

DETECTOR SWITCH --- Horizontal

PCB		SMT		SNAP	
<p>DTS-02</p> 	<p>DTS-03-KR/L</p> 	<p>DTS-03</p> 	<p>DTS-15</p> 		
<p>DTS-04</p> 	<p>DTS-05</p> 	<p>DTS-15</p> 			
<p>DTS-08</p> 	<p>DTS-17</p> 	<p>DTS-17</p> 			
<p>DTS-19</p> 	<p>DTS-19</p> 		<p>DTS-19</p> 		
<p>DTS-19</p> 		<p>DTS-25</p> 			

DETECTOR SWITCH

Characteristics

Series	Circuit	Travel	Free Mode	Operating temperature range	Soldering
DTS-02	1P2T	2.4mm	ON	-10 °C to 60 °C	Dip, Manual

Electrical Performance

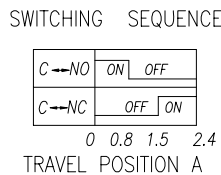
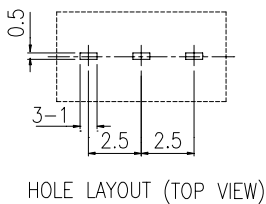
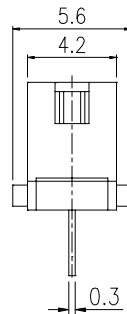
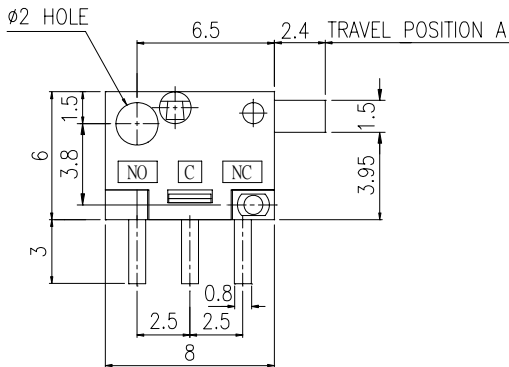
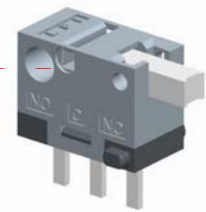
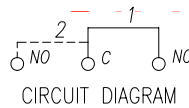
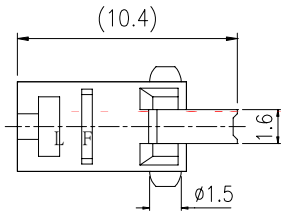
Rating (max.)	Contact resistance	Insulation resistance	Withstand voltage
0.1A 30V DC	30 mΩ max.	100 MΩ min. 500 V DC	500 V AC for 1 min.

Mechanical & Solderability Performance

Operating force	Terminal Strength	Actuator Strength	Solderability	Resistance to soldering heat	
				Dip soldering	Manual soldering
60 gf ± 20 gf	0.5 kgf for 15 seconds	1.0 kgf for 15 seconds	230 ± 5 °C	260 °C, 5 seconds	350 °C, 3 seconds

Endurance, Environmental Performance

Operating life without load	Operating life with load (load: as ratings)	Cold	Dry heat	Damp heat
10,000 cycles , 100 mΩ max.		-25 °C for 48 hrs	70 °C for 48 hrs	40 °C , 90 to 95% RH for 96 hrs



DETECTOR SWITCH

Characteristics

Series	Terminal style	Circuit	Travel	Free Mode	Operating temperature range	Soldering
DTS-03-KL	PCB	1P1T	2.4 mm	OFF	-10 °C to 60 °C	Dip, Manual
DTS-03-KR	PCB					
DTS-03-SMT	SMT					

Electrical Performance

Rating (max.)	Contact resistance	Insulation resistance	Withstand voltage
0.01A 5V DC	500 mΩ max.	100 MΩ min. 100 V DC	100 V AC for 1 min.

