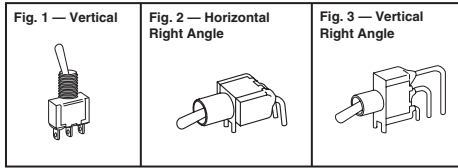


# E-SWITCH™ Toggle Switches



## Actuators

## Bushings



Note: All switches come complete with mounting hardware.

### Contact Material:

- Q (Silver):** Fixed terminal and moving contact: Silver plated over copper alloy. **Contact Rating:** 5A @ 28VAC or VDC; 2A @ 250VAC
- R (Gold):** Fixed terminal and moving contact: Copper alloy with gold plate over nickel plate. **Contact Rating:** 0.4VA maximum at 20VAC or DC maximum

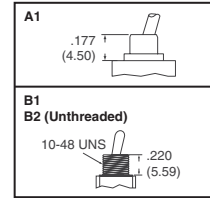
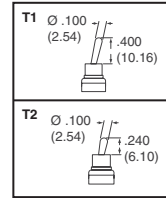
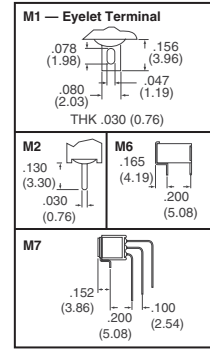


Fig.	Circuit	Switching Function	Options (see diagrams)			Contact Material	Dimensions Inch (mm)			Digi-Key Part No.	Price Each			E-Switch Part No.
			Actuator	Bushing	Termination		L x W x H				1	10	100	
<b>200 Series — Subminiature Toggle Switches</b>														
1	SPDT	On-On	T1	B1	M1	Q	.320 x .240 x .340	(8.13 x 6.10 x 8.64)	EG2446-ND	3.45	3.11	2.65	200MSP1T1B1M1OE	
	SPDT	On-On	T1	B1	M2	Q	.320 x .240 x .340	(8.13 x 6.10 x 8.64)	EG2447-ND	3.45	3.11	2.65	200MSP1T1B1M2OE	
	SPDT	On-Off-On	T1	B1	M1	Q	.320 x .240 x .340	(8.13 x 6.10 x 8.64)	EG2450-ND	4.65	4.19	3.57	200MSP3T1B1M1OE	
	SPDT	On-Off-On	T1	B1	M2	Q	.320 x .240 x .340	(8.13 x 6.10 x 8.64)	EG2451-ND	3.88	3.49	2.98	200MSP3T1B1M2OE	
	SPDT	Mom-Off-Mom	T1	B1	M1	Q	.320 x .240 x .340	(8.13 x 6.10 x 8.64)	EG2453-ND	4.86	4.38	3.73	200MSP4T1B1M1OE	
	SPDT	On-Off-Mom	T1	B1	M1	Q	.320 x .240 x .340	(8.13 x 6.10 x 8.64)	EG2454-ND	4.86	4.38	3.73	200MSP5T1B1M1OE	
	DPDT	On-On	T1	B1	M1	Q	.320 x .360 x .340	(8.13 x 9.14 x 8.64)	EG2455-ND	4.86	4.38	3.73	200MDP1T1B1M1OE	
	DPDT	On-On	T1	B1	M2	Q	.320 x .360 x .340	(8.13 x 9.14 x 8.64)	EG2456-ND	4.06	3.65	3.11	200MDP1T1B1M2OE	
	DPDT	On-Off-On	T1	B1	M1	Q	.320 x .360 x .340	(8.13 x 9.14 x 8.64)	EG2458-ND	5.73	5.16	4.40	200MDP3T1B1M1OE	
	DPDT	On-Off-On	T1	B1	M2	Q	.320 x .360 x .340	(8.13 x 9.14 x 8.64)	EG2459-ND	6.22	5.60	4.78	200MDP3T1B1M2OE	
2	SPDT	On-On	T2	B2	M6	R	.320 x .240 x .340	(8.13 x 6.10 x 8.64)	EG2448-ND	5.02	4.52	3.85	200MSP1T2B2M6RE	
	SPDT	On-On	T2	B2	M6	R	.320 x .240 x .340	(8.13 x 6.10 x 8.64)	EG2449-ND	6.70	6.04	5.14	200MSP1T2B2M7RE	
	SPDT	On-On	T2	B2	M7	R	.320 x .240 x .340	(8.13 x 6.10 x 8.64)	EG2449-ND	5.54	4.99	4.25	200MSP1T2B2M7RE	
<b>200A Series — Process-Sealed Subminiature Toggle Switches</b>														
1	SPDT	On-On	T1	A1	M2	R	.320 x .200 x .527	(8.13 x 5.08 x 13.39)	EG2459-ND	4.49	4.04	3.45	200AWMSP1T1A1M2RE	
	SPDT	On-Mom	T1	A1	M2	R	.320 x .200 x .527	(8.13 x 5.08 x 13.39)	EG2461-ND	5.44	4.90	4.17	200AWMSP2T1A1M2RE	
	SPDT	On-Off-On	T1	A1	M2	R	.320 x .200 x .527	(8.13 x 5.08 x 13.39)	EG2463-ND	4.50	4.05	3.45	200AWMSP3T1A1M2RE	
	DPDT	On-On	T1	A1	M2	R	.320 x .360 x .527	(8.13 x 9.14 x 13.39)	EG2465-ND	6.99	6.30	5.36	200AWMDP1T1A1M2RE	
	DPDT	On-Off-On	T1	A1	M2	R	.320 x .360 x .527	(8.13 x 9.14 x 13.39)	EG2467-ND	8.12	7.31	6.23	200AWMDP3T1A1M2RE	
	DPDT	On-Off-On	T1	A1	M2	R	.320 x .360 x .527	(8.13 x 9.14 x 13.39)	EG2468-ND	9.76	8.79	7.49	200AWMDP3T2A1M6RE	
2	SPDT	On-On	T2	A1	M6	R	.320 x .200 x .527	(8.13 x 5.08 x 13.39)	EG2460-ND	5.87	5.29	4.51	200AWMSP1T2A1M6RE	
	SPDT	On-Off-On	T2	A1	M6	R	.320 x .200 x .527	(8.13 x 5.08 x 13.39)	EG2464-ND	6.05	5.45	4.64	200AWMSP3T2A1M6RE	
	DPDT	On-On	T2	A1	M6	R	.320 x .360 x .527	(8.13 x 9.14 x 13.39)	EG2466-ND	8.65	7.79	6.64	200AWMDP1T2A1M6RE	
DPDT	On-Off-On	T2	A1	M6	R	.320 x .360 x .527	(8.13 x 9.14 x 13.39)	EG2468-ND	9.76	8.79	7.49	200AWMDP3T2A1M6RE		

