

**Product Range**



**Rocker & Paddle Switches**

- **Rocker & Paddle Switches for Panel Mounting:**  
F, TRD and Gemini Series
- **Rocker & Paddle Switches for PCB Mounting:**  
Gemini Series

**Main features:**

- Sealed or unsealed versions
- Various switch functions
- Gold or silver contacts
- LED illumination available (also bi-color)
- Multiple rocker/paddle colors available
- Beveled frames available



**F Series, Power Rocker, Panel Mounting, 6A .....page F2**



**TRD Series, Rocker/Paddle .....page F4**



**Gemini A Series Rocker/Paddle .....page F7**



**Gemini AE Series Rocker/Paddle .....page F17**

**F Series, Rocker/Paddle, Panel Mounting, 6A**

**Features**

- Wide range switch functions available
- Terminals are gold-flashed to prevent oxidation and for ease of soldering



**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

Rocker & Paddle Switches

**Product key**

Typical product key

**F L N 1 9 red 04**

**Type**  
**F** F Series power rocker switch

**Model**  
**L** snap-in lever & rocker

**Switch function & poles**  
**1 pole** **2 pole**  
**D** ON-ON **N** ON-ON

**Actuator**  
**1** long rocker **2** small rocker

**Terminal type**  
**9** leadwire hooking type

**Contact material**  
**blank** silver **G** gold

**Rocker color**  
**red** red **black** black **white** white

**Material**  
**04** RoHS compliant

**F Series, Rocker/Paddle, Panel Mounting, 6A** (Continued)

**Function**



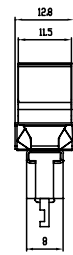
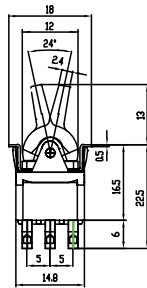
Function	Poles	On	On	On	On
D	1	On	On	1-2	2-3
N	2	On	On	1-2, 4-5	2-3, 5-6

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

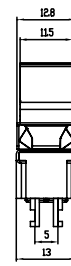
**Actuator**



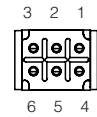
**Code 1 long rocker**



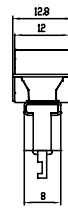
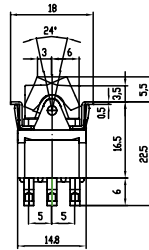
1 pole



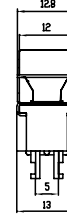
2 pole



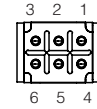
**Code 2 small rocker**



1 pole



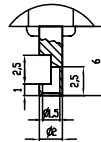
2 pole



**Terminal**

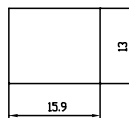


**Leadwire hooking type**



**Mounting**

Panel Cutout thickness 1 to 2.5mm



Product key	Poles	Switch func.	Actuator	Act. Color	Terminal	Contacts	Material	Part Number
FLD19black04	1 pole	On - On	long rocker	black	leadwire hooking type	silver	RoHS compliant	3-6437630-2
FLD29black04			small rocker	black				2-6437630-9
FLN19black04	2 poles		long rocker	black				3-6437630-7
FLN19red04				red				2-6437630-7
FLN19white04				white				2-6437630-6
FLN29black04			small rocker	black				2-6437630-5
FLN29red04				red				4-6437630-7
FLN29white04				white				2-6437630-3

**TRD Series, Rocker/Paddle**

**Features**

- Wire lug, quick connect, or PC terminals
- LED both single and bi-colored available
- Entire series epoxy sealed terminals



**Typical performance characteristics**

Contact configuration . . . . . SPST, DPDT  
 Contact timing . . . . . break-before-make  
 Contact rating max . . . . . 3 A @ 125 VAC with silver Option 3, 0.4 VA @ 20 VDC gold option 1  
 Electrical life. . . . . 2 Pos.: 20,000 cycles @ full rated 3 A load  
 . . . . . 80,000 cycles @ 0.4 VA  
 . . . . . 3 Pos.: 10,000 cycles @ full rated 3 A load  
 . . . . . 60,000 cycles @ 0.4 VA  
 Initial contact resistance. . . . . max.20 mOhms  
 Insulation resistance. . . . . 1,000 MOhms min. @ 500 VDC  
 Dielectric strength. . . . . 500 Volts rms @ sea level

**Environmental specification**

Operating temperature . . . . . -20°C to +80°C  
 Storage temperature . . . . . -45°C to +93°C  
 Solder heat resistance . . . . .  
     wave solder . . . . . capable to 265°C  
     hand solder . . . . . max. 316°C for less than 5 seconds  
     with switch in the closed position  
 Seal . . . . . epoxy sealed terminals

**Material specifications**

Contacts movable. . . . . copper alloy w/silver inlay or gold plated  
 Actuator . . . . . brass nickel plated  
 Terminals/fixed contacts. . . . . copper alloy w/silver inlay or gold plated  
 Housing/beveled frame . . . . . polyamide, black matte finish  
 Terminal seal . . . . . epoxy  
 RoHS Directive 2002/95/EC . . . . . compliant

Rocker & Paddle Switches

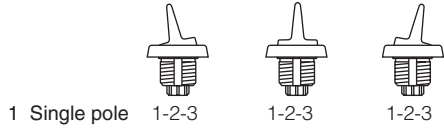
Product key	Typical product key		TRD	1	3	D	1	0	WL	04
<b>Type</b>	TRD	Rocker/Paddle Switch								
<b>Number of poles</b>	1	single pole	2	double pole						
<b>Rating</b>	1	0.4 VA @20VDC (Gold)	3	3A @ 125VAC or 28VDC (Silver)						
<b>Function</b>	<b>single pole</b>		<b>double pole</b>							
	D	on-on	N	on-on						
	E	on-off-on	P	on-off-on						
	F	on-(on)	S	(on)-off-(on)						
	G	(on)-off-(on)								
<b>Actuator</b>	1	rocker	2	paddle						
<b>Actuator color</b>	0	black	2	red						
<b>Terminals</b>	WL	wire lug	QC	quick connect						
<b>Mount</b>	blank	11.91 mm (15/32")								
<b>LED illumination</b>	blank	none	LR	LED integral w/rocker (TRD1 only)						
<b>LED color</b>	2	red	5	green	25	bi-color red/green				
<b>Material</b>	blank	RoHS compliant	04	RoHS compliant						

**TRD Series, Rocker/Paddle (Continued)**

**Function**

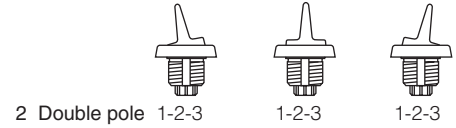


**Codes 1, 2 1 and 2 pole**



1 Single pole

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



2 Double pole

Function	1-2-3	1-2-3	1-2-3
N	On	None	On
P	On	Off	On
S	(On)	Off	(On)
Terminals connected	2 - 3	---	1 - 2
	5 - 6	---	4 - 5

Off mechanical position, no electrical connection  
 (On) momentary mechanical position and electrical connection  
 None no mechanical position

