

DETECTOR SWITCH --- Vertical

PCB	SMT	SNAP	WIRING
<p>DTS-01</p> 	<p>DTS-06A</p> 	<p>DTS-03</p> 	<p>DTS-03-11W / WL</p> 
<p>DTS-06</p> 	<p>DTS-11</p> 	<p>DTS-09</p> 	
<p>DTS-08A</p> 	<p>DTS-12</p> 	<p>DTS-16</p> 	
<p>DTS-10</p> 	<p>DTS-24</p> 	<p>DTS-18</p> 	
	<p>DTS-26</p> 	<p>DTS-20</p> 	
		<p>DTS-22</p> 	

<http://pady-switch.com>

DETECTOR SWITCH

Characteristics

Series	Circuit	Travel	Free Mode	Operating temperature range	Soldering
DTS-01	1P2T	50°	ON	-10 °C to 60 °C	Dip, Manual

Electrical Performance

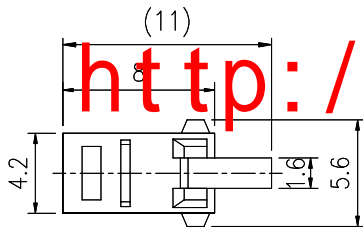
Rating (max.)	Contact resistance	Insulation resistance	Withstand voltage
0.1A 30V DC	30 mΩ max.	100 MΩ min. 500 V DC	500 V AC for 1 min.

Mechanical & Solderability Performance

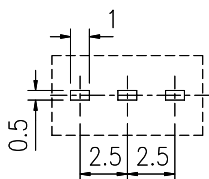
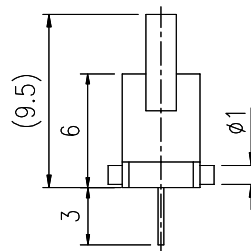
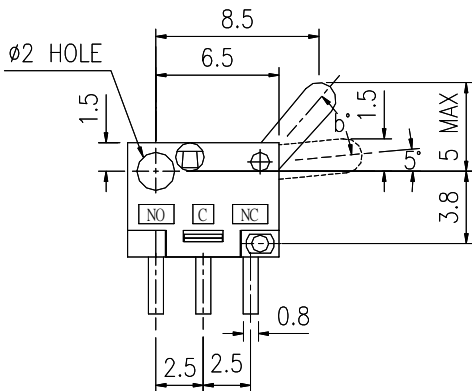
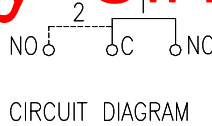
Operating force	Terminal Strength	Actuator Strength	Solderability	Resistance to soldering heat	
				Dip soldering	Manual soldering
70gf ± 20gf	0.5 kgf for 15 seconds	1.0 kgf for 15 seconds	230 ± 5 °C	260 °C, 5 seconds	350 °C, 3 seconds

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 ± 3°C for 48 hrs	70 ± 2°C for 48 hrs	40 ± 2°C, 90 to 95% RH for 96 hrs



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HOLE LAYOUT (BOTTOM VIEW)

SWITCHING SEQUENCE

C → NC	ON	OFF
C → NO	OFF	ON

TRAVEL POSITION b°

DETECTOR SWITCH

Characteristics

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

Electrical Performance

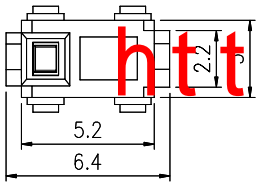
Rating (max.)	Contact resistance	Insulation resistance	Withstand voltage
0.01A 5V DC	500 mΩ max.	100 MΩ min. 100 V DC	100 V AC for 1 min.

Mechanical & Solderability Performance

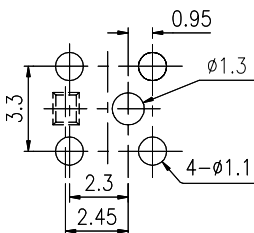
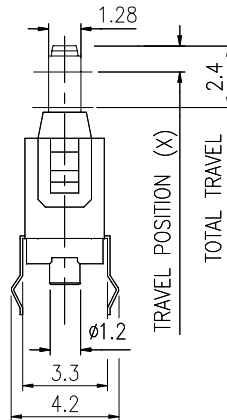
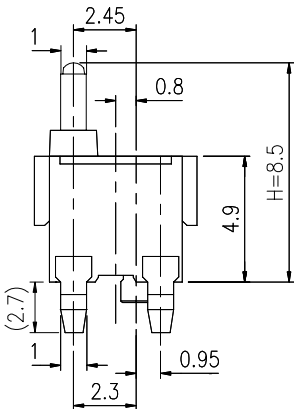
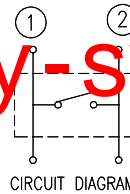
Operating force	Terminal Strength	Actuator Strength	Solderability	Resistance to soldering heat	
				Dip soldering	Manual soldering
35gf max.	0.3kgf for 15 seconds	0.3 kgf for 15 seconds	230 ± 5 °C	260 °C, 5 seconds	350°C, 3 seconds

