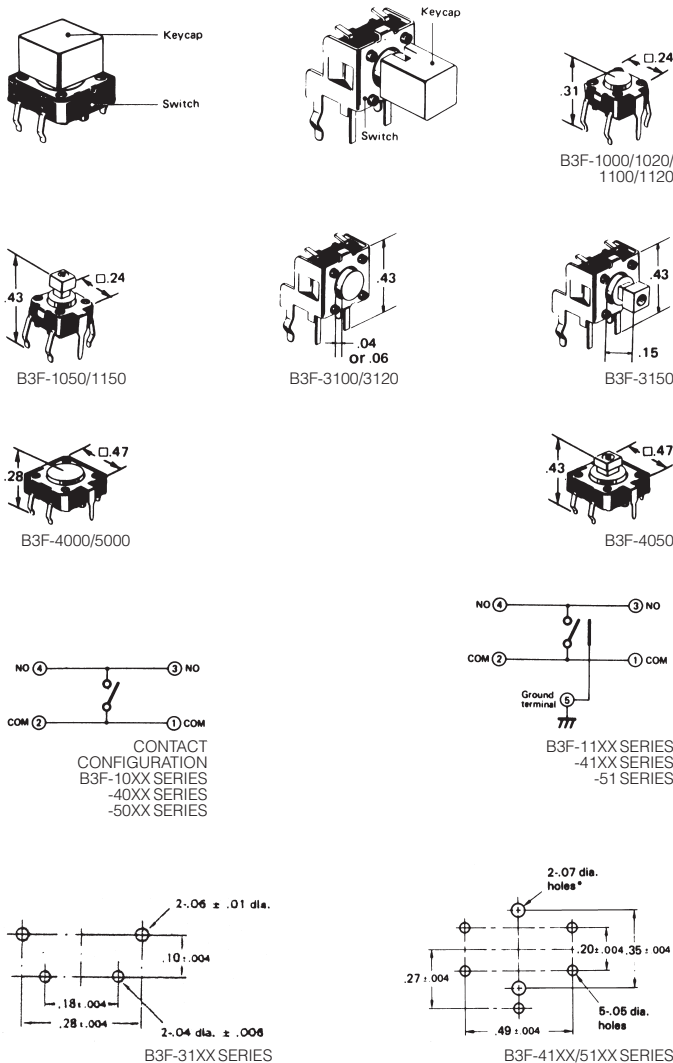


OMRON®

Tactile Switches



OMRON B3F SERIES MECHANICAL KEYSWITCHES

Long Service Life (10 x 10⁶ Operations Min.) Comparable to Solid-state Switches.

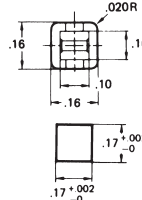
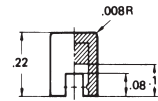
FEATURES:

- Flux-tight construction allows automatic soldering of the keyswitches onto a PC board.
- All switches are miniature, low profiled and housed in a .24" x .24" (6mm x 6mm) or .47" x .47" (12mm x 12mm) case.
- Snap-action contact mechanism assures short key stroke with positive feed back.
- Flat plunger and projected plunger types with a ground terminal for protection against electrostatic discharge also available.
- Long mechanical/electrical service life: 10 x 10⁶ operations for .47" x .47" (12mm x 12mm) type and 1 x 10⁶ operations for the .24" x .24" (6mm x 6mm) type.
- Ideal for applications such as audio, office and communications equipment, measuring instruments, TV's, VTR's, etc.

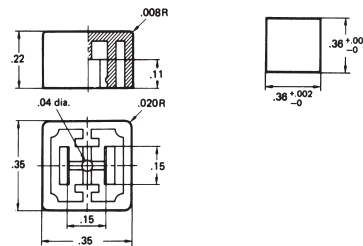
OMRON B3F SERIES MECHANICAL KEYSWITCH LONG SERVICE LIFE (10 x 10⁶ OPERATIONS MIN.) [50MA, 24VDC (RESISTIVE LOAD) SPST-NO (MOMENTARY CONTACT)]

Cat. No.	Type	Plunger	Switch Height x Pitch	Ground Terminal	Net Price
6MM x 6MM GENERAL PURPOSE TYPE (OF = 100g)					
∅ B3F-1000	Standard	Flat	4.3 x 6.5	No	\$.46
∅ B3F-1100	Standard	Flat	4.3 x 6.5	Yes	\$.54
∅ B3F-1020	Standard	Flat	5.0 x 6.5	No	\$.54
∅ B3F-1120	Standard	Flat	5.0 x 6.5	Yes	\$.54
∅ B3F-1110	Standard	Flat	5.0 x 7.5	Yes	\$.54
∅ B3F-1050	Standard	Projected	7.3 x 6.5	No	\$.54
∅ B3F-1150	Standard	Projected	7.3 x 6.5	Yes	\$.54
∅ B3F-3100	Vertical	Flat	3.15	Yes	\$.75
∅ B3F-3120	Vertical	Flat	3.85	Yes	\$.75
∅ B3F-3150	Vertical	Projected	6.15	Yes	\$.75
6MM x 6MM HIGH FORCE TYPE (OF = 150g)					
∅ B3F-1002	Standard	Flat	4.3 x 6.5	No	\$.54
∅ B3F-1102	Standard	Flat	4.3 x 6.5	Yes	\$.54
∅ B3F-1052	Standard	Projected	7.3 x 6.5	No	\$.54
12MM x 12MM GENERAL PURPOSE TYPE (OF = 130g)					
∅ B3F-4000	Standard	Flat	4.3 x 12.5	No	\$.75
∅ B3F-4100	Standard	Flat	4.3 x 12.5	Yes	\$.89
∅ B3F-4050	Standard	Projected	7.3 x 12.5	No	\$.75
∅ B3F-4150	Standard	Projected	7.3 x 12.5	Yes	\$.89
∅ B3F-5000	L.S.F.*	Flat	4.3 x 12.5	No	\$.89
∅ B3F-5100	L.S.F.*	Flat	4.3 x 12.5	Yes	1.08

