT	P	On	Off	On

Note: No center terminal on "K" switches



4 POLE



TT41NGPC1

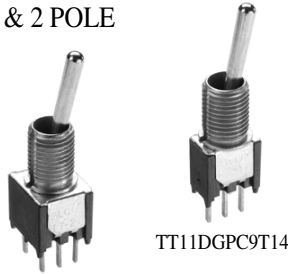
Tyco Electronics	Alcoswitch	Type	Act. Code P. M5	On	None	Off
6-1437562-6	TT41NGPC1	4PDT	N	On	None	On

Toggle Switches, Tiny, Vertical and Vertical Right Angle, PC Mount

SEE PAGE C8 FOR PRODUCT SPECIFICATIONS

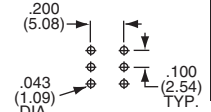
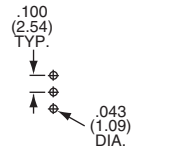
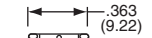
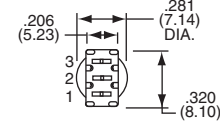
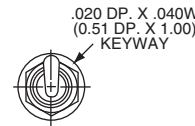
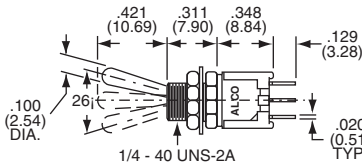
For terminal connections refer to Code Chart on page M5-6

1 & 2 POLE

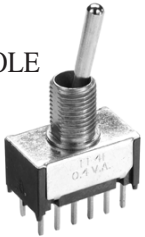


TT11DGPC9T1/4

TT21NGPC9T1/4



4 POLE



TT41NGPC9T1/4

Tyco Electronics	Alcoswitch	Type	Act.	Code	P.	M5				Tyco Electronics	Alcoswitch	Type	Act.	Code	P.	M5			
2-1437561-5	TT11AGPC9T1/4	SPST	A	On	None	Off				1-1437562-1	TT21NGPC9T1/4	DPDT	N	On	None	On			
3-1437561-5	TT11DGPC9T1/4	SPDT	D	On	None	On				3-1437562-8	TT21PGPC9T1/4	DPDT	P	On	Off	On			
5-1437561-9	TT11EGPC9T1/4	SPDT	E	On	Off	On				4-1437562-6	TT21RGPC9T1/4	DPDT	R	On	None	(On)			
7-1437561-3	TT11FGPC9T1/4	SPDT	F	On	None	On				6-1437562-8	TT41NGPC9T1/4	4PDT	N	On	None	On			
1437562-1	TT21KGPC9T1/4	DPST	K	On	None	Off				7-1437562-5	TT41PGPC9T1/4	4PDT	P	On	Off	On			

Note: No center terminal on "A" or "K" switches.

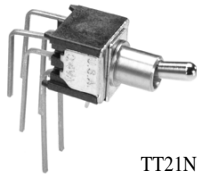
(On) indicates momentary position.

Note: Hardware Included

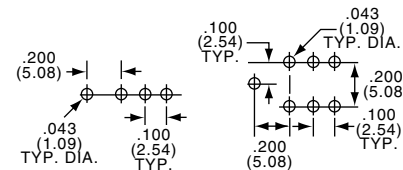
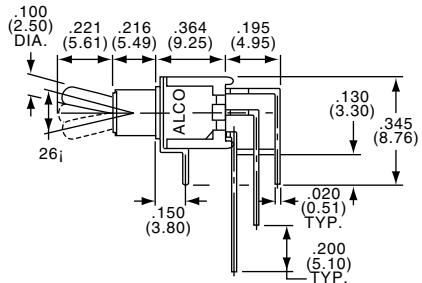
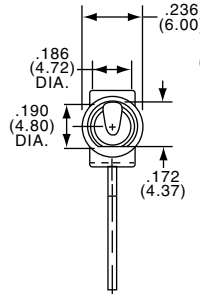
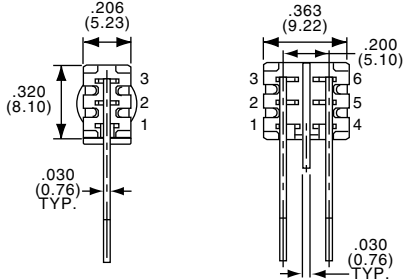
1 & 2 POLE



TT11DGVRA1
Vertical Actuation

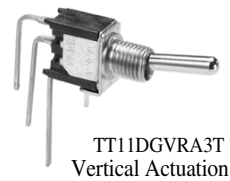


TT21NGVRA1
Vertical Actuation

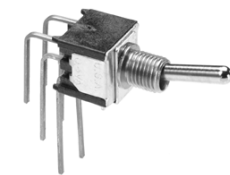


Tyco Electronics	Alcoswitch	Type	Act.	Code	P.	M5			
4-1437561-8	TT11DGVRA1	SPDT	D	On	None	On			
6-1437561-9	TT11EGVRA1	SPDT	E	On	Off	On			
2-1437562-2	TT21NGVRA1	DPDT	N	On	None	On			
4-1437562-3	TT21PGVRA1	DPDT	P	On	Off	On			