Endurance, Environmental Performance

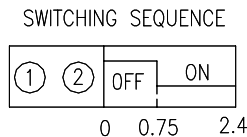
Operating life without load	Cold	Dry heat	Damp heat
50,000 cycles 1,000 mΩ max.	-25°C for 96 hrs	80 °C for 96 hrs	40 °C, 90 to 95% RH for 96 hrs



<http://pady-switch.com>



HOLE LAYOUT (TOP VIEW)



TRAVEL POSITION (X)

DETECTOR SWITCH

Characteristics

Series	Circuit	Travel	Free Mode	Operating temperature range	Soldering
DTS-03-11WL	1P1T	3.6 mm	OFF	-10 °C to 60 °C	Dip, Manual

Electrical Performance

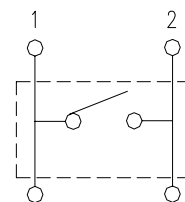
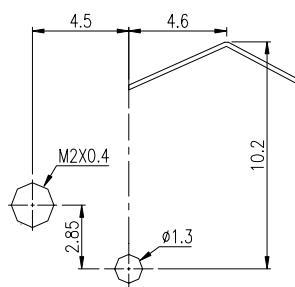
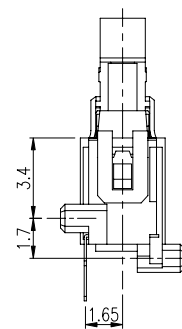
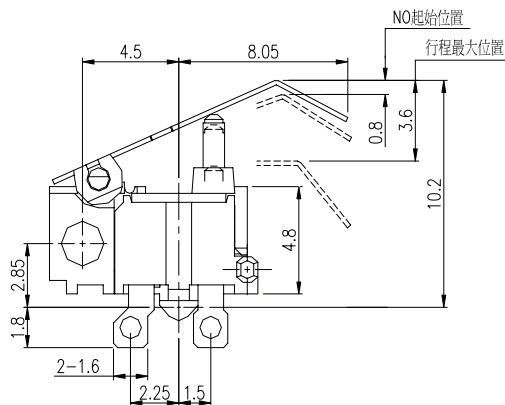
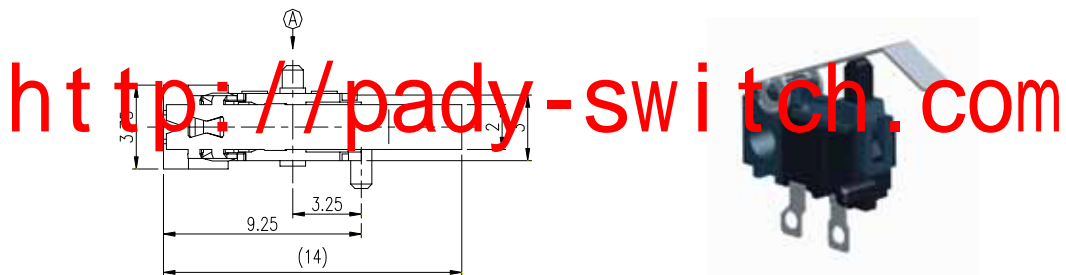
Rating (max.)	Contact resistance	Insulation resistance	Withstand voltage
0.1A 30V DC	1,000 mΩ max.	100 MΩ min. 100 V DC	100 V AC for 1 min.

Mechanical & Solderability Performance

Operating force	Terminal Strength	Solderability	Resistance to soldering heat	
			Dip soldering	Manual soldering
35gf max.	1.0 kgf for 15 seconds	235 ± 3 °C	260 °C, 10 seconds	350°C, 3 seconds

Endurance, Environmental Performance

Operating life with load (load: as ratings)	Cold	Dry heat	Damp heat
50,000 cycles 200 mΩ max.	-10°C for 500 hrs	60 °C for 500 hrs	40 °C, 90 to 95% RH for 500 hrs



CIRCUIT DIAGRAM

P.C board mounting hole dimensions
(viewed from the direction A)