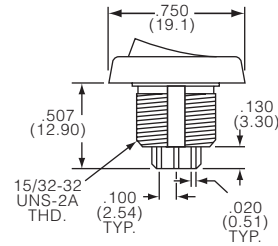
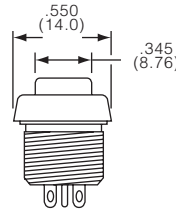
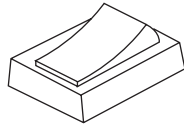
**Actuator**



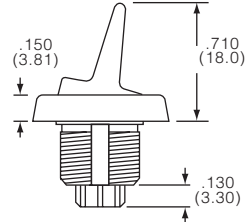
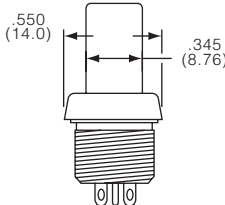
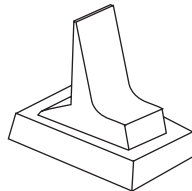
**1 rocker**



TRD21N10WL



**2 paddle**

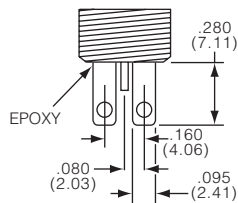


**Terminal**

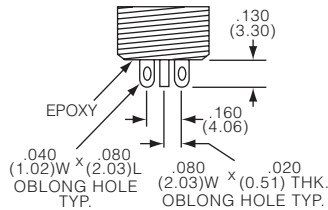


**QC, WL**

**QC, quick connect**



**WL, wire lug**

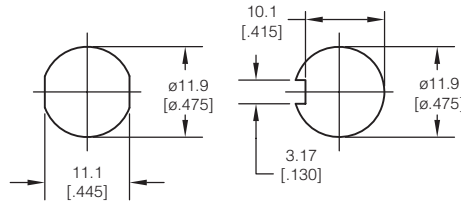


**TRD Series, Rocker/Paddle (Continued)**



Mount

blank 15/32" round hole



Standard TRD bushing will mount in any hole shown. Recommended panel thickness: .030" to .250". One hex nut, one internal tooth lock washer supplied

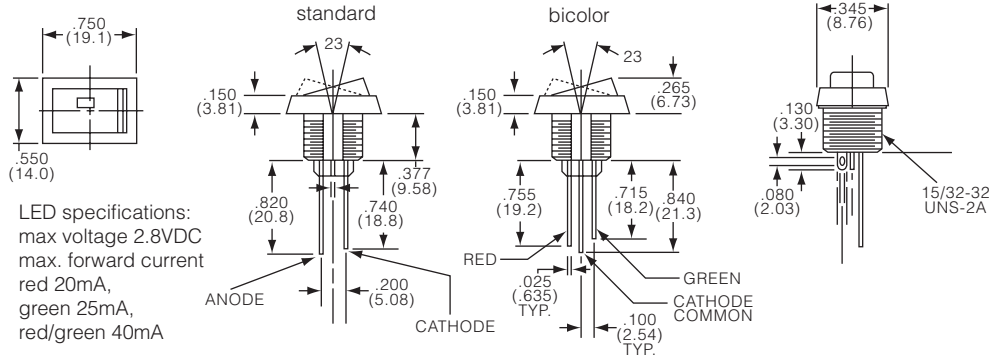


LED

LR integral w/rocker (TRD1 only)



TRD11D10WLLR



LED specifications:  
max voltage 2.8VDC  
max. forward current  
red 20mA,  
green 25mA,  
red/green 40mA

Product key	Poles	Rating	Function	Actuator	Act. color	Terminals	LED	LED color	Material	Part Number
TRD11D10WL	single pole	0.4 VA @ 20VDC	on-on	rocker	black	wire lug	none	none	RoHS compliant	4-1437595-1
TRD11D10WLLR504		gold				lug	integral	green		1825424-1
TRD11F10QCLR204			on-(on)			quick c.		red		1825425-1
TRD11F10WL						wire	none	none		5-1437595-2
TRD11G10WL			(on)-off-(on)			lug				5-1437595-6
TRD13D10QC04		3 A	on-on			quick c.				1825422-1
TRD13D10WL04		@ 125VAC				wire				1825420-1
TRD13D10WLLR204		or 28VDC				lug	integral	red		1825426-1
TRD13D10WLLR2504		silver						bi-color		1825426-2
TRD13D10WLLR504								green		1825426-3
TRD13E10WLLR204			on-off-on					red		1825426-4
TRD13F10QC04			on-(on)			quick connect	none	none		1825422-2
TRD13F10QCLR204						connect	integral	red		1825427-1
TRD13F10WL04						wire	none	none		1825420-2
TRD13G10WL04			(on)-off-(on)			lug				1825420-3
TRD13G10WLLR204							integral	red		1825426-5
TRD21N10WL	double	0.4 VA	on-on				none	none		1437596-3
TRD21S10WL		gold	(on)-off-(on)							1-1437596-4
TRD23N10QC04		3 A	on-on			quick c.				1825423-1
TRD23N10WL04		@ 125VAC				wire				1825421-1
TRD23P10WL04		or 28VDC	on-off-on			lug				1825421-2
TRD23S10WL04		silver	(on)-off-(on)							1825421-3

**Gemini A Series Rocker/Paddle**

**Features**

- Multiple actuator colors available
- G and Q contacts UL® recognition



**Typical performance characteristics**

Contact configuration . . . . . SPST, DPST  
 Contact timing . . . . . break before make  
 Contact rating max. . . . . B contacts: 0.4 VA @ 20 V max. AC or DC  
 . . . . . G contacts: 0.4 VA @ 20 V max. AC or DC or  
 . . . . . 5 A @ 120 VAC or 28 VDC (resistive) or  
 . . . . . 2 A @ 250 VAC (resistive)  
 . . . . . Q contacts: 5 A @ 120 VAC or 28 VDC (resistive) or  
 . . . . . 2 A @250 VAC (resistive)  
 Electrical life . . . . . 6,000 cycles at rated load  
 Mechanical life . . . . . 40,000 cycles  
 Contact resistance . . . . . max. 10 mOhms initial @ 2-4 VDC, 100 mA  
 Insulation resistance . . . . . min. 1,000 MOhms  
 Dielectric strength . . . . . 1,000 Vrms at sea level  
 Standards and specs . . . . . UL® recognition on G & Q contacts

**Environmental specification**

Operating temperature . . . . . -30°C to 85°C  
 Storage temperature . . . . . -40°C to 85°C  
 Solder heat resistance . . . . . wave solder capable to 265°C

**Material specifications**

Contacts & terminals . . . . . B contacts: copper alloy w/ gold over nickel  
 . . . . . G contacts: copper alloy w/ silver  
 . . . . . Q contacts: copper alloy w/ gold over silver  
 Actuator . . . . . phenolic  
 Base . . . . . DAP® UL94 V-O  
 Frame . . . . . stainless steel  
 Seal . . . . . epoxy UL94 V-1  
 RoHS Directive 2002/95/EC . . . . . compliant

