

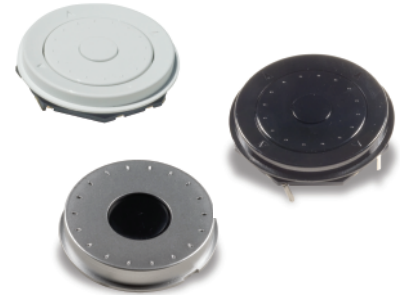
# TSW Series 3 or 7 Function Tact and Scroll Wheel

## 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

## Environmental

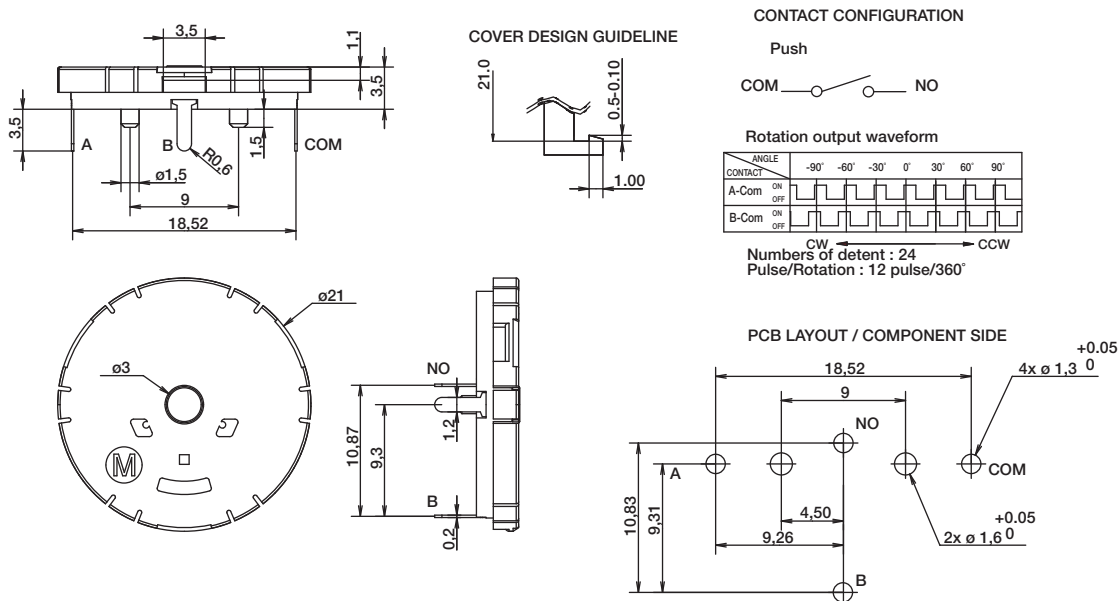
OPERATING TEMPERATURE: 0°C / 40°C  
STORAGE TEMPERATURE: -40°C / 70°C  
VIBRATION RESISTANCE: 10 ~ 55 Hz, displacement 0.75mm (p-p)  
SHOCK RESISTANCE: Destruction 1,000 m/s<sup>2</sup> (approx. 100G) max.  
WAVE SOLDERING: Max. 260°C for 5 seconds  
HAND SOLDERING: Max. 260°C for 5 seconds

| Designation | Number of Circuits | Rotation Actuation Force | Push Actuation Force | Cycle Life Rotation (per direction) | Cycle Life Push |
|-------------|--------------------|--------------------------|----------------------|-------------------------------------|-----------------|
| TSWA        | 3                  | Max. 60g - cm            | 220g ± 50g           | 1,000K cycles                       | 1,000K cycles   |
| TSWB        | 5                  | Max. 50g - cm            | Max 300g             | 1,000K cycles                       | 1,000K cycles   |

| 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



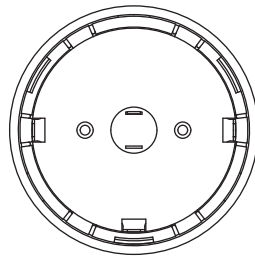
Dimensions are shown: mm  
Specifications and dimensions subject to change