DETECTOR SWITCH

Characteristics

Series	Terminal style	Circuit	Travel	Free Mode	Operating temperature range	Soldering
DTS-06	PCB	1P1T	1.7mm	OFF	-10 °C to 60 °C	Dip, Reflow, Manual
DTS-06A	SMT					

Electrical Performance

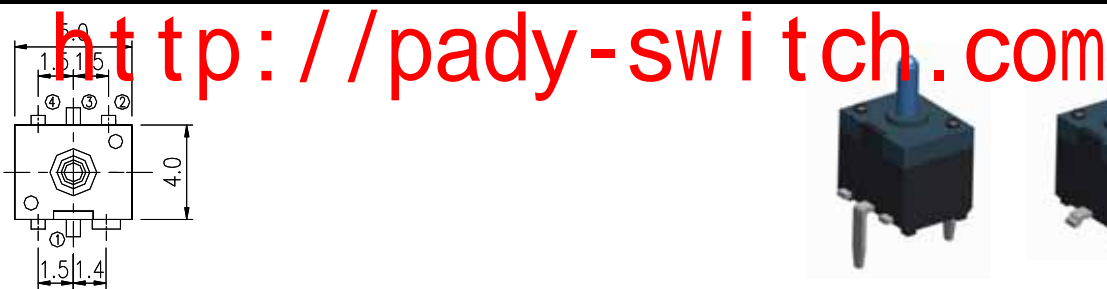
Rating (max.)	Contact resistance	Insulation resistance	Withstand voltage
0.1A 30V DC	500 mΩ max.	100 MΩ min. 100 V DC	100 V AC for 1 min.

Mechanical & Solderability Performance

Operating force	Terminal Strength	Actuator Strength	Solderability	Resistance to soldering heat		
				Dip soldering	Reflow soldering	Manual soldering
30gf ± 10gf	0.3 kgf , 15 seconds	1.0 kgf , 15 seconds	230 ± 5 °C	260 °C , 5 seconds	240 °C max., 10 seconds	350°C , 3 seconds

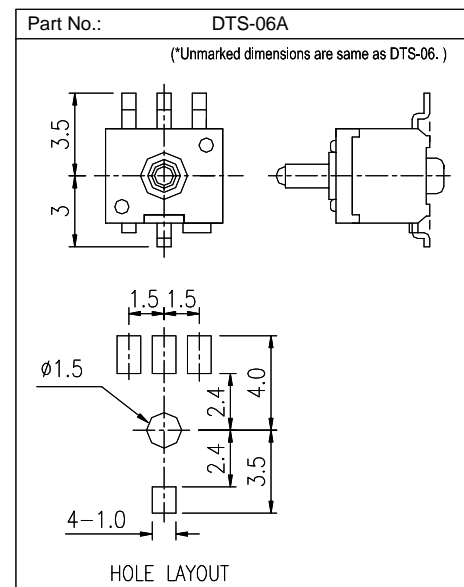
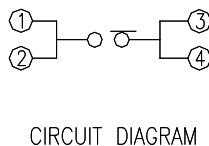
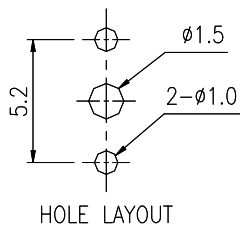
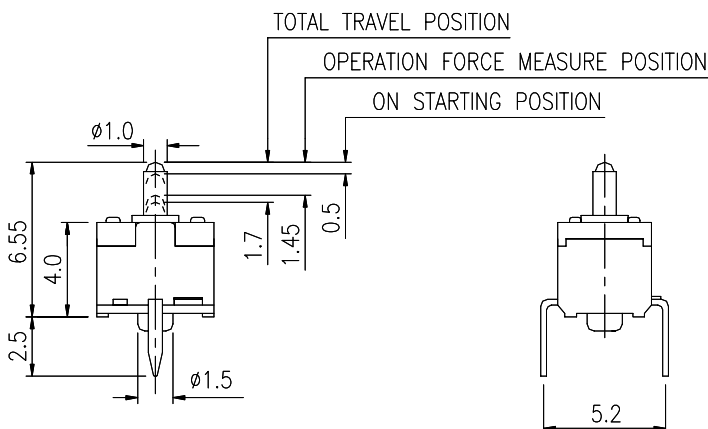
Endurance, Environmental Performance

Operating life without load	Operating life with load (load: as ratings)	Cold	Dry heat	Damp heat
50,000 cycles , 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-06