Product key		Typical product key										
		<b>A</b>	<b>1</b>	<b>01</b>	<b>J1</b>	<b>A</b>	<b>Q</b>	<b>0</b>			<b>04</b>	
<b>Type</b>	<b>A</b> Rocker/Paddle Switch											
<b>Number of poles</b>	<b>1</b> single pole		<b>2</b> double pole									
<b>Function</b>	<b>01</b> On-On		<b>07</b> On-Off-(On)		<b>13</b> On-On-(On)							
	<b>03</b> On-Off-On		<b>08</b> On-(On)									
	<b>05</b> (On)-Off-(On)		<b>11</b> On-On-On									
<b>Actuator</b>												
<b>Rocker</b>						<b>Paddle</b>						
<b>J1</b> small						<b>J2</b> small						
<b>J3</b> large						<b>J4</b> large						
<b>J50</b> snap-in						<b>J60</b> snap-in						
<b>J51</b> snap-in w/beveled frame						<b>J61</b> snap-in w/beveled frame						
<b>J52</b> snap-in w/beveled frame and LED						<b>J62</b> snap-in w/beveled frame and LED						
<b>Terminals</b>												
<b>A</b> right angle						<b>V3</b> vertical with support bracket .620(15.75)						
<b>AV2</b> vertical R/A						<b>Z</b> wire lug						
<b>C</b> P.C.						<b>Z3</b> quick connect						
<b>Contacts</b>	<b>B</b> gold			<b>G</b> gold over silver			<b>Q</b> silver					
<b>Actuator color</b>	<b>0</b> black (std.)		<b>3</b> orange		<b>6</b> blue							
	<b>1</b> brown		<b>4</b> yellow		<b>8</b> gray							
	<b>2</b> red		<b>5</b> green		<b>9</b> white							
<b>Beveled frame color</b>	<b>0</b> black (std.)		<b>3</b> orange		<b>6</b> blue							
	<b>1</b> brown		<b>4</b> yellow		<b>8</b> gray							
	<b>2</b> red		<b>5</b> green		<b>9</b> white							
<b>Material</b>	<b>04</b> RoHS compliant											

Rocker & Paddle Switches

**Gemini A Series Rocker/Paddle (Continued)**

Function



Codes 01, 03, 05, 07, 08, 11 and 13

Code	Positions			
01	2 positions	On	None	On
08	2 positions	On	None	(On)
	Term. conn.	2 - 3	---	1 - 2
03	3 positions	On	Off	On
05		(On)	Off	(On)
07		On	Off	(On)
	Terminals connected	2 - 3	---	1 - 2
		5 - 6	---	4 - 5
11	3 positions	On	On	On
13		On	On	(On)
	Terminals connected	2 - 3	1 - 2	1 - 2
		5 - 6	5 - 6	4 - 5

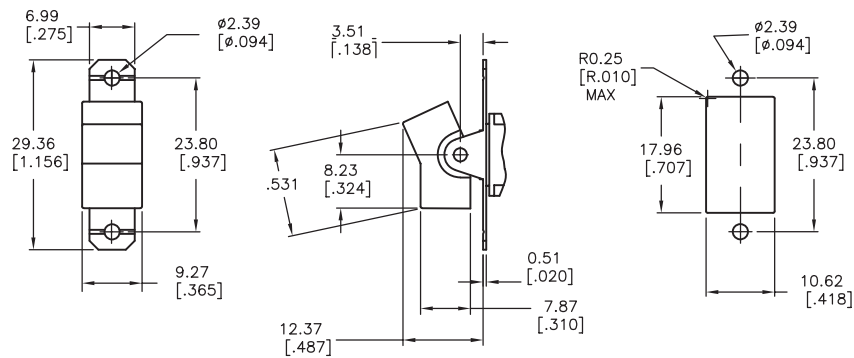
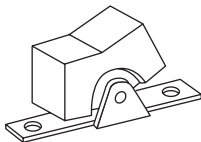
Off  
(On)  
None

mechanical position, no electrical connection  
momentary mechanical position and electrical connection  
no mechanical position

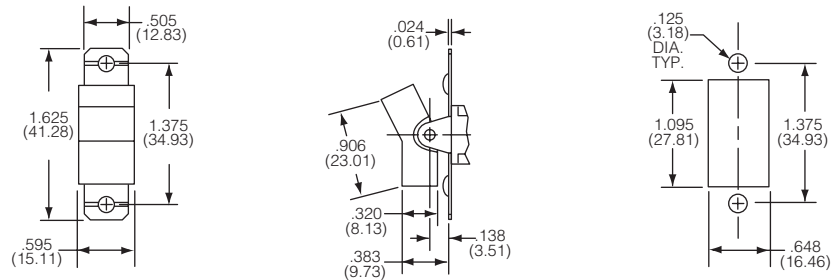
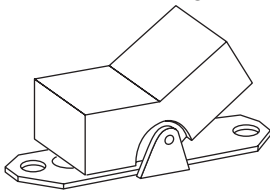
Actuator



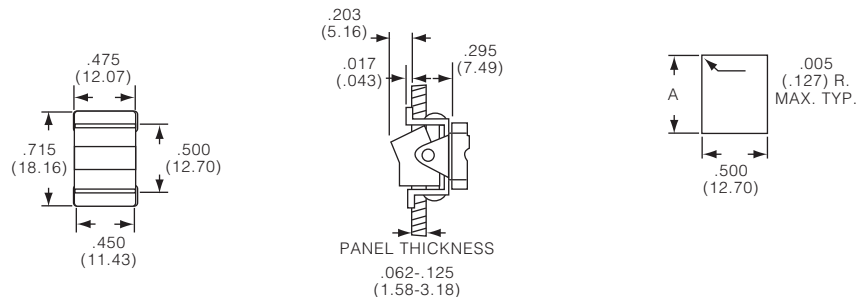
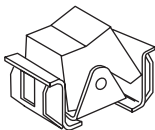
**J1 rocker, small**



**J3 rocker, large**



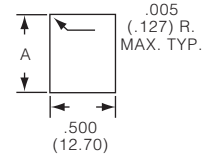
**J50 rocker, snap-in**



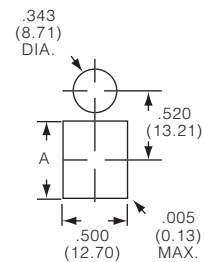
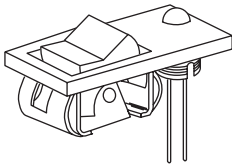


**Gemini A Series Rocker/Paddle (Continued)**

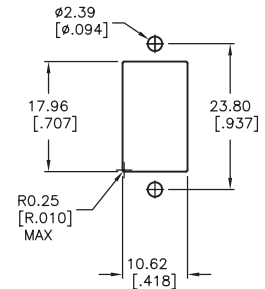
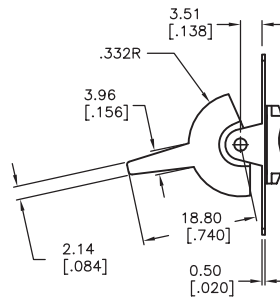
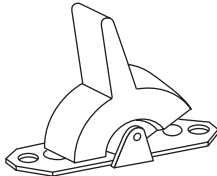
**J51 rocker, snap-in w/beveled frame**



