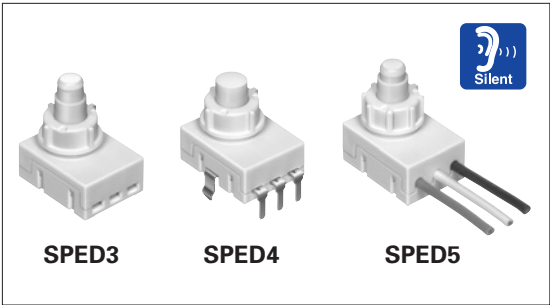


Push Switch
3.8mm-travel Push-push Type
SPED3/SPED4/SPED5 Series



Smooth and linear operation feeling.



Features

- A mid-size version of in our SPED2 series.
- Smooth and linear operation feeling achieved from ratchet cam structure.
- Near-silent operation contributes to improved comfort in the car interior.
- Only 4 pushes in one cycle (conventional products 6-8 times) contributing to VA.

Applications

- For ON/FF switching in in-car map lamps

Typical Specifications

Items	Specifications
Ratings	1A 14.5V DC
Contact resistance (Initial performance)	100mΩ max.
Operating force	4.17±0.74N
Operating life (Without load)	30,000cycles
Circuit configuration	1-pole, 2-positions
Travel	3.8mm

Product Line

Changeover timing	Travel (mm)	Total travel (mm)	Mounting method	Rating	Poles	Operation	Terminal style	Minimum packing unit (pcs.)	Product No.	Drawing No.
Non shorting	—	3.8	Connector	—	1	Alternate	—	100	SPED310200	1
			PC board				For PC board	280	SPED420200	2
			With wire ※				—	240	SPED530202	3

Note

※ Contact us for lead length variations.

Detector

Push

Slide

Rotary

Encoders

Power

Dual-in-line
Package Type

Multi Control
Devices

TACT Switch™

Custom-
Products

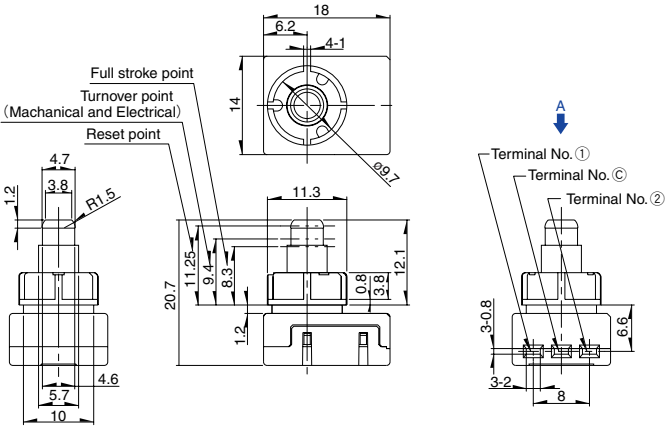
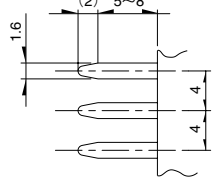
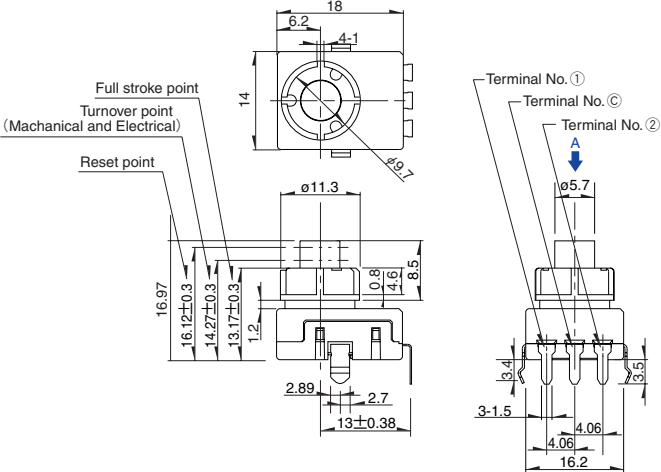
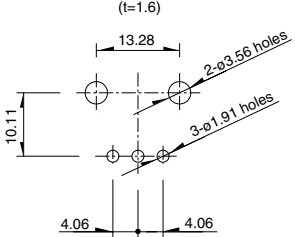
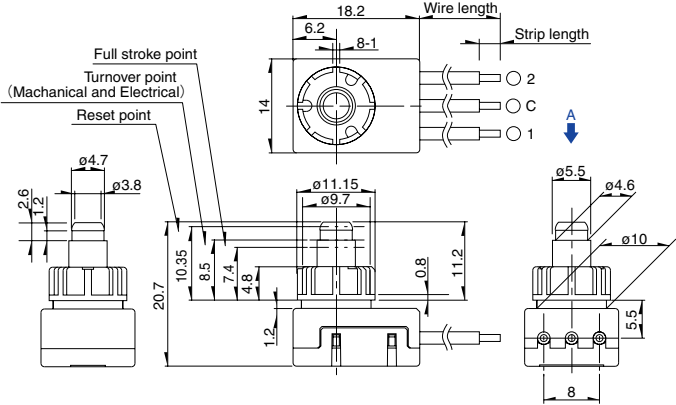
Horizontal
Type