## Termination Options



# NKK SWITCHES™ Process Sealed Miniature Toggle Switches



**M2T Series:** Interior bushing is sealed with O-ring which surrounds the actuator. Bushing and top of the housing are one molded piece, achieving the exterior seal. Ultrasonic welding is used to seal the bushing unit to the base. Terminals are epoxy sealed for safeguarding the switch at the base. **Features:** • **Electrical Capacity:** Logic Level (code G): 0.4VA maximum @ 28V AC/DC maximum. • **Dielectric Strength:** 1,000VAC minimum between contacts; 1,500VAC minimum between contacts and case. • **Mechanical Life:** 100,000 operations minimum • **Electrical Life:** 50,000 operations minimum for gold • **Operating Temperature Range:** -30°C - 85°C

**B Series:** Sealed body construction permits switches to be subjected to time- and money-saving automated soldering techniques. Can be safely cleaned of flux without fear of compromising operating characteristics. **Features:** • **Electrical Capacity:** Logic Level: 0.4VA maximum @ 28V AC/DC maximum • **Dielectric Strength:** 500VAC minimum • **Mechanical Life:** 100,000 operations minimum for On-On and On-Off-On • **Electrical Life:** 50,000 operations minimum • **Operating Temperature Range:** -30°C - 85°C

**G3T Series:** Ultra-miniature size allows high density mounting, and extremely light weight of 0.6 gram makes these switches ideal for handheld equipment. Combination of design features achieves total seal and allows automated processing techniques, including flux cleaning procedures: one-piece bushing and housing, rubber seals surrounding actuator and base, epoxy at joint of case and base, and molded-in, epoxy sealed terminals. **Features:** • **Electrical Capacity:** Logic Level: 0.4VA maximum @ 28V AC/DC maximum • **Dielectric Strength:** 500VAC minimum • **Mechanical Life:** 50,000 operations minimum • **Electrical Life:** 50,000 operations minimum • **Operating Temperature Range:** -30°C - 85°C

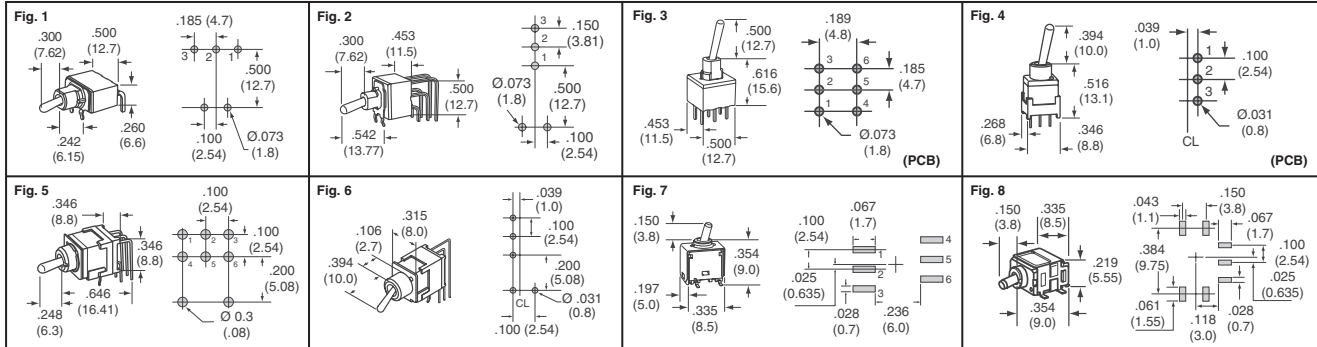


Fig.	Circuit	Switching Function	Digi-Key Part No.	Price Each			NKK Part No.
				1	25	100	
<b>Washable Mini Toggle Switches</b>							
1	SPDT	On-On	360-1877-ND	5.24	3.40	3.11	M2T12S4A5G30-RO
	SPDT	Mom-Off-Mom	360-1882-ND	6.08	4.05	3.63	M2T18S4A5G30-RO
	SPDT	On-On	360-1879-ND	5.24	3.40	3.11	M2T12S4A5G30-RO
	SPDT	On-Off-On	360-1880-ND*	5.51	3.67	3.29	M2T13S4A5G30-RO
2	SPDT	On-On	360-1878-ND	5.30	3.53	3.17	M2T12S4A5G40-RO
	SPDT	On-Off-On	360-1881-ND	5.77	3.85	3.45	M2T13S4A5G40-RO
	SPDT	Mom-Off-Mom	360-1883-ND	6.34	4.23	3.79	M2T18S4A5G40-RO
	DPDT	On-On	360-1884-ND	7.99	5.67	5.17	M2T22S4A5G40-RO
3	SPDT	On-On	360-1180-ND	4.82	3.01	2.76	M2T12S4A5G03
	SPDT	On-Off-On	360-1181-ND	5.13	3.33	3.04	M2T13S4A5G03
	SPDT	Mom-Off-Mom	360-1182-ND	5.51	3.67	3.29	M2T18S4A5G03
	DPDT	On-On	360-1183-ND	6.73	4.66	4.12	M2T22S4A5G03
<b>Washable Sub-Mini Antistatic Toggle Switches</b>							
4	SPDT	On-On	360-1012-ND	4.06	2.52	2.29	B12AP
	SPDT	On-Off-On	360-1013-ND	4.23	2.63	2.38	B13AP
	SPDT	On-Mom	360-1014-ND	4.20	2.70	2.40	B15AP
	DPDT	On-On	360-1015-ND	5.01	3.19	2.92	B22AP
	DPDT	On-Off-On	360-1016-ND	5.29	3.43	3.14	B23AP
	SPDT	On-On	360-2108-ND	4.26	2.74	2.44	B12JB-RO

Fig.	Circuit	Switching Function	Digi-Key Part No.	Price Each			NKK Part No.
				1	25	100	
4	SPDT	On-On	360-1751-ND	4.59	2.87	2.63	B12JH-RO
	SPDT	On-Off-On	360-1753-ND	4.76	2.98	2.72	B13JH-RO
5	SPDT	On-Mom	360-1754-ND	4.87	3.05	2.79	B15JH-RO
	DPDT	On-On	360-1755-ND	5.67	3.78	3.38	B22JH-RO
6	DPDT	On-Off-On	360-1756-ND	6.03	4.02	3.60	B23JH-RO
	SPDT	On-On	360-1752-ND	4.59	2.87	2.63	B12JV-RO
<b>Washable Ultra Mini SMT Toggle Switches</b>							
7	SPDT	On-On	360-1774-ND	5.13	3.33	3.04	G3T12AP-RO
	SPDT	On-Off-On	360-1778-ND	5.30	3.53	3.17	G3T13AP-RO
	DPDT	On-On	360-1779-ND	6.35	4.40	3.89	G3T22AP-RO

Fig.	Circuit	Switching Function	Digi-Key Part No.	Cut Tape Price Each			Digi-Key Part No.	T & R Pricing 500	NKK Part No.
				1	25	100			
<b>Washable Ultra-Miniature SMT Toggle Switch</b>									
8	SPDT	On-On	360-1773-1-ND	6.00	4.80	3.80	360-1773-2-ND	1400.00	G3T12AH-R-RO
	SPDT	On-Off-On	360-1775-1-ND	6.42	5.14	4.07	360-1775-2-ND	1498.00	G3T13AH-R-RO

