

The Gemini Series

"A" Series Toggles 5 Amp

Refer to Pages C32-C36 for Additional Options

"A" SERIES DESIGN FEATURES

- Meets CSA Requirements
- Toggle – Machined brass, heavy nickel plated.
- Bushing & Frame – Rigid one-piece die cast, copper flashed, heavy nickel plated.
- Fixed Contact – Welded construction, selective placement of precious metal. (Gold or silver.)
- Movable Contact – "Captured" design eliminates possibility of displacement due to shock. (01 function.)
- Terminal Seal – Epoxy sealing of terminals is standard.
- Termination – Precious metal(or silver)/brass or copper strip with welded contact area.
- Case – DAP for electrical performance and mechanical strength, UL94VO.

MATERIAL SPECIFICATIONS:

Contacts.....Gold/gold flash
Silver/tin lead
Case MaterialThermoset
Terminal Seal.....Epoxy

ENVIRONMENTAL SPECIFICATIONS

Operating Temperature.....-20°C to +85°C (-4°F to +185°F)
Storage Temperature.....-45°C to +100°C (-49°F to +212°F)
Solder Heat ResistanceSee page M6-7

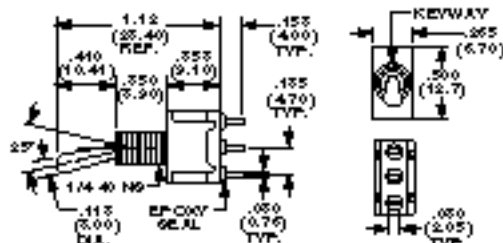
TYPICAL PERFORMANCE CHARACTERISTICS:

Contact RatingGold: 0.4 VA @ 20 VAC/DC
Silver: 2 A @ 250 VAC: 5 A @ 125 VAC
Initial Contact Resistance.....30 Milliohms max.
Contact TimingBreak before make
Insulation Resistance1,000 Megohms @ 500 VDC.
Dielectric Strength1,000 Volts RMS @ sea level
Actuation Force.....Momentary: 950 Grams max.
Plunger/Actuator TravelMaintained: 1750 Grams max. 25°
Life Expectancy30,000 Cycles

SPDT



A101SYZQ

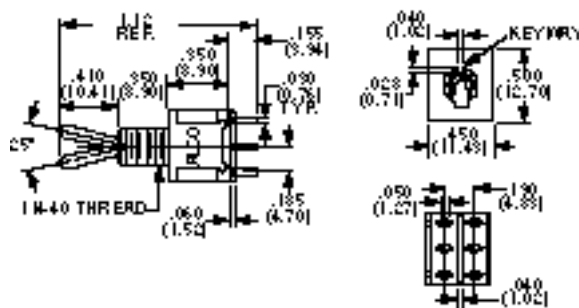


Model	Type	Act. Code	P.M8			
Silver Contacts						
A101SYZQ	SPDT	1	On	None	On	
A103SYZQ	SPDT	5	On	Off	On	
A105SYZQ	SPDT	5	(On)	Off	(On)	
A107SYZQ	SPDT	5	On	Off	(On)	
A108SYZQ	SPDT	1	On	None	(On)	
Gold Contacts						
A101SYZB	SPDT	1	On	None	On	
A103SYZB	SPDT	5	On	Off	On	
A105SYZB	SPDT	5	(On)	Off	(On)	
A107SYZB	SPDT	5	On	Off	(On)	

DPDT



A201SYZQ

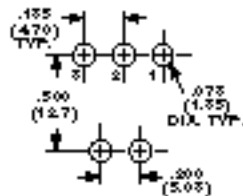
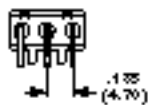
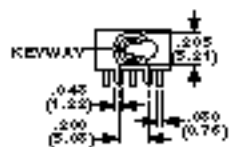


Model	Type	Act. Code	P.M8			
Silver Contacts						
A201SYZQ	DPDT	2	On	None	On	
A203SYZQ	DPDT	6	On	Off	On	
A205SYZQ	DPDT	6	(On)	Off	(On)	
A207SYZQ	DPDT	6	On	Off	(On)	
A208SYZQ	DPDT	2	On	None	(On)	
A211SYZQ	DP3T	11	On	On	On	
A213SYZQ	DP3T	11	On	On	(On)	
A215SYZQ	DP3T	11	(On)	On	(On)	

"A" Series Toggles

The Gemini Series

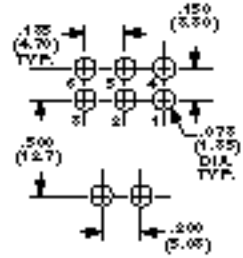
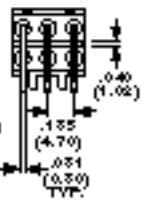
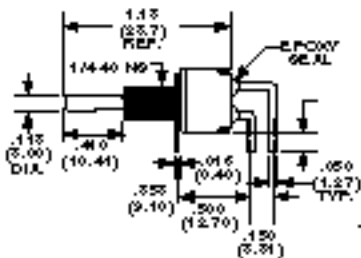
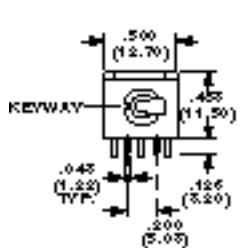
SEE PAGE C24 FOR PRODUCT SPECIFICATIONS



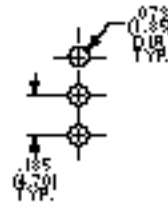
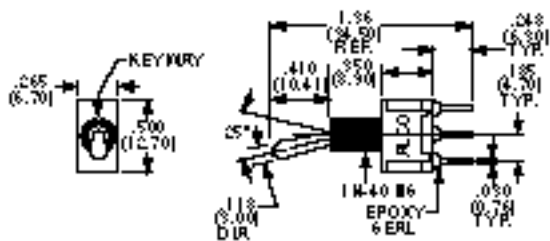
SPDT/DPDT