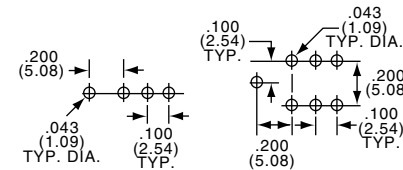
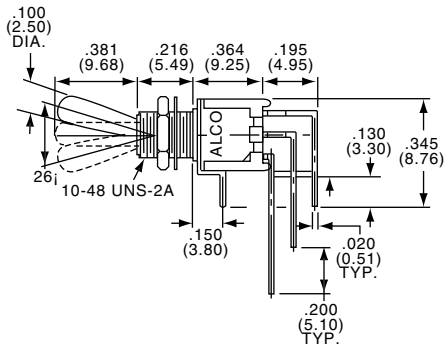
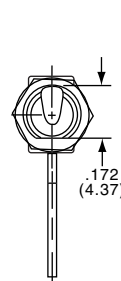
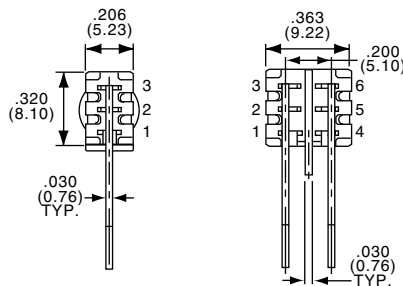
1 & 2 POLE



TT11DGVRA3T
Vertical Actuation



TT21NGVRA3T
Vertical Actuation



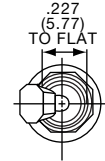
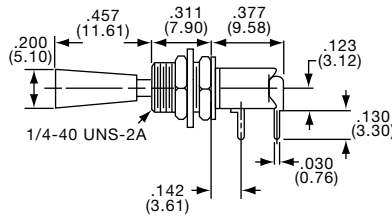
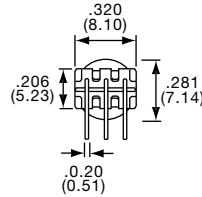
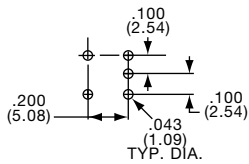
Tyco Electronics	Alcoswitch	Type	Act.	Code	P.	M5			
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7-1437561-0	TT11EGVRA3T	SPDT	E	On	Off	On			
2-1437562-3	TT21NGVRA3T	DPDT	N	On	None	On			

Toggle Switches, Tiny, Right Angle, Flat Actuator

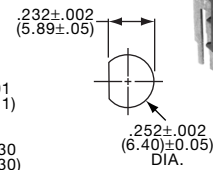
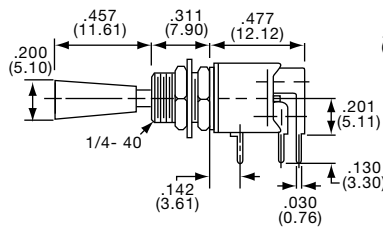
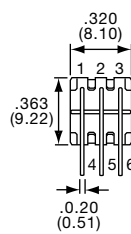
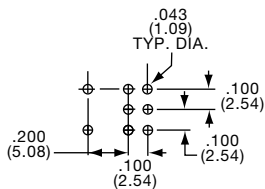
SEE PAGE C8 FOR PRODUCT SPECIFICATIONS

* Refer to Page C8 for
Other Options *

1 & 2 POLE FLAT



TT11DGRA7T1/4
Horizontal Actuation



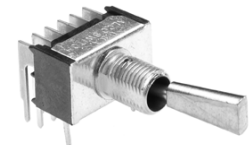
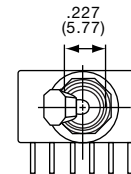
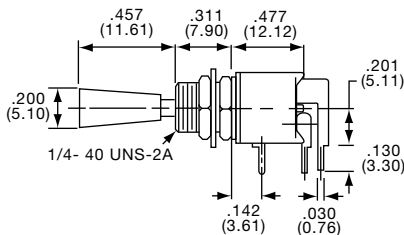
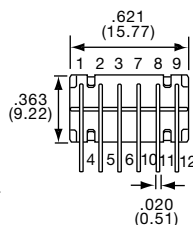
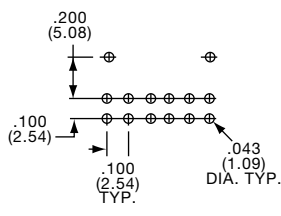
TT21NGRA7T1/4
Horizontal Actuation

Tyco Electronics	Alcoswitch	Type	Act. Code	P. M5	On	None	On
4-1437561-5	TT11DGRA7T1/4	SPDT	D		On	None	On
6-1437561-7	TT11EGRA7T1/4	SPDT	E		On	Off	On
7-1437561-4	TT11FGRA7T1/4	SPDT	F		On	None	(On)
1-1437562-9	TT21NGRA7T1/4	DPDT	N		On	None	On
4-1437562-0	TT21PGRA7T1/4	DPDT	P		On	Off	On

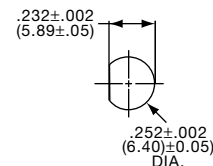
(On) indicates momentary position

Pinned for Anti-Rotation

4 POLE FLAT



TT41NGRA7T14
Horizontal Actuation



Tyco Electronics	Alcoswitch	Type	Act. Code	P. M5	On	None	On
7-1437562-2	TT41NGRA7T1/4	4PDT	N		On	None	On

