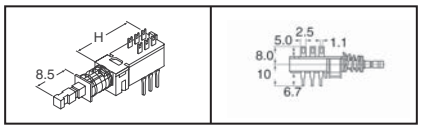
Switch Products

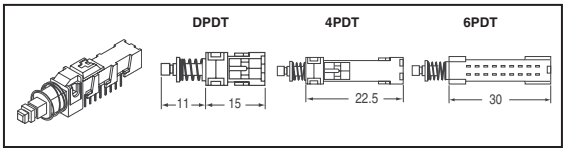
F Series Pushbutton Switches

Essential features of the F pushbutton switch are the bridge contact which is spring loaded, guaranteeing constant pressure on the contacts. **Travel:** 4.7/3.3mm **Operating Force:** 650 grams **Switching:** Voltage Maximum: 125VAC/30VDC (silver), 50VAC/30VDC (gold), Current Maximum: 0.5A (silver), 0.4VA (gold) **Contact Resistance:** 10 - 20mΩ **Contact Material:** Silver or Gold **Operating Temperature:** -40°C ~ 70°C



Circuit	Description	Dim. H (mm)	Digi-Key Part No.	Price Each 1	25	100	C&K Part No.
DPDT	Alt Act., 650gF, .5A, PCB-Mnt, Silver Plating	21	401-1223-ND	1.40	1.13	.89	F2UEE
	Alt Act., 650gF, .4VA, PCB-Mnt, Gold Plating	21	401-1224-ND	3.66	2.93	2.32	F2UEE AU
	Mom., 650gF, .5A, PCB-Mnt, Silver Plating	21	401-1225-ND	1.25	1.00	.79	F2UOA
4PDT	Alt Act., 650gF, .5A, PCB-Mnt, Silver Plating	33	401-1226-ND	2.44	1.95	1.55	F4UEE
	Alt Act., 650gF, .4VA, PCB-Mnt, Gold Plating	33	401-1227-ND	6.92	5.54	4.39	F4UEE AU
	Mom., 650gF, .5A, PCB-Mnt, Silver Plating	33	401-1228-ND	2.38	1.91	1.51	F4UOA

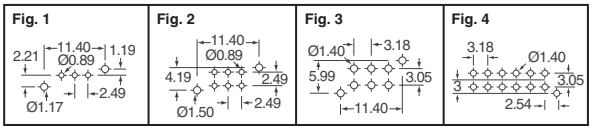
PHA Series Pushbutton Switches

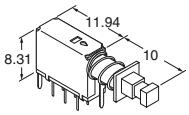


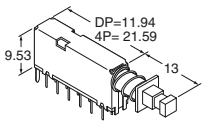
Small dimensions make it the ideal choice for today's demanding switch requirements. Non-shorting contacts.
Switching: Voltage Maximum: 30VDC, Current Maximum: 100mA DC
Operating Life: 10^4 operations
Contact Resistance: 20mΩ
Operating Temperature: -10°C ~ 60°C

Circuit	Description	Digi-Key Part No.	Price Each 1	25	100	C&K Part No.
DPDT	Alternate Action, 170gF	401-1192-ND	.97	.78	.62	PHA2UEE
	Momentary Action, 170gF	401-1195-ND	.83	.67	.53	PHA2UOA
4PDT	Alternate Action, 170gF	401-1193-ND	1.29	1.04	.82	PHA4UEE
	Momentary Action, 170gF	401-1196-ND	1.21	.97	.77	PHA4UOA
6PDT	Alternate Action, 170gF	401-1194-ND	1.78	1.43	1.13	PHA6UEE
	Momentary Action, 170gF	401-1197-ND	1.71	1.37	1.09	PHA6UOA

PN Series Pushbutton Switches







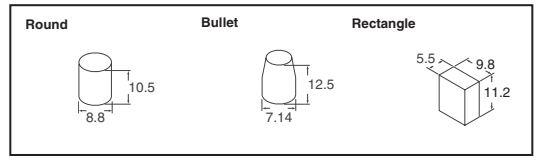
Specifications: • **Contact Rating:** 0.2 Amp @ 30VDC maximum • **Electrical Life:** 10,000 Make-and-Break Cycles at Full Load • **Operating/Storage Temperature:** -10°C ~ 60°C. ***Materials:*** • **Frame:** Tin Plated Steel • **Terminals:** Silver Plated Brass • **Movable Contacts:** Silver Plated (or Clad) Phosphor Bronze • **Terminal Seal:** Epoxy