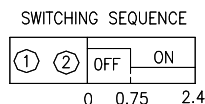
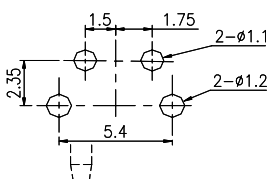
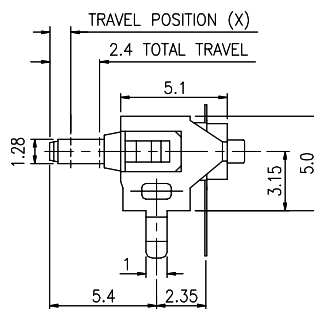
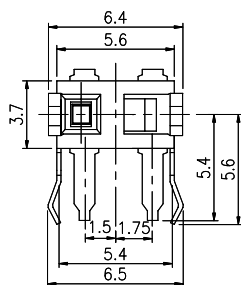
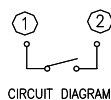
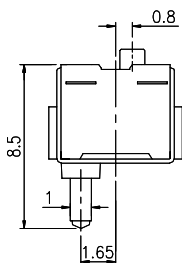
Mechanical & Solderability Performance

Operating force	Terminal Strength	Actuator Strength	Solderability	Resistance to soldering heat	
				Dip soldering	Manual soldering
35gf max.	0.3 kgf for 15 seconds	0.3 kgf for 15 seconds	230 ± 5 °C	280 °C, 5 seconds	350 °C, 3 seconds

Endurance, Environmental Performance

Operating life without load	Cold	Dry heat	Damp heat
50,000 cycles 1,000 mΩ max.	-25 °C for 96 hrs	80 °C for 96 hrs	40 °C, 90 to 95% RH for 96 hrs

DTS-03-KL

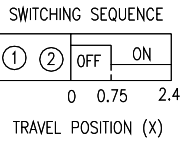
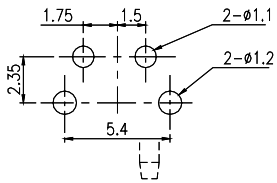
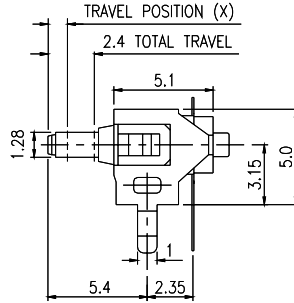
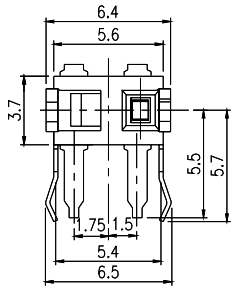
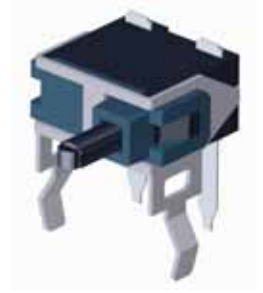
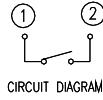
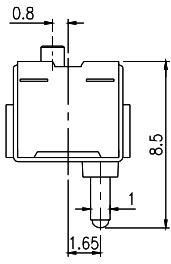


HOLE LAYOUT (TOP VIEW)

TRAVEL POSITION (X)

Part No.

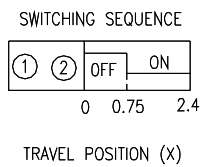
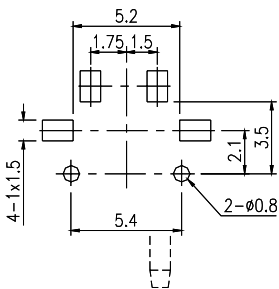
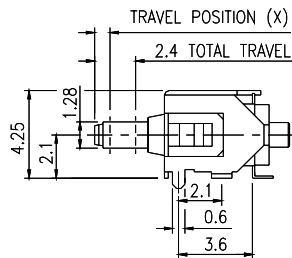
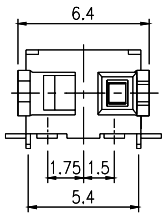
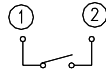
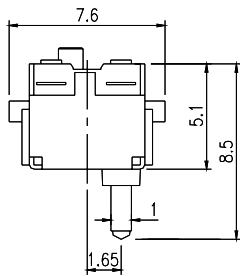
DTS-03-KR



HOLE LAYOUT (TOP VIEW)

Part No.

