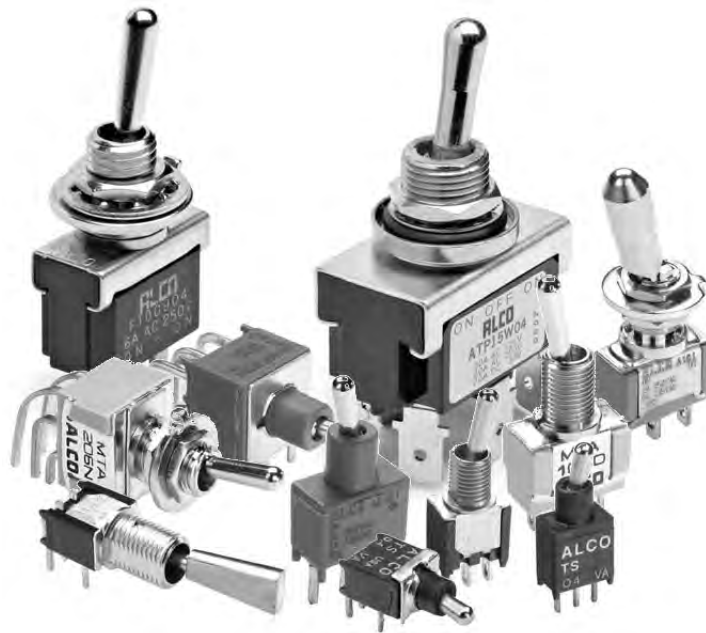


Product Range



Toggle Switches

Toggle Switches

- **Tiny Toggles:** TT and TST Series
- **Miniature Toggles:** Gemini Series and Green Series
- **Power Toggles:** F and AW Series

Main features:

- Up to 4 poles
- Wide range of different switch functions
- Gold or silver contacts
- Up to 20 A
- Sealed or unsealed versions
- Horizontal and vertical right angle versions
- Many different actuator styles
- Locking versions
- Different bushings with or with out thread
- THT and wire lug terminals
- Accessories: Boot seals, decorative mounting hardware

TST Tiny Toggle, Process Sealedpage E3



TT Tiny Toggle Switchpage E6



Product Range (Continued)



Gemini A Seriespage E15



Gemini AE Series, Sealed IP67page E26



MT Green Seriespage E32



F Series, Panel Mounting, 6Apage E43



AW Series, Panel Mounting, Waterproofpage E46



Hardware and Accessoriespage E49



Boot Sealspage E50

TST, Tiny Toggle, Process Sealed

Features

- Washable process sealed construction (Internal "O" ring)
- Compact design
- Liquid Crystal Polymer (LCP) case



Typical performance characteristics

Contact configuration spst, spdt
 Contact timing break-before-make
 Contact rating, max gold 0.4 VA @ 20 VAC/DC
 Electrical life D = 80,000 cycles (2 position)
 E = 60,000 cycles (3 position)
 F and G = 30,000 cycles (momentary 2 and 3 position)
 Contact resistance, initial max.20 mOhms'
 Insulation resistance 1,000 mega Ohms @ 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
 Seal process sealed with internal "O" ring

Material specifications

Contacts copper or brass alloy, gold over nickel finish
 Bat brass alloy, nickel finish
 Terminals brass with gold over nickel in contact area
 tin over nickel in solder aArea
 Case theroplastic (LCP)
 Spring music wire zinc plated
 Support bracket steel tin plated
 Seal "O" ring rubber
 RoHS Directive 2002/95/EC compliant

Product key	Typical product key											
	TST	1	1	D	G	RA	1	D	04			
Type	Tiny toggle, process sealed, through hole mount											
Number of Poles	1 single pole											
Contact rating	1 0.4VA Gold											
Function	D On None On			F On None (On)								
	E On Off On			G (On) Off (On)								
Plating	G Gold											
Terminals	PC printed circuit board			RA right angle								
	PCV printed circuit board, w bracket			VRA vertical right angle								
Actuator length	1 .206 (5.23)			4 .400 (10.16)								
	2 .250 (6.35)											
Bushing	D plain, not threaded											
Material	04 RoHS compliant											

Toggle Switches

TST, Tiny Toggle, Process Sealed (Continued)

Function



Function			
D	On	None	On
E	On	Off	On
F	On	None	(On)
G	(On)	Off	(On)
Terminals	1-2	-	2-3

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

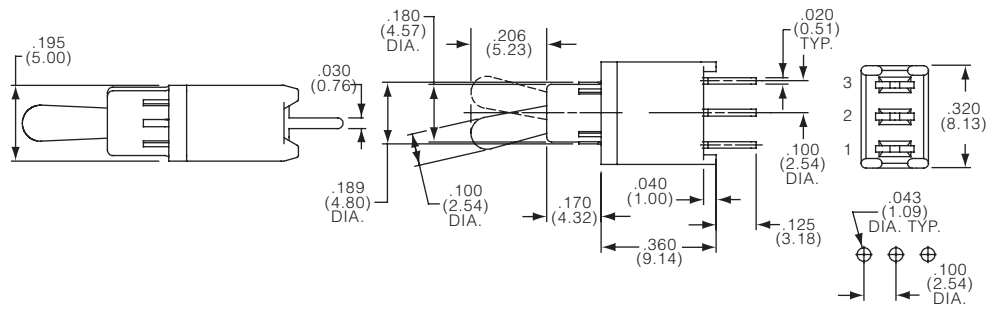
Terminations



PC printed circuit



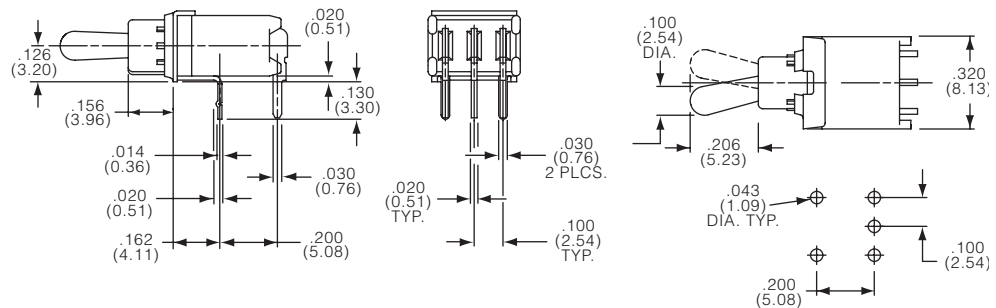
TST11DGPC1D



RA right angle



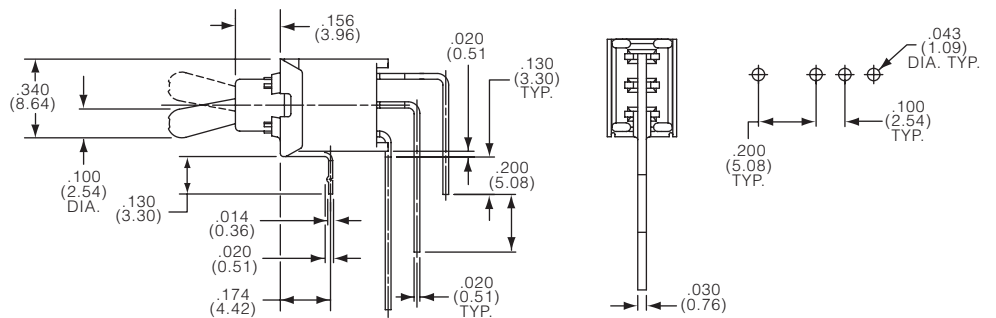
TST11DGRA1D



VRA vertical right angle



TST11DGVRA1D

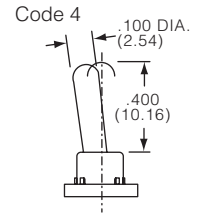
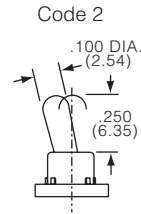
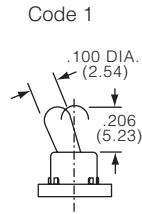


TST, Tiny Toggle, Process Sealed(Continued)

Actuator



Codes 1,2,4 actuator lengths



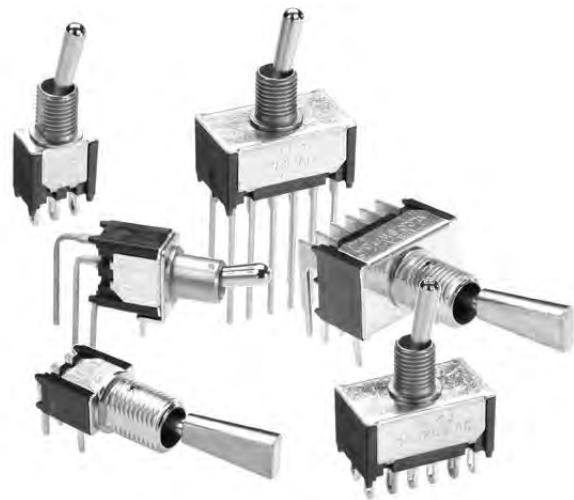
Product key	Poles	Rating	Function	Plating	Terminals	Actuator	Bushing	Material	Part Number
TST11DGPC1D04	1 pole	0.4VA	On None On	Gold	pcb	.206 (5.23)	plain,	RoHS	1825455-1
TST11DGPCV1D04					pcb w brack		not	compliant	1825455-2
TST11DGRA1D04					right angle		threaded		1825455-3
TST11DGVRA1D04					vertical r.a.				1825455-4
TST11EGPC4D04			On Off On		pcb	.400 (10.16)			1825455-5

Preferred parts in bold print

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 single pole 2 double pole									
Contact rating	1 0.4VA Gold 3 1 Amp, Silver with wire lug and pc terminals only									
Function	single pole A On Off Versions A and K available with wire lug & pc terminals only D On On E On Off On F On (On) 2 & 4 pole K On Off N On On P On Off On R On (On)									
Plating	G Gold blank Silver									
Terminals	blank wire lug PC printed circuit RA right angle VRA vertical right angle WW wire wrap									
Actuator length	#10 or Unthreaded Bushing 1 .221 (5.61), bat 2 .296 (7.52), bat 3 .381 (9.68), bat 5 na 6 .401 (10.19), round, colored 7 na 8 na 9 .516 (13.11), bat 1/4 Bushing 1 .125 (3.18), bat 2 .200 (5.1), bat 3 .286 (7.26), bat 5 paddle 6 .306 (7.77), round, colored 7 .457 (11.61), flat 8 .567 (14.40), locking 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



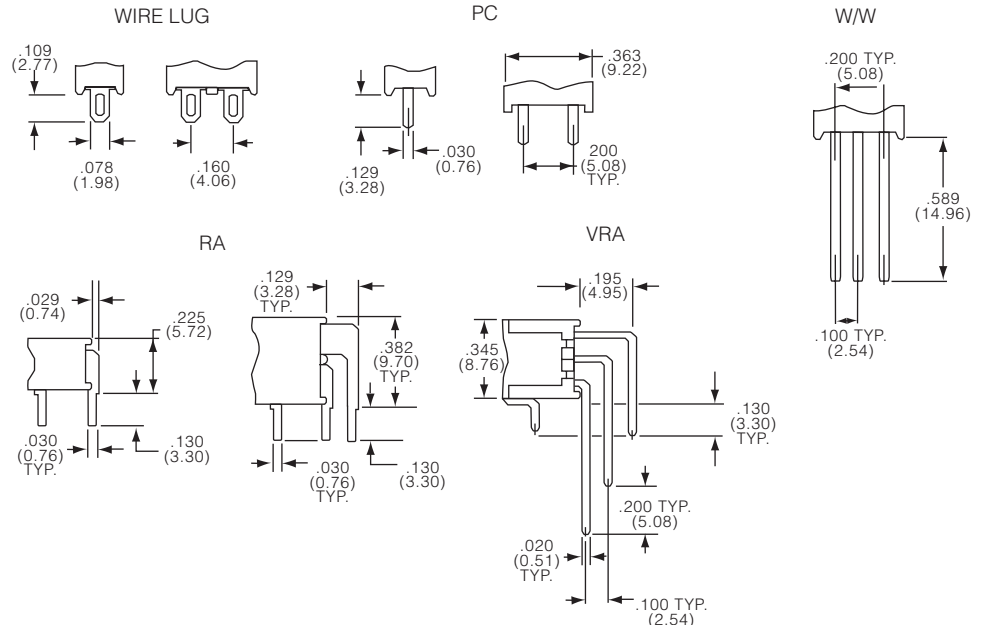
Function

Function	Poles	↘	↓	↙	↘	↓	↙
A	1 pole	On	None	Off	1-3	-	-
D		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		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

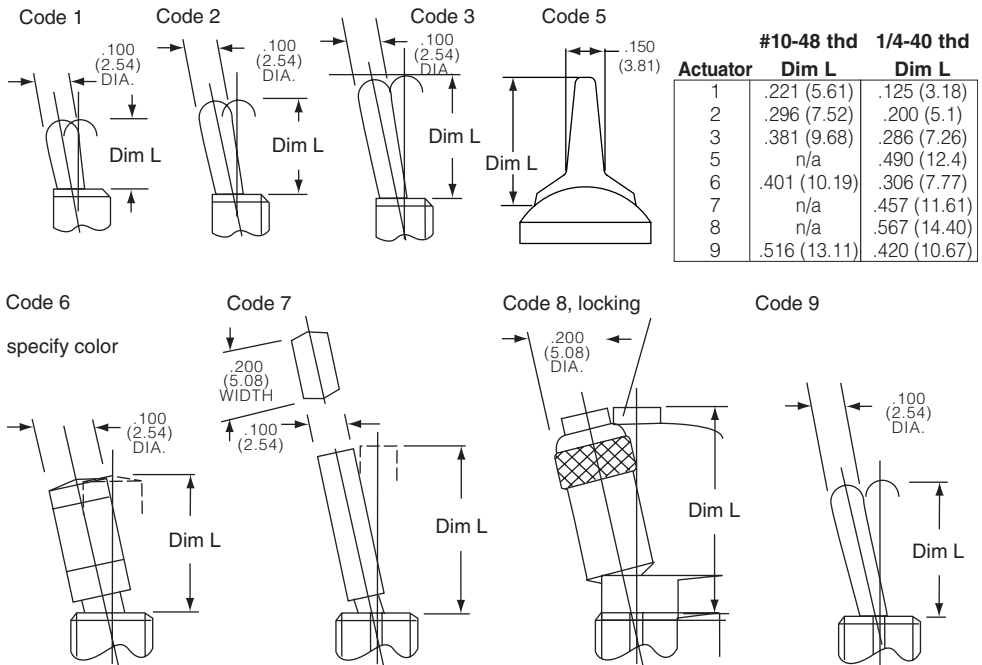
Off indicates a mechanical position with no electrical connection
 (On) indicates momentary connection
 None indicates no mechanical position

TT, Tiny Toggle Switch (Continued)

Terminals



Actuator



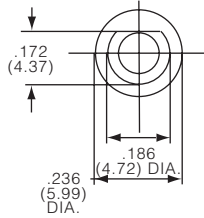
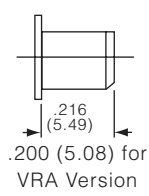
TT, Tiny Toggle Switch (Continued)

Bushing

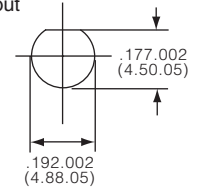


blank

unthreaded

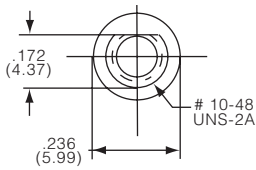
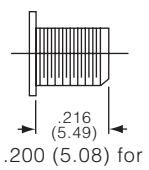


panel cutout

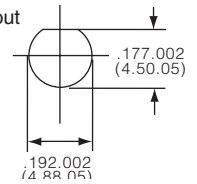


T

10-48 UNS-2A thread

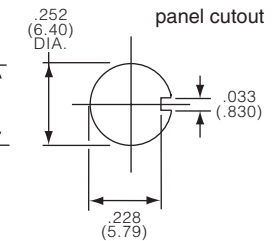
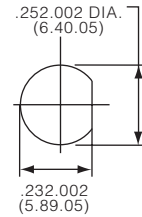
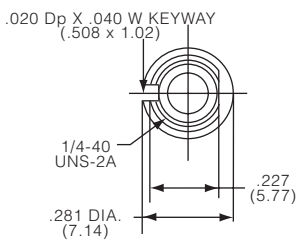
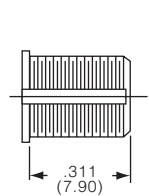


panel cutout



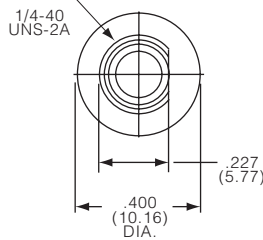
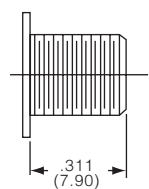
T1/4

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

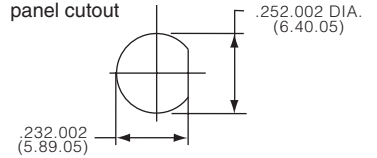


T1/4

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



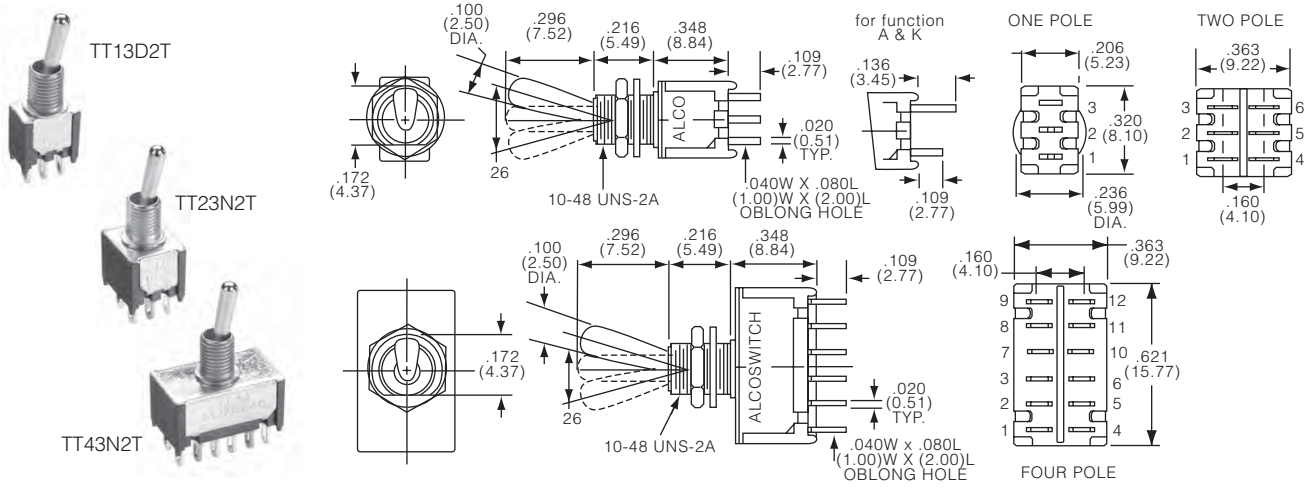
panel cutout



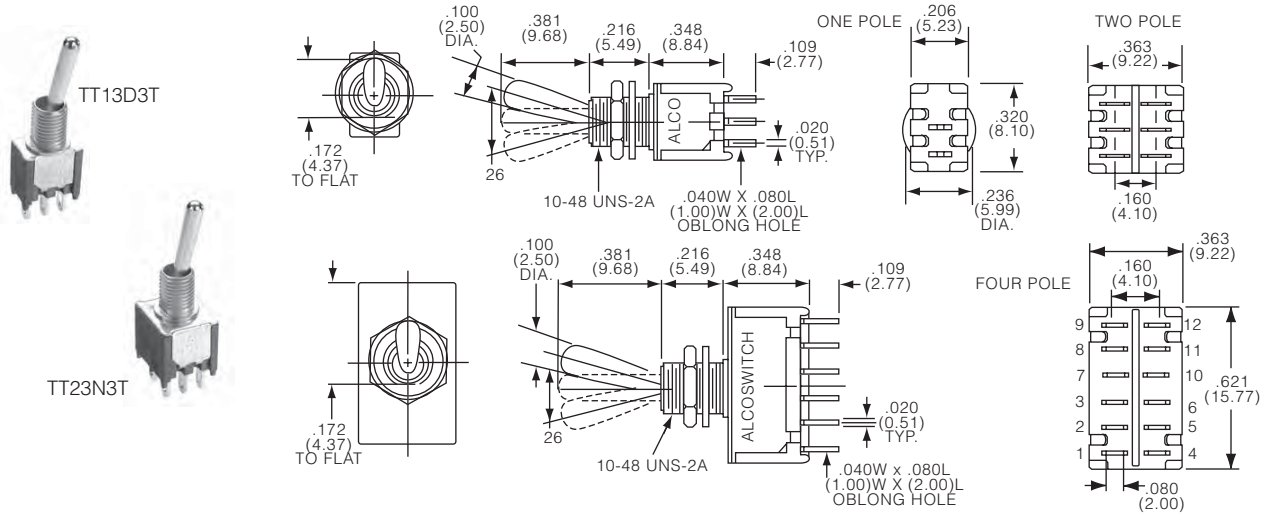
TT, Tiny Toggle Switch (Continued)

