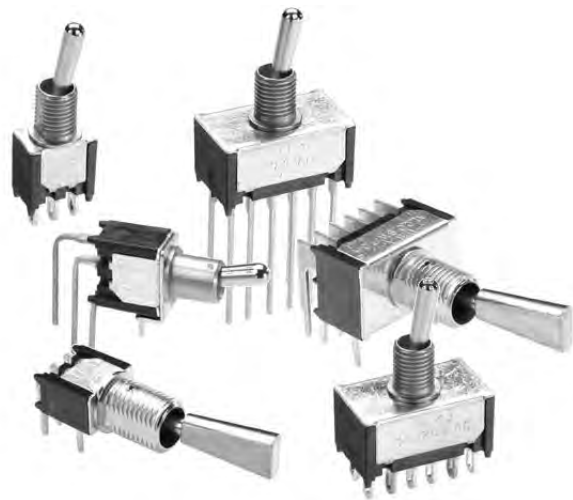


TT, Tiny Toggle Switch

Features

- Compact design
- Vertical and horizontal right angle versions available



Typical performance characteristics

Contact configuration	1, 2 and 4 pole
Contact timing	make before break
Contact rating, max	gold 0.4 VA @ 20 VDC or peak AC resistive
	silver (2 position): 3 A @ 125 VAC or 28 VDC resistive
	silver (4 position): 2 A @ 125 VAC or 28 VDC resistive
Electrical life	0.4 VA: 80,000 (2 pos.), 60,000 (3 pos.)
	2 A: 10,000 cycles
	3 A: 20,000 cycles
Contact resistance, initial	max.20 mOhms
Insulation resistance	1,000 MOhms @ 500 VDC
Dielectric strength	1,000 Vrms @ sea Level
Actuator travel	22° for D and E function
	18° for F and G function

Environmental specification

Operating temperature	-30°C to +85°C
Storage temperature	-55°C to +85°C
Solder heat resistance	wave solder capable to 265°C
Terminal Seal	single pole: epoxy, double pole: epoxy optional
Process Sealed	TTE version only

Material specifications

Contacts	copper or brass alloy, gold over nickel finish
	or silver clad copper alloy
Actuator	brass alloy, nickel finish or
	stainless steel or thermoplastic
Terminals	brass with gold over nickel in contact area
	brass alloy, gold over nickel finish
	or silver clad copper alloy tin over nickel in solder area
Case	thermoplastic
Bushing	brass alloy finish nickel over copper
Internal actuator	thermoplastic or PTFE
Spring	music wire zinc plated
Support Bracket	steel tin plated
RoHS Directive 2002/95/EC	compliant

TT, Tiny Toggle Switch (Continued)

Product key	Typical product key		TT	1	1	D	G	PC	9	T1/4	04					
Type	TT		Tiny toggle switch													
Environmental seal	blank		no seal													
	E		environmental seal (splash proof), not available with actuator 7 or with terminals VRA													
Number of Poles	1		4		4 pole											
	2		double pole													
Contact rating	1		0.4VA Gold		3		1 Amp, Silver with wire lug and pc terminals only									
Function	single pole		2 & 4 pole													
	A		On Off		K		On Off									
	D		On On		N		On On									
	E		On Off On		P		On Off On									
	F		On (On)		R		On (On)									
Plating	G		Gold		blank		Silver									
Terminals	blank		wire lug		RA		right angle									
	PC		printed circuit		VRA		vertical right angle									
					WW		wire wrap									
Actuator length	#10 or Unthreaded Bushing		1/4 Bushing													
	1		.221 (5.61), bat		1		.125 (3.18), bat									
	2		.296 (7.52), bat		2		.200 (5.1), bat									
	3		.381 (9.68), bat		3		.286 (7.26), bat									
	5		na		5		paddle									
	6		.401 (10.19), round, colored		6		.306 (7.77), round, colored									
	7		na		7		.457 (11.61), flat									
	8		na		8		.567 (14.40), locking									
	9		.516 (13.11), bat		9		.421 (10.693), bat									
Bushing	blank		unthreaded		T		#10-48		T1/4			1/4-40				
Actuator color	for actuator code 6 only															
	0		black		2		red		6		blue		9		white	
Material	04		RoHS compliant													