Pinned for Anti-Rotation

Toggle Switches, Tiny, Wire Wrap Termination

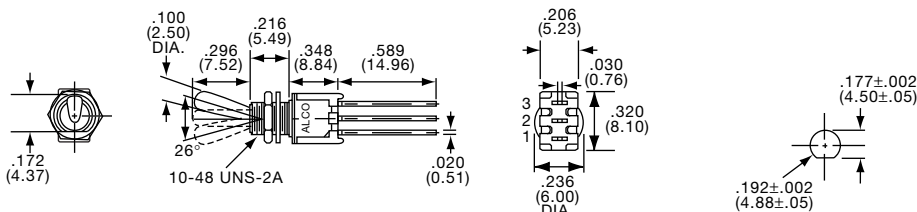
SEE PAGE C8 FOR PRODUCT SPECIFICATIONS

For terminal connections refer to Code Chart on page M5-6

1 POLE



TT11DGWW2T

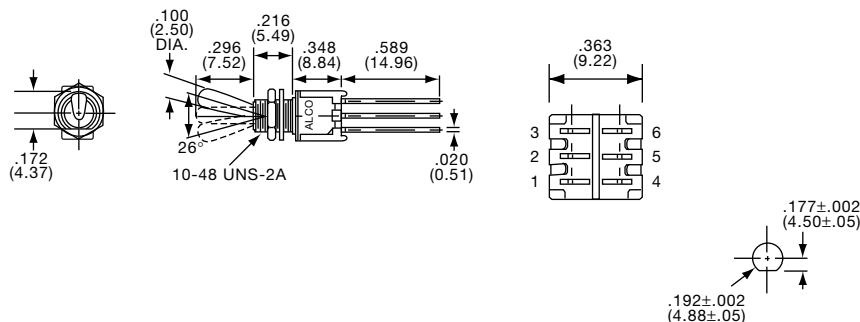


Tyco Electronics	Alcoswitch	Type	Act. Code P. M5	On	None	On
5-1437561-0	TT11DGWW2T	SPDT	D	On	None	On
7-1437561-1	TT11EGWW2T	SPDT	E	On	Off	On

2 POLE

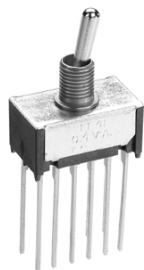


TT21NGWW2T

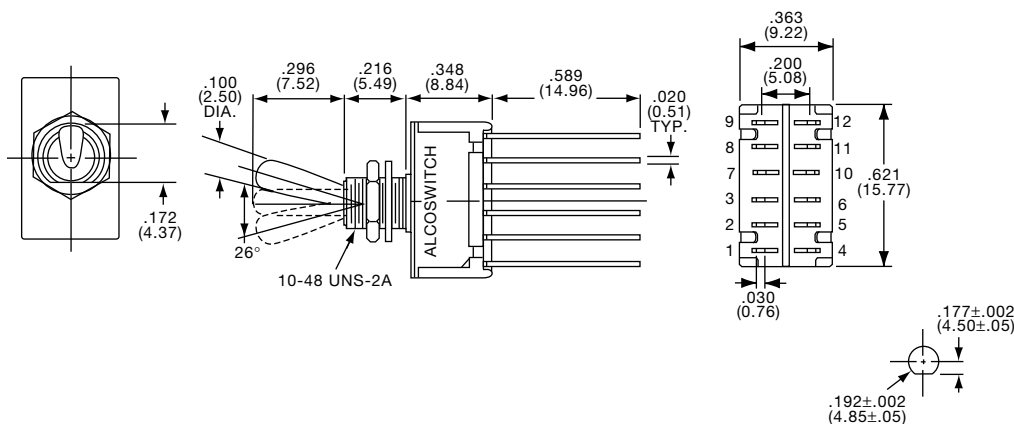


Tyco Electronics	Alcoswitch	Type	Act. Code P. M5	On	None	On
2-1437562-4	TT21NGWW2T	DPDT	N	On	None	On
4-1437562-4	TT21PGWW2T	DPDT	P	On	Off	On

