

# TPA Series

## Multidirection SMT Navigation Switch



### Features/Benefits

- One touch, 5 way switching
- Distinctive tactile feel for scanning and select functions
- Normally open momentary contacts
- Push down to select possible in any position
- Optional pegs for improved mechanical strength and easier PCB positionning
- RoHS compliant and compatible

### Typical Applications

- Electronic devices requiring direct control on LCD display
- MP3 player
- Bluetooth Headset
- Digital cameras
- GPS navigation systems
- Home entertainment systems
- Security



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Navigation

### Construction

FUNCTION: Multi-directional momentary action  
CONTACT ARRANGEMENT: Make contact = SP, N.O.  
TERMINALS: Gullwing type for SMT  
IP50

### Mechanical

SHAFT DISPLACEMENT:  
Orthogonal 4 horizontal directions  
Vertical Push down  
TRAVEL TO MAKE:  
Orthogonal 0.35 mm±0.15 mm  
Push to select 0.25 mm±0.15 mm  
OPERATING FORCE:  
Scanning Orthogonal 1.8 N ± 0.5 N  
Push to select Vertical 4.0 N ± 0.8 N  
MAXIMUM APPLIED FORCE:  
Scanning 20N  
Select 40N  
Button design may prevent overload (see next page)  
LIFE EXPECTANCY:  
Scanning 200,000 operations in each direction  
Push to select 200,000 operations

### Electrical

|                     | Silver | Gold   |
|---------------------|--------|--------|
| MAXIMUM POWER:      | 1 VA   | 0.2 VA |
| MAXIMUM VOLTAGE:    | 24 V   | 24 V   |
| MAXIMUM CURRENT DC: | 50 mA  | 10 mA  |
| MINIMUM CURRENT DC: | 1 mA   | 1 mA   |

DIELECTRIC STRENGTH: 250 Vrms  
CONTACT RESISTANCE, INITIAL: 200 mΩ  
INSULATION RESISTANCE (100 VDC): 100 MΩ  
BOUNCE TIME: < 10 ms

### Environmental

|                        | Silver         | Gold           |
|------------------------|----------------|----------------|
| OPERATING TEMPERATURE: | -40°C to +85°C | -40°C to +85°C |
| STORAGE TEMPERATURE:   | -40°C to +85°C | -40°C to +85°C |

### Packaging

Tape and reels in reels of 1,000 pieces.  
External diameter 330mm ± 2mm.

### Process

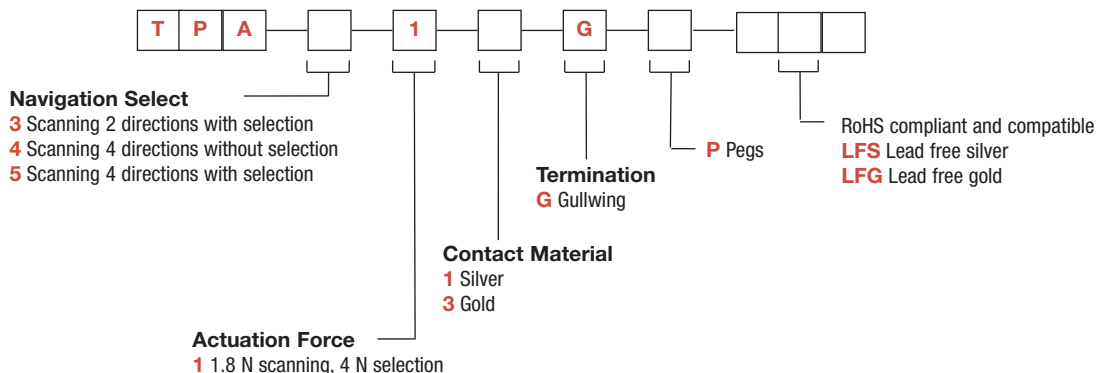
Infared reflow soldering in accordance with IEC 61760-1

**Note:** Specifications listed above are for switches with standard options.

### How To Order

Our easy build-a-switch concept allows you to mix and match options to create the switch you need. To order, select desired option from each category and place it in the appropriate box.

