

Not for new applications**Panasonic**
ideas for life**A ULTRA MINIATURE SIZED
DETECTION SWITCH****NEW FD (ABU8)
SWITCHES**

- Low operating force Max. 0.34 N
- High contact reliability in a low-level load by sliding crossbar contacts
- Reflow soldering is available by custom ordered

ORDERING INFORMATION

Contact arrangement	Number of terminals	Part No.	Packing quantity	
			Inner	Outer
1 Form A	2	ABU811261S	100	5,000
	4	ABU810261S		
1 Form B	2	ABU831261S		
	4	ABU830261S		

Remarks: Standard packaging; Tube 100 pcs.

Please consult us for vinyl bag (200 pcs.). In this case, please change the suffix S to V.

TYPICAL APPLICATION

- Floppy Disk Drivers
- Optical Disk Drivers
- CD-ROM Drivers
- Notebook Personal Computers
- VCR
- Audio Equipments
- Microprocessor-controlled Rice Cookers
- Burglar alarms & Fire alarms

SPECIFICATIONS**1. Contact rating**

10mA to 0.1A 30V DC

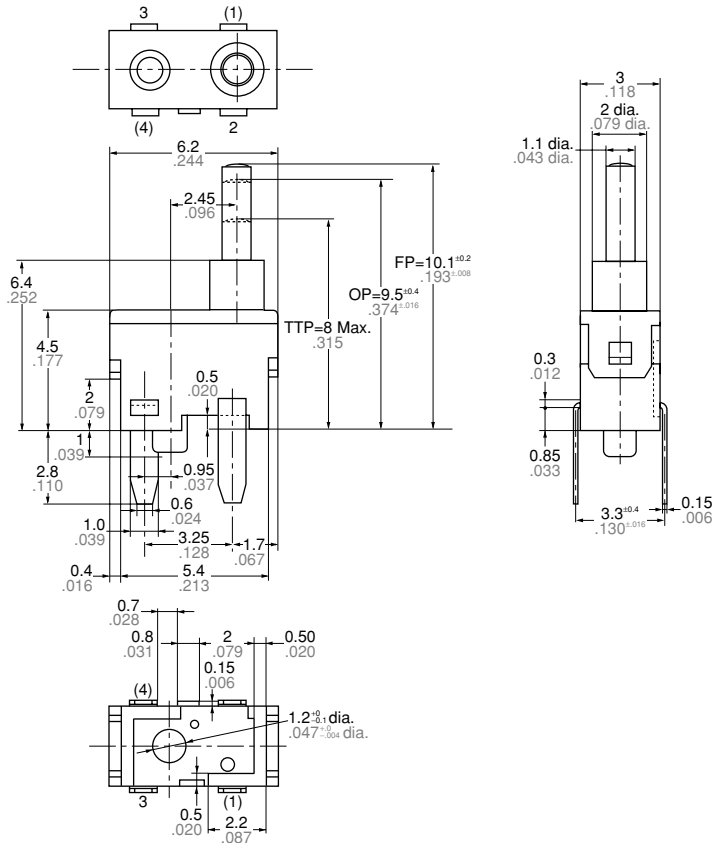
2. Characteristics

Expected electrical life (Min. operations)	0.1A 30V DC resistive	Min. 5×10^4
	10mA 5V DC resistive	Min. 10^5
Mechanical life (Min. operations)		10^5
Insulation resistance (by 100V DC insulation resistance meter)		Min. 100M Ω
Dielectric Strength		100Vrms for 1 min.
Vibration resistance		14.7ms ² 10 to 500Hz (contact opening: Max. 10 μ sec.)
Shock resistance		Min. 294 m/s ² (contact opening: Max. 10 μ sec.)
Ambient temperature		-25°C to +80°C -13°F to +176°F (not freezing below 0°C 32°F)
Initial contact resistance		Max. 1 Ω (by HP4328A)

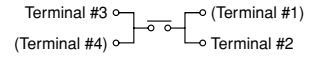
3. Operating characteristics

Operating force Max.		0.34 N
Free position Max.	mm inch	10.1 \pm 0.2 .398 \pm .008
Operating position	mm inch	9.5 \pm 0.4 .374 \pm .016
Total travel position Max.	mm inch	8.0 .315
Total stroke	mm inch	2.1 .083

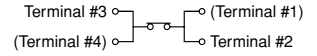
DIMENSIONS



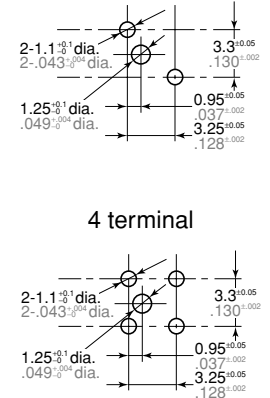
Schematic
1 Form A



1 Form B



PC board pattern (Top view)



NOTES

1. Soldering operations

- 1) For manual soldering; By using 18W Max. (iron tip temperature: 350°C 662°F Max.) soldering should be completed within 3 seconds.
- 2) For reflow soldering; Perform soldering reflow at a peak surface temperature of the PC board not to exceed 240°C 464°F.
- 3) For automatic soldering tub; 260°C 500°F immersion, completed within 5 seconds.
- 4) During soldering, care should be taken not to apply excessive stress to the terminals as the resulting deformation may cause malfunction. Excessively high solder tab temperature and soldering iron wattage should also be avoided as these factors may harm switching performance.

2. Mounting

- 1) When the operation object is in the free position, force should not be applied to the pin plunger. Also force should be applied to the pin plunger from vertical direction to the switch. During both mounting and operation, care must be taken to protect the pushbutton from excessive stress, as this may cause malfunctioning.
- 2) After mounting and wiring, the insulation distance between ground and each terminals/cover should be confirmed as sufficient.
- 3) When using adhesive, make sure it

does not come into contact with moving parts. If the internal contacts are contaminated with adhesive, they may not function properly.

3. Setting of the operation object

In setting the operation object, keep the following distance between the switch bottom and the operation object at T.T.P. (Total Travel Position) 8.0 to 8.8mm .315 to .346 inch

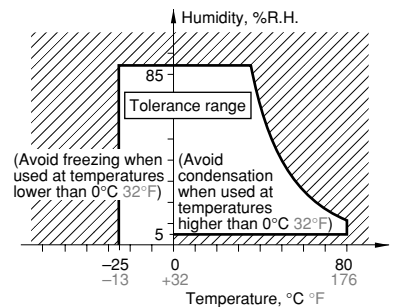
4. Environment

- 1) These switches do not have a sealed construction. As such, the construction of the equipment in which the switches are to be installed should be given careful consideration when the switches are to be used in locations where corrosive gases, silicon or other substances which will adversely affect the contacts are used, where there is a high concentration of dust or where the switches may be exposed to condensation or water. Using switches in locations like these may cause malfunctioning.
- 2) Avoid using this switch in high-temperature, high-humidity or condensation-forming environments and avoid allowing droplets of water to remain on the switch or come into contact with it. These conditions may interfere with the performance of the switch (resulting in short-circuiting, migration, etc.). Use the type with the gold contacts in applications involving trains,

aircraft, motor vehicles or medical equipment where the switch must satisfy safety and high reliability requirements. Please consult with us for the applications required high reliability.

- 3) Because the humidity range differs depending on the ambient temperature, the humidity range indicated below should be used. Continuous operation of the switch is possible within this range, but continuous use near the limit of the range should be avoided.

• This humidity range does not guarantee permanent performance.



5. Quality Check under Actual Loading Conditions

To assure reliability, check the switch under actual loading conditions. Avoid any situation that may adversely affect switching performance.