# 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

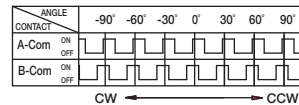


CONTACT CONFIGURATION

Push



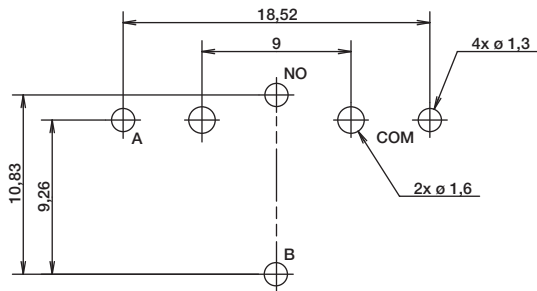
Rotation output waveform



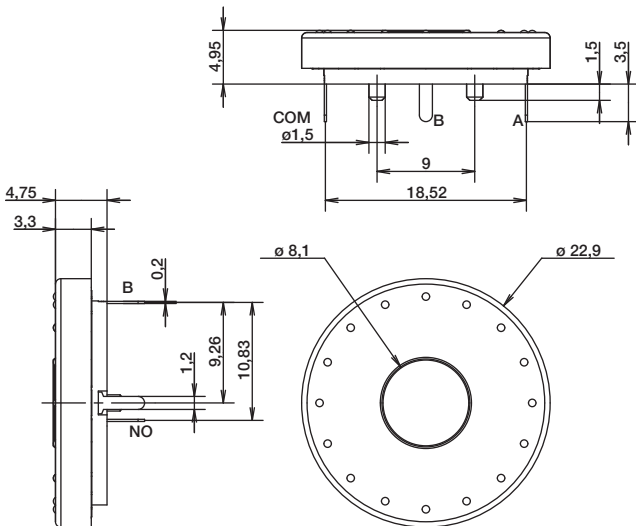
Numbers of detent : 24

Pulse/Rotation : 12 pulse/360°

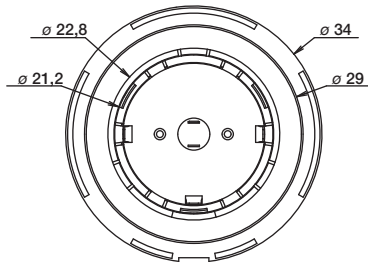
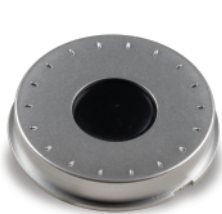
PCB LAYOUT / COMPONENT SIDE



Navigation



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

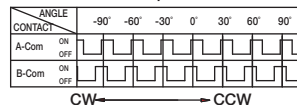


CONTACT CONFIGURATION

Push



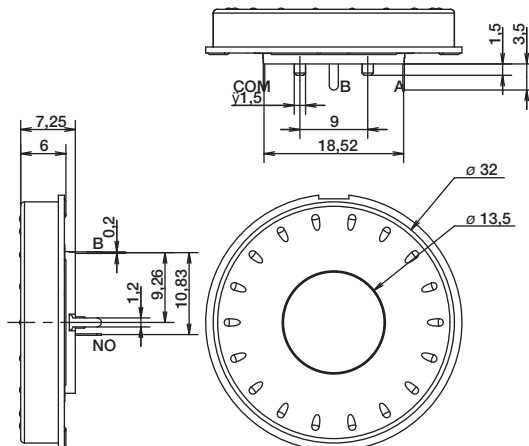
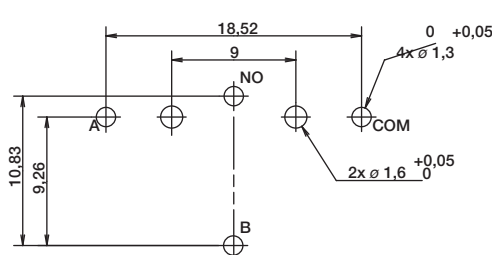
Rotation output waveform