A101SYAB
Horizontal Actuation



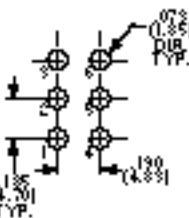
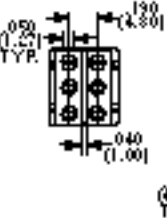
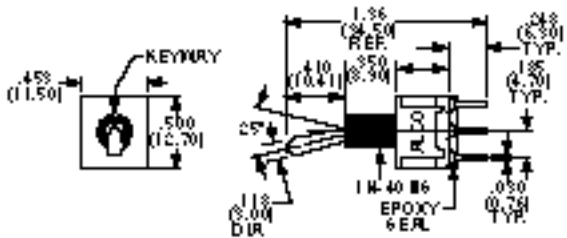
Gold Contacts			  			
Model	Type	Act. Code	P.M8			
A101SYAB	SPDT	1	On	None	On	
A103SYAB	SPDT	5	On	Off	On	
A201SYAB	DPDT	2	On	None	On	
A208SYAB	DPDT	2	On	None	(On)	



SPDT/DPDT



A101SYCB



A201SYCB

Gold Contacts		Act . Code	P.M8			
Model	Type					
A101SYCB	SPDT	1	On	None	On	
A103SYCB	SPDT	5	On	Off	On	
A108SYCB	SPDT	1	On	None	(On)	
A201SYCB	DPDT	2	On	None	On	
A203SYCB	DPDT	6	On	Off	On	
A208SYCB	DPDT	2	On	None	(On)	

Need more technical information?

Contact your local ABE office--(800) 453-1692--or AboveBoardElectronics.com.

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1918 Junction Avenue
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The Gemini Series

"A" Series Toggles "Wire Wrap/Wire Lug"
Refer to Pages C32-C36 for Additional Options

SEE PAGE C24 FOR PRODUCT SPECIFICATIONS

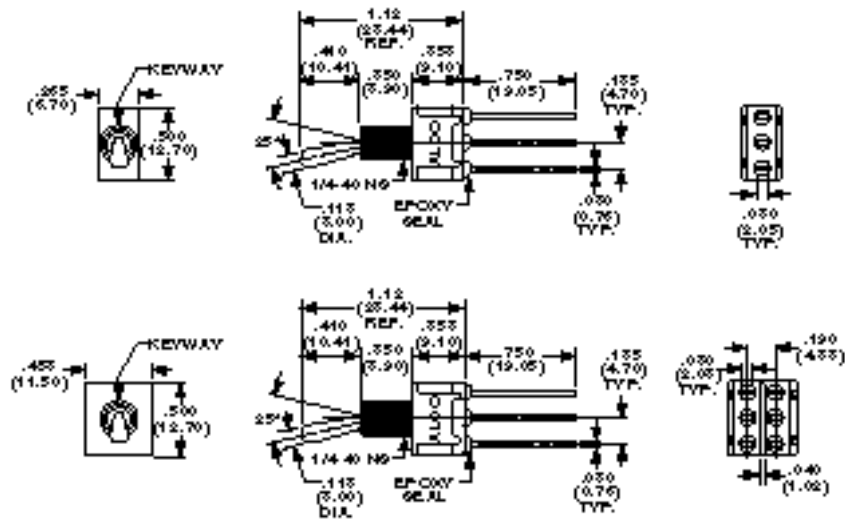
SPDT/DPDT



A101SYWQ



A201SYWQ



Silver Contacts Model	Type	Act . Code P. M8	On	None	On
A101SYWQ	SPDT	1	On	None	On
A103SYWQ	SPDT	5	On	Off	On
A201SYWQ	DPDT	2	On	None	On
A203SYWQ	DPDT	6	On	Off	On

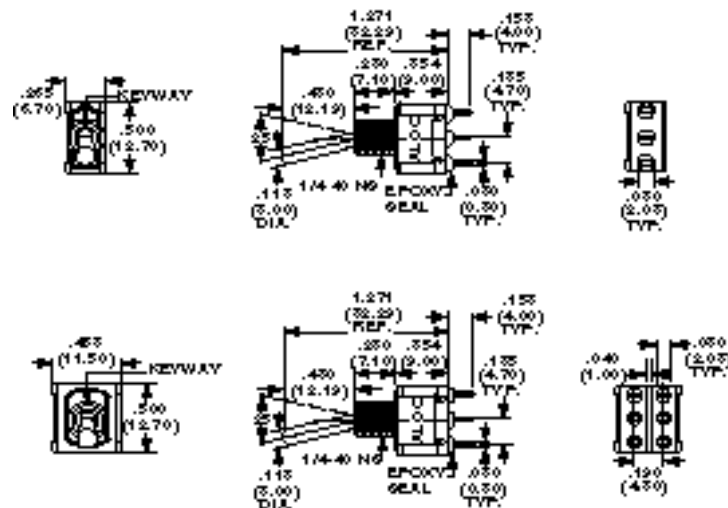
SPDT/DPDT



A101SDZQ



A201SDZQ



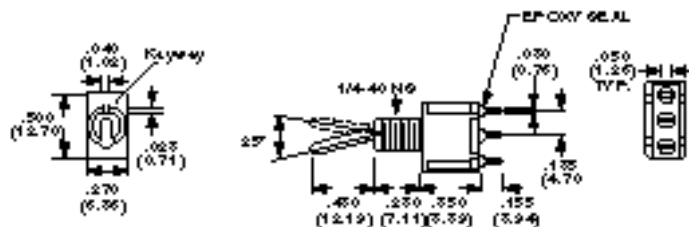
Silver Contacts Model	Type	Act . Code P.M8	On	None	On
A101SDZQ	SPDT	1	On	None	On
A103SDZQ	SPDT	5	On	Off	On
A201SDZQ	DPDT	2	On	None	On
A203SDZQ	DPDT	6	On	Off	On