Toggle Switches

Function

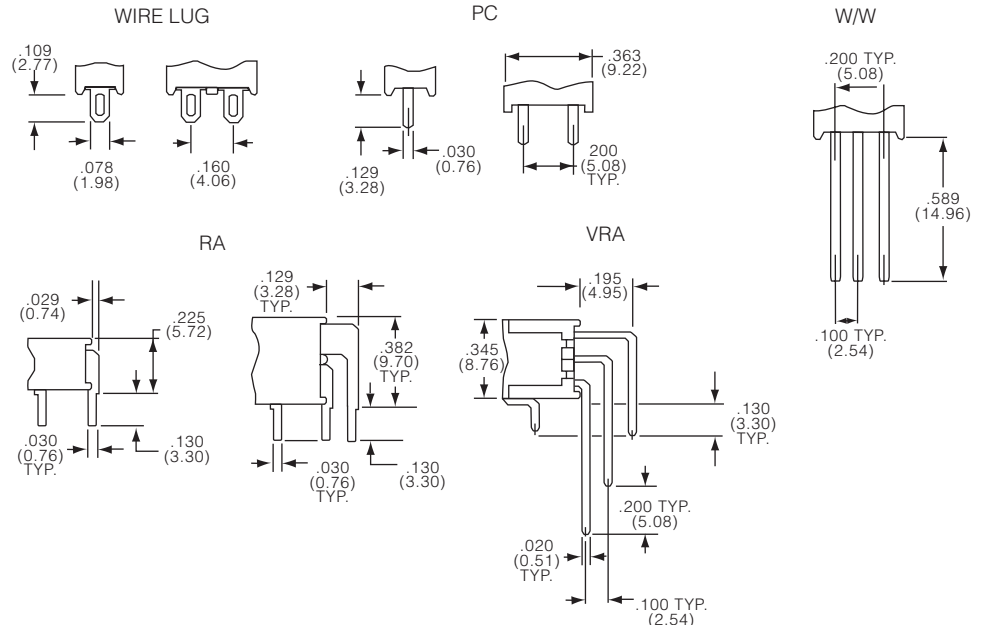


Function	Poles	↘	↓	↙	↘	↓	↙
A	1 pole	On	None	Off	1-3	-	-
D	1 pole	On	None	On	1-2	-	2-3
E		On	Off	On	1-2	-	2-3
F		On	None	(On)	1-2	-	2-3
K		2 poles	On	None	Off	1-3, 4-6	-
N	2 poles	On	None	On	1-2, 4-5	-	2-3, 5-6
P		On	Off	On	1-2, 4-5	-	2-3, 5-6
R		On	None	(On)	1-2, 4-5	-	2-3, 5-6

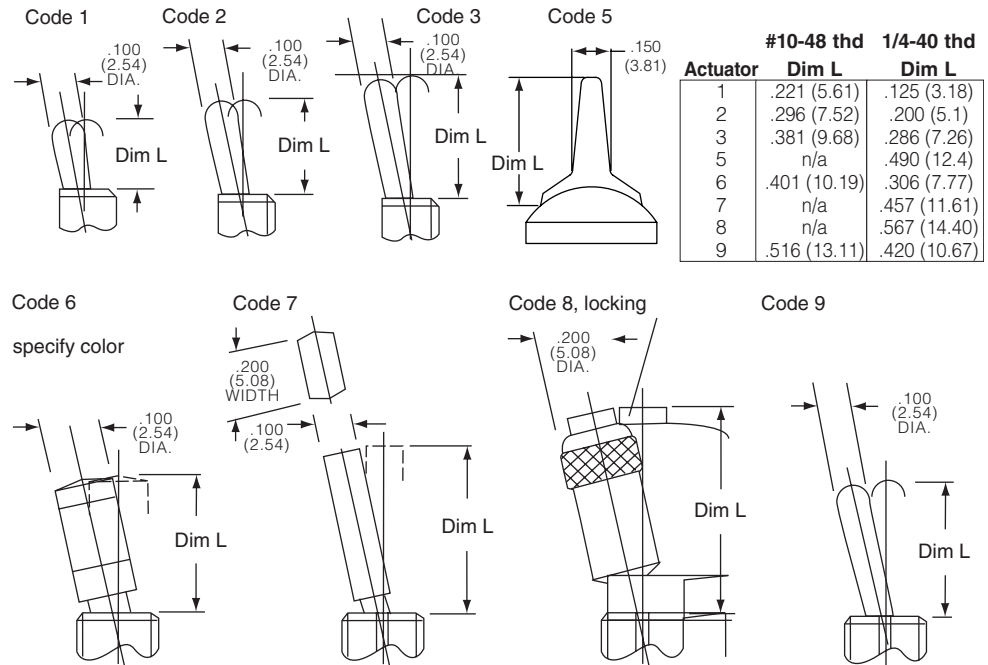
Off indicates a mechanical position with no electrical connection
 (On) indicates momentary connection
 None indicates no mechanical position

TT, Tiny Toggle Switch (Continued)

Terminals



Actuator



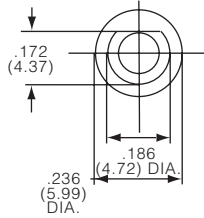
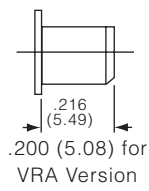
TT, Tiny Toggle Switch (Continued)