Fig.	Circuit	Description	Digi-Key Part No.	Price Each 1	100	500	C&K Part No.
1	SPDT	Momentary, 230 gf, Nonshorting	CKN1188-ND *	.57	.49	.43	PN11SHNA03QE
		Alt. Action, 230 gf, Nonshorting	CKN1189-ND *	.62	.53	.47	PN12SHNA03QE
2	DPDT	Momentary, 330gf, Nonshorting	CKN1190-ND *	.67	.58	.51	PN21SJNA03QE
		Alt. Action, 330gf, Nonshorting	CKN1191-ND *	.69	.61	.53	PN22SJNA03QE
3	DPDT	Momentary, 300gf, Nonshorting	CKN1192-ND†	.66	.58	.50	PN21LENA03QE
		Alt. Action, 300gf, Nonshorting	CKN1193-ND†	.70	.61	.53	PN22LENA03QE
4	4PDT	Momentary, 300gf, Nonshorting	CKN1194-ND†	.80	.68	.60	PN41LENA02QE
		Alt. Action, 300gf, Nonshorting	CKN1195-ND†	.89	.76	.67	PN42LENA02QE

* Use PHA caps † Use PVA caps

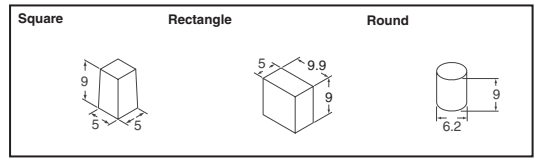
Switch Caps

Switch Caps for F Series



Description	Digi-Key Part No.	Price Each 1	25	100	C&K Part No.
Switch Caps for F Series					
Round, Black, 8.8mm Diameter	401-1215-ND	.37	.30	.24	F0201
Round, Grey, 8.8mm Diameter	401-1217-ND	.41	.33	.26	FG/GY
Round, Red, 8.8mm Diameter	401-1218-ND	.38	.31	.25	FG/RD
Round, White, 8.8mm Diameter	401-1216-ND	.38	.31	.25	F0202
Bullet, Black, 7mm Diameter	401-1212-ND	.36	.29	.23	F0101
Bullet, Grey, 7mm Diameter	401-1214-ND	.38	.31	.24	FMR GY
Bullet, White, 7mm Diameter	401-1213-ND	.38	.31	.24	FMR/WHT
Rectangle, Black, 9.8 x 5.5mm	401-1219-ND	.36	.29	.23	FSC/BK
Rectangle, Grey, 9.8 x 5.5mm	401-1221-ND	.41	.33	.26	FSC/GY
Rectangle, Red, 9.8 x 5.5mm	401-1222-ND	4.17	3.34	2.64	FSC/RD
Rectangle, White, 9.8 x 5.5mm	401-1220-ND	.38	.31	.25	FSC/WHT

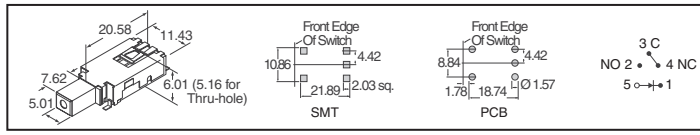
Switch Caps for PHA Series



Description	Digi-Key Part No.	Price Each 1	25	100	C&K Part No.
Switch Caps for PHA Series					
Square, Indexed, Black, 5mm sq. x 9mm(H)	401-1198-ND	.33	.27	.22	G001A
Square, Indexed, Grey, 5mm sq. x 9mm (H)	401-1199-ND	.34	.28	.22	G001G
Square, Indexed, Red, 5mm sq. x 9mm (H)	401-1200-ND	.34	.27	.22	G001R
Rectangle, Black, 5mm(W) x 10mm(L)	401-1201-ND	.38	.31	.24	G002A
Rectangle, Grey, 5mm(W) x 10mm(L)	401-1202-ND	.38	.31	.24	G002G
Rectangle, Red, 5mm(W) x 10mm(L)	401-1203-ND	.38	.31	.25	G002R
Round, Black, 6.2mm Dia.	401-1204-ND	.38	.31	.24	G003A
Round, Blue, 6.2mm Dia.	401-1207-ND	.38	.31	.25	G003B
Round, Grey, 6.2mm Dia.	401-1205-ND	.38	.31	.24	G003G
Round, Red, 6.2mm Dia.	401-1206-ND	.38	.31	.24	G003R

