

# 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



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

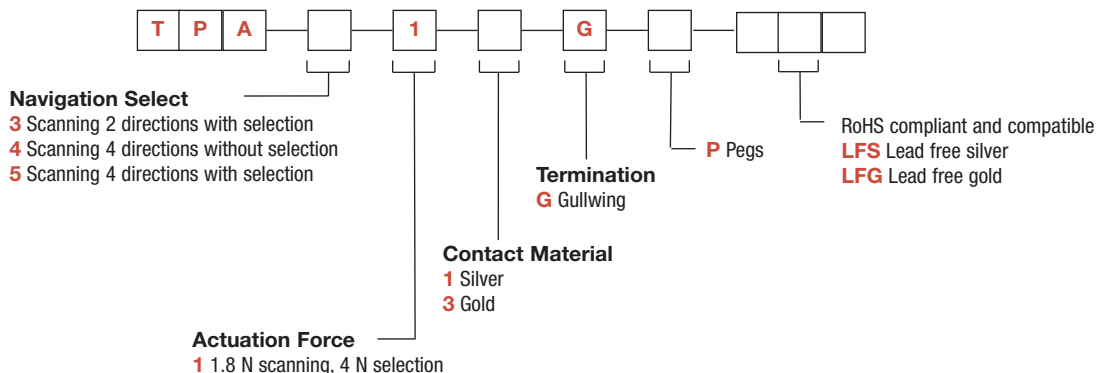
Infared reflow soldering in accordance with IEC 61760-1