*L.S.F. = Long Service Life



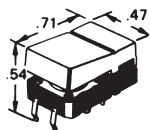
B32-10XX SERIES KEY CAPS



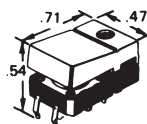
B32-12XX SERIES KEY CAPS

B3F KEYCAPS

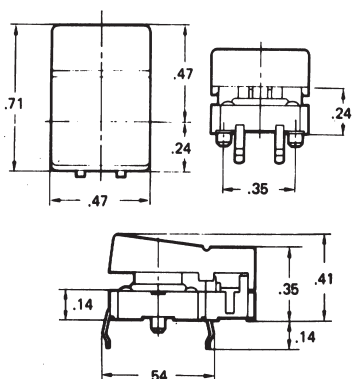
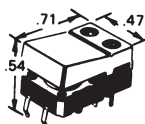
Cat. No.	Colour	Net Price
6 x 6MM SWITCH SIZE		
4 x 4MM KEYCAP SIZE		
∅ B32-1000	Light Grey	\$.45
∅ B32-1010	Black	\$.45
∅ B32-1020	Orange	\$.45
∅ B32-1030	Yellow	\$.45
∅ B32-1040	Blue	\$.45
12 x 12MM SWITCH SIZE		
9 x 9MM KEYCAP SIZE		
∅ B32-1200	Light Grey	\$.45
∅ B32-1210	Black	\$.45
∅ B32-1220	Orange	\$.45
∅ B32-1230	Yellow	\$.45
∅ B32-1240	Blue	\$.45



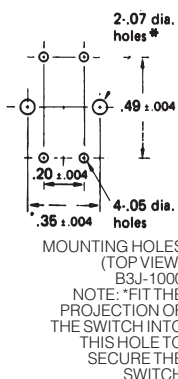
B3J-1000



B3J-5000R
KEYCAPS



DIMENSIONS



OMRON B3J SERIES MECHANICAL KEYSWITCHES

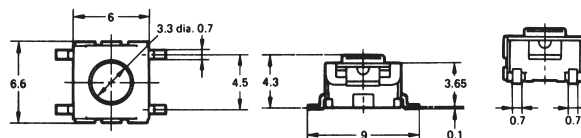
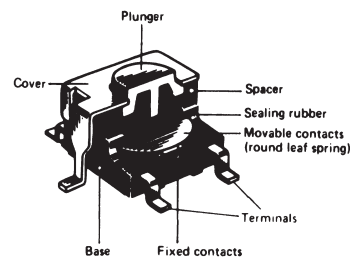
Hinge Type with Wide Variations in Button/LED Colours.

FEATURES:

- Flux-tight structure allows automatic soldering of the keyswitches onto a PC board.
- Hook type hinge mechanism provides a feel of sharp snap-action upon button depression.
- Single LED and double LED types available in addition to the versions without LED indicator.
- Hinged buttons available in light grey.
- Ideal for applications such as audio, office and communications equipment, measuring instruments, TV's, VCR's, etc.

OMRON B3J SERIES MECHANICAL KEYSWITCH [50MA, 24VDC (RESISTIVE LOAD) SPST-NO (MOMENTARY CONTACT)]

Cat. No.	LED Type	LED Colour	Switch Height x Pitch	Ground Terminal	Net Price
.71" x .47" (OF = 4.6 ± 1.8 OZ).					
B3J-1000	No	—	.41" x .54"	No	\$2.07
B3J-2000	Single	Red	.41" x .54"	No	3.68
B3J-3000	Single	Yellow	.41" x .54"	No	3.68
B3J-4000	Single	Green	.41" x .54"	No	3.68
B3J-5000	Double	Red/Yellow	.41" x .54"	No	5.20



DIMENSIONS
B3S-1000-1002

OMRON B3S SERIES MECHANICAL KEYSWITCHES

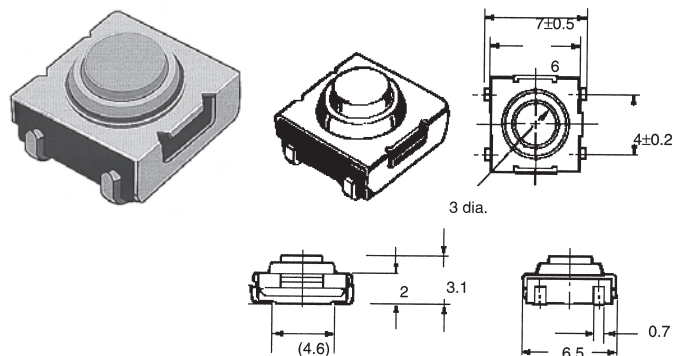
Surface-mount Version Ideal for High Density Packing.

FEATURES:

- Sealed construction allows immersion-cleaning of the PC board with the keyswitches mounted and soldered.
- Ground terminal available to protect against static electricity.
- Ideal for applications such as audio, office, and communications equipment, measuring instruments, industrial robots, VCR's, TV's, and vending machines.

OMRON B3S SERIES MECHANICAL KEYSWITCHES [50MA, 24VDC (RESISTIVE LOAD) SPST-NO (MOMENTARY CONTACT)]

Cat. No.	Type	Plunger	Switch Height x Pitch	Ground Terminal	Net Price
.24" x .24" (6MM x 6MM), (OF = 160G). GENERAL PURPOSE TYPE					
B3S-1000	Standard	Flat	4.3mm x 9mm	No	\$1.06
B3S-1100	Standard	Flat	4.3mm x 9mm	Yes	1.06
.24MM x .24MM (6MM x 6MM), (OF = 230G). HIGH LOAD TYPE					
B3S-1002	Standard	Flat	4.3mm x 9mm	No	1.06
B3S-1102	Standard	Flat	4.3mm x 9mm	Yes	1.06



B3SN MECHANICAL KEYSWITCH (SMD)

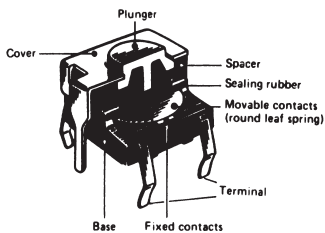
FEATURES:

- Ideal mechanical key switch for surface mounting.
- Compact and more than 1 mm thinner than conventional mechanical key switches.
- Available with ground terminals for protection against static electricity.
- Sealed construction conforming to IP62 (IEC-529) provides high reliability in dusty or humid environments.

