TSW Series
3 or 7 Function Tact and Scroll Wheel

Features/Benefits
- Compact and slim
- Multiple function in one component (rotary, select)
- Easy installation
- Through hole termination
- Integrated decoration (B type)

Typical Applications
- Remote controls
- Desk phones
- Keyboards
- Printers
- Entertainment systems
- White goods

Operation Characteristics
OPERATING FORCE: See chart below
24 detent - 12 pulses/360˚

Specifications
INITIAL CONTACT RESISTANCE: Max. 300mΩ
INSULATION RESISTANCE: Min. 100 MΩ (100 VDC)
RATING: 1mA 10 VDC
LIFE CYCLE: See chart below
OPERATING FREQUENCY:
Rotation - Max. 30 operations per minute
Push - Max. 120 operations per minute
Depression - Max. 300 gf

<table>
<thead>
<tr>
<th>Designation</th>
<th>Number of Circuits</th>
<th>Rotation Actuation Force</th>
<th>Push Actuation Force</th>
<th>Cycle Life Rotation (per direction)</th>
<th>Cycle Life Push</th>
</tr>
</thead>
<tbody>
<tr>
<td>TSWA</td>
<td>3</td>
<td>Max. 60g - cm</td>
<td>220g ± 50g</td>
<td>1,000K cycles</td>
<td>1,000K cycles</td>
</tr>
<tr>
<td>TSWB</td>
<td>5</td>
<td>Max. 50g - cm</td>
<td>Max 300g</td>
<td>1,000K cycles</td>
<td>1,000K cycles</td>
</tr>
</tbody>
</table>

Environmental
OPERATING TEMPERATURE: 0˚C / 40˚C
STORAGE TEMPERATURE: -40˚C / 70˚C
VIBRATION RESISTANCE: 10 - 55 Hz, displacement 0.75mm (p-p)
SHOCK RESISTANCE: Destruction 1,000 m/s² (approx. 100G) max.
WAVE SOLDERING: Max. 260˚C for 5 seconds
HAND SOLDERING: Max. 260˚C for 5 seconds

Part Number Description Tray Box
TSWA-3N-C LFS Base switch with jog and select, no decoration 80 160
TSWA-3N-CB11 LFS Base switch with jog and select, white central button, white dial 65 130
TSWA-3N-CD23 LFS Base switch with jog and select, black central button, grey dial 30 60
TSWB-3N-CB111 LFS Central select with jog and 4 directions, white central button, dial & direction ring 30 60
TSWB-3N-CB222 LFS Central select with jog and 4 directions, black central button, dial & direction ring 30 60

TSWA-3N-C LFS
Base switch with jog and select, no decoration

CONTACT CONFIGURATION
Push

Rotation output waveform
Numbers of detent: 24
Pulse/Rotation: 12 pulse/360˚

COVER DESIGN GUIDELINE

PCB LAYOUT
TSW Series
3 or 7 Function Tact and Scroll Wheel

TSWA-3N-CB11 LFS
Base switch with jog and select, white central button, white dial

CONTACT CONFIGURATION
Push

Rotation output waveform

Numbers of detent: 24
Pulse/Rotation: 12 pulse/360°

PCB LAYOUT

Dimensions are shown: mm
Specifications and dimensions subject to change
www.ck-components.com
TSW Series
3 or 7 Function Tact and Scroll Wheel

TSWA-3N-CD23 LFS
Base switch with jog and select, black central button, grey dial

CONTACT CONFIGURATION
Push

Rotation output waveform

Numbers of detent : 24
Pulse/Rotation : 12 pulse/360°

PCB LAYOUT

Dimensions are shown: mm
Specifications and dimensions subject to change
TSWB-3N-CB111 LFS
TSWB-3N-CB222 LFS

Central select with jog and 4 directions, white central button, dial & direction ring
Central select with jog and 4 directions, black central button, dial & direction ring

ELECTRICAL FUNCTION

Rotational Output Waveform

<table>
<thead>
<tr>
<th>ANGLE CONTACT</th>
<th>-90°</th>
<th>-60°</th>
<th>-30°</th>
<th>0°</th>
<th>30°</th>
<th>60°</th>
<th>90°</th>
</tr>
</thead>
<tbody>
<tr>
<td>A-COM A OFF</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B-COM A OFF</td>
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CW   CCW

Numbers of detent : 24
Pulse Rotation : 12 pulse/360°

Specifications and dimensions subject to change