DTS-06A



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

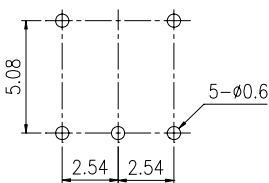
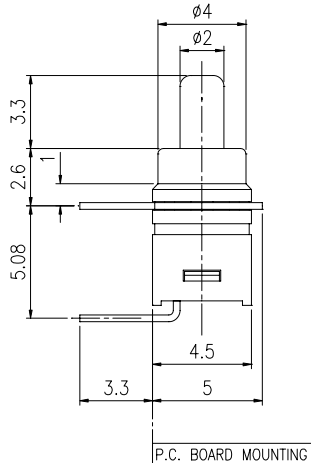
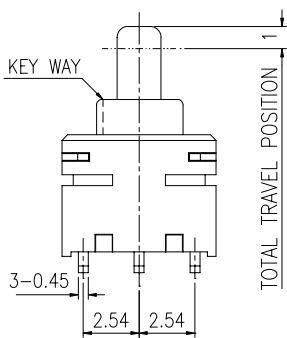
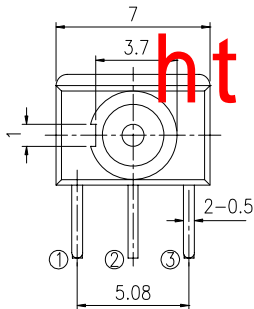
Rating (max.)	Contact resistance	Insulation resistance	Withstand voltage
10 mA 5V DC	80 mΩ max.	100 MΩ min. 100 V DC	100 V AC for 1 min.

Mechanical & Solderability Performance

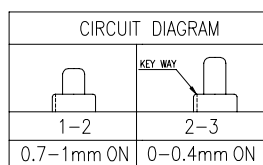
Operating force	Terminal Strength	Actuator Strength	Solderability	Resistance to soldering heat	
				Dip soldering	Manual soldering
51 gf max.	510 gf , 15 seconds	100 gf , 15 seconds	230 ± 5 °C	260 °C , 5 seconds	300°C , 3 seconds

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



P.C. BOARD MOUNTING HOLE DIMENSIONS



INDICATES MOMENTARY POSITION

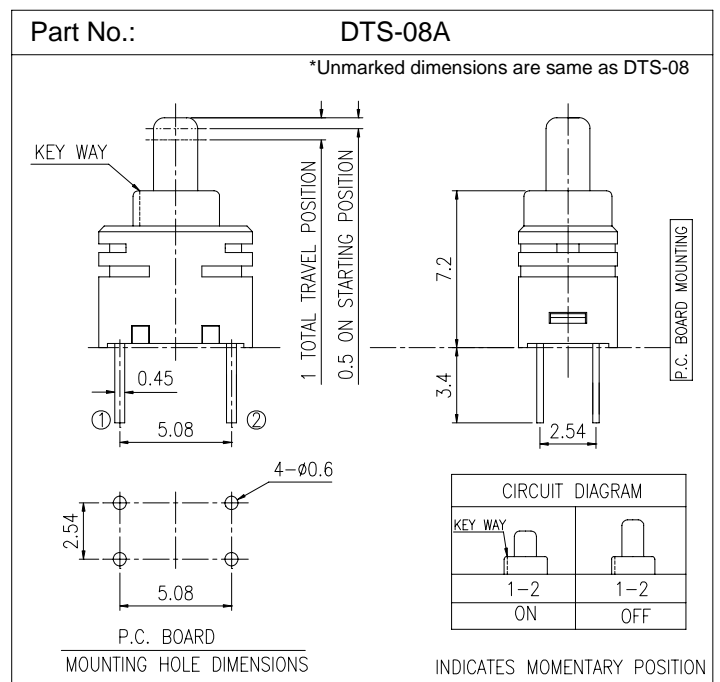
<http://pady-switch.com>



Part No.: DTS-08



DTS-08A



P.C. BOARD MOUNTING HOLE DIMENSIONS

INDICATES MOMENTARY POSITION

DETECTOR SWITCH

Characteristics

Series	Circuit	Travel	Free Mode	Operating temperature range	Soldering
DTS-09	2x1P1T	2.1 mm	OFF	-20 °C to 80 °C	Dip, Manual

