Features/Benefits

- Up to 10 poles per module
- Various contact terminals
- Various mounting & switch ganging configurations
- Mechanical indicator buttons
- RoHS compliant

Typical Applications

- Audio selection
- Digital equipment interface
- Medical equipment interface





Specifications

SWITCHING POWER: F module max. AC/DC: Silver: 50 VA/15W, Gold: 1 VA/300 mW.

SWITCHING VOLTAGE: F module max. AC/DC: Silver: 125/30V, Gold: 50/30 V.

SWITCHING CURRENT: F module max. AC/DC: Silver: 0.5A/0.5A. Gold: 0.04A/0.01A.

CARRYING CURRENT: Max at $\Delta u = 20^{\circ}$ C: Silver: < 2A, Gold: <0.5A.

DIELECTRIC STRENGTH (50 Hz, 1 min.): Chassis/contact: ≥1500V Between contacts: ≥1500V.

OPERATING LIFE "OA/EE" (24V/200mA): >10⁵ operations "GR": >3.5 x 10⁴ operations.

CONTACT RESISTANCE: Initial: Typical ≤10 mΩ, max. 20 mΩ After operating life: ≤100 mΩ

INSULATION RESISTANCE: $\ge 10^9~\Omega$ between open contacts, ≥ $10^9 \Omega$ between chassis and contacts.

CAPACITANCE (at f = 10 kHz): ≤0.7 pF between 2 contacts.

TOTAL TRAVEL/LATCHING TRAVEL: 4.7mm/3.3mm (.185 inch/ .130 inch).

All models and options are RoHS compliant and compatible.

NOTE: All models and options are RoHS compliant and compatible.

NOTE: Specifications and materials listed above are for switches with standard options. For information on specific and custom switches, consult Customer Service Center.

TYPICAL F OPERATING FORCE: 2U: 6.5N (650 grams); 4U: 6.5N (650 grams); 6U: 7.5N (750 grams); 8U: 9.0N (900 grams); 10U: 9.0N (900 grams).

EUROPEAN TYPICAL SF OPERATING FORCE:

2U: 3.5N±0.5N (350 grams±100 grams): 4U: 5N±1N (500 grams±100 grams); 6U: 6.5N±1N (650 grams±100 grams); 8U: 9.0N±1N (900 grams±100 grams).

OPERATING TEMPERATURE RANGE: -40°C to 70°C.

Materials

HOUSING: Polycarbonate UL 94V-0 or polyester UL 94V-0.

ACTUATOR: Polyester UL 94V-0.

MOVABLE CONTACTS: Bimetal brass, silver plated, gold plate

STATIONARY CONTACTS & TERMINALS: Brass, silver plated, gold plated.

TERMINAL BOARD: Polyester UL 94V-0.

RETURN SPRING: Music wire.

TERMINAL SEAL: RTV adhesive sealant.

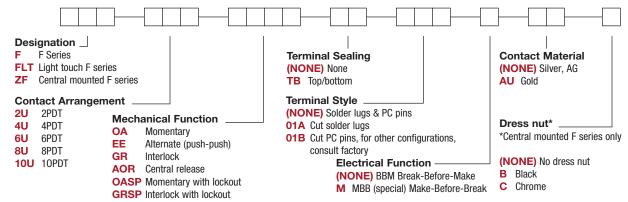
CHASSIS: Steel. LOCKOUT PIN: Steel. BLOCKERS: Steel.

Build-A-Switch

To order, simply select desired option from each category and place in the appropriate box. Available options are shown and described on pages A-88 thru A-95. For additional options not shown in catalog, consult Customer Service Center.

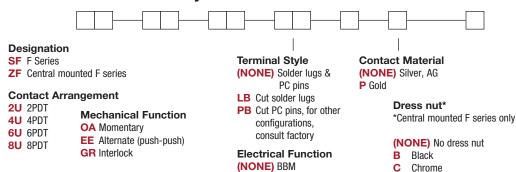
If requesting only a switch, select either a North American or European switch as noted below. Chassis and buttons are sold separately. If multiple stations are selected, we will assume all switches are the same unless noted otherwise.

North American Order Code - Switch Only



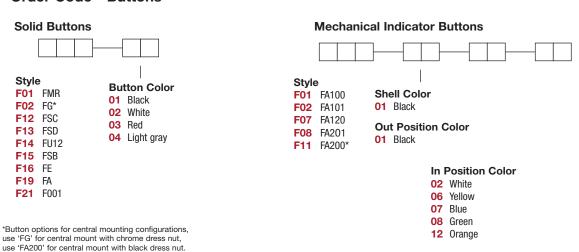


European Order Code - Switch Only



^{*}Minimum order quantities apply

Order Code - Buttons



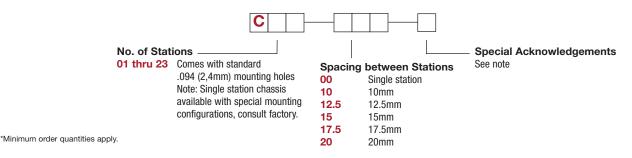
BUTTON REMOVAL

A button of a push-push switch should only be removed in the "OFF" non-latching position.