Bushing

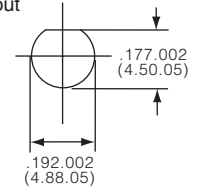


blank

unthreaded

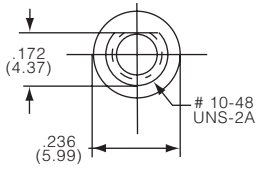
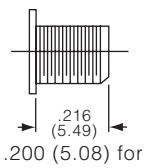


panel cutout

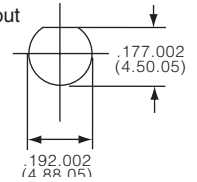


T

10-48 UNS-2A thread

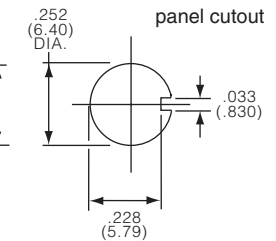
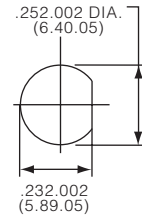
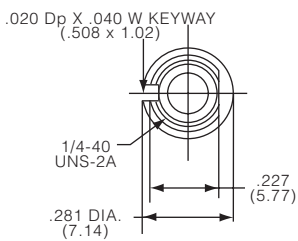
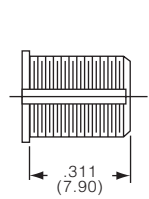


panel cutout



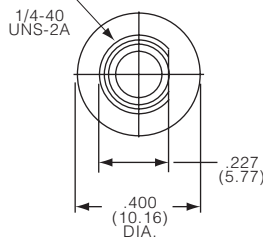
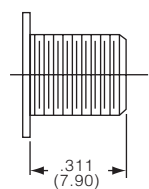
T1/4

1/4-40 UNS-2A thread for non environmental sealed version

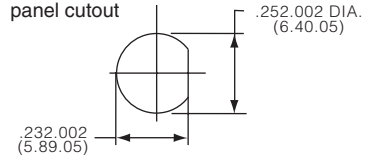


T1/4

1/4-40 UNS-2A thread for environmental sealed version



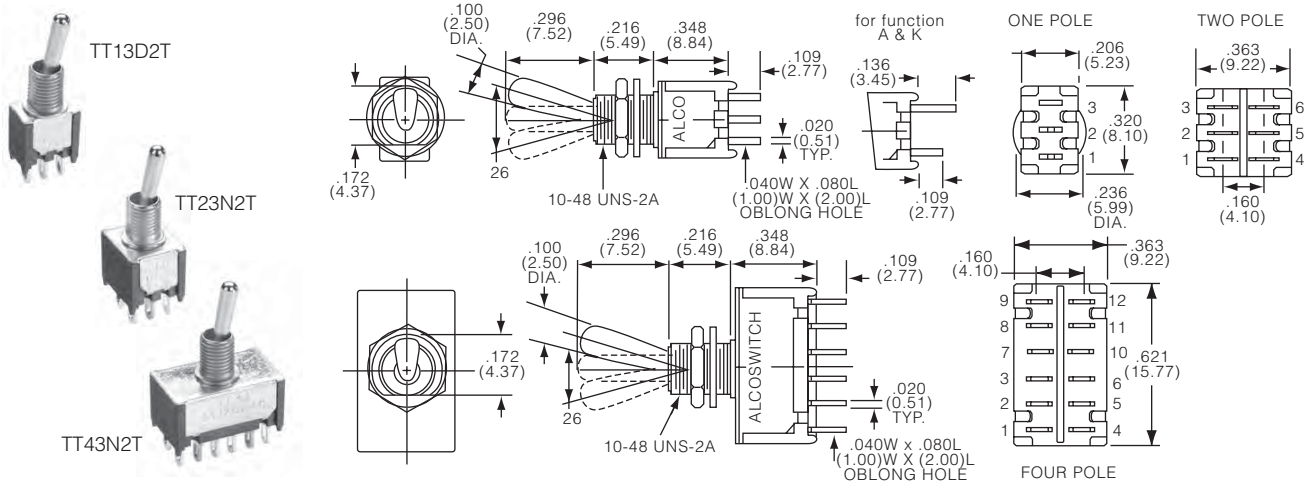
panel cutout



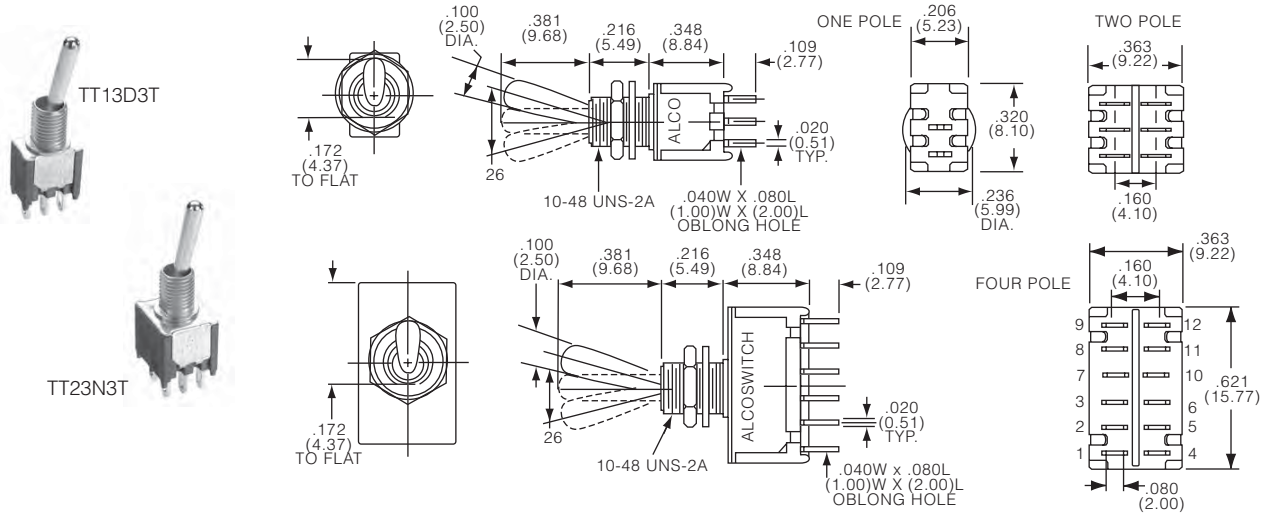
TT, Tiny Toggle Switch (Continued)