♦ Actual Length .248" \* Actual Length .500"

More Product Available Online: [www.digikey.com](http://www.digikey.com)



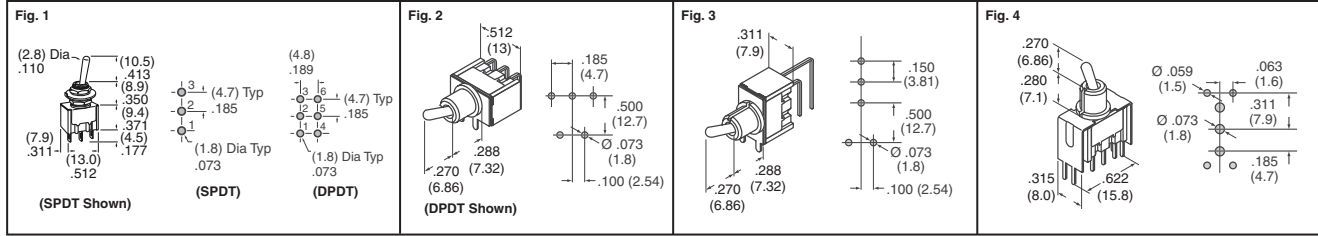
# Miniature Toggle Switches

## NEW! Digi-Key® M Series Miniature Toggle Sample Kit

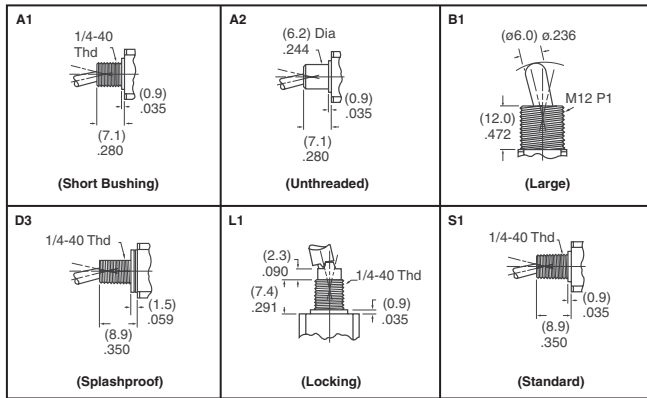
M Series: Over 350,000 different configurations possible, with the most popular listed here. Epoxy sealed terminals, high torque bushings, anti-jamming levers. Available as PCB mount or solder lug terminal for ease of wiring. • **Dielectric strength:** 1,500VAC minimum • **Mechanical Life:** 100,000 operations minimum, 50,000 operations minimum for flat and locking lever • **Electrical Life:** 25,000 operations minimum • **Operating Temperature:** -30°C - 85°C • **Angle of Throw:** 25° • **Standard Hardware:** 2 hex nuts, 1 locking ring, 1 lockwasher

1 each of switches denoted. Includes plastic storage case, bin storage guide and hardware.

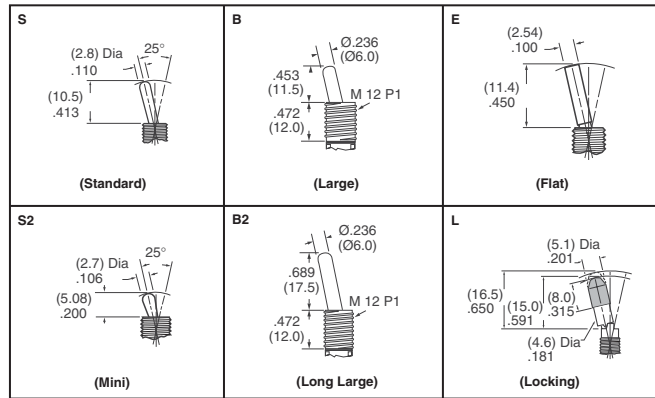
\$ 360-2293-ND 18 Pieces Total — RoHS Compliant ... \$35.00