Dimensions

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

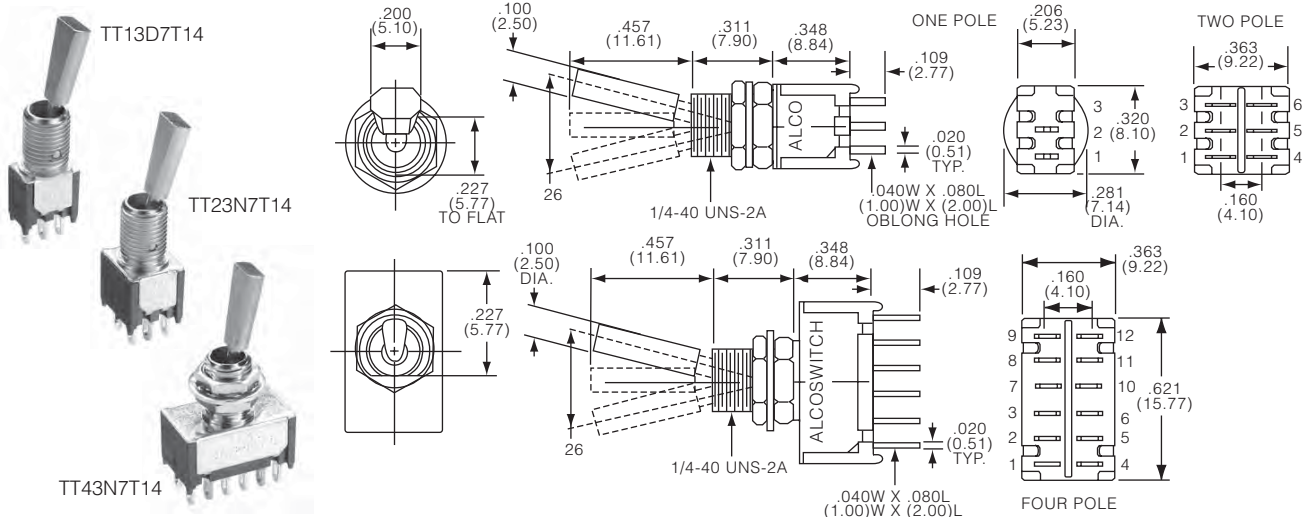


Series TT...3T wire lug, .381 bat toggle, 10-48 thread

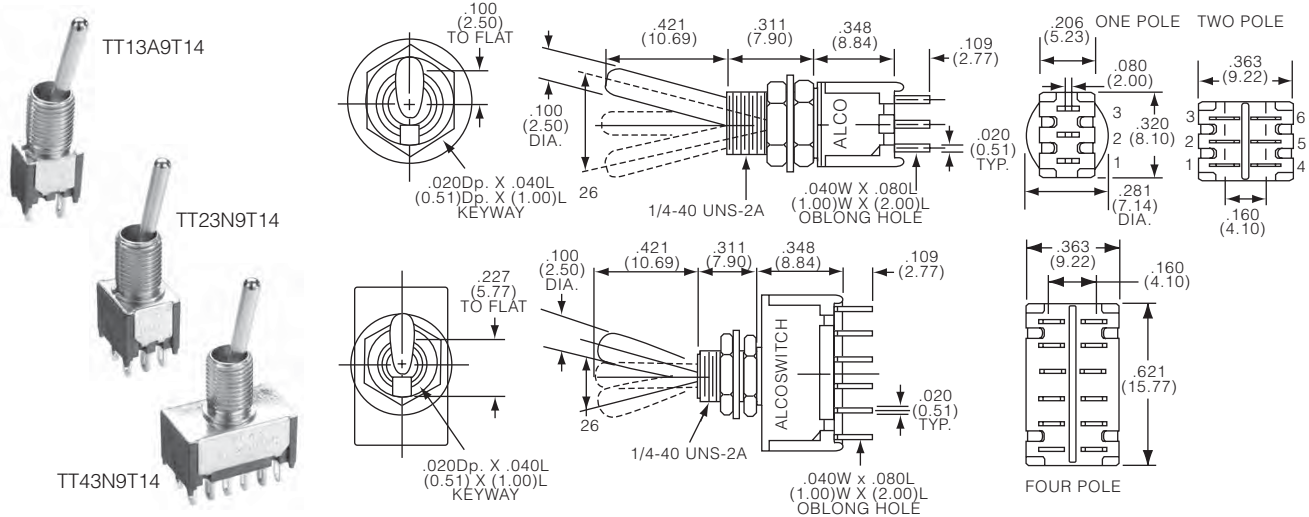


TT, Tiny Toggle Switch (Continued)

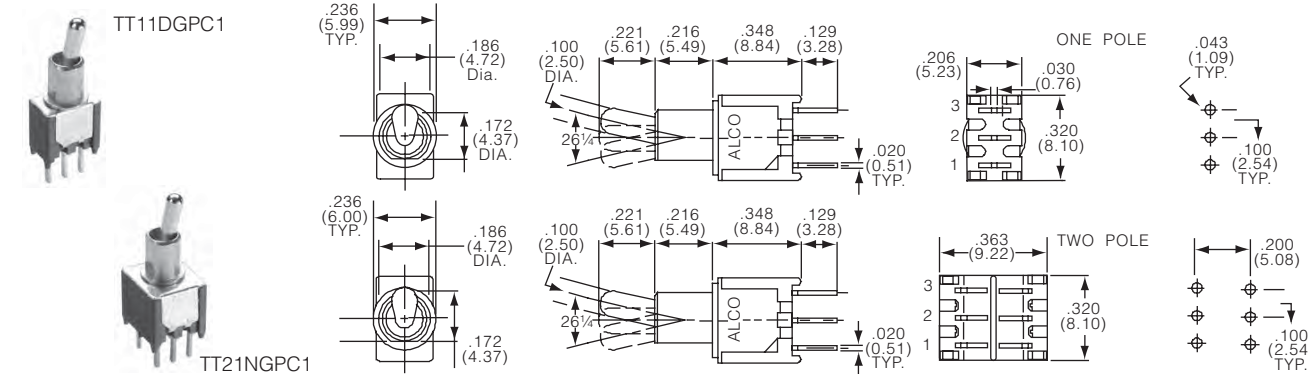
Series TT...7T1/4 wire lug, .457 flat toggle, 1/4-40 thread



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

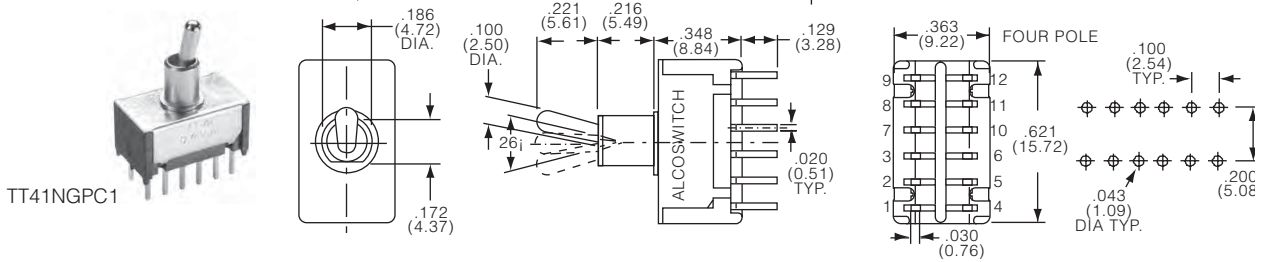


Series TT...PC1 pc terminals, .221 bat toggle, unthreaded

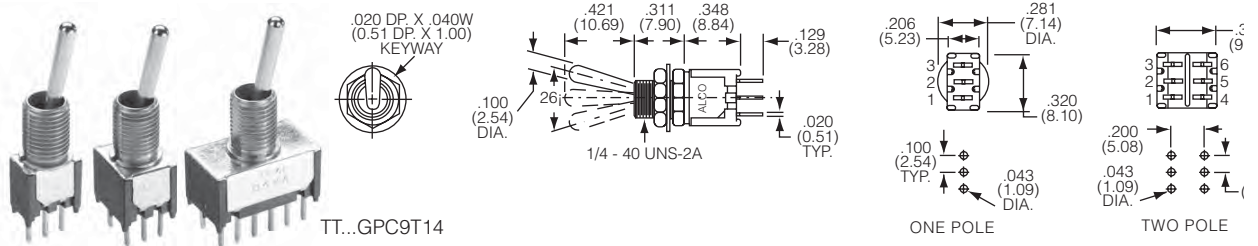


TT, Tiny Toggle Switch (Continued)

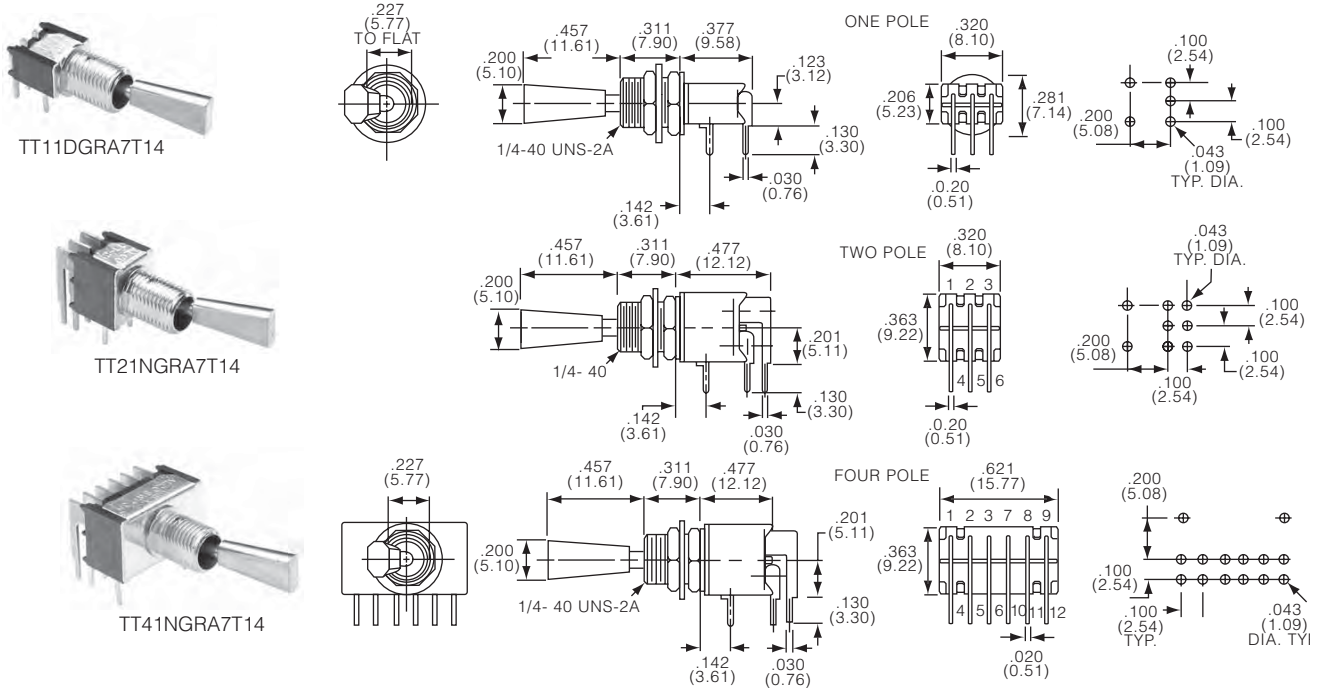
Series TT...PC1 pc terminals, .221 bat toggle, unthreaded



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



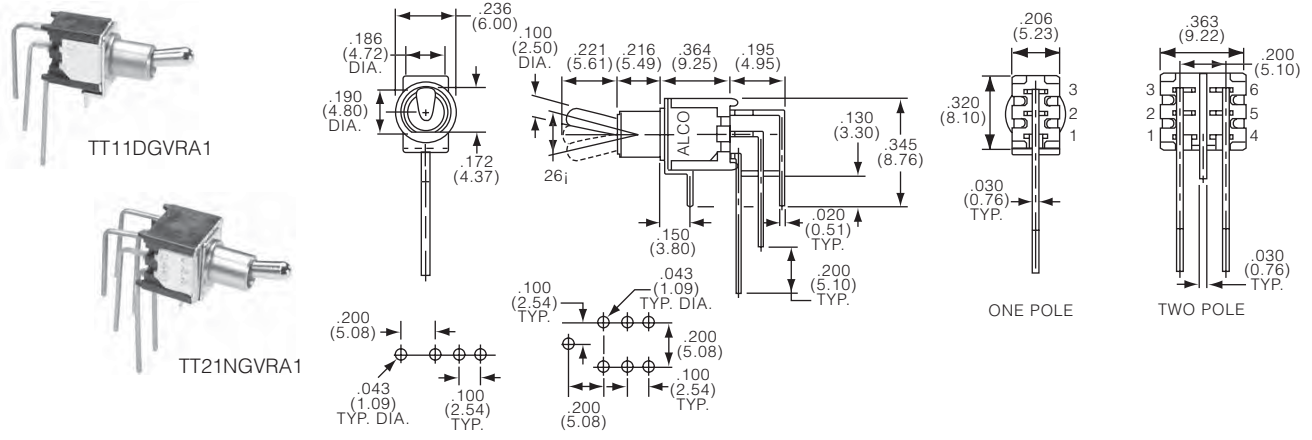
Series TT...RA7T1/4 right angle, .457 flat toggle, 1/4-40 thread



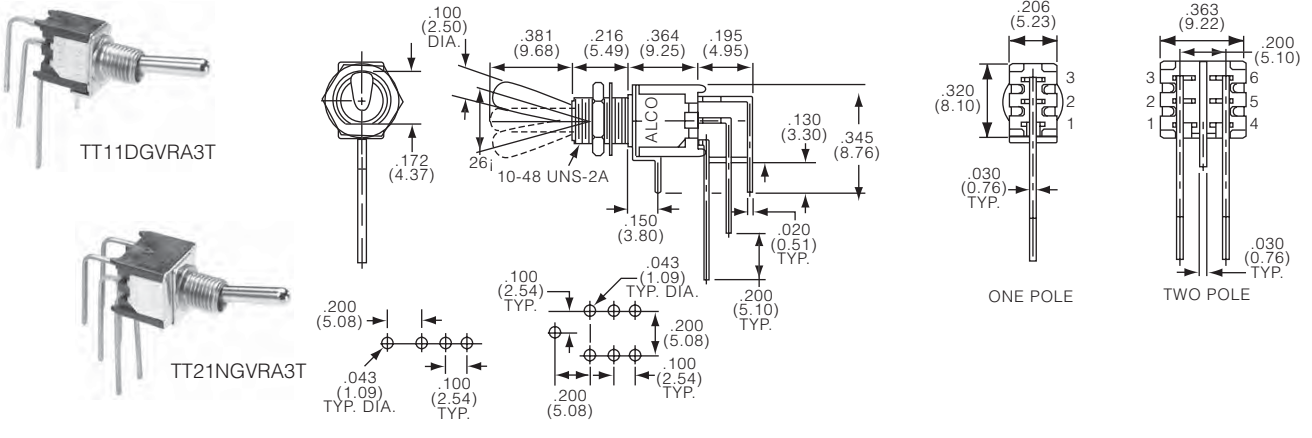
Toggle Switches

TT, Tiny Toggle Switch (Continued)

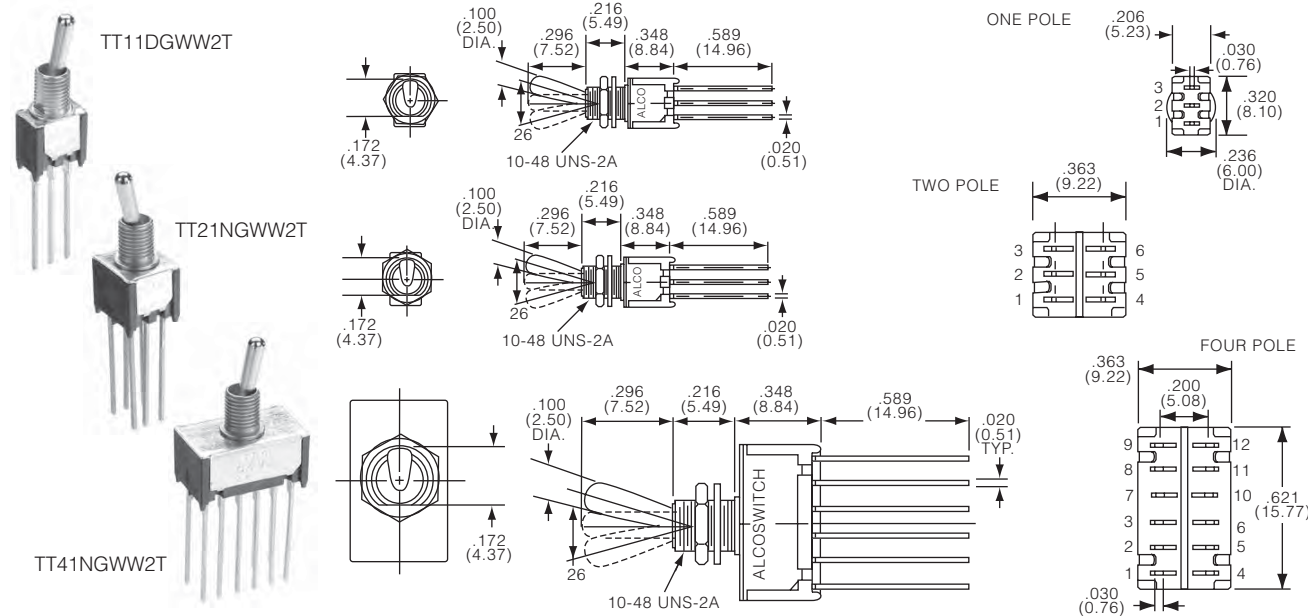
Series TT...VRA1 vertical right angle, .221 bat toggle, unthreaded



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

Gemini A Series

Features

- Gold, gold over silver or silver contacts
- Epoxy sealed terminals
- Stainless steel frame with brass tin plated solder support
- Hardware included
- Boot seals available



Typical performance characteristics

Contact configuration	1, 2, 3, and 4 pole
Contact timing	Break before Make
Contact rating max.	gold: 0.4VA @20V AC or DC
	gold over silver : 5 A @ 125VAC or 28VDC resistive
	or 0.4VA @ 20VAC or DC or 2A @250VAC resistive
	silver: 5 A @ 125VAC or 28VDC resistive
	and 2A @ 250VAC resistive
Electrical life	6000 cycles
Contact resistance, initial	max.10 mOhms
Insulation resistance	1,000 MOhms
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	-30°C to +85°C
Solder heat resistance	wave solder capable to 265° C
Terminal Seal	single pole: epoxy

Material specifications

Contacts	contacts B: copper alloy finish gold over nickel
	contacts G: copper alloy finish gold over silver
	contacts Q: copper alloy finish silver
Actuator	brass alloy chrome
Terminals	contacts B: copper alloy finish gold over nickel
	contacts G: copper alloy finish gold over silver
	contacts Q: copper alloy finish silver
Case	thermoplastic
Bushing	brass alloy finish nickel
Internal actuator	phenolic
Spring	music wire
Support Bracket	brass tin plated
Seal	epoxy
RoHS Directive 2002/95/EC	compliant

Toggle Switches

Product key		Typical product key		A	1	01	P3		Z	Q	04
Type	A Gemini A Series Toggles										
Number of Poles	1 single pole	2 double pole									
Function	single and double pole		double pole only								
	01 On-On	11 On-On-On									
	03 On-Off-On	13 On-On-(On)									
	05 (On)-Off-(On)	15 (On)-On-(On)									
	07 On-Off-(On)										
	08 On-(On)										
Toggles											
S	bat long	T	large toggle & bushing (15/32)								
K	locking	T1	large toggle & bushing (15/32)								
K1	locking	L	lever								
M	bat short	L1	lever								
P3	flatted (with bushing code Y only)	L2	lever								
Bushing											
blank	toggles K1 &/ P3: 1/4-40 threaded .35 (8.9) long										
	toggles K, T, T1: unthreaded .28 (7.1) long										
CW	1/4-40 threaded .37 (9.4) long, enviromental seals (toggles codes S & M only)										
D	1/4-40 threaded .28 (7.1) long										
D9	unthreaded .28 (7.1) long										
H	1/4-40 threaded .3 (7.6) long										
	Y	1/4-40 threaded .35 (8.9) long									
	Y9	unthreaded .35 (8.9) long									
Terminations											
A	right angle	V30	vertical support	W	wire wrap						
AV2	vertical right angle	V40	vertical support	W4	wire wrap						
C	printed circuit			Z	wire lug						
Contacts											
B	gold	G	gold over silver	Q	silver						
Material											
04	RoHS compliant										

Gemini A Series (Continued)

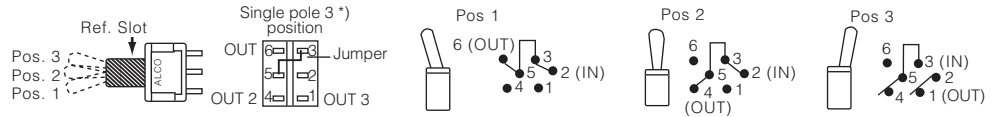
Function



Code	Positions	↙	↓	↘
01	2 positions	On	None	On
03	3 positions	On	Off	On
05	3 positions	(On)	Off	(On)
07	3 positions	(On)	Off	On
08	2 positions	(On)	None	On
SPDT	Term. conn.	1 - 2	---	2 - 3
DPDT	Terminals connected	1 - 2 4 - 5	---	2 - 3 5 - 6
11*)	3 positions	On	On	On
13*)		(On)	On	On
15*)		(On)	On	(On)
DP3T	Terminals connected	1 - 2 4 - 5	2 - 3 4 - 5	2 - 3 5 - 6

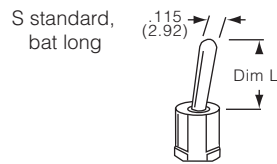
Off mechanical position, no electrical connection
 (On) momentary mechanical position and electrical connection
 None no mechanical position
 *) functions available in dual pole case only.
 **) SP3T functions achieved with external jumper installed by customer

Wiring diagram for functions 11, 13, 15

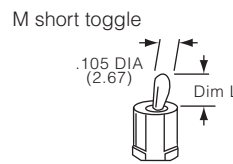


Toggle Switches

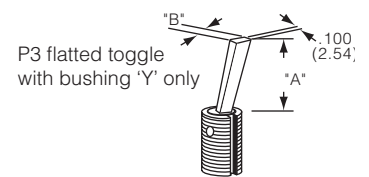
Toggles



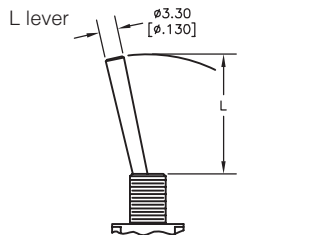
Toggle	Bushing	Dim L
S	CW, H, Y D, D9	10.41 (.410) 12.19 (.480)



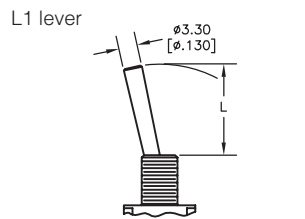
Toggle	Bushing	Dim L
M	CW, H, Y D, D9	5.08 (.200) 6.86 (.270)



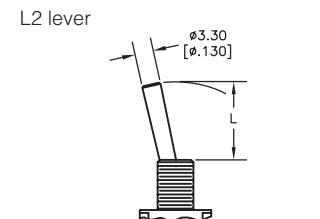
Toggle	Dim
P3	Dim A 11.43 (.450) Dim B 5.08 (.200)