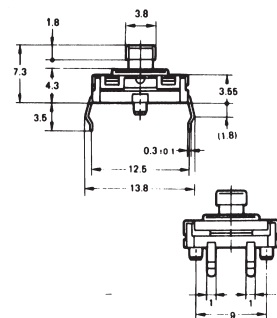
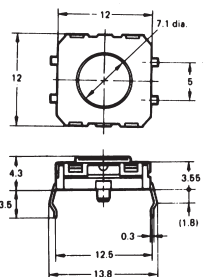
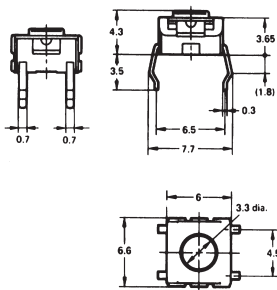
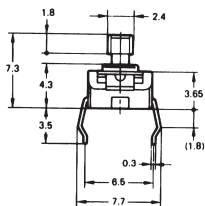
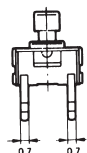
B3SN MECHANICAL KEY SWITCH SURFACE MOUNT

Cat. No.	Type	Switch Height x Pitch	Ground Terminal	Contact Form	Net Price
SMD-Sealed Bulk Packaging					
B3SN-3012	Bulk Packaging	3.1 x 6.5mm	No	SPST	\$1.56
B3SN-3112	Bulk Packaging	3.1 x 6.5mm	Yes	SPST	1.56
B3SN-3012P	Embossed Tape*	3.1 x 6.5mm	No	SPST	1.58
B3SN-3112P	Embossed Tape*	3.1 x 6.5mm	Yes	SPST	1.58

*Embossed tape must be ordered in 3kpcs multiples.



6-MM SQUARE TYPES
B3W-1000
B3W-1050



12-MM SQUARE TYPES
B3W-4000
B3W-4050

OMRON B3W SERIES MECHANICAL KEYSWITCHES

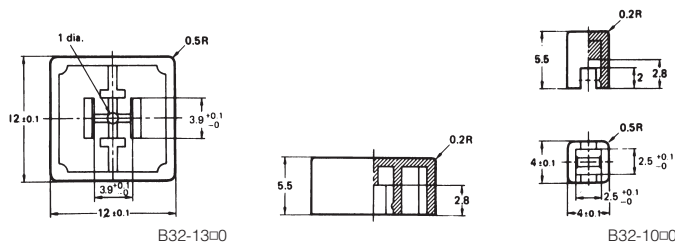
Sealed Construction Allows Immersion Cleaning after Automatic Soldering.

FEATURES:

- Available in two sizes: .24" (6mm) square and .47" (12mm) square.
- Snap-action contact mechanism assures short key stroking and a sharp click to confirm input.
- Ground terminal available to protect against static electricity.
- Ideal for applications such as audio, office, and communications equipment, measuring instruments, TV's, VCR's, industrial robots, and vending machines.

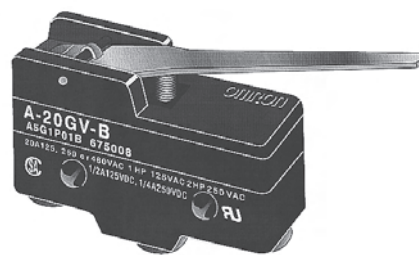
OMRON B3W SERIES MECHANICAL KEYSWITCH [50MA, 24VDC (RESISTIVE LOAD) SPST-NO (MOMENTARY CONTACT)]

Cat. No.	Type	Plunger	Switch Height x Pitch	Ground Terminal	Net Price
.24" x .24" (6MM x 6MM), (OF = 160G).					
B3W-1000	Standard	Flat	4.3mm x 6.5mm	No	\$.88
B3W-1050	Standard	Projected	7.3mm x 6.5mm	No	.88
B3W-1100	Standard	Flat	4.3mm x 6.5mm	Yes	.88
B3W-1150	Standard	Projected	7.3mm x 6.5mm	Yes	.88
.47" x .47" (12MM x 12MM), (OF = 200G).					
B3W-4000	Standard	Flat	4.3mm x 12.5mm	No	1.04
B3W-4050	Standard	Projected	7.3mm x 12.5mm	No	1.04
B3W-4100	Standard	Flat	7.3mm x 12.5mm	Yes	1.04
B3W-4150	Standard	Projected	4.3mm x 12.5mm	Yes	1.04

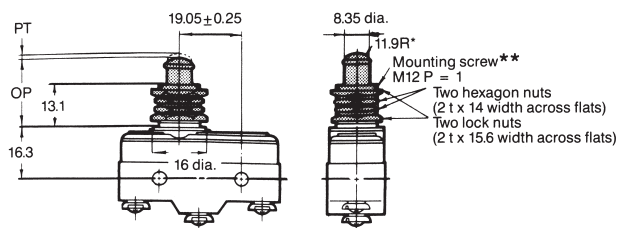


B3W KEYCAPS		
Cat. No.	Colour	Net Price
6MM x 6MM SWITCH SIZE 4MM x 4MM KEYCAP SIZE		
B32-1000	Light Grey	\$.45
B32-1010	Black	.45
B32-1020	Orange	.45
12MM x 12MM SWITCH SIZE 12MM x 12MM KEYCAP SIZE		
B32-1300	Light Grey	.45
B32-1310	Black	.45
B32-1320	Orange	.45
B32-1330	Yellow	.45
B32-1340	Blue	.45

Unsealed Snap Action Switches

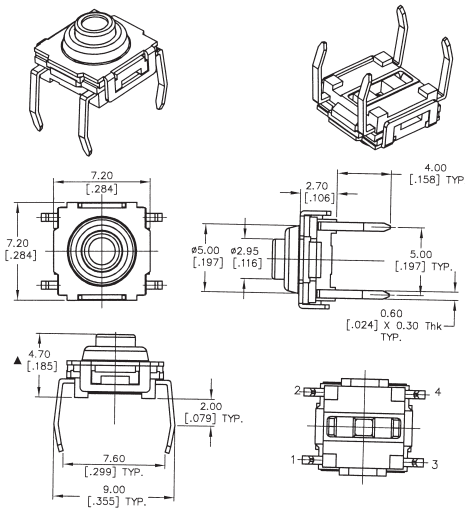


OMRON A



A-20GV-B-K

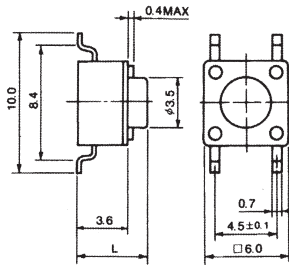
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TL6100 SEALED TACTILE SWITCH

The TL6100 series switches are rated at a switching power of 1 VA for silver contacts, and 0.2 VA for gold. Maximum switching voltage is 50 volts and initial contact resistance is 50m ohms @ 5 VDC. Operating temperatures range from -40C to +85C for silver contacts; and -40C to +125C for gold contacts. An earth ground terminal is available as an option.