DTS-03-SMT



HOLE LAYOUT (TOP VIEW)

DETECTOR SWITCH

Characteristics

Series	Circuit	Travel	Free Mode	Operating temperature range	Soldering
DTS-04	2P1T	2 mm	OFF	-10 °C to 60 °C	Dip, Manual

Electrical Performance

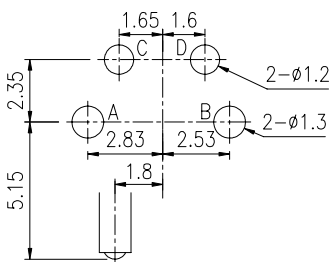
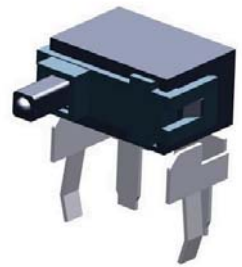
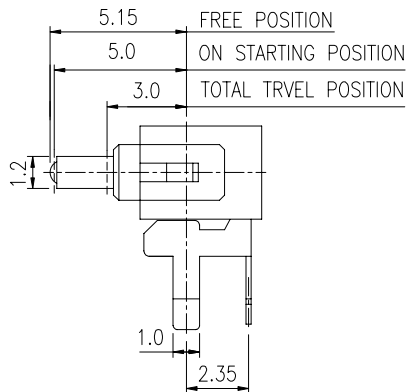
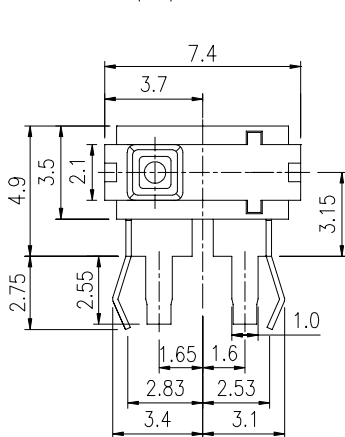
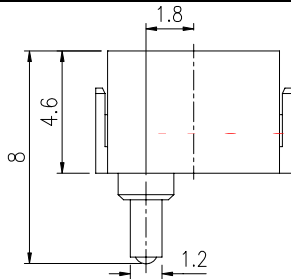
Rating (max.)	Contact resistance	Insulation resistance	Withstand voltage
0.001A 5V DC	500 mΩ max.	100 MΩ min. 100 V DC	300 V AC for 1 min.

Mechanical & Solderability Performance

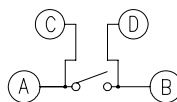
Operating force	Terminal Strength	Actuator Strength	Solderability	Resistance to soldering heat	
				Dip soldering	Manual soldering
25gf max.	0.3kgf for 60 seconds	1.0 kgf for 15 seconds	230 ± 5 °C	260 °C, 5 seconds	350 °C, 3 seconds

Endurance, Environmental Performance

Operating life without load	Cold	Dry heat	Damp heat
50,000 cycles 1,000 mΩ max.	-25 °C for 168 hrs	80 °C for 168 hrs	40 °C, 90 to 95% RH for 168 hrs



HOLE LAYOUT (TOP VIEW)



CIRCUIT DIAGRAM

DETECTOR SWITCH

Characteristics

Series	Circuit	Travel	Free Mode	Operating temperature range	Soldering
DTS-05	1P2T	36°	OFF	-10 °C to 60 °C	Dip, Manual

Electrical Performance

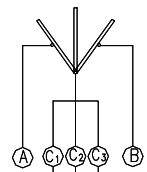
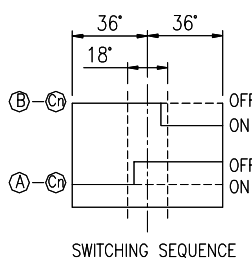
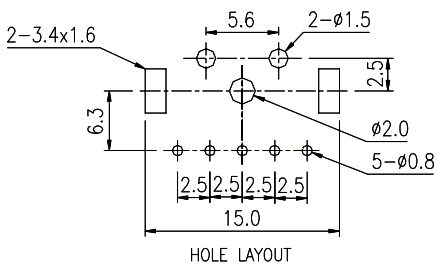
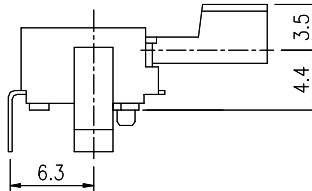
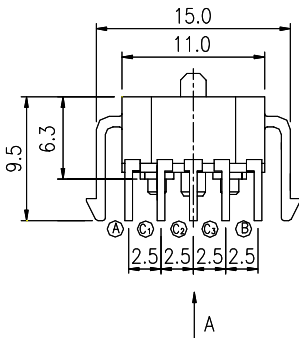
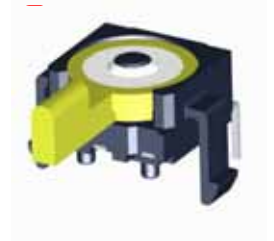
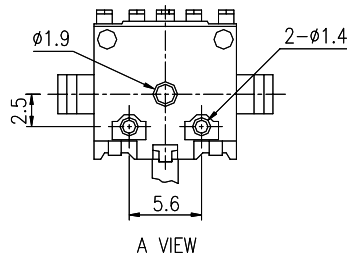
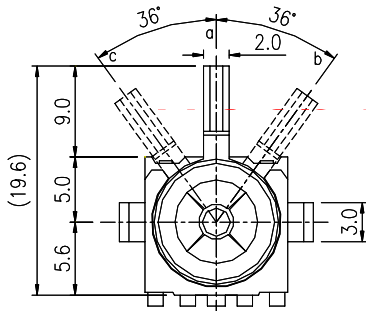
Rating (max.)	Contact resistance	Insulation resistance	Withstand voltage
0.1A 12V DC	100 mΩ max.	100 MΩ min. 100 V DC	100 V AC for 1 min.