### Bushings



### Actuators



Circuit	Switching Function	Options		Digi-Key Part No.	Price Each			NKK Part No.
		Actuator	Bushing		1	25	100	
<b>Fig. 1 - Solder Lug 6A Silver Contacts</b>								
SPDT	On-On	B	B1	360-1782-ND	5.93	3.95	3.54	M2012BB1W01-RO
SPDT	On-Off-On	B	B1	360-1804-ND	6.30	4.36	3.86	M2013BB1W01-RO
SPDT	On-Off-Mom	B	B1	360-2067-ND	6.90	4.78	4.23	M2019BB1W01-RO
DPDT	On-On	B	B1	360-1830-ND	7.45	5.07	4.56	M2022BB1W01-RO
DPDT	On-Off-On	B	B1	360-1846-ND	7.97	5.65	5.15	M2023BB1W01-RO
3PDT	On-On	B	B1	360-1858-ND	10.07	7.14	6.79	M2023BB1W01-RO
SPDT	On-On	B2	B1	360-1781-ND	6.14	4.09	3.66	M2012BB2W01-RO
SPDT	On-Off-On	B2	B1	360-1803-ND	6.50	4.50	3.98	M2013BB2W01-RO
SPDT	Mom-Off-Mom	B2	B1	360-2061-ND	7.10	4.83	4.35	M2018BB2W01-RO
DPDT	On-On	B2	B1	360-1829-ND	7.65	5.21	4.75	M2022BB2W01-RO
DPDT	On-Off-On	B2	B1	360-1845-ND	8.16	5.78	5.27	M2023BB2W01-RO
SPDT	On-On	E	S1	360-1784-ND	4.95	3.15	2.88	M2012ES1W01-RO
SPDT	On-Off-On	E	S1	360-1806-ND	5.30	3.53	3.17	M2013ES1W01-RO
SPDT	On-Mom	E	S1	360-2056-ND	5.82	3.88	3.48	M2015ES1W01-RO
SPDT	Mom-Off-Mom	E	S1	360-2062-ND	5.93	3.95	3.54	M2018ES1W01-RO
SPDT	On-Off-Mom	E	S1	360-2068-ND	5.93	3.95	3.54	M2019ES1W01-RO
SP3T	On-On-On	E	S1	360-2072-ND	8.16	5.78	5.27	M2024ES1W01-RO
DPDT	On-On	E	S1	360-1832-ND	6.25	4.33	3.83	M2022ES1W01-RO
DPDT	On-Off-On	E	S1	360-1846-ND	7.10	4.83	4.35	M2023ES1W01-RO
DPDT	On-Mom	E	S1	360-2076-ND	8.00	5.44	4.96	M2023ES1W01-RO
DPDT	On-Off-Mom	E	S1	360-2076-ND	7.97	5.65	5.15	M2023ES1W01-RO
3PDT	On-On	E	S1	360-1860-ND	9.36	6.44	6.05	M2032ES1W01-RO
3PDT	On-Off-On	E	S1	360-1867-ND	11.04	7.83	7.44	M2033ES1W01-RO
4PDT	On-On	E	S1	360-1870-ND	11.75	8.51	7.57	M2042ES1W01-RO
SPDT	On-On	L	L1	360-1787-ND	6.32	4.21	3.77	M2012LL1W01-RO
SPDT	On-Off-On	L	L1	360-1809-ND	6.68	4.62	4.09	M2013LL1W01-RO
SPDT	On-Mom	L	L1	360-2057-ND	7.18	4.88	4.40	M2015LL1W01-RO
DPDT	On-On	L	L1	360-1834-ND	7.83	5.33	4.86	M2022LL1W01-RO
DPDT	On-Off-On	L	L1	360-1849-ND	8.33	5.90	5.38	M2023LL1W01-RO
3PDT	On-On	L	L1	360-1861-ND	10.42	7.39	7.03	M2032LL1W01-RO
3PDT	On-Off-On	L	L1	360-1868-ND	12.22	8.86	7.88	M2033LL1W01-RO
4PDT	On-On	L	L1	360-1871-ND	13.16	9.54	8.49	M2042LL1W01-RO
SPDT	On-On	S	S1	360-1801-ND	4.06	2.52	2.29	M2012SS1W01-RO
SPDT	On-Off-On	S	S1	360-1816-ND	4.59	2.87	2.63	M2013SS1W01-RO
SPDT	On-Mom	S	S1	360-2059-ND	5.06	3.22	2.95	M2015SS1W01-RO
SPDT	Mom-Off-Mom	S	S1	360-2065-ND	5.17	3.29	3.01	M2018SS1W01-RO
SPDT	On-Off-Mom	S	S1	360-2070-ND	5.17	3.29	3.01	M2019SS1W01-RO
SP3T	On-On-On	S	S1	360-2073-ND	7.50	5.10	4.65	M2024SS1W01-RO
DPDT	On-On	S	S1	360-1843-ND	5.46	3.64	3.26	M2022SS1W01-RO
DPDT	On-Off-On	S	S1	360-1853-ND	6.34	4.23	3.79	M2023SS1W01-RO
DPDT	On-Mom	S	S1	360-2076-ND	7.97	4.76	4.29	M2023SS1W01-RO
DPDT	Mom-Off-Mom	S	S1	360-2078-ND	7.30	4.97	4.47	M2028SS1W01-RO
DPDT	On-Off-Mom	S	S1	360-2080-ND	7.30	4.97	4.47	M2029SS1W01-RO
DP3T	On-On-On	S	S1	360-2082-ND	15.40	11.20	10.15	M2044SS1W01-RO
3PDT	On-On	S	S1	360-1865-ND	8.40	5.95	5.43	M2032SS1W01-RO
3PDT	On-Off-On	S	S1	360-1869-ND	10.12	7.18	6.82	M2033SS1W01-RO
3PDT	Mom-Off-Mom	S	S1	360-2081-ND	12.15	8.81	7.83	M2038SS1W01-RO
4PDT	On-On	S	S1	360-1874-ND	11.09	7.86	7.48	M2042SS1W01-RO
4PDT	On-Off-On	S	S1	360-1876-ND	12.96	9.39	8.36	M2043SS1W01-RO
SPDT	On-On	S	D3	360-1089-ND	4.95	3.15	2.88	M2012SD3W01-RO
SPDT	On-Off-On	S	D3	360-1089-ND	5.30	3.53	3.17	M2013SD3W01-RO

Circuit	Switching Function	Options		Digi-Key Part No.	Price Each			NKK Part No.
		Actuator	Bushing		1	25	100	
<b>Fig. 1 - Solder Lug .4VA Gold Contacts — RoHS Compliant</b>								
SPDT	On-Mom	S	D3	360-1090-ND	5.82	3.88	3.48	M2015SD3W01-RO
SPDT	Mom-Off-Mom	S	D3	360-1091-ND	5.93	3.95	3.54	M2018SD3W01-RO
SPDT	On-Off-Mom	S	D3	360-1092-ND	5.93	3.95	3.54	M2019SD3W01-RO
DPDT	On-On	S	D3	360-1093-ND	6.25	4.33	3.83	M2022SD3W01-RO
DPDT	On-Off-On	S	D3	360-1094-ND	7.10	4.83	4.35	M2023SD3W01-RO
DPDT	Mom-Off-Mom	S	D3	360-1095-ND	7.97	5.65	4.98	M2028SD3W01-RO
SPDT	On-On	S2	A1	360-1788-ND	4.06	2.52	2.29	M2012S2A1W01-RO
DPDT	On-On	S2	A1	360-1835-ND	5.46	3.64	3.26	M2022S2A1W01-RO
SPDT	On-On	S2	S1	360-1795-ND	4.06	2.52	2.29	M2012S2S1W01-RO
<b>Fig. 1 - Solder Lug .4VA Gold Contacts — RoHS Compliant</b>								
SPDT	On-On	B2	B1	360-1780-ND	6.45	4.47	3.95	M2012B2B1G01-RO
DPDT	On-On	B2	B1	360-1828-ND	8.38	5.94	5.41	M2022B2B1G01-RO
SPDT	On-Off-ND	E	S1	360-1783-ND	5.25	3.50	3.14	M2012ES1G01-RO
SPDT	On-Off-On	E	S1	360-1805-ND	5.88	3.91	3.51	M2013ES1G01-RO
SP3T	On-On-On	E	S1	360-1855-ND	9.19	6.32	5.94	M2024ES1G01-RO
DPDT	On-On	E	S1	360-1831-ND	7.33	4.99	4.49	M2022ES1G01-RO
DPDT	On-Off-On	E	S1	360-1847-ND	7.85	5.56	5.07	M2023ES1G01-RO
3PDT	On-On	E	S1	360-1859-ND	10.47	7.42	7.06	M2032ES1G01-RO
SPDT	On-On	L	L1	360-1786-ND	6.63	4.59	4.06	M2012LL1G01-RO
SPDT	On-Off-On	L	L1	360-1808-ND	7.23	4.92	4.43	M2013LL1G01-RO
SPDT	On-Mom	L	L1	360-1818-ND	7.73	5.26	4.79	M2015LL1G01-RO
DPDT	On-On	L	L1	360-1833-ND	8.54	6.06	5.52	M2022LL1G01-RO
SPDT	On-On	S	D3	360-1140-ND	5.25	3.50	3.14	M2012SD3G01
SPDT	On-Off-On	S	D3	360-1141-ND	5.88	3.91	3.51	M2013SD3G01
SPDT	Mom-Off-Mom	S	D3	360-1143-ND	6.25	4.33	3.83	M2018SD3G01
DPDT	On-On	S	D3	360-1144-ND	7.33	4.99	4.49	M2022SD3G01
SPDT	On-On	S	S1	360-1799-ND	4.54	2.84	2.60	M2012SS1G01-RO
SPDT	On-Off-On	S	S1	360-1814-ND	5.12	3.26	2.98	M2013SS1G01-RO
SPDT	On-Mom	S	S1	360-1819-ND	5.36	3.57	3.20	M2015SS1G01-RO
SPDT	Mom-Off-Mom	S	S1	360-1823-ND	5.46	3.64	3.26	M2018SS1G01-RO
SPDT	On-Off-Mom	S	S1	360-1826-ND	5.46	3.64	3.26	M2019SS1G01-RO
DPDT	On-On	S	S1	360-1841-ND	6.33	4.38	3.88	M2022SS1G01-RO
SP3T	On-On-On	S	S1	360-1856-ND	8.23	5.84	5.32	M2032SS1G01-RO
3PDT	On-On	S	S1	360-1863-ND	9.96	6.77	6.44	M2038SS1G01-RO
4PDT	On-On	S	S1	360-1872-ND	12.78	9.26	8.24	M2042SS1G01-RO
<b>Fig. 1 - PC Terminal 6A Silver Contacts</b>								
SPDT	On-On	E	S1	360-1785-ND	5.09	3.24	2.96	M2012ES1W03-RO
SPDT	On-Off-On	E	S1	360-1151-ND	5.43	3.62	3.24	M2013ES1W03
SPDT	On-Off-ND	E	S1	360-1807-ND	5.43	3.62	3.24	M2013ES1W03-RO
SPDT	Mom-Off-Mom	E	S1	360-2063-ND	6.06	4.04	3.62	M2018ES1W03-RO
SPDT	On-On	S	S1	360-1802-ND	4.21	2.61	2.37	M2012SS1W03-RO
SPDT	On-Off-On	S	S1	360-1817-ND	4.73	2.96	2.71	M2013SS1W03-RO
SPDT	On-Mom	S	S1	360-2060-ND	5.20	3.31	3.03	M2015SS1W03-RO
SPDT	On-Off-Mom	S	S1	360-2071-ND	5.21	3.38	3.09	M2019SS1W03-RO
SPDT	Mom-Off-Mom	S	S1	360-1081-ND	5.79	4.64	3.67	M2018SS1W03
SPDT	Mom-Off-Mom	S	S1	360-2066-ND	5.21	3.38	3.09	M2018SS1W03-RO
SP3T	On-Off-On	S	S1	360-2074-ND	7.75	5.27	4.81	M2024SS1W03-RO
DPDT	On-On	S	S1	360-1844-ND	5.72	3.81	3.41	M2022SS1W03-RO
DPDT	On-Off-On	S	S1	360-1853-ND	6.35	4.40	3.89	M2023SS1W03-RO