Cat. No.	Switch Function	Operating Force	Dim "L" (mm)	Net Price
TL6100AF130QP	SPST	130 ± 40gf	7.2	\$.58
TL6100AF160QP	SPST	160 ± 40gf	7.2	\$.58
TL6100AF300QP	SPST	300 ± 50gf	7.2	\$.58

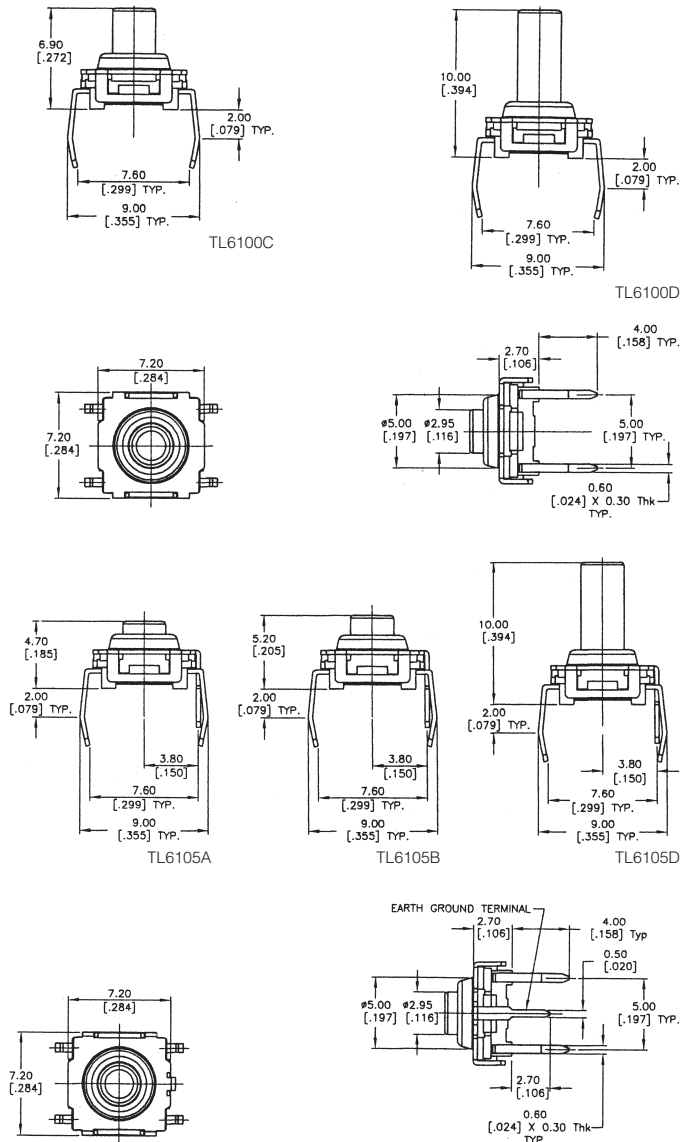
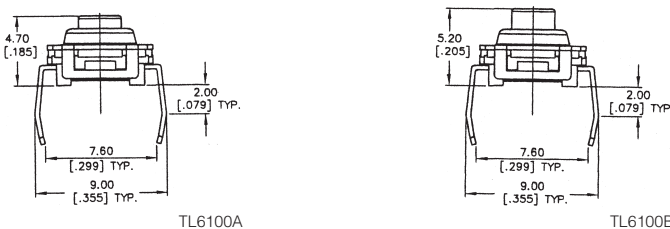


SERIES TL SURFACE MOUNT TACT SWITCHES

SPECIFICATIONS: Rating: 50mA @ 50VDC. Mechanical life: 100,000 cycles typical. Contact resistance: 20MΩ max. initial @ 2-4 VDC 100mA for both silver and gold plated contacts. Insulation resistance: 100MΩ min. Dielectric strength: 1,000 V RMS at sea level. Operating force: 260 ± 50 gf. **MATERIALS:** Polyphenylene sulfide (PPS) or 4/6 nylon. Actuator: Polyphenylene sulfide (PPS) or 6/6 nylon. Bracket/cover: Tin plated steel. **CONTACT MATERIAL OPTIONS (Q):** Silver plated phosphor bronze. **CONTACT MATERIAL OPTIONS (R):** Gold over nickel phosphor bronze. Terminals: Silver plated brass.

Cat. No.	Contacts	Contact Material	Dim "L" (mm)	Net Price
TL3301SPF260QG	DPDT	Q	2.8	\$.39

NOTE: For more information on series TL tact switches please contact your Electro Sonic sales representative.



SERIES TL6100 PROCESS SEALED TACT SWITCHES

FEATURES: Washable design eliminates contamination of the switch contact area. Cambered terminations for easy through-hole mounting. Up to 1 million actuations for long-life applications. Phosphor bronze or stainless steel domes. Variety of actuator heights for flexible design situations. Variety of actuator forces to suit specific applications. **APPLICATIONS:** Instrumentation, Telecom, Computer peripherals, Modems, External hard drives, Cell phones, PDA's video game players, and High tech industrial appliances. **SPECIFICATIONS:** Switching voltage (max): 50VDC. 1.0VA. Contact resistance: 50 MΩ @ 5VDC, 10mA. Insulation resistance (min @ 100V): 10000MΩ. Bounce (max): <5m sec. Dielectric strength (50Hz., 1 min.): 300VAC. Operating temperature: -40°C to +85°C.

Cat. No.	Operating Force	Termination	Contact Material	Net Price
TL6100AF130QP	130 ± 40gf	PC pin	Silver	\$.58
TL6100CF300QP	300 ± 40gf	PC pin	Silver	\$.58
TL6100BF160QP	160 ± 40gf	PC pin	Silver	\$.58
TL6100DF130QP	230 ± 50gf	PC pin	Silver	\$.58
EARTH GROUND TERMINAL				
TL6105AF130QP	130 ± 40gf	PC pin	Silver	\$.75
TL6105BF300QP	300 ± 50gf	PC pin	Silver	\$.75
TL6105DF130QP	130 ± 50gf	PC pin	Silver	\$.75

NOTE: For stainless steel dome add suffix "SSDOME" to Cat. No. For more information on series TL6100 process sealed tact snap-action pushbutton switches please contact your Electro Sonic sales representative.

Cannon Slide & Tact Switches



C&K 1000 SERIES MINIATURE SLIDE SWITCHES

GOLD CONTACT RATING: 0.4 VA max. @ 20VAC or DC max. Contacts and terminals: Copper alloy, with gold plate over nickel plate. **SILVER CONTACT RATING:** 6 amps @ 120 VAC or 28 VDC; 3 amps @ 250 VAC. **CONTACTS AND TERMINALS:** Copper alloy, with gold plate over nickel plate. **TERMINAL SEAL:** Epoxy. **HOUSING:** Stainless steel. **CONTACTS:** SPDT.

