

SELECTION. SERVICE. SPEED. >>> PRODUC

PRODUCT MATRIX

DO YOU NEED A SWITCH?

E+SWITCH[®]-

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PRODUCT MATRIX	
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E-Switch has prepared a 7-step process to help guide users to determine the type of switch best suited to their needs.



QUESTIONS TO ASK WHEN SPECIFYING A SWITCH



HOW MANY POLES AND THROWS DO YOU NEED?

Poles are the number of closed independent circuits. Throws are the number of positions in which a given pole is closed.

Common pole/throw configurations are:









Basic examples of above configurations are:

- SPST Flashlight: 1 pole for turning the light on or off.
- SPDT Vacuum Cleaner: 1 pole for power, 1 throw for low speed, 1 throw for high speed.
- DPST Air Conditioner: 1 pole controls the chiller, 1 pole controls the fan.
- **DPDT Hair Dryer:** 1 pole controls the heater, 1 pole controls the fan, 1 throw is for low speed, 1 throw is for high speed.



HOW DOES THE SWITCH ATTACH TO YOUR PRODUCT?

- 1. Panel Mount
 - What is the panel cutout size?
 - What is the thickness of the panel?
 - What type of termination?
 - » Quick connect or solder lug
- 2. PC Board Mount
 - What type of termination?
 - » Through hole or surface mount
 - What type of actuation?
 - » Right angle or vertical
 - Do you need a process sealed component?











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WHAT IS YOUR APPLICATION?

Knowing the application that the switch goes into aids us in the ability to look for unique instances where certain switches work better than others. Below are some examples of industries we sell our switches to.



ARE THERE ANY ADDITIONAL REQUIREMENTS?

Many products have requirements that are not initially thought of. Some might make the switch more aesthetically pleasing and others will help the switch perform better under special circumstances. Below are examples that should be brought up during discussion:

- Momentary or Latching
- Illumination
- Sealed Protection (IP Rating)
- Custom Cap Options
 - » Colors
 - » Graphics
 - » Styles
- Long Life Expectancy
- High Inrush or Horse Power Rating
- Extreme Temperature Rating
- Custom User Requirements

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WHAT IS THE ESTIMATED ANNUAL USAGE (EAU)?

If you are looking for a custom switch, it is important to know an accurate EAU for your project. Once we know, we are able to determine how feasible certain customizations are. Since unique requirements sometimes incur additional tooling charges, knowing in the beginning will help expedite the process.



Anti-vandal switches feature a metal housing and actuator which is sealed from dust and moisture penetration. The ULV anti-vandal series is also UL certified. These features along with the capacity for a long life expectancy make anti-vandal switches ideal for rugged use in harsh weather conditions, such as vending kiosks and parking ticket dispensers. The anti-vandal switches offer a variety of options, including bicolor and pattern illumination, different actuator styles and housing material.







ANTI-VANDAL SWITCH SERIES

Fledge	Cutour Diameter - Par	Ner Depin	Inctions Avai	Terminar Oor	cituator Option	Materia	Nater Resis Uption Options	Stance Railing	25	
-PV0	2A, 48VDC	Diameter: 12.2mm Max. Depth: 6mm	1 Pole:	Off-(On)	Solder	High	Stainless Steel Black Anodized	Dot Ring	IP65	
-PV1	2A, 48VDC	Diameter: 19mm Max. Depth: 8mm	1 Pole:	Off-(On)	Screw Solder	Domed Flat High	Anodized Aluminum Gold Plated Brass Nickel Plated Brass Stainless Steel	N/A	IP65	
 -PV2	2A, 48VDC	Diameter: 16mm Max. Depth: 6mm	1 Pole:	Off-(On)	Screw Solder	Domed Flat High	Anodized Aluminum Gold Plated Brass Nickel Plated Brass Stainless Steel	N/A	IP65	
-PV3	2A, 48VDC	Diameter: 16mm Max. Depth: 10mm or 14mm	1 Pole: 2 Pole:	On-(On) On-(On)	Solder	Concave Flat Guarded High	Anodized Aluminum Gold Plated Brass Nickel Plated Brass Stainless Steel	Bi-Color Dot Ring	IP67 Optional	
 -PV4	2A, 24VDC .7A 125VAC (cURus)	Diameter: 19mm Max. Depth: 10mm	1 Pole: 1P O 2 Pole:	On-On On-(On) ff-(On) + 1P On-(Off) On-On On-(On)	Screw Solder	Flat High	Anodized Aluminum Nickel Plated Brass Stainless Steel	Bi-Color Dot Ring Arrow	IP65	
 -PV5	2A, 48VDC	Diameter: 12mm Max. Depth: 6mm	1 Pole:	Off-(On)	Screw Solder	Domed	Anodized Aluminum Nickel Plated Brass Stainless Steel	N/A	IP65	

Specifications subject to change without notice



ANTI-VANDAL SWITCH SERIES

		Electrical A	Cutour Diameter - Pa	le Deous	inctions suailable	cituator Option	Materic	Mater Resist Uptions	Hance Rating	8	
		-PV6	2A, 48VDC	Diameter: 16mm Max. Depth: 9mm	1 Pole: Off-(On)	Solder	Flat High	Anodized Aluminum Nickel Plated Brass Stainless Steel	Bi-Color Dot Ring	IP65	l
1017		-PV7	2A, 48VDC	Diameter: 22mm Max. Depth: 8mm (Momentary), 13mm (Maintained)	1 Pole: 1P Off-On + 1P On-Off 1P Off-(On) + 1P On-(Off)	Solder	Flat	Anodized Aluminum Nickel Plated Brass Stainless Steel	Bi-Color Dot Ring	IP65	
	60 -	-PV8	2A, 48VDC	Diameter: 25mm Max. Depth: 10mm (Momentary), 14mm (Maintained)	1 Pole: 1P Off-On + 1P On-Off 1P Off-(On) + 1P On-(Off) 2 Pole: 2P Off-On + 2P On-Off 2P Off-(On) + 2P On-(Off)	Solder	Flat	Anodized Aluminum Nickel Plated Brass Stainless Steel	Bi-Color Dot Ring	IP65	
		-PV9	2A, 48VDC	Diameter: 28mm Max. Depth: 10mm (Momentary), 13mm (Maintained)	1 Pole: 1P Off-On + 1P On-Off 1P Off-(On) + 1P On-(Off) 2 Pole: 2P Off-On + 2P On-Off 2P Off-(On) + 2P On-(Off)	Solder	Flat	Nickel Plated Brass Stainless Steel	Bi-Color Dot Ring	IP65	
NEW		-PVL	N/A	Diameter: 6-19mm Max. Depth: 6mm to 10mm (depending on mounting diameter)	N/A	Solder	Flat	Stainless Steel Black	Pilot Lamp	IP67	

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ANTI-VANDAL SWITCH SERIES (UL CERTIFIED)

	flectric	Cutour Diameter - Parts	Re Deorg	Indions Avail	Penninal Obio	Allator Opin	Materia Ons	Humination Options	tence Rains	25	
NEW -	——ULV4	3A 250VAC (cURus)	Diameter: 19mm Max. Depth: 10mm	1 Pole: 2 Pole:	On-On On-(On) On-On On-(On)	Solder	Flat High	Anodized Aluminum Nickel Plated Brass Stainless Steel	Bi-Color Dot Ring Power	IP67	
NEW -	ULV7	3A 250VAC (cURus)	Diameter: 22mm Max. Depth: 10mm	1 Pole: 2 Pole:	On-On On-(On) On-On On-(On)	Solder	Flat	Anodized Aluminum Stainless Steel	Bi-Color Ring Ring w/ Power	IP67	
-	ULV8	3A 250VAC (cURus)	Diameter: 25mm Max. Depth: 10mm	1 Pole: 2 Pole:	On-On On-(On) On-On On-(On)	Solder	Flat	Anodized Aluminum Stainless Steel	Ring Bi-color	IP67	

Specifications subject to change without notice





Pushbutton switches open or close an electrical circuit by the user pressing down on the actuator or in some cases, pulling on the actuator. Our pushbutton switches come in many different shapes and sizes, ranging from low milliamp ratings to high power ratings with horse power. We also offer some that are sealed up to IP67 standards, and many different styles of actuation with illumination are available.



PUSHBUTTON SWITCH SERIES (SUBMINIATURE)

