

# Snap-action Microswitches – Ultraminiature F1

## F1

Characteristics	<ul style="list-style-type: none"> <li>■ Long electrical rating from a very small switch</li> <li>■ Gold plated contacts</li> <li>■ PCB mounting from side</li> <li>■ UL and CSA approved</li> </ul>
Rating	Up to 250 VAC, 5 A
Dimensions (mm)	16 x 6.5 x 5.7
Actuator	Plunger, plain lever
Approvals	UL, CSA



A

## Preferred Product Range

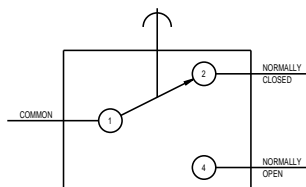
Ordering Reference	Actuating Force (N)      (oz)		Sealing	Operating position (mm)      (in)		Terminal	Circuit	Actuator	Contacts	Electrical rating
F1T8GPUL	1.4	5.04	IP40	6.35	0.25	PCB	CO	Plunger	Gold plate	Up to 250 VAC, 5 A
F1T8Y1GPUL	0.5	1.80	IP40	8.50	0.33	PCB	CO	Lever	Gold plate	Up to 250 VAC, 5 A

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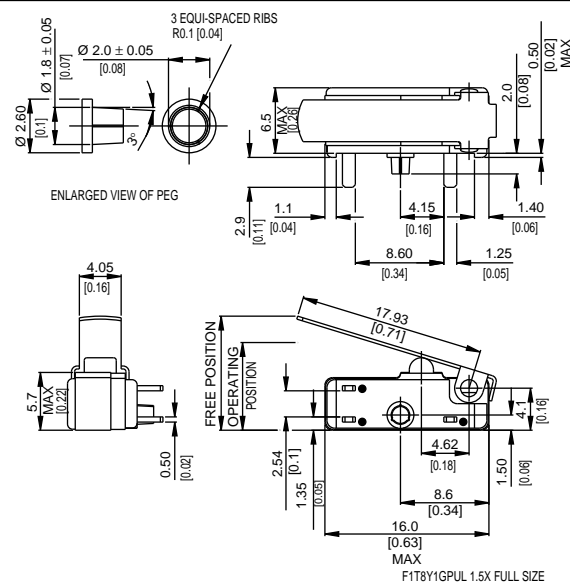
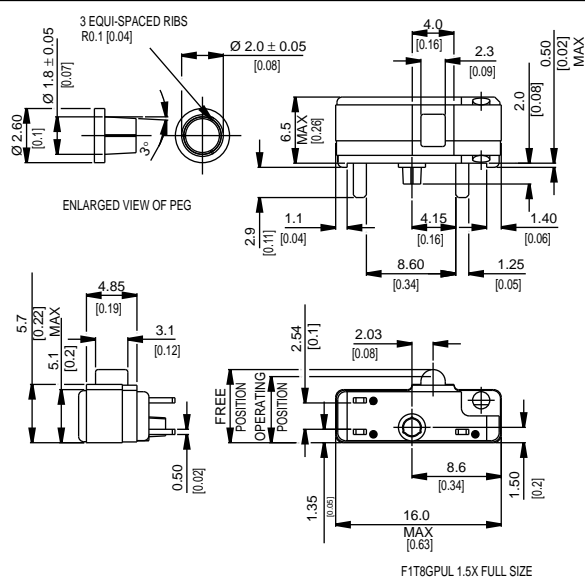
## Specifications

Housing	Glass fiber reinforced nylon
Plunger	Nylon
Mechanism	Snap-action, coil spring mechanism with stainless steel spring
Functions	Single pole change-over
Contacts	Gold plate on silver
Terminals	PCB - copper, gold-flashed
Temperature range °C	-40°C to +85°C
Mechanical life	10 <sup>6</sup> cycles minimum (impact-free actuation)
Protection	IP40 (enclosure)
Mounting	Side mount PCB with locating pin on housing
Actuators	Plain plunger, straight lever

Circuit diagram



Dimensions  
mm [in]



## Recommended Maximum Electrical Ratings

Voltage (max)	Resistive load (A)	Inductive load	Approval
250 VAC	5 (0.75 pf)	5	UL 1054/CSA 22.2 No. 55 - 6,000 operations
0 - 15 VDC	5		General rating - 50,000 operations
15 - 30 VDC	10	10	General rating - 50,000 operations

F1 switches have gold-plated silver contacts.

Switches with gold-plated contacts are intended for use in circuits where switching is at milliwatt levels.

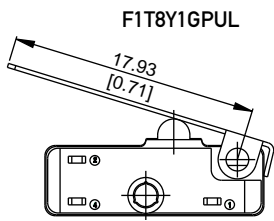
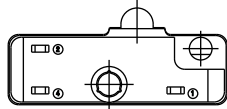
In this case, the power being switched must be limited to avoid the erosion of gold plate from the contact area.

However, as the underlying contacts are silver, the same power ratings apply.

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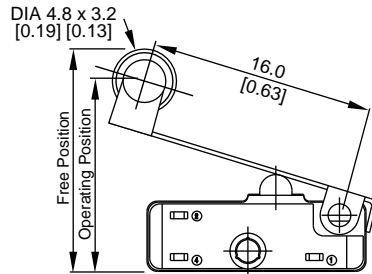
## Operating Characteristics

Actuator	Reference	Actuating Force Maximum		Release Force Minimum		Free Position Maximum		Operating Position		Movement Differential Maximum		Over Travel
		(N)	(oz)	(N)	(oz)	(mm)	(in)	(mm)	(in)	(mm)	(in)	
Plunger	F1T8GPUL	1.4	5.00	0.28	1.00	7.1	0.28	6.35 ± 0.38	0.25 ± 0.015	0.1	0.004	*
Straight lever mm [in]	F1T8Y1GPUL	0.5	1.8	0.06	0.022	11.0	0.43	8.5 ± 1.5	0.33 ± 0.06	0.5	0.02	*



Width of lever 4.05 mm/0.16 in

Roller lever mm [in]	F1T8YR1GPUL	0.5	1.8	0.08	0.3	16.0	0.63	13.9 ± 1.3	0.55 ± 0.05	0.3	0.012	*
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\* Plunger can be depressed flush with housing. The housing should not be used as an end stop.

## Ordering Reference – How to Build a Part Number

	F1	
Terminals	T8	PCB
Circuit	No digit	Change-over
Actuators	No digit	Plunger
	Y1	Plain lever
	YR1	Roller lever
Contacts	GP	Gold plate on silver
Approvals	UL	UL and CSA