Mechanical & Solderability Performance

Operating force	Terminal Strength	Actuator Strength	Solderability	Resistance to soldering heat	
				Dip soldering	Manual soldering
70gf max.	0.5 kgf for 60 seconds	1.0 kgf for 15 seconds	230 ± 5 °C	260 °C, 5 seconds	350°C, 3 seconds

Endurance, Environmental Performance

Operating life without load	Operating life with load (load: as ratings)	Cold	Dry heat	Damp heat
50,000 cycles	300 mΩ max.	-20°C for 96 hrs	85 °C for 240 hrs	40 °C, 90 to 95% RH for 500 hrs



DETECTOR SWITCH

Characteristics

Series	Circuit	Travel	Free Mode	Operating temperature range	Soldering
DTS-08	1P2T	1.0mm	ON	-20 °C to 80 °C	Dip , Manual
DTS-08A	1P1T		OFF		

Electrical Performance

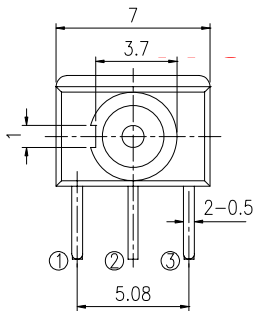
Rating (max.)	Contact resistance	Insulation resistance	Withstand voltage
10 mA 5V DC	80 mΩ max.	100 MΩ min. 100 V DC	100 V AC for 1 min.

Mechanical & Solderability Performance

Operating force	Terminal Strength	Actuator Strength	Solderability	Resistance to soldering heat	
				Dip soldering	Manual soldering
51 gf max.	510 gf , 15 seconds	100 gf , 15 seconds	230 ± 5 °C	260 °C , 5 seconds	300°C , 3 seconds

Endurance, Environmental Performance

Operating life without load	Operating life with load (load: as ratings)	Cold	Dry heat	Damp heat
50,000 cycles , 300 mΩ max.		-40 °C for 96 hrs	80 °C for 96 hrs	40 °C , 90 to 95% RH for 240 hrs



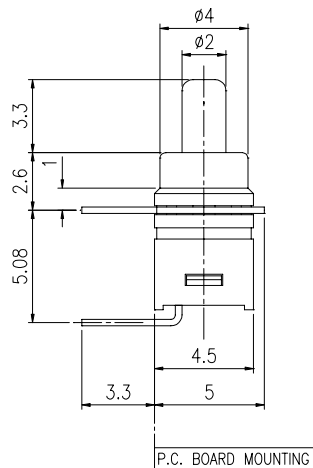
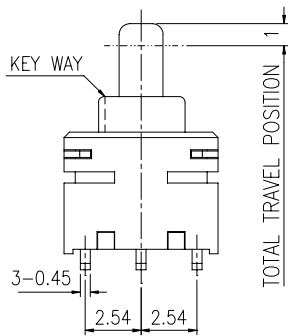
*** Water-proof ***
Spec: 1 kgf/cm² , 30 minutes
1 m water depth