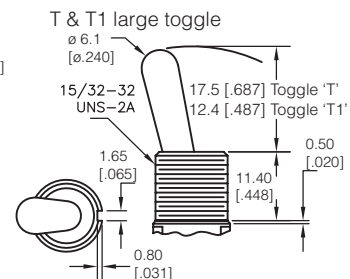
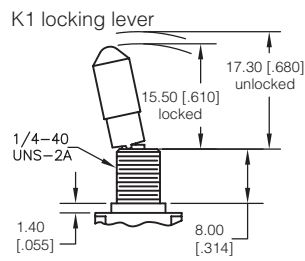
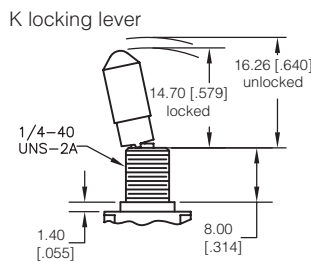
Toggle	Bushing	Dim L
L	H, Y D, D9	21.34 (.840) 23.11 (.910)



Toggle	Bushing	Dim L
L1	H, Y D, D9	16.26 (.640) 18.03 (.710)



Toggle	Bushing	Dim L
L2	H, Y D, D9	13.97 (.550) 15.75 (.620)

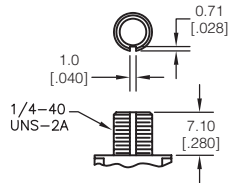


Gemini A Series (Continued)

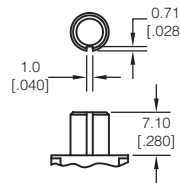
Bushings



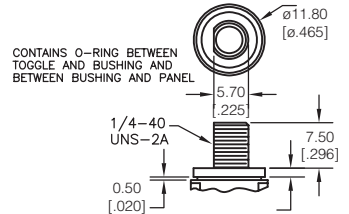
D 1/4-40 threaded



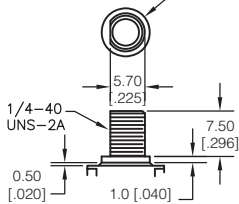
D9 unthreaded



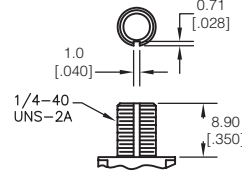
CW 1/4-40 threaded environmental seals (toggles codes S & M only)



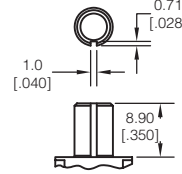
H 1/4-40 threaded



Y 1/4-40 threaded

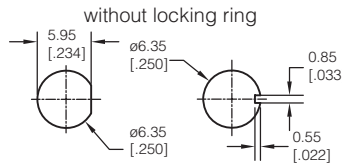


Y9 unthreaded

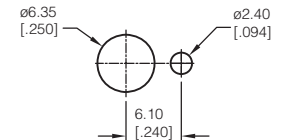


Recommended panel cut-outs

Bushing 1/4



with standard locking ring

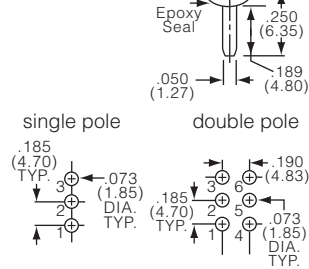


Terminals

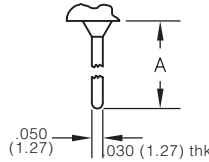


Codes C, W, W4, Z printed circuit, wire wrap and wire lug

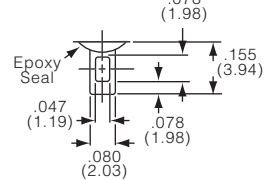
C printed circuit



W, W4 wire wrap



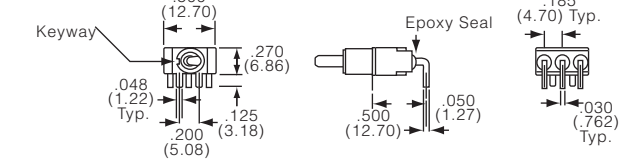
Z wire lug



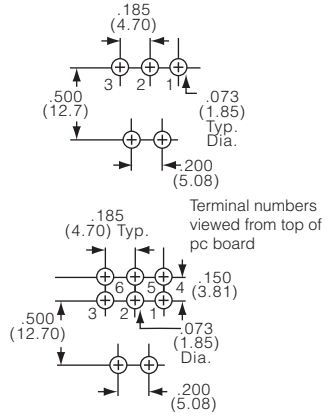
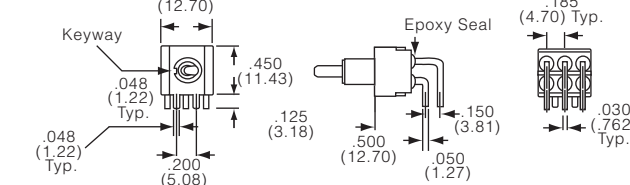
Terminal	Dim A
W	18.69 (.736)
W4	26.98 (1.062)

Code A right angle

single pole

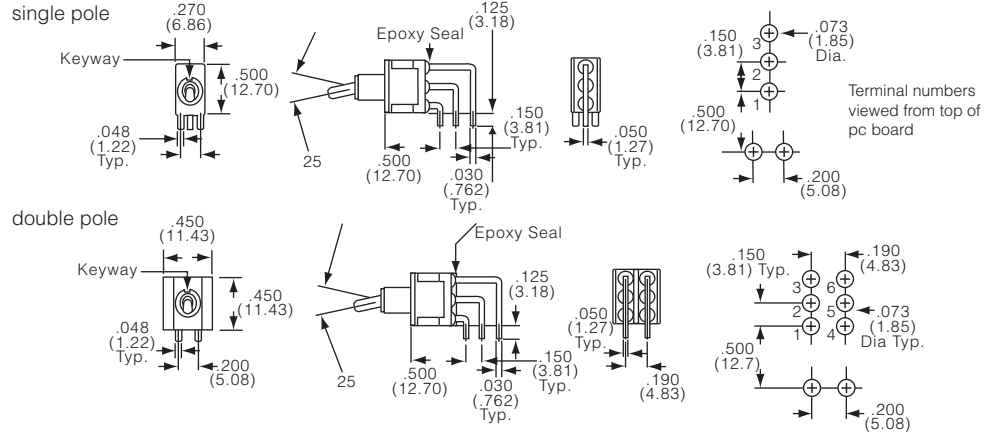


double pole

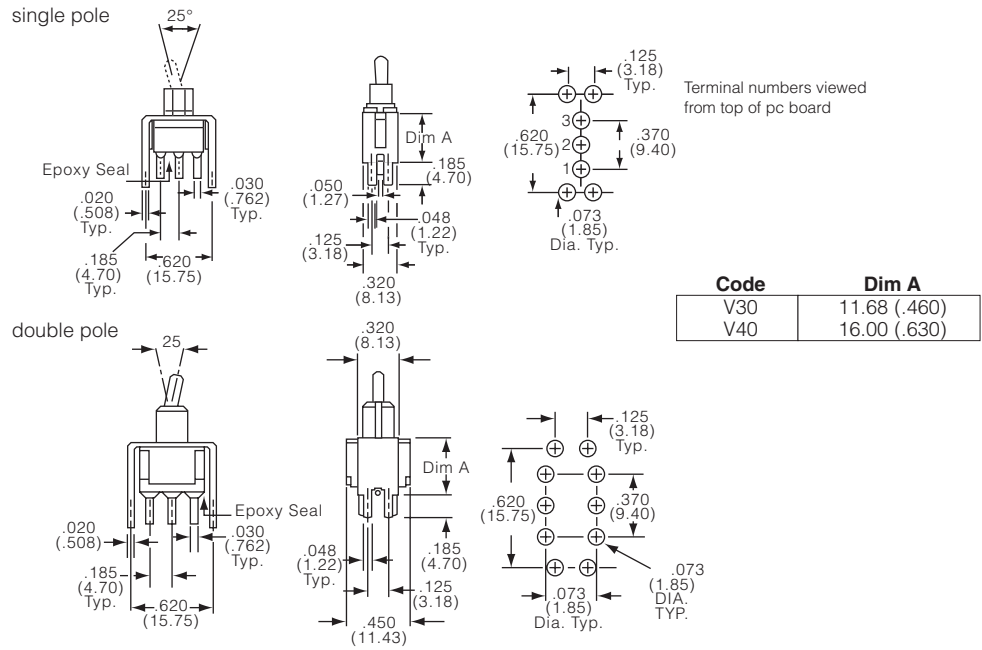


Gemini A Series (Continued)

Code AV2 vertical right angle



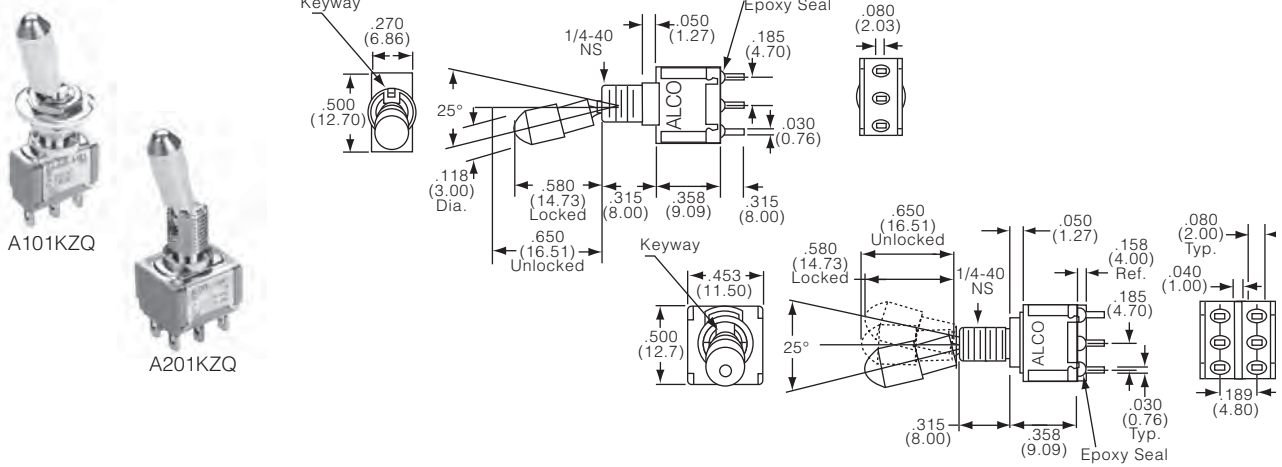
Codes V30, V40 vertical support



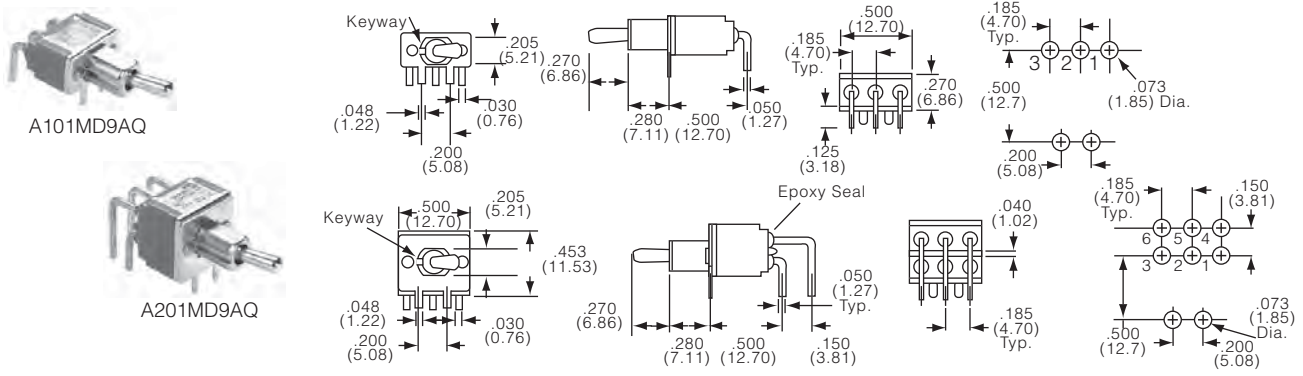
Gemini A Series (Continued)

Dimensions

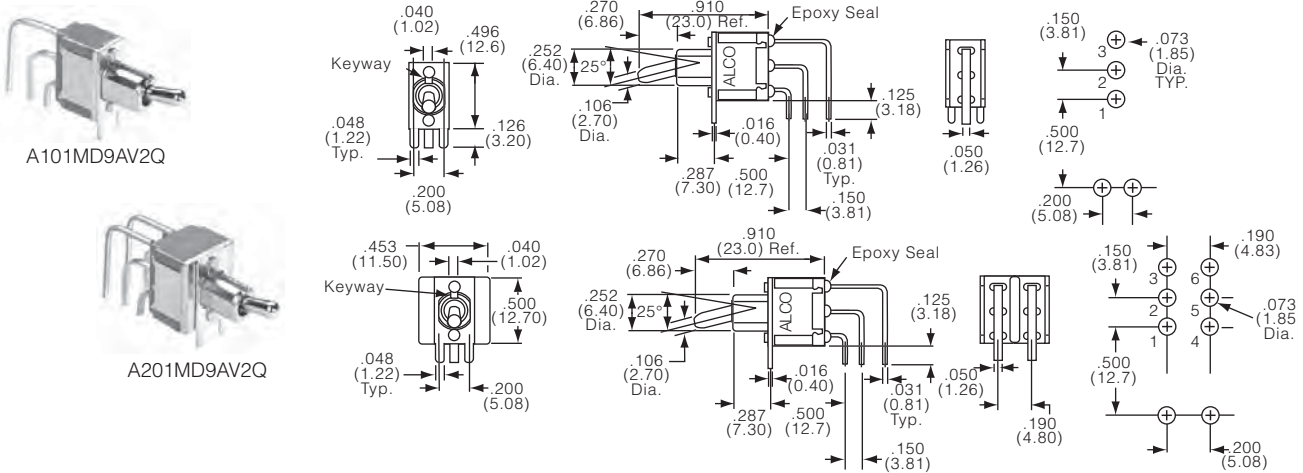
Series A...KZ locking, unthreaded, wire lug, 1 & 2 pole



Series A...MD9A short bat, unthreaded bushing, right angle, 1 & 2 pole

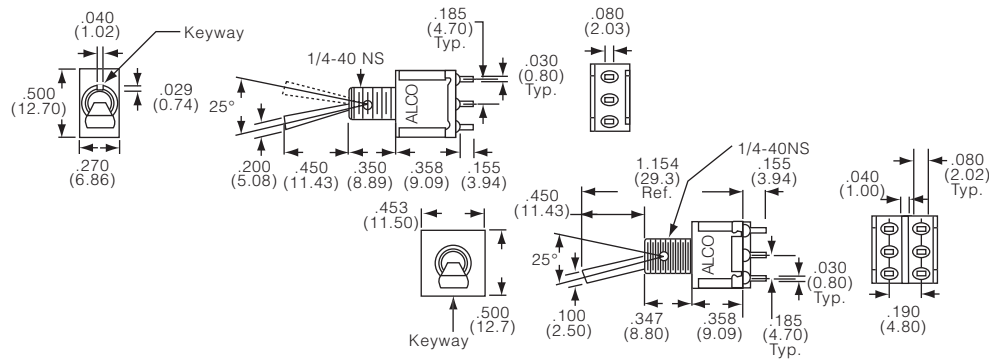


Series A...MD9AV2 short bat, unthreaded bushing, vertical right angle, 1 & 2 pole

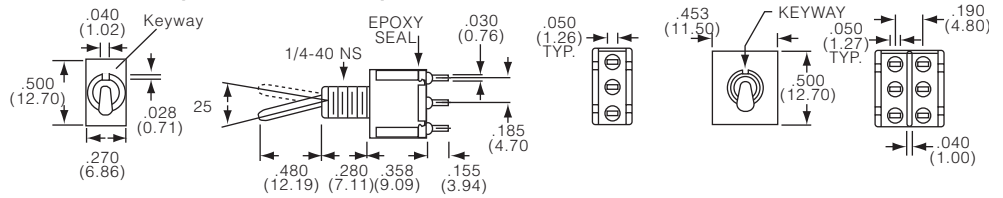


Series A...P3YZ flatted toggle, 1/4-40 threaded, wire lug, 1 & 2 pole

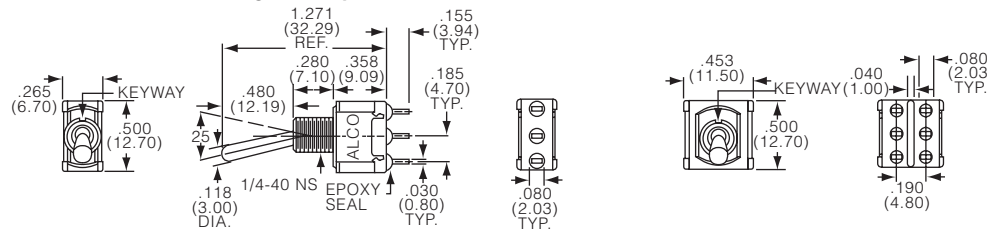
Gemini A Series (Continued)



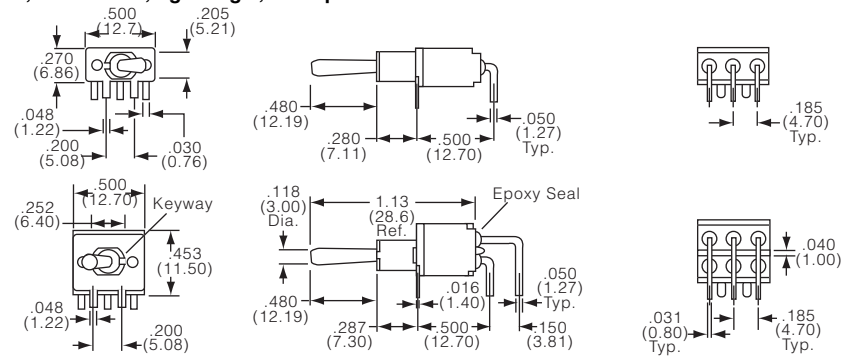
Series A...SDC long bat, 1/4-40 threaded, printed circuit, 1 & 2 pole



Series A...SDZ long bat, 1/4-40 threaded, wire lugs, 1 & 2 pole

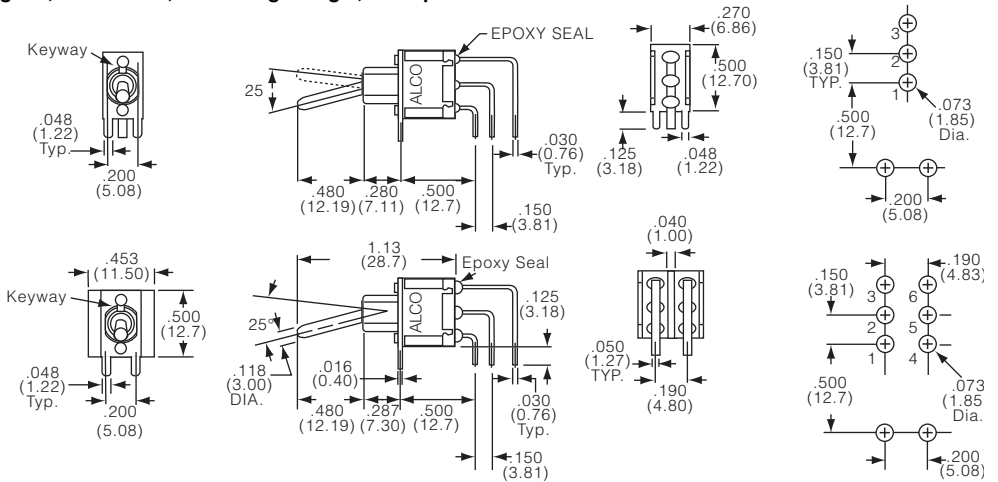


Series A...SD9A long bat, unthreaded, right angle, 1 & 2 pole

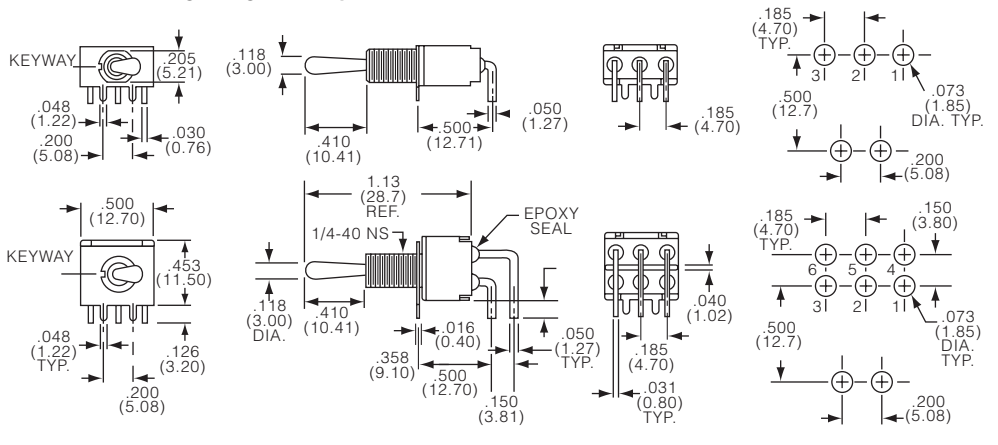


Gemini A Series (Continued)

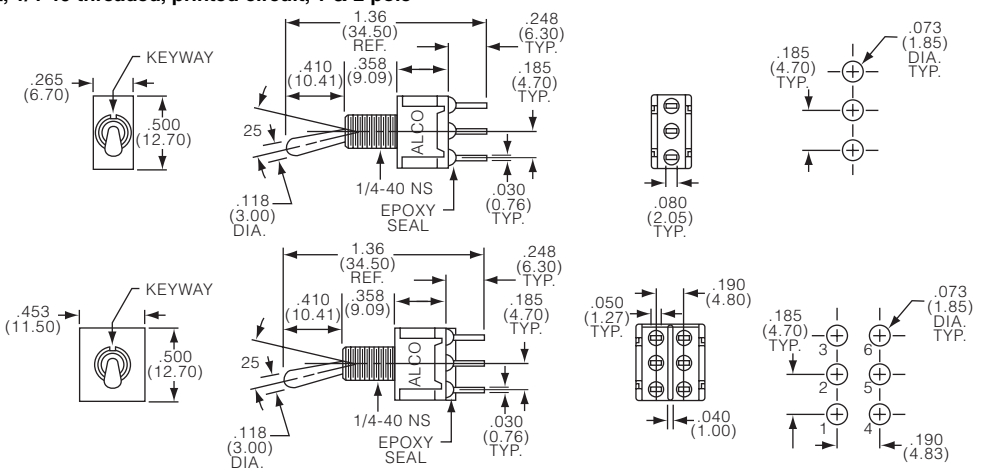
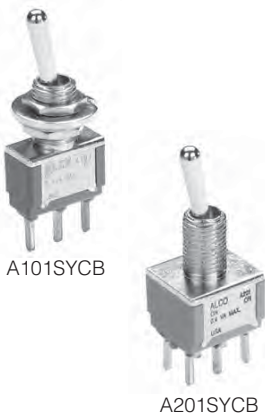
Series A...SD9AV2 long bat, unthreaded, vertical right angle, 1 & 2 pole