• RoHS Compliant † SP3T uses a Dp Body †† DP3T uses a 4p Body

(Continued)

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Circuit	Switching Function	Options		Digi-Key Part No.	Price Each			NKK Part No.
		Actuator	Bushing		1	25	100	
3PDT	On-On	S	S1	360-1866-ND	8.74	6.01	5.65	M2032SS1W03-R0
4PDT	On-On	S	S1	360-1875-ND	11.27	8.17	7.27	M2042SS1W03-R0
SPDT	On-On	S2	A1	360-1789-ND	4.21	2.61	2.37	M2012S2A1W03-R0
<b>Fig. 1 - PC Terminal .4VA Gold Contacts - RoHS Compliant</b>								
SPDT	On-On	S	S1	360-1800-ND	4.65	2.91	2.66	M2012SS1G03-R0
SPDT	On-Off-On	S	S1	360-1815-ND	5.13	3.33	3.04	M2013SS1G03-R0
SPDT	On-Mom	S	S1	360-1820-ND	5.46	3.64	3.26	M2015SS1G03-R0
SPDT	Mom-Off-Mom	S	S1	360-1824-ND	5.56	3.71	3.32	M2018SS1G03-R0
SPDT	On-Off-Mom	S	S1	360-1827-ND	5.56	3.71	3.32	M2019SS1G03-R0
SP3T	On-On-On	S	S1	360-1857-ND	8.47	6.01	5.48	M2024SS1G03-R0
DPDT	On-On	S	S1	360-1842-ND	6.58	4.55	4.03	M2022SS1G03-R0
DPDT	On-Off-On	S	S1	360-1851-ND	7.43	5.05	4.55	M2023SS1G03-R0
3PDT	On-On	S	S1	360-1864-ND	9.87	7.00	6.55	M2032SS1G03-R0
4PDT	On-On	S	S1	360-1873-ND	13.23	9.59	8.53	M2042SS1G03-R0
<b>Fig. 2 - Right Angle PC Terminal 6A Silver Contacts - RoHS Compliant</b>								
SPDT	On-On	S2	A2	360-1794-ND	4.65	2.91	2.66	M2012S2A2W30-R0
DPDT	On-On	S2	A2	360-1838-ND	6.53	4.52	4.00	M2022S2A2W30-R0
<b>Fig. 2 - Right Angle PC Terminal .4VA Gold Contacts - RoHS Compliant</b>								
SPDT	On-On	S	A2	360-1796-ND	5.17	3.29	3.01	M2012SA2G30-R0
SPDT	On-On	S2	A2	360-1791-ND	5.17	3.29	3.01	M2012S2A2G30-R0
SPDT	On-Off-On	S2	A2	360-1810-ND	5.51	3.67	3.29	M2013S2A2G30-R0

Circuit	Switching Function	Options		Digi-Key Part No.	Price Each			NKK Part No.
		Actuator	Bushing		1	25	100	
SPDT	Mom-Off-Mom	S2	A2	360-1821-ND	6.14	4.09	3.66	M2018S2A2G30-R0
DPDT	On-On	S2	A2	360-1836-ND	7.60	5.17	4.72	M2022S2A2G30-R0
3PDT	On-On	S2	A2	360-1862-ND	11.36	8.06	7.66	M2032S2A2G30-R0

**Fig. 3 - Vertical Right Angle PC Terminal .4VA Gold Contacts - RoHS Compliant**

Circuit	Switching Function	Options		Digi-Key Part No.	Price Each			NKK Part No.
		Actuator	Bushing		1	25	100	
SPDT	On-On	S2	A2	360-1792-ND	5.35	3.47	3.17	M2012S2A2G40-R0
SPDT	On-Off-On	S2	A2	360-1811-ND	5.77	3.85	3.45	M2013S2A2G40-R0
SPDT	On-Off-Mom	S2	A2	360-1825-ND	6.40	4.26	3.82	M2018S2A2G40-R0
DPDT	On-On	S2	A2	360-1837-ND	7.85	5.56	5.07	M2022S2A2G40-R0

**Fig. 4 - Vertical Bracket PC Terminal 6A Silver Contacts - RoHS Compliant**

Circuit	Switching Function	Options		Digi-Key Part No.	Price Each			NKK Part No.
		Actuator	Bushing		1	25	100	
SPDT	On-On	S2	A2	360-1793-ND	4.34	2.79	2.48	M2012S2A2W13-R0

**Fig. 4 - Vertical Bracket PC Terminal .4VA Gold Contacts - RoHS Compliant**

Circuit	Switching Function	Options		Digi-Key Part No.	Price Each			NKK Part No.
		Actuator	Bushing		1	25	100	
SPDT	On-On	S2	A2	360-1790-ND	4.87	3.10	2.84	M2012S2A2G13-R0

