

# TP40 Series Nano-Miniature SMT Top Actuated

## Features

- Smallest footprint
- Smallest thickness with integrated actuator
- Extended life cycles
- IP68
- Ultra low current capabilities

## Typical Applications

- Mobile Phones
- Hearing Aids
- MP3 accessories
- Bluetooth Headset
- Automotive keyless entry system
- Smoke and CO detectors
- E-readers
- Home automation remote controls



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Tactile Switches

## Specification

FUNCTION: momentary action, normally open  
CONTACT ARRANGEMENT: 1 make contact = SPST, N.O.  
TERMINALS: J lead type for SMT

## Mechanical

TRAVEL (mm): 0.15 ± 0.1

	Operating force Newtons (grams)	Tactile Feeling	Operating Life
TP4011NGJLHS	1.0 (100) ± 25%	≥ 10%	300,000
TP4021NGJLHS	1.6 (160) ± 25%	≥ 30%	300,000
TP4071NGJLHS	2.3 (230) ± 25%	≥ 30%	300,000
TP4031NGJLHS	3.4 (340) ± 25%	≥ 30%	300,000

	Operating force Newtons (grams)	Tactile Feeling	Operating Life
TP4012NGJLHS	1.0 (100) ± 25%	≥ 10%	1,000,000
TP4022NGJLHS	1.6 (160) ± 25%	≥ 30%	600,000
TP4072NGJLHS	2.3 (230) ± 25%	≥ 30%	600,000

## Electrical

MAXIMUM POWER:	0.5 VA
MAXIMUM VOLTAGE:	32 VDC
MINIMUM VOLTAGE:	20 mV
MAXIMUM CURRENT DC:	50 mA
MINIMUM CURRENT DC:	1 mA
DIELECTRIC STRENGTH:	≥ 250 Vrms (1mn)
CONTACT RESISTANCE:	≤ 150 mΩ
INSULATION RESISTANCE:	≥ 50 MΩ
BOUNCE TIME:	≤ 6 ms

## Environmental

OPERATING TEMPERATURE: -40°C to 85°C  
STORAGE TEMPERATURE: -55°C (10 days) +85°C (4 days)

## Process

SOLDERING: This component is suited to the following methods:  
– Infrared Reflow Soldering in accordance with IEC61760-1

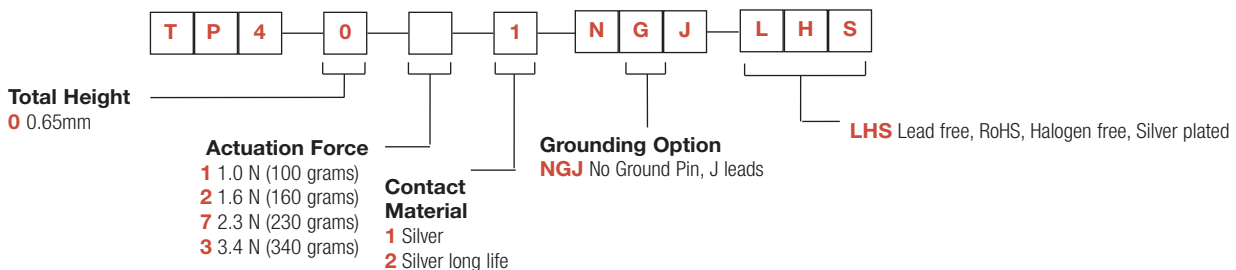
## Packaging

In reels of 5,000 pieces.  
Dimensions of reels according to EIA 481B  
External diameter 180 mm

**NOTE:** Specifications listed above are for switches with standard options.  
For information on specific and custom switches, consult Customer Service Center.

## Part Number Description

For any part number different from those listed above, please consult your local representative.



