

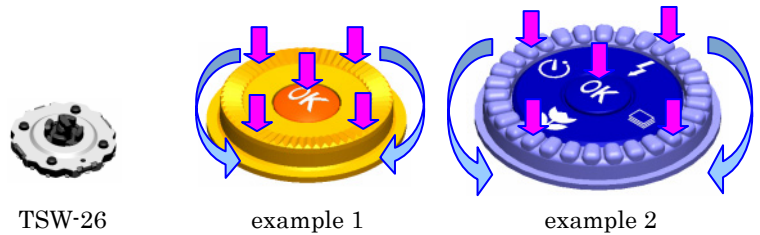
# Wheel Tactile Switches (Encoder + 5 direction push) TSW-26 Series

## Features

- ◇ The compound switch of the encoder and 5 direction push.
- ◇ With 11.6x11.6mm dimension and 3.4mm height, surface-mounting type switches are ideal for high-density mounting.
- ◇ Switches are packaged in 24mm wide embossed taping

## Applications

- ◇ Digital still camera and digital video camera
- ◇ Portable audio devices, Car navigation system
- ◇ All kinds of digital equipment



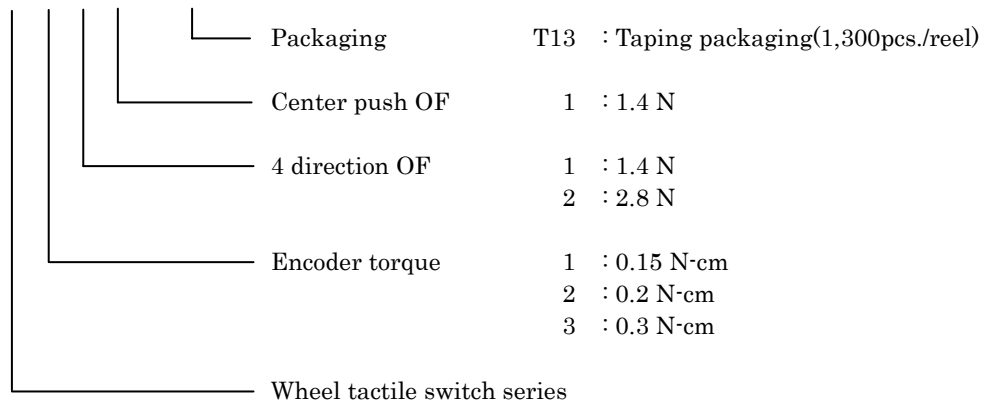
TSW-26

example 1

example 2

## Product number

TSW-26-[ ] [ ] [ ] B-T13



## Typical Specifications

Item	Specifications
<b>Ratings (max.) (Resistive load)</b>	10mA 5V DC
<b>Contact resistance</b>	1 ohm max. (Initial)
<b>Insulation resistance</b>	100 megohm min. 500V DC
<b>Withstanding voltage</b>	100V AC for 1min.
<b>Encoder</b>	number of click : 12 number of pulse : 12
<b>Operating force</b>	Encoder torque : 0.15N-cm , 0.2N-cm , 0.3N-cm 4 direction : 1.4 N , 2.8 N Center push : 1.4 N
<b>Operating life</b>	Encoder : 20,000 cycles 4 direction : 100,000 cycles Center push : 100,000 cycles
<b>Operating temperature range</b>	-20 to +70 degree Celsius
<b>Storage temperature range</b>	-30 to +80 degree Celsius (except carrier tape)

## Products Line

No	Products No.	Encoder torque	4 direction OF	Center push OF
1	TSW-26-011B-4-T13	0.15N-cm	1.4N	1.4N
2	TSW-26-121B-4-T13	0.2N-cm	2.8N	1.4N
3	TSW-26-221B-4-T13	0.3N-cm	2.8N	1.4N