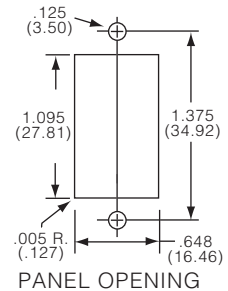
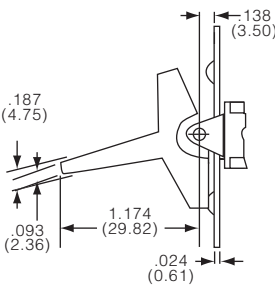
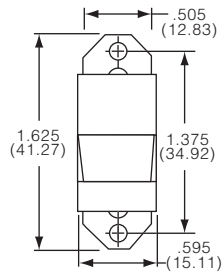
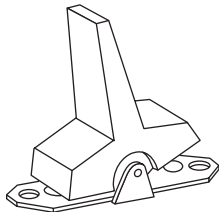
**J52 rocker, snap-in, w/beveled frame and LED**



**J2 paddle, small**

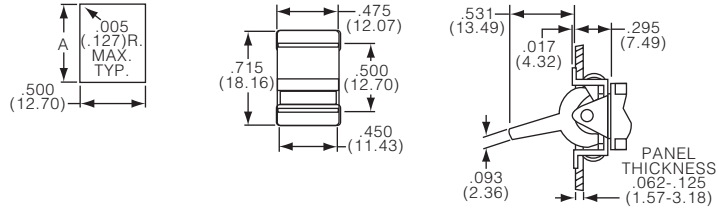


**J4 paddle, large**



**Gemini A Series Rocker/Paddle (Continued)**

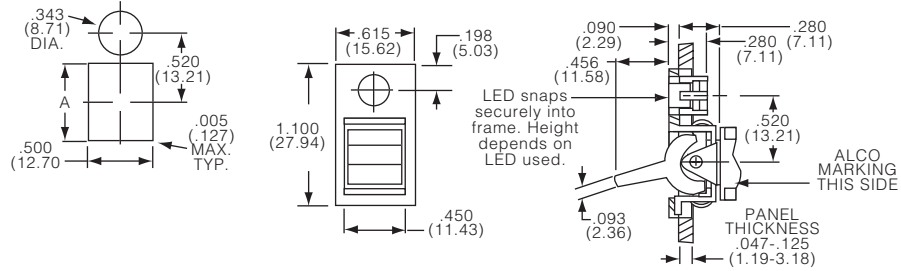
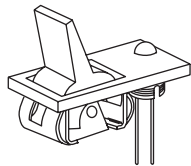
**J60 paddle, snap-in**



**J61 paddle, snap-in w/beveled frame**



**J62 paddle, ssnap-in, w/beveled frame and LED**



**Terminals**

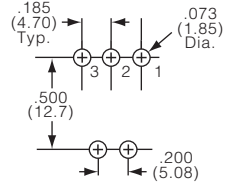
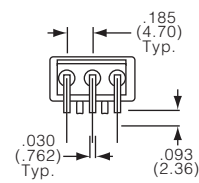
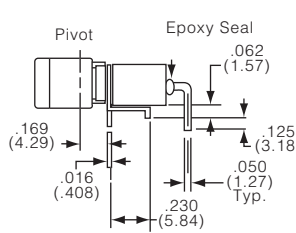
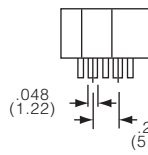


**A right angle, rocker**



A101J1AQ0

**Single pole**

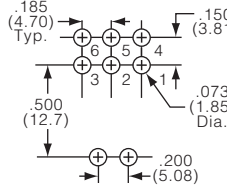
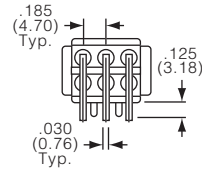
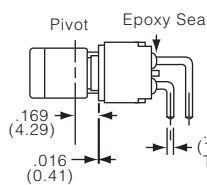
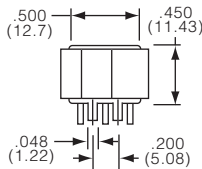


Terminal numbers viewed from top of P.C board



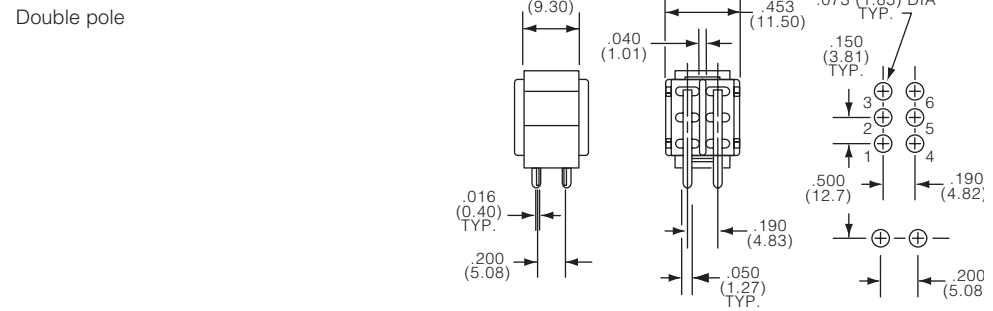
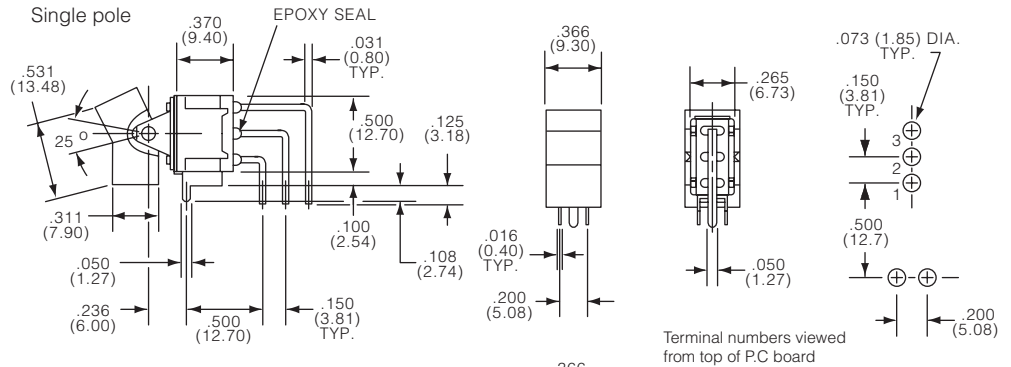
A201J1AQ0