Dimensions

Series TT...2T wire lug, .296 bat toggle, 10-48 thread

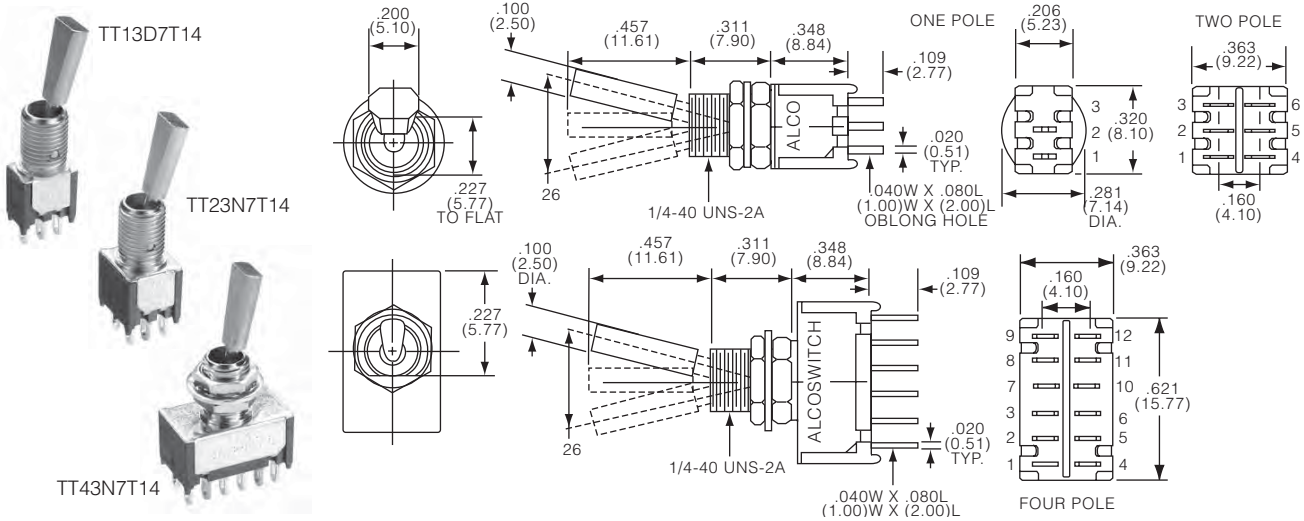


Series TT...3T wire lug, .381 bat toggle, 10-48 thread

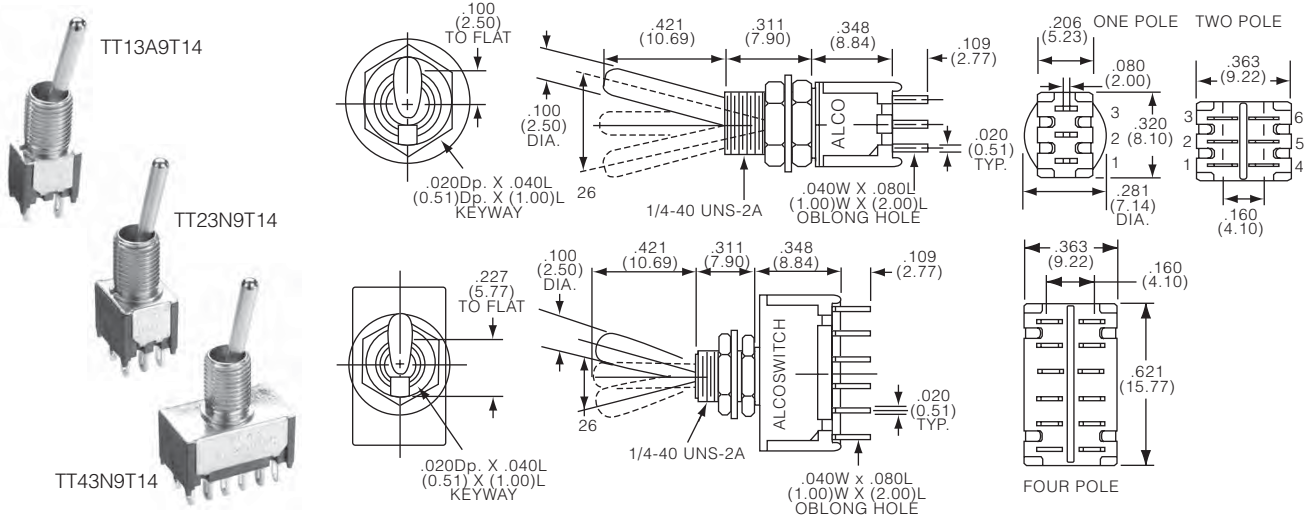


TT, Tiny Toggle Switch (Continued)