Order Code - Chassis

To order a switch with chassis, create the switch part number listed above and add the Chassis part number configurator information at the end of the part number.

Note: We do not guarantee or recommend interlocking beyond 10 stations.

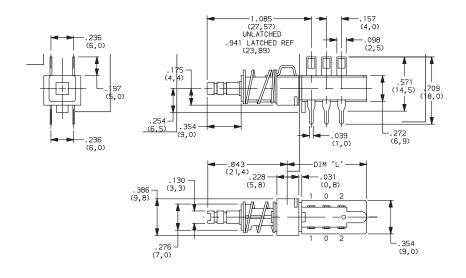




SWITCHES WITH STANDARD OPTIONS

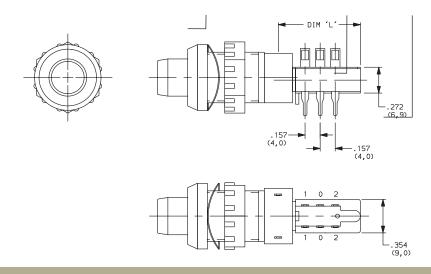
F2UEE

CONTACT ARRANGEMENT	LENGTH DIM 'L'	
2U	0.827 (21,00)	
4U	1.300 (33,00)	
6U	1.770 (45,00)	
8U	2.240 (57,00)	
10U	2.720 (69,00)	



ZF2UEEBF11010108

CONTACT ARRANGEMENT	LENGTH DIM 'L'
2U	0.827 (21,00)
4U	1.300 (33,00)
6U	1.770 (45,00)
8U	2.240 (57,00)
10U	2.720 (69,00)



DESIGNATION -----

Designation, North America

F Series

FLT Light touch F series

Central mounted F series

Designation, Europe

SF F Series

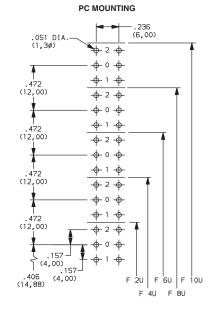
ZF Central mounted F series





CONTACT ARRANGEMENT -----

OPTION CODE	NO. OF POLES	SCHEMATIC
2U	2PDT	1 0 0 0
4U	4PDT	2X 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
6U	6PDT	3X 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
8U	8PDT	4X 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
10U	10PDT	5X 1 0 0 0 0



MECHANICAL FUNCTION



OPTION CODE	FUNCTION
OA	Momentary
EE	Alternate (push-push)
GR	Interlock
AOR	Central release
OASP	Momentary with lockout
GRSP	Interlock with lockout

Europe

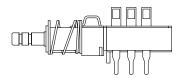
OPTION CODE	FUNCTION
OA	Momentary
EE	Alternate (push-push)
GR	Interlock

TERMINAL SEALING



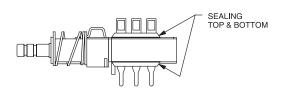
(NONE)

NO SEAL



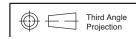
F2UEE shown in example above.

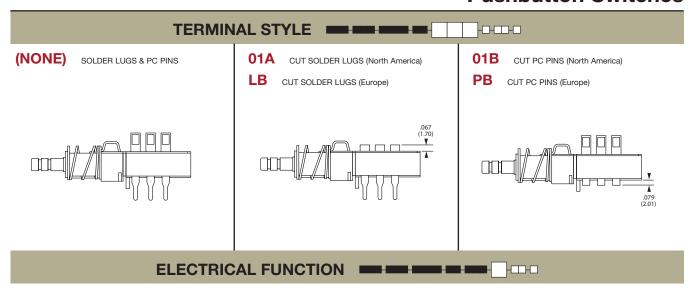
TB TOP & BOTTOM



NOTE: Available for North America only







OPTION CODE	FUNCTION	
(NONE)	BBM Non-shorting	
M	MBB Shorting (North America only)	

CONTACT MATERIAL

NORTH AMERICA OPTION CODE	EUROPE OPTION CODE	RoHS COMPLIANT *	RoHS COMPATIBLE *	MATERIAL	RATING
(NONE)	(NONE)	YES	YES	SILVER, AG	50 VA/15 W; 125/30 V; 0.5/0.5 A
AU	Р	YES	YES	GOLD	1 VA/300mW; 50/30 V; 0.04 A/0.01 A

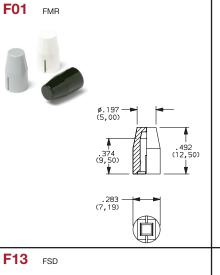
^{*} Note: See Technical Data section of this catalog for RoHS compliant and compatible definitions and specifications.