Vertical
Type

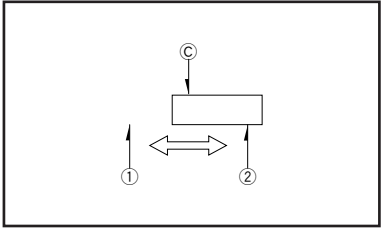
Refer to P.105 for product specifications.

Dimensions

Unit:mm

No.	Style	Reference dimension of connection terminal (T=0.5~0.65mm)
1		
2		PC board mounting hole dimensions (Viewed from the direction A) 
3		

Circuit Diagram



Note

Factory setting for contact points can be either ① or ②.

Product Specifications

Series		SPEE	SPPJ6	SPPJ2	SPPJ3	SPUJ SPUP ※1	SPUN ※1	SPUN (medium current) ※1	SPPH2	SPPH4	SPPH1	SPEA	SPEC	SPED2	SPED3	SPED4	SPED5	SPEF		
		Item																		
Operating temperature range		−10℃ to +60℃		−40℃ to +85℃		−10℃ to +60℃					−40℃ to +85℃		−10℃ to +60℃		−40℃ to +85℃					
Rating (max.) (Resistive load)		5V 20mA	0.2A 12V DC	0.2A 30V DC		0.1A 30V DC		1A 25V DC	0.1A 12V DC	0.1A 30V DC				1A 14.5V DC						
Electrical performance	Initial contact resistance	※2	20mΩ max.						30mΩ max.	100mΩ max.	20mΩ max.	30mΩ max.		100mΩ max.						
	Insulation resistance	10mΩ min. 100V DC	100MΩ min. 500V DC																3MΩ min. 500V DC	3MΩ min. 100V DC
	Voltage proof	100V AC for 1minute	500V AC for 1minute												100V AC for 1minute			100V AC for 1minute		
Mechanical performance	Terminal strength		—		5N for 1minute						3N for 1minute		—							
	Actuator strength	Operating direction	50N		30N		50N		30N		50N					90N				
		Pulling direction	—		—		24.6350N		— 10N		—		50N		—		30N			
	Vibration		10 to 55 to 10Hz/min., the amplitude is 1.5mm for all the frequencies, in the 3 direction of X, Y and Z for 2 hours respectively																	
	Resistance to soldering heat	Manual soldering	350±10℃ 4±0s	350±10℃ 3 ⁺¹ ₀ s		300±10℃ 3 ⁺¹ ₀ s	350±10℃ 3 ⁺¹ ₀ s		350℃ max. 3s max.	350±10℃ 3 ⁺¹ ₀ s			350±10℃ 3±0.5s	—	350±10℃ 3±0.5s	—	350±5℃ 3s max.			
		Dip soldering	—	260±5℃ 5±1s	260±5℃ 10±1s	260±5℃ 5±1s	260±5℃ 10±1s		260±5℃ 5±1s		260±5℃ 10±1s	260±5℃ 5±1s	260℃ max. 5s max.	260±5℃ 10±1s	—	260±5℃ 10±1s	—	260±5℃ 10±1s		
Reflow		Please see P.107	—															Please see P.107		
Durability	Operating life without load	100,000 cycles	10,000 cycles 40mΩ max.				30,000cycles 40mΩ max.	10,000cycles 40mΩ max.	10,000cycles 50mΩ max.	10,000cycles 100mΩ max.	10,000cycles 40mΩ max.	10,000cycles 50mΩ max.		30,000cycles 100Ω max.						
	Operating life with load Load : As rating	100,000 cycles	10,000 cycles 40mΩ max.					5,000 cycles 40mΩ max.	10,000 cycles 50mΩ max.	10,000 cycles 100mΩ max.	10,000 cycles 40mΩ max.	10,000 cycles 50mΩ max.		30,000cycles 100mΩ max.						
Environmental performance	Cold		−40±2℃ for 96h	−20±2℃ for 96h											−40±2℃ for 96h					
	Dry heat		85±2℃ for 96h																	
	Damp heat		40±2℃, 90 to 95%RH for 96h																	

Detector

Push

Slide

Rotary

Encoders

Power

Dual-in-line
Package TypeMulti Control
Devices

TACT Switch™

Custom-
ProductsHorizontal
TypeVertical
Type

Notes

- ※1. The operating temperature range for automotive applications can be raised upon request. Please contact us for requirements of this kind.
- ※2. 1V or less, at the present rating of 1mA, 5V DC for output voltage.