NAiS

A PIERCED EARRING SIZE DETECTION SWITCH

FP (ABP8) SWITCHES

ABP111P

ABP112P

- Ultra-miniature size (3.4×3.4×2.4mm. .134 × .134 × .094 inch)
  Meet the market requirements of FDD miniaturization
- Low operating force Max. 30 gf
- SMD type available

ORDERING INFORMATION

Type	Part No.
Type I	ABP8111P
Type II	ABP8112P

Remarks: Standard packaging
1 reel: 2,000 pcs.
1 case: 5 reels (10,000 pcs.)

TYPICAL APPLICATIONS

- Floppy Disk Drivers
- Optical Disk Drivers
- CD-ROM Drivers
- Notebook Personal Computers
- Portable Handy Phones
- VCR
- Printers

SPECIFICATIONS

1. Contact rating

Standard rating	0.1A 30V DC
Low-level circuit rating	0.1mA 5V DC

2. Characteristics

Expected electrical life (Min. operations)	0.1A 30V DC resistive	Min. 5×10^4
	0.1mA 5V DC resistive	Min. 10^5
Insulation resistance (by 100V DC insulation resistance meter)		Min. 100MΩ
Dielectric Strength		100Vrms for 1 min.
Vibration resistance		14.7m/s² {1.5G}8 to 500Hz (contact opening: Max. 10μsec.)
Shock resistance		Min. 294 m/s² {30G}(contact opening: Max. 10μsec.)
Ambient temperature		-25°C to +80°C -13 ° F to +176 ° F (not freezing below 0°C 32 ° F)
Ambient humidity		Max. 85% R.H.
Initial contact resistance		Max. 1Ω (by HP4328A)

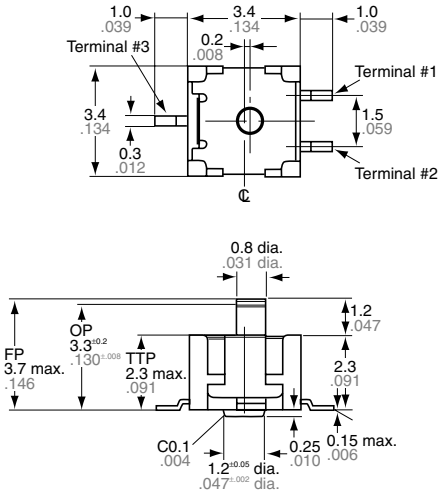
3. Operating characteristics

		Type I	Type II
Operating force Max.	N {gf}	0.3 {30}	
Free position Max.	mm inch	3.7 .146	4.9 .193
Operating position	mm inch	3.3±0.2 .130 ±.008	4.5±0.2 .177 ±.008
Total travel position Max.	mm inch	2.3 .091	3.5 .138
Total stroke	mm inch	1.2 .047	

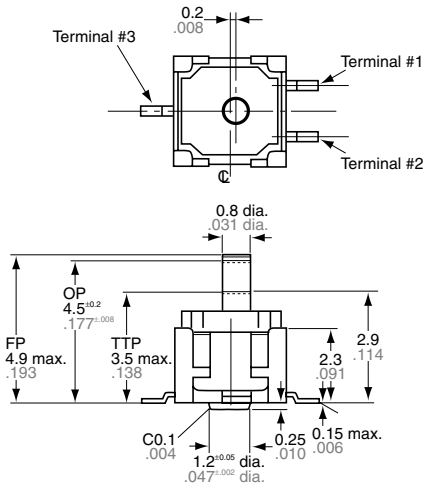
DIMENSIONS

mm inch

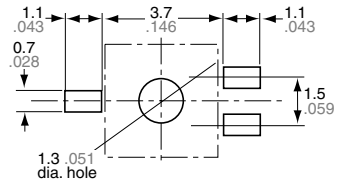
Type I
(ABP111P)



Type II
(ABP112P)

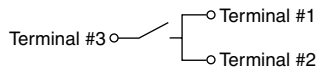


Recommended PC board pattern
(Top view)



Schematic

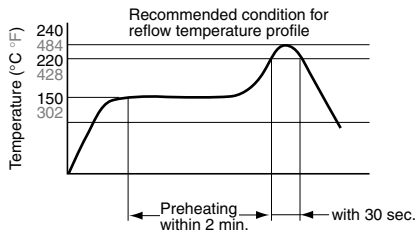
SPST-NO



NOTES

1. Soldering operations

1) For manual soldering;
By using 18W Max. (iron tip temperature: 320°C 608 ° 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. See the below recommended temperature profile.



3) 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. 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)
ABP8111P: 2.3 to 2.9mm .091 to .114 inch
ABP8112P: 3.5 to 4.1mm .138 to .161 inch

3. 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.

4. Environment

Avoid using the switches in the following conditions;

- In corrosive gases, such as silicon gas
- In a dusty environment