DRESS NUT (NONE) NO DRESS NUT FOR F & F/LT BLACK CHROME M12 X 0.75 DESIGNATIONS -KNURL .098 (2,49) -ø.689 (17,50) ø.415⁻ (10,54) M14 X 1 THD .098 .197 (5,00) PANEL CUTOUT PANEL CUTOUT .472 DIA. (12,0ø) .551 DIA. (14,0ø) .020-.035 (0,9) NOTE: Available with ZF designation and FG button. NOTE: Available with ZF designation and FA200 buttons. Third Angle Projection

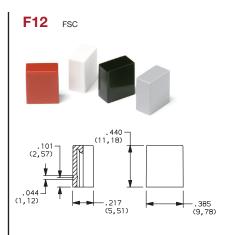
Dimensions are shown: Inches (mm) Specifications and dimensions subject to change

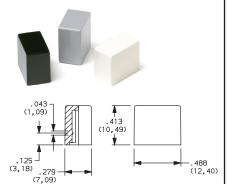
SOLID BUTTON

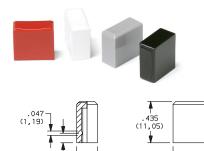
STYLE



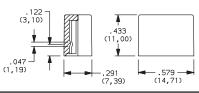




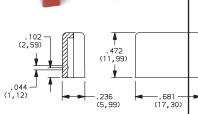










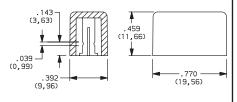




F14

FU12





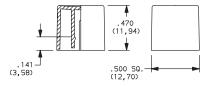
OPTION CODE	COLOR	
01	BLACK	
02	WHITE	
03	RED	
04	LT. GRAY	



F15

FSB

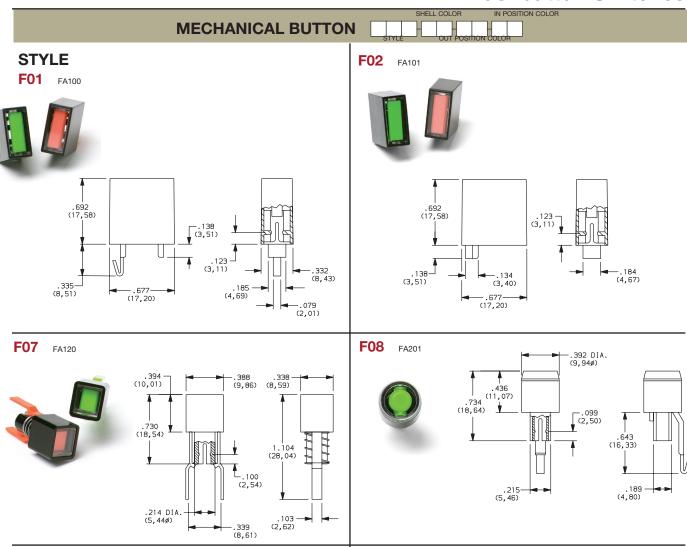




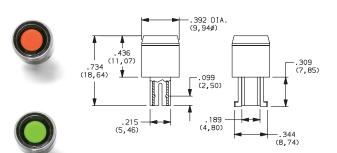


F16 FE

Dimensions are shown: Inches (mm) Specifications and dimensions subject to change



F11 FA200



SHELL COLOR

01 BLACK

OUT POSITION COLOR

01 BLACK

IN POSITION COLOR

OPTION CODE	COLOR	
02	WHITE	
06	YELLOW	
07	BLUE	
08	GREEN	
12	ORANGE	



CHASSIS

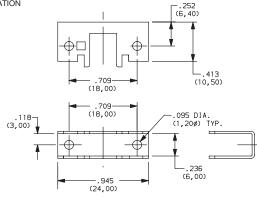
NUMBER OF STATIONS

C00 Thru C10 Comes with standard 0.094 (2,44mm) mounting holes

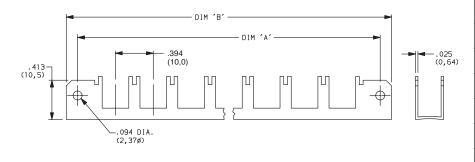
NOTE: Single station chassis available with mounting configurations, consult factory.