4 POLE



TT41NGWW2T



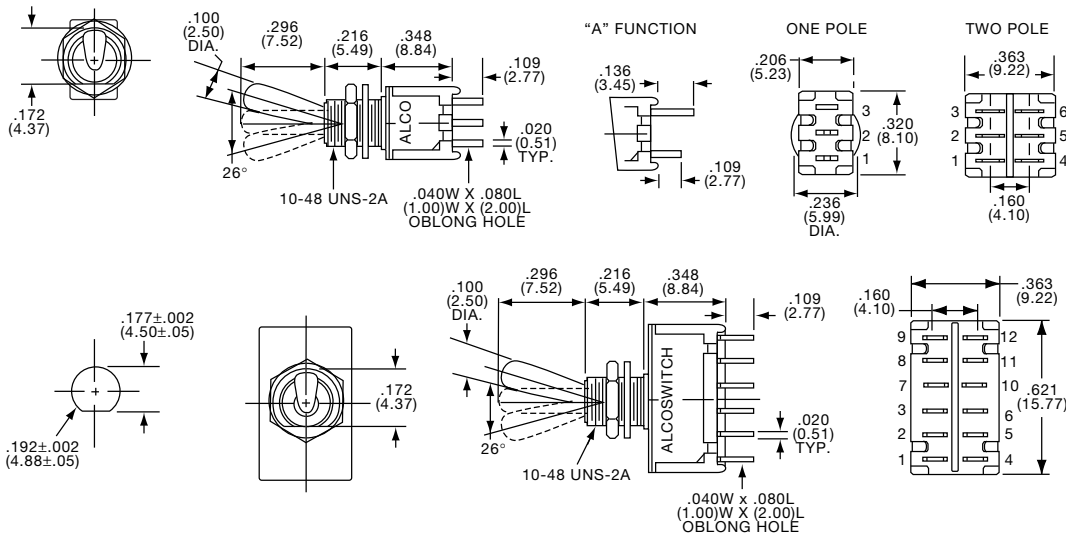
Tyco Electronics	Alcoswitch	Type	Act. Code P. M5	On	None	On
7-1437562-4	TT41NGWW2T	4PDT	N	On	None	On

Toggle Switches, Tiny, Wire Lug, Round or Flat Actuators

SEE PAGE C8 FOR PRODUCT SPECIFICATIONS

For terminal connections refer to Code Chart on page M5-6

NOTICE: Wire lug terminals accept two No. 20 AWG wires.



1 & 2 POLE

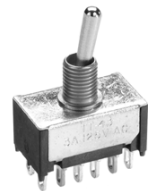


TT13D2T



TT23N2T

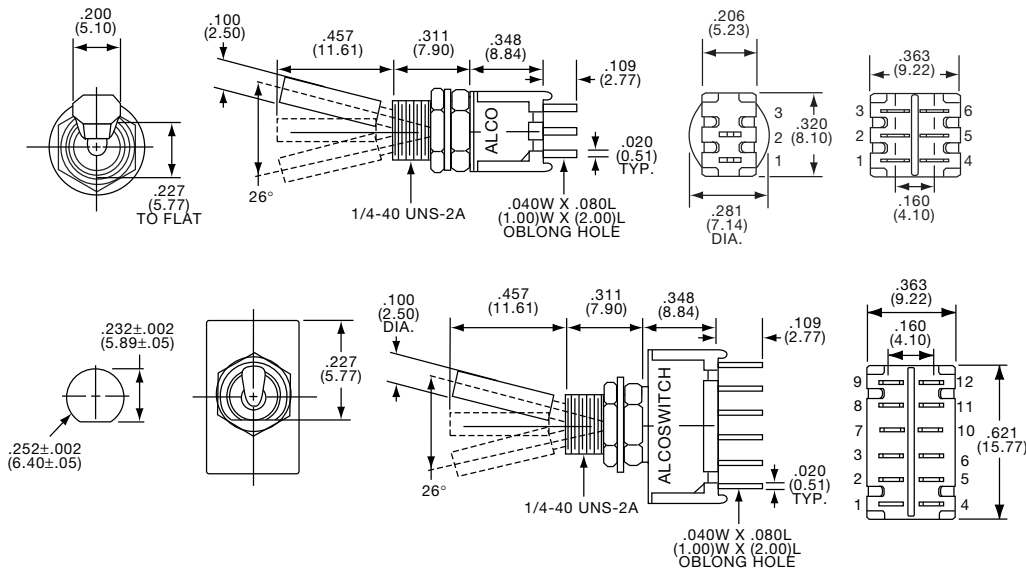
4 POLE



TT43N2T

Tyco Electronics	Alcoswitch	Type	Act. Code P. M5	On	None	Off	Tyco Electronics	Alcoswitch	Type	Act. Code P. M5	On	None	Off
7-1437561-8	TT13A2T	SPST	A	On	None	Off	5-1437562-1	TT23N2T	DPDT	N	On	None	On
8-1437561-5	TT13D2T	SPDT	D	On	None	On	5-1437562-7	TT23P2T	DPDT	P	On	Off	On
9-1437561-5	TT13E2T	SPDT	E	On	Off	On	7-1437562-6	TT43N2T	4PDT	N	On	None	On
4-1437562-7	TT23K2T	DPST	K	On	None	Off							

Note: No center terminal "A" or "K" action switches.



1 & 2 POLE



TT13D7T1/4



TT23N7T1/4

4 POLE



TT43N7T1/4

Pinned for Anti-Rotation

Tyco Electronics	Alcoswitch	Type	Act. Code P. M5	On	None	Off	Tyco Electronics	Alcoswitch	Type	Act. Code P. M5	On	None	Off
9-1437561-1	TT13D7T1/4	SPDT	D	On	None	On	6-1437562-0	TT23P7T1/4	DPDT	P	On	Off	On
9-1437561-7	TT13E7T1/4	SPDT	E	On	Off	On	7-1437562-8	TT43N7T1/4	4PDT	N	On	None	On
5-1437562-5	TT23N7T1/4	DPST	N	On	None	On		TT43P7T1/4	4PDT	P	On	Off	On