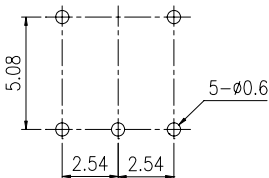
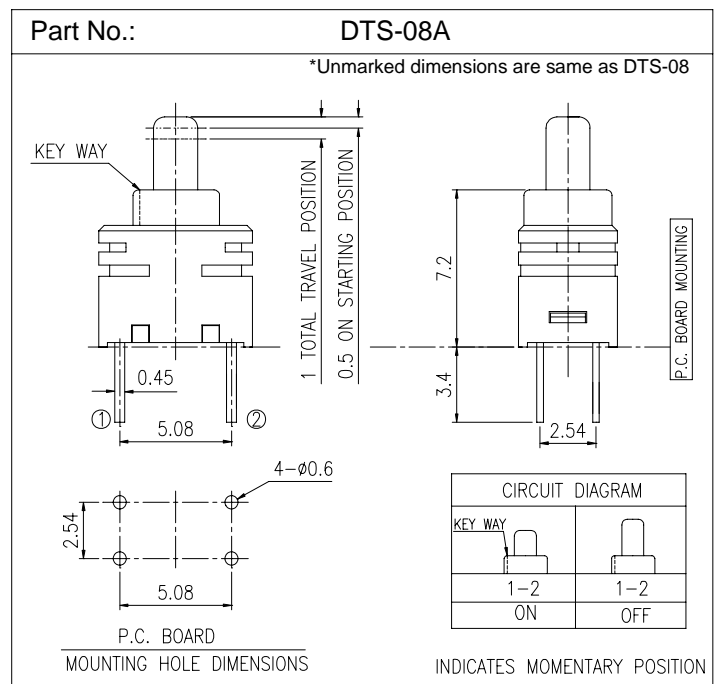
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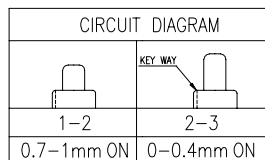
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P.C. BOARD MOUNTING



P.C. BOARD MOUNTING HOLE DIMENSIONS



INDICATES MOMENTARY POSITION

DETECTOR SWITCH

Characteristics

Series	Terminal style	Circuit	Travel	Free Mode	Operating temperature range	Soldering
DTS-15	PCB	1P1T	1.7mm	OFF	-10 °C to 60 °C	Dip, Manual, Reflow
DTS-15-SMT	SMT					

Electrical Performance

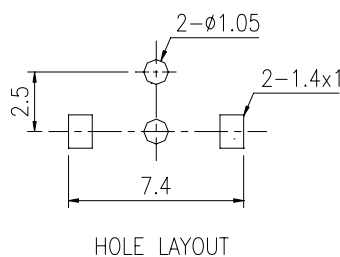
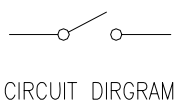
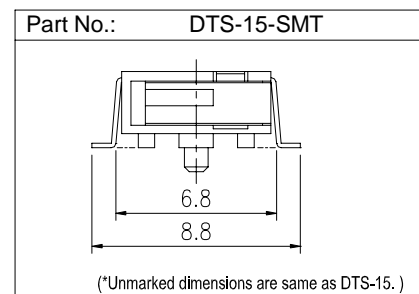
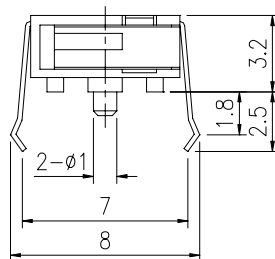
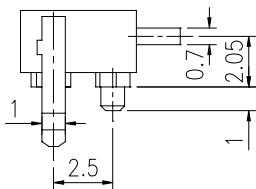
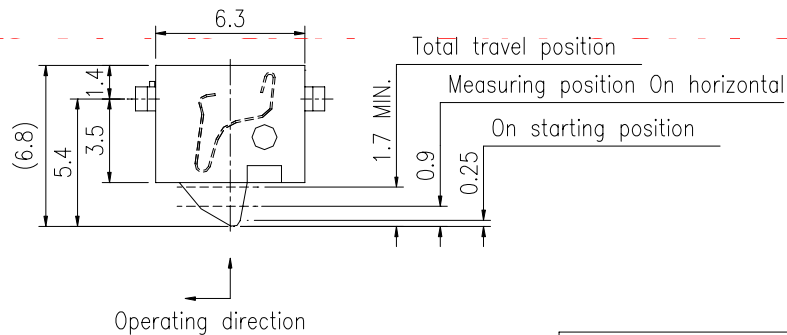
Rating (max.)	Contact resistance	Insulation resistance	Withstand voltage
0.1A 5V DC	500 mΩ max.	100 MΩ min. 500 V DC	300 V AC for 1 min.