"A" Series Toggles
Refer to Pages C32-C36 for Additional Options

The Gemini Series

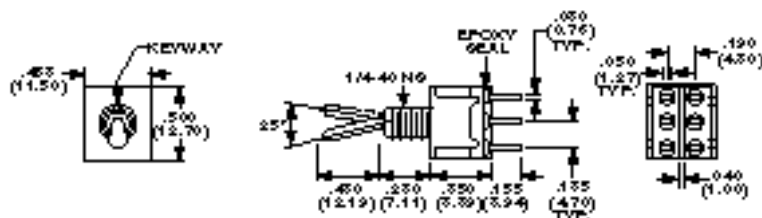
SEE PAGE C24 FOR PRODUCT SPECIFICATIONS

SPDT



A101SDCQ

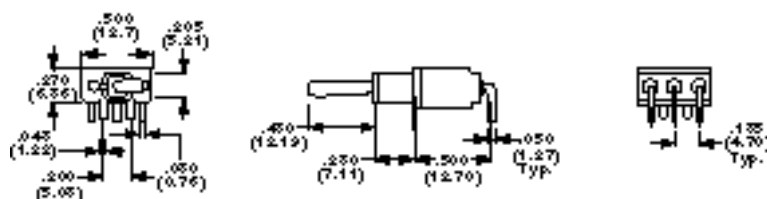
DPDT



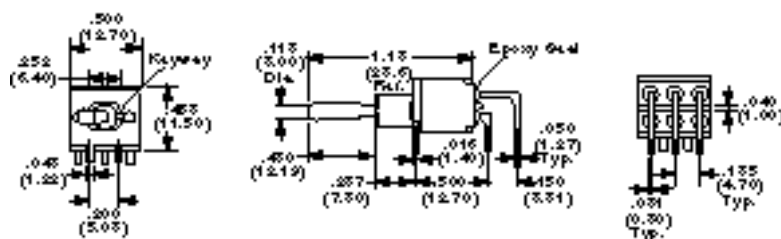
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Silver Contacts Model	Type	Act. Code	P. M8	
A101SDCQ	SPDT	1	On None On	
A103SDCQ	SPDT	5	On Off On	
A201SDCQ	DPDT	2	On None On	
A203SDCQ	DPDT	6	On Off On	
A208SDCQ	DPDT	2	On None (On)	

SPDT/DPDT



A101SD9AQ
Horizontal Actuation



A201SD9AQ
Horizontal Actuation

Silver Contacts Model	Gold Contacts Model	Type	Act. Code	P. M8	
A101SD9AQ	A101SD9AB	SPDT	1	On None On	
A103SD9AQ	A103SD9AB	SPDT	5	On Off On	
A108SD9AQ	A108SD9AB	SPDT	1	On None (On)	
A201SD9AQ	A201SD9AB	DPDT	2	On None On	
A208SD9AQ	A208SD9AB	DPDT	2	On None (On)	

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The Gemini Series

"A" Series Toggles 5 Amp "Locking Actuator"

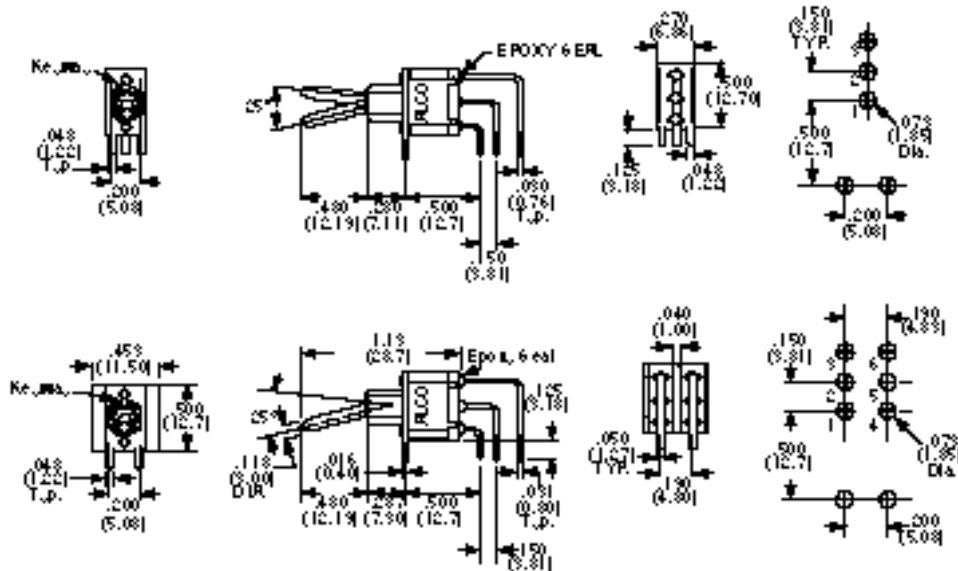
Refer to Pages C32-C36 for Additional Options