Toggle Switches, Tiny, Wire Lug, Long Actuators

SEE PAGE C8 FOR PRODUCT SPECIFICATIONS

For terminal connections refer to Code Chart on page M5-6

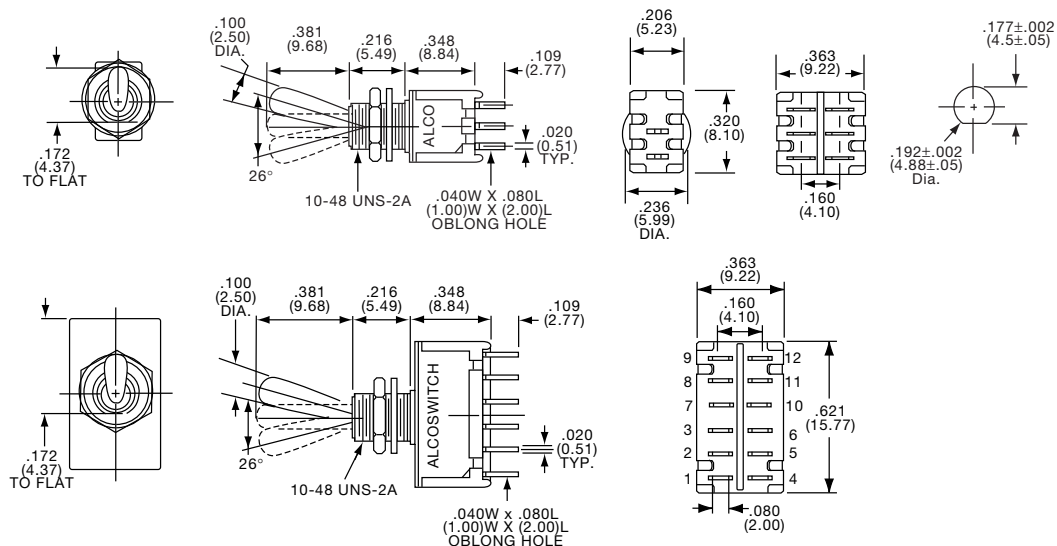
1 & 2 POLE



TT13D3T



TT23N3T



Tyco Electronics	Alcoswitch	Type	Act. Code P. M5	On	None	Off	Tyco Electronics	Alcoswitch	Type	Act. Code P. M5	On	None	Off
8-1437561-0	TT13A3T	SPST	A	On	None	Off	5-1437562-8	TT23P3T	DPDT	P	On	Off	On
8-1437561-8	TT13D3T	SPDT	D	On	None	On	7-1437562-7	TT43N3T	4PDT	N	On	None	On
9-1437561-6	TT13E3T	SPDT	E	On	Off	On	8-1437562-0	TT43P3T	4PDT	P	On	Off	On
4-1437562-8	TT23K3T	DPST	K	On	None	Off							
5-1437562-2	TT23N3T	DPDT	N	On	None	On							

Note: No center terminal on "A" or "K" action switches.

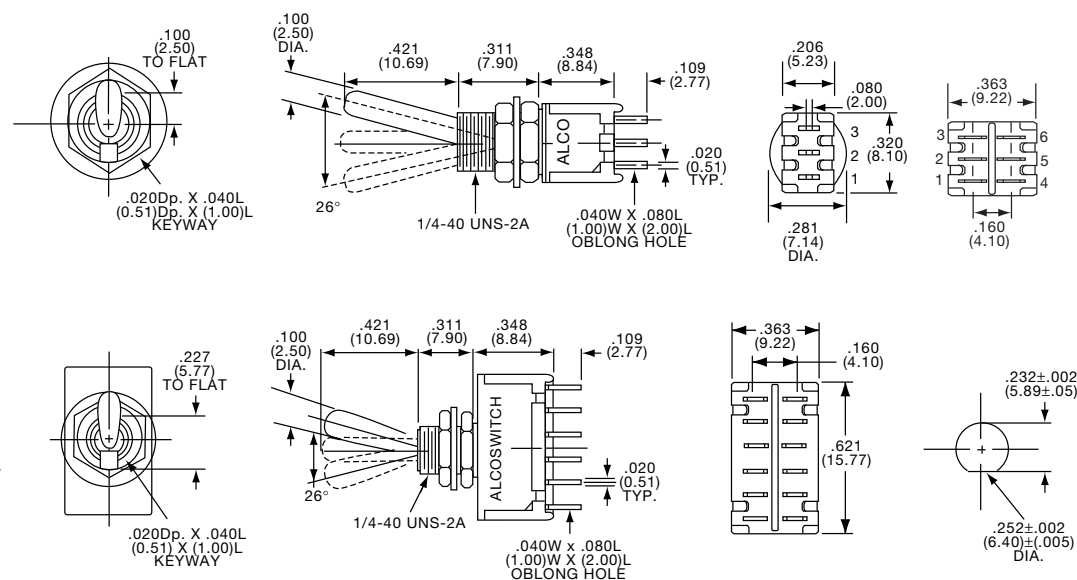
1 & 2 POLE



TT13A9T1/4



TT23N9T1/4



Tyco Electronics	Alcoswitch	Type	Act. Code P. M5	On	None	Off	Tyco Electronics	Alcoswitch	Type	Act. Code P. M5	On	None	Off
8-1437561-4	TT13A9T1/4	SPST	A	On	None	Off	6-1437562-2	TT23P9T1/4	DPDT	P	On	Off	On
9-1437561-2	TT13D9T1/4	SPDT	D	On	None	On	7-1437562-9	TT43N9T1/4	4PDT	N	On	None	On
9-1437561-8	TT13E9T1/4	SPDT	E	On	Off	On	8-1437562-1	TT43P9T1/4	4PDT	P	On	Off	On
4-1437562-9	TT23K9T1/4	DPST	K	On	None	Off							
5-1437562-6	TT23N9T1/4	DPDT	N	On	None	On							

Note: No center terminal on "A" or "K" action switches.