Series A...SYA long bat, 1/4-40 threaded, right angle, 1 & 2 pole

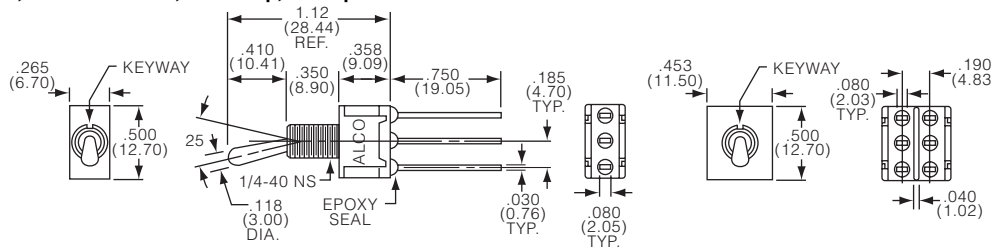


Series A...SYC long bat, 1/4-40 threaded, printed circuit, 1 & 2 pole

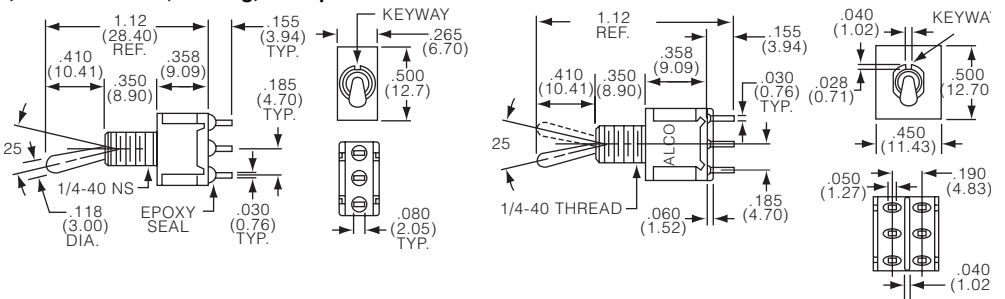


Gemini A Series (Continued)

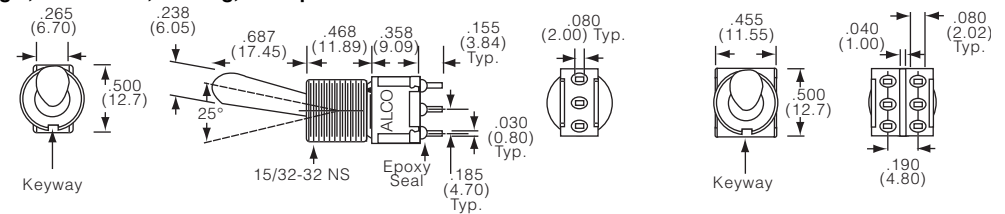
Series A...SYW long bat, 1/4-40 threaded, wire wrap, 1 & 2 pole



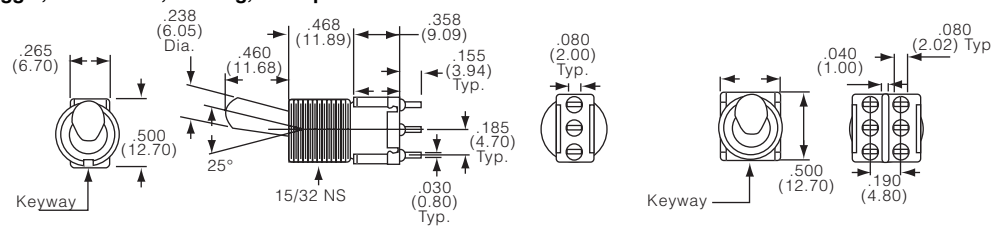
Series A...SYZ long bat, 1/4-40 threaded, wire lug, 1 & 2 pole



Series A...TZ large toggle, unthreaded, wire lug, 1 & 2 pole



Series A...T1Z large toggle, unthreaded, wire lug, 1 & 2 pole



Gemini A Series (Continued)

Product key	Poles	Function	Toggles	Bushing	Terminations	Contacts	Material	Part Number
A101K1V30B04	1	On-On	locking	1/4-40 threaded .35 (8.9)	vertical support	gold	RoHS	1825136-1
A101KAB04				unthreaded .28 (7.1)	right angle	silver	compliant	1825136-2
A101KAQ04								1825136-3
A101KAV2Q04					vertical right angle			2-1825136-8
A101KCQ04					printed circuit			1825136-5
A101KD9AQ04					right angle			1825136-6
A101KZQ04					wire lug			1825136-7
A101L1D9V30Q04			lever		vertical support			1825136-9
A101L1YZB04				1/4-40 threaded .35 (8.9)	wire lug	gold		1-1825136-0
A101LDZQ04				1/4-40 threaded .28 (7.1)		silver		1-1825136-1
A101MD9AB04			bat short	unthreaded .28 (7.1)	right angle	gold		1-1825136-2
A101MD9AG04						Au over Ag		1-1825136-3
A101MD9AQ04						silver		1-1825136-4
A101MD9AV2B04					vertical right angle	gold		1-1825136-5
A101MD9AV2G04						Au over Ag		1-1825136-6
A101MD9AV2Q04						silver		1-1825136-7
A101MD9V30B04					vertical support	gold		1-1825136-8
A101MDAQ04				1/4-40 threaded .28 (7.1)	right angle	silver		1-1825136-9
A101MDAV2B04					vertical right angle	gold		2-1825136-0
A101MDCG04					printed circuit	Au over Ag		2-1825136-1
A101MDZQ04					wire lug	silver		2-1825136-2
A101MYCQ04				1/4-40 threaded .35 (8.9)	printed circuit			2-1825136-3
A101MYZQ04					wire lug			2-1825136-4
A101P3CB04			flatted		printed circuit	gold		2-1825136-6
A101P3YV30B04					vertical support			1825136-4
A101P3ZQ04					wire lug	silver		2-1825136-7
A101SCWCQ004			bat long	1/4-40 threaded .37 (9.4)	printed circuit			3-1825136-0
A101SCWZQ04					wire lug			3-1825136-1
A101SD9AB04				unthreaded .28 (7.1)	right angle	gold		3-1825136-2
A101SD9AQ04						silver		3-1825136-3
A101SD9AV2B04					vertical right angle	gold		3-1825136-4
A101SD9AV2Q04						silver		3-1825136-5
A101SD9V30B04					vertical support	gold		3-1825136-6
A101SD9V30Q04						silver		3-1825136-7
A101SDCCQ04				1/4-40 threaded .28 (7.1)	printed circuit			3-1825136-8
A101SDZQ04					wire lug			3-1825136-9
A101SHZQ04				1/4-40 threaded .3 (7.6)				4-1825136-0
A101SY9CQ04				unthreaded .35 (8.9)	printed circuit			4-1825136-1
A101SYAB04				1/4-40 threaded .35 (8.9)	right angle	gold		4-1825136-2
A101SYAQ04						silver		4-1825136-3
A101SYAV2B04					vertical right angle	gold		1825136-8
A101SYCB04					printed circuit			4-1825136-4
A101SYCQ04						silver		4-1825136-5
A101SYWQ04					wire wrap			4-1825136-7
A101SYZB04					wire lug	gold		4-1825136-8
A101SYZQ04						silver		4-1825136-9
A101T1ZB04			lg. tgl. & bushing	unthreaded .28 (7.1)		gold		5-1825136-2
A101T1ZQ04						silver		5-1825136-3
A101TCQ04					printed circuit			5-1825136-4
A101TZQ04					wire lug			5-1825136-5
A103KZQ04		On-Off-On	locking					1825137-1
A103MD9AB04			bat short		right angle	gold		1825137-2
A103MD9AG04						Au over Ag		1825137-3
A103MD9AQ04						silver		1825137-4
A103MD9AV2B04					vertical right angle	gold		1825137-5
A103P3ZQ04			flatted	1/4-40 threaded .35 (8.9)	wire lug	silver		1825137-6
A103SD9AQ04			bat long	unthreaded .28 (7.1)	right angle			1825137-7
A103SD9AV2B04					vertical right angle	gold		1825137-8
A103SD9AV2Q04						silver		1825137-9
A103SDCB04				1/4-40 threaded .28 (7.1)	printed circuit	gold		1-1825137-0
A103SDCCQ04						silver		1-1825137-1
A103SDZQ04					wire lug			1-1825137-2
A103SYAQ04				1/4-40 threaded .35 (8.9)	right angle			1-1825137-3
A103SYAV2B04					vertical right angle	gold		2-1825136-5
A103SYAV2Q04						silver		1-1825137-4
A103SYCB04					printed circuit	gold		1-1825137-5
A103SYCQ04						silver		1-1825137-6
A103SYWB04					wire wrap	gold		1-1825137-7
A103SYWQ04					right angle	silver		1-1825137-8
A103SYZB04					wire lug	gold		1-1825137-9
A103SYZQ04						silver		2-1825137-0
A103T1CG04			lg. tgl. & bushing	unthreaded .28 (7.1)	printed circuit	Au over Ag		2-1825137-1
A103T1ZQ04					wire lug	silver		2-1825137-2
A103TZQ04								2-1825137-3

Preferred parts in bold print

Toggle Switches

Gemini A Series (Continued)

Toggle Switches

Product key	Poles	Function	Toggles	Bushing	Terminations	Contacts	Material	Part Number
A105MD9AB04	1	(On)-Off-(On)	bat short	unthreaded .28 (7.1)	right angle	gold	RoHS compliant	2-1825137-4
A105MD9AQ04						silver		2-1825137-5
A105MYV30Q04				1/4-40 threaded .35 (8.9)	vertical support		2-1825137-6	
A105P3CG04			flatted		printed circuit	Au over Ag		2-1825137-7
A105P3CQ04						silver	2-1825137-8	
A105P3ZQ04					wire lug		2-1825137-9	
A105SD9AB04			bat long	unthreaded .28 (7.1)	right angle	gold		3-1825137-1
A105SD9AV2Q04					vertical right angle	silver		
A105SD9V30B04					vertical support	gold		3-1825137-3
A105SYAB04				1/4-40 threaded .35 (8.9)	right angle			3-1825137-4
A105SYAV2B04					vertical right angle			3-1825137-5
A105SYCB04					printed circuit			3-1825137-6
A105SYCQ04						silver		3-1825137-7
A105SYZB04					wire lug	gold		3-1825137-8
A105SYZQ04						silver		3-1825137-9
A105T1ZB04			lg. tgl.& bushing	unthreaded .28 (7.1)		gold		4-1825137-0
A105T1ZQ04						silver		
A105TZQ04								4-1825137-2
A107KAV2Q04		On-Off-(On)	locking		vertical right angle			4-1825137-3
A107KZB04						wire lug	gold	
A107MD9AV2B04			bat short		vertical right angle			4-1825137-5
A107MD9CQ04						printed circuit	silver	
A107MD9V30Q04					vertical support			4-1825137-7
A107P3ZQ04			flatted	1/4-40 threaded .35 (8.9)	wire lug			4-1825137-8
A107SYAQ04			bat long		right angle			4-1825137-9
A107SYCB04					printed circuit	gold		5-1825137-0
A107SYCQ04						silver		5-1825137-1
A107SYZQ04					wire lug			5-1825137-2
A107TZB04			lg. tgl.& bushing	unthreaded .28 (7.1)		gold		5-1825137-3
A108MD9AB04		On-(On)	bat short		right angle			5-1825136-6
A108P3CQ04				flatted	1/4-40 threaded .35 (8.9)	printed circuit	silver	
A108P3ZQ04						wire lug		
A108SD9AQ04			bat long	unthreaded .28 (7.1)	right angle			6-1825136-0
A108SDZQ04					1/4-40 threaded .28 (7.1)	wire lug		
A108SYCB04				1/4-40 threaded .35 (8.9)	printed circuit	gold		6-1825136-2
A108SYCQ04						silver		
A108SYZQ04					wire lug			6-1825136-4
A201KAB04	2	On-On	locking	unthreaded .28 (7.1)	right angle	gold		1825138-1
A201KD9AQ04							silver	
A201KZQ04					wire lug			1825138-3
A201L1D9V30Q04			lever		vertical support			1825138-5
A201MD9AB04			bat short		right angle	gold		1825138-6
A201MD9AQ04						silver		1825138-7
A201MD9AV2B04					vertical right angle	gold		1825138-8
A201MD9AV2Q04						silver		1825138-9
A201MDAQ04				1/4-40 threaded .28 (7.1)	right angle			1-1825138-0
A201MYAQ04				1/4-40 threaded .35 (8.9)				1-1825138-2
A201MYCB04					printed circuit	gold		1-1825138-3
A201MYZQ04					wire lug	silver		1-1825138-4
A201P3ZQ04			flatted					1-1825138-5
A201SCWZB04			bat long	1/4-40 threaded .37 (9.4)		gold		1-1825138-6
A201SD9AQ04					unthreaded .28 (7.1)	right angle	silver	
A201SD9AV2Q04					vertical right angle			1-1825138-8
A201SDCB04				1/4-40 threaded .28 (7.1)	printed circuit	gold		1-1825138-9
A201SDZQ04						wire lug	silver	
A201SY9AB04				unthreaded .35 (8.9)	right angle	gold		2-1825138-1
A201SYAB04				1/4-40 threaded .35 (8.9)				2-1825138-2
A201SYAQ04						silver		2-1825138-3
A201SYCB04					printed circuit	gold		2-1825138-4
A201SYCQ04						silver		2-1825138-5
A201SYWQ04					wire wrap			2-1825138-6
A201SYZB04					wire lug	gold		2-1825138-7
A201SYZQ04						silver		2-1825138-8
A201T1ZQ04			lg. tgl.& bushing	unthreaded .28 (7.1)				2-1825138-9
A201TZQ04								

Preferred parts in bold print

Gemini A Series (Continued)

Product key	Poles	Function	Toggles	Bushing	Terminations	Contacts	Material	Part Number
A203KZQ04	2	On-Off-On	locking	unthreaded .28 (7.1)	wire lug	silver	RoHS	1825139-1
A203MD9AB04			bat short		right angle	gold	compliant	1825139-2
A203P3AV2Q04			flatted	1/4-40 threaded .35 (8.9)	vertical right angle	silver		1825139-3
A203P3ZQ04					wire lug		1825139-4	
A203SD9AV2B04			bat long	unthreaded .28 (7.1)	vertical right angle	gold		1825139-5
A203SD9AV2Q04						silver	1825139-6	
A203SDZQ04				1/4-40 threaded .28 (7.1)	wire lug			1825139-7
A203SYCB04					1/4-40 threaded .35 (8.9)	printed circuit	gold	
A203SYCQ04						silver		1825139-9
A203SYZQ04					wire lug			1-1825139-0
A203T1ZQ04			lg. tgl.& bushing	unthreaded .28 (7.1)				1-1825139-1
A203TZQ04								1-1825139-2
A205KZB04		(On)-Off-(On)	locking	1/4-40 threaded .35 (8.9)		gold		1-1825139-3
A205P3ZQ04			flatted			silver	1-1825139-4	
A205SD9AB04			bat long	unthreaded .28 (7.1)	right angle	gold		1-1825139-5
A205SYCB04					1/4-40 threaded .35 (8.9)	printed circuit		1-1825139-6
A205SYCQ04						silver		1-1825139-7
A205SYZQ04						wire lug		1-1825139-8
A205T1ZQ04			lg. tgl.& bushing	unthreaded .28 (7.1)				1-1825139-9
A205TZQ04								2-1825139-0
A207P3ZQ04		On-Off-(On)	flatted	1/4-40 threaded .35 (8.9)				2-1825139-1
A207SYCB04			bat long			printed circuit	gold	
A207SYCQ04						silver		2-1825139-3
A207SYZQ04						wire lug		2-1825139-4
A207T1ZQ04			lg. tgl.& bushing	unthreaded .28 (7.1)				2-1825139-5
A207TZQ04								2-1825139-6
A208KZG04		On-(On)	locking	1/4-40 threaded .35 (8.9)		Au over Ag		3-1825138-2
A208P3ZQ04			flatted			silver	3-1825138-3	
A208SD9AQ04			bat long	unthreaded .28 (7.1)	right angle			3-1825138-4
A208SD9AV2Q04					1/4-40 threaded .35 (8.9)	vertical right angle		3-1825138-5
A208SYCB04					printed circuit	gold		3-1825138-6
A208SYCQ04						wire lug		silver
A208SYZQ04								3-1825138-8
A208T1ZQ04					lg. tgl.& bushing	unthreaded .28 (7.1)		
A208TZQ04								4-1825138-0
A211KZB04					On-On-On	locking		gold
A211MD9AQ04			bat short	1/4-40 threaded .35 (8.9)	right angle	silver		2-1825139-8
A211MYCQ04							printed circuit	
A211P3CQ04			flatted					3-1825139-0
A211P3V40G04							vertical support	Au over Ag
A211P3ZQ04					wire lug	silver		3-1825139-2
A211SCWCQ004					bat long	1/4-40 threaded .37 (9.4)	printed circuit	
A211SDZQ04				1/4-40 threaded .28 (7.1)	wire lug			3-1825139-4
A211SHZQ04					1/4-40 threaded .3 (7.6)			3-1825139-5
A211SY9AQ04				unthreaded .35 (8.9)	right angle			3-1825139-6
A211SYCQ04					1/4-40 threaded .35 (8.9)	printed circuit		
A211SYZB04					wire lug	gold		3-1825139-8
A211SYZQ04								silver
A211T1ZQ04			lg. tgl.& bushing	unthreaded .28 (7.1)				4-1825139-0
A213SYZQ04					On-On-(On)	bat long	1/4-40 threaded .35 (8.9)	
A215SD9V30B04		(On)-On-(On)		unthreaded .28 (7.1)	vertical support	gold		4-1825139-3
A215SY9AQ04					unthreaded .35 (8.9)	right angle	silver	
A215SYZQ04				1/4-40 threaded .35 (8.9)	wire lug			4-1825139-5

Preferred parts in bold print

Gemini AE Series, Sealed IP67

Features

- Meets IP 67 requirements
- Gold, gold over silver or silver contacts
- Stainless steel frame with brass tin plated solder support
- Epoxy sealed terminals



Typical performance characteristics

Contact configuration 1, 2, 3, and 4 pole
 Contact timing Break before Make
 Contact rating max. gold: 0.4VA @20V AC or DC
 gold over silver : 5 A @ 125VAC or 28VDC resistive
 or 0.4VA @ 20VAC or DC or 2A @250VAC resistive
 silver: 5 A @ 125VAC or 28VDC resistive
 and 2A @ 250VAC resistive
 Electrical life 6000 cycles
 Contact resistance, initial max.10 mOhms @ 2 to 4VDC, 100mA
 Insulation resistance min. 1,000 MOhms
 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 -30°C to +85°C
 Solder heat resistance wave solder capable to 265° C
 Terminal seal epoxy

Material specifications

Contacts contacts B: copper alloy finish gold over nickel
 contacts G: copper alloy finish gold over silver
 contacts Q: copper alloy finish silver
 Actuator brass alloy chrome
 Terminals contacts B: copper alloy finish gold over nickel
 contacts G: copper alloy finish gold over silver
 contacts Q: copper alloy finish silver
 Case thermoplastic
 Bushing brass alloy finish nickel
 Internal actuator phenolic
 Spring music wire
 Support bracket brass tin plated
 Seal epoxy
 RoHS Directive 2002/95/EC compliant

Toggle Switches

Product key	Typical product key									
	AE	1	01	S	D1	C	Q	04		
Type	Gemini AE Series Toggles									
Number of Poles	1	single pole		2	double pole					
Function	single and double pole			double pole only						
	01	On-On		11	On-On-On					
	03	On-Off-On		13	On-On-(On)					
	05	(On)-Off-(On)		15	(On)-On-(On)					
	07	On-Off-(On)								
	08	On-(On)								
Toggles	S	bat long			M	bat short				
Bushing	D1	unthreaded								
Terminations	A	right angle	V30	vertical support	W	wire wrap				
	AV2	vertical right angle	V40	vertical support	W4	wire wrap				
	C	printed circuit			Z	wire lug				
Contacts	B	gold	G	gold over silver	Q	silver				
Material	04	RoHS compliant								

Gemini AE Series, Sealed IP67 (Continued)

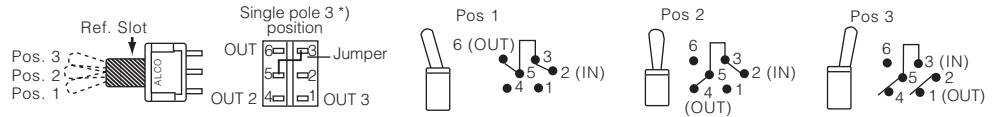
Function



Code	Positions	↘	↓	↙
01	2 positions	On	None	On
03	3 positions	On	Off	On
05	3 positions	(On)	Off	(On)
07	3 positions	(On)	Off	On
08	2 positions	(On)	None	On
SPDT	Term. conn.	1 - 2	---	2 - 3
DPDT	Terminals connected	1 - 2 4 - 5	---	2 - 3 5 - 6
11*)	3 positions	On	On	On
13*)		(On)	On	On
15*)		(On)	On	(On)
DP3T	Terminals connected	1 - 2 4 - 5	2 - 3 4 - 5	2 - 3 5 - 6

Off mechanical position, no electrical connection
 (On) momentary mechanical position and electrical connection
 None no mechanical position
 *) functions available in dual pole case only.
 **) SP3T functions achieved with external jumper installed by customer

