SMT TL series

Surface mount tiny washable toggle switches

Distinctive features and specifications



- ☐ Entirely designed for surface mount
- ☐ Tape and reel packaging
- ☐ Reflow solderable
 - High temperature plastic materials
 - Tin plated ground plate

 - Terminal coating: tin alloy over nickel plating
 Terminals turned to the outside, preventing the shadow effect in infrared soldering and permitting visual inspection of solder joints
 - Distance between case and circuit: 0,55 mm (.021)
 - End stackable with 10,16 mm (.40) pitch
 - Available with positioning pins to ensure switch orientation during the reflow process and increasing switch mechanical resistance
- Protected against electrostatic discharges (ESD) up to 10 KV
- Washable

Construction withstands cleaning processes, including hot water under pressure

ELECTRICAL SPECIFICATIONS

- Max. current/voltage rating with resistive load : 0,4VA 20V max. AC or DC
- Minimum load: 10mA 50mV or 10µA 5VDC
- Initial contact resistance : 20 m Ω max Insulation resistance : 1.000 M Ω min. at 500VDC
- Dielectric strength: 1.000 Vrms. 50 Hz min. between terminals and frame 500 Vrms. 50 Hz min. between terminals
 Electrical life at full load:
- 2 position switches : 60.000 cycles 3 position switches : 30.000 cycles
- Static resistance: 10 KV (Schaffner equipment)

GENERAL SPECIFICATIONS

- Operating temperature : -40°C to +85°C
- Moisture resistance: 21days per IEC 512-6 test 11c
- Vibration resistance: 10-500 Hz / 10 g per IEC 512-4 test 6d
- Shock resistance: 50 g per IEC 512-4 test 6c

MATERIALS

- Case : high temperature plastic material UL94-V0
- Actuator: brass, nickel plated, with high temperature UL94-VO plastic cap
- Ground plate and positioning pins: steel, tin plated
- Contacts: brass, gold plated
- Terminals: brass, with pure tin plating over nickel barrier

SOLDERING AND CLEANING

- Reflow soldering: infrared, vapor phase or infrared convection
- Washable per IEA-RS448-2 :
 - water + detergent preferred
 - solvents
- Further information on reflow soldering: see end of catalogue.

PACKAGING Unrolling direction 9 40.40±0.10 (1.590±.003) Ø360.00 Maxi (14.173 DIA MAX) Ø100.00 mini (3.937 DIA MIN) Ø13.00±0.25 (.511 DIA±.009) 3.00 (.118)

Tape width	24.00 (.944)	44.00 (1.732)
Reel	24.40+2.00/0.00	44.40+2.00/0.00
(dimension A)	(.960+.078/.000)	(1.748+.078/.000)

Standard packaging unit: 700 pieces Tape meeting international standard IEC -

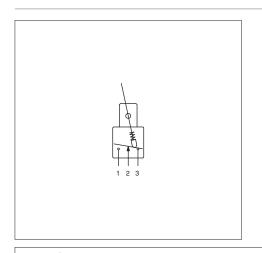
Publication 286-3 (EIA481A) Start leader: 400 mm min.

Dimensions: First dimensions are in mm while inches are shown as bracketed numbers.

A-4 APEM www.apem.com

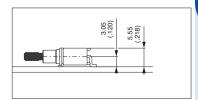
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- With or without positioning pins
- Single pole

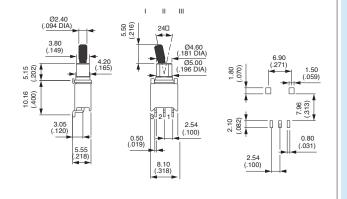
Also available for vertical mounting. On request.



Without positioning pins



TL36WS84000 TL39WS84000 TL37WS84000 TL38WS84000 TL32WS84000 III II I
ON - ON
ON OFF ON
MOM OFF MOM
ON OFF MOM
ON - MOM



With positioning pins



TL36WS84065 TL39WS84065 TL37WS84065 TL38WS84065 TL32WS84065

ON - ON
ON OFF ON
ON OFF MOM
ON OFF MOM
ON OFF MOM

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