4 POLE



TT43N9T1/4

Toggle Switches, Process Sealed, Vertical

MATERIAL SPECIFICATIONS:

Contacts Gold over nickel
 Inner Case Material High temperature polyester
 Outer Case Material Polyamide
 Terminals/Fixed Contacts Tin lead plate
 Terminal Seal Epoxy
 Process Seal Disposable boot, epoxied double case

TYPICAL PERFORMANCE CHARACTERISTICS:

Contact Rating 0.4VA Max. @ 20 VDC or peak AC
 Initial Contact Resistance 20 Milliohms max.
 Contact Timing Break-before-make
 Insulation Resistance 1,000 Megohms min. 500 VDC
 Dielectric Strength 1,000 Volts RMS @ sea level
 Plunger/Actuator Travel 26°
 Life Expectancy See page C8

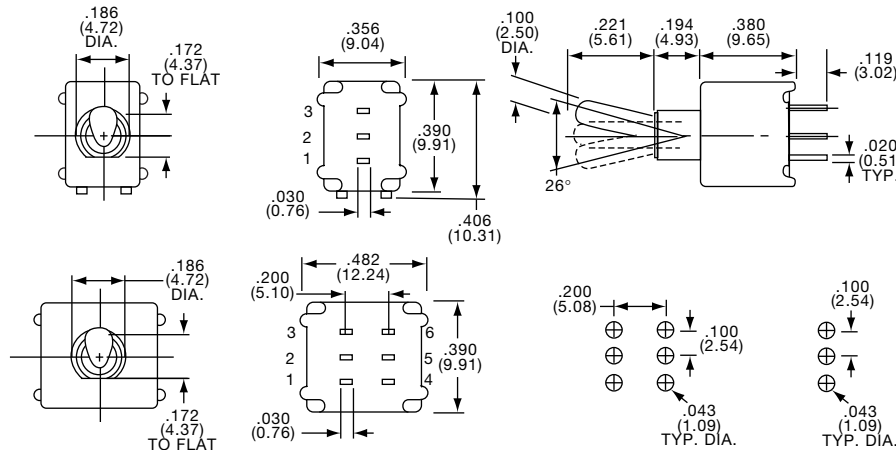
ENVIRONMENTAL SPECIFICATIONS

Operating Temperature -22°F to +185°F (-30°C to +85°C)
 Storage Temperature -67°F to +185°F (-55°C to +85°C)
 Solder Heat Resistance See page M3-4

APPLICATION NOTE: Each switch is provided with a disposable boot used only during cleaning operation.

* Refer to Page C8 for Other Options *

Note: Hardware included with switch



1 & 2 POLE
UNTHREADED BUSHING

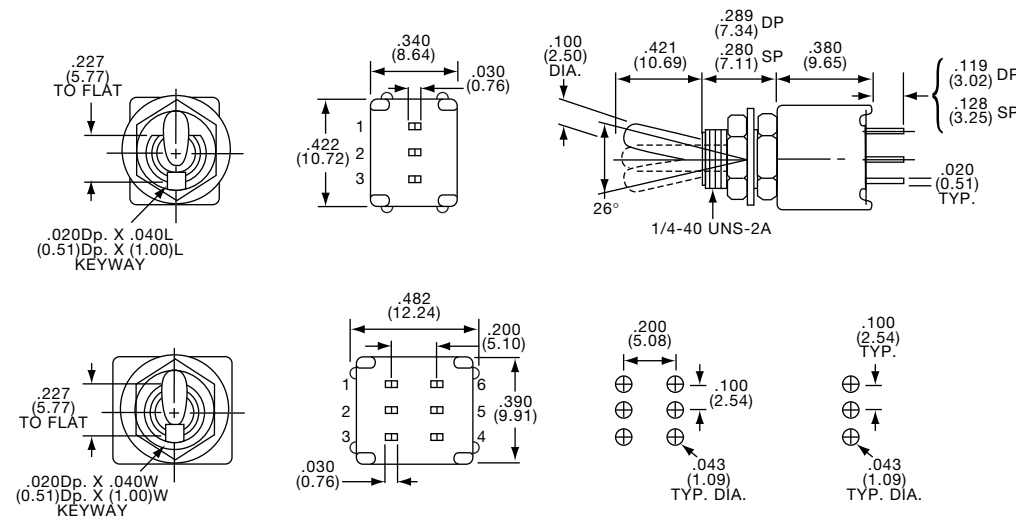


TT11DGPC1ES

Tyco Electronics	Alcoswitch	Type	Act. Code P. M5	On	None	Off
2-1437561-4	TT11AGPC1ES	SPST	A	On	None	Off
2-1437561-7	TT11DGPC1ES	SPDT	D	On	None	On

Note: No center terminal "A".