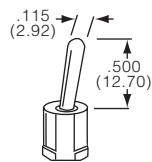
Wiring diagram for functions 11, 13, 15



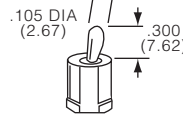
Toggles



S standard, bat long



M short toggle

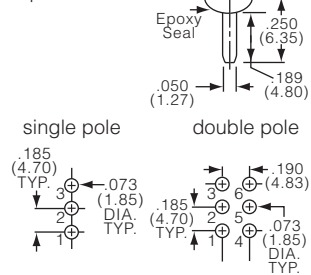


Terminals

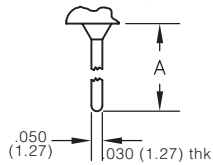


Codes C, W, W4, Z printed circuit, wire wrap and wire lug

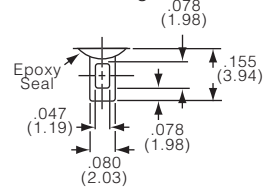
C printed circuit



W, W4 wire wrap



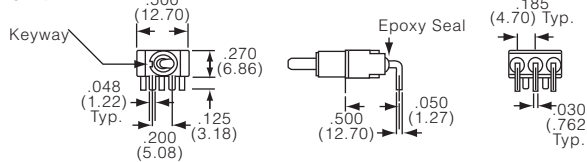
Z wire lug



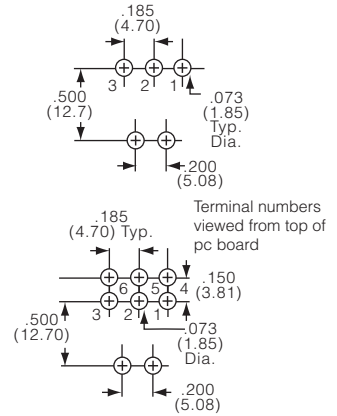
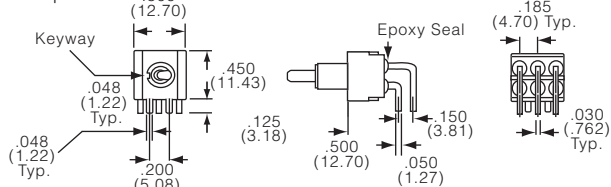
Terminal	Dim A
W	18.69 (.736)
W4	26.98 (1.062)

Code A right angle

single pole

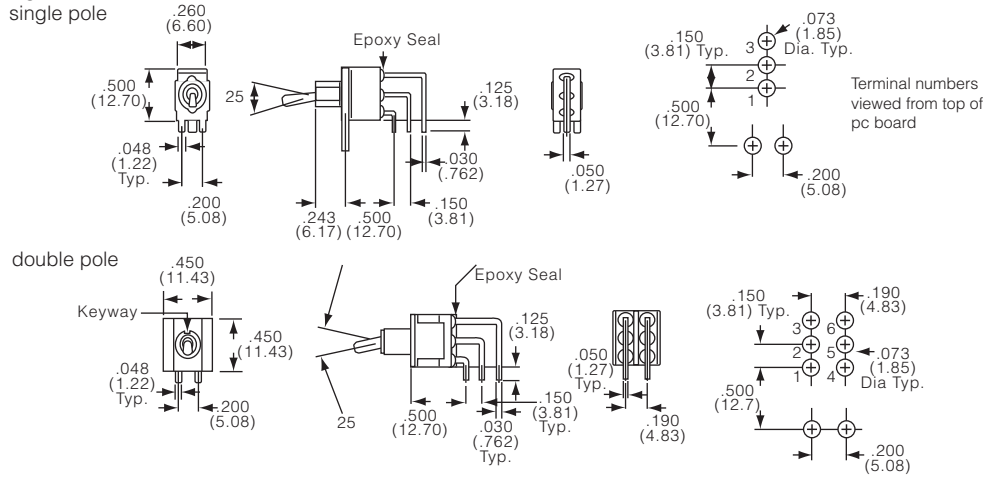


double pole

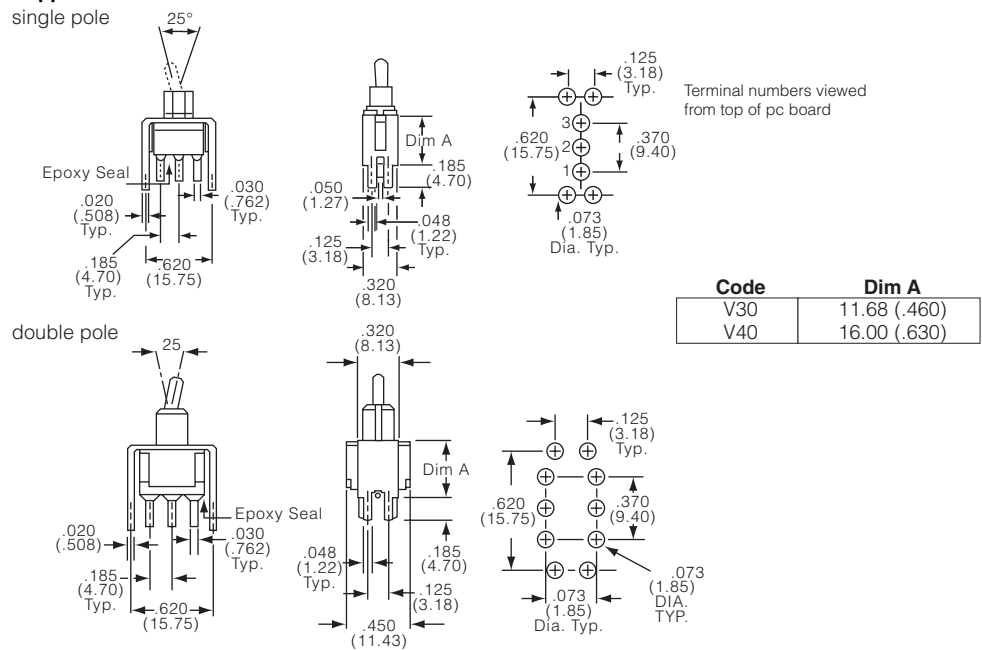


Gemini AE Series, Sealed IP67 (Continued)

Code AV2 vertical right angle



Codes V30, V40 vertical support



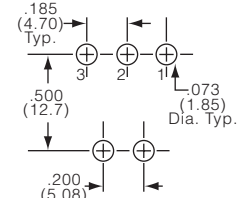
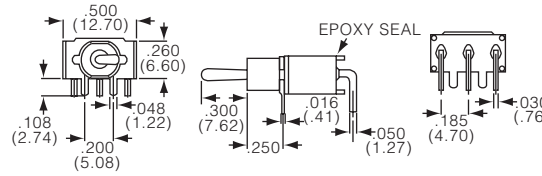
Gemini AE Series, Sealed IP67 (Continued)

Dimensions

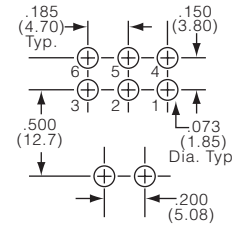
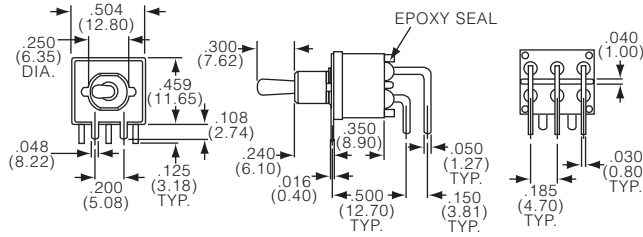
Series AE...MD1A short bat, unthreaded, right angle, 1 & 2 pole



AE101MD1AQ



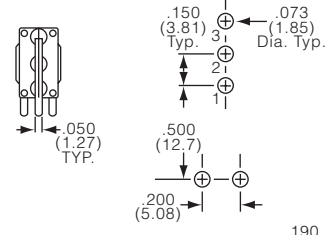
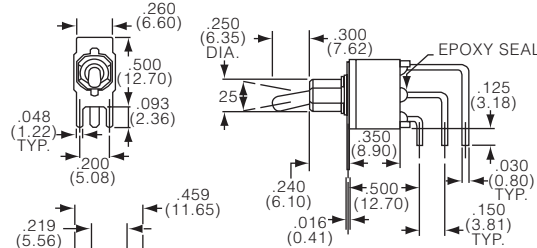
AE201MD1AQ



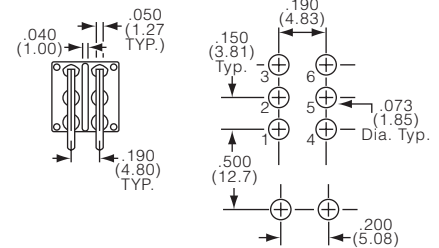
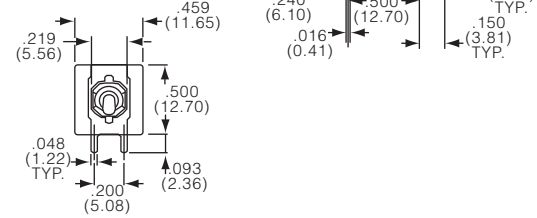
Series AE...MD1AV2 short bat, unthreaded, vertical right angle, 1 & 2 pole



AE101MD1AV2Q



AE201MD1AV2Q



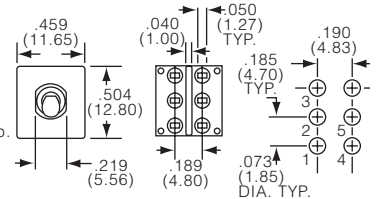
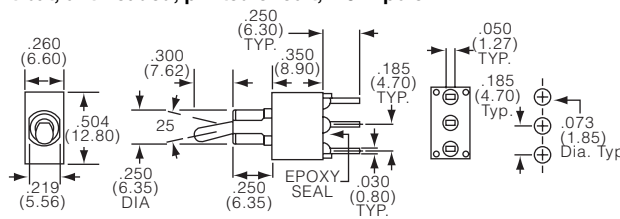
Series AE...MD1C short bat, unthreaded, printed circuit, 1 & 2 pole



AE101MD1CQ

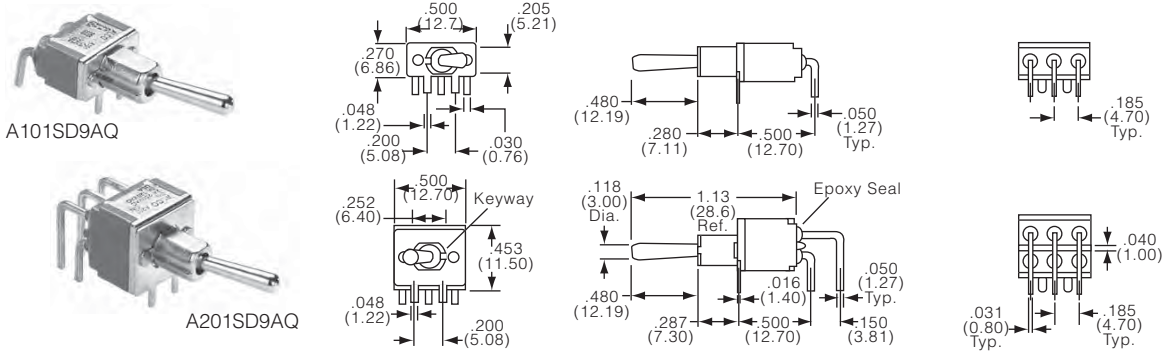


AE201MD1CQ

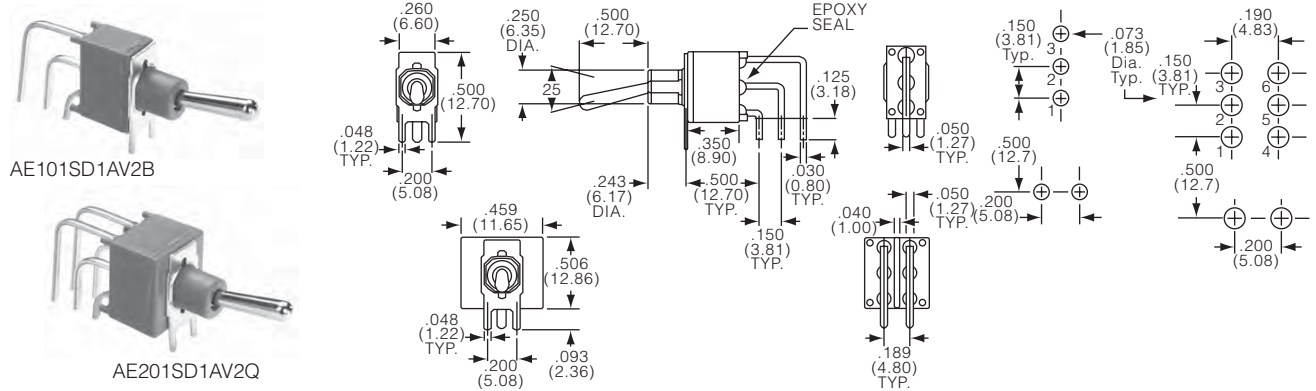


Gemini AE Series, Sealed IP67 (Continued)

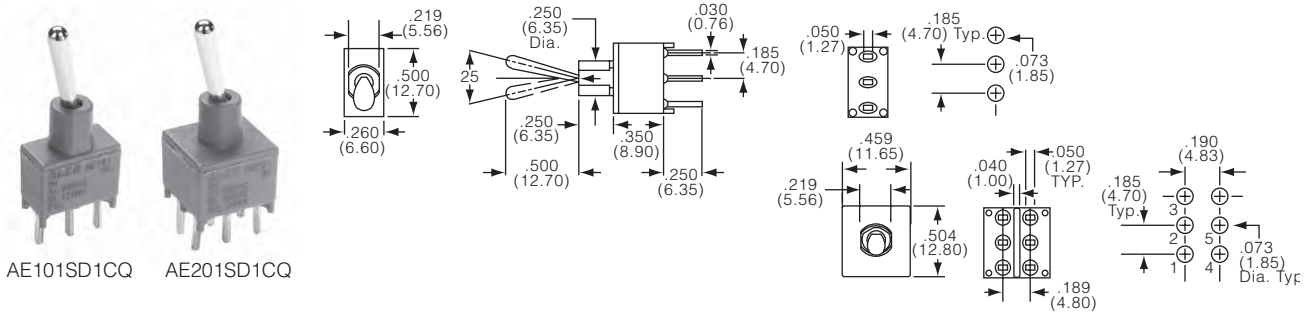
Series AE...SD1A long bat, unthreaded, right angle, 1 & 2 pole



Series AE...SD1AV2 long bat, unthreaded, vertical right angle, 1 & 2 pole



Series AE...SD1C long bat, unthreaded, printed circuit, 1 & 2 pole



Toggle Switches

Gemini AE Series, Sealed IP67 (Continued)

Product key	Poles	Function	Toggles	Bushing	Terminations	Contacts	Material	Part Number																														
AE101MD1AB04	1	On-On	bat short	unthreaded	right angle	gold	RoHS	1825142-1																														
AE101MD1AG04						Au over Ag		compliant	1825142-2																													
AE101MD1AQ04						silver		1825142-4																														
AE101MD1AV2B04						vertical right angle		gold	1825142-5																													
AE101MD1AV2Q04								silver	1825142-6																													
AE101MD1CB04						printed circuit		gold	1825142-8																													
AE101MD1CG04								Au over Ag	1825142-9																													
AE101MD1CQ04								silver	1-1825142-0																													
AE101MD1V30B04						vertical support		gold	1-1825142-1																													
AE101MD1V30Q04								silver	1-1825142-2																													
AE101MD1W4B04						wire wrap		gold	1-1825142-3																													
AE101MD1W4Q04								silver	1-1825142-4																													
AE101SD1AB04									bat long		right angle	gold		1-1825142-5																								
AE101SD1AQ04												silver		1-1825142-6																								
AE101SD1AV2B04											vertical right angle	gold		1-1825142-8																								
AE101SD1AV2Q04									silver			1-1825142-9																										
AE101SD1CB04									printed circuit		gold	2-1825142-0																										
AE101SD1CQ04											silver	2-1825142-1																										
AE101SD1V30B04									vertical support		gold	2-1825142-2																										
AE101SD1V30Q04	silver	2-1825142-3																																				
AE103MD1AB04	On-Off-On		bat short		right angle				gold		2-1825142-4																											
AE103MD1AV2B04					vertical right angle				2-1825142-5																													
AE103MD1CB04					printed circuit				2-1825142-6																													
AE103MD1W4B04			wire wrap		2-1825142-8																																	
AE103SD1AV2B04			vertical right angle		bat long						vertical right angle					2-1825142-9																						
AE103SD1CB04																printed circuit	3-1825142-0																					
AE103SD1CQ04			silver		3-1825142-1																																	
AE103SD1V30B04			vertical support		gold						3-1825142-3																											
AE103SD1W4B04			wire wrap		3-1825142-4																																	
AE105MD1AB04			(On)-Off-(On)		bat short												right angle			3-1825142-5																		
AE105MD1AG04																	Au over Ag			3-1825142-6																		
AE105MD1AV2B04						vertical right angle							vertical right angle									3-1825142-7																
AE105MD1W4B04																						wire wrap	3-1825142-8															
AE105SD1CB04						printed circuit							bat long										printed circuit				3-1825142-9											
AE105SD1V30B04																											vertical support	4-1825142-0										
AE105SD1W4B04						wire wrap							4-1825142-1																									
AE107MD1AV2B04						On-Off-(On)							bat short															vertical right angle			4-1825142-2							
AE107SD1AB04																												bat long			4-1825142-3							
AE107SD1AG04													right angle																			right angle				4-1825142-4		
AE107SD1CB04	printed circuit	4-1825142-5																																				
AE107SD1V30B04	vertical support	4-1825142-6																																				
AE108MD1AQ04	On-(On)	bat short											right angle																								4-1825142-7	
AE108MD1AV2B04													vertical right angle																								4-1825142-8	
AE108MD1AV2Q04		right angle											right angle																									4-1825142-9
AE108SD1AB04																																						gold
AE108SD1AQ04		silver											5-1825142-1																									
AE108SD1CQ04		printed circuit											5-1825142-2																									
AE108SD1V30B04		vertical support											5-1825142-4																									
AE108SD1W4B04		wire wrap	5-1825142-5																																			
AE201MD1AB04		2	On-On		bat short								right angle						1825143-1																			
AE201MD1AQ04								silver		1825143-2																												
AE201MD1AV2B04								vertical right angle		1825143-3																												
AE201MD1CB04								printed circuit		1825143-4																												
AE201MD1CQ04								silver		1825143-5																												
AE201MD1W4B04								wire wrap		1825143-6																												
AE201SD1AB04						right angle		bat long									right angle					1825143-7																
AE201SD1AG04																						Au over Ag	1825143-8															
AE201SD1AV2B04						vertical right angle																vertical right angle				1825143-9												
AE201SD1CB04																										printed circuit	1-1825143-0											
AE201SD1CQ04						silver																1-1825143-1																
AE201SD1W4B04	wire wrap			1-1825143-2																																		
AE203MD1AB04	On-Off-On			bat short																		right angle						1-1825143-3										
AE203MD1AQ04									silver			1-1825143-4																										
AE203MD1AV2B04									vertical right angle			1-1825143-5																										
AE203SD1AB04									right angle			bat long			right angle															1-1825143-6								
AE203SD1AV2B04																														vertical right angle	1-1825143-7							
AE203SD1AV2Q04									silver			1-1825143-8																										
AE203SD1CB04									printed circuit			1-1825143-9																										
AE203SD1W4B04		wire wrap	2-1825143-0																																			
AE205MD1AV2B04		(On)-Off-(On)	bat short								vertical right angle				2-1825143-1																							
AE205SD1CQ04											printed circuit				2-1825143-2																							
AE207MD1AB04			On-Off-(On)								bat short							right angle														2-1825143-4						
AE208SD1W4B04																		On-(On)														bat long	2-1825143-5					
AE211MD1CB04			On-On-On								bat short																						printed circuit			2-1825143-6		
AE211MD1V30B04										vertical support									2-1825143-7																			

Preferred parts in bold print

MT Green Series

Features

- Wire lug, PC terminals, both right angle and vertical right angle
- MTE series splashproof toggle actuator
- Entire series epoxy sealed terminals
- Actuator guards, decorative hardware, and silicone boot seals available



Typical performance characteristics

Contact configuration	SPDT, DPDT, 3PDT, 4PDT
Contact timing	Break-before-make
Contact rating max.	6A @ 125VAC, 3A @ 250VAC
Contact resistance, initial	max. 10 mOhms
Insulation resistance	min. 1,000 MOhms
Dielectric strength	1,500 Vrms @ sea level
Actuation force	4 to 20 N (0.4 to 2 kgf)
Actuator travel	24°~26°

Material specifications

Contacts	copper alloy silver clad
Toggle	brass nickel plated
Terminals	copper alloy gold flash
Terminal seal	epoxy
Housing	alkyd polyester (green)UL94 V-O
Frame	stainless steel
Support Bracket	steel nickel plated
Spring	music wire
RoHS Directive 2002/95/EC	compliant

Environmental specification

Operating temperature	-20°C to +80°C
Storage temperature	-40°C to +80°C
Solder heat resistance	wave solder capable to 265° C
Seal	epoxy sealed terminals
	MTE series splashproof toggle actuator O-ring