Dimensions are shown: mm  
Specifications and dimensions subject to change

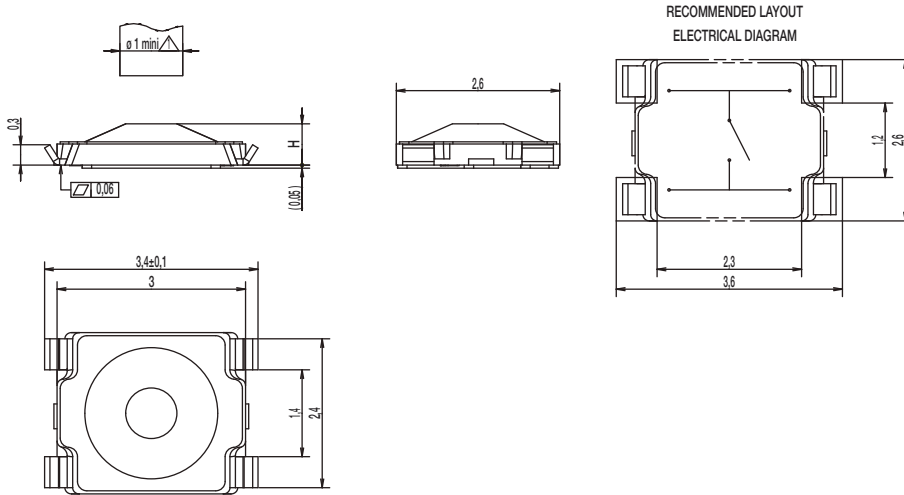
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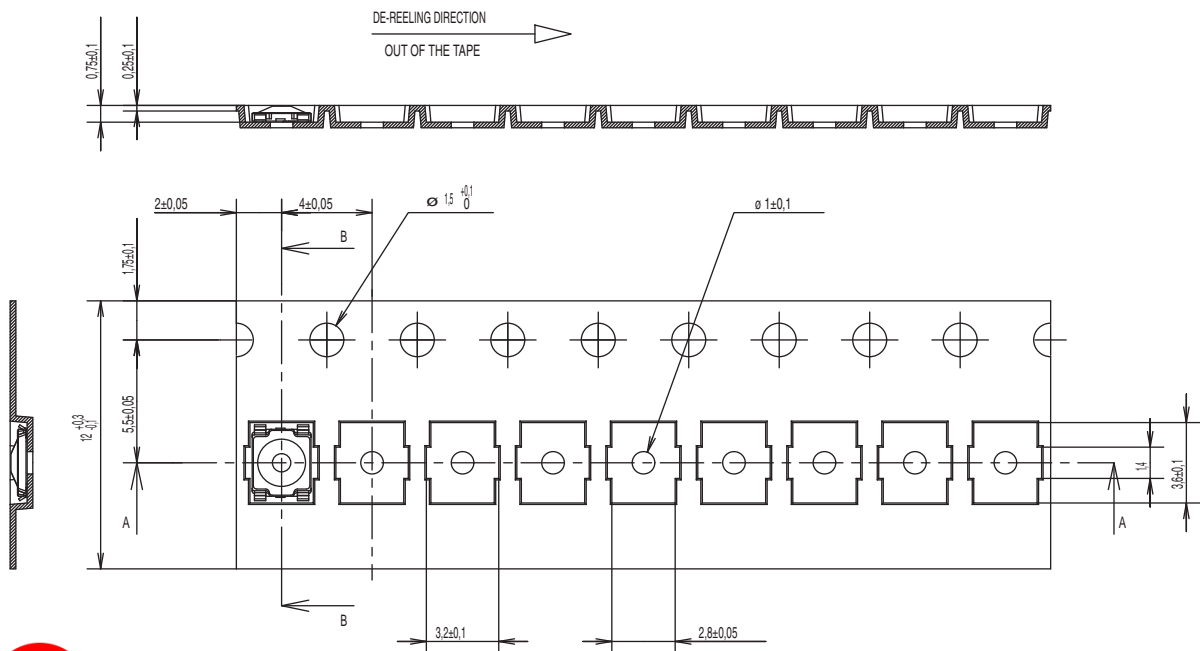
Minimum actuator diameter is 1.0 mm. It is recommended to enlarge this diameter to a full flat surface covering the switch.



Tactile Switches



## TAPE & REEL



Dimensions are shown: mm  
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