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	ଦ୍ଦୁ	Neral Ralinos	lie cirical Ratings	ions Runco	Bushing	^g O _{ptions}	enninal Options	'n	
-	700 *Panel Mount Version	Life Cycles: 50,000 Operating Force: 200gf Operating Temperature: -30°C to 85°C Contact Resistance: 10mΩ Max. Insulation Resistance: 1,000MΩ Min.	Silver: 3A, 120VAC [cURus] 3A, 28VDC 1A, 250VAC [cURus] Gold: 0.4VA, Max. 20V (AC or DC)	1.0mm	SPDT: On-(On) DPDT: On-(On)	Panel Cutout 12.7mm x 15.7mm	Quick Connect Solder	N/A	
	700	Life Cycles: 50,000 Operating Force: 200gf Operating Temperature: -30°C to 85°C Contact Resistance: 10mΩ Max. Insulation Resistance: 1,000MΩ Min.	Silver: 3A, 120VAC [cURus] 3A, 28VDC 1A, 250VAC [cURus] Gold: 0.4VA, Max. 20V (AC or DC)	1.0mm	SPDT: On-(On) DPDT: On-(On)	Flat Non-Threaded Flat Threaded Keyway Non-Threaded Keyway Threaded	Right Angle PCB Pin Solder Vertical PCB Pin Vertical PCB Pin with Bracket Wire Wrap	N/A	
<u></u>	700A	Life Cycles: 50,000 Operating Force: 300gf Operating Temperature: -30°C to 85°C Contact Resistance: 20mΩ Max. Insulation Resistance: 1,000MΩ Min.	Silver: 3A, 120VAC [cURus] 3A, 28VDC 1A, 250VAC [cURus] Gold: 0.4VA, Max. 20V (AC or DC)	1.0mm	SPDT: On-(On) DPDT: On-(On)	Non-Threaded Threaded	Right Angle PCB Pin Solder Vertical PCB Pin Vertical PCB Pin with Bracket		
	700C	Life Cycles: 50,000 Operating Force: 400gf SP7 600gf DP7 Operating Temperature: -30°C to 85°C Contact Resistance: 10mΩ Max. Insulation Resistance:	Silver: 3A, 120VAC [cURus] 3A, 28VDC 1A, 250VAC [cURus] Gold: 0.4VA, Max. 20V (AC or DC)	3.0mm	SPDT: On-On	Flat Non-Threaded Flat Threaded Keyway Non-Threaded Keyway Threaded	Right Angle PCB Pin Solder Vertical PCB Pin Vertical PCB Pin with Bracket	N/A	
	800	Life Cycles: 50,000 Operating Force: 200gf Operating Temperature: -30°C to 85°C Contact Resistance: 10mΩ Max. Insulation Resistance: 1,000MΩ Min.	Silver: 3A, 120VAC [cURus] 3A, 28VDC 1A, 250VAC [cURus] Gold: 0.4VA, Max. 20V (AC or DC)	0.9mm	SPST Off-(On) SPDT On-(On)	Flat Non-Threaded Flat Threaded Non-Threaded	Right Angle PCB Pin Solder Right Angle PCB Pin with Bracket Vertical PCB Pin Vertical PCB Pin with Bracket	N/A	
<u> </u>	800A	Life Cycles: 50,000 Operating Force: 200gf Operating Temperature: -30°C to 85°C Contact Resistance: 10mΩ Max. Insulation Resistance: 1,000MΩ Min.	Silver: 1A, 120VAC [cURus] 1A, 28VDC Gold: 0.4VA, Max. 20V (AC or DC)	0.9mm	SPST Off-(On) SPDT On-(On)	Non-Threaded	Right Angle PCB Pin Vertical PCB Pin	IP67	
Jun Co	800B	Life Cycles: 50,000 Operating Force: 200gf Operating Temperature: -30°C to 85°C Contact Resistance: 20mΩ Max. Insulation Resistance: 1,000MΩ Min.	Silver: 3A, 120VAC [cURus] 3A, 28VDC 1A, 250VAC [cURus] Gold: 0.4VA, Max. 20V (AC or DC)	0.9mm	SPST Off-(On) SPDT On-(On)	Non-Threaded	Surface Mount	IP67	
NEW	800C	Life Cycles: 6,000 Operating Force: 350gf Operating Temperature: -30°C to 85°C Contact Resistance: Silver: 50mΩ Max initial Gold: 20mΩ Max initial Insulation Resistance: 1,000MΩ Min.	Silver: 3A, 120VAC or 28VDC 1A, 250VAC Gold: 0.4VA, Max. 20V (AC or DC)	Electrical Make: 1.34mm Full travel: 1.88mm	SPDT On-On	Non-Threaded Threaded		N/A	
NEW	800U	Life Cycles: 6,000 Operating Force: 250gf Operating Temperature: -30°C to 85°C Contact Resistance: 100mΩ Initial Insulation Resistance: 500MΩ Min.	Gold: 0.4VA, Max. 20V (AC or DC)	1.0mm	SPDT On-(On) DPDT On-(On)	Non-Threaded	PC thru-hole Right Angle, PC thru-hole Vertical Right angle, PC thru-hole	IP67	
						Specifica	tions subject to change without	notice	

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			Cener Cere	Operating tor		Role	DUNII	Termin	Water Resistant			
			¹ ^{al} Rajings	al Ratings	orions ?	Tavel Into	10 Q	Allons Allo	otions Option	Pating	8	
-		5500	Life Cycles: 500,000 Operating Temperature: -25°C to 65°C Contact Resistance: 50mΩ Max. Insulation Resistance: 50MΩ Min.	300mA, 12VDC	255gf Max.	2.5mm	SPDT	PCB	PCB Pin	1 or 2 Dot	N/A	
-		LC	Life Cycles: 10,000 Operating Temperature: -20°C to 85°C Contact Resistance: 20mΩ Max. Insulation Resistance: 100MΩ Min.	300mA, 30VDC	200gf to 330gf	3.5mm	SPDT DPDT	PCB	Right Angle PCB Pin	N/A	N/A	
-		LP11	Life Cycles: 200,000 Operating Temperature: -20°C to 70°C Contact Resistance: 200mΩ Max. Insulation Resistance: 100MΩ Min.	100mA, 12VDC	250gf	4.5mm	SPST	PCB	PCB Pin	Full	N/A	
-		LP15	Life Cycles: 300,000 Operating Temperature: -20°C to 70°C Contact Resistance: 200mΩ Max. Insulation Resistance: 100MΩ Min.	1mA, 20VDC	125gf	1.3mm	SPST	PCB	PCB Pin	Full	N/A	
-		LP16	Life Cycles: 50,000,000 Operating Temperature: -5°C to 60°C Contact Resistance: 150mΩ Max. Insulation Resistance: 10MΩ Min.	100mA, 200VDC	250gf	3.3mm	SPST	PCB	PCB Pin	Full	N/A	
-	-	LP2	Life Cycles: 300,000 Operating Temperature: -20°C to 70°C Contact Resistance: 200mΩ Max. Insulation Resistance: 100MΩ Min.	1mA, 20VDC 5mA, 5VDC	125gf	1.3mm	SPST	PCB	PCB Pin	Full	N/A	
-		LP37	Life Cycles: 30,000 Operating Temperature: -30°C to 85°C Contact Resistance: 50mΩ Max. Insulation Resistance: 1,000MΩ Min.	10mA to 250mA 20mVDC to 50VDC	250gf	Full: 5.1mm Switching: 2.95mm Latching: 3.3mm	SPDT	PCB	Right Angle PCB Pin	Dot	N/A	
-		LP4	Life Cycles: 50,000 Operating Temperature: -20°C to 70°C Contact Resistance: 50mΩ Max. Insulation Resistance: 100MΩ Min.	100mA, 30VDC	250gf	Full: 1.5mm Latching: 1.0mm	DPDT	PCB	PCB Pin	Full	N/A	
-		LP6	Life Cycles: 200,000 Operating Temperature: -20°C to 70°C Contact Resistance: 50mΩ Max. Insulation Resistance: 100MΩ Min.	12mA, 12VDC	150gf SPST 200gf DPST	2.2mm	SPST DPST	PCB	PCB Pin	Full	N/A	

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		Ceneral A	Operating Force	A.C.	Mou	ining o	Terninal	Nater Resistance	20		
		satings	Satings S	otions ra	ter nro	15 0	tions	Otions Ditol	S aring	2	
	P197	Electrical Life: 10,000 Cycles Temperature: -20°C to 85°C Contact Resistance: 100mΩ Max. Insulation Resistance: 1,000MΩ Min.	10A, 125VAC [cURus] 5A, 250VAC [cURus, VDE] TV-5 125VAC [cURus]	300gf	3.5mm	SPST	PCB Panel Mount	Right Angle PCB Pin Solder	N/A	N/A	
The second se	РВН	Life Cycles: 6,000 Operating Temperature: -20°C to 70°C Contact Resistance: 100mΩ Max. Insulation Resistance: 100MΩ Min.	100mA, 30VDC	230gf DPDT 280gf 4PDT 380gf 6PDT	5.5mm	DPST DPDT	PCB	Right Angle PCB Pin	N/A	N/A	
	PB300	Life Cycles: 20,000 Operating Temperature: -40°C to 95°C Contact Resistance: 50mΩ Max. Initial Insulation Resistance: 100MΩ Min.	30mA, 28VDC	ST: 490gf DT 1st position: 600gf 2nd position: 1150gf	2.0mm	SPST SPDT	PCB	PCB Pin	N/A	N/A	
*TL2201 Pictured	TL2201 TL4201	Life Cycles: 10,000 Operating Temperature: -20°C to 70°C Contact Resistance: 100mΩ Max. Insulation Resistance: 100MΩ Min.	100mA, 30VDC	220gf DPDT 300gf 4PDT	2.5mm	DPDT 4PDT	PCB	PCB Pin	N/A	N/A	
	TL2203	Life Cycles: 10,000 Operating Temperature: -20°C to 70°C Contact Resistance: 100mΩ Max. Insulation Resistance: 100MΩ Min.	100mA, 30VDC	180gf	1.9mm	DPDT	PCB	PCB Pin	N/A	N/A	
	TL2205	Life Cycles: 10,000 Operating Temperature: -20°C to 70°C Contact Resistance: 100mΩ Max. Insulation Resistance: 100MΩ Min.	100mA, 30VDC	250gf	Full: 2.5mm Lock: 1.5mm	DPDT	PCB	PCB Pin	Dot	N/A	
	TL2230	Life Cycles: 10,000 Operating Temperature: -20°C to 70°C Contact Resistance: 100mΩ Max. Insulation Resistance: 100MΩ Min.	100mA, 30VDC	140gf 230gf	1.8mm	DPDT	PCB	PCB Pin	N/A	N/A	
	TL2285	Life Cycles: 10,000 Operating Temperature: -20°C to 70°C Contact Resistance: 100mΩ Max. Insulation Resistance: 100MΩ Min.	100mA, 30VDC	180gf	2.5mm	DPDT	PCB	PCB Pin	N/A	N/A	
And and a second	WBL	Life Cycles: 10,000 Operating Temperature: -20°C to 70°C Contact Resistance: 50mΩ Max. Insulation Resistance: 100MΩ Min.	300mA, 30VDC	200gf	Full: 3.3mm Lock: 2.5mm	DPDT 4PDT	PCB	Right Angle PCB Pin	Full	N/A	
						Specific	ations subje	ct to change w	ithout	notice	