Tyco Electronics	Alcoswitch	Type	Act. Code P. M5	On	None	On
1437562-4	TT21NGPC1ES	DPDT	N	On	None	On



1 & 2 POLE
THREADED BUSHING



TT11DGPC9T1/4ES



TT21NGPC9T1/4ES

Tyco Electronics	Alcoswitch	Type	Act. Code P. M5	On	None	Off
6-1437830-2	TT11AGPC9T1/4ES	SPST	A	On	None	Off
	TT11DGPC9T1/4ES	SPDT	D	On	None	On
	TT11EGPC9T1/4ES	SPDT	E	On	Off (On)	
	TT21KGPC9T1/4ES	DPST	K	On	None	Off

Note: No center terminal "A" or "K" action switches.

Tyco Electronics	Alcoswitch	Type	Act. Code P. M5	On	None	On
1-1437562-2	TT21NGPC9T1/4ES	DPDT	N	On	None	On
	TT21PGPC9T1/4ES	DPDT	P	On	Off	On

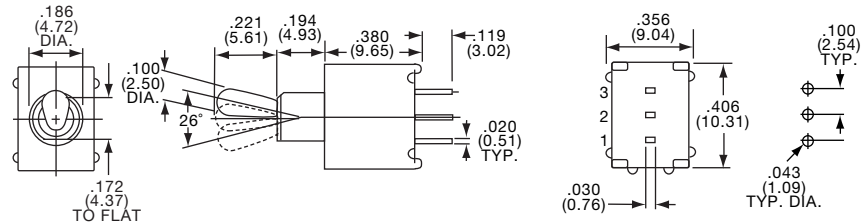
(On) indicates momentary position.

Toggle Switches, Tiny, Enviromental and Process Sealed

SEE PAGE C16 FOR PRODUCT SPECIFICATIONS

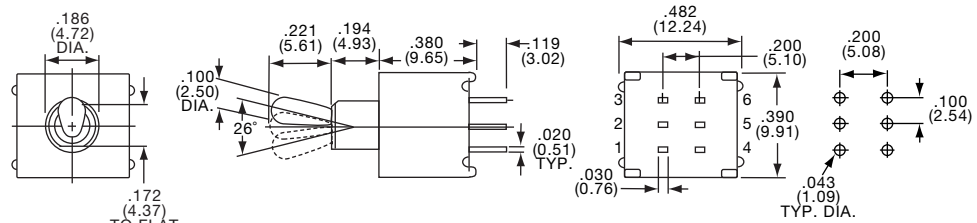
For terminal connections refer to Code Chart on page M5-6

1 POLE-PC VERTICAL MOUNT



Tyco Electronics	Alcoswitch	Type	Act. Code P. M5	On	None	On
8-1437562-6	TTE11DGPC1ES	SPDT	D	On	None	On
	TTE11EGPC1ES	SPDT	E	On	Off	On

2 POLE-PC VERTICAL MOUNT

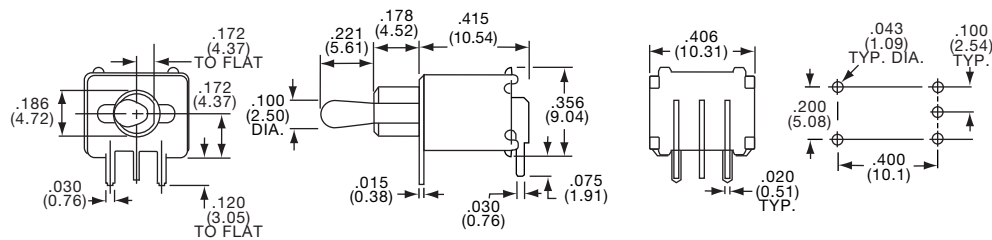


Tyco Electronics	Alcoswitch	Type	Act. Code P. M5	On	None	On
1437563-1	TTE21NGPC1ES	DPDT	N	On	None	On
	TTE21PGPC1ES	DPDT	P	On	Off	On

1 POLE-PC RIGHT ANGLE



TTE11DGRA1ES
Horizontal Actuation

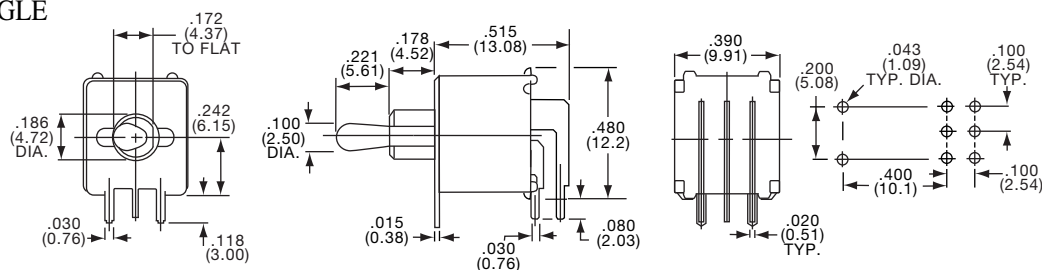


Tyco Electronics	Alcoswitch	Type	Act. Code P. M5	On	None	On
8-1437562-9	TTE11DGRA1ES	SPDT	D	On	None	On
9-1437562-2	TTE11EGRA1ES	SPDT	E	On	Off	On