SEE PAGE C24 FOR PRODUCT SPECIFICATIONS

SPDT



A101SD9AV2Q
Vertical Actuation



DPDT



A201SD9AV2Q
Vertical Actuation

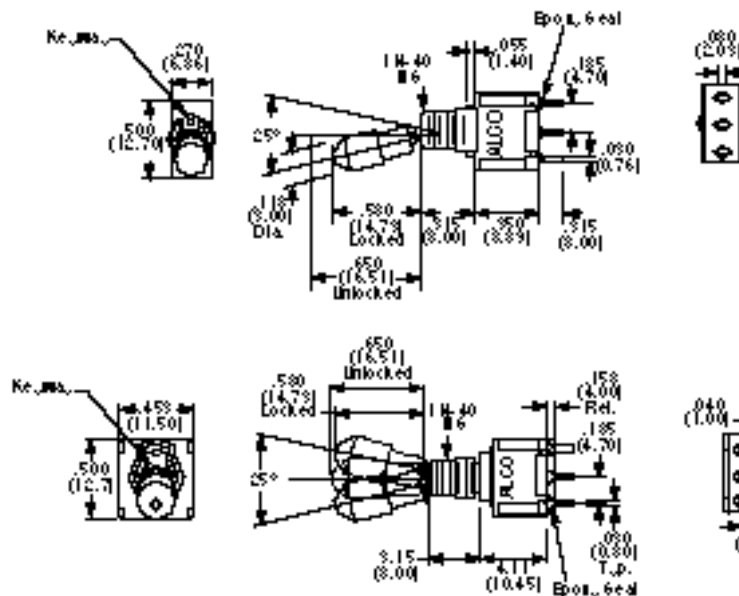
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A101SD9AV2Q	SPDT	1		On	None	On
A103SD9AV2Q	SPDT	5		On	Off	On

Silver Contacts Model	Type	Act. Code	P. M8	On	None	On
A201SD9AV2Q	DPDT	2		On	None	On
A203SD9AV2Q	DPDT	6		On	Off	On
A208SD9AV2Q	DPDT	2		On	None	(On)

SPDT



A101KZQ



DPDT



A201KZQ

Silver Contacts Model	Type	Act. Code	P. M8	On	None	On
A101KZQ	SPDT	1		On	None	On
A103KZQ	SPDT	5		On	Off	On

Gold Contacts Model	Silver Contacts Model	Type	Act. Code	P. M8	On	None	On
A201KZB	A201KZQ	DPDT	2		On	None	On
A203KZB	A203KZQ	DPDT	6		On	Off	On
A205KZB	A205KZQ	DPDT	6		(On)	Off	(On)
A211KZB	A211KZQ	SP3T	11		On	On	On

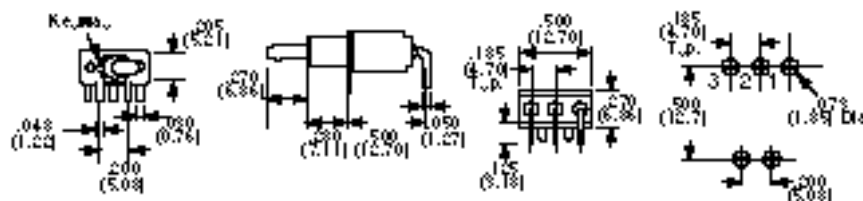
"A" Series Toggles Right Angle

Refer to Pages C32-C36 for Additional Options

The Gemini Series

PRODUCT SPECIFICATIONS

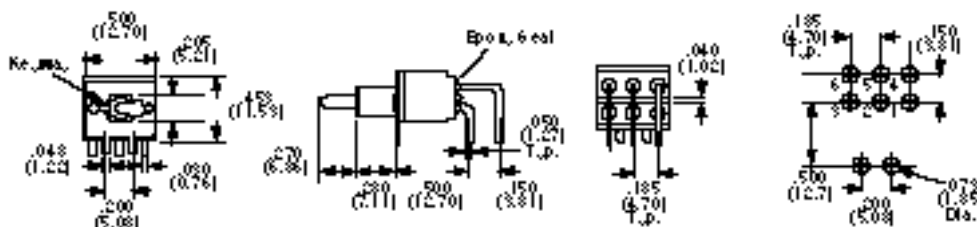
SPDT



A101MD9AQ
Horizontal Actuation

Silver Contacts Model	Gold Contacts Model	Type	Act. Code	P. M8	On	None	On
A101MD9AQ	A101MD9AB	SPDT	1	On	None	On	
A103MD9AQ	A103MD9AB	SPDT	5	On	Off	On	
A108MD9AQ	A108MD9AB	SPDT	1	On	None	(On)	

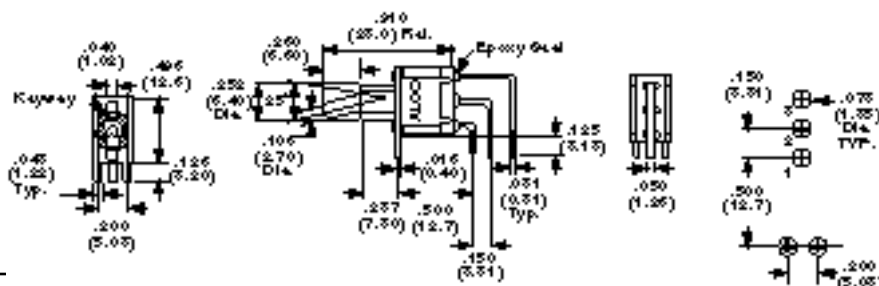
DPDT



A201MD9AQ
Horizontal Actuation

Silver Contacts Model	Gold Contacts Model	Type	Act. Code	P. M8	On	None	On
A201MD9AQ	A201MD9AB	DPDT	2	On	None	On	
	A203MD9AB	DPDT	6	On	Off	On	