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		Ceneral Ratinos	Operating Force Option	Roles III Lie	Donous Func	Aner Cutour Dim	Tenninal Obio	Water Rest. OR	istence Reling	\$	
	– D16	Electrical / Mechanical Life: 50,000 / 100,000 Cycles Operating Temperature: -20°C to 55°C Contact Resistance: 100mΩ Max. Insulation Resistance: 1,000MΩ Min.	8A, 125VAC [cURus, CSA] 5A, 250VAC [cURus, VDE] 6A, 24VDC [cURus, CSA]	300gf	3.0mm	SPDT, DPDT, 3PDT, 4PDT On-On On-(On)	16mm Diameter	Solder	Full	N/A	
	– L16	Operating Temperature: -20°C to 55°C Insulation Resistance: 1,000MΩ Min.	N/A	N/A	N/A	Signal Light	16mm Diameter	Solder	Full Signal Light	N/A	
	– LA	Electrical / Mechanical Life: 50,000 / 100,000 Cycles Operating Temperature: -20°C to 55°C Contact Resistance: 100mΩ Max. Insulation Resistance: 1,000MΩ Min.	8A, 125VAC [cURus] 5A, 250VAC [cURus] 2A, 250VDC [cURus] 6A, 24VDC [cURus]	300gf	3.0mm	SPDT, DPDT, 3PDT, 4PDT On-On On-(On)	22mm Diameter 25.5mm Diameter 30.5mm Diameter	Socket Solder Tab	Full Signal Light	IP65	
-	– LP1	Electrical / Mechanical Life: 50,000 / 50,000 Cycles Operating Temperature: -20°C to 55°C Contact Resistance: 50mΩ Max. Insulation Resistance: 100MΩ Min.	100mA, 30VDC	250gf	1.8mm	SPST Off-(On)	8.2mm Diameter	Solder	Full	N/A	
.	– MDP-16	Electrical / Mechanical Life: 6,000 / 50,000 Cycles Operating Temperature: -25°C to 55°C Contact Resistance: 100mΩ Max. Insulation Resistance: 50MΩ Min.	8A, 125VAC [cURus, VDE] 5A, 250VAC [cURus, VDE]	SPDT 500gf DPDT 800gf	3.0mm	SPDT On-On On-(On) DPDT On-On On-(On)	16mm Diameter	Tab	Full	N/A	

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	C	Seneral Ratings	Operating Force Opic	273	Poles Throws	Panel Cutour Dim.	Nates Ferninal Osic	Resistence on one of the second	A Rains	285	
	P16	Electrical / Mechanical Life: 50,000 / 100,000 Cycles Operating Temperature: -20°C to 55°C Contact Resistance: 100mΩ Max. Insulation Resistance: 1,000MΩ Min.	8A, 125VAC cURus 5A, 250VAC [VDE] 6A, 24VDC	300gf	3.0mm	SPDT, DPDT, 3PDT, 4PDT On-On On-(On)	16mm Diameter	Socket	Full	N/A	
	PA4	Electrical / Mechanical Life: 10,000 / 50,000 Cycles Operating Temperature: -20°C to 65°C -20°C to 125°C Contact Resistance: 20mΩ Max. Insulation Resistance: 100MΩ Min.	16A, 125VAC [cURus] 16A, 250VAC [cURus] 16(4)A, 250VAC [ENEC] 16(8)A, 250VAC [ENEC]	500gf	4.5mm	SPST Off-On Off-(On)	13mm x 19mm PCB	PCB Pin Solder Tab	Full	IP54	
	PA5	Electrical / Mechanical Life: 10,000 / 50,000 Cycles Operating Temperature: -20°C to 125°C Contact Resistance: 20mΩ Max. Insulation Resistance: 100MΩ Min.	16A, 125VAC [cURus] 16A, 250VAC [cURus] 16(4)A, 250VAC [ENEC] 16(8)A, 250VAC [ENEC]	500gf	5.5mm	SPST Off-On Off-(On) DPST Off-On Off-(On)	Capture Mount PCB	PCB Pin Solder Tab	N/A	N/A	
.	PB1973	Electrical / Mechanical Life: 10,000 / 30,000 Cycles Operating Temperature: -10°C to 55°C Contact Resistance: 20mΩ Max. Insulation Resistance: 1,000MΩ Min.	15A, 125VAC [cURus] 15A, 250VAC [cURus] 10(4)A, 250VAC [VDE]	300gf to 800gf	2.8mm	SPST Off-On Off-(On) DPST Off-On Off-(On)	13mm x 19.2mm	Tab	Full	N/A	
	PB2	Electrical / Mechanical Life: 6,000 / 50,000 Cycles Operating Temperature: 0°C to 85°C Contact Resistance: 50mΩ Max. Insulation Resistance: 5MΩ Min.	20A, 125VAC [UR] 12A, 250VAC [UR]	600gf	3.1mm	SPST Off-On On-On DPST Off-On On-On	22mm x 30mm	Tab	Dot	IP54	

Specifications subject to change without notice



	G	Seneral Ratings	Doerating to toe Ooic		Poles Throws	Parel Cutout Dim.	Mater Per Tenninatori Ansions	sister of Jones	Rains	285	
	PP1	Electrical / Mechanical Life: 6,000 / 50,000 Cycles Operating Temperature: 0°C to 85°C Contact Resistance: 10mΩ Max. Insulation Resistance: 2MΩ Min.	16A, 125VAC [cURus] 12A, 250VAC [cURus] 1HP, 125/250VAC [cURus]	300gf to 500gf	Push Only Push: 9.4mm Push: 9.4mm Push: 5.0mm Pull: 5.7mm	SPDT On ₂ -On ₁ -(On ₂) Push-Pull On-(On)	13.3mm x 28.2mm	Tab	N/A	N/A	
LAMB PRC ALL PR ATTORNEY	PP2	Electrical / Mechanical Life: 6,000 / 50,000 Cycles Operating Temperature: $0^{\circ}C$ to $85^{\circ}C$ Contact Resistance: $10m\Omega$ Max. Insulation Resistance: $10M\Omega$ Min.	Rating Option 1: 10R(4)A 277VAC 5E4 [UL] Rating Option 2: 16A, 125VAC [cURus] 12A, 250VAC [cURus] 1HP, 125/250VAC [cURus]	300gf to 500gf	Push Only Push: 9.4mm Push: 5.0mm Push: 5.7mm	DPDT On2-On1-(On2) Push-Pull On-(On)	13.5mm x 36mm	Tab	N/A	N/A	
	PR1	Electrical / Mechanical Life: 50,000 / 100,000 Cycles Operating Temperature: -20°C to 105°C [cURus] -20°C to 125°C [ENEC] Contact Resistance: 35mΩ Max. Insulation Resistance: 100MΩ Min.	16A, 125VAC [cURus] 3/4HP, 250VAC [cURus] 16(6)A, 250VAC [ENEC] 10(4)A, 250VAC [ENEC]	1,800gf	6.2mm	SPST Off-On Off-(On) DPST Off-On Off-(On)	25mm Diameter	Tab	Full	IP54 Optional	
	RP3508	Electrical / Mechanical Life: 6,000 / 20,000 Cycles Operating Temperature: 0°C to 65°C Contact Resistance: 100mΩ Max. Insulation Resistance: 1,000MΩ Min.	3A, 125VAC [cURus] 1.5A, 250VAC [cURus]	500gf	3.5mm	SPST Off-On Off-(On)	15mm x 16mm (Rounded Edge)	Solder	Full	N/A	
_	RP8100	Electrical / Mechanical Life: 500,000 Cycles Operating Temperature: -30°C to 85°C Contact Resistance: 50mΩ Max. Insulation Resistance: 1,000MΩ Min.	125mA, 125VAC 100mA, 50VDC	350gf	1.5mm	SPST Off-(On)	13.6mm Diameter	Solder	Dot	IP67	
<u> </u>	RP8200	Electrical / Mechanical Life: 200,000 Cycles Operating Temperature: -30°C to 85°C Contact Resistance: 100mΩ Max. Insulation Resistance: 1,000MΩ Min.	100mA, 24VDC	560gf	2.5mm	SPST Off-On	13.6mm Diameter	Solder	Dot	IP67	

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	C	Seneral Rainos	Operating to the Opice	75	ooles Throws	Faner Cutour Ding	Auster Illuminat Renninat Obio	Resistance Option	e Rains	245 245	
	RP8300	Electrical / Mechanical Life: 500,000 Cycles Operating Temperature: -30°C to 85°C Contact Resistance: 50mΩ Max. Insulation Resistance: 1,000MΩ Min.	500mA, 48 VAC 200mA, 50 VDC 200mA, 250 VAC	350gf	1.5mm	SPST Off-(On)	13.6mm Diameter	Solder	Dot	IP67	
	RP8400	Electrical / Mechanical Life: 500,000 Cycles Operating Temperature: -30°C to 85°C Contact Resistance: 50mΩ Max. Insulation Resistance: 1,000MΩ Min.	500mA, 48 VAC 200mA, 50 VDC 200mA, 250 VAC	350gf	1.5mm	SPST Off-(On)	13.6mm Diameter	Solder	Dot	IP67	
	RP8500	Electrical / Mechanical Life: 500,000 Cycles Operating Temperature: -30°C to 85°C Contact Resistance: 50mΩ Max. Insulation Resistance: 1,000MΩ Min.	125mA, 125VAC 100mA, 50VDC	350gf	1.5mm	SPST Off-(On)	13.6mm Diameter	Solder	Dot	IP67	
()	RP8600	Electrical / Mechanical Life: 50,000 / 100,000 Cycles Operating Temperature: -30°C to 85°C Contact Resistance: 200mΩ Initial @2-4VDC, 100mA Insulation Resistance: 100MΩ @500VDC	0.4VA Max @20V Max (AC or DC)	630gf	0.65mm	SPST Off-(On)	16.0mm Diameter	Solder	N/A	IP67	
	ULP	Electrical / Mechanical Life: 200,000 / 1,000,000 Cycles Operating Temperature: -20°C to 70°C Contact Resistance: 50mΩ Max. (Silver) 100mΩ Max. (Gold) Insulation Resistance: 1,000MΩ Min.	Silver: 500mA, 25VDC 200mA, 250VAC Gold: 0.4VA, Max. at 28V (AC or DC)	SPDT 200gf DPDT 300gf	2.2mm	SPST On-On On-(On) DPST On-On On-(On)	15.8mm x 16mm PCB 15.8mm x 18mm Panel Mount Cut-out size	PCB Pin Solder	Full	N/A	

Specifications subject to change without notice





Tactile switches are very reliable and economical due to their unique features. Being extremely low profile and having a long operating life, tactile switches are used in common markets like telecommunication, medical, audio, and computer. With an array of options, such as multiple actuation forces and actuator lengths, consumers can benefit from a soft to strong touch of a button.