Electrical Performance

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

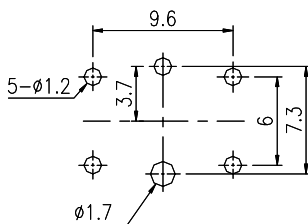
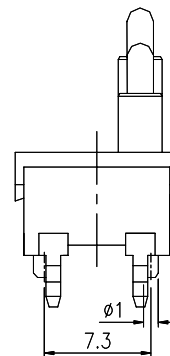
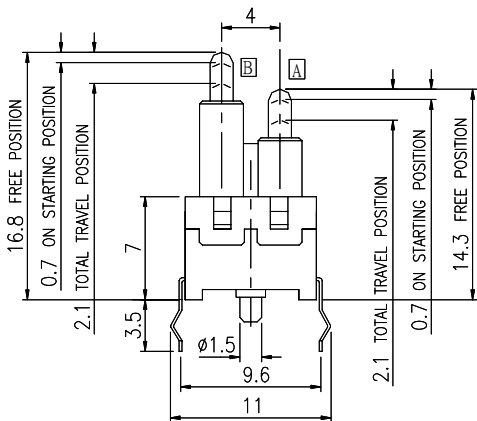
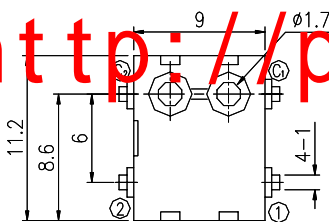
Mechanical & Solderability Performance

Operating force	Terminal Strength	Actuator Strength	Solderability	Resistance to soldering heat	
				Dip soldering	Manual soldering
30gf max.	0.3kgf for 5 seconds	0.5 kgf for 10 seconds	240 ± 5 °C	260 °C, 5 seconds	350 °C, 3 seconds

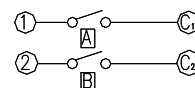
Endurance, Environmental Performance

Operating life without load	Operating life with load (load: as ratings)	Cold	Dry heat	Damp heat
100,000 cycles , 1,000 mΩ max.		-20 °C for 96 hrs	85 °C for 96 hrs	40 °C , 90 to 95% RH for 96 hrs

<http://pady-switch.com>



HOLE LAYOUT



CIRCUIT DIAGRAM

DETECTOR SWITCH

Characteristics

Series	Circuit	Travel	Free Mode	Operating temperature range	Soldering
DTS-10	1P1T	3mm	OFF	-10 °C to 60 °C	Dip, Manual

Electrical Performance

Rating (max.)	Contact resistance	Insulation resistance	Withstand voltage
1A 16V DC	40 mΩ max.	50 MΩ min. 250 V DC	250 V AC for 1 min.

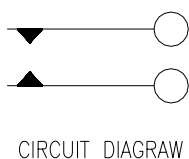
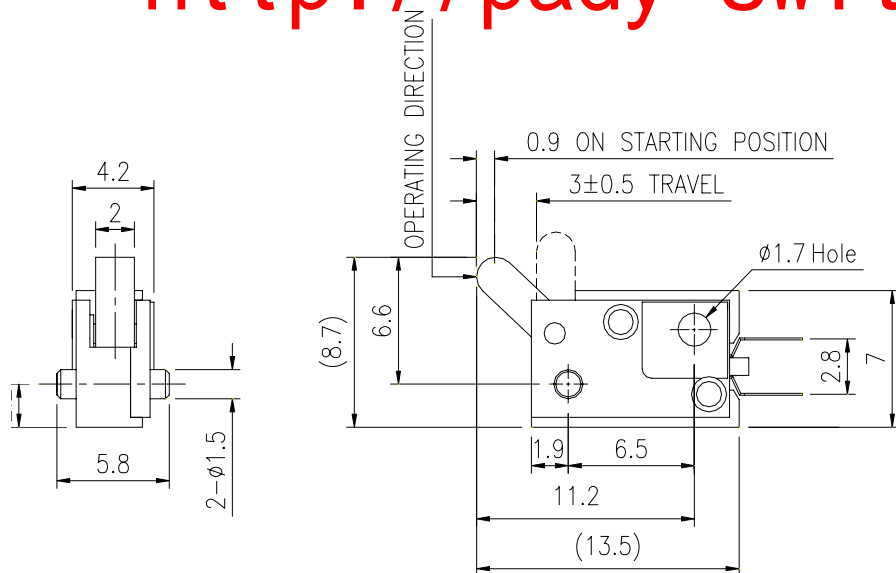
Mechanical & Solderability Performance

Operating force	Terminal Strength	Actuator Strength	Solderability	Resistance to soldering heat	
				Dip soldering	Manual soldering
70gf max.	0.5 kgf for 30 seconds	1.0 kgf for 15 seconds	230 ± 5 °C	260 °C, 10 seconds	350 °C, 3 seconds

Endurance, Environmental Performance

Operating life without load	Operating life with load (load: as ratings)	Cold	Dry heat	Damp heat
20,000 cycles , 70 mΩ max.		-20 °C for 24 hrs	85 °C for 24 hrs	40 °C , 90 to 95% RH for 24 hrs

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DETECTOR SWITCH

Characteristics

Series	Circuit	Travel	Free Mode	Operating temperature range	Soldering
DTS-11	1P1T	1.52 mm	ON	-10 °C to 70 °C	Dip, Manual

Electrical Performance

Rating (max.)	Contact resistance	Insulation resistance	Withstand voltage
0.1mA~5mA 5V DC	1,000 mΩ max.	100 MΩ min. 250 V DC	250 V AC for 1 min.