SPACING

00 SINGLE STATION

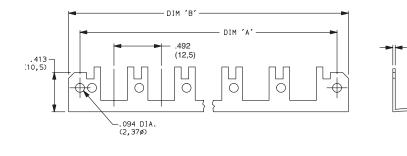


10 10mm



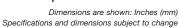
No. of Stations	Dim. 'A'	Dim. 'B'	Tolerance
2	1.182 (30,02)	1.418 (36,02)	0.005
3	1.575 (40,01)	1.811 (46,00)	0.010
4	1.969 (50,01)	2.205 (56,01)	0.010
5	2.363 (60,02)	2.599 (66,01)	0.010
6	2.757 (70,03)	2.993 (76,02)	0.015
7	3.150 (80,01)	3.386 (86,00)	0.015
8	3.544 (90,02)	3.780 (96,01)	0.015
9	3.938 (100,03)	4.174 (106,02)	0.015
10	4.331 (110,01)	4.567 (116,00)	0.015

12.5 12.5mm



No. of Stations	Dim. 'A'	Dim. 'B'	Tolerance
2	1.200 (30,48)	1.436 (36,47)	0.005
3	1.692 (42,98)	1.928 (48,97)	0.010
4	2.184 (55,47)	2.420 (61,47)	0.010
5	2.676 (67,97)	2.912 (73,96)	0.010
6	3.169 (80,49)	3.405 (86,49)	0.015
7	3.661 (92,99)	3.897 (98,98)	0.015
8	4.153 (105,49)	4.389 (111,48)	0.015
9	4.645 (117,98)	4.881 (123,98)	0.015
10	5.137 (130,48)	5.373 (136,47)	0.015







.025 (0,64)

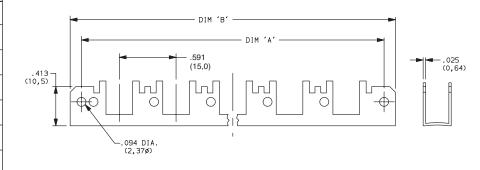
Pushbutton Switches

SPACING

15 15mm

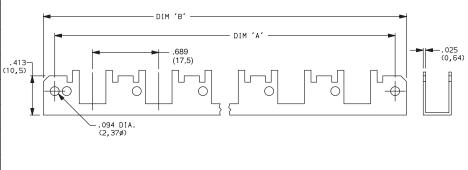
No. of Stations	Dim. 'A'	Dim. 'B'	Tolerance
2	1.374 (34,90)	1.615 (41,02)	0.005
3	1.969 (50,01)	2.205 (56,01)	0.010
4	2.560 (65,02)	2.796 (71,02)	0.010
5	3.150 (80,01)	3.386 (86,00)	0.010
6	3.741 (95,02)	3.977 (101,02)	0.015
7	4.332 (110,03)	4.568 (116,03)	0.015
8	4.922 (125,02)	5.158 (131,01)	0.015
9	5.513 (140,03)	5.749 (146,02)	0.015
10	6.103 (155,02)	6.339 (161,01)	0.015

CHASSIS



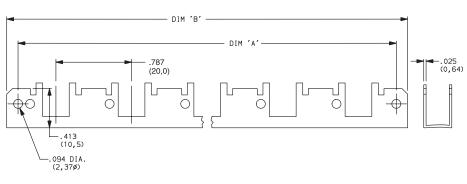
17.5 17.5mm

No. of Stations	Dim. 'A'	Dim. 'B'	Tolerance
2	1.477 (37,52)	1.713 (43,51)	0.005
3	2.166 (55,02)	2.402 (61,01)	0.010
4	2.855 (75,52)	3.091 (78.51)	0.010
5	3.544 (90,02)	3.780 (96,01)	0.010
6	4.233 (107,52)	4.469 (113,51)	0.015
7	4.922 (125,02)	5.158 (131,01)	0.015
8	5.611 (142,52)	5.847 (148.51)	0.015
9	6.300 (160,02)	6.536 (166,01)	0.015
10	6.989 (177,52)	7.225 (183,52)	0.015



20 20mm

No. of Stations	Dim. 'A'	Dim. 'B'	Tolerance
2	1.575 (40,01)	1.811 (46,00)	0.005
3	2.363 (60,02)	2.599 (66,01)	0.010
4	3.150 (80,01)	3.386 (86,00)	0.010
5	3.938 (100,03)	4.174 (106,02)	0.010
6	4.725 (120,02)	4.961 (126,01)	0.015
7	5.512 (140,00)	5.748 (146,00)	0.015
8	6.300 (160,02)	6.536 (166,01)	0.015
9	7.087 (180,01)	7.323 (186,00)	0.015
10	7.875 (200,03)	8.111 (206,02)	0.015





Dimensions are shown: Inches (mm) Specifications and dimensions subject to change



29 may 19