**Double pole**

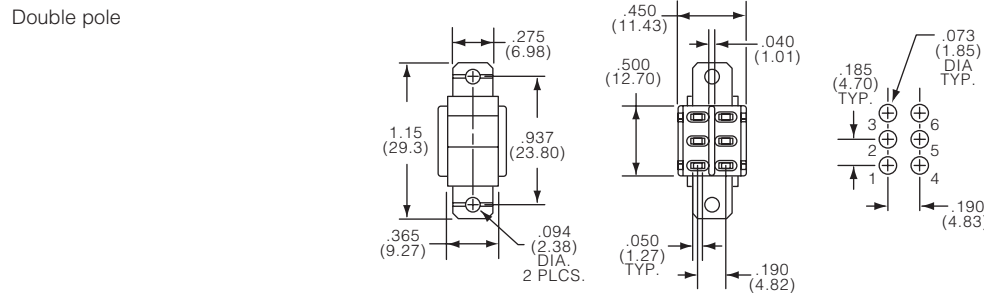
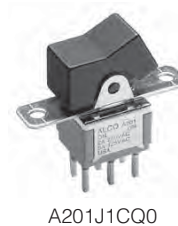
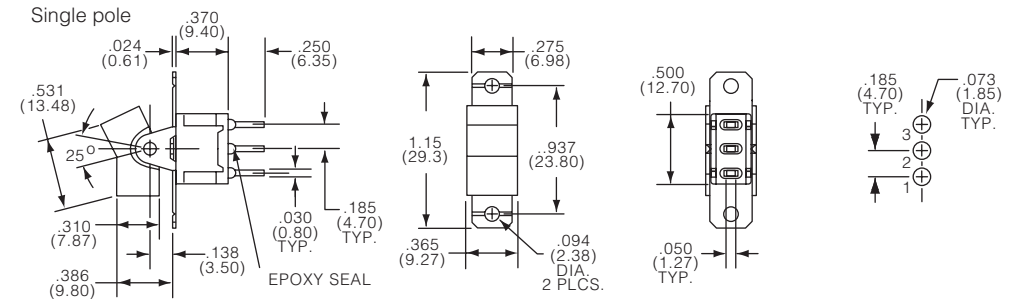
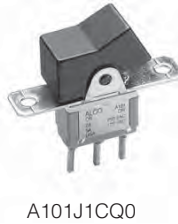


**Gemini A Series Rocker/Paddle (Continued)**

**AV2 vertical, right angle, rocker**



**C printed circuit board, rocker**

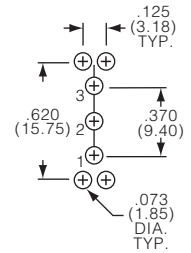
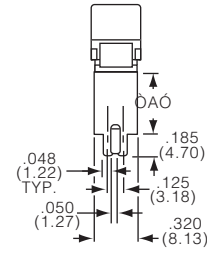


Rocker & Paddle Switches

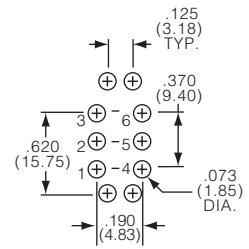
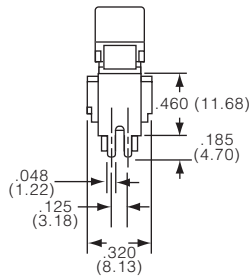
**Gemini A Series Rocker/Paddle (Continued)**

**V3 vertical with support bracket, rocker**

Single pole



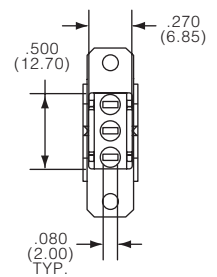
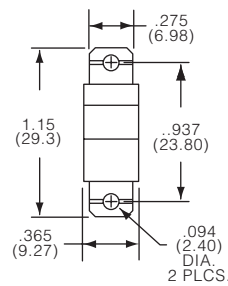
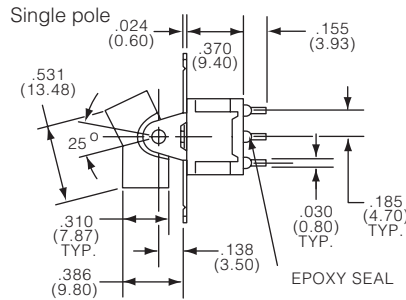
Double pole



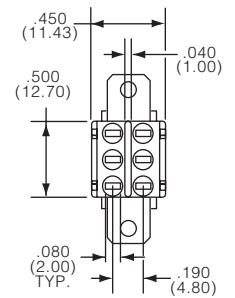
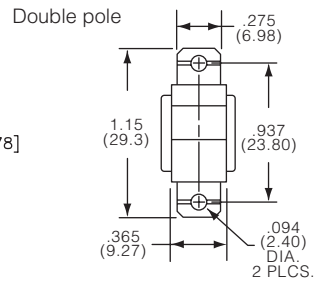
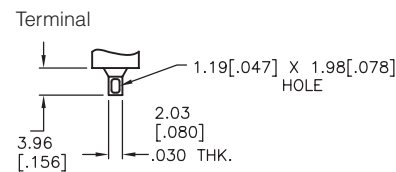
**Z wire lug, rocker**