#### SWITCH



First Angle  
Projection

Dimensions are shown: mm  
Specifications and dimensions subject to change

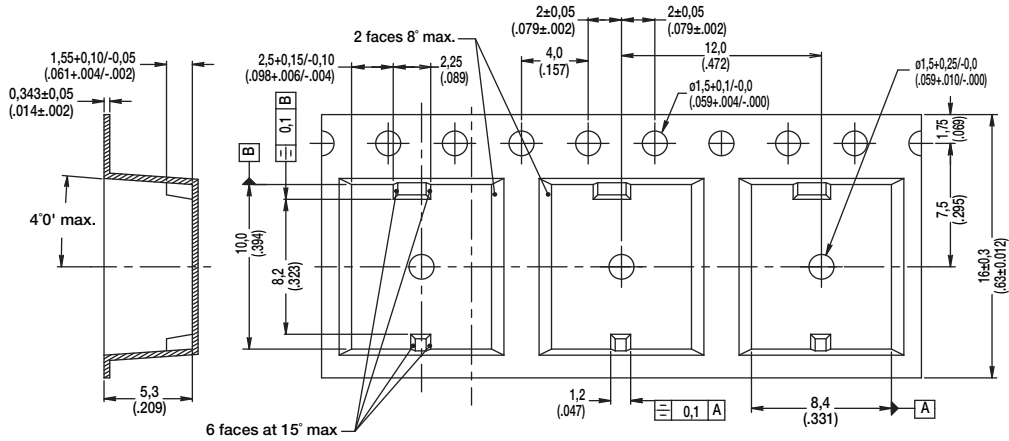




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## TAPE & REEL



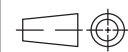
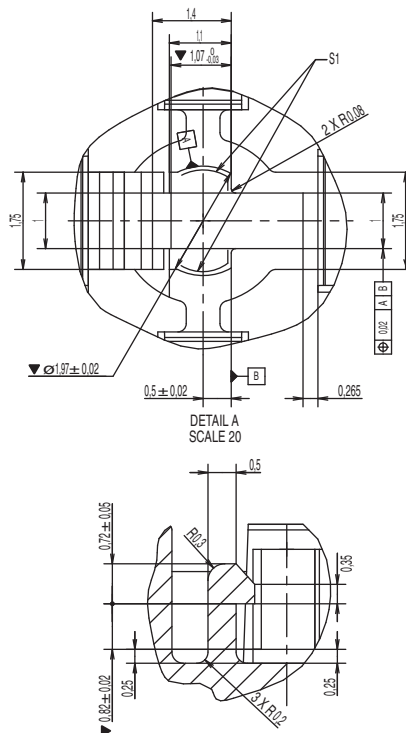
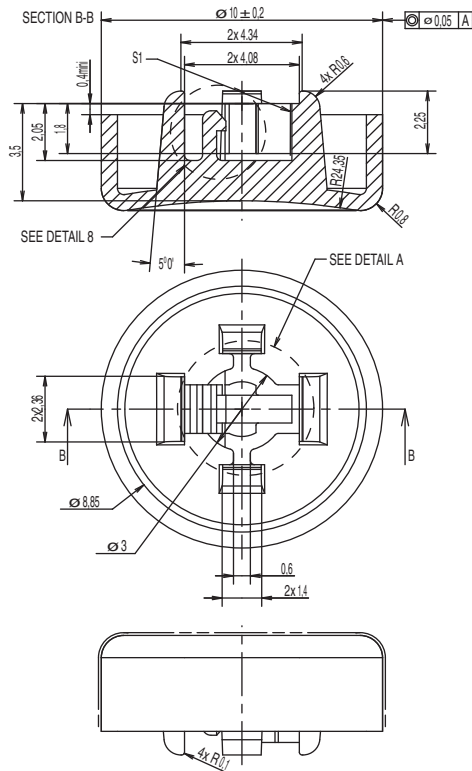
## STANDARD BUTTON

This drawings shows our standard available product but also provides the dimensional guidelines for a specific button integration, the main points being:

- shaft clip
- 4 travel stop to avoid overload

To be ordered separately

- TPA Button - Y43109100OP
- Color: Black only
- Bags of 1,000 pieces



### First Angle Projection

Dimensions are shown: mm

Specifications and dimensions subject to change