TACTILE SWITCH SERIES (PART 1)

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		General Clectrical		Boot Di	10 force Oor	Mounting	4		
		Ratings	Ratings	Traver	ensions ton	61	otions lashable		
*	320	Multiple Actuator Styles Life Cycles: 1,000,000 Operating Temp: -20°C to 70°C Contact Resistance: 50mΩ Max. Insulation Resistance: 1,000MΩ Min.	25mA, 50VDC	0.5mm	12.4mm x 12.4mm 12.4mm x 22.0mm	135	PCB Pin	N/A	
	LL1105	Multiple Actuator Styles Life Cycles: 5,000,000 Operating Temp: -20°C to 70°C Contact Resistance: 50mΩ Max. Insulation Resistance: 100MΩ Min.	50mA, 12VDC	0.25mm	6.0mm x 6.0mm	65	PCB Pin	N/A	
<u> </u>	TL1014	Life Cycles: up to 200,000 Operating Temp: -40°C to 85°C Contact Resistance: 100mΩ Max. Insulation Resistance: 100MΩ Min.	50mA, 12VDC	0.25mm (160 gf) 0.30mm (220 gf)	4.7mm x 3.5mm	160, 220	SMT (Gull Wing)	N/A	
	TL1015	Life Cycles: 200,000 Operating Temp: -20°C to 70°C Contact Resistance: 100mΩ Max. Insulation Resistance: 100MΩ Min.	50mA, 12VDC	0.20mm	2.9mm x 3.9mm	160	SMT (Gull Wing)	N/A	
<u> </u>	TL1100	Multiple Actuator Styles Life Cycles: 100,000 Operating Temp: -20°C to 70°C Contact Resistance: 100mΩ Max. Insulation Resistance: 100MΩ Min.	50mA, 12VDC	0.3mm	12.0mm x 12.0mm	160, 260	PCB Pin	N/A	
<u>_</u>	TL1105	Caps Available Life Cycles: 100,000 Operating Temp: -20°C to 70°C Contact Resistance: 100mΩ Max. Insulation Resistance: 100MΩ Min.	50mA, 12VDC	0.25mm	6.0mm x 6.0mm	100, 160, 250	PCB Pin	N/A	
- (TL1107	Multiple Actuator Styles Life Cycles: 30,000 (260gf), 50,000 (130gf & 180gf) Operating Temp: -20°C to 70°C Contact Resistance: 100mΩ Max. Insulation Resistance: 100MΩ Min.	50mA, 12VDC	0.25mm	3.5mm x 6.0mm	130, 180, 260	PCB Pin	N/A	
	FL1220	Caps Available Life Cycles: 500,000 Operating Temp: -20°C to 70°C Contact Resistance: 100mΩ Max. Insulation Resistance: 100MΩ Min.	50mA, 12VDC	0.2mm	7.5mm x 7.5mm 10.0mm x 14.0mm 10.0mm x 19.0mm 7, 8, 10mm Dia	180	PCB Pin	N/A	
<u></u>	FL1240	Caps Available / LED Illuminated Life Cycles: 100,000 Operating Temp: -20°C to 70°C Contact Resistance: 100mΩ Max. Insulation Resistance: 100MΩ Min.	50mA, 12VDC	0.25mm	6.0mm x 6.0mm	160	PCB Pin	N/A	
	FL1250	Life Cycles: 50,000 Operating Temp: -20°C to 70°C Contact Resistance: 100mΩ Max. Insulation Resistance: 100MΩ Min.	50mA, 12VDC	0.25mm	7.0mm x 8.3mm	120, 180, 280	PCB Pin	N/A	

Specifications subject to change without notice

TACTILE SWITCH SERIES (PART 2)

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		Ceneral Railings	Rainas	Body Dill Traver	Nensions	Mounting Op	tions theshable		
To	——TL1260	Caps Available / LED Illuminated Life Cycles: 50,000 Operating Temp: -20°C to 70°C Contact Resistance: 100mΩ Max. Insulation Resistance: 100MΩ Min.	50mA, 12VDC	0.2mm	6.8mm x 7.0mm	160	PCB Pin	N/A	
	———TL1265	Caps Available / LED Illuminated Life Cycles: 500,000 Operating Temp: -20°C to 70°C Contact Resistance: 100mΩ Max. Insulation Resistance: 100MΩ Min.	50mA, 12VDC	0.2mm	6.8mm x 7.0mm	160	PCB Pin	N/A	
	——	Double Stacked Low Profile Life Cycles: 30,000 Operating Temp: -20°C to 70°C Contact Resistance: 100mΩ Max. Insulation Resistance: 100MΩ Min.	40mA, 12VDC	0.25mm	7.3mm x 9.1mm	180	PCB Pin	N/A	
the last	——— TL3200	Single or Dual LED Illumination Life Cycles: 30,000 Operating Temp: -25°C to 85°C Contact Resistance: 500mΩ Max. Insulation Resistance: 100MΩ Min.	50mA, 12VDC	0.25mm	6.8mm x 4.5mm	160	SMT (Gull Wing)	N/A	
	——TL3210	LED Illuminated Life Cycles: 100,000 Operating Temp: -20°C to 70°C Contact Resistance: 500mΩ Max. Insulation Resistance: 100MΩ Min.	50mA, 12VDC	0.2mm	5.6mm x 3.4mm	160	SMT (Gull Wing)	N/A	
	——TL3215	LED Illuminated Life Cycles: 1,000,000 Operating Temp: -40°C to 85°C Contact Resistance: 100mΩ Max. Insulation Resistance: 100MΩ Min.	50mA, 12VDC	0.25mm	4.9mm x 4.9mm	160	SMT (Gull Wing)	N/A	
Ţ	——TL3240	LED Illuminated / Caps Available Life Cycles: up to 200,000 Operating Temp: -25°C to 70°C Contact Resistance: 100mΩ Max. Insulation Resistance: 100MΩ Min.	50mA, 12VDC	0.2mm	6.1mm x 6.1mm	100, 160, 260	SMT (Gull Wing)	N/A	
1 AN	———TL3253	LED Illuminated Life Cycles: up to 500,000 Operating Temp: -20°C to 70°C Contact Resistance: 100mΩ Max. Insulation Resistance: 100MΩ Min.	50mA, 12VDC	0.25mm	8.4mm x 10.55mm	160	Right Angle PCB Pin	N/A	
	TL3300	Multiple Actuator Styles Life Cycles: up to 200,000 Operating Temp: -25°C to 70°C Contact Resistance: 100mΩ Max. Insulation Resistance: 100MΩ Min.	50mA, 12VDC	0.35mm	12mm x 12mm	160, 260, 320, 520	SMT (Gull Wing)	N/A	
	———TL3301	Caps Available / Multiple Actuator Styles Life Cycles: 100,000 Operating Temp: -20°C to 70°C Contact Resistance: 100mΩ Max. Insulation Resistance: 100MΩ Min.	50mA, 12VDC	0.25mm	6.0mm x 6.0mm	100, 160, 260	SMT (Gull Wing)	N/A	

# TACTILE SWITCH SERIES (PART 3)

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			General Ratio	Patte	Boot DI	Nensie Obitony	Mounting	on thesha		
		——TL3302	Multiple Actuator Styles Life Cycles: 20,000 - 50,000 Operating Temp: -20°C to 70°C Contact Resistance: 100mΩ Max. Insulation Resistance: 100MΩ Min.	7 <b>25</b> 50mA, 12VDC	0.25mm	ිද 3.5mm x 6.0mm	ر 130, 180, 260	SMT (Gull Wing)	N/A	
		———TL3303	Multiple Actuator Styles Life Cycles: 100,000 Operating Temp: -20°C to 70°C Contact Resistance: 100mΩ Max. Insulation Resistance: 100MΩ Min.	50mA, 12VDC	0.25mm	6.0mm x 6.0mm	100, 160, 260	SMT (Gull Wing)	N/A	
NEW		——TL3305	Life Cycles: up to 500,000 Operating Temp: -20°C to 70°C Contact Resistance: 100mΩ Max. Insulation Resistance: 100MΩ Min.	50mA, 12VDC	0.20mm	4.5mm x 4.5mm	160, 260	SMT (Gull Wing)	N/A	
	100	———TL3313	Life Cycles: 100,000 Operating Temp: -20°C to 70°C Contact Resistance: 50mΩ Max. Insulation Resistance: 100MΩ Min.	50mA, 12VDC	0.25mm	4.8mm x 4.8mm	100, 160, 250	SMT (Gull Wing)	N/A	
		——TL3315	Life Cycles: 100,000 (100gf), 500,000 (160gf), 200,000 (250gf) Operating Temp: -20°C to 70°C Contact Resistance: 200mΩ Max. Insulation Resistance: 50MΩ Min.	50mA, 12VDC	0.2mm	4.5mm x 4.5mm	100, 160, 250	SMT (Gull Wing)	N/A	
		——TL3330	Life Cycles: 50,000 (130gf), 30,000 (260gf) Operating Temp: -20°C to 70°C Contact Resistance: 100mΩ Max. Insulation Resistance: 100MΩ Min.	50mA, 12VDC		6.9mm x 3.3mm	100, 200	Right Angle SMT (Gull Wing)	N/A	
	t.C.	——TL3340	Life Cycles: 100,000 Operating Temp: -35°C to 85°C Contact Resistance: 500mΩ Max. Insulation Resistance: 100MΩ Min.	50mA, 15VDC	0. <b>252mm</b>	4.25mm x 3.3mm	160	Right Angle SMT (Gull Wing)	N/A	
		———TL3342	Life Cycles: 100,000 Operating Temp: -20°C to 70°C Contact Resistance: 20mΩ Max. Insulation Resistance: 100MΩ Min.	50mA, 12VDC	0.25mm	5.2mm x 5.2mm	160, 250	SMT (Gull Wing)	N/A	
NEW		———TL3360	Life Cycles: 200,000 Operating Temp: -25°C to 70°C Contact Resistance: 100mΩ Max. Insulation Resistance: 100MΩ Min.	50mA, 12VDC	0.15mm	6.5mm x 6mm	185, 260	Right Angle SMT (Gull Wing)	N/A	
NEW	<b>\$</b>	———TL3365	Life Cycles: 100,000 Operating Temp: -20°C to 70°C Contact Resistance: 100mΩ Max. Insulation Resistance: 100MΩ Min.	50mA, 12VDC	0.20mm	4.2mm x 3.2mm	180	SMT (Gull Wing)	N/A	

Specifications subject to change without notice

## **TACTILE SWITCH SERIES (PART 4)**

NEW

TL6100 Operating TC Contact Res Insulation R
E+SWITCH[®] –

Insulation Resistance: 100MΩ Min.