A101J1ZQ0

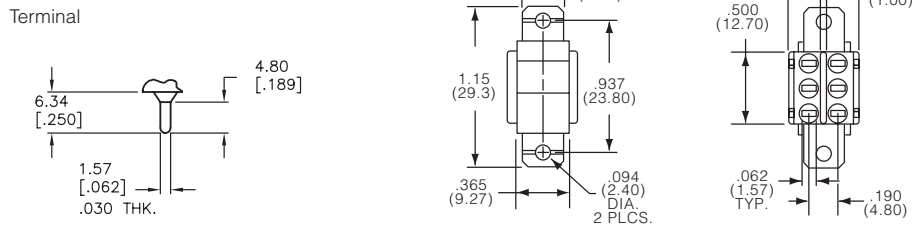


A201J1ZQ0

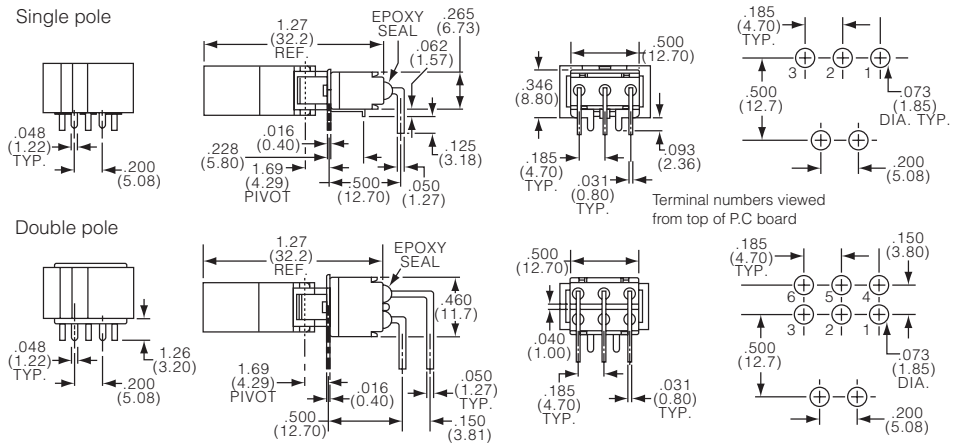


**Gemini A Series Rocker/Paddle (Continued)**

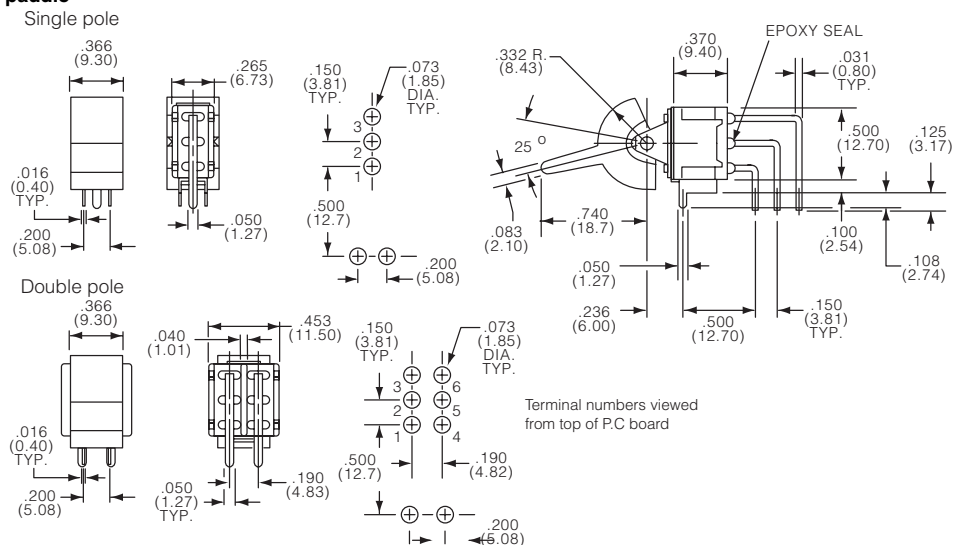
**Z3 quick connect, rocker**



**A right angle, paddle**



**AV2 vertical, right angle, paddle**



Rocker & Paddle Switches

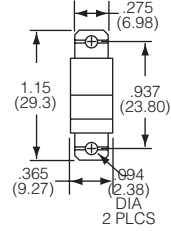
**Gemini A Series Rocker/Paddle (Continued)**

**C printed circuit board, paddle**



A105J2CQ0

Single pole



A205J2CQ0

Double pole



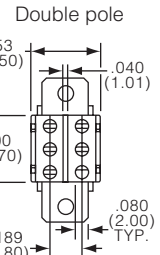
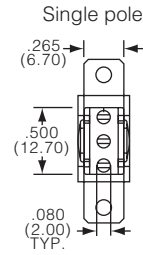
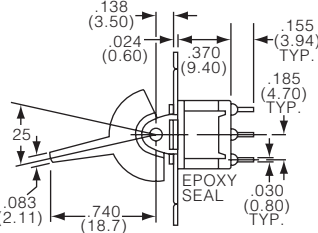
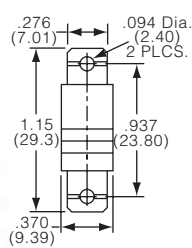
**Z wire lug, paddle**



A101J2ZQ0



A201J2ZQ0



**Gemini A Series Rocker/Paddle** (Continued)

Product key	Poles	Function	Actuator	Terminals	Contacts	Act. color	Fr. color	Material	Part Number
A101J1AB004	single pole	On-On	small	right angle	gold	black	n/a	RoHS	1571986-7
A101J1AQ004					silver			compliant	1571986-8
A101J1AQ204						red			1571986-9
A101J1AV2B004				vertical R/A	gold	black			1-1571986-0
A101J1AV2Q004					silver				1-1571986-1
A101J1CG004				P.C.	Au on Ag				1-1571986-2
A101J1CQ004					silver				1-1571986-3
A101J1V3B004				br. .620(15.75)	gold				1-1571986-4
A101J1V3Q004					silver				1-1571986-5
A101J1ZB004				wire lug	gold				1-1571986-6
A101J1ZQ004					silver				1-1571986-7
A101J2AV2Q004				vertical R/A					1-1571986-8
A101J2ZB904				wire lug	gold	white			1-1571986-9
A101J2ZQ004					silver	black			2-1571986-0
A101J3V3Q204			large	br. .620(15.75)		red			2-1571986-1
A101J3ZQ004				wire lug		black			2-1571986-2
A101J4ZQ004									2-1571986-3
A101J4ZQ804						gray			2-1571986-4
A101J50AV2Q004			snap-in	vertical R/A		black			2-1571986-5
A101J50V3Q004				br. .620(15.75)					2-1571986-6
A101J50V3Q204						red			2-1571986-7
A101J50ZQ004				wire lug		black			2-1571986-8
A101J51CB0004			snap-in, frame	P.C.	gold		black		2-1571986-9
A101J51Z3G0004				quick c.	Au on Ag				3-1571986-0
A101J51Z3Q0004					silver				3-1571986-1
A101J51ZB0004				wire lug	gold				3-1571986-3
A101J51ZQ0004					silver				3-1571986-4
A101J51ZQ2004						red			3-1571986-5
A101J61ZQ0004						black			3-1571986-6
A103J1AV2B004		On-Off-On	small	vertical R/A	gold		n/a		3-1571986-8
A103J1AV2Q004					silver				3-1571986-9
A103J1V3Q004				br. .620(15.75)					4-1571986-0
A103J1ZQ004				wire lug					4-1571986-1
A103J2CB004				P.C.	gold				4-1571986-2
A103J2ZQ004				wire lug	silver				4-1571986-3
A103J3ZQ004			large						4-1571986-4
A103J51ZQ0004			snap-in, frame				black		4-1571986-5
A103J61ZQ0004									4-1571986-6
A105J1AQ004		(On)-Off-(On)	small	right angle			n/a		4-1571986-9
A105J1AV2Q004				vertical R/A					5-1571986-0
A105J1CQ004				P.C.					5-1571986-1
A105J1V3B004				br. .620(15.75)	gold				5-1571986-2
A105J1ZQ004				wire lug	silver				5-1571986-3
A105J2AQ004				right angle					5-1571986-4
A105J2AV2Q004				vertical R/A					5-1571986-5
A105J2ZQ004				wire lug					5-1571986-6
A105J3CQ004			large	P.C.					5-1571986-7
A105J3CQ2004						red	black		5-1571986-8
A105J3ZQ004				wire lug		black	n/a		5-1571986-9
A105J4ZQ004									6-1571986-0
A105J51ZQ0004			snap-in, frame				black		6-1571986-1
A105J52ZQ2004			snap-in, f., LED			red			6-1571986-2
A105J61ZG0004			snap-in, frame		Au on Ag	black			6-1571986-3
A105J61ZQ0004					silver				6-1571986-4
A107J51ZQ0004		On-Off-(On)							6-1571986-5
A107J61ZQ0004									6-1571986-6
A108J1V3Q004		On-(On)	small	br. .620(15.75)			n/a		6-1571986-7
A108J1ZQ004				wire lug					6-1571986-8
A108J51ZQ0004			snap-in, frame				black		6-1571986-9
A108J61ZQ0004									7-1571986-0