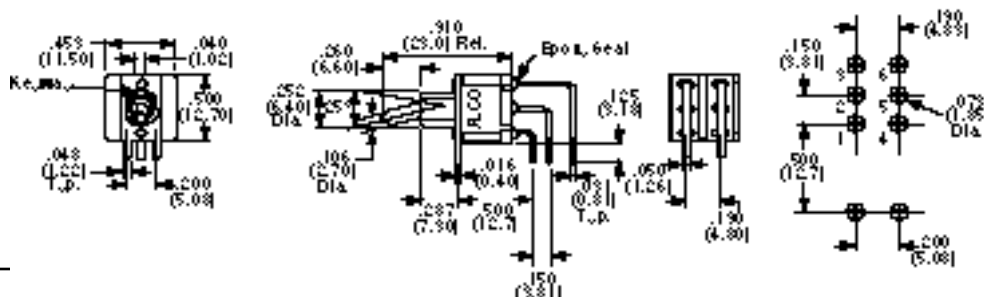
SPDT



A101MD9AV2Q
Vertical Actuation

Silver Contacts Model	Gold Contacts Model	Type	Act. Code	P. M8	On	None	On
A101MD9AV2Q	A101MD9AV2B	SPDT	1	On	None	On	
A103MD9AV2Q	A103MD9AV2B	SPDT	5	On	Off	On	
A108MD9AV2Q		SPDT	1	On	None	(On)	

DPDT



A201MD9AV2AQ
Vertical Actuation

Silver Contacts Model	Model	Type	Act. Code	P. M8	On	None	On
A201MD9AV2Q	A201MD9AV2B	DPDT	2	On	None	On	
A203MD9AV2Q	A203MD9AV2B	DPDT	6	On	Off	On	
A208MD9AV2Q	A208MD9AV2B	DPDT	2	On	None	(On)	

Need more technical information?

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The Gemini Series "A" Series Toggles Flat Actuators/Wire Lug

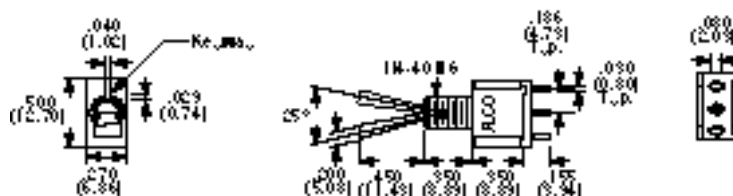
Refer to Pages C32-C36 for Additional Options

SEE PAGE C24 FOR PRODUCT SPECIFICATIONS

SPDT



A101P3YZQ

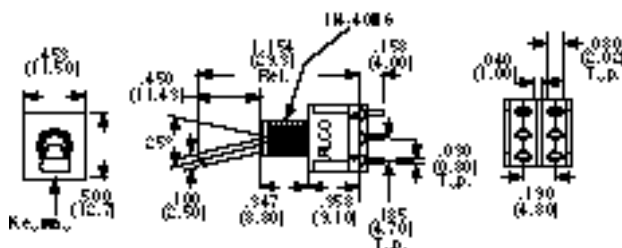


Model	Contacts	Type	Act. Code	P.M8	On	None	Off
A101P3YZQ	SPDT	1	On	None	On		
A103P3YZQ	SPDT	5	On	Off	On		
A105P3YZQ	SPDT	5	(On)	Off	(On)		
A107P3YZQ	SPDT	5	On	Off	(On)		
A108P3YZQ	SPDT	1	On	None	(On)		

DPDT



A201P3YZQ

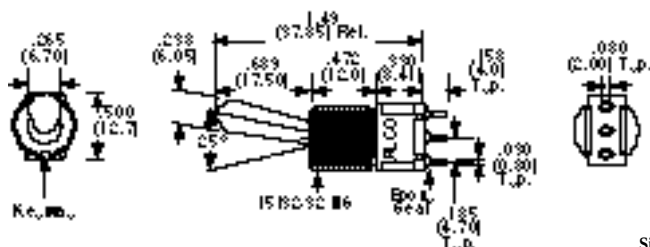


Model	Silver Contacts	Type	Act. Code	P.M8	On	None	Off
A201P3YZQ	DPDT	2	On	None	On		
A203P3YZQ	DPDT	6	On	Off	On		
A205P3YZQ	DPDT	6	(On)	Off	(On)		
A207P3YZQ	DPDT	6	On	Off	(On)		
A208P3YZQ	DPDT	2	On	None	(On)		
A211P3YZQ	SP3T	11	On	On	On		
A215P3YZQ	SP3T	11	(On)	On	(On)		

SPDT



A101TZQ

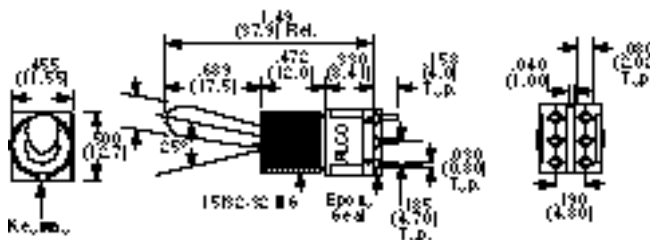


Model	Silver Contacts	Type	Act. Code	P.M8	On	None	Off
A101TZQ	SPDT	1	On	None	On		
A103TZQ	SPDT	5	On	Off	On		

DPDT



A201TZQ



Model	Silver Contacts	Type	Act. Code	P.M8	On	None	Off
A201TZQ	DPDT	2	On	None	On		
A203TZQ	DPDT	6	On	Off	On		
A211TZQ	SP3T	11	On	On	On		