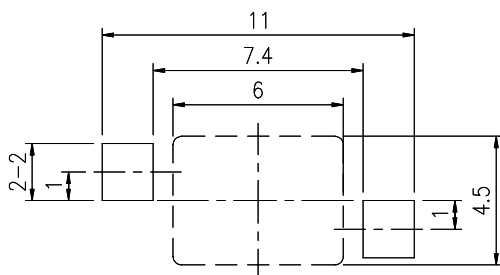
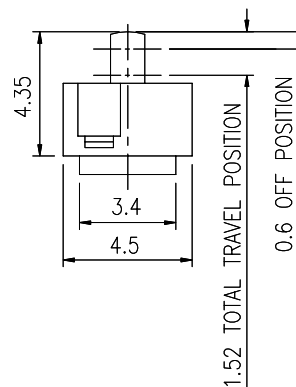
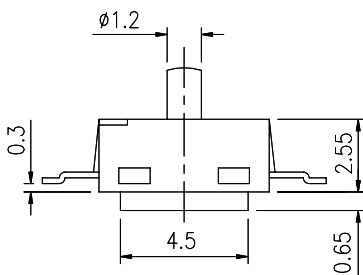
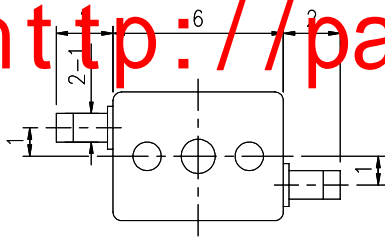
Mechanical & Solderability Performance

Operating force	Terminal Strength	Actuator Strength	Solderability	Resistance to soldering heat	
				Dip soldering	Manual soldering
35gf max.	0.5 kgf for 60 seconds	0.25 kgf for 60 seconds	230 ± 5 °C	300 °C, 3 seconds	350 °C, 3 seconds

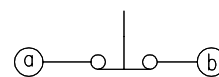
Endurance, Environmental Performance

Operating life without load	Operating life with load (load: as ratings)	Cold	Dry heat	Damp heat
100,000 cycles , 10 Ω max.		-40 °C for 48 hrs	80 °C for 48 hrs	40 °C , 90 to 95% RH for 96 hrs

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HOLE LAYOUT(TOP VIEW)



CIRCUIT DIAGRAM

DETECTOR SWITCH

Characteristics

Series	Circuit	Travel	Free Mode	Operating temperature range	Soldering
DTS-12	2x1P1T	1.52 mm	ON	-10 °C to 70 °C	Dip, Manual

Electrical Performance

Rating (max.)	Contact resistance	Insulation resistance	Withstand voltage
0.1mA~5mA 5V DC	1,000 mΩ max.	100 MΩ min. 250 V DC	250 V AC for 1 min.

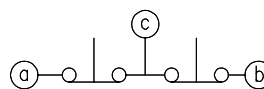
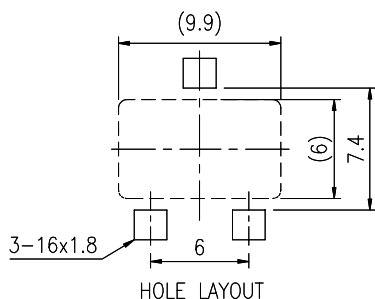
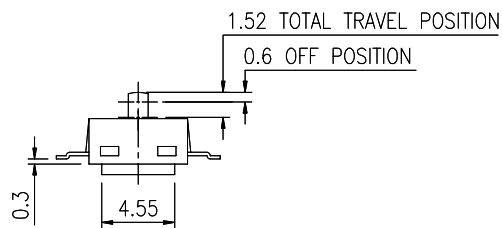
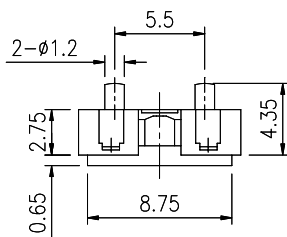
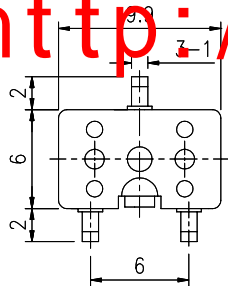
Mechanical & Solderability Performance