Cat. No.	Switch Function	Terminal Plating	Net Price Each	
			1-499	500-Up
SOLDER TERMINAL PANEL MOUNT				
1101M1S3ZQE2	On-None-On	Silver	\$3.97	\$2.53
STANDARD PC TERMINALS				
1101M2S3CBE2	On-None-On	Gold	4.06	2.61
1101M2S3CQE2	On-None-On	Silver	4.06	2.61
PC TERMINAL RIGHT ANGLE MOUNT				
1101M2S3ABE2	On-None-On	Gold	4.49	2.99
1101M2S3AQE2	On-None-On	Silver	4.49	2.99
PC TERMINAL VERTICAL RIGHT ANGLE MOUNT				
1101M2S3AV2BE2	On-None-On	Gold	4.49	2.99



C&K S SERIES SLIDE SWITCHES

CONTACT RATING: 6 amps @ 125 VAC; 6 amps @ 250 VAC; 1 amp @ 125VDC (UL/CSA). **ELECTRICAL LIFE:** 10,000 make-and-break cycles at full load. **MECHANICAL LIFE:** 100,000 cycles min. **DIELECTRIC STRENGTH:** 1,000 VRMS min. @ sea level. **HOUSING:** 6/6 nylon (UL94V-2), black. **ACTUATOR:** 6/6 nylon (UL94V-2), black. **CONTACTS:** Copper, silver plated. **TERMINALS:** Copper, silver plated. **CONTACT SPRING:** Stainless steel. **TERMINAL SEAL:** Epoxy.

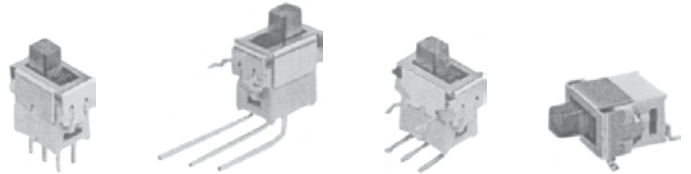
Cat. No.	Contacts	Net Price Each	
		1-499	500-Up
PC MOUNT			
S102031MS03Q	SPDT	\$1.46	\$1.46
PANEL MOUNT			
S202031SS03Q	DPDT	3.08	1.96



C&K V SERIES POWER AND LINE VOLTAGE SELECT SLIDE SWITCHES

CONTACT RATING: 10.1 amps @ 125 VAC; 4 amps @ 28 VDC; 5 amps @ 250 VAC (UL/CSA); 2 amps (0.5) amps @ 250 VAC, T85 (VDE). **ELECTRICAL LIFE:** 10,000 make-and-break cycles at full load. **MECHANICAL LIFE:** 100,000 cycles min. **DIELECTRIC STRENGTH:** 1,000 VRMS min. @ sea level. **HOUSING:** 6/6 nylon (UL94V-2), black. **ACTUATOR:** Glass filled polyester (UL94V-0), red with white 115V-230V markings. **CONTACTS:** Copper, silver plated. **TERMINALS:** Copper, silver plated. **CONTACT SPRING:** Stainless steel. **TERMINAL SEAL:** Epoxy.

Cat. No.	Contacts	Net Price Each	
		1-499	500-Up
PANEL MOUNT			
V80212SS05Q	DPDT	\$4.58	\$3.02
PC MOUNT			
V80212MS02Q	DPDT	4.58	3.02
V80212MA08Q	DPDT	5.35	3.70



C&K ES SERIES SEALED SUBMINIATURE SLIDE SWITCHES

Uniquely sealed sub-miniature slide switch that is process-compatible. The ES Series offers an internal o-ring and epoxy base seal that protects the switch from wave and reflow soldering as well as cleaning processes. Compact in size, its high temperature materials allow for processing flexibility. **CONTACT RATING:** 0.4 VA max. @ 20 VAC or DC max. **CONTACT RESISTANCE:** 50Ω max. initial @ 2-4 VDC, 100 mA. Applications include: Computers, modems, telecommunication devices and test equipment. "AV" in type number indicates vertical right angle bend terminals. "C" in type number indicates straight PC terminals. "A" in type number indicates horizontal right angle terminals, and "SA" in type number indicates surface mount terminals.

Cat. No.	Switch Function	Contacts	Net Price Each	
			1-499	500-Up
SOLDER TERMINAL PANEL MOUNT				
ES01MAVKE	On-None-On	SPDT	\$4.17	\$3.30
ES01MCBE	On-None-On	SPDT	4.17	3.30
ES01MSAKE	On-None-On	SPDT	4.17	3.30
ES02MAKE	On-None-On	SPDT	4.17	3.30
ES02MCBE	On-None-On	SPST	4.17	3.30
ES02MSAKE	On-None-On	SPST	4.17	3.30
ES03MAKE	On-Off-On	SPDT	4.17	3.30
ES03MAVKE	On-Off-On	SPDT	4.17	3.30
ES03MCKE	On-Off-On	SPDT	4.17	3.30
ES03MSAKE	On-Off-On	SPDT	4.17	3.30
ES21MAKE	On-None-On	DPDT	4.17	3.30
ES21MAVKE	On-None-On	DPDT	4.17	3.30
ES22MAKE	On-None-On	DPST	4.17	3.30
ES22MAVKE	On-None-On	DPST	4.17	3.30
ES22MCKE	On-None-On	DPST	4.17	3.30
ES23MAKE	On-Off-On	DPDT	4.17	3.30
ES23MAVKE	On-Off-On	DPDT	4.17	3.30
ES01MAKE	On-None-On	SPDT	4.17	3.30
ES23MCKE	On-Off-On	DPDT	4.17	3.30
ES21MCKE	On-Off-On	DPDT	4.17	3.30



KSA, KSL, KSI SERIES SEALED THROUGH-HOLE MINIATURE TACT SWITCHES

1 VA max, 50V AC or DC max, SPST N.O. momentary function. Body size: 7.4 x 7.4mm. Compatible with wave-soldering and washing processes. Extended life expectancy. Silver-plated contacts (gold option available). Regular mounting or right-angle actuation. Tin-plated terminals. **OPERATING TEMPERATURES:** -40°C to +85°C (up to +125°C with gold contact). Box or tube packaging. **APPLICATIONS:** industrial controls and instrumentation, automotive modules, home electronic appliances such as VCR, TV, PC, set-top boxes, medical equipment.

Continued on next page....