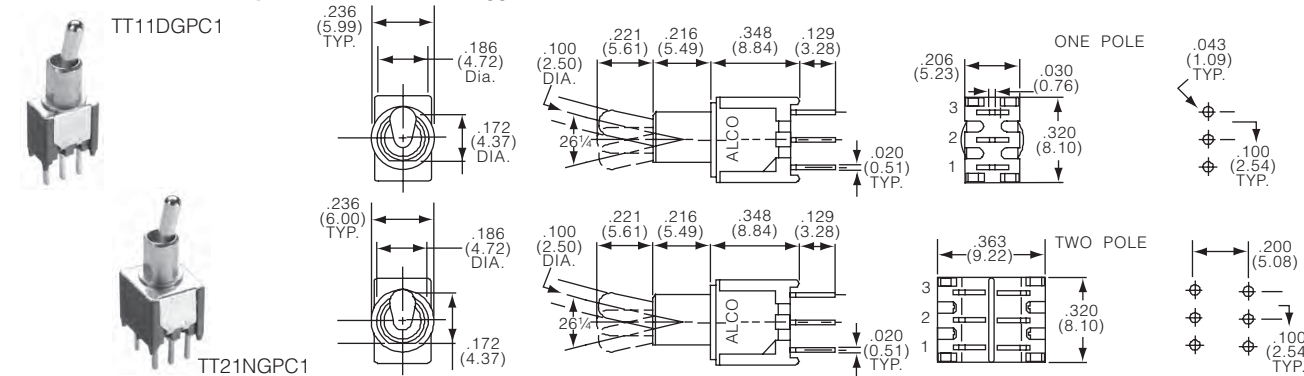
Series TT...7T1/4 wire lug, .457 flat toggle, 1/4-40 thread



Series TT...9T1/4 wire lug, .420 bat toggle, 1/4-40 thread



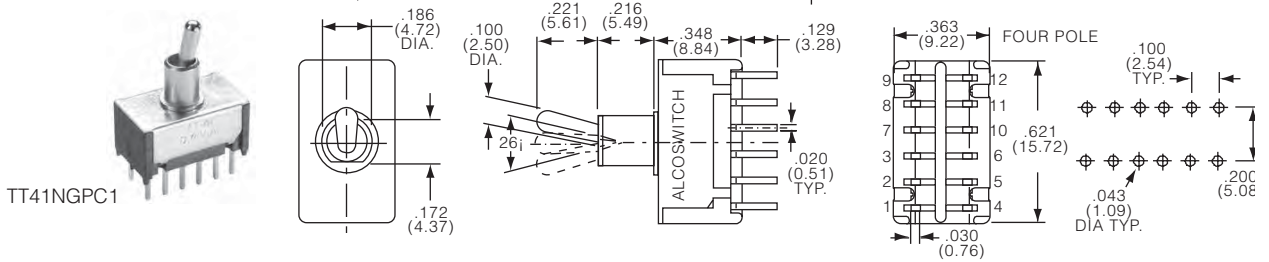
Series TT...PC1 pc terminals, .221 bat toggle, unthreaded



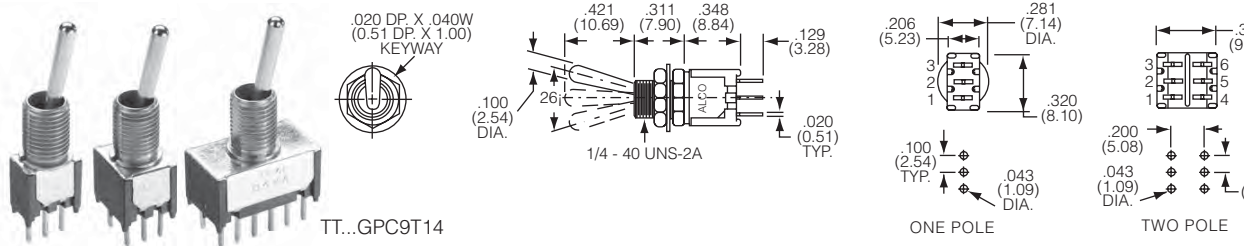
Toggle Switches

TT, Tiny Toggle Switch (Continued)