Toggle Switches

Product key		Typical product key		MT	A	1	06	E	PC	04																																							
Type		Green series toggle switches, panel mount																																															
Toggle & bushing		<table border="0" style="width: 100%;"> <tr> <td>A</td> <td>.410 long round toggle, 1/4-40 bushing</td> </tr> <tr> <td>A8</td> <td>.410 long round toggle, 1/4-40 bushing, right angle & vertical right angle</td> </tr> <tr> <td>B</td> <td>.600 long round toggle with plastic tip, 1/4-40 bushing</td> </tr> <tr> <td>E</td> <td>.410 long round toggle, 1/4-40 bushing with O ring seal</td> </tr> <tr> <td>F</td> <td>.485 long flat toggle, 1/4-40 bushing</td> </tr> <tr> <td>G</td> <td>.452 long large diameter round toggle, 15/32 bushing</td> </tr> <tr> <td>G2</td> <td>.685 long large diameter round toggle, 15/32 bushing</td> </tr> <tr> <td>L</td> <td>locking toggle, 1/4-40 bushing</td> </tr> <tr> <td>M</td> <td>.270 long round toggle, 1/4-40 bushing</td> </tr> <tr> <td>M8</td> <td>.270 long round toggle, 1/4-40 bushing, right angle & vertical right angle</td> </tr> </table>									A	.410 long round toggle, 1/4-40 bushing	A8	.410 long round toggle, 1/4-40 bushing, right angle & vertical right angle	B	.600 long round toggle with plastic tip, 1/4-40 bushing	E	.410 long round toggle, 1/4-40 bushing with O ring seal	F	.485 long flat toggle, 1/4-40 bushing	G	.452 long large diameter round toggle, 15/32 bushing	G2	.685 long large diameter round toggle, 15/32 bushing	L	locking toggle, 1/4-40 bushing	M	.270 long round toggle, 1/4-40 bushing	M8	.270 long round toggle, 1/4-40 bushing, right angle & vertical right angle																			
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2	double pole	4	4 pole																																														
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Function		<table border="0" style="width: 100%;"> <tr> <td colspan="3">1 and 3 pole</td> <td colspan="3">2 and 4 pole</td> <td colspan="3">1 and 2 pole functionality *)</td> </tr> <tr> <td>D</td> <td>ON-ON</td> <td>N</td> <td>ON-ON</td> <td>PA</td> <td>ON-ON-ON</td> </tr> <tr> <td>E</td> <td>ON-OFF-ON</td> <td>P</td> <td>ON-OFF-ON</td> <td>SA</td> <td>(ON)-ON-(ON)</td> </tr> <tr> <td>F</td> <td>ON-(ON)</td> <td>R</td> <td>ON-(ON)</td> <td>TA</td> <td>ON-ON-(ON)</td> </tr> <tr> <td>G</td> <td>(ON)-OFF-(ON)</td> <td>S</td> <td>(ON)-OFF-(ON)</td> <td colspan="2">*) 2 and 4 pole design, internally connected for 1 and 2 pole functionality</td> </tr> <tr> <td>H</td> <td>ON-OFF-(ON)</td> <td>T</td> <td>ON-OFF-(ON)</td> <td colspan="2"></td> </tr> </table>									1 and 3 pole			2 and 4 pole			1 and 2 pole functionality *)			D	ON-ON	N	ON-ON	PA	ON-ON-ON	E	ON-OFF-ON	P	ON-OFF-ON	SA	(ON)-ON-(ON)	F	ON-(ON)	R	ON-(ON)	TA	ON-ON-(ON)	G	(ON)-OFF-(ON)	S	(ON)-OFF-(ON)	*) 2 and 4 pole design, internally connected for 1 and 2 pole functionality		H	ON-OFF-(ON)	T	ON-OFF-(ON)		
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H	ON-OFF-(ON)	T	ON-OFF-(ON)																																														
Terminations		<table border="0" style="width: 100%;"> <tr> <td>blank</td> <td>wire lug</td> <td>RA</td> <td>right angle</td> </tr> <tr> <td>PC</td> <td>printed circuit board</td> <td>VRA</td> <td>vertical right angle</td> </tr> </table>									blank	wire lug	RA	right angle	PC	printed circuit board	VRA	vertical right angle																															
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PC	printed circuit board	VRA	vertical right angle																																														
Material		04 RoHS compliant																																															

MT Green Series (Continued)

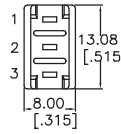
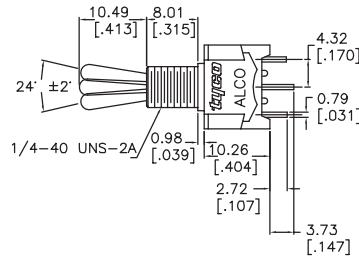
MTA



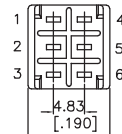
MTA1, MTA2 1 & 2 pole



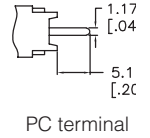
MTA106D04 MTA206NPC04



MTA106



MTA206

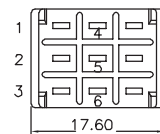
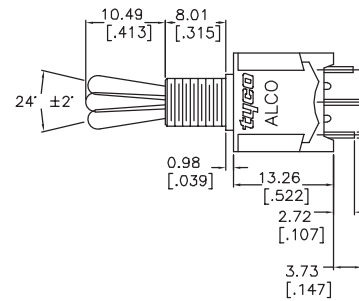


PC terminal

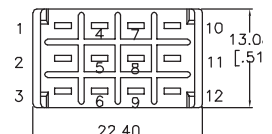
MTA3, MTA4 3 & 4 pole



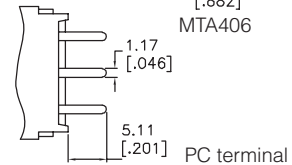
MTA306D04 MTA406NPC04



MTA306



MTA406

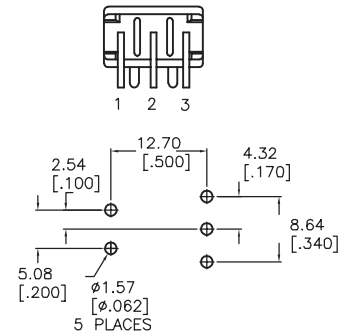
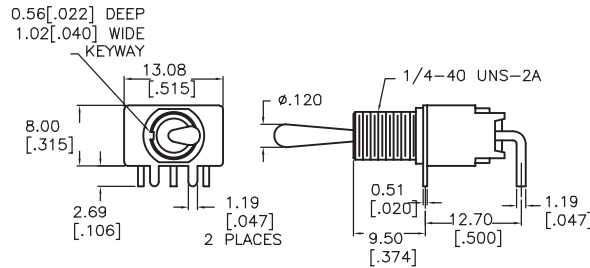


PC terminal

MTA81 RA 1pole, right angle



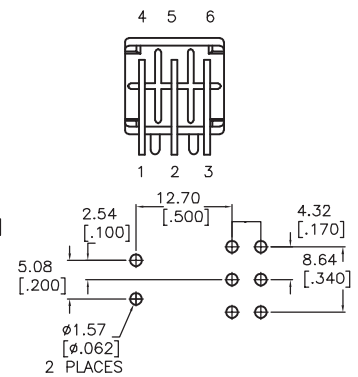
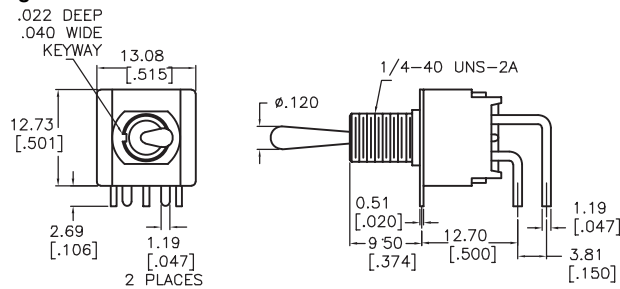
MTA8106DRA04



MTA82 RA 2pole, right angle



MTA8206NRA04



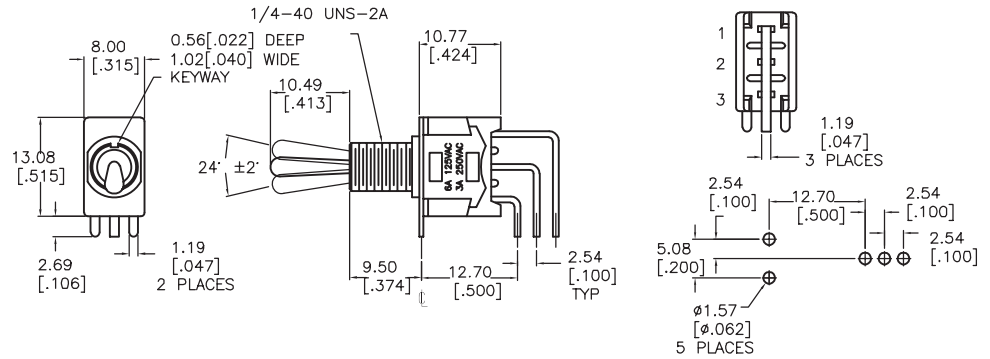
Toggle Switches

MT Green Series (Continued)

MTA81 VRA 1pole, vertical right angle



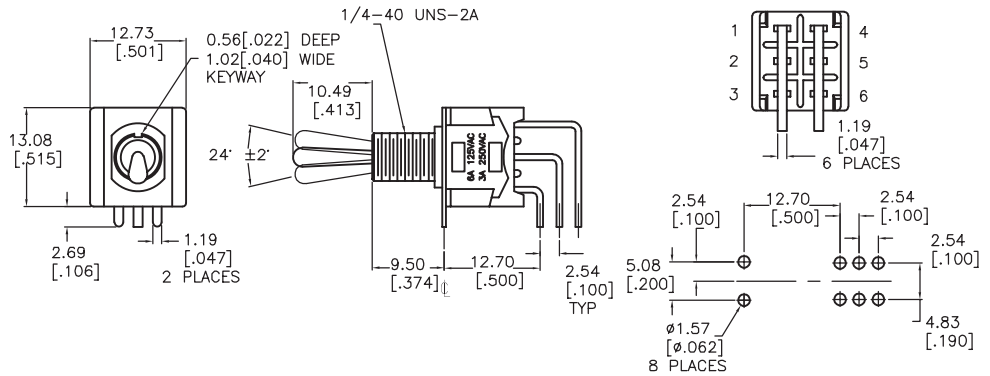
MTA8106DVRA04



MTA82 VRA 2pole, vertical right angle



MTA8206NVRA04



MTB



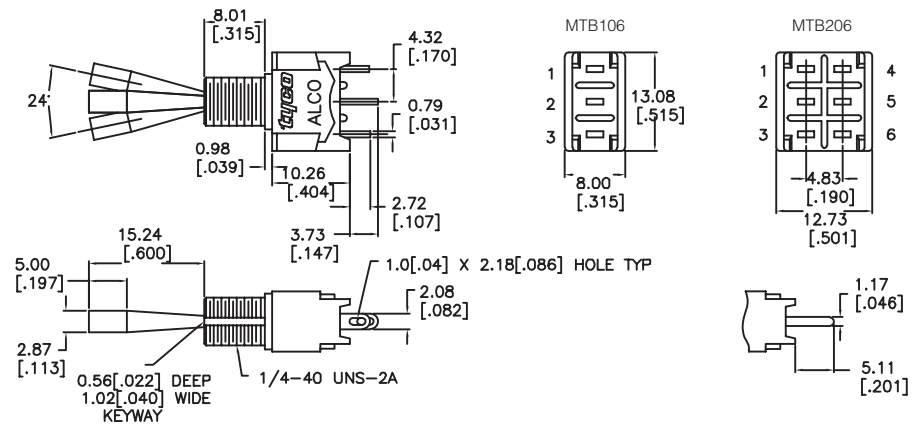
MTB1, MTB2 1 & 2 pole



MTB106D04

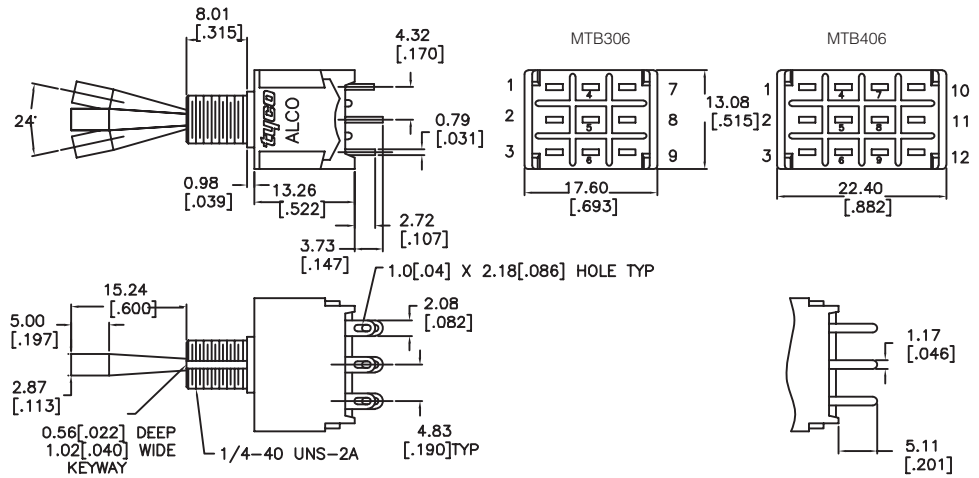


MTB206N04



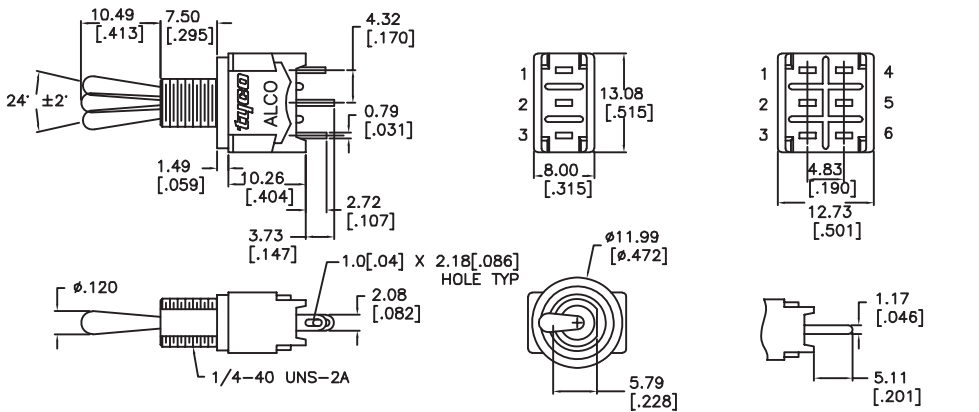
MT Green Series (Continued)

MTB3, MTB4 3 & 4 pole

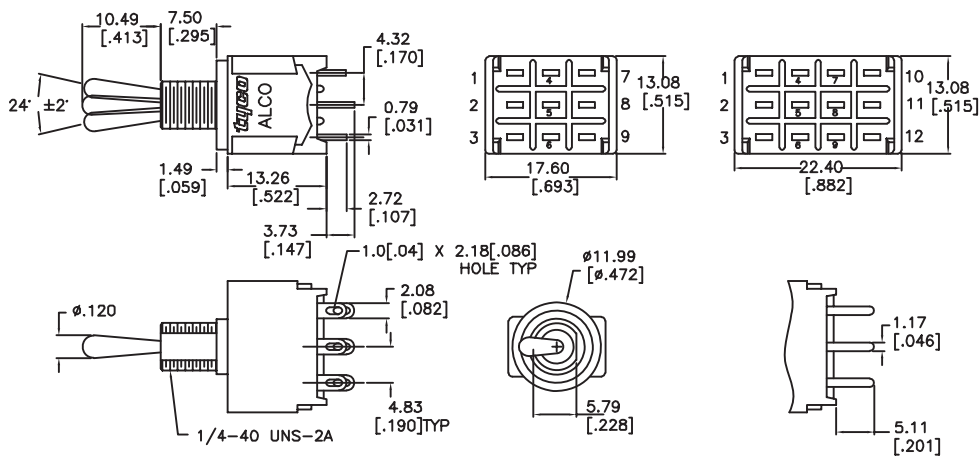


MTE

MTE1, MTE2 1 & 2 pole



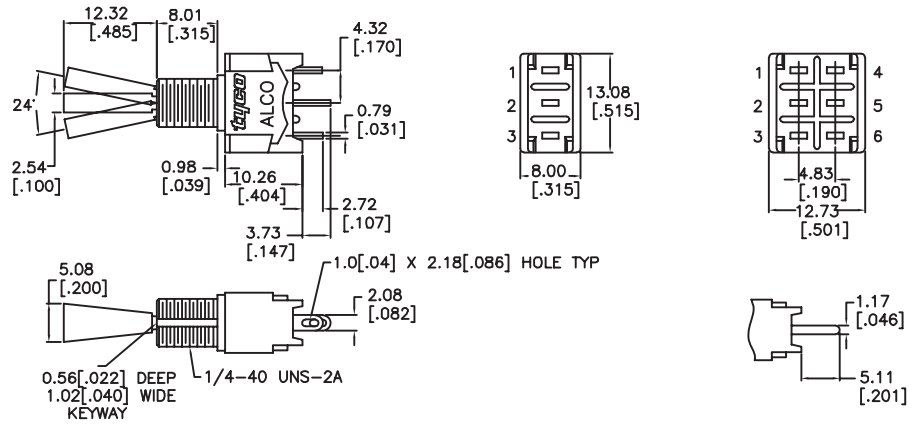
MTE3, MTE4 3 & 4 pole



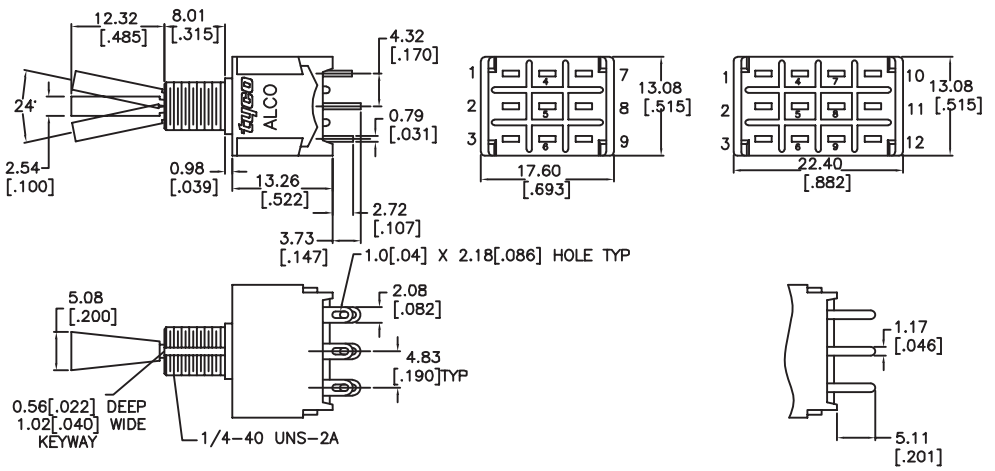
MT Green Series (Continued)

MTF

MTF1, MTF2 1 & 2 pole

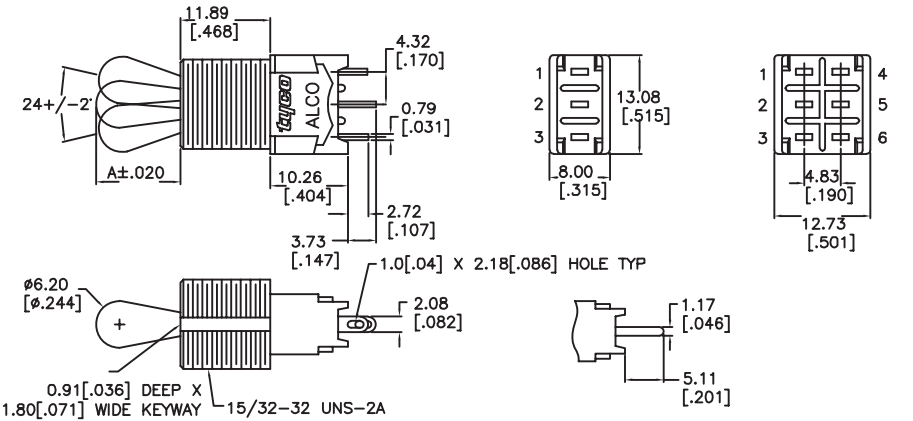


MTF3, MTF4 3 & 4 pole



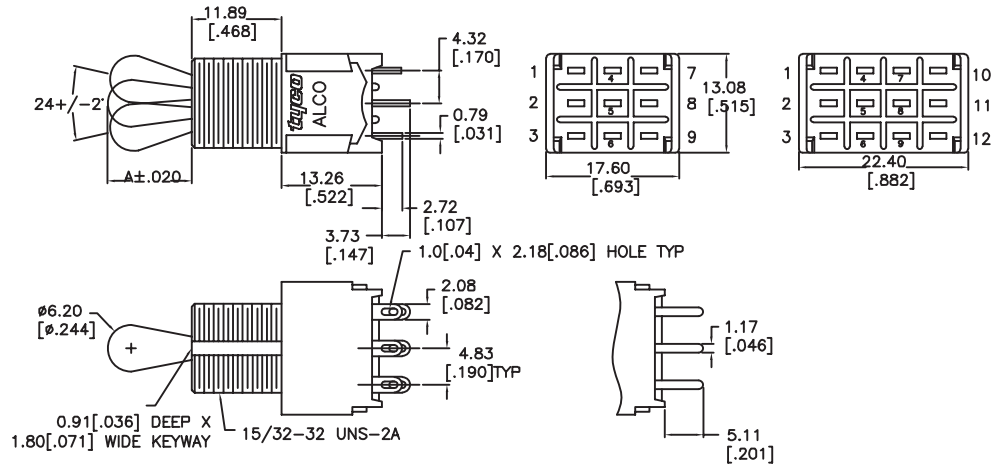
MTG

MTG1, MTG2 1 & 2 pole



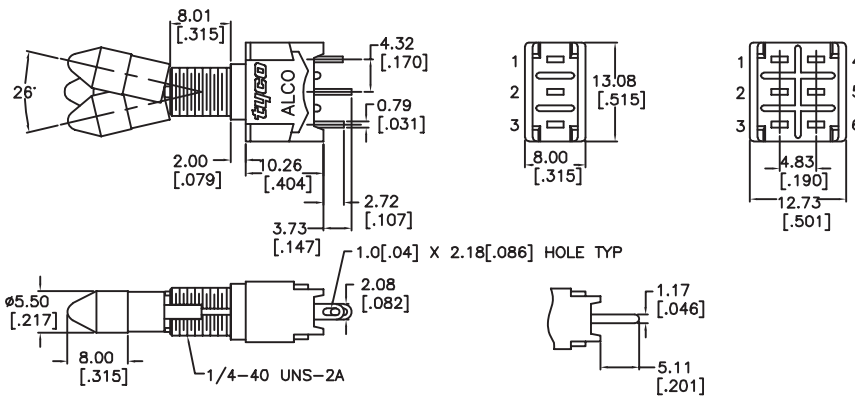
MT Green Series (Continued)

MTG3, MTG4 3 & 4 pole

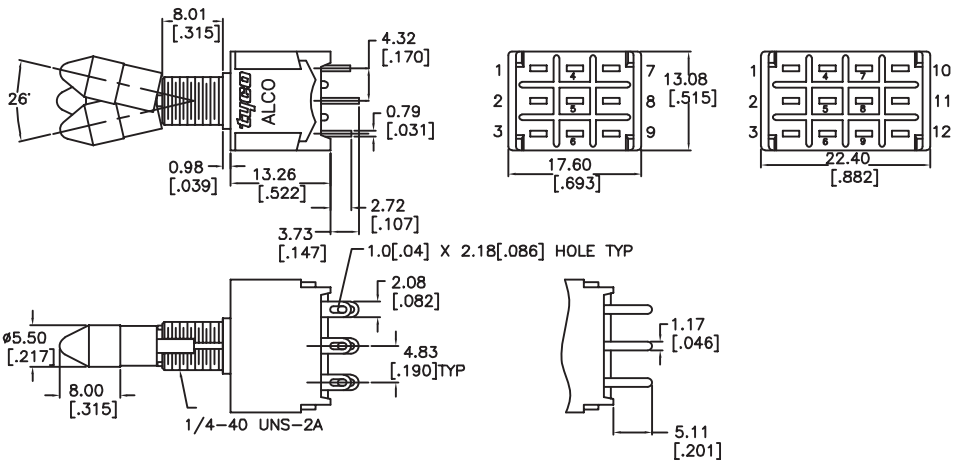


MTL

MTL1, MTL2 1 & 2 pole



MTL3, MTL4 3 & 4 pole

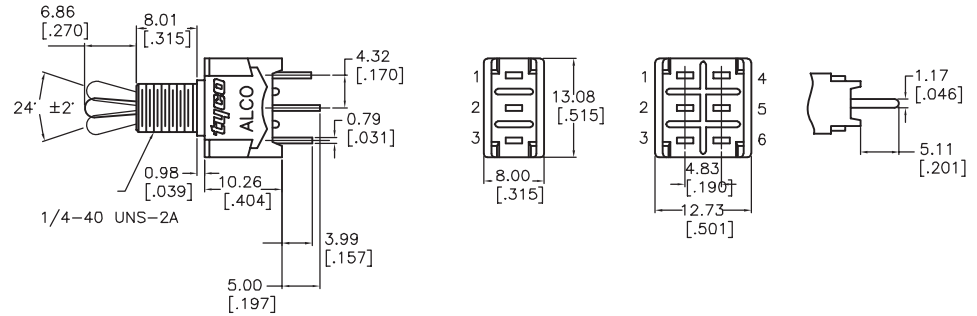


MT Green Series (Continued)