Cat. No.	Height above PC (mm)	"H" dim. horizontal (mm)	Mounting Style	Force (N)	Net Price Each	
					1-499	500-Up
SHORT PLASTIC ACTUATOR						
KSA0M211	4.7	—	PC	1.3	\$.62	\$.49
KSA0M411	4.7	—	PC	3.0	\$.64	\$.50
KSA0M511	4.7	—	PC	5.0	\$.77	\$.61
KSA0V211	8.0	5.8	PCR/A	1.3	\$.66	\$.52
KSA0V411	8.0	5.8	PCR/A	3.0	\$.67	\$.53
KSA0V511	8.0	5.8	PCR/A	5.0	\$.81	\$.63
MEDIUM SILICONE ACTUATOR						
KSI0M011	5.1	—	PC	1.1	\$.60	\$.45
KSI0M411	5.1	—	PC	3.0	\$.67	\$.51
KSI0V011	8.0	6.1	PCR/A	1.1	\$.69	\$.52
KSI0V411	8.0	6.1	PCR/A	3.0	\$.76	\$.58
LONG PLASTIC ACTUATOR						
KSL0M211	9.9	—	PC	1.3	\$.65	\$.50
KSL0M411	9.9	—	PC	3.0	\$.69	\$.53
KSL0M511	9.9	—	PC	5.0	\$.77	\$.59
KSL0V211	8.0	11.1	PCR/A	1.3	\$.71	\$.54
KSL0V411	8.0	11.1	PCR/A	3.0	\$.75	\$.57
KSL0V511	8.0	11.1	PCR/A	5.0	\$.82	\$.63



KSJ SERIES SEALED THROUGH-HOLE MINIATURE TACT SWITCHES WITH SPHERICAL ACTUATOR

30 degree actuation tact switch. 1 VA max, 50V AC or DC max, SPST N.O. momentary function. Body size: 7.4 x 7.4mm. Unique metal ball-shaped actuator allowing angular actuation up to 30 degrees. Compatible with wave-soldering and washing processes. Extended life expectancy. Silver-plated contacts (gold option available). Regular mounting or right-angle actuation. Tin-plated terminals. **OPERATING TEMPERATURES:** -40°C to +85°C (up to +125°C with gold contact). Box packaging. **APPLICATIONS:** industrial machines and controls and instrumentation, automotive modules, medical equipment.

Cat. No.	Height above PC (mm)	"H" dim. horizontal (mm)	Mounting Style	Force (N)	Net Price
METAL BALL ACTUATOR					
KSJ0M011	6.4	—	PC	1.0	\$1.21
KSJ0M411	6.4	—	PC	3.0	1.13
KSJ0V011	8.0	7.7	PCR/A	1.0	1.31
KSJ0V411	8.0	7.7	PCR/A	3.0	1.19



PTS SERIES THROUGH-HOLE MINIATURE TACT SWITCHES

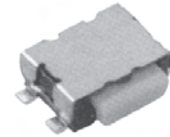
1 VA max, 50V AC or DC max, SPST N.O. momentary function. Compatible with wave-soldering (non washable). Extended life expectancy. Silver-plated contacts. Regular mounting or right-angle actuation. Many other actuator heights available. **OPERATING TEMPERATURES:** -10°C to +60°C. Box or radial-tape packaging. **APPLICATIONS:** light instrumentation, car radio, consumer electronic appliances such as Stereo, VCR, TV, PC, set-top boxes.

Cat. No.	Switch Style (mm)	Height above PC (mm)	"H" dim. horizontal (mm)	Mounting Style	Force (N)	Net Price Each	
						1-499	500-Up
PTS635SL43	6x3.5	4.3	—	PC	1.3	\$.54	\$.31
PTS635SH43	6x3.5	4.3	—	PC	2.0	\$.40	\$.22
PTS635VL31	6x3.5	7.1	3.1	PCR/A	1.3	\$.36	\$.21
PTS635VH31	6x3.5	7.1	3.1	PCR/A	2.0	\$.36	\$.21
PTS645SL43	6x6	4.3	—	PC	1.3	\$.43	\$.25

NOTE: For other available heights, please contact your Electro Sonic sales representative.

Cat. No.	Switch Style (mm)	Height above PC (mm)	"H" dim. horizontal (mm)	Mounting Style	Force (N)	Net Price Each	
						1-499	500-Up
PTS645SH43	6x6	4.3	—	PC	2.0	\$.50	\$.29
PTS645VL31	6x6	7.1	3.1	PCR/A	1.3	\$.45	\$.26
PTS645VH31	6x6	7.1	3.1	PCR/A	2.0	\$.46	\$.26
PTS125SM43	12x12	4.3	—	PC	1.6	\$.42	\$.24
PTS125SK43	12x12	4.3	—	PC	2.6	\$.43	\$.25

NOTE: For other available heights, please contact your Electro Sonic sales representative.



KMS SERIES MICROMINIATURE SIDE ACTUATED TACT SWITCH FOR SMT

Silver contacts 1 VA max, gold contacts 0.2 VA max, 50V AC or DC max, SPST N.O. momentary function. Body size: 3.5 x 4.12mm. Compact size. Excellent tactile feel. Compatible with lead free soldering. Ground cover for EMC protection. Date code marking. Terminals: Gullwing type for SMT IP40 sealed. **OPERATING TEMPERATURE:** Silver plated contacts: -40°C to 85°C, gold plated contacts: -40°C to 125°C. **APPLICATIONS:** Mobile phones, pagers, PDAs. Medical handheld monitors. Consumer electronics. Telecommunication networks.

Cat. No.	Force (N)	Contact Plating	Terminals	Net Price
KMS231G	2.5	Silver	G Type	\$.31
KMS233G	2.5	Gold	G Type	\$.34

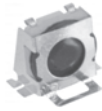


KSC AND KST SERIES SEALED SMT MINIATURE TACT SWITCHES

1 VA max, 50V AC or DC max, SPST N.O. momentary function. Body size: 6.2 x 6.2mm. Compatible with reflow, wave-soldering and aqueous washing processes. Extended life expectancy. Silver-plated contacts (gold option available). Tin-plated terminals. **OPERATING TEMPERATURES:** -40°C to +85°C (up to +125°C with gold contact). Tape and reel packaging. **APPLICATIONS:** industrial controls and instrumentation, automotive modules, home appliances, medical equipment. New: Special version KST features an extended travel up to 1.3mm.