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		Seneral Patings	Ratings	Pody Dij	Nensions	Mounting Op	tions shape	0	
Ø	—— TL3700	Life Cycles: 100,000 Operating Temp: -40°C to 85°C Contact Resistance: 500mΩ Max. Insulation Resistance: 100MΩ Min.	20mA, 15VDC	0.15mm	3.0mm x 2.6mm	100, 160	SMT (Gull Wing)	N/A	
	——— TL3750	Life Cycles: 300,000 Operating Temp: -30°C to 85°C Contact Resistance: 500mΩ Max. Insulation Resistance: 100MΩ Min.	50mA, 12VDC	0.13mm	3.0mm x 2.0mm	100, 180 240	SMT (Gull Wing)	N/A	
	——TL3780	Life Cycles: up to 500,000 Operating Temp: -40°C to 85°C Contact Resistance: 500mΩ Max. Insulation Resistance: 50MΩ Min	20mA, 15VDC	0.13mm	2.0mm x 3.0mm	240, 330	SMT (Gull Wing)	N/A	
	——— TL3901	Life Cycles: 50,000 Operating Temp: -40°C to 85°C Contact Resistance: 500mΩ Max. Insulation Resistance: 100MΩ Min	50mA, 12VDC	0.3mm	5.4mm x 5.0mm	180	Right Angle Edge (Gull Wing)	N/A	
	TL4100	Life Cycles: 1,000,000 Operating Temp: -40°C to 85°C Contact Resistance: 100mΩ Max. Insulation Resistance: 100MΩ Min.	50mA, 12VDC	0.15mm	3.5mm x 6.2mm	120, 240	Right Angle Edge (Gull Wing)	N/A	
R.	TL4105	Life Cycles: 200,000 Operating Temp: -40°C to 85°C Contact Resistance: 1Ω Max. Insulation Resistance: 100MΩ Min.	50mA, 12VDC	0.15mm	2.9mm x 4.8mm	160	Right Angle Edge (Gullwing)	N/A	
Se.	——TL52	IP67 Rated Life Cycles: 100,000 Operating Temp: -25°C to 85°C Contact Resistance: 100mΩ Max. Insulation Resistance: 100MΩ Min.	50mA, 12VDC	0.3mm	8.0mm x 8.0mm	160, 260	PCB Pin	•	
NO	TL58	Multiple Actuator Styles Life Cycles: 100,000 Operating Temp: -20°C to 70°C Contact Resistance: 100mΩ Max. Insulation Resistance: 100MΩ Min.	50mA, 12VDC	0.25mm	6.2mm x 6.2mm	100, 160, 260	Right Angle PCB Pin	N/A	
1		Multiple Actuator Styles Life Cycles: 100,000 Operating Temp: -20°C to 70°C Contact Resistance: 100mΩ Max. Insulation Resistance: 100MΩ Min.	50mA, 12VDC	0.25mm	6.2mm x 6.2mm	100, 160, 260	PCB Pin	N/A	
	——	Caps Available / Multiple Actuator Styles Life Cycles: up to 1,000,000 Operating Temp: -40°C to 85°C Contact Resistance: 100mΩ Max.	50mA, 12VDC	0.5mm	7.4mm x 7.4mm	130, 160, 300, 500	PCB Pin		

Specifications subject to change without notice

# TACTILE SWITCH SERIES (PART 5)

					Derallip				
		General Ratings	Rainos	Body Dim	^S Force Objections	Mounting C	otions stabl	6	
<b>-</b>	-TL6105	Caps Available / Multiple Actuator Styles Life Cycles: up to 1,000,000 Operating Temp: -40°C to 85°C Contact Resistance: 100mΩ Max. Insulation Resistance: 100MΩ Min.	50mA, 12VDC	0.5mm	7.4mm x 7.4mm	130, 160, 300, 500	PCB Pin w/ Earth ground terminal	•	
	-TL6110	Caps Available / Multiple Actuator Styles Life Cycles: up to 1,000,000 Operating Temp: -40°C to 85°C Contact Resistance: 100mΩ Max. Insulation Resistance: 100MΩ Min.	50mA, 12VDC	0.5mm	5.8mm x 8.3mmm	130, 160, 300, 500	Right Angle PCB Pin	•	
<b></b>	-TL6120	Caps Available / Multiple Actuator Styles Life Cycles: up to 1,000,000 Operating Temp: -40°C to 85°C Contact Resistance: 100mΩ Max. Insulation Resistance: 100MΩ Min.	50mA, 12VDC	0.5mm	7.4mm x 7.4mm	130, 160, 300, 500	SMT (Gull Wing)	•	
<b>•</b> –	-TL6190	Caps Available Life Cycles: 100,000 Operating Temp (Switch): -40°C to 105°C Operating Temp (Cap): -40°C to 85°C Contact Resistance: 100mΩ Max. Insulation Resistance: 100MΩ Min.	50mA, 12VDC	0.5mm	12.0mm x 11.5mm	160, 220, 320	Right Angle PCB Pin	•	
	-TL6200	Life Cycles: 10,000,000 Operating Temp: -20°C to 70°C Contact Resistance: 30mΩ Max. Insulation Resistance: 10MΩ Min.	50mA, 24VDC	1.0mm	6.9mm x 6.2mm	300	SMT (Gull Wing) PCB Pin	•	
<u></u>	-TL6210	LED Illuminated Life Cycles: 100,000 Operating Temp: -20°C to 70°C Contact Resistance: 500mΩ Max. Insulation Resistance: 100MΩ Min.	50mA, 12VDC	0.45mm	6.2mm x 4.6mm	200	SMT (Gull Wing)	•	
	-TL6215	Caps Available / LED Illuminated Life Cycles: 500,000 Operating Temp: -20°C to 70°C Contact Resistance: 100mΩ Max. Insulation Resistance: 100MΩ Min.	50mA, 12VDC	0.45mm	7.7mm x 6.37mm	200, 450	Vertical or Right Angle PCB Pin	•	
	-TL6700	Life Cycles: 500,000 (160gf), 100,000 (260gf) Operating Temp: -20°C to 70°C Contact Resistance: 100mΩ Max. Insulation Resistance: 100MΩ Min.	50mA, 12VDC	0.45mm	6.9mm x 6.2mm	160, 260	SMT (Gull Wing J-Bend)	•	
-	-TL9210	Life Cycles: 100,000 Operating Temp: -20°C to 70°C Contact Resistance: 100mΩ initial Insulation Resistance: 100MΩ Min.	50mA, 12VDC	1.3mm	6.0mm x 6.0mm	180, 260	SMT (J-Bend)	N/A	

Specifications subject to change without notice



Snap Action switches are uniquely designed to deliver a very precise "Turn-ON" function as well as featuring a very rapid actuation. Most actuator styles are easily customized. The actuation force and lever length also can be customizable at a low cost to fit many requirements. They are commonly used in vending machines, timing controls, power tools and the gaming industry.







### **SNAP ACTION SWITCH SERIES**

	Gen	Stat Ratings	Correction of the second secon	stating Rotce Or	Stions*	Oquons 181	hinar Obtions	Potions	
	LS	Electrical Life: 50,000 Cycles Mechanical Life: 1,000,000 Cycles Operating Temp: -25°C to 85°C Contact Resistance: 100mΩ Max.	Silver cURus, VDE: 15A, 125/250VAC Gold: 0.4VA, 20V (AC or DC)	SPST N.O. SPST N.C. SPDT	25, 40, 45, 50, 60, 75, 85, 100, 120, 140, 160, 250	Pin Plunger Lever Roller Simulated Roller	Quick Connect Right Angle PCB Pin Left Angle PCB Pin Solder	Width: 27.9mm Height: 15.9mm Depth: 10.3mm	
	MS	Electrical Life: 50,000 Cycles Mechanical Life: 1,000,000 Cycles Operating Temp: -25°C to 85°C Contact Resistance: 100mΩ Max.	Silver cURus: 5A, 125/250VAC Gold: 0.4VA, 20V (AC or DC)	SPST N.O. SPDT	10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60, 65, 70, 75, 80, 85, 95, 115, 130, 150, 175, 190, 250, 295	Pin Plunger Lever Roller Simulated Roller Custom	Quick Connect PCB Pin Right Angle PCB Pin Left Angle PCB Pin Solder	Width: 19.8mm Height: 10.6mm Depth: 6.4mm	
	SS	Electrical Life: 100,000 Cycles Mechanical Life: 1,000,000 Cycles Operating Temp: -25°C to 75°C Contact Resistance: 100mΩ Max.	Silver cURus: 3A, 125VAC 1.5A, 250VAC 0.1A, 5VDC Gold: 0.4VA, 20V (AC or DC)	SPDT	15, 20, 25, 30, 35, 40, 50, 70, 90, 110, 130	Pin Plunger Lever Simulated Roller	PCB Pin PCB Retention Right Angle PCB Pin Left Angle PCB Pin Solder	Width: 12.7mm Height: 6.5mm Depth: 5.75mm	
<b>E</b> y —	тs	Electrical Life: 50,000 Cycles Mechanical Life: 100,000 Cycles Operating Temp: -25°C to 85°C Contact Resistance: 300mΩ Max.	300mA, 6VDC	SPDT	20	Lever	Vertical PCB Pin Right Angle PCB Pin Short Left Angle PCB Pin Short Right Angle PCB Pin Long Left Angle PCB Pin Long	Width: 8.2mm Height: 6.6mm Depth: 2.7mm	
<u></u>	TS2	Electrical Life: 3,000,000 Cycles Mechanical Life: 3,000,000 Cycles Operating Temp: -25°C to 85°C Contact Resistance: 300mΩ Max.	100mA, 125VAC 100mA, 48VDC	SPST	70	Pin Plunger	SMT Terminals	Width: 8.6mm Height: 3.0mm Depth: 4.8mm	

*Not all force options work with all actuator options.



Specifications subject to change without notice

800.867.2717



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Rocker switches open or close an electrical circuit by pivoting between the terminal contacts as the user rocks the actuator back and forth. Our rocker switches come in many different shapes and sizes, ranging from low milliamp ratings to high power ratings with horse power. We also offer some that are sealed up to IP67 standards and many different styles of actuation with illumination are available.