**Gemini A Series Rocker/Paddle** (Continued)

Product key	Poles	Function	Actuator	Terminals	Contacts	Act. color	Fr. color	Material	Part Number
A201J1AQ004	double	On-On	small	right angle		black	n/a	RoHS	1571987-2
A201J1AQ204	pole					red		compliant	1571987-3
A201J1AV2Q004				vertical R/A		black			1571987-4
A201J1CQ004				P.C.					1571987-5
A201J1V3Q004				br. .620(15.75)					1571987-6
A201J1ZQ004				wire lug					1571987-7
A201J2CQ004				P.C.					1571987-8
A201J2ZQ004				wire lug					1571987-9
A201J3ZB004			large		gold				1-1571987-0
A201J3ZQ004					silver				1-1571987-1
A201J50AV2Q004			snap-in	vertical R/A					1-1571987-2
A201J50AV2Q804						gray			1-1571987-3
A201J50ZQ004				wire lug		black			1-1571987-4
A201J51ZQ0004			snap-in, frame				black		1-1571987-5
A201J51ZQ9904						white	white		1-1571987-7
A201J61Z3Q0004				quick c.		black	black		1-1571987-8
A201J61ZQ0004				wire lug					1-1571987-9
A203J1AQ004		On-Off-On	small	right angle			n/a		2-1571987-0
A203J1AV2Q004				vertical R/A					2-1571987-1
A203J1CQ204				P.C.		red			2-1571987-2
A203J1ZQ004				wire lug		black			2-1571987-4
A203J51ZQ0004			snap-in, frame				black		2-1571987-6
A203J61ZQ0004									2-1571987-7
A205J1AV2Q004		(On)-Off-(On)	small	vertical R/A			n/a		2-1571987-9
A205J1ZQ004				wire lug					3-1571987-0
A205J2CQ004				P.C.					3-1571987-1
A205J2ZQ004				wire lug					3-1571987-2
A205J51ZQ0004			snap-in, frame				black		3-1571987-3
A205J61ZQ0004									3-1571987-4
A207J1ZQ004		On-Off-(On)	small				n/a		3-1571987-5
A207J3ZQ004			large						3-1571987-6
A207J51ZQ0004			snap-in, frame				black		3-1571987-7
A207J61ZQ0004									3-1571987-8
A208J1V3Q004		On-(On)	small	br. .620(15.75)			n/a		4-1571987-0
A208J51ZQ0004			snap-in, frame	wire lug			black		4-1571987-1
A208J61ZQ0004									4-1571987-2
A211J51ZQ0004		On-On-On							4-1571987-3
A213J61ZQ0004		On-On-(On)							4-1571987-4

Rocker & Paddle Switches



**Gemini AE Series Rocker/Paddle**

**Features**

- Multiple actuator colors available
- G and Q contacts UL® recognition
- Sealed to IP67 select series



**Typical performance characteristics**

Contact configuration . . . . . SPST, DPST  
 Contact timing . . . . . break-before-make  
 Contact rating max. . . . . B contacts: 0.4 VA @ 20 V max. AC or DC  
 . . . . . G contacts: 0.4 VA @ 20 V max. AC or DC or  
 . . . . . 5 A @ 120 VAC or 28 VDC (resistive) or  
 . . . . . 2 A @ 250 VAC (resistive)  
 . . . . . Q contacts: 5 A @ 120 VAC or 28 VDC (resistive) or  
 . . . . . 2 A @ 250 VAC (resistive)  
 Electrical life. . . . . 6,000 cycles at rated load  
 Mechanical life. . . . . 40,000 cycles  
 Contact resistance. . . . . max. 10 mOhms initial @ 2-4 VDC, 100 mA  
 Insulation resistance . . . . . min. 1,000 MOhms  
 Dielectric strength. . . . . 1,000 Vrms at sea level  
 Standards and specs. . . . . UL® recognition on G & Q contacts

**Environmental specification**

Operating temperature . . . . . -30°C to 85°C  
 Storage temperature . . . . . -40°C to 85°C  
 Solder heat resistance . . . . . wave solder capable to 265°C

**Material specifications**

Contacts & terminals. . . . . B contacts: copper alloy w/ gold over nickel  
 . . . . . G contacts: copper alloy w/ silver  
 . . . . . Q contacts: copper alloy w/ gold over silver  
 Actuator . . . . . phenolic  
 Case. . . . . nylon red, UL94 V-0  
 Support bracket . . . . . brass/ tin plated  
 Seal. . . . . epoxy UL94 V-1  
 O ring. . . . . pvc, black  
 Spring . . . . . music wire  
 Mounting bracket & rocker cap. . . . . nylon UL94 V-1  
 Retainer . . . . . stainless steel  
 RoHS Directive 2002/95/EC . . . . . compliant

Product key		Typical product key							
		AE	1	01	J1	A	Q	0	04
<b>Type</b>	Rocker/Paddle Switch								
<b>Number of poles</b>	<b>1</b> single pole	<b>2</b> double pole							
<b>Function</b>	<b>01</b> On-On	<b>07</b> On-Off-(On)							
	<b>05</b> (On)-Off-(On)	<b>08</b> On-(On)							
<b>Actuator</b>	<b>Rocker</b>		<b>Paddle</b>						
	<b>J1</b> standard	<b>J2</b> standard							
	<b>J50</b> small	<b>J60</b> small							
<b>Terminals</b>	<b>A</b> right angle		<b>W</b> wire wrap .736 (18.7)						
	<b>AV2</b> vertical R/A		<b>W4</b> wire wrap 1.062 (27.00)						
	<b>C</b> P.C.		<b>Z</b> wire lug						
	<b>V3, V4</b> vertical with support bracket		<b>Z3</b> quick connect						
<b>Contacts</b>	<b>B</b> gold		<b>G</b> gold over silver		<b>Q</b> silver				
<b>Actuator color</b>	<b>0</b> black (std.)		<b>2</b> red						
<b>Material</b>	<b>04</b> RoHS compliant								

**Gemini AE Series Rocker/Paddle (Continued)**

**Function**



Codes 01, 05, 07 and 08

Code	Positions			
01	2 positions	On	None	On
08	2 positions	On	None	(On)
	Term. conn.	1 - 2	---	2 - 3
05	3 positions	(On)	Off	(On)
07	3 positions	On	Off	(On)
	Terminals connected	1 - 2 4 - 5	---	2 - 3 5 - 6

Off mechanical position, no electrical connection  
 (On) momentary mechanical position and electrical connection  
 None no mechanical position

**Actuator**



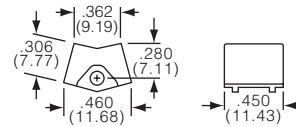
**J1, J50 rockers standard and small rocker**

J1 standard rocker



mounting provided with C or Z terminal types

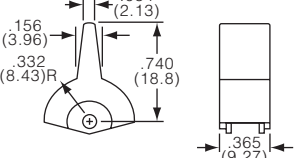
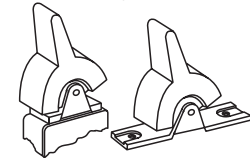
J50 small rocker



mounting provided with C or Z terminal types

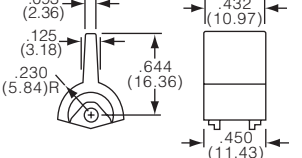
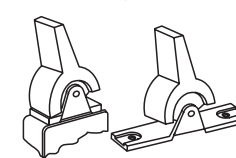
**J2, J60 paddles standard and small paddle**

J2 standard paddle



mounting provided with C or Z terminal types

J60 small paddle



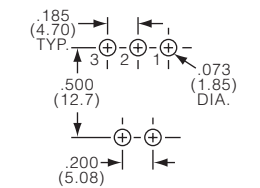
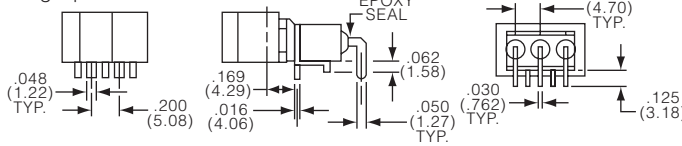
mounting provided with C or Z terminal types