"A" Series Toggles 15/32 Bushing
Refer to Pages C32-C36 for Additional Options

SEE PAGE C24 FOR PRODUCT SPECIFICATIONS

SPDT



A103T1ZQ

Silver Contacts		Type	Act. Code	P. M8			
Model							
A101T1ZQ	SPDT	1	On	None	On		
A103T1ZQ	SPDT	5	On	Off	On		
A105T1ZQ	SPDT	5	(On)	Off	(On)		
A108T1ZQ	SPDT	1	On	None	(On)		

DPDT



A201T1ZQ

Silver Contacts Model	Type	Act. Code	P. M8			
A201T1ZQ	DPDT	2	On	None	On	
A203T1ZQ	DPDT	6	On	Off	On	
A205T1ZQ	DPDT	6	(On)	Off	(On)	
A207T1ZQ	DPDT	6	On	Off	(On)	
A208T1ZQ	DPDT	2	On	None	(On)	
A211T1ZQ	SP3T	11	On	On	On	

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The Gemini Series "A" Series Miniature Toggles

FEATURES

Hardware supplied with threaded bushings: two hex nuts, one internal tooth lockwasher and one locking ring. (See Hardware Section for: dress nuts, plastic caps and environment boot seals.)

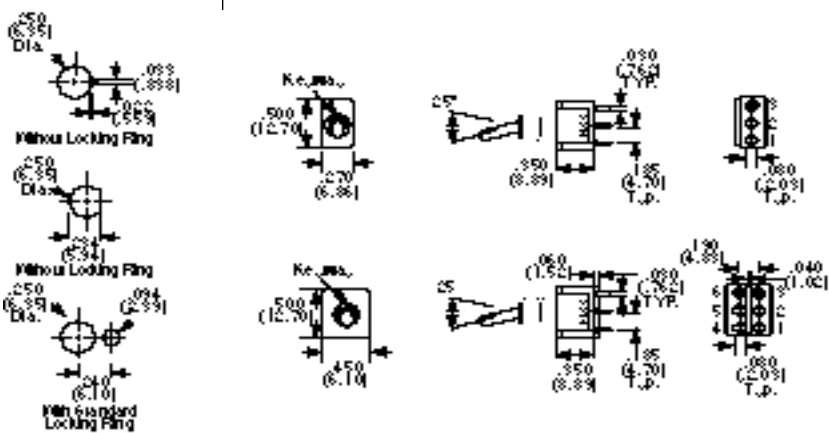
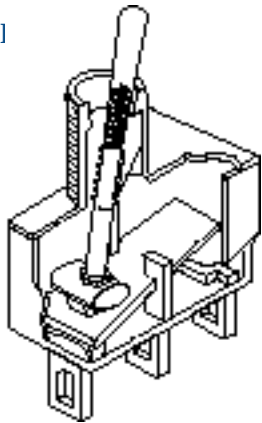
TYPICAL PERFORMANCE CHARACTERISTICS:

Contact RatingSilver: 2 A @ 250 VAC or 5 A @ 125 VAC
Gold: 0.4 VA @ 20 VAC/DC max.
Insulation Resistance1,000 Megohms min. @ 500 VDC.
Dielectric Strength1,000 Volts RMS @ sea level initial
Electrical Life30,000 Cycles

ENVIRONMENTAL SPECIFICATIONS

Operating Temperature..... -20°C to + 85°C (-4°F to + 185°F)
Storage Temperature.....-45°C to + 100°C (-49°F to + 212°F)

DES



PART NUMBERING

Model	Function	Toggle	Bushing	Terminal	Contact	K, K1: Cap Color	Option
A1 Single Pole A2 Double Pole 01 On-On 03 On-Off-On 05 (On)-Off-(On) 07 On-Off-(On) 08 On-(On) 11 On-On-On 13 On-On-(On) 15 (On)-On-(On)	S Bat. Long K Locking K1 Locking L Lever L1 Lever L2 Lever M Bat. Short P3 Flatted (with Y only) P4 Flatted (with Y only) T Large Toggle & Bushing T1 Large Toggle & Bushing T2P Large Flatted Toggle and Bushing	Y 1/4-40 threaded, .35" long, slotted Y9 unthreaded, .35" long CW 1/4-40 threaded, .37" long, actuator & bushing flange environmental seals D 1/4-40 threaded, .28" long, slotted D9 Unthreaded, .28" long H 1/4-40 threaded, flanged, .30" long	Z Wire Lug A Right Angle AV2 Vertical Right Angle C Printed Circuit V30 V40 V90 Vertical Support V60 V70 V80 Bracket W W1 W3 W4 W5 Wire Wrap Z3 Quick Connect	Q Silver B Gold G Gold over Silver	(Nickel Standard) 0 Black 2 Red U.L.(Q or G contact only)	Note: For surface mount termination, use the "TST" series, Page C8 Other Options N Black finish toggle, bushing and hardware. Add "N" to end of part number, but before U.L. option. O Internal O-ring environmental actuator seal. Add letter after toggle option: S,M,L,L1 & L2. P Anti-Push-In/Anti rotate. Add letter after toggle S,M,L,L1 & L2	

See page C33 for SP3T wiring diagram.

See pages M2-M4 for application specific indexing.

"A" Series Miniature Toggles

The Gemini Series

FUNCTIONS

The following functions available in SP or DP.