## Dimensions

Unit : mm

No	Style	P.C.B reference Land Dimensions Circuit Diagram (TOP VIEW)						
	<p>Top view dimensions: 2-11.62, 4-10.3, 2-9.12<sup>±0.15</sup>, 4-50°<sup>±3'</sup>, 4-4, 4-40°<sup>±5'</sup>, 12-0.4, 12-0.8, 2-11.2, 2-11.57, 2-4.68, 4-10.25, 12-1.35, 2-3.31, 2-0.95, 2-0.8, 7<sup>±0.05</sup>, 45°, 4-φ1, 1.2<sup>±0.15</sup>, 0.55<sup>±0.08</sup>, 1.65<sup>±0.15</sup>, 2.65<sup>±0.15</sup>, 2.9<sup>±0.05</sup>, 3.6<sup>±0.15</sup>, φ0.8<sup>±0.1</sup>, 2-φ0.15, φ1.2<sup>±0.1</sup>, 2-0.4, 1.6<sup>±0.15</sup>.</p> <p>Side view dimensions: 1.65<sup>±0.15</sup>, 0.55<sup>±0.08</sup>, 1.2<sup>±0.15</sup>, 2.65<sup>±0.15</sup>, 2.9<sup>±0.05</sup>, 3.6<sup>±0.15</sup>, φ0.8<sup>±0.1</sup>, 2-φ0.15, φ1.2<sup>±0.1</sup>, 2-0.4, 1.6<sup>±0.15</sup>.</p> <p>Callouts: 1-14, A, B, C, D, E, S R 1.3.</p>	<p>Printed circuit board land dimensions and circuit diagram (top view) showing pin locations (1-14) and dimensions. Includes a prohibition area for exposing patterns (hatched area).</p> <p>プリント基板ランド推奨寸法 Land dimensions ランドパターン禁止領域 Prohibition area of exposing patterns</p> <p>Center Push connections: A: ⑨ - ⑧, ⑬ - ⑭ (GND) B: ⑫ - ⑪ C: ③ - ② D: ⑥ - ⑤ E: ⑩ - ①</p> <table border="1"> <thead> <tr> <th>CODE</th> <th>phase difference</th> </tr> </thead> <tbody> <tr> <td>PULSE</td> <td>12</td> </tr> <tr> <td>POSITION</td> <td>12</td> </tr> </tbody> </table> <p>Timing chart (Timing chart) showing pulse sequences for C W and C C W directions. Pulse widths T1, T2, T3, T4 are shown. T1, T3 = 1/4 T ± 1/8 T.</p>	CODE	phase difference	PULSE	12	POSITION	12
CODE	phase difference							
PULSE	12							
POSITION	12							

## □ Notes

1. The appearance and specifications of the product may be modified to improve its performance without prior notice.
2. This catalog shows only outline specifications. When using the product, please obtain formal specifications.
3. Please see appendix [Cautions in Using Switches].
4. 1,300pcs/one reel is the minimum packing unit. It is requested that the quantity of order shall be an integer multiple of the minimum packing unit.
5. Please set the reflow soldering condition confirming under the actual conditions of mass-production.
6. Characteristics of switch may change due to the warping of the circuit writing board. Consideration shall be given to the pattern design and layout.
7. This push switch is not washable.
8. This push switch permits reflow soldering and the switch has the possibility to be mounted on the edge of the PC board. But auto-dip shall not be done after the mounting of the switch because of the big possibility of the penetration of the soldering flux into the contacts sliding portion.
9. Larger stress than specified and/ or shock shall not be applied during switch operation.
10. In manual soldering, consider that the abnormal pressure of the soldering iron shall not be applied to the tip of the terminal as well do not apply any pressure for more than 1 minute after soldering.
11. Care shall be taken so that the flux shall not penetrate into the terminal portion.
12. The operating characteristic may change if force is exerted to the top the cover.
13. Consideration shall be taken to the chattering and bouncing in circuit design and soft setting.
14. Please confirm the performance on actual operation by simulation with actual environments for high reliability.