Cat. No.	Actuator Style	Height above PC (mm)	Mounting Style	Force (N)	Net Price
CONTACT STYLE: DOME					
KSC221JB	Short Silicone	3.5	SMT-J	2.0	\$.51
KSC241JB	Short Silicone	3.5	SMT-J	3.5	\$.51
KSC321JB	Short Plastic	3.5	SMT-J	1.6	\$.51
KSC341JB	Short Plastic	3.5	SMT-J	3.0	\$.51
KSC351JB	Short Plastic	3.5	SMT-J	5.5	\$.51
KSC421JB	Medium Silicone	5.2	SMT-J	1.7	\$.51
KSC441JB	Medium Silicone	5.2	SMT-J	3.2	\$.60
KSC621JB	Long Plastic	7.7	SMT-J	1.6	\$.70
KSC641JB	Long Plastic	7.7	SMT-J	3.0	\$.70
KSC221GB	Short Silicone	3.5	SMT-G	2.0	\$.51
KSC241GB	Short Silicone	3.5	SMT-G	3.5	\$.51
KSC321GB	Short Plastic	3.5	SMT-G	1.6	\$.60
KSC341GB	Short Plastic	3.5	SMT-G	3.0	\$.60
KSC351GB	Short Plastic	3.5	SMT-G	5.5	\$.60
KSC421GB	Medium Silicone	5.2	SMT-G	1.7	\$.60
KSC441GB	Medium Silicone	5.2	SMT-G	3.2	\$.60
KSC621GB	Long Plastic	7.7	SMT-G	1.6	\$.70
KSC641GB	Long Plastic	7.7	SMT-G	3.0	\$.70

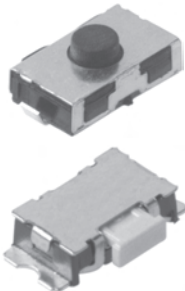
CONTACT STYLE: RUBBER					
KST221JB	Medium Silicone	5	SMT-J	2.0	\$.60
KST241JB	Medium Silicone	5	SMT-J	3.5	\$.60
KST221GB	Medium Silicone	5	SMT-G	2.0	\$.60
KST241GB	Medium Silicone	5	SMT-G	3.5	\$.60



KT SERIES SEALED SMT MINIATURE RIGHT-ANGLE TACT SWITCHES

1 VA max, 50V AC or DC max, SPST N.O. momentary function. Body size: 6.2 × 6.2mm. Compatible with reflow-soldering and aqueous washing processes. Silver-plated contacts. Tin-plated terminals. **OPERATING TEMPERATURES:** -40°C to +85°C. Tape and reel **APPLICATIONS:** industrial controls and instrumentation, automotive modules, home appliances, medical equipment.

Cat. No.	Actuator Style	Height above PC (mm)	"H" dim. horizontal (mm)	Mounting Style	Force (N)	Net Price
KT11B1SAM	Short Silicone	6.6	5.2	SMT R/A	2.0	\$2.38
KT11B2SAM	Medium Silicone	6.6	6.6	SMT R/A	2.0	2.40
KT11P2SA1M	Medium Plastic	6.6	6.8	SMT R/A	2.0	2.38
KT11P3SA1M	Short Plastic	6.6	5.9	SMT R/A	2.0	2.36
KT11P4SA1M	Long Plastic	6.6	8.3	SMT R/A	2.0	2.40



KSR AND KSS SERIES ULTRA-MINIATURE TACT SWITCHES

1 VA max, 50V AC or DC max, SPST N.O. momentary function. Body size: 6 × 3mm and 7 × 4mm. Compatible with reflow-soldering process. Extended life expectancy. Silver-plated contacts (gold option available). Tin-plated terminals. **OPERATING TEMPERATURES:** -40°C to +85°C (up to +125°C with gold contact). Tape and reel packaging. **APPLICATIONS:** handheld devices such as cellular phones, two-way radios, pagers, PDA, laptops, cameras, camcorder, remote controls, handheld game consoles, industrial data terminals and scanners.

Cat. No.	Height above PC (mm)	"H" dim. horizontal (mm)	Mounting Style	Force (N)	Net Price
SHORT SILICONE ACTUATOR					
KSR211J	2.5	—	SMT-J	1.2	\$.31
KSR221J	2.5	—	SMT-J	2.0	.31
KSR231J	2.5	—	SMT-J	3.0	.31
KSR251J	2.5	—	SMT-J	4.5	.31
SHORT PLASTIC ACTUATOR					
KSS221G	1.6	4.4	SMT-G	2.0	.27
KSS231G	1.6	4.4	SMT-G	2.5	.27
KSS241G	1.6	4.4	SMT-G	4.0	.31



TPA AND TPC SERIES SCROLL-SELECT SMT NAVIGATION SWITCHES

1 VA max, 50V AC or DC max, Multi-directional switches, N.O. momentary function. Compatible with reflow-soldering process. Extended life expectancy. Silver-plated or gold-plated contacts. **OPERATING TEMPERATURES:** -40°C to +85°C (up to +125°C with gold contact). Tape and reel packaging. **APPLICATIONS:** devices with menu-scrolling function such as cellular phones, PDA, laptops, cameras, camcorder, remote controls, handheld game consoles, industrial data terminals and barcode scanners.

Cat. No.	Switch Style	Height above PC (mm)	Mounting Style	Force Scroll (N)	Force Select (N)	Net Price
TPA511G	5-way Front Nav	5.0	SMT-G	1.8	4.0	\$.95
TPA411G	4-way Front Nav	5.0	SMT-G	1.8	—	.76
TPA311G	3-way Front Nav	5.0	SMT-G	1.8	4.0	.72
TPC1113G	3-way Side Nav	1.8	SMT-G	1.0	2.2	.95




KSM AND KSU SERIES DETECTION MINIATURE SMT SWITCHES

1 VA max, 50V AC or DC max, detection switches with no tactile feedback, momentary function. Compatible with reflow-soldering process. Extended life expectancy. Gold-plated contacts to prevent oxydation. **OPERATING TEMPERATURE:** -40°C to +125°C. Tape and reel packaging. **APPLICATIONS:** enclosed electronic equipment with tamper/intrusion detection, screen or hinged cover detection, PCB card insertion detection, detection of moving mechanical elements such as in fax, copiers and printers machines.

Cat. No.	Actuator Style	Height above PC (mm)	Electrical/ Total travel (mm)	Electrical Function	Force (N)	Net Price
KSM1131	Plastic	1.5	0.3/1.3	N.C.	0.9	\$.96
KSU113W	Metal	5.0	0.8/1.5	N.O.	0.7	1.01



Part's indicated with a leaf  are considered RoHS July 2006 compliant based on the manufacturer's confirmation at the time of publishing. For additional information please contact Electro Sonic.

Augat Alcoswitch Switches

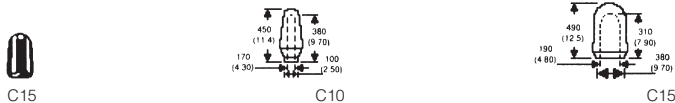


MINIATURE SWITCH HARDWARE

Fits all miniature toggle and pushbutton switches with 1/4"-40 or 15/32"-32 bushings. Bright Nickel finish.