♦ RoHS Compliant † SP3T uses a Dp Body †† DP3T uses a 4p Body

**Splashproof Boots**



Description	Digi-Key Part No.	Price Each			NKK Part No.
		1	25	100	
Black for 1/4-40 Thd Bushing and .413" (10.49mm) Bat Height	360-1750-ND	3.12	1.93	1.70	AT428H
Gray for M12 Bushing and .689" (17.50mm) Bat Height	360-1706-ND	3.94	2.45	2.22	AT402H
Red for M12 Bushing and .689" (17.50mm) Bat Height	360-1707-ND	3.94	2.45	2.22	AT402C
Yellow for M12 Bushing and .689" (17.50mm) Bat Height	360-1708-ND	3.94	2.45	2.22	AT402E

**Power Toggle Switches**

**Features:** • NKK offers one of the most extensive lines of power toggle switches • Standard switching currents of 15, 25 and 30 Amps • Locking lever type is ideal for preventing accidental switching, lever must be pulled out then switched • All toggles come complete with mounting hardware **Specifications:** • Dielectric Strength: 2000V AV minimum • Mechanical Life: 50,000 operations minimum • Operating Temperature: -10°C - 70°C



Dimensions in Inch (mm)

**Fig. 1 - Solder Terminal**

3 Pole Shown

**Fig. 2 - QC Terminal**

1 Pole Shown

**Fig. 3 - Locking Lever**

**Fig. 4 - Screw Terminal**

**Fig. 5**

**Fig. 6 - HD Screw Terminal**

**Fig. 7**

Red/Black Background with "ON" and "OFF" in White Lettering

**Fig. 8**

Full-Boot Half-Boot

Fig.	Circuit	Function	Switch Current (125VAC)	Digi-Key Part No.	Price Each			NKK Part No.	
					1	25	100		
<b>Medium and High Capacity, Solder Lug</b>									
1	SPST	On-Off	15A	360-1896-ND*	5.09	3.24	2.96	S301-R0	
	SPDT	On-On	15A	360-1898-ND*	5.09	3.24	2.96	S302-R0	
	SPDT	On-Off-On	15A	360-1900-ND*	5.20	3.46	3.10	S303-R0	
	SPDT	On-Mom	15A	360-1902-ND†	5.33	3.55	3.18	S305-R0	
	SPDT	Mom-Off-Mom	15A	360-1904-ND†	5.43	3.62	3.24	S308-R0	
	SPDT	On-Off-Mom	15A	360-1906-ND†	5.62	3.74	3.35	S309-R0	
	DPST	On-Off	25A	360-2087-ND*	6.98	4.83	4.27	S331-R0	
	DPDT	On-On	25A	360-2089-ND*	6.98	4.83	4.27	S332-R0	
	DPDT	On-Off-On	25A	360-1909-ND*	7.82	5.55	5.06	S333-R0	
	DPDT	On-Mom	15A	360-1911-ND*	7.90	5.60	5.10	S335-R0	
	DPDT	Mom-Off-Mom	15A	360-1913-ND†	8.59	6.09	5.55	S338-R0	
	DPDT	On-Off-Mom	15A	360-1915-ND†	8.59	6.09	5.55	S339-R0	
2	3PST	On-Off	25A	360-2083-ND†	9.46	6.51	6.11	S31-R0	
	3PDT	On-On	25A	360-2085-ND†	9.72	6.61	6.28	S32-R0	
	3PDT	On-Off-On	25A	360-1908-ND†	10.05	7.13	6.78	S35-R0	
	3PDT	On-Mom	15A	360-1918-ND*	10.05	7.13	6.78	S35-R0	
	3PDT	Mom-Off-Mom	15A	360-1919-ND*	10.05	7.13	6.78	S38-R0	
	4PST	On-Off	25A	360-2091-ND†	10.72	7.60	7.23	S41-R0	
	4PDT	On-On	25A	360-2093-ND†	10.72	7.60	7.23	S42-R0	
	4PDT	On-Off-On	25A	360-1923-ND†	11.30	8.19	7.28	S43-R0	
	4PDT	On-Mom	15A	360-1925-ND†	11.30	8.19	7.28	S45-R0	
	<b>Medium and High Capacity, .250" (6.35mm) Quick Connect</b>								
	2	SPST	On-Off	15A	360-1887-ND	4.48	2.80	2.56	S1F-R0
		SPDT	On-On	15A	360-1895-ND	5.14	3.28	3.00	S2F-R0
SPDT		On-Off-On	15A	360-1922-ND	5.24	3.40	3.11	S3F-R0	
DPST		On-Off	15A	360-1889-ND	6.08	4.05	3.63	S21F-R0	
DPDT		On-On	20A	360-1929-ND	7.15	4.87	4.38	S6F-R0	
DPDT		On-Off-On	20A	360-1932-ND	7.20	4.90	4.41	S7F-R0	
3PST		On-Off	25A	360-2084-ND*	9.78	6.93	6.59	S31F-R0	
3PDT		On-On	25A	360-2086-ND*	10.05	7.13	6.78	S32F-R0	
3PDT		On-Off-On	25A	360-1917-ND*	10.76	7.63	7.26	S33F-R0	
4PST		On-Off	25A	360-2092-ND*	11.34	8.04	7.65	S41F-R0	
4PDT		On-On	25A	360-2094-ND*	11.39	8.25	7.34	S42F-R0	
4PDT		On-Off-On	25A	360-1924-ND†	12.20	8.84	7.86	S43F-R0	
<b>Medium Capacity, Solder Lug, Locking Lever with Panel Seal</b>									
3	SPST	On-Off	15A	360-1885-ND	11.54	8.37	7.44	S1AL-R0	
	SPDT	On-On	15A	360-1893-ND	12.78	9.26	8.24	S2AL-R0	
	SPDT	On-Off-On	15A	360-1920-ND	13.05	9.46	8.41	S3AL-R0	
	DPDT	On-On	20A	360-1927-ND	14.96	10.88	9.86	S6AL-R0	
	DPDT	On-Off-On	20A	360-1930-ND	15.07	10.96	9.94	S7AL-R0	