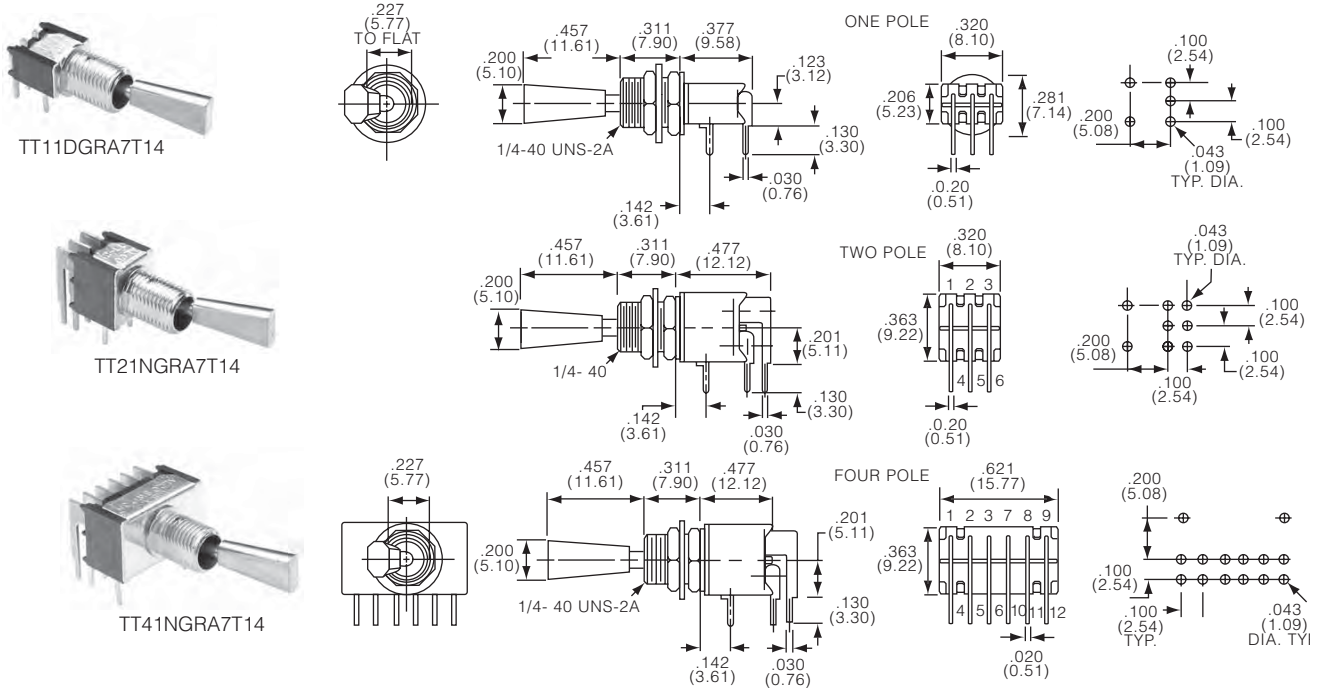
Series TT...PC1 pc terminals, .221 bat toggle, unthreaded



Series TT...PC9T1/4 pc terminals, .420 bat toggle, 1/4-40 thread



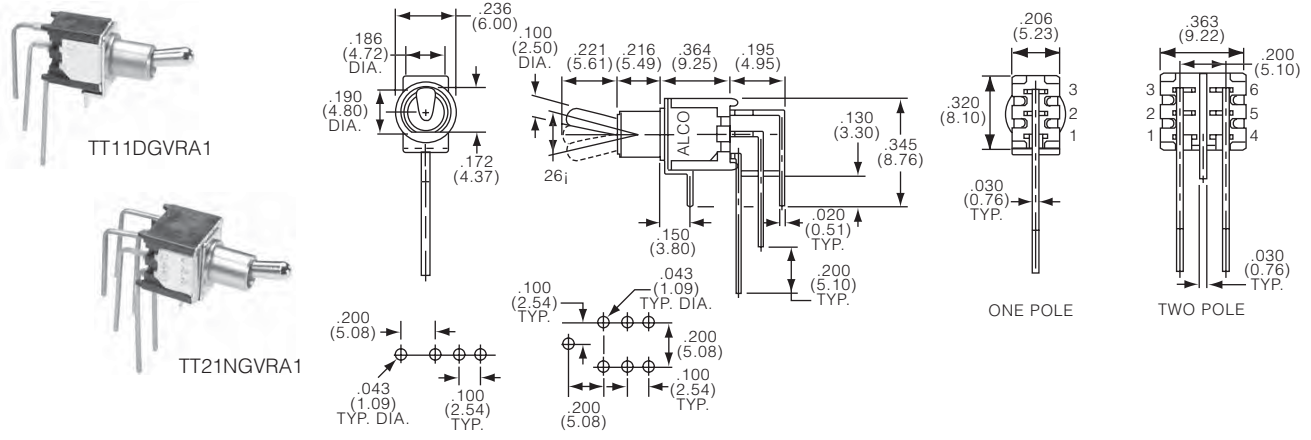
Series TT...RA7T1/4 right angle, .457 flat toggle, 1/4-40 thread