Cat. No.	Description	Thread Size	Dim. (In.)	
			A	B
N-1	Knurled Nut	1/4"-40	.350	.060
N-1A	Knurled Nut	1/4"-40	.315	.080
N-1B	Knurled Nut	15/32"-32	.562	.140
N-2	Hex Nut	1/4"-40	.312	.060

NOTE: Contact your Electro Sonic sales representative for pricing.



COLOUR CODED PLASTIC CAPS

Colour coded caps provide quick identification of toggle switches. Molded of flexible plastic, they are also useful for other non-related applications.

Cat. No.	Colour	Fits Switch Series
C-10-OAG	Black	MST, MTA, MTE
C-10-2AG	Red	
C-10-4	Yellow	MTG
C-10-6	Blue	
C-10-8AG	Grey	
C-10-9	White	
C-15-2	Red	MTG
C-15-6	Blue	

NOTE: Contact your Electro Sonic sales representative for pricing.



TOGGLE SWITCH BOOT SEALS

Splashproof toggle seals for protection against dirt and liquids. A hex nut is integrally bonded to the flexible Neoprene boot.

Cat. No.	Colour	Thread Size	Fits Switch Series	Net Price
B-1048-0	Black	10-48	TT	\$3.72
B-1440-0	Black	1/4"-40	TT, MST, MTA	4.62
B-1440-2	Red	1/4"-40	TT, MST, MTA	5.59
B-1532-0	Black	15/32"-32	MTG	6.13
B-1532-2	Red	15/32"-32	MTG	6.53
B-1532-8	Grey	15/32"-32	MTG	6.53

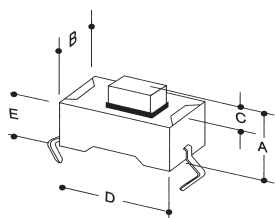


FIG. 1

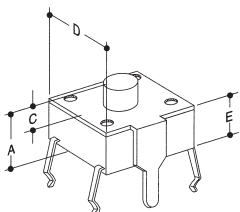


FIG. 2

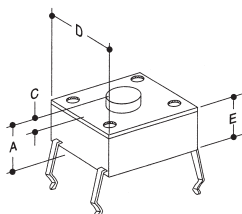


FIG. 3

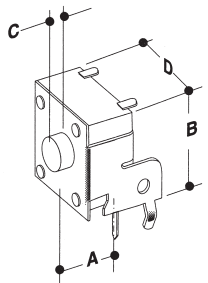


FIG. 4

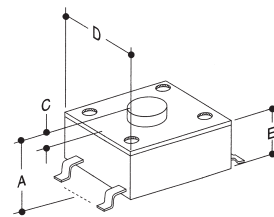


FIG. 5

ALCO FSM SERIES TACTILE PUSHBUTTON SWITCHES

MATERIAL SPECIFICATIONS: Contacts: FSM - Silverplate, FSM1 to 14 - Beryllium copper. Case: Nylon. Terminals: Silverplate. **PERFORMANCE CHARACTERISTICS:** 50mA at 12VDC. Life expectancy: FSM - 20,000 cycles, FSM1 to 14 - 100,000 cycles. Operating temperature: -25°C to +90°C. Actuation force: 150 grams average.

Cat. No.	Dimensions (Inches)				E
	A	B	C	D	
FSM	.172	.138	.060	.236 square	.138
FSM1J	.169	—	.028	.236 square	.142
FSM2J	.169	—	.028	.236 square	.142
FSM3J	.196	—	.055	.236 square	.142
FSM4J	.196	—	.055	.236 square	.142
FSM5J	.276	—	.134	.236 square	.142
FSM6J	.276	—	.135	.236 square	.142
FSM7J	.232	—	.232	.236 square	.142
FSM8J	.232	—	.232	.236 square	.142
FSM14J	.512	—	.378	.236 square	.142
FSMRA1J	.058	.287	.022	.280	—
FSMRA2J	.151	.287	.049	.280	—
FSMRA3J	.230	.287	.128	.280	—
FSMRA4J	.328	.287	.226	.280	—
FSM2JSMA	.169	—	—	.236	.142

FSM SERIES

Cat. No.	Type of Actuator and Terminals	Fig.	Lead Spacing (Inches)	Net Price Per 100
FSM	SPST: Off/(On)	1	.256 x .177	\$42.28
FSM1J	SPST: Off/(On), With Ground Terminal	2	.256 x .177	38.42
FSM2J	SPST: Off/(On)	3	.256 x .177	25.59
FSM3J	SPST: Off/(On)	2	.256 x .177	32.07
FSM4J	SPST: Off/(On)	3	.256 x .177	26.90
FSM5J	SPST: Off/(On), With Ground Terminal	2	.256 x .177	33.30
FSM6J	SPST: Off/(On)	3	.256 x .177	26.90
FSM7J	SPST: Off/(On), With Ground Terminals	2	.256 x .177	34.57
FSM8J	SPST: Off/(On)	3	.256 x .177	33.69
FSM14J	SPST: Off/(On)	3	.256 x .177	32.07
FSMRA1J	SPST: Off/(On), Right Angle	4	—	32.07
FSMRA2J	SPST: Off/(On), Right Angle	4	—	32.07
FSMRA3J	SPST: Off/(On), Right Angle	4	—	41.01
FSMRA4J	SPST: Off/(On), Right Angle	4	—	34.57
FSM2JSMA	SPST: Off/(On), Surface Mount	5	.128 x .363	29.48



TP11CG-PC



TPA11CG-PC



TP11CG-RA

ALCO TP AND TPA SERIES PUSHBUTTON SWITCHES

Choice of round or rectangular buttons. For PC board mount. Gold plated contacts rated 0.4VA max. at 28VDC or peak AC. Contact resistance: 20 milliohms max. Insulation resistance: 1000 megohms at 500VDC. Thermoplastic case.

Cat. No.	Contacts	Action	Button	Net Price Each	
				1-999	1000-Up
.080" x .150" SQUARE BUTTON, .130" PC TERMINALS					
TP11CG-PC-004	SPST-NO	Momentary	Black	\$4.10	\$2.01
TP11CG-PC-204	SPST-NO	Momentary	Red	20.13	9.83
TP11FG-PC-004	SPDT	Momentary	Black	6.35	3.12
.100" ROUND BUTTON, .130" PC TERMINALS					
TPA11CG-PC-004	SPST-NO	Momentary	Black	3.53	3.53
.080" x .150" SQUARE BUTTON, .130" RIGHT ANGLE PC TERMINALS					
TP11CG-RA-004	SPST-NO	Momentary	Black	3.90	1.91
TP11CG-RA-204	SPST-NO	Momentary	Red	21.83	10.65