Fig.	Circuit	Function	Switch Current (125VAC)	Digi-Key Part No.	Price Each			NKK Part No.
					1	25	100	
<b>Medium Capacity, Screw Lug</b>								
4	SPST	On-Off	15A	360-1897-ND*	5.28	3.52	3.15	S301T-R0
	SPDT	On-On	15A	360-1899-ND*	5.43	3.62	3.24	S302T-R0
	SPDT	On-Off-On	15A	360-1901-ND*	5.75	3.83	3.43	S303T-R0
	SPDT	On-Mom	15A	360-1903-ND†	5.62	3.74	3.35	S305T-R0
	SPDT	Mom-Off-Mom	15A	360-1905-ND†	6.21	4.14	3.71	S308T-R0
	SPDT	On-Off-Mom	15A	360-1907-ND†	6.21	4.14	3.71	S309T-R0
	DPST	On-Off	15A	360-2088-ND*	7.78	5.29	4.83	S331T-R0
	DPDT	On-On	15A	360-2090-ND*	7.82	5.55	5.06	S332T-R0
	DPDT	On-Off-On	15A	360-1910-ND*	8.81	6.06	5.69	S333T-R0
	DPDT	On-Mom	15A	360-1912-ND*	9.02	6.21	5.83	S335T-R0
	DPDT	Mom-Off-Mom	15A	360-1914-ND*	9.46	6.51	6.11	S338T-R0
	DPDT	On-Off-Mom	15A	360-1916-ND*	9.72	6.61	6.28	S339T-R0
<b>Medium Capacity, Solder Lug with Panel Seal</b>								
5	SPDT	On-Off	15A	360-1886-ND	9.72	6.61	6.28	S1AW-R0
	SPDT	On-On	15A	360-1894-ND	10.12	7.18	6.82	S2AW-R0
	SPDT	On-Off-On	15A	360-1921-ND	10.65	7.55	7.18	S3AW-R0
	SPDT	On-Mom	15A	360-1926-ND	9.66	6.55	6.51	S5AW-R0
	SPDT	Mom-Off-Mom	15A	360-1933-ND	10.19	7.23	6.87	S8AW-R0
	SPDT	On-Off-Mom	15A	360-1934-ND	10.19	7.23	6.87	S9AW-R0
	DPDT	On-On	20A	360-1928-ND	12.89	9.34	8.31	S6AW-R0
	DPDT	On-Off-On	20A	360-1931-ND	12.94	9.38	8.34	S7AW-R0
	DPST	On-Off	15A	360-1888-ND	11.43	8.29	7.37	S21AW-R0
	DPDT	On-Mom	15A	360-1890-ND	12.94	9.38	8.34	S25AW-R0
	DPDT	Mom-Off-Mom	15A	360-1891-ND	13.46	9.75	8.68	S28AW-R0
	DPDT	On-Off-Mom	15A	360-1892-ND	13.46	9.75	8.68	S29AW-R0
<b>High Capacity, Screw Lug</b>								
6	DPST	On-Off	30A	360-2096-ND*	20.90	16.20	14.63	S821-R0
	DPDT	On-On	30A	360-2097-ND*	23.88	18.51	16.52	S822-R0
	DPDT	On-Off-On	30A	360-2098-ND*	21.50	16.67	15.05	S823-R0
	3PST	On-Off	30A	360-2099-ND*	29.99	23.07	21.54	S831-R0
	3PDT	On-On	30A	360-2100-ND*	36.17	27.83	25.97	S832-R0
	3PDT	On-Off						

# NKK® Environmentally Sealed Switches

For use in outdoor or harsh applications.



### Features:

- Sealing at front and back panel meets IP67 of IEC60529 and IP60 Standards
- Single unit construction of bushing and case gives added protection from environmental elements
- Anti-jamming design protects contacts from damage due to excessive downward force on the toggle
- Specially designed contact mechanism for breaking light contact welds
- Minimal contact bounce achieved with designed interlocked switching mechanism

### Specifications:

- Electrical Capacity:** Toggle: 10A @ 125VAC; Rocker: 15A @ 125VAC
- Dielectric Strength:** Toggle: 1,500VAC minimum; Rocker: 3,750VAC minimum between contacts and case
- Mechanical Life:** 30,000 operations minimum
- Electrical Life:** 15,000 operations minimum
- Operating Temperature:** Toggle: -30°C ~ 70°C; Rocker: -25°C ~ 85°C
- Angle of Throw:** 24°
- Panel Thickness:** .157" (4.0mm)
- Standard Hardware:** Toggle: 1 hex nut, 1 lockwasher, 1 O-ring
- Color:** Black

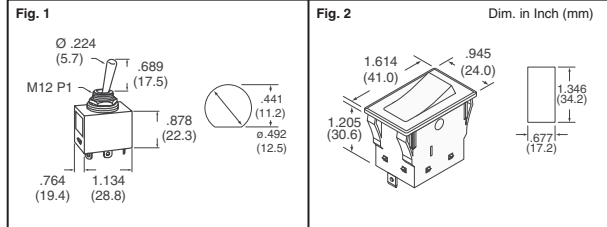


Fig.	Switching Circuit	Termination	Function	Digi-Key Part No.	1	25	100	NKK Part No.
<b>Sealed Toggle — 10A</b>								
1	SPST	Solder Lug	On-Off	360-1951-ND	11.25	8.15	7.25	WT11S-RO
	SPST	Screw Lug	On-Off	360-1952-ND	12.04	8.73	7.76	WT11T-RO
	SPDT	Solder Lug	On-On	360-1953-ND	11.93	8.64	7.69	WT12S-RO
	SPDT	Screw Lug	On-On	360-1954-ND	12.71	9.21	8.20	WT12T-RO
	SPDT	Solder Lug	On-Off-On	360-1955-ND	12.56	9.10	8.10	WT13S-RO
	SPDT	Screw Lug	On-Off-On	360-1956-ND	13.34	9.67	8.60	WT13T-RO
	DPST	Solder Lug	On-Off	360-1957-ND	16.13	11.73	10.63	WT21S-RO
	DPST	Screw Lug	On-Off	360-1958-ND	16.86	12.45	11.45	WT21T-RO
	DPDT	Solder Lug	On-On	360-1959-ND	16.79	12.21	10.88	WT22S-RO
	DPDT	Screw Lug	On-On	360-1960-ND	17.49	12.92	11.88	WT22T-RO
1	DPDT	Solder Lug	On-Off-On	360-1961-ND	17.43	12.87	11.83	WT23S-RO
	DPDT	Screw Lug	On-Off-On	360-1962-ND	18.90	13.95	12.83	WT23T-RO
<b>Sealed Rocker — 15A</b>								
2	SPST	.250" QC	On-Off	360-2277-ND	11.45	8.30	7.39	WR11AF
	SPST	Solder Lug	On-Off	360-1507-ND	11.45	8.30	7.39	WR11AS
	SPST	Solder Lug	On-Off	360-1510-NDA	11.45	8.30	7.39	WR11BS
	SPDT	.250" QC	On-On	360-2278-ND	12.06	8.74	7.78	WR12AF
	SPDT	Solder Lug	On-On	360-1513-ND	12.06	8.74	7.78	WR12AS
	SPDT	Solder Lug	On-On	360-1516-NDA	12.06	8.74	7.78	WR12BS
	SPDT	.250" QC	On-Off-On	360-2279-ND	12.69	9.20	8.18	WR13AF
	SPDT	Solder Lug	On-Off-On	360-1519-ND	12.69	9.20	8.18	WR13AS
	SPDT	Solder Lug	On-Off-On	360-1522-NDA	12.69	9.20	8.18	WR13BS
	SPDT	.250" QC	On-Mom	360-2280-ND	13.62	9.91	8.98	WR15AF
	SPDT	.250" QC	Mom-Off-Mom	360-2281-ND	15.42	11.22	10.17	WR18AF
	SPDT	.250" QC	On-Off-Mom	360-2282-ND	15.42	11.22	10.17	WR19AF