**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

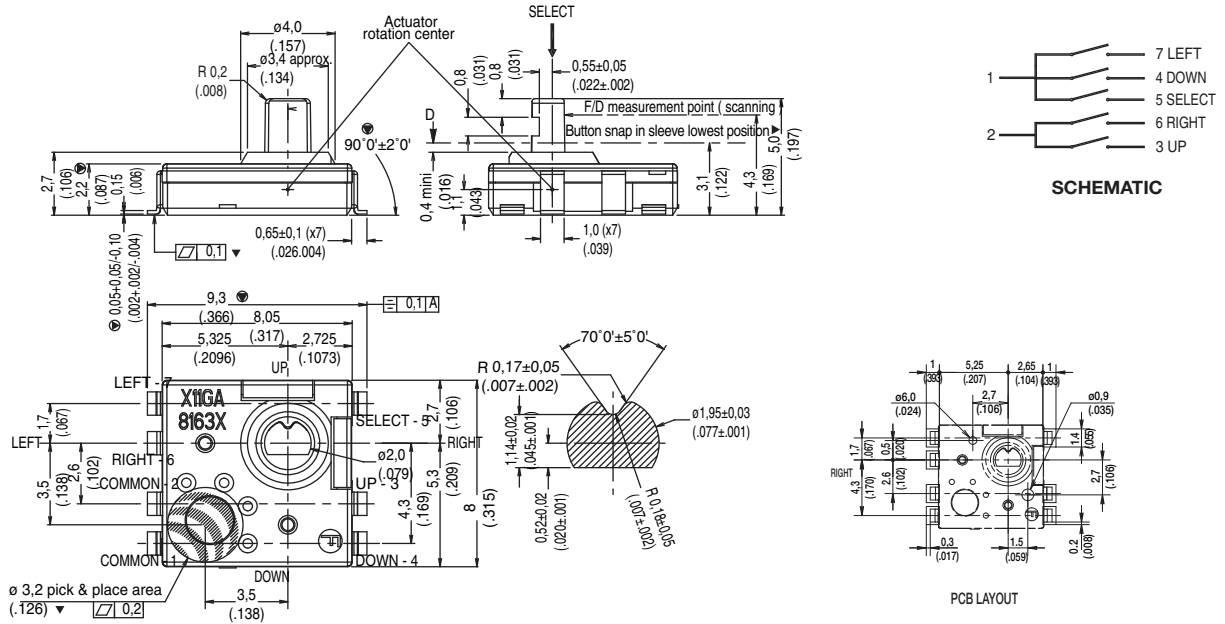
Dimensions are shown: mm

Specifications and dimensions subject to change



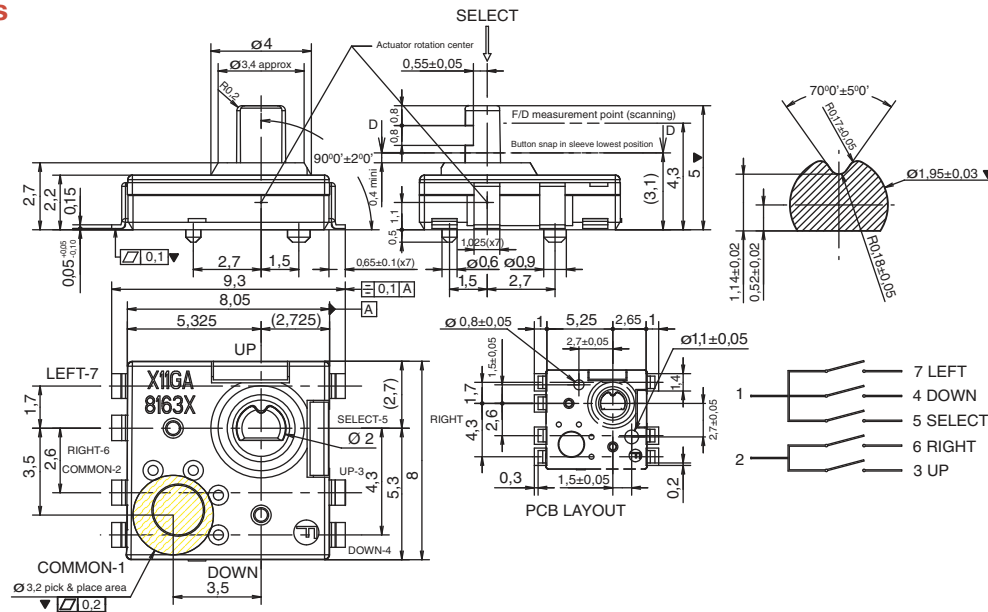
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## TPA



Navigation

## TPA with Pegs

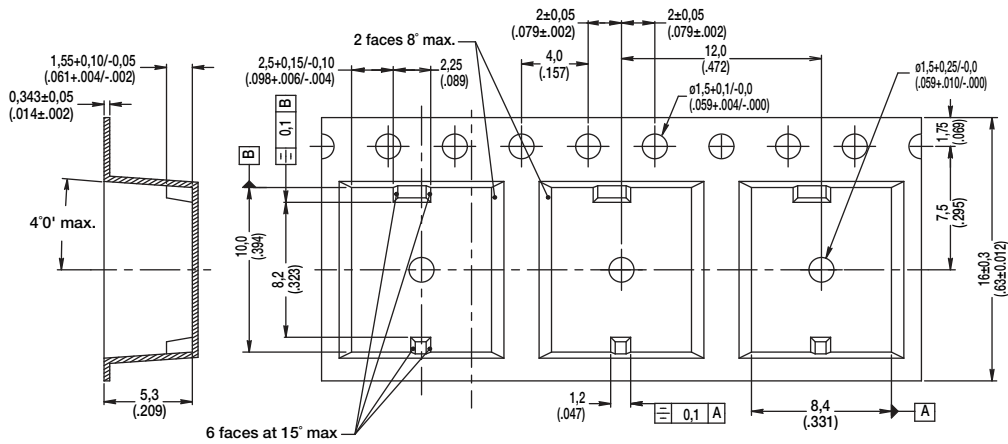


Dimensions are shown: mm  
Specifications and dimensions subject to change



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## TAPE & REEL

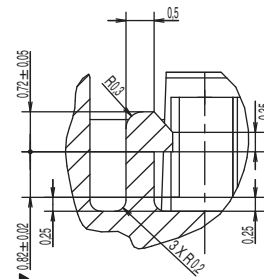
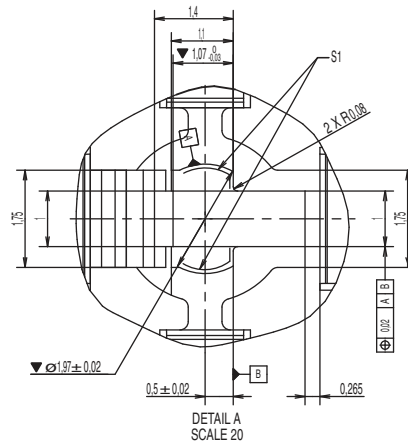
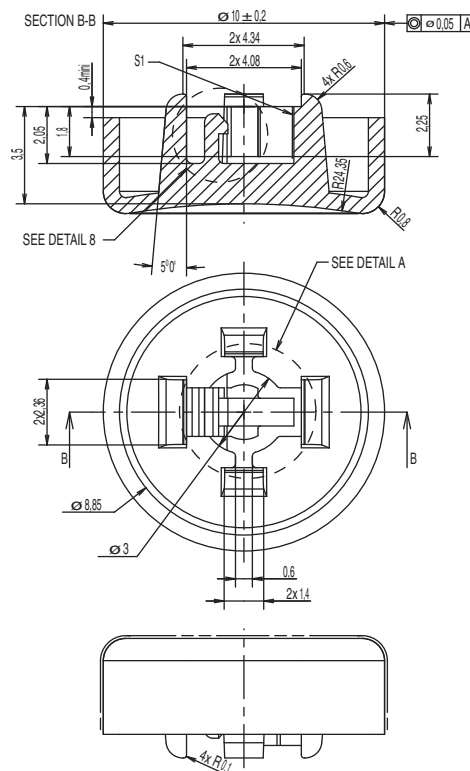


## STANDARD BUTTON

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 - Y431091000P
- Color: Black only
- Bags of 1,000 pieces



First Angle  
Projection

Dimensions are shown: mm  
Specifications and dimensions subject to change