**Terminals**

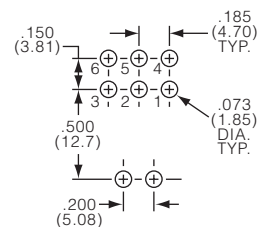
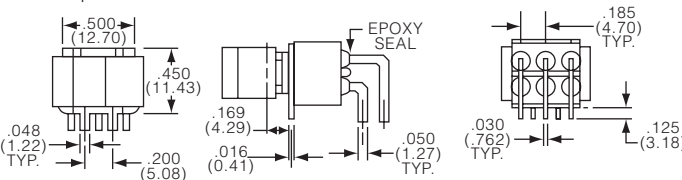


**A right angle**

Single pole

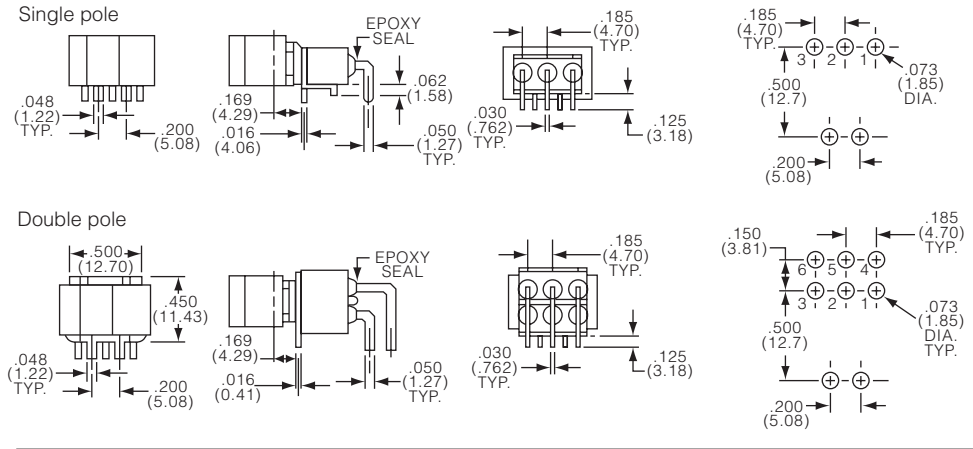


Double pole

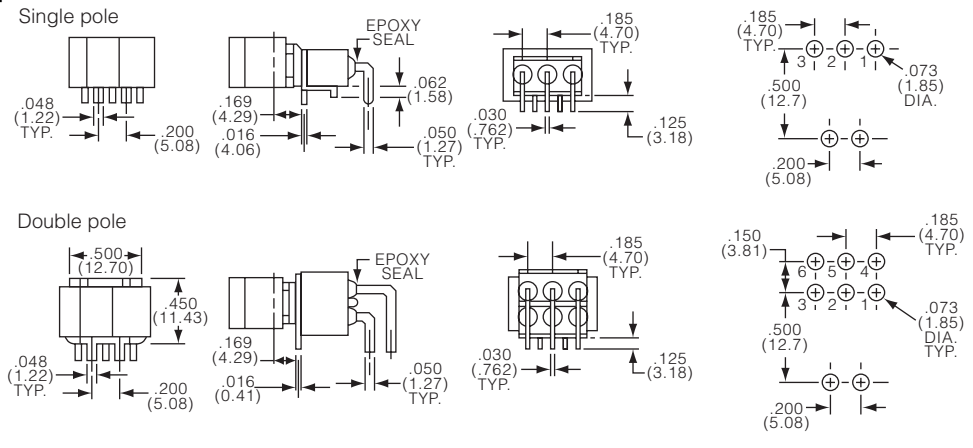


**Gemini AE Series Rocker/Paddle (Continued)**

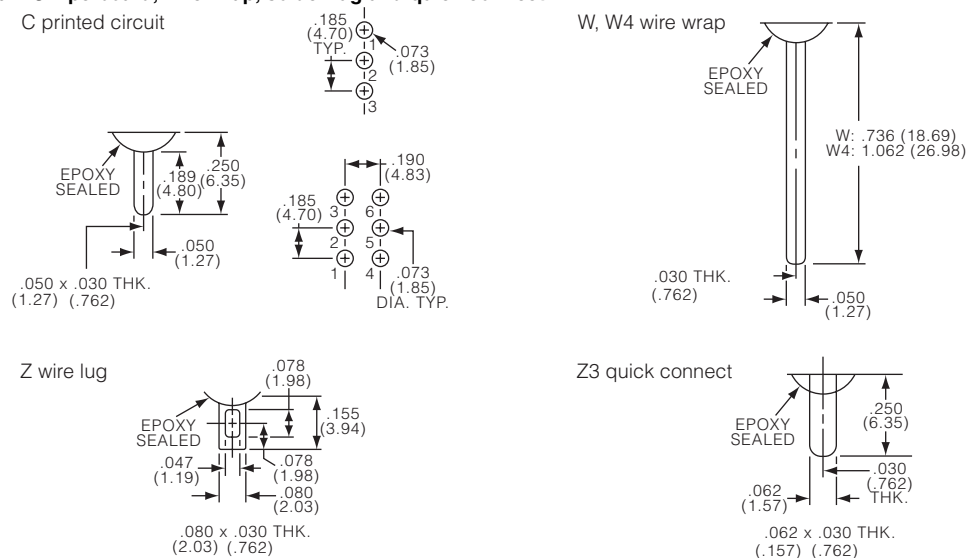
**AV2 vertical right angle**



**V3, V4 vertical with support bracket**



**Codes C, W, W4, Z and Z3 rpc board, wire wrap, solder lug and quick connect**



Rocker & Paddle Switches

**Gemini AE Series Rocker/Paddle** (Continued)

Product key	Poles	Function	Actuator	Terminals	Contacts	Act. color	Material	Part Number
AE101J1AB004	single pole	On-On	standard	right angle	gold	black	RoHS compliant	1571988-1
AE101J1AQ004					silver			1571988-2
AE101J1A404						yellow		1571988-3
AE101J1AV2Q004				vertical R/A		black		1571988-4
AE101J1V3B004				br. .620(15.75)	gold			1571988-5
AE101J1V3Q004					silver			1571988-6
AE103J50V3B004		On-Off-On	small		gold			1571988-7
AE103J60V3Q204					silver	red		1571988-8
AE105J1AQ004		(On)-Off-(On)	standard	right angle		black		1571988-9
AE105J1V3B004				br. .620(15.75)	gold			1-1571988-0
AE105J1ZB004				wire lug				1-1571988-1
AE105J60V3B004			small	br. .620(15.75)				1-1571988-2
AE107J1AQ004		On-Off-(On)	standard	right angle	silver			1-1571988-3
AE107J1ZQ004				wire lug				1-1571988-4
AE108J1ZQ004		On-(On)						1-1571988-5
AE108J60V3B004			small	br. .620(15.75)	gold			1-1571988-6
AE201J1AQ004	double pole	On-On	standard	right angle	silver			1571989-1
AE201J1AV2Q004				vertical R/A			1571989-2	
AE201J1V3B004				br. .620(15.75)	gold			1571989-3
AE201J2AQ204				right angle	silver	red		1571989-4
AE203J1AQ004		On-Off-On				black		1571989-5
AE205J50V3B004		(On)-Off-(On)	small	br. .620(15.75)	gold			1571989-6
AE205J60V3B004								1571989-7
AE208J50V3B004		On-(On)						1571989-8

Rocker & Paddle Switches