▲ Ivory

## Fully Illuminated Toggle and Paddle Switches

**TL Series:** Interior O-ring protects contacts from oil, dust, water, and other contaminants  
**Specifications:** • Power Level: 6A @ 125VAC • Electrical Life: 25,000 operations minimum • Sealing Ring: Nitrile butadiene rubber • Operating Temperature: -10°C ~ 55°C • IP65 Panel seal when used with optional AT401P O-ring

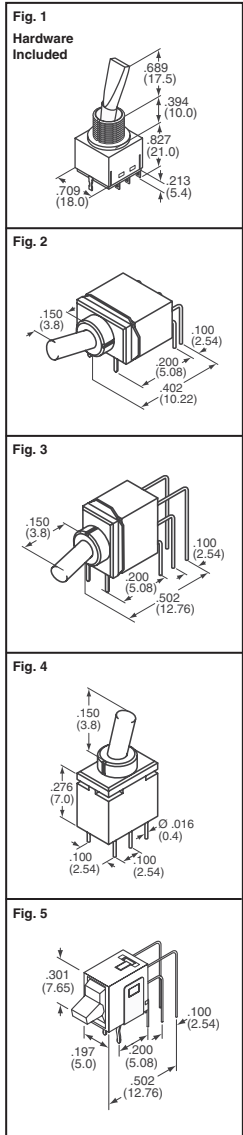
**G Series:** Totally sealed body construction prevents contact contamination and allows time and money saving automated soldering and washing  
**Specifications:** • Logic Level: 0.4VA maximum @ 28V AC/DC maximum • Electrical Life: 50,000 operations minimum • Sealing Rings: Nitrile butadiene rubber • Operating Temperature: -25°C ~ 55°C

**Sealing Rings:** Nitrile butadiene rubber • Non-Illuminated Operating Temperature: -25°C ~ 85°C • Illuminated Operating Temperature: -25°C ~ 55°C

**GW Series:** World's smallest fully illuminated paddles for highly visible status indication. Specially designed switching mechanism provides crisp actuation feedback to positively indicate circuit transfer. **Specifications:** • Logic Level: 0.4VA maximum @ 28V AC/DC maximum • Electrical Life: 50,000 operations minimum • Sealing Rings: Nitrile butadiene rubber • Operating Temperature: -25°C ~ 55°C

Fig.	Switch Circuit	Actuator Function	Illumination Color	Color	Digi-Key Part No.	1	25	100	NKK Part No.
<b>Fully Illuminated Toggle Switches</b>									
1	DPDT	On-On	Red	Bright Red	360-1939-ND	12.13	8.79	7.82	TL22DCAW015C-RO
	DPDT	On-On	Amber	Bright Amber	360-1940-ND	12.13	8.79	7.82	TL22DDAW015D-RO
	DPDT	On-On	Green	Bright Green	360-1941-ND	12.13	8.79	7.82	TL22DFAW015F-RO
	DPDT	On-On	Clear	Super Bright White	360-1713-ND	14.52	10.56	9.57	TL22DNAW016B-RO
	DPDT	On-On	Clear	Super Bright White	360-1942-ND	14.52	10.56	9.57	TL22DNAW016B-RO
	DPDT	On-On	Clear	Super Bright Blue	360-1944-ND	14.52	10.56	9.57	TL22DNAW016F-RO
DPDT	On-On	Clear	Super Bright Green	360-1943-ND	14.52	10.56	9.57	TL22DNAW016F-RO	
—	Panel Seal O-Ring for TL Toggles.....				360-1719-ND	.92	.48	.40	AT401P
<b>Ultra-Miniature Fully Illuminated Toggle Switches Process Sealed</b>									
2	SPDT	On-On	Clear	Red	360-1760-ND	7.25	4.93	4.44	G12JHC-RO
	SPDT	On-On	Clear	Amber	360-1688-ND	7.25	4.93	4.44	G12JHD
	SPDT	On-On	Clear	Amber	360-1762-ND	7.25	4.93	4.44	G12JHD-RO
	SPDT	On-On	Clear	Green	360-1691-ND	7.25	4.93	4.44	G12JHF
	SPDT	On-On	Clear	Green	360-1763-ND	7.25	4.93	4.44	G12JHF-RO
	SPDT	On-On	Clear	Red/Green	360-1761-ND	8.16	5.78	5.27	G12JHCF-RO
SPDT	On-Off-On	Clear	Red/Green	360-1771-ND	8.42	5.97	5.45	G13JHCF-RO	
3	SPDT	On-On	Clear	Red	360-1764-ND	7.25	4.93	4.44	G12JVC-RO
	SPDT	On-On	Clear	Amber	360-1690-ND	7.25	4.93	4.44	G12JVD
	SPDT	On-On	Clear	Amber	360-1766-ND	7.25	4.93	4.44	G12JVD-RO
	SPDT	On-On	Clear	Green	360-1767-ND	7.25	4.93	4.44	G12JVJF-RO
	SPDT	On-On	Clear	Red/Green	360-1765-ND	8.16	5.78	5.27	G12JVJCF-RO
SPDT	On-Off-On	Clear	Red/Green	360-1772-ND	8.42	5.97	5.45	G13JVJCF-RO	
4	SPDT	On-On	Clear	Red	360-1686-ND	6.48	4.49	3.97	G12JPC
	SPDT	On-On	Clear	Amber	360-1689-ND	6.48	4.49	3.97	G12JPD
	SPDT	On-On	Clear	Green	360-1692-ND	6.48	4.49	3.97	G12JPF
	SPDT	On-On	Clear	Red/Green	360-1695-ND	7.70	5.24	4.78	G12JPCF
	SPDT	On-Off-On	Clear	Red/Green	360-1698-ND	7.98	5.43	4.95	G13JPCF
<b>Ultra-Miniature Non-Illuminated Toggle Switches Process Sealed — RoHS Compliant</b>									
2	SPDT	On-On	Gray	—	360-1757-ND	4.81	3.07	2.80	G12AH-RO
	SPDT	On-Off-On	Gray	—	360-1768-ND	5.03	3.21	2.93	G13AH-RO
3	SPDT	On-Off-On	Gray	—	360-1759-ND	4.81	3.07	2.80	G12AV-RO
	SPDT	On-Off-On	Gray	—	360-1770-ND	5.03	3.21	2.93	G13AV-RO
4	SPDT	On-On	Gray	—	360-1758-ND	4.26	2.74	2.44	G12AP-RO
	SPDT	On-Off-On	Gray	—	360-1769-ND	4.48	2.80	2.56	G13AP-RO
<b>Ultra Thin Fully Illuminated Paddles — RoHS Compliant</b>									
5	SPDT	On-On	Clear	Red	360-2117-ND	6.45	4.30	3.85	GW12LJVC-RO
	SPDT	On-On	Clear	Amber	360-2118-ND	6.45	4.30	3.85	GW12LJVD-RO
	SPDT	On-On	Clear	Green	360-2119-ND	6.45	4.30	3.85	GW12LJVJF-RO

◆ RoHS Compliant



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