# **ROCKER SWITCH SERIES (SUBMINIATURE)**

	¢ _e	Chicar C	Cles A.	Actual	ð,	Mounting Contract	Resistance		
	-300	<b>Silver:</b> 5A, 120VAC [cURus] 5A, 28VDC 2A, 250VAC [cURus] <b>Gold:</b> 0.4VA, 20V (AC or DC)	Chicons           1, 2, 3, or 4 Pc           On-On           On-Off-On           On-Off-On           On-Off-(On)           2 Pole:           On-On-On           (On)-On-(On)           4 Pole:           On-On-On	On-(On) (On)-Off-(On) (On)-Off-(On)	Paddle Rocker	Panel Mount: Quick Connect Vertical Solder PC Mount: Horizontal Right Angle Horizontal Right Angle with Bracket Vertical Vertical Right Angle Vertical with Bracket	PCB Pin Quick Connect Solder	N/A	
	-300A	Silver: 5A, 120VAC [cURus] 5A, 28VDC 2A, 250VAC [cURus] Gold: 0.4VA, 20V (AC or DC)	1 or 2 Pole: On-On On-Off-On On-Off-(On)	On-(On) (On)-Off-(On)	Paddle Rocker	Panel Mount: Quick Connect Vertical Solder PC Mount: Horizontal Right Angle Horizontal Right Angle with Bracket Vertical Vertical Right Angle Vertical with Bracket	PCB Pin Quick Connect Solder	IP67	
	-400	Silver: 3A, 120VAC [cURus] 3A, 28VDC 1A, 250VAC [cURus] Gold: 0.4VA, 20V (AC or DC)	1 Pole: On-On On-Off-On On-Off-(On) 2 Pole: On-On On-Off-On	On-(On) (On)-Off-(On) Off-On On-(On)	Rocker	Panel Mount: Vertical Solder PC Mount: Horizontal Right Angle Horizontal Right Angle with Bracket Vertical Vertical Right Angle Vertical Right Angle Vertical Right Angle with Bracket Vertical with Bracket	PCB Pin Solder	N/A	
	-400A	Silver: 3A, 120VAC [cURus] 3A, 28VDC 1A, 250VAC [cURus] Gold: 0.4VA, 20V (AC or DC)	1 Pole: On-On On-Off-On On-Off-(On) 2 Pole: On-On On-Off-On	On-(On) (On)-Off-(On) Off-On On-(On)	Rocker	Panel Mount: Vertical Solder PC Mount: Horizontal Right Angle Horizontal Right Angle with Bracket Vertical Right Angle Vertical Right Angle with Bracket Vertical with Bracket	PCB Pin Solder	IP67	
	-400B	Silver: 3A, 120VAC [cURus] 1A, 250VAC [cURus]	<b>1 Pole:</b> On-On On-Off-On On-Off-(On)	On-(On) (On)-Off-(On)	Rocker	PC Mount: Surface Mount	PCB Pin	IP67	
	-400U	Gold: 0.4VA@ 24V AC or DC	2 Pole: On-None-On		Rocker Lever	PC Mount: Vertical Right Angle, PC thru-hole Right Angle, PC thru-hole PC thru-hole	PCB Pin	IP67	
E+SW	лтс	CH® ——			(	Specifications subject to www.e-switch.com	<i>change without</i> 0.867.2717	notice	

## **ROCKER SWITCH SERIES (RECTANGULAR PANEL MOUNT)**

		*	°	Panel Cur		Water	Res		
		"ectrical Ratings	oles Functions	^{our} DI	Mensions Course	ination of	sistence Re	alings	
	 R1966	15A, 125VAC T65 [cURus] 8A, 250VAC T65 [cURus] 6A, 250VAC T85 [VDE]	<b>1 Pole:</b> On-Off On-Off-On Off-(On) On-Off-(On)	On-On On-(Off) On-(On) (On)-Off-(On)	13mm x 19.2mm	Curved	Full	N/A	
1	 R1973	9A, 125VAC T65 [cURus] 6A, 250VAC T65 [cURus] 4(1)A, 250VAC T85 [VDE]	1 Pole: On-Off 2 Pole: On-Off		13mm x 19.2mm	Curved	Full	N/A	
	 R4	20A, 125VAC T65 [cURus] 15A, 125VAC T65 [cURus] 3/4HP, 125VAC [cURus] 1HP, 250VAC [cURus] 15A, 250VAC T85 [VDE] 10A, 250VAC T85 [VDE]	1 Pole: On-Off On-Off-On Off-(On) On-(Off)	On-On On-(On) (On)-Off-(On) On-Off-(On)	11mm x 30mm	Curved	Full Dott	N/A	
North Contraction	 R5	20A, 125VAC T65 [cURus] 15A, 125VAC T65 [cURus] 3/4HP, 125VAC [cURus] 1HP, 250VAC [cURus] 16A, 250VAC T85 [VDE] 10A, 250VAC T85 [VDE]	2 Pole: On-Off On-Off-On Off-(On) On-(Off)	On-On On-(On) (On)-Off-(On) On-Off-(On)	22mm x 30mm	Curved	Full	N/A	
۲	 R6	10A, 125VAC T65 [cURus] 6A, 250VAC T65 [cURus]	<b>1 Pole:</b> On-Off	(On)-Off	6.65mm x 19.2mm	Curved	N/A	N/A	
	 R7	16(8)A, 125/250VAC [cURus] 20(8)A, 125/250VAC [cURus] 16A, 30VDC [cURus]	1 or 2 Pole: On-Off (On)-Off On-(Off) On-Off-On	On-On (On)-On (On)-Off-On (On)-Off-(On)	21.1mm x 37mm	Hard PC or TPR	Multiple Lens Options	IP67	
	 RA1	16A, 125VAC 1/3HP T105 [cURus] 10A, 250VAC 1/3HP T105 [cURus] 10(4)A, 250VAC 1E4 T125/55 [ENEC] 10(2)A, 250VAC 5E4 T85/55 [ENEC]	1 Pole: Off-On On-(On) Off-(On) On-Off-On	On-(Off) On-Off-(On) On-On (On)-Off-(On)	13mm x 19mm	Bi-Color Curved Custom	Full Signal Light	IP54 with cap	
	 RA2	16A, 125VAC 1/3HP T105 [cURus] 10A, 250VAC 1/3HP T105 [cURus] 10(4)A, 250VAC 1E4 T125 [ENEC] 10(2)A, 250VAC 5E4 T85 [ENEC]	1 Pole (Each Ac Off-On Off-(On) On-(Off)	<b>stuator):</b> On-On On-Off-On	22mm x 19mm	Curved	Signal Light	IP54 with cap	
	 RA4	16A, 125VAC 1/3HP T105 [cURus] 10A, 250VAC 1/3HP T105 [cURus] 10(4)A, 250VAC T125 1E4 [ENEC] 10(2)A, 250VAC T85 5E4 [ENEC]	1 or 2 Pole: Off-On Off-(On) On-(Off)	On-On On-Off-On On-(On)	22mm x 19.2mm	Curved Paddle	Full	IP54 with cap	
					Specificati	ons subje	ct to change	without notice	

# ROCKER SWITCH SERIES (RECTANGULAR PANEL MOUNT)

		Flectrice /	ooles x	Panel Cutout DI	Actuator	Water Mination	Resistance		
		Ratings	Unctions		lensions Options	Ons Ot	HONS P	alings	
	 RA8	16A, 125VAC 1/3HP T105 [cURus] 10A, 250VAC 1/3HP T105 [cURus] 10(4)A, 250VAC 1E4 T125/55 [ENEC] 10(2)A, 250VAC 5E4 T85/55 [ENEC]	1 Pole: Off-On 2 Pole: Off-On		13mm x 19mm	Bi-color Curved	Full Signal Light	IP54 with cap	
	 RB1	20A, 125VAC 1/4HP T65 [cURus] 20A, 250VAC 3/4HP T65 [cURus] 20(8)A, 250VAC 1E4 T125 [ENEC] 16(4)A, 250VAC 1E4 T85/55 [ENEC] 10(2)A, 250VAC 5E4 T85/55 [ENEC]	<b>1 Pole:</b> Off-On On-(On) Off-(On) On-Off-On	On-(Off) On-Off-(On) On-On (On)-Off-(On)	11mm x 30mm	Curved Flat	Dot Full Signal Light	IP54 with cap	
	 RB2	20A, 125VAC 1/4HP T65 [cURus] 20A, 250VAC 3/4HP T65 [cURus] 16(8)A, 250VAC 1E4 T125 [ENEC] 10(2)A, 250VAC 5E4 [ENEC] 16(4)A, 250VAC 1E4 T85/55 [ENEC]	1 or 2 Pole: Off-On On-Off-On (On)-Off-(On) 2 Pole Only: Off-(On)	On-On On-Off-(On) On-(On)	22mm x 30mm	Curved Flat	Dot Full Signal Light	IP54 with cap	
	 RB4	16A, 125VAC T85 [cURus] 8A, 250VAC T85 [cURus] 16(4)A, 250VAC 1E4 T125 [ENEC]	1 Pole (Each Ad Off-On On-(On) Off-(On) On-Off-On	ctuator): On-(Off) On-Off-(On) On-On (On)-Off-(On)	22mm x 30mm	Curved Flat	Dot Full Signal Light	IP54 with cap	
	 RBW2	16(16)A, 125VAC 5E4 T85 [cURus] 1/3HP, 125VAC IP66 [cURus] 10(10)A, 250VAC 5E4 T85 [VDE]	<b>2 Pole:</b> Off-On	*On-On	22mm x 30mm	Curved	Full	IP66	
<b>N</b>	 RD1	16A, 125VAC 1/3HP T105 [cURus] 10A, 250VAC 1/3HP T105 [cURus] 10(4)A, 250VAC 1E4 T125 [ENEC] 10(2)A, 250VAC 5E4 T85 [ENEC]	<b>1 Pole:</b> Off-On		6.8mm x 19.2mm	Curved	N/A	N/A	
	 RSC	20A, 125VAC 1/4HP T105 [cURus] 16A, 250VAC 3/4HP T105 [cURus] 20(8)A, 250VAC 1E4 T125 [ENEC] 16(4)A, 250VAC 1E4 T125 [ENEC] 10(2)A, 250VAC 5E4 T125 [ENEC]	1 Pole: Off-On Off-(On) On-(Off) On-Off-(On)	On-On On-Off-On On-(On)	28.6mm x 13.9mm 27.2mm x 12.1mm 27.2mm x 13.9mm 28.6mm x 12.1mm	Bi-Color Curved Flat	Full Signal Light	N/A	
Ŵ	 RVW	20A, 125VAC [cURus UL508] 15A, 277VAC [cURus UL508] 2HP, 220-240VAC [cURus UL508] <b>Momentary Switches:</b> 1.5HP, 220-240VAC [cURus UL508]	1 or 2 Pole: Off-On Off-(On) On-(Off) On-Off-(On)	On-On On-Off-On On-(On) (On)-Off-(On)	21mm x 36.8mm	Curved	N/A	IP54	
ST.	 WB2	Maintained Switches: 20A, 125/250VAC T65/T85 [cURus] 2.OHP, 125/250VAC [cURus] 18(12)A, 250VAC 5E4 T85 [TÜV] Momentary Switches: 20A, 125/250VAC T65/T85 [cURus] 1.5HP, 125/250VAC [cURus] 18(10)A, 250VAC 5E4 T85 [TÜV]	2 Pole: Off-On Off-(On) (On)-Off-(On)	On-On On-Off-On On-(On)	22mm x 30mm	Curved	N/A	IP55	
					Speci	fications s	ubiect to cha	ange without n	otice

*Option only available with non-illuminated version.