Operating force	Terminal Strength	Actuator Strength	Solderability	Resistance to soldering heat	
				Dip soldering	Manual soldering
35gf max.	0.5 kgf for 60 seconds	0.25 kgf for 60 seconds	230 ± 5 °C	300 °C, 3 seconds	350 °C, 3 seconds

Endurance, Environmental Performance

Operating life without load	Operating life with load (load: as ratings)	Cold	Dry heat	Damp heat
100,000 cycles , 10 Ω max.		-40 °C for 48 hrs	80 °C for 48 hrs	40 °C , 90 to 95% RH for 96 hrs

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CIRCUIT DIAGRAM
C: COMMON PIN

DETECTOR SWITCH

Characteristics

Series	Circuit	Travel	Free Mode	Operating temperature range	Soldering
DTS-16	1P2T	2.45mm / 66°28'	OFF	-15 °C to 35 °C	Dip, Manual

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.

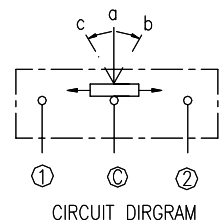
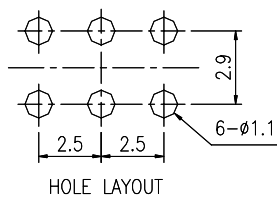
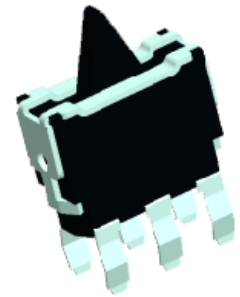
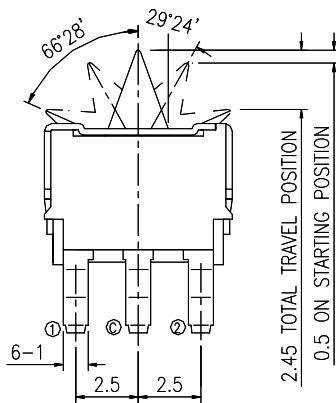
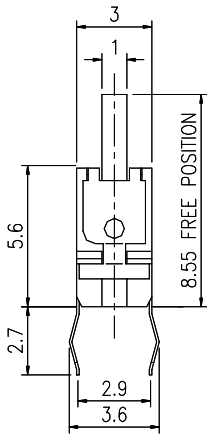
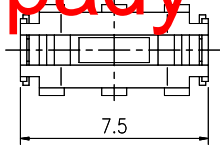
Mechanical & Solderability Performance

Operating force	Terminal Strength	Actuator Strength	Solderability	Resistance to soldering heat	
				Dip soldering	Manual soldering
35 gf or less	0.3 kgf for 15 seconds	0.5 kgf for 15 seconds	230 ± 5 °C	260 °C, 10 seconds	350 °C, 3 seconds

Endurance, Environmental Performance

Operating life without load	Cold	Dry heat	Damp heat
50,000 cycles , 1 Ω max.	-25 °C for 48 hrs	70 °C for 48 hrs	40 °C, 90 to 95% RH for 96 hrs

<http://pady-switch.com>



DETECTOR SWITCH

Characteristics

Series	Circuit	Travel	Free Mode	Operating temperature range	Soldering
DTS-18	1P1T	1.4 mm	OFF	-15 °C to 35 °C	Dip, Manual

Electrical Performance

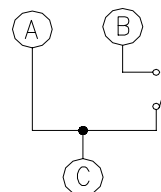
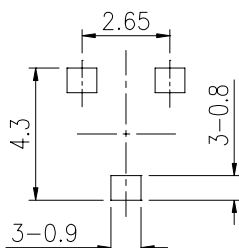
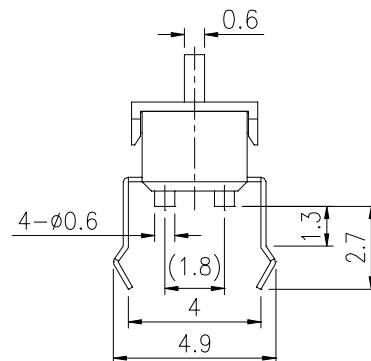
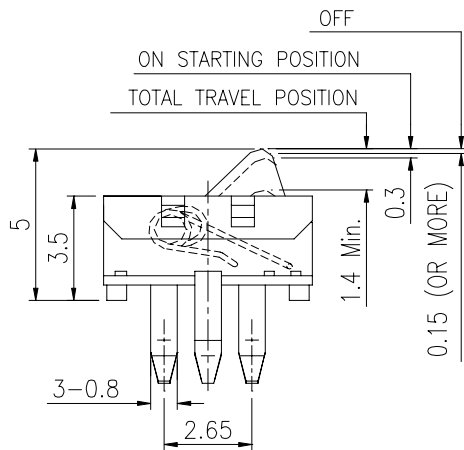
Rating (max.)	Contact resistance	Insulation resistance	Withstand voltage
1mA 5V DC	500 mΩ max.	100 MΩ min. 500 V DC	300 V AC for 1 min.