ELUM Pushbutton Switch

Features: • Low height above PCB • Reliable self-cleaning contact • Central LED illumination • Long travel • Smooth feel **Materials:** • Fixed Contacts and Terminals: Stainless steel, silver plated with gold flash • Movable Contacts: Copper alloy, silver plated with gold flash • Base: Glass filled LCP (UL94V-0) • Actuator: Glass filled nylon 4/6 (UL94V-0) • Cover: Stainless steel **Electrical:** • Maximum Voltage: 50VDC • Maximum Current: 250mA **Mechanical:** • Operating Force: 250gF **Operating Environment:** • Operating Temperature: -40°C ~ 85°C • Operating Life: 30,000 Cycles



Terminal	LED Color	Maximum LED Intensity (mcd)†	Digi-Key Part No.	Price Each 1	25	100	C&K Part No.
Illuminated Momentary Pushbuttons							
PCB	None	N/A	CKN9027-ND	3.59	2.87	2.28	ELUMOATHQC02
	Red	8	CKN9028-ND	4.28	3.43	2.72	ELUMOATHQ3C12
	Green	50	CKN9029-ND	4.28	3.43	2.72	ELUMOATHQ6C12
	Blue	1,500	CKN9030-ND	4.46	3.57	2.83	ELUMOATHQ7C12
	Green/Red	20	CKN9031-ND	3.90	3.12	2.47	ELUMOATHQ9C12
SMT	Red	8	CKN9032CT-ND	4.34	3.75	3.01	ELUMOASAQ3C12
			CKN9032TR-ND *		1273.74/450		ELUMOASAQ3C12
SMT	Green	50	CKN9033CT-ND	4.34	3.75	3.01	ELUMOASAQ6C12
			CKN9033TR-ND *		1273.74/450		ELUMOASAQ6C12
SMT	Blue	1,500	CKN9034CT-ND	5.30	4.57	3.67	ELUMOASAQ7C12
			CKN9034TR-ND *		1174.03/400		ELUMOASAQ7C12
SMT	Green/Red	20	CKN9035CT-ND	5.44	4.69	3.77	ELUMOASAQ2C12
Illuminated Latching Pushbuttons							
PCB	None	N/A	CKN9036-ND	3.78	3.03	2.40	ELUMEETHQC02
	White	5,000	CKN9037-ND	5.04	4.04	3.20	ELUMEETHQ1C12

Terminal	LED Color	Maximum LED Intensity (mcd)†	Digi-Key Part No.	Price Each 1	25	100	C&K Part No.
PCB	Red	8	CKN9038-ND	4.47	3.58	2.84	ELUMEETHQ3C12
	Amber	50	CKN9039-ND	4.48	3.59	2.84	ELUMEETHQ5C12
	Green	50	CKN9040-ND	4.47	3.58	2.84	ELUMEETHQ6C12
	Blue	1,500	CKN9041-ND	4.65	3.72	2.95	ELUMEETHQ7C12
	Amber/Green	10	CKN9042-ND	4.79	3.84	3.04	ELUMEETHQ8C12
	Green/Red	20	CKN9043-ND	4.78	3.83	3.03	ELUMEETHQ2C12
SMT	Red	8	CKN9044CT-ND	4.52	3.90	3.13	ELUMEESAQ3C12
			CKN9044TR-ND *		1325.49/450		ELUMEESAQ3C12
SMT	Green	50	CKN9045CT-ND	5.32	4.59	3.69	ELUMEESAQ6C12
			CKN9045TR-ND *		1325.49/450		ELUMEESAQ6C12
SMT	Blue	1,500	CKN9046CT-ND	4.68	4.04	3.25	ELUMEESAQ7C12
			CKN9046TR-ND *		1372.53/450		ELUMEESAQ7C12
SMT	Green/Red	20	CKN9047CT-ND	4.80	4.14	3.33	ELUMEESAQ9C12
			CKN9047TR-ND *		1196.70/450		ELUMEESAQ9C12

* Tape and Reel † LED Forward Current: 20 mA LED Forward Voltage: 2.0 V Typical

Digi-Reel® Most SMT cutdown parts are available on a Digi-Reel®. For Digi-Reel part number, change 1-ND to 6-ND or CT-ND to DKR-ND. See Digi-Key® Services on page 2 for additional information.