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### ROCKER SWITCH SERIES (OVAL / ROUND PANEL MOUNT)

		Electrical Railings	ooles functions	Paner Cutour Dr.	Actuator Optimiensions	Water Mination Oc	Residence Re	itings	
	——RE1	16A, 125VAC 1/3HP T105 [cURus] 10A, 250VAC 1/3HP T105 [cURus] 10(4)A, 250VAC 1E4 T125 [ENEC] 10(2)A, 250VAC 5E4 T85 [ENEC]	<b>1 Pole:</b> Off-On On-On	On-Off-On	13.5mm x 23.3mm (Oval)	Curved	Full	N/A	
	RR1	16A, 125VAC 1/3HP T105 [cURus] 10A, 250VAC 1/3HP T105 [cURus] 10(4)A, 250VAC 1E4 T125/55 [ENEC] 10(2)A, 250VAC 5E4 T85/55 [ENEC]	1 Pole: Off-On Off-(On) On-(Off) On-Off-(On)	On-On On-Off-On On-(On)	20mm Diameter	Curved	Dot Full Signal Light	IP54 with cap	
	——RR3112	16A, 125VAC T65 [cURus] 10A, 250VAC T65 [cURus]	<b>1 Pole:</b> On-Off On-Off-On	On-On Off-(On)	20.2mm Diameter	Curved	Full	N/A	
9	——RR3130	10A, 125VAC T65 [cURus] 6A, 250VAC T65 [cURus]	1 Pole: On-Off 2 Pole: On-On	On-On	18.2mm Diameter	Curved	N/A	N/A	
	——RR3402	6A, 125VAC [cURus] 3A, 250VAC [cURus]	<b>1 Pole:</b> On-Off On-Off-On	On-On	15mm Diameter	Paddle	N/A	N/A	

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## ROCKER SWITCH SERIES (OVAL / ROUND PANEL MOUNT)

		Slectrical Patinos	O O LES _ FUNCIONS	Panel Cutout D	Rensions Out	Mater mination Oc	Resistance Re	8117Q5	
9	RR5	20A, 125VAC T65 [cURus] 12A, 250VAC T65 [cURus] 10(4)A, 250VAC 5E4 T125 [ENEC]	<b>1 Pole:</b> Off-On	Off-(On)	20mm Diameter	Curved	N/A	N/A	
	RR8	16A, 125VAC 1/3HP T105 [cURus] 10A, 250VAC 1/3HP T105 [cURus] 10(4)A, 250VAC 1E4 T125/55 [ENEC] 10(2)A, 250VAC 5E4 T85/55 [ENEC]	1 Pole: Off-On 2 Pole: Off-On		20mm Diameter	Curved	Full	N/A	
	RRA	15A, 125VAC 1/3HP T105 [cURus] 10A, 250VAC 1/3HP T105 [cURus]	1 Pole: Off-On On-Off-On 2 Pole: Off-On On-Off-On	On-On On-On	22mm Diameter	Curved	Full	IP54 with cap	
100	RRG3	16A, 125VAC 1/3HP T105 [cURus] 10A, 250VAC 1/3HP T105 [cURus] 10(4)A, 250VAC 1E4 T125/55 [ENEC]	1 Pole: Off-On Off-(On) On-(Off) On-Off-(On)	On-On On-Off-On On-(On)	20mm Diameter	Curved	N/A	N/A	
	RRGA	16A, 125VAC 1/3HP T105 [cURus] 10A, 250VAC 1/3HP T105 [cURus] 10(4)A, 250VAC 1E4 T125/55 [ENEC]	1 Pole: Off-On Off-(On) On-(Off) On-Off-(On)	On-On On-Off-On On-(On)	22mm Diameter	Curved	N/A	N/A	

Specifications subject to change without notice







Toggle switches are actuated by a mechanical lever and are used in both big industrial applications and smaller board level applications. Our toggle switches include a wide variety of actuator, bushing, and terminal options as well as low and high amperage ratings. There are even a few with horse power ratings for some of the more industrial strength applications.



## **TOGGLE SWITCH SERIES**

	$\backslash$			$\backslash$	$\langle \rangle$			4Vater		
	ଦ୍ଦ୍ର	e a Ratings	ectrical Ratinos	les Functions	Actuator Opt	Bushing (	Potions Potions	A Options	25	
	100	Electrical Life: 6,000 Cycles Mechanical Life: 30,000 Cycles Operating Temp: -30°C to 85°C Contact Resistance: 10mΩ Max.	Silver: 5A, 120VAC [cURus] 5A, 28VDC 2A, 250VAC [cURus] Gold: 0.4VA, 20V Max. (AC or DC)	1 or 3 Pole: On-On On-Off-On On-Off-(On) 2 or 4 Pole: On-On On-Off-On On-Off-(On)	On-(On) (On)-Off-(On) On-(On) (On)-Off-(On) On-On-On	Flat Locking Metal Plastic	High Torque Non-Threaded Threaded Splash Proof	Quick Connect Right Angle PCB Pin Solder Vertical PCB Pin Wire Wrap	N/A	
	100A	Electrical Life:         6,000 Cycles           Mechanical Life:         30,000 Cycles           Operating Temp:         -30°C to 85°C           Contact Resistance:         10mΩ Max.	Silver: 5A, 120VAC [cURus] 5A, 28VDC 2A, 250VAC [cURus] Gold: 0.4VA, 20V Max. (AC or DC)	1 Pole: On-On On-Off-On On-Off-(On) 2 Pole: On-On On-Off-On On-Off-(On)	On-(On) (On)-Off-(On) On-(On) (On)-Off-(On)	Metal Plastic	Non-Threaded Threaded	Right Angle PCB Pin Solder Vertical PCB Pin Wire Wrap	IP67	
	200	Electrical Life:         6,000 Cycles           Mechanical Life:         30,000 Cycles           Operating Temp:         -30°C to 85°C           Contact Resistance:         10mΩ Max.	Silver: 3A, 120VAC [cURus] 3A, 28VDC 1A, 250VAC [cURus] Gold: 0.4VA, 20V Max. (AC or DC)	<b>1 Pole:</b> On-On On-Off-On On-Off-(On) <b>2 Pole:</b> On-On On-Off-On	On-(On) (On)-Off-(On) Off-On On-(On)	Metal	Non-Threaded Threaded	Right Angle PCB Pin Solder Vertical PCB Pin	N/A	
è —	200A	Electrical Life:         6,000 Cycles           Mechanical Life:         30,000 Cycles           Operating Temp:         -30°C to 85°C           Contact Resistance:         10mΩ Max.	Silver: 3A, 120VAC [cURus] 3A, 28VDC 1A, 250VAC [cURus] Gold: 0.4VA, 20V Max. (AC or DC)	<b>1 Pole:</b> On-On On-Off-On On-Off-(On) <b>2 Pole:</b> On-On On-Off-(On)	On-(On) (On)-Off-(On) Off-On On-(On)	Metal Plastic	Non-Threaded	Right Angle PCB Pin Vertical PCB Pin	IP67	
	200B	Electrical Life:         6,000 Cycles           Mechanical Life:         30,000 Cycles           Operating Temp:         -30°C to 85°C           Contact Resistance:         20mΩ Max.	Gold: 0.4VA, 20V Max. (AC or DC)	<b>1 Pole:</b> On-(On) (On)-Off-(On	On-Off-On ) On-Off-(On)	Metal Plastic	Non-Threaded	Surface Mount	IP67	
	200R	Electrical Life: 6,000 Cycles Mechanical Life: 40,000 Cycles Operating Temp: -30°C to 85°C Contact Resistance: 50mΩ Max.	Gold: 0.4VA, 48V Max. (AC or DC)	1 or 2 Pole: On-None-Or On-None-(O On-Off-On (On)-Off-(On) On-Off-(On)	n n) n)	Metal	Non-Threaded	Surface Mount Right Angle PCB Pin Verticle Right Angle PCB Pin	N/A	
<b>I</b>	200U	Electrical Life: 40,000 Cycles Mechanical Life: 40,000 Cycles Operating Temp: -30°C to 85°C Contact Resistance: 100mΩ Max.	Gold: 0.4VA, 20V Max. (AC or DC)	<b>1 or 2 Pole:</b> Off-On On-Off-On	On-On	Plastic	Non-Threaded	PCB Pin Right Angle PCB Pin Vertical Right Angle- PCB Pin	IP67	
*ST2 Pictured	ST1 ST2	Electrical Life: 6,000 Cycles Mechanical Life: 100,000 Cycles Operating Temp: -20°C to 85°C Contact Resis- tance: 50mΩ Max.	Maintained Switches:           20A, 125VAC [cURus]           15A, 277VAC [cURus]           2HP, 125-277VAC [cURus]           Momentary Switches:           20A, 125VAC [cURus]           15A, 277VAC [cURus]           15A, 277VAC [cURus]           15A, 125VAC [cURus]           1.5HP, 125-277VAC [cURus]	2 Pole: Off-On Off-(On) On-Off-(On)	On-On On-Off-On (On)-Off-(On)	Met- al	Threaded	Quick Connect Screw Solder Wire Leads	N/A	
<u> </u>	ST3	Electrical Life: 6,000 Cycles Mechanical Life: 100,000 Cycles Operating Temp: -30°C to 85°C Contact Resistance: 50mΩ Max.	Maintained Switches: 24A, 125VAC [cURus] 15A, 277VAC [cURus] 2HP, 125-277VAC [cURus]	3 Pole: Off-On On-Off-On	On-On	Metal	Threaded	Quick Connect Screw Solder Wire Leads	N/A	

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Slide switches function in a sliding movement from the current position to the next. The method of activation is designed to move toward a switching condition with an option of flush or raised actuators. Our diverse selection of termination types allow the switch to be mounted in a variety of ways. They are frequently used in computer servers, consumer electronics, and testing equipment.