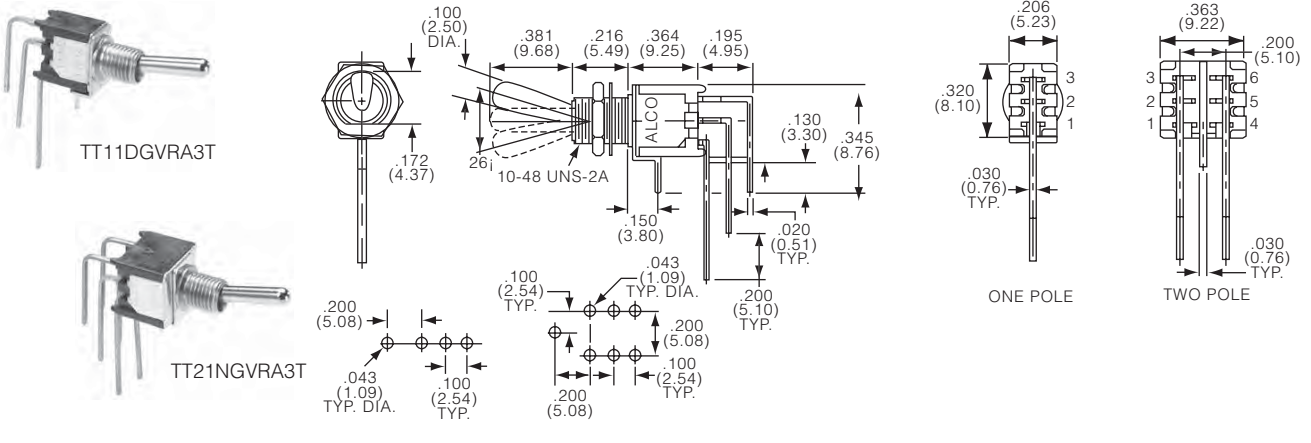
Toggle Switches

TT, Tiny Toggle Switch (Continued)

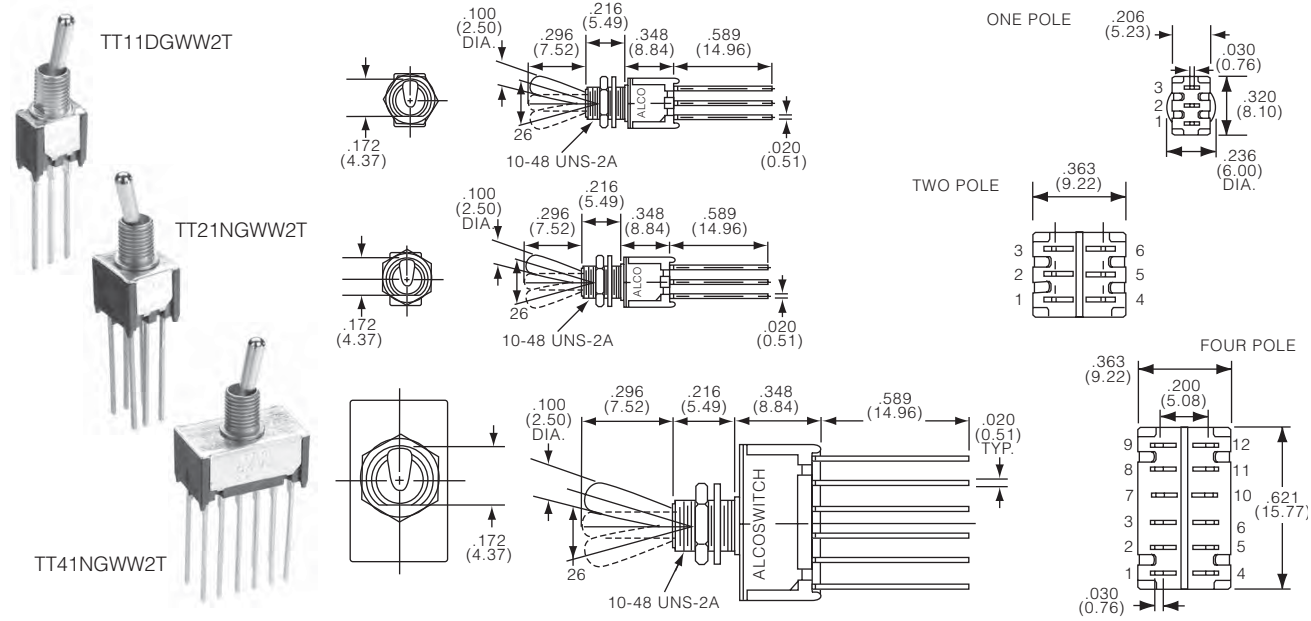
Series TT...VRA1 vertical right angle, .221 bat toggle, unthreaded



Series TT...VRA3T vertical right angle, .381 bat, 10-48 thread



Series TT...WW2T wire wrap, .296 bat toggle, 10-48 thread



Toggle Switches

TT, Tiny Toggle Switch (Continued)