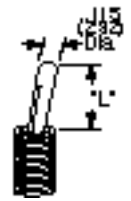
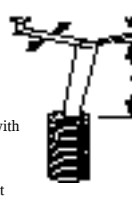
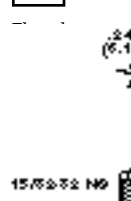
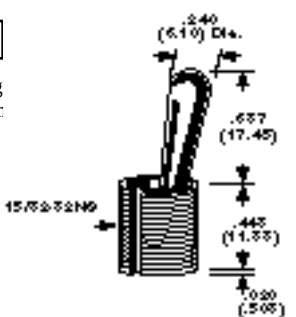
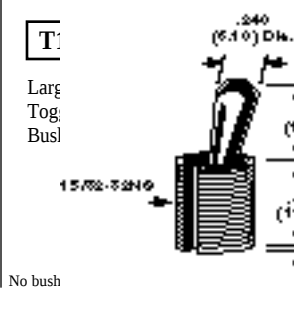
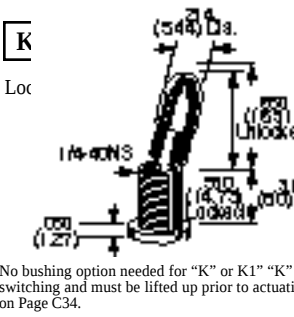
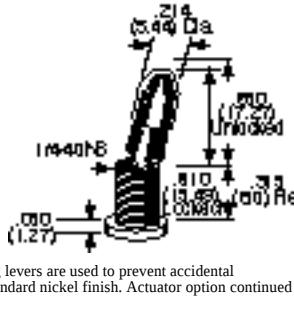
					
01	2 Positions	None indicates no mechanical position	On	None	On
03	3 Positions		On	Off	On
05	3 Positions	Off indicates a mechanical position with no electrical connection.	(On)	Off	(On)
07	3 Positions		(On)	Off	On
08	2 Positions	(On) indicates momentary action.	(On)	None	On
	SPDT, connect terminals:		1—2	—	2—3
	DPDT, connect terminals:		1—2 4—5	— —	2—3 5—6
11	3 Positions		On	On	On
13	3 Positions		(On)	On	On
15	3 Positions		(On)	On	(On)
Functions available in DP only			Connect terminals:		
			1—2 4—5	2—3 4—5	2—3 5—6

* SP3T functions achieved with external jumper installed by customer

WIRING DIAGRAM FOR FUNCTION:



TOGGLES

S Standard		M Short		P3 P4 Flatted Available only with "Y" bushing. Pinned for anti-rotation. Use N-3 dress nut for enhancement.		T2P 
Dimension "L"	Bushing	Dimension "L"	Bushing Type	Actuator	Dimension "A"	Dimension "B"
.410 (10.41)	"Y", "H", "CW"	.200 (5.08)	"Y", "H", "CW"	P3	.450 (11.43)	.200 (5.08)
.480 (12.19)	"D", "D9"	.270 (6.86)	"D", "D9"	P4	.250 (6.35)	.165 (4.19)
T Larg Busl		T Larg Tog. Busl		K Loc		

No bushing option needed for "K" or "K1" "K" locking levers are used to prevent accidental switching and must be lifted up prior to actuation. Standard nickel finish. Actuator option continued on Page C34.

Need more technical information?

Contact your local ABE office--(800) 453-1692--or AboveBoardElectronics.com.

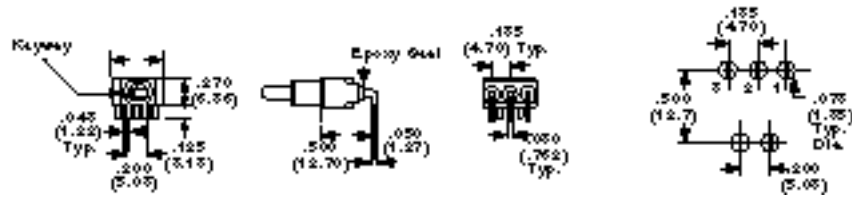
Above Board Electronics
1918 Junction Avenue
San Jose, CA 95131

"A" Series Miniature Toggles The Gemini Series

TERMINALS

A

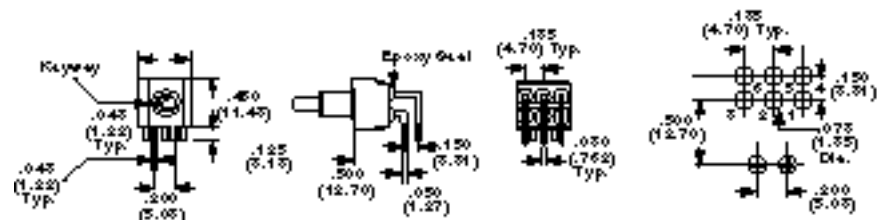
Right Angle
Single Pole



Note: Terminal numbers viewed from top of P.C. boards.

A

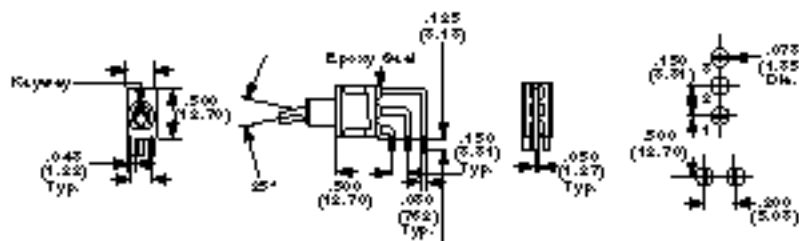
Right Angle
Double Pole



Note: Terminal numbers viewed from top of P.C. boards.

AV2

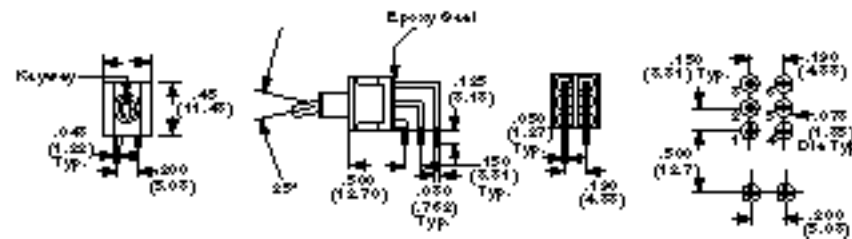
Vertical Right Angle
Single Pole



Note: Terminal numbers viewed from top of P.C. boards.