## **SLIDE SWITCH SERIES**

	4	ectrical Ratings	Veror Poles	of Positions	Panel Mount Cap	sistance Rat.	str.	
	500	Silver: 5A, 120VAC [cURus] 2A, 250VAC [cURus] Gold: 0.4VA, 20V (AC or DC)	Up to 2 Poles	Up to 3 Positions	PCB Pin Solder Quick Connect Wire Wrap	•	N/A	
<b>_</b>	500A	Silver: 3A, 120VAC [cURus] 1A, 250VAC [cURus] Gold: 0.4VA, 20V (AC or DC)	Up to 2 Poles	Up to 3 Positions	PCB Pin	N/A	N/A	
	500R	<b>Gold:</b> 0.4VA, 20V (AC or DC)	Up to 2 Poles	Up to 3 Positions	Right Angle PCB Pin Vertical PCB Pin	N/A	IP67	
	600	Silver: 1A, 30VDC Gold: 0.4VA, 20V (AC or DC)	1 Pole	Up to 3 Positions	Right Angle PCB Pin Vertical PCB Pin Surface Mount	•	N/A	
	EG	200mA, 30VDC	Up to 6 Poles	Up to 6 Positions	PCB Pin Surface Mount	•	N/A	
NEW	EGL2290	300mA, 6VDC	2 Poles	2 Positions	Surface Mount	N/A	N/A	

Specifications subject to change without notice





DIP switches are designed to be used on a PC board and are commonly used to customize the behavior of an electronic device for specific situations. DIP switches are also an alternative to jumper blocks, as one of their main advantages lies in the ability to quickly change positions. Also, there are no parts to lose. Some examples of applications include radio receivers such as the ones found in a garage door opener and a ceiling fan.







## **DIP Switch Series**

		Ce the	Bogy Din	Numbe	N _{Cr}	Mon	Pack Na	Se Se		
		The Fill Railings	ical Ratings	Ins (MM)	Vator Options	inting c	oțions	oions shaba	2	
12323233232 	——КАЕ	Life Cycles: 2,000 Operating Force: 1,000gf Max. Operating Temp: -20°C to 85°C	Switch: 25mA, 24VDC Carry: 100mA, 50VDC	Height: 3.05 Width: 6.3 Length: Varies per # of positions	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 12	Extended Recessed	SMT (Gull Wing) PCB Pin (Splayed or straight)	Tape and Reel Tube	•	
	——— KAN	Life Cycles: 2,000 Operating Force: 500gf Max. Operating Temp: -40°C to 85°C	Switch: 25mA, 24VDC Carry: 100mA, 50VDC	Height: 1.5 Width: 4.5 Length: Varies per # of positions	2, 4, 6, 8, 10	Recessed	SMT (Gull Wing)	Tape and Reel Tube	•	
Para and a second	——КАР	Life Cycles: 2,000 Operating Force: 400gf Max. Operating Temp: -40°C to 85°C	Switch: 25mA, 24VDC Carry: 100mA, 50VDC	Height: 10.8 Width: 10.2 Length: Varies per # of positions	2, 3, 4, 5, 6, 7, 8, 9, 10, 12	Extended Recessed	PCB Pin	Tube	•	
ALALA	——КАС	Life Cycles: 2,000 Operating Force: 800gf Max. Operating Temp: -20°C to 85°C	Switch: 25mA, 24VDC Carry: 100mA, 50VDC	Height: 5.0 Width: 6.0 Length: Varies per # of positions	2, 4, 6, 8, 10	Extended	SMT (Gull Wing) PCB Pin (Splayed)	Tape and Reel Tube	N/A	
T.L.L.	——KAS	Life Cycles: 2,000 Operating Force: 1,000gf Max. Operating Temp: -40°C to 85°C	Switch: 25mA, 24VDC Carry: 100mA, 50VDC	Height: 6.0 Width: 9.9 Length: Varies per # of positions	2, 3, 4, 5, 6, 7, 8, 9, 10, 12	Extended Recessed	PCB Pin (Vertical & Right Angle)	Tube	•	
R	DR	2x3, 3x3, 4x1 Layout Life Cycles: 15,000 Steps Operating Force: 500gf-cm Max. Operating Temp: -40°C to 85°C	Switch: 25mA, 24VDC Carry: 100mA, 50VDC	Height: 4.5 Width: 9.8 Length: 9.9	10, 16	Extended Flush	PCB Pin	Tape and Reel Tube	N/A	
	RDM	3x3 Layout Life Cycles: 25,000 Steps Operating Force: 120gf-cm Max. Operating Temp: -60°C to 125°C	Switch: 100mA, 42VDC Carry: 400mA, 42VDC	Height: 3.65 (Vert) Height: 5.80 (RA) Width: 7.4 Length: 7.4	10, 16	Extended Flush	PCB Pin (Vertical & Right Angle) SMT	Tape and Reel Tube	IP67	
a de la de l	RDT	2x3, 3x3 Layout Life Cycles: 10,000 Steps Operating Force: 700gf-cm Max. Operating Temp: -40°C to 85°C (Through Hole), -60°C to 125°C (SMT)	<b>Switch:</b> 150mA, 42VDC <b>Carry:</b> 200mA, 42VDC	Height: 6.50 (Vert) Height: 12.05 (RA) Width: 10.0 Length: 10.0	04, 06, 08, 10, 16	Extended Flush	PCB Pin (Vertical & Right Angle) SMT	Tape and Reel Tube	IP67	
	——— SRJ	2x3 Layout Life Cycles: 15,000 Steps Operating Force: 400gf-cm Max. Operating Temp: -10°C to 60°C	Switch: 100mA, 5VDC Carry: 100mA, 50VDC	Height: 6.5 Width: 10.0 Length: 10.0	8, 10, 16	Extended Flush	PCB Pin	Tube	•	
	SRK	3x3 Layout Life Cycles: 15,000 Steps Operating Force: 400gf-cm Max. Operating Temp: -10°C to 60°C	Switch: 100mA, 5VDC Carry: 100mA, 50VDC	Height: 6.5 Width: 10.0 Length: 10.0	10	Extended Flush	PCB Pin	Tube	•	
Contraction of the second seco	SRM	2x3 Layout Life Cycles: 15,000 Steps Operating Force: 400gf-cm Max. Operating Temp: -10°C to 60°C	Switch: 100mA, 5VDC Carry: 100mA, 50VDC	Height: 5.1 Width: 10.0 Length: 10.0	10, 16	Flush	SMT (Gull Wing)	Tape and Reel Tube	•	
The second	SRT	4x1 Layout Life Cycles: 15,000 Steps Operating Force: 400gf-cm Max. Operating Temp: -10°C to 60°C	Switch: 100mA, 5VDC Carry: 100mA, 50VDC	Height: 4.7 Width: 10.0 Length: 10.0	10, 16	Flush	PCB Pin (Vertical & Right Angle)	Tube	•	
						Specificati	ons subject to	change without	notice	



### **E-Switch Website Tutorial**



#### **RECOMMENDED SOLDERING GUIDELINES & IP RATINGS**

Most contamination problems can be prevented by exercising care during the cleaning and soldering process. Care should be taken not to immerse or spray unsealed switches during flux removal. Contact E-Switch for specific soldering recommendations and specifications not found in this catalog. Generalized soldering procedures are outlined below.

#### HAND SOLDERING AND TEMPERATURES

Recommend soldering irons of 30 watt maximum with a tip temperature of 345°C (650°F) for 2-3 seconds and solder of 0.030 - 0.040 diameter.

#### SMT REFLOW (LEAD AND LEAD-FREE)

#### **"TYPICAL" SMT REFLOW (Pb and Pb-Free)**

Profile Feature	Sn-Pb Eutectic Assembly	Pb-Free Assembly		
Average Ramp-Up Rate $(T_{smax} to T_{p})$	3°C/second max.	3°C/second max.		
Preheat -Temperature Min. (T _{smin} ) -Temperature Max. (T _{smax} ) -Time (t _{smin} to t _{smax} )	100°C 150°C 60-120 seconds	150°C 200°C 60-180 seconds		
Time maintained above: -Temperature (T _L ) -Time (t _L )	183°C 60-150 seconds	217°C 60-150 seconds		
Time within 5°C of actual Peak Temperature (t _p )	10-30 seconds	20-40 seconds		
Ramp-Down Rate	6°C/second max.	6°C/second max.		
Time 25°C to Peak Temperature	6 minutes max.	8 minutes max.		

Note 1: All temperatures refer to topside of the package, measured on the package body surface.

#### **Classification Reflow Profile**



E+SWITCH[®]

#### WAVE SOLDER TIME AND TEMPERATURES

When wave soldering, we recommend using a no-clean flux soldering process, rather than a process that requires washing. The fluxing process must be controlled so as not to have flux migrate inside the switch.

#### WAVE SOLDER

#### (Includes Pb-Free, max. component side preheat temp-130°C)



Good venting is required. No-clean flux vapors can enter the switch if adequate venting is not available. The vapors will condense on the internal contacts and become an insulator when they solidify.

- Preheat temperature/time: Circumferential temperature of the P.C. Board not to exceed 100°C (212°F) for 60 seconds.
- Soldering temperature/time: not to exceed 260°C (500°F) for 5 seconds.

IP Rating Chart							
First Number	Definition	Second Number	Definition				
Protection against		Protection against					
1	Protected against solid objects over 50mm (e.g. accidental touch by hands)	1	Protected against vertically falling drops of water				
2	Protected against solid objects over 12mm (e.g. fingers)	2	Protected against direct sprays up to 15° from the vertical				
3	Protected against solid objects over 2.5mm (e.g. tools and wires)	3	Protected against direct sprays up to 60° from vertical				
4	Protected against solid objects over 1mm (e.g. tools, wires and small wires)	4	Protected against sprays from all directions - limited ingress permitted				
5	Protected against dust - limited ingress (no harmful deposit)	5	Protected against low pressure jets if water from all directions - limited ingress permitted				
6	Totally protected against dust	6	Protected against strong jets of water (e.g. for use on shipdecks - limited ingress permitted)				
		7	Protected against the effects of temporary immersion between 15cm and 1m. Duration of test 30 min.				
		8	Protected against long periods of immersion under pressure				



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For more information on other switches or custom solutions, contact any of our locations.



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