Mechanical & Solderability Performance

Operating force	Terminal Strength	Actuator Strength	Solderability	Resistance to soldering heat		
				Dip soldering	Manual soldering	Reflow soldering
30 gf max.	0.5 kgf 15 seconds	0.5 kgf 15 seconds	230 ± 5 °C	260 °C, 5 seconds	380 °C, 3 seconds	270 °C, 5 seconds

Endurance, Environmental Performance

Operating life without load	Cold	Dry heat	Damp heat
100,000 cycles , 1 Ω max.	-30 °C for 168 hrs	80 °C for 48 hrs	40 °C, 90 to 95% RH for 96 hrs



DETECTOR SWITCH

Characteristics

Series	Terminal style	Circuit	Travel	Free Mode	Operating temperature range	Soldering
DTS-17	PCB	1P2T	2.45mm / 66°28'	OFF	-15 °C to 35 °C	Dip, Manual, Reflow
DTS-17-SMT	SMT					

Electrical Performance

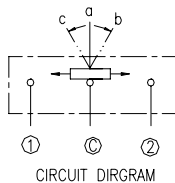
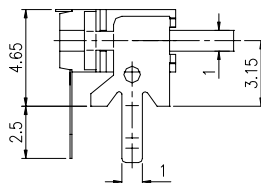
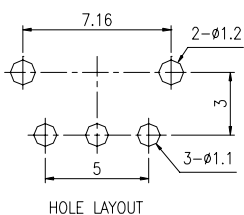
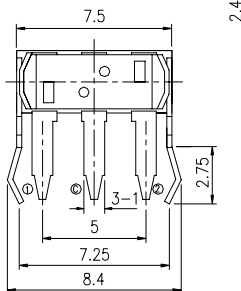
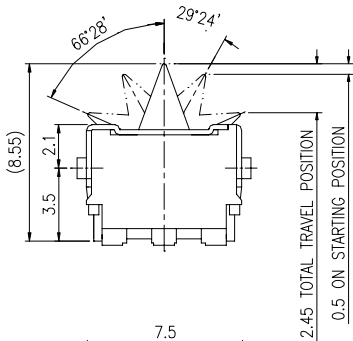
Rating (max.)	Contact resistance	Insulation resistance	Withstand voltage
10mA 5V DC	500 mΩ max.	100 MΩ min. 100 V DC	100 V AC for 1 min.

Mechanical & Solderability Performance

Operating force	Terminal Strength	Actuator Strength	Solderability	Resistance to soldering heat		
				Dip soldering	Manual soldering	Reflow soldering
35 gf max.	0.3 kgf 15 seconds	0.5 kgf 15 seconds	230 ± 5 °C	260 °C, 5 seconds	380 °C, 3 seconds	240 °C, 5 seconds

Endurance, Environmental Performance

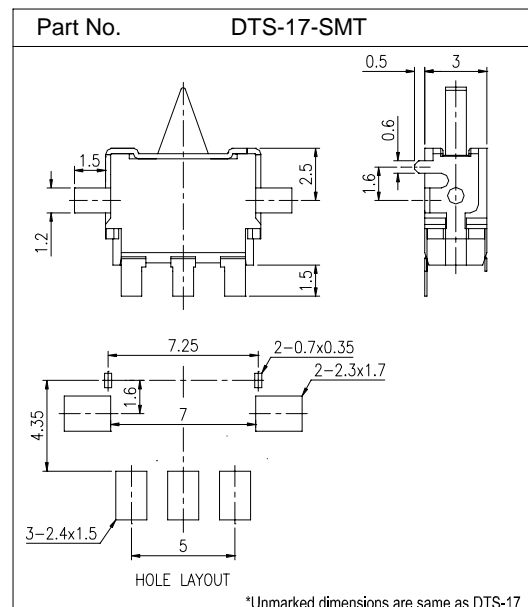
Operating life without load	Operating life with load (load: As rating)	Cold	Dry heat	Damp heat
50,000 cycles , 500 mΩ max.		-25 °C for 48 hrs	70 °C for 48 hrs	40 °C, 90 to 95% RH for 96 hrs