Numbers of detent : 24

Pulse/Rotation : 12 pulse/360°

PCB LAYOUT / COMPONENT SIDE



First Angle Projection

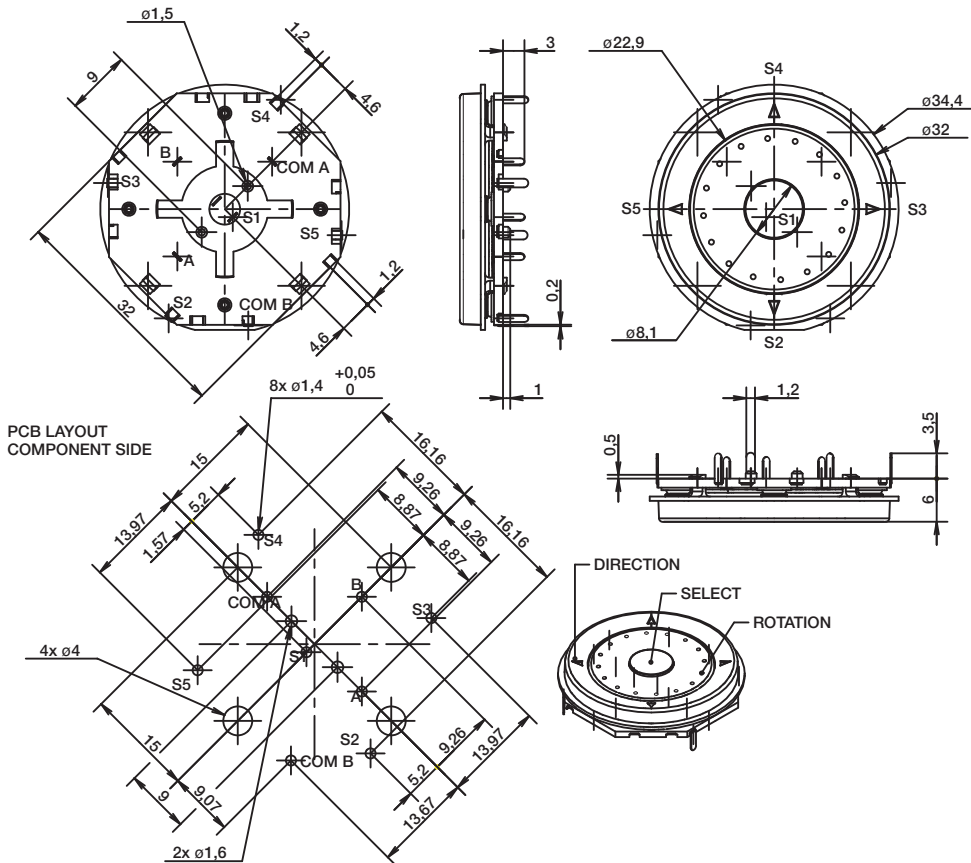
Dimensions are shown: mm  
Specifications and dimensions subject to change



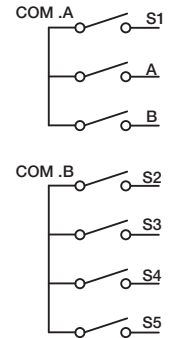
# TSW Series 3 or 7 Function Tact and Scroll Wheel

**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

| ANGLE   | -90° | -60° | -30° | 0°  | 30° | 60° | 90° |
|---------|------|------|------|-----|-----|-----|-----|
| CONTACT |      |      |      |     |     |     |     |
| A-COM A | ON   | OFF  | ON   | OFF | ON  | OFF | ON  |
| B-COM A | ON   | OFF  | ON   | OFF | ON  | OFF | ON  |

CW ← → CCW

Numbers of detent : 24

Pulse/Rotation : 12 pulse/360°



C

Navigation



Dimensions are shown: mm  
Specifications and dimensions subject to change

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