Toggle Switches

Product key	E. seal	Poles	Contacts	Function	Terminals	Act. length	Bushing	Material	Part Number
TT11AGPC104	no	1	0.4VA	On Off	pc	.221 (5.61), bat	unthreaded	RoHS compliant	1825219-2
TT11AGPC9T1/404			Gold plated			.421 (10.69), bat	1/4-40		1-1825192-8
TT11DGPC104				On On		.221 (5.61), bat	unthreaded		1825219-3
TT11DGPC7T1/404						.457 (11.61), flat	1/4-40		1825226-1
TT11DGPC9T1/404						.421 (10.69), bat			1825192-2
TT11DGRA104					right a.	.125 (3.18), bat	unthreaded		1825219-4
TT11DGRA7T1/404						.457 (11.61), flat	1/4-40		1825226-2
TT11DGRA9T1/404						.421 (10.69), bat			1825192-3
TT11DGVRA104					vert r.a.	.125 (3.18), bat	unthreaded		1825219-5
TT11DGWW2T04					wire wrap	.200 (5.1), bat	#10-48		1825222-1
TT11EGPC104				On Off On	pc	.125 (3.18), bat	unthreaded		1825219-6
TT11EGPC304						.286 (7.26), bat			1825223-1
TT11EGPC5T1/4004						.490 (12.45)	1/4-40		1825224-1
TT11EGPC9T1/404									1825192-4
TT11EGPCV104					pc vert.	.125 (3.18), bat	unthreaded		1825219-7
TT11EGRA104					right a.				1825219-8
TT11EGVRA104					vert r.a.				1825219-9
TT11EGVRA3T04						.286 (7.26), bat	#10-48		1825223-2
TT11FGRA9T1/404				(On) On	right a.	.421 (10.69), bat	1/4-40		1825192-5
TT13A2T04			1 Amp	On Off	wire lug	.200 (5.1), bat	#10-48		1825222-2
TT13A3T04			Silver plated			.286 (7.26), bat			1825223-3
TT13A6T004						.306 (7.77), rnd, col.			1825225-1
TT13A9T1/404						.421 (10.69), bat	1/4-40		1825192-6
TT13D2T04				On On		.200 (5.1), bat	#10-48		1825222-3
TT13D3T04						.286 (7.26), bat			1825223-4
TT13D7T1/404						.457 (11.61), flat	1/4-40		1825226-3
TT13D9T1/404						.421 (10.69), bat			1825192-7
TT13E2T04				On Off On		.200 (5.1), bat	#10-48		1825222-4
TT13E3T04						.286 (7.26), bat			1825223-5
TT21KGPC104		2	0.4VA	On Off	pc	.125 (3.18), bat	unthreaded		1-1825219-0
TT21NGPC104			Gold plated	On On					1-1825219-1
TT21NGPC9T1/404						.421 (10.69), bat	1/4-40		1825192-8
TT21NGRA104					right a.	.125 (3.18), bat	unthreaded		1-1825219-2
TT21NGRA7T1/404						.457 (11.61), flat	1/4-40		1825226-4
TT21NGRA9T1/404						.421 (10.69), bat			1825192-9
TT21NGWW2T04					wire wrap	.200 (5.1), bat	#10-48		1825222-5
TT23K2T04			1 Amp	On Off	wire lug				1825222-6
TT23K9T1/404			Silver plated			.421 (10.69), bat	1/4-40		1-1825192-0
TT23N2T04				On On		.200 (5.1), bat	#10-48		1825222-7
TT23N3T04						.286 (7.26), bat			1825223-6
TT23P3T04				On Off On					1825223-7
TT23P6T004						.306 (7.77), rnd, col.			1825225-2
TT23P8T1/404						.567 (14.40), locking	1/4-40		1825227-1
TT41NGPC104		4	0.4VA	On On	pc	.125 (3.18), bat	unthreaded		1-1825219-3
TT41NGPC9T1/404			Gold plated			.421 (10.69), bat	1/4-40		1-1825192-1
TT41NGRA104					right a.	.125 (3.18), bat	unthreaded		1-1825219-4
TT41NGRA7T1/404						.457 (11.61), flat	1/4-40		1825226-5
TT41NGRA9T1/404						.421 (10.69), bat			1-1825192-2
TT41NGWW2T04					wire wrap	.200 (5.1), bat	#10-48		1825222-8
TT43N2T04			1 Amp		wire lug				1825222-9
TT43N9T1/404			Silver			.421 (10.69), bat	1/4-40		1-1825192-3
TTE11EG104	yes	1	0.4VA	On Off On		.221 (5.61), bat	unthreaded		1825219-1
TTE11EGPC9T1/4ES04			0.4VA		pc	.421 (10.69), bat	1/4-40		1-1825192-4
TTE13A9T1/404			1 Amp	On Off	wire lug				1-1825192-5
TTE13D2T04			Silver plated	On On		.200 (5.1), bat	#10-48		1-1825222-0
TTE13D8T1/404						.567 (14.40), locking	1/4-40		1825227-2
TTE13E8T1/404				On Off On					1825227-3
TTE23P8T1/404		2							1825227-4
TTE11AGPC9T1/404		1	0.4VA	On Off	pc	.421 (10.69), bat			1-1825192-7

Preferred parts in bold print