Part No.: DTS-17



DTS-17-SMT
Carrier taping available



DETECTOR SWITCH

Characteristics

Series	Terminal style	Circuit	Travel	Free Mode	Operating temperature range	Soldering
DTS-19L	SMT	1P1T	2.15 mm	OFF	-15 °C to 35 °C	Dip, Manual, Reflow
DTS-19R						
DTS-19R-PCB	PCB					

Electrical Performance

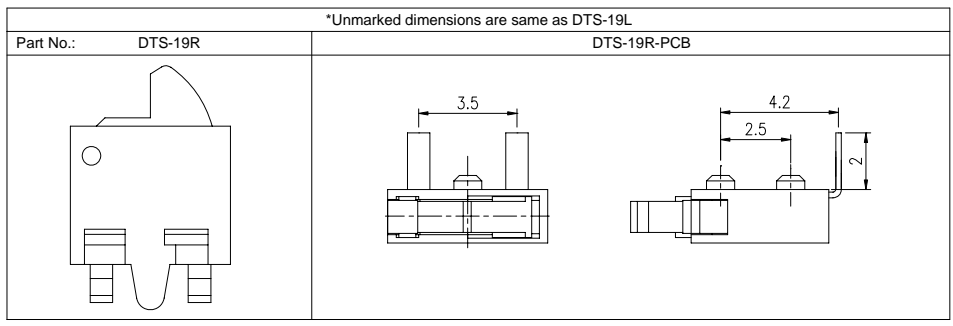
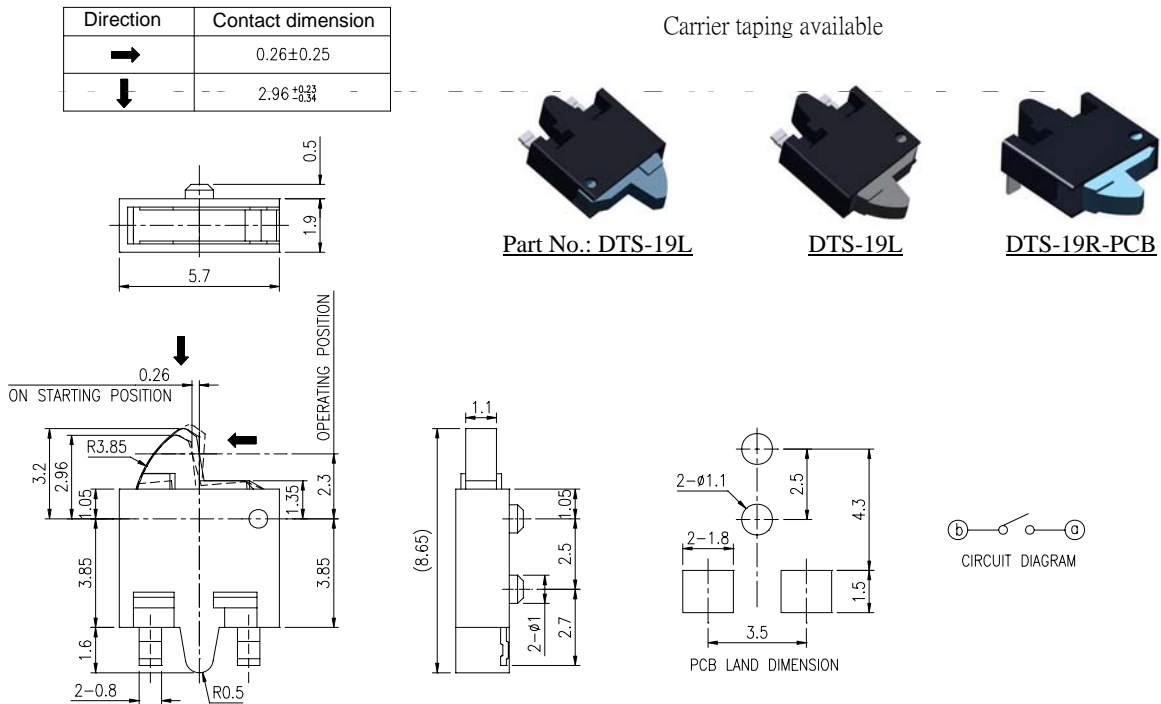
Rating (max.)	Contact resistance	Insulation resistance	Withstand voltage
1mA 5V DC	500 mΩ max.	100 MΩ min. 500 V DC	500 V AC for 1 min.