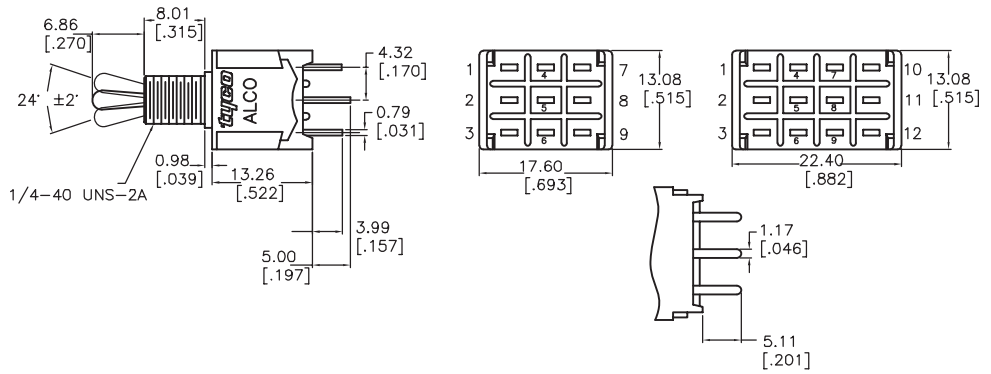
MTM



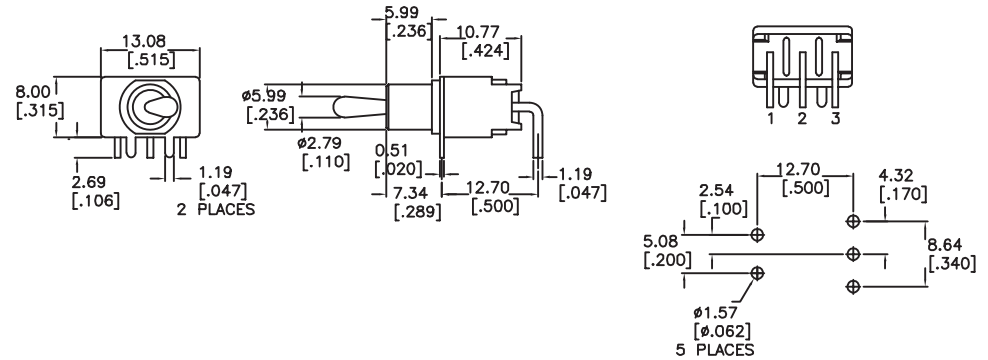
MTM1, MTM2 1 & 2 pole



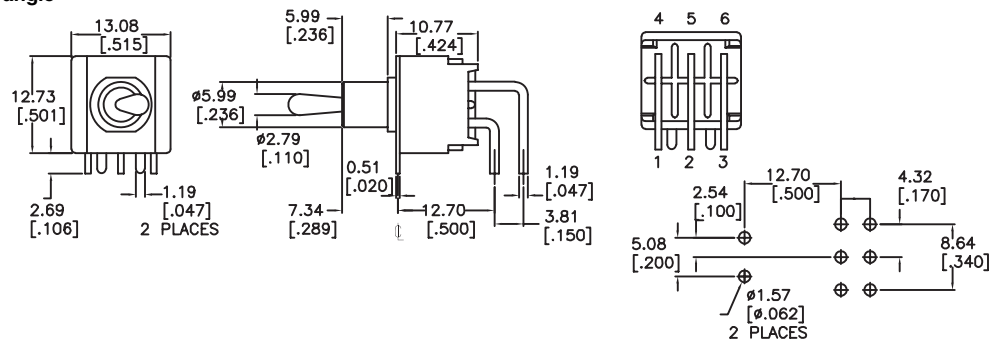
MTM3, MTM4 3 & 4 pole



MTM81 RA 1pole, right angle



MTM82 RA 2pole, right angle

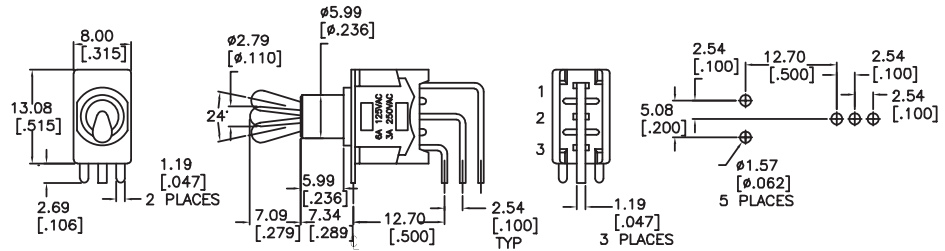


MT Green Series (Continued)

MTM81 VRA 1pole, vertical right angle



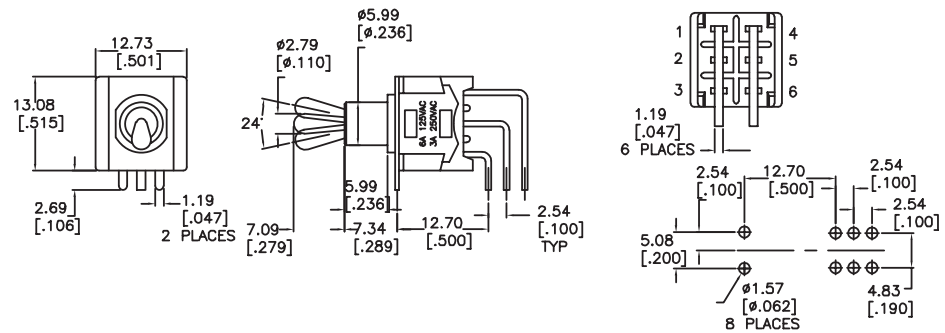
MTM8106DVRA04



MTM82 VRA 2pole, vertical right angle



MTM8206NVRA04



Function

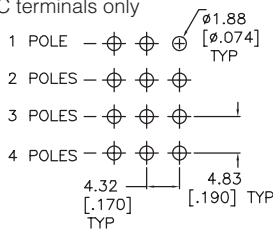


Function	Poles	Throws	↘	↓	↙	↘	↓	↙
A	1	1	On	None	Off	2-3	-	Off
D	1	2	On	None	On	2-3	-	2-1
D	3	2	On	None	On	2-3, 5-6, 8-9	-	2-1, 5-4, 8-7
E	1	2	On	Off	On	2-3	Off	2-1
E	3	2	On	Off	On	2-3, 5-6, 8-9	Off	2-1, 5-4, 8-7
F	1	2	On	None	(On)	2-3	-	2-1
F	3	2	On	None	(On)	2-3, 5-6, 8-9	-	2-1, 5-4, 8-7
G	1	2	(On)	Off	(On)	2-3	Off	2-1
H	1	2	On	Off	(On)	2-3	Off	2-1
H	3	2	On	Off	(On)	2-3, 5-6, 8-9	Off	2-1, 5-4, 8-7
N	2	2	On	None	On	2-3, 5-6	-	2-1, 5-4
N	4	2	On	None	On	2-3, 5-6, 8-9, 11-12	-	2-1, 5-4, 8-7, 11-10
P	2	2	On	Off	On	2-3, 5-6	Off	2-1, 5-4
P	4	2	On	Off	On	2-3, 5-6, 8-9, 11-12	Off	2-1, 5-4, 8-7, 11-10
PA	1 ¹⁾	3	On	On	On	5-6	5-3	5-1
PA	2 ²⁾	3	On	On	On	5-6, 11-12	5-3, 11-9	5-1, 11-7
R	2	2	On	None	(On)	2-3, 5-6	-	2-1, 5-4
S	2	2	(On)	Off	(On)	2-3, 5-6	Off	2-1, 5-4
SA	1 ¹⁾	3	(On)	On	(On)	5-6	5-3	5-1
T	2	2	On	Off	(On)	2-3, 5-6	Off	2-1, 5-4
TA	1 ¹⁾	3	On	On	(On)	5-6	5-3	5-1

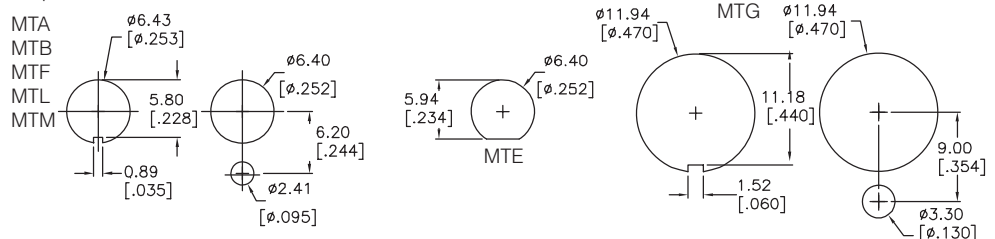
¹⁾ customer installed external jumper between terminals 1 and 4 required for 1 pole 3 throw function
²⁾ customer installed external jumpers between terminals 2 and 4 as well as between 8 and 10 required for 2 pole 3 throw function
 Off indicates a mechanical position with no electrical connection
 (On) indicates momentary connection
 None indicates no mechanical position

Mounting

PC board layout
 PC terminals only



Recommended hole layout
 to prevent rotation



MT Green Series (Continued)

Toggle Switches

Product key	Toggle	Bushing	Poles	Terminations	Material	Part Number			
MTA106D04	.410 round	1/4-40 bushing	1	wire lug	RoHS compliant	1571920-3			
MTA106DPC04				pc board		1571920-4			
MTA106E04				wire lug		1571920-5			
MTA106EPC04				pc board		1571920-6			
MTA106F04				wire lug		1571920-7			
MTA106FPC04				pc board		1571920-8			
MTA106G04				wire lug		1571920-9			
MTA106GPC04				pc board		1-1571920-0			
MTA106H04				wire lug		1-1571920-1			
MTA106HPC04				pc board		1-1571920-2			
MTA206N04			2	wire lug		1-1571920-5			
MTA206NPC04				pc board		1-1571920-6			
MTA206P04			1	wire lug		1-1571920-7			
MTA206PA04				pc board		1-1571920-8			
MTA206PAPC04			2	pc board		1-1571920-9			
MTA206PPC04				pc board		2-1571920-0			
MTA206R04			1	wire lug		2-1571920-1			
MTA206RPC04				pc board		2-1571920-2			
MTA206S04			2	wire lug		2-1571920-3			
MTA206SA04				pc board		2-1571920-4			
MTA206SAPC04	1	pc board	2-1571920-5						
MTA206SPC04		wire lug	2-1571920-6						
MTA206T04	2	wire lug	2-1571920-7						
MTA206TA04		pc board	2-1571920-8						
MTA206TPC04	1	pc board	2-1571920-9						
MTA306D04		3	wire lug	3-1571920-0					
MTA306DPC04	pc board		3-1571920-1						
MTA306E04	2	wire lug	3-1571920-2						
MTA306EPC04		pc board	3-1571920-3						
MTA306F04	1	wire lug	3-1571920-4						
MTA306FFPC04		pc board	3-1571920-5						
MTA306H04	4	wire lug	3-1571920-6						
MTA306HPC04		pc board	3-1571920-7						
MTA406N04	4	wire lug	3-1571920-8						
MTA406NPC04		pc board	3-1571920-9						
MTA406P04	2	wire lug	4-1571920-0						
MTA406PA04		pc board	4-1571920-1						
MTA406PAPC04	4	pc board	4-1571920-2						
MTA406PPC04		pc board	4-1571920-3						
MTA8106DGVRA04	.600 round, w plastic tip	1/4-40 bushing	1	vertical r.a.		1571922-3			
MTA8106DRA04				right angle		1571922-4			
MTA8106DVRA04				vertical r.a.		1571922-5			
MTA8106EGRA04				right angle		1571922-6			
MTA8106EGVRA04				vertical r.a.		1571922-7			
MTA8106ERA04				right angle		1571922-8			
MTA8106EVRA04				vertical r.a.		1571922-9			
MTA8106FRA04				right angle		1-1571922-0			
MTA8106FVRA04				vertical r.a.		1-1571922-1			
MTA8206NRA04				2		right angle	1-1571922-4		
MTA8206NVRA04			vertical r.a.			1-1571922-5			
MTA8206PGVRA04			1	right angle		1-1571922-6			
MTA8206PRA04				vertical r.a.		1-1571922-7			
MTA8206PVRA04			1	vertical r.a.		1-1571922-8			
MTA8206RRA04				right angle		1-1571922-9			
MTB106D04			.600 round, w plastic tip	1/4-40 bushing		1	wire lug		1571923-3
MTB106E04									1571923-4
MTB106F04									1571923-5
MTB106G04									1571923-6
MTB206N04							2		
MTB206P04		1-1571923-0							
MTB206T04	3				1-1571923-1				
MTB306D04					1-1571923-2				
MTB406N04	4				1-1571923-3				

Preferred parts in bold print

MT Green Series (Continued)

Product key	Toggle	Bushing	Poles	Terminations	Material	Part Number
MTE106D04	.410 round	1/4-40, O-ring seal	1	wire lug		1571924-3
MTE106E04						1571924-4
MTE106F04						1571924-5
MTE106G04						1571924-6
MTE106H04						1571924-7
MTE206N04			2			1-1571924-0
MTE206P04						1-1571924-1
MTE206PA04			1			1-1571924-2
MTE206R04			2			1-1571924-3
MTE206S04						1-1571924-4
MTE206T04						1-1571924-5
MTE306D04			3			1-1571924-6
MTE306E04						1-1571924-7
MTE406N04			4			1-1571924-8
MTE406P04						1-1571924-9
MTF106D04	.485 flat	1/4-40 bushing	1			1571925-3
MTF106E04						1571925-4
MTF106F04						1571925-5
MTF106G04						1571925-6
MTF106H04						1571925-7
MTF126D04						1-1571925-0
MTF126E04						1-1571925-1
MTF126F04						1-1571925-2
MTF126G04						1-1571925-3
MTF206N04			2			1-1571925-6
MTF206P04						1-1571925-7
MTF206PA04			1			1-1571925-8
MTF206R04			2			1-1571925-9
MTF206S04						2-1571925-0
MTF206SA04			1			2-1571925-1
MTF206T04			2			2-1571925-2
MTF226N04						2-1571925-5
MTF226P04						2-1571925-6
MTF226PA04			1			2-1571925-7
MTF226R04			2			2-1571925-8
MTF226S04						2-1571925-9
MTF226SA04			1			3-1571925-0
MTF306D04			3			3-1571925-1
MTF326D04						3-1571925-2
MTF406N04			4			3-1571925-3
MTF426N04						3-1571925-4
MTG106D04	.452 large diam. round	15/32 bushing	1			1571926-3
MTG106E04						1571926-4
MTG106F04						1571926-5
MTG106G04						1571926-6
MTG106H04						1571926-7
MTG126D04	.685 large diam. round	15/32 bushing				1-1571926-0
MTG126E04						1-1571926-1
MTG126G04						1-1571926-2
MTG206N04	.452 large diam. round	15/32 bushing	2			1-1571926-5
MTG206NPC04				pc board		1-1571926-6
MTG206P04				wire lug		1-1571926-7
MTG206PA04			1			1-1571926-8
MTG206R04			2			1-1571926-9
MTG206S04						2-1571926-0
MTG206T04						2-1571926-1
MTG226N04	.685 large diam. round	15/32 bushing				2-1571926-4
MTG226P04						2-1571926-5
MTG226PA04			1			2-1571926-6
MTG306D04	.452 large diam. round	15/32 bushing	3			2-1571926-7
MTG306E04						2-1571926-8
MTG326D04	.685 large diam. round	15/32 bushing				2-1571926-9
MTG406N04	.452 large diam. round	15/32 bushing	4			3-1571926-0
MTG406P04						3-1571926-1
MTG426N04	.685 large diam. round	15/32 bushing				3-1571926-2

Preferred parts in bold print

MT Green Series (Continued)

Product key	Toggle	Bushing	Poles	Terminations	Material	Part Number
MTL106D04	locking	1/4-40 bushing	1	wire lug		1571927-2
MTL106E04						1571927-3
MTL206N04			2			1571927-5
MTL206NPC04				pc board		1571927-6
MTL206P04				wire lug		1571927-7
MTL206PA04			1			1571927-8
MTL206S04			2			1571927-9
MTL306D04			3			1-1571927-0
MTL306E04						1-1571927-1
MTL406N04			4			1-1571927-2
MTL406PA04			2			1-1571927-3
MTM106DPC04	.270 round	1/4-40 bushing	1	pc board		1571921-2
MTM106EPC04						1571921-3
MTM106FPC04						1571921-4
MTM206NPC04			2			1571921-6
MTM206PAPC04			1			1571921-7
MTM206PPC04			2			1571921-8
MTM206SPC04						1571921-9
MTM306DPC04			3			1-1571921-0
MTM406NPC04			4			1-1571921-1
MTM8106DGRA04			1	right angle		2-1571922-2
MTM8106DRA04						2-1571922-3
MTM8106DVRA04				vertical r.a.		2-1571922-4
MTM8106ERA04				right angle		2-1571922-5
MTM8106EVRA04				vertical r.a.		2-1571922-6
MTM8106FRA04				right angle		2-1571922-7
MTM8206NRA04			2	right angle		3-1571922-0
MTM8206NVRA04				vertical r.a.		3-1571922-1
MTM8206PRA04				right angle		3-1571922-2
MTM8206PVRA04				vertical r.a.		3-1571922-3
MTM8206RRA04				right angle		3-1571922-4
MTM8206RVRA04				vertical r.a.		3-1571922-5

Toggle Switches

F Series, Power Toggle, Panel Mounting, 6A

Features

- Wide choice of toggles
- Wide range switch functions available
- Terminals are gold-flashed to prevent oxidation and for ease of soldering
- Up to 4 poles



Typical performance characteristics

Number of poles 1 to 4 pole
 Switch functions ON-ON, ON-(ON), ON-OFF-ON, ON-ON-ON,
 ON-OFF-(ON), (ON)-OFF-(ON)
 Contact rating 6 A @250 VAC, 6 A @125 VAC;
 gold contact: 0,4 VA max 20 V AC/DC
 Electrical life 25,000 to 50,000 cycles
 Mechanical life 50,000 to 100,000 cycles
 Contact resistance max 10 mOhm
 Insulation resistance min 1,000 MOhm
 Dielectric strength 1,000 VAC for 1 min
 Actuation force max 19,6 N
 Panel cut-out Ø 6,2 mm
 Standards and specs UL, CSA

Environmental specification

Operating temperature -20 to +70°C
 Storage temperature -20 to +70°C
 Vibration resistance 1,5 mm 10-55 Hz
 Shock resistance 50 g for 11±1 msec
 Terminal strength 24,5 N

Material specifications

Contacts brass silver alloy finished
 Toggle brass chromium plated
 Terminals brass plate
 Case phenol resin
 Cover steel zinc plated
 Seal rubber seal, insert molded rubber
 RoHS compliance compliant

Product key	Typical product key		F	T	D	0	9	04
Type	F Series power toggle switch							
Number of poles	blank	1 & 2 pole	3	3 poles				
			4	4 poles				
Model	toggle							
Switch function & poles	1 & 3 Pole		2 & 4 Pole					
	D	ON-ON	N	ON-ON				
	E	ON-OFF-ON	P	ON-OFF-ON				
	F	ON-(ON)	R	ON-(ON)				
	G	(ON)-OFF-(ON)	S	(ON)-OFF-(ON)				
	H	ON-OFF-(ON)	T	ON-OFF-(ON)				
			PA	ON-ON-ON				
Actuator	0	standard toggle	7	long flat toggle				
	5	locking lever						
Terminal type	leadwire hooking type							
Contact material	blank	silver	G	gold				
Material	RoHS compliant							

F Series, Power Toggle, Panel Mounting, 6A (Continued)

Function



Code 0 standard toggle

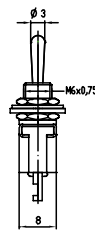
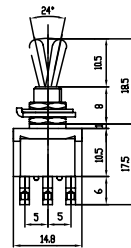
Fct.	Poles	↙	↓	↘	↙	↓	↘
D	1	On	None	On	1-2	-	2-3
E	1	On	Off	On	1-2	Off	2-3
F	1	On	None	(On)	1-2	-	2-3
G	1	(On)	Off	(On)	1-2	Off	2-3
H	1	On	Off	(On)	1-2	Off	2-3
N	2	On	None	On	1-2, 4-5	-	2-3, 5-6
P	2	On	Off	On	1-2, 4-5	Off	2-3, 5-6
R	2	On	None	(On)	1-2, 4-5	-	2-3, 5-6
S	2	(On)	Off	(On)	1-2, 4-5	Off	2-3, 5-6
T	2	On	Off	(On)	1-2, 4-5	Off	2-3, 5-6
PA	2	On	On	On	1-2, 4-5	2-3, 4-5	2-3, 5-6
D	3	On	None	On	1-2, 4-5, 7-8	-	2-3, 5-6, 8-9
N	4	On	None	On	1-2, 4-5, 7-8, 10-11	-	2-3, 5-6, 8-9, 11-12
PA	4	On	On	On	1-2, 4-5, 7-8, 10-11	2-3, 4-5, 7-8, 11-12	2-3, 5-6, 8-9, 11-12

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

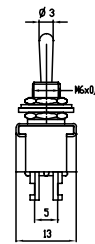
Actuator



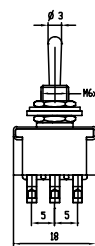
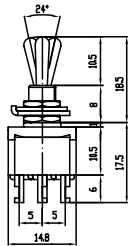
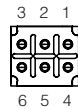
Code 0 standard toggle