AV2

Vertical Right Angle
Double Pole



Note: Terminal numbers viewed from top of P.C. boards.

Need more technical information?

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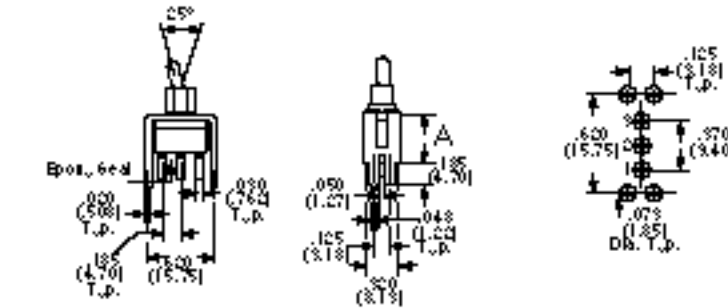
The Gemini Series "A" Series Miniature Toggles "5 Amp"

Terminal Options

TERMINALS NOTE: Terminal numbers viewed from top of P.C. board

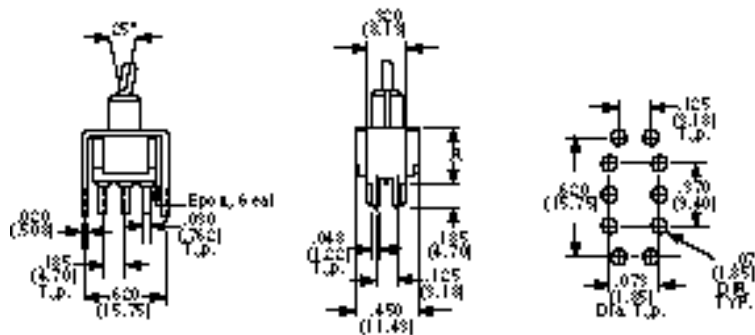
V30 V40 V90

Vertical Support Bracket
Single Pole



Option Code	Dim. "A"
V30	.460 (11.68)
V40	.630 (16.00)
V90	1.150 (29.21)

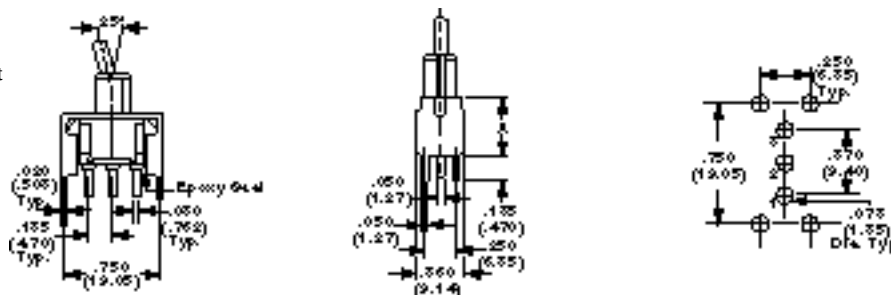
Vertical Support Bracket
Double Pole



Option Code	Dim. "A"
V30	.460 (11.68)
V40	.630 (16.00)
V90	1.150 (29.21)

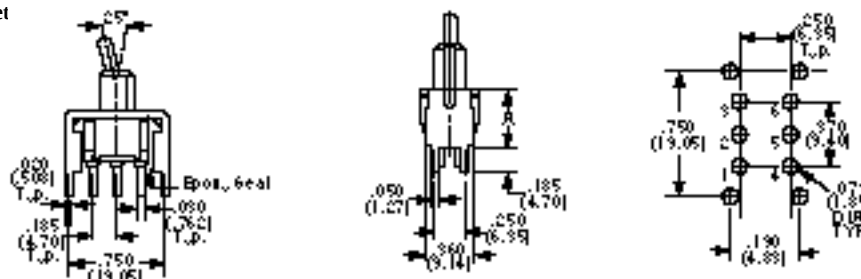
V60 V70 V80

Vertical Support Bracket
Single Pole



Option Code	Dim. "A"
V60	.460 (11.68)
V70	.630 (16.00)
V80	.953 (24.71)

Vertical Support Bracket
Double Pole



Option Code	Dim. "A"
V60	.460 (11.68)
V70	.630 (16.00)
V80	.953 (24.71)

CONTACTS

B CONTACTS: Copper alloy with gold plate, welded button.

TERMINALS: Brass with gold plate.

ELECTRICAL RATING: 0.4 VA @ 20 VAC/DC.

Q CONTACTS: Copper alloy with silver, welded button.

TERMINALS: Brass with tin/lead plate.

ELECTRICAL RATING: 5 A @ 125 VAC, 2 A @ 250 VAC, 5 A @ 28 VDC.

UL/CSA RATING: 5A @ 125 VAC, 3A @ 250 VAC.
(Specify "UL" option code)

G CONTACTS: Copper alloy with gold plate over silver, welded button.

TERMINALS: Brass alloy, with gold plate.

Note: This contact option can be used for low-level or power switching. If level is above 0.4 VA @ 20 VAC/DC, the switch is rendered usable only for power switching due to arc-removal of gold plate.

UL/CSA RATING: 5A @ 125 VAC, 3A @ 250 VAC
(Specify "UL" option code)

ELECTRICAL RATING: 0.4 VA @ 20 VAC/DC or 5 A @ 125 VAC, 2 A @ 250 VAC, 5 A @ 28 VDC.



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1918 Junction Avenue
San Jose, CA 95131

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