2 POLE-PC RIGHT ANGLE



TTE21NGRA1ES
Horizontal Actuation



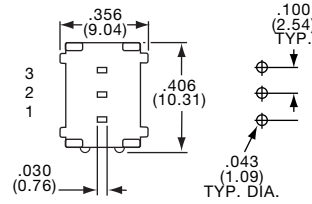
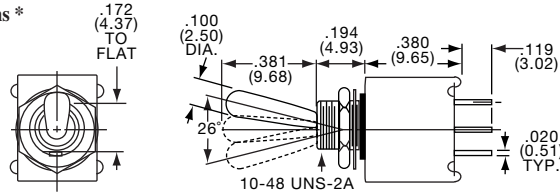
Tyco Electronics	Alcoswitch	Type	Act. Code P. M5	On	None	On
1437563-4	TTE21NGRA1ES	DPDT	N	On	None	On
	TTE21PGRA1ES	DPDT	P	On	Off	On

Toggle Switches, Tiny, Enviromental and Process Sealed

For terminal connections refer to Code Chart on page M5-6.

SEE PAGE C16 FOR PRODUCT SPECIFICATIONS

* Refer to Page C8 for
Other Options *



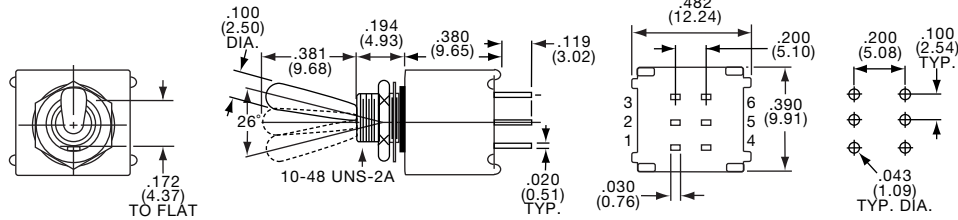
1 POLE



TTE11DGPC3TES

Tyco Electronics	Alcoswitch	Type	Act. Code P. M5	On	None	Off
8-1437562-5	TTE11AGPC3TES	SPST	A	On	None	Off
8-1437562-7	TTE11DGPC3TES	SPDT	D	On	None	On
9-1437562-0	TTE11EGPC3TES	SPDT	E	On	Off	On

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

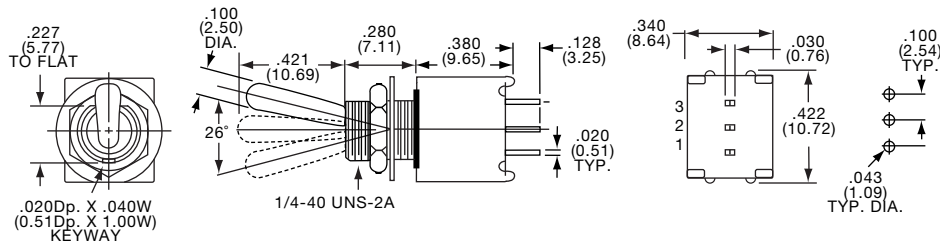


2 POLE



TTE21NGPC3TES

Tyco Electronics	Alcoswitch	Type	Act. Code P. M5	On	None	On
1437563-2	TTE21NGPC3TES	DPDT	N	On	None	On
	TTE21PGPC3TES	DPDT	P	On	Off	On



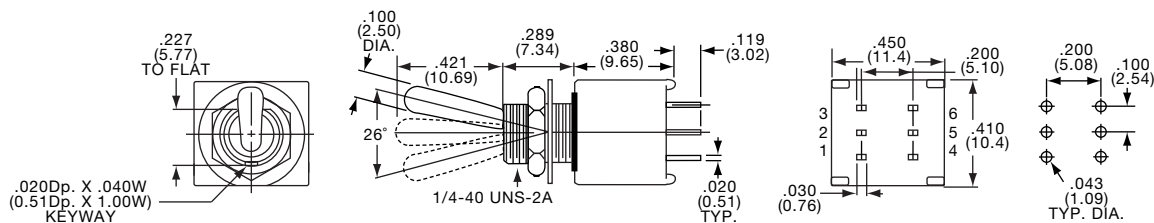
1 POLE



TTE11DGPC9T4ES

Tyco Electronics	Alcoswitch	Type	Act. Code P. M5	On	None	Off
	TTE11AGPC9T1/4ES	SPST	A	On	None	Off
8-1437562-8	TTE11DGPC9T1/4ES	SPDT	D	On	None	On
9-1437562-1	TTE11EGPC9T1/4ES	SPDT	E	On	Off	On

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



2 POLE



TTE21NGPC9T4ES

Tyco Electronics	Alcoswitch	Type	Act. Code P. M5	On	None	Off
	TTE21KGPC9T1/4ES	DPST	K	On	None	Off
1437563-3	TTE21NGPC9T1/4ES	DPDT	N	On	None	On
	TTE21PGPC9T1/4ES	DPDT	P	On	Off	On

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