Mechanical & Solderability Performance

Operating force	Terminal Strength	Actuator Strength	Solderability	Resistance to soldering heat		
				Dip soldering	Manual soldering	Reflow soldering
28 gf max.	0.5 kgf 15 seconds	0.5 kgf 15 seconds	245 ± 5 °C	260 °C, 5 seconds	350°C, 3 seconds	250°C, 5 seconds

Endurance, Environmental Performance

Operating life without load	Cold	Dry heat	Damp heat
100,000 cycles , 1 Ω max.	-40°C for 168 hrs	80 °C for 168 hrs	60 °C, 90 to 95% RH for 168 hrs



DETECTOR SWITCH

Characteristics

Series	Circuit	Travel	Free Mode	Operating temperature range	Soldering
DTS-25	1P1T	2.0mm	OFF	-10 °C to 60 °C	Dip ; Reflow ; Manual

Electrical Performance

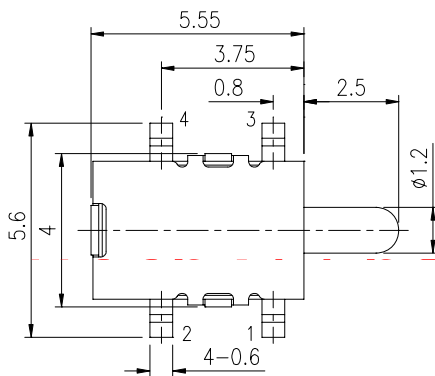
Rating (max.)	Contact resistance	Insulation resistance	Withstand voltage
1mA DC 5V	1000 mΩ max.	100 MΩ Min. 100 V DC	100 V AC for 1 min.

Mechanical & Solderability Performance

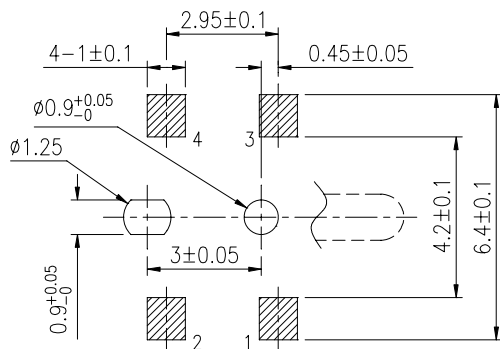
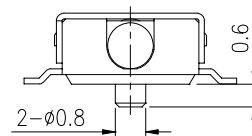
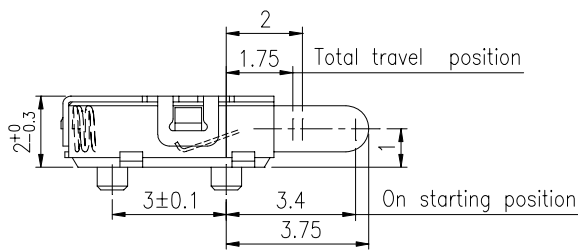
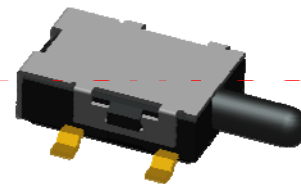
Operating force	Terminal Strength	Actuator Strength	Solderability	Resistance to soldering heat		
				Dip soldering	Reflow soldering	Manual soldering
102gf Max.	102 gf for 15 seconds	500gf for 15 seconds	245 ± 3°C	260°C , 5 seconds	260°C , 5 seconds	350°C , 3 seconds

Endurance, Environmental Performance

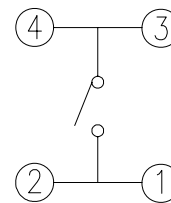
Operating life with load	Operating life without load	Cold	Dry heat	Damp heat
100,000 cycles , 1000mΩ max.		-40 °C for 96 hrs	85 °C for 96 hrs	60 °C, 90 to 95% RH for 96 hrs



Carrier taping available



PCB LAND DIMENSION $\oplus 0.05$



CIRCUIT DIAGRAM