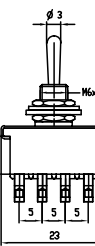
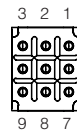
1 pole



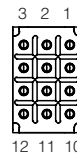
2 pole



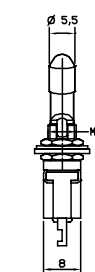
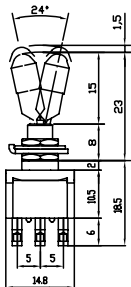
3 pole



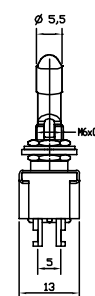
4 pole



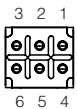
Code 5 locking lever



1 pole

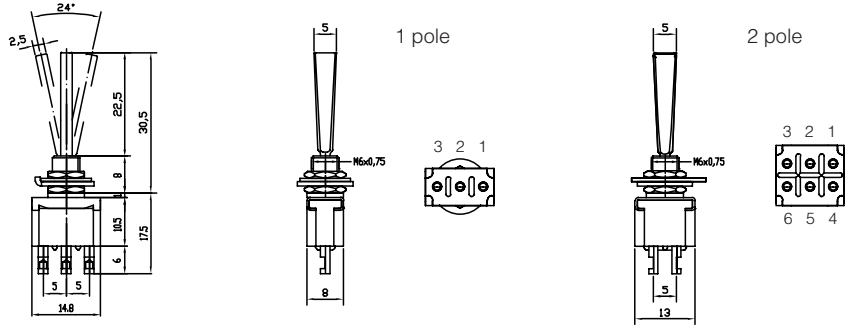


2 pole



F Series, Power Toggle, Panel Mounting, 6A (Continued)

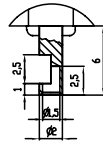
Code 7 long flat toggle



Terminal

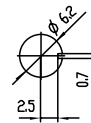


Code 9 leadwire hooking type

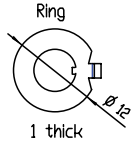


Mounting

Recommended hole layout to prevent rotation



Panel Cutout using Ring



Product key	Poles	Switch func.	Actuator	Terminal	Contacts	Material	Part Number
F3TD0904	3 poles	ON-ON	standard	leadwire	silver	RoHS	2-6437630-8
F4TN0904	4 poles			hooking		compliant	3-6437630-5
F4TPA0904		ON-ON-ON		type			3-6437630-6
FTD0904	1 pole	ON-ON	standard				2-6437630-0
FTD09G04					gold		3-6437630-4
FTD5904			locking lever		silver		1-6437630-5
FTD59G04					gold		4-6437630-0
FTD7904			flat toggle		silver		5-6437630-3
FTD79G04					gold		5-6437630-4
FTE0904		ON-OFF-ON	standard		silver		6-6437630-2
FTE09G04					gold		5-6437630-1
FTE79G04			flat toggle				5-6437630-8
FTF0904		ON-(ON)	standard		silver		5-6437630-7
FTF09G04					gold		6-6437630-3
FTG0904		(ON)-OFF-(ON)			silver		5-6437630-5
FTG09G04					gold		3-6437630-8
FTH0904		ON-OFF-(ON)			silver		4-6437630-8
FTH09G04					gold		6-6437630-4
FTN0904	2 poles	ON-ON			silver		4-6437630-2
FTN09G04					gold		6-6437630-8
FTN5904			locking lever		silver		3-6437630-9
FTN59G04					gold		6-6437630-1
FTN7904			flat toggle		silver		5-6437630-2
FTN79G04					gold		5-6437630-9
FTP0904		ON-OFF-ON	standard		silver		4-6437630-6
FTPA0904							4-6437630-5
FTR0904		ON-(ON)					4-6437630-4
FTS0904		(ON)-OFF-(ON)					4-6437630-3
FTT0904		ON-OFF-(ON)					4-6437630-1

Preferred parts in bold print

AW Series, Power Toggle, Panel Mounting, Waterproof

Features

- IP67 panel mounting seal
- Sleeve and Frame are sealed.
- Fixed contact molded-inserting construction
- Wide range switch functions available



Typical performance characteristics

Number of poles 1,2 and 4 pole
 Switch functions ON-OFF, ON-ON, ON-(ON),
 ON-OFF-ON, ON-OFF-(ON), (ON)-OFF-(ON)
 Contact rating 20 A @250 VAC, 20 A @125 VAC, 20 A @30 VDC
 Electrical life 20,000 cycles
 Mechanical life 40,000 cycles
 Contact resistance max 10 mOhm
 Insulation resistance min 1,000 MOhm
 Dielectric strength 1,500 VAC for 1 min
 Actuation force max 29,4 N
 Panel cut-out D-cut, 12,5 mm
 Standards and specs UL, CSA

Environmental specification

Operating temperature -20 to +70°C
 Storage temperature -20 to +70°C
 Vibration resistance 1,5 mm 10-55 Hz
 Shock resistance 50 g for 11±1 msec
 Terminal strength 24,5 N

Material specifications

Contacts brass silver alloy finished
 Toggle brass chromium plated
 Case brass plate
 Terminals phenol resin
 Cover steel zinc plated
 Seal rubber seal, insert molded rubber
 RoHS compliance compliant

Toggle Switches

Product key	Typical product key							A	W	T	T	1	5	04																				
Type	A A Series power toggle switch, 1 & 2 pole																																	
Sealing	W water proof																																	
Actuator style	T toggle																																	
Switch function & poles	<table border="0"> <tr> <td>1 pole</td> <td></td> <td>2 pole</td> </tr> <tr> <td>A ON-OFF</td> <td></td> <td>N ON-ON</td> </tr> <tr> <td>D ON-ON</td> <td></td> <td>P ON-OFF-ON</td> </tr> <tr> <td>E ON-OFF-ON</td> <td></td> <td>R ON-(ON)</td> </tr> <tr> <td>F ON-(ON)</td> <td></td> <td>S (ON)-OFF(ON)</td> </tr> <tr> <td>G (ON)-OFF(ON)</td> <td></td> <td>T ON-OFF-(ON)</td> </tr> <tr> <td>H ON-OFF-(ON)</td> <td></td> <td></td> </tr> </table>							1 pole		2 pole	A ON-OFF		N ON-ON	D ON-ON		P ON-OFF-ON	E ON-OFF-ON		R ON-(ON)	F ON-(ON)		S (ON)-OFF(ON)	G (ON)-OFF(ON)		T ON-OFF-(ON)	H ON-OFF-(ON)								
1 pole		2 pole																																
A ON-OFF		N ON-ON																																
D ON-ON		P ON-OFF-ON																																
E ON-OFF-ON		R ON-(ON)																																
F ON-(ON)		S (ON)-OFF(ON)																																
G (ON)-OFF(ON)		T ON-OFF-(ON)																																
H ON-OFF-(ON)																																		
Power rating	1 20 A @ 125/250 VAC																																	
Terminal type	5 .250 quick connect terminal																																	
Material	04 RoHS compliant																																	

AW Series, Power Toggle, Panel Mounting, Waterproof (Continued)

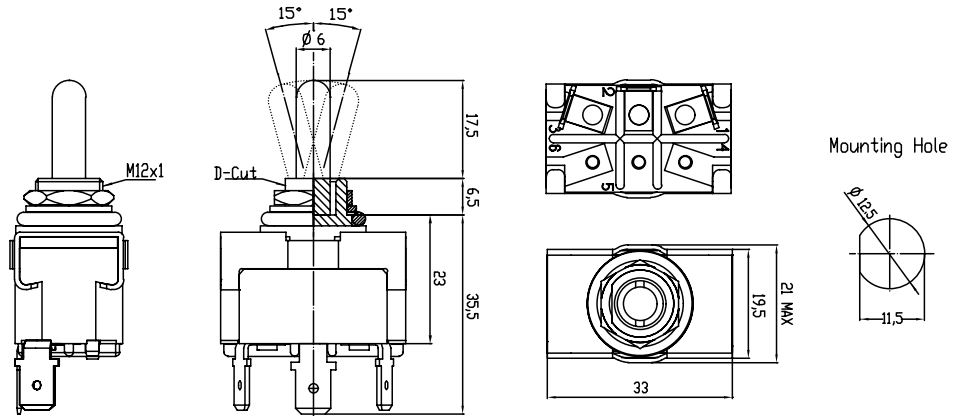
Product key	Typical product key								A	4	T	K	1	5	W	04	
Type									A	A Series power toggle switch, 4 pole							
Poles									4	4 pole							
Actuator style									T	toggle							
Switch function									K	ON-OFF		R	ON-(ON)				
									N	ON-ON		S	(ON)-OFF(ON)				
									P	ON-OFF-ON							
Power rating									1	20 A @ 125/250 VAC							
Terminal type									5	.250 quick connect terminal							
Sealing									W	water proof							
Material									04	RoHS compliant							

Poles

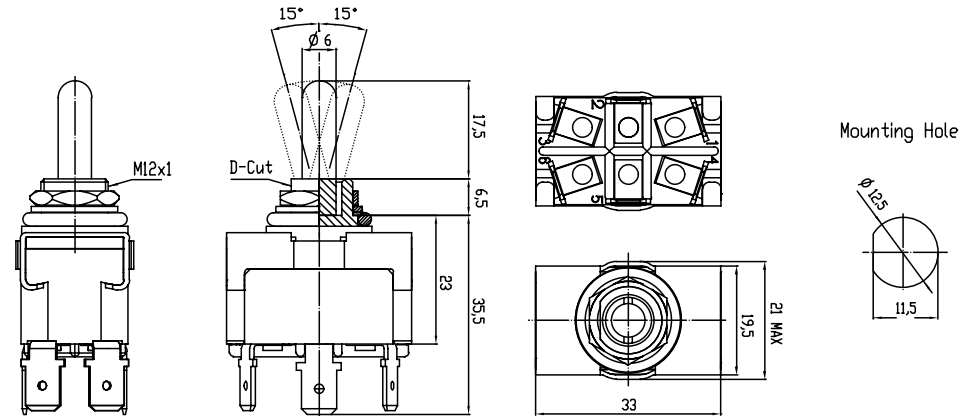
1 pole



AWTA1504

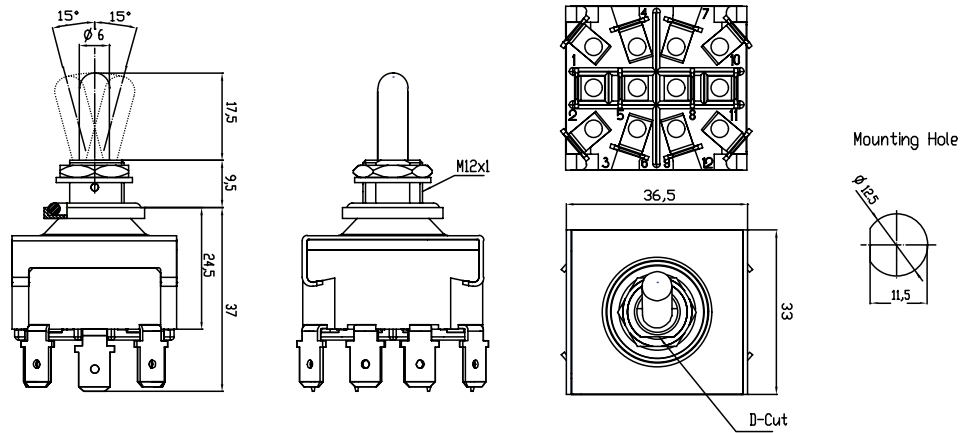


2 pole



AW Series, Power Toggle, Panel Mounting, Waterproof (Continued)

4 pole



Function

Fct.	Poles	↙	↓	↘	↙	↓	↘
A	1	On	None	Off	1-2	-	Off
D	1	On	None	On	1-2	-	2-3
E	1	On	Off	On	1-2	Off	2-3
F	1	On	None	(On)	1-2	-	2-3
G	1	(On)	Off	(On)	1-2	Off	2-3
H	1	On	Off	(On)	1-2	Off	2-3
N	2	On	None	On	1-2, 4-5	-	2-3, 5-6
P	2	On	Off	On	1-2, 4-5	Off	2-3, 5-6
R	2	On	None	(On)	1-2, 4-5	-	2-3, 5-6
S	2	(On)	Off	(On)	1-2, 4-5	Off	2-3, 5-6
T	2	On	Off	(On)	1-2, 4-5	Off	2-3, 5-6
K	4	On	None	Off	1-2, 4-5, 7-8, 10-11	-	Off
N	4	On	None	On	1-2, 4-5, 7-8, 10-11	-	2-3, 5-6, 8-9, 11-12
P	4	On	Off	On	1-2, 4-5, 7-8, 10-11	Off	2-3, 5-6, 8-9, 11-12
R	4	On	None	(On)	1-2, 4-5, 7-8, 10-11	-	2-3, 5-6, 8-9, 11-12
S	4	(On)	Off	(On)	1-2, 4-5, 7-8, 10-11	Off	2-3, 5-6, 8-9, 11-12

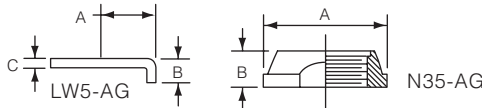
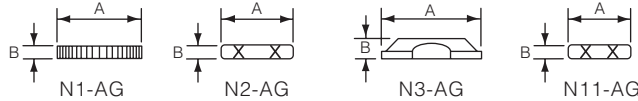
Off indicates a mechanical position with no electrical connection
 (On) indicates momentary connection
 None indicates no mechanical position

Product key	Sealing	Poles	Switch func.	Terminal	Rating	Part Number	
A4TK15W04	water proof	4 poles	ON-OFF	.250	20 A @ 125/250 VAC	8-6437630-0	
A4TN15W04			ON-ON	quick connect terminal		8-6437630-1	
A4TP15W04	ON-OFF-ON			8-6437630-2			
A4TR15W04	ON-(ON)			8-6437630-3			
A4TS15W04			(ON)-OFF-(ON)			8-6437630-4	
AWTA1504		1 pole	ON-OFF			7-6437630-3	
AWTD1504			ON-ON			7-6437630-0	
AWTE1504			ON-OFF-ON			7-6437630-1	
AWTF1504			ON-(ON)			7-6437630-4	
AWTG1504			(ON)-OFF-(ON)			7-6437630-5	
AWTH1504			ON-OFF-(ON)			7-6437630-6	
AWTN1504			2 poles	ON-ON			7-6437630-2
AWTP1504				ON-OFF-ON			3-6437592-9
AWTR1504				ON-(ON)			5-6437630-0
AWTS1504				(ON)-OFF-(ON)			1-6437630-1
AWTT1504		ON-OFF-(ON)				1-6437630-0	

Preferred parts in bold print

Hardware and Accessories

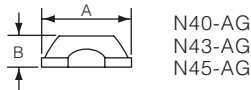
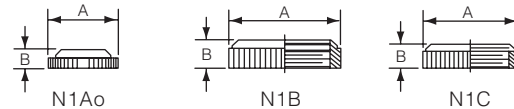
Standard and decorative mounting hardware



Fits all miniature toggle and pushbutton switches 1/4-40 and 15/32-32 bushings. N1 and N3 style nuts are recommended as styling options. Finger tighten until nut rests on mounting surface. Finally tighten with the back nut.

Product key	Description	Diameter/Thread	Finish	Dim A	Dim B	Material	Part Number
N1-AG	knurled nut	1/4-40	bright nickel	8.89 (.350)	1.52 (.060)	RoHS	1437628-7
10264-00-120	hex nut			7.87 (.310)	1.52 (.060)	compliant	1437561-9
N304	dress nut			11.7 (.460)	2.29 (.090)		1825621-1
N3504		15/32-32		16.0 (.630)	4.32 (.170)		1825621-2
11106-AG	hex nut	1/4-48		7.11 (.280)	1.27 (.050)		1-1437561-2
11052	int.lock washer	.27		10.2 (.400)	0.61 (.024)		1437579-1
11098	lck washer #10	.19	zinc	7.62 (.300)	0.76 (.030)		1-1437561-1

"Perfect Fit" decorative mounting hardware



Use blind threaded nuts for ultimate appearance. Finger tighten until nut rests on mounting surface. Finally tighten with the back nut.

Product key	Description	Diameter/Thread	Finish	Dim A	Dim B	Material	Part Number
N1A04	knurled nut	1/4-40	bright nickle	7.87 (.310)	2.03 (.080)	RoHS	1825622-1
N1B04		15/32-32		14.2 (.560)	3.56 (.140)	compliant	1825622-2
N4004	dress nut	1/4-40	matte nicke	9.52 (.375)	3.10 (.122)		1825623-1
N4304			bright nicke	3.10 (.122)	9.52 (.375)		1825623-2
N4504		15/32-32		4.32 (.170)	16.0 (.630)		1825623-3

Toggle switch, legend plate



SPA32

Constructed of .025 gauge brushed aluminum with a matte black enamel.

Easily readable and aesthetically attractive.

Product key	Description	Diameter/Thread	Finish	Dim A	Dim B	Material	Part Number
SPA32	On-Off	1/4"	clear lacquer	9.52 (.375)	22.4 (.880)	RoHS	2-1437628-4
SPA42		15/32"		17.3 (.680)	28.6 (1.12)	compliant	2-1437628-6

Boot Seals

Features

- One piece design, nut over molded "bonded" to silicone boot element and 'O' ring
- Silicone rubber eliminates cure dates
- Protects against moisture, oil, dirt, dust, most solvents and some acids
- Multiple colors available



Environmental specification

Operating temperature -65°C to 265°C

Material specifications

Boot material silicone rubber
 Threaded nut material, and finish..... brass nut, black oxide finish

Product key		Typical product key		BT	1532	2	04
Type							
B	Full boot seals						
BT	Half boot seals *)						
	*)Half boot recommended for maintained switch's as full boot may have tendency to pull toggle back						
Nut thread							
1048	10-48 UNS 2-B						
1440	1/4-40 UNS 2-B						
1532	15/32-32 UNS 2-B						
Color							
0	black	2	red	8	gray		
Material							
04	RoHS compliant						

Toggle Switches

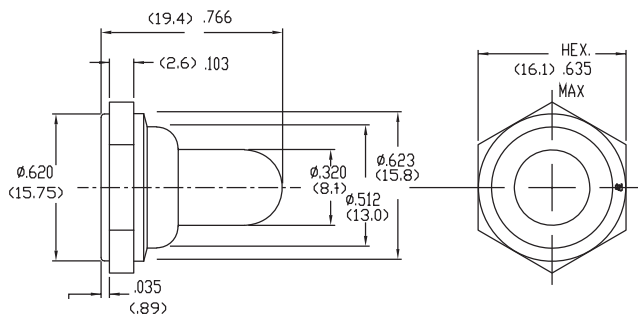
Full boots



1532 Series



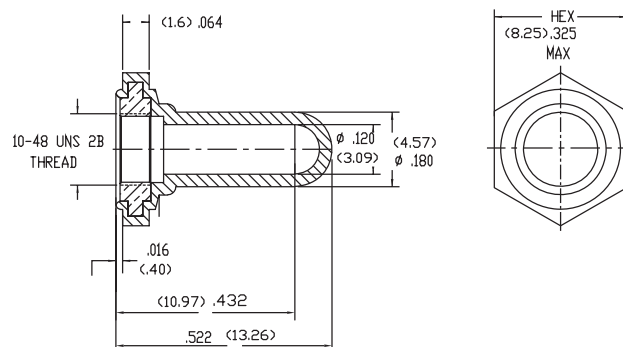
B1532004



1048 Series



B1048004

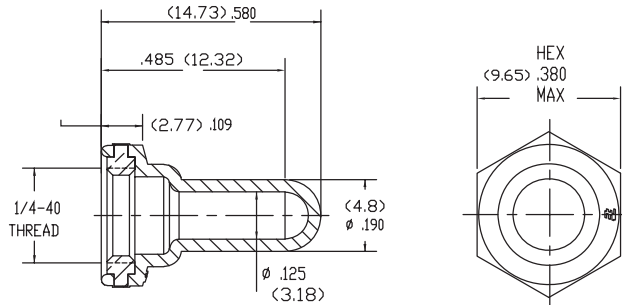


Boot Seals (Continued)

1440 Series



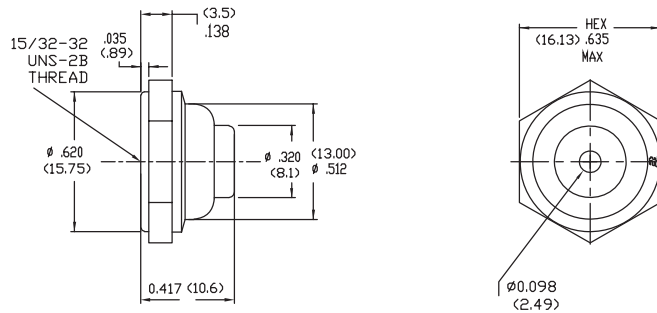
B1440004



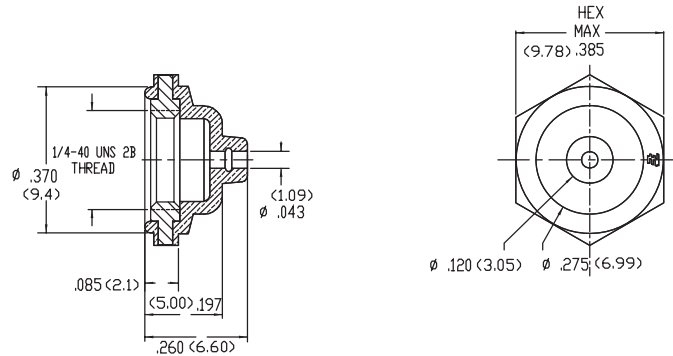
Half boots



1532 Series



1440 Series



Product key	Used on switch type	Nut thread	Color	Material	Part Number
Full boot					
B1532004	MTG	15/32-32 UNS 2-B	black	RoHS compliant	1825602-1
B1532204			red		1825602-2
B1532804			gray		1825602-3
B1048004	TT Series	10-48 UNS 2-B	black		1825609-1
B1048204			red		1825609-2
B1048804			gray		1825609-3
B1440004	TT,MTA,Gemini	1/4-40 UNS 2-B	black		1825612-1
B1440204			red		1825612-2
B1440804			gray		1825612-3
Half boot					
BT1532004	MTG Series	15/32-32 UNS 2-B	black	RoHS compliant	1825600-1
BT1532204			red		1825600-2
BT1532804			gray		1825600-3
BT1440004	TT, MTA, Gemini	1/4-40 UNS 2-B	black		1825619-1