Mechanical & Solderability Performance

Operating force	Terminal Strength	Actuator Strength	Solderability	Resistance to soldering heat	
				Dip soldering	Manual soldering
50 gf max.	0.3 kgf 15 seconds	0.5 kgf for 15 seconds	245 ± 5 °C	255 °C, 3 seconds	350 °C, 3 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 168 hrs	40 °C , 90 to 95% RH for 96 hrs



CIRCUIT DIAGRAM

DETECTOR SWITCH

Characteristics

Series	Circuit	Travel	Free Mode	Operating temperature range	Soldering
DTS-20	1P1T	4	OFF	-20 °C to 70 °C	Dip, Manual
DTS-20A		2.1			

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.

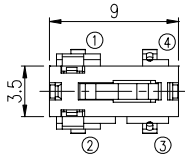
Mechanical & Solderability Performance

Operating force	Terminal Strength	Actuator Strength	Solderability	Resistance to soldering heat	
				Dip soldering	Manual soldering
As drawing below	0.3 kgf for 30 seconds	0.1 kgf for 15 seconds	240 ± 5 °C	260 °C, 5 second	350 °C, 3 second

Endurance, Environmental Performance

Operating life without load	Operating life with load (load: DC 5V, 0.001A)	Cold	Dry heat	Damp heat
100,000 cycles , 1 Ω max.		-40 °C for 500 hrs	85 °C for 500 hrs	60 °C, 90 to 95% RH for 500 hrs

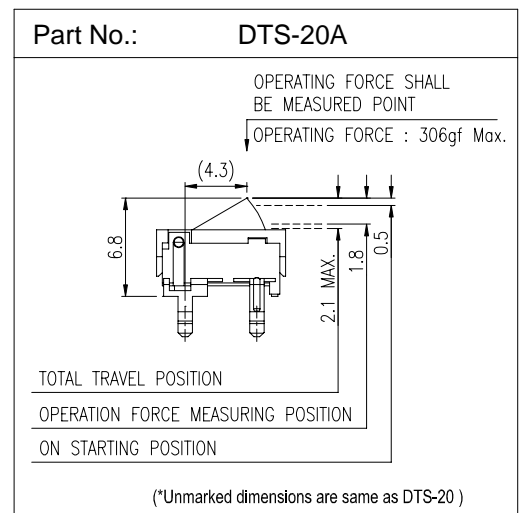
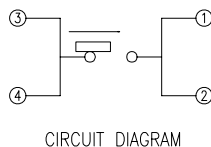
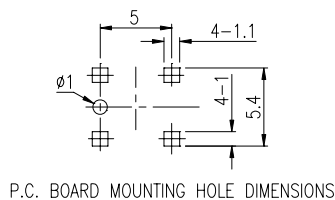
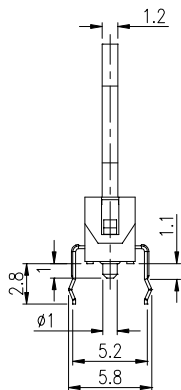
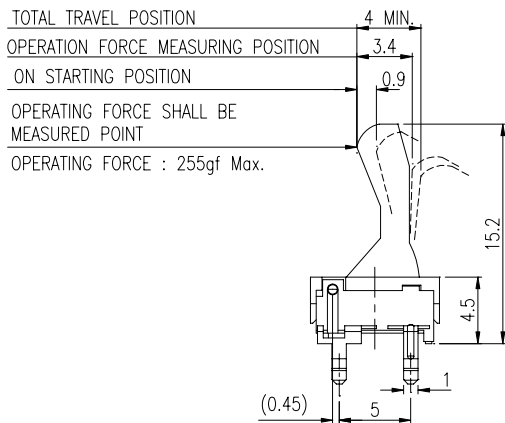
<http://pady-switch.com>



Part No.: DTS-20



Part No.: DTS-20A



DETECTOR SWITCH

Characteristics

Series	Circuit	Travel	Free Mode	Operating temperature range	Soldering
DTS-22	1P1T	2.75 mm	OFF	-20 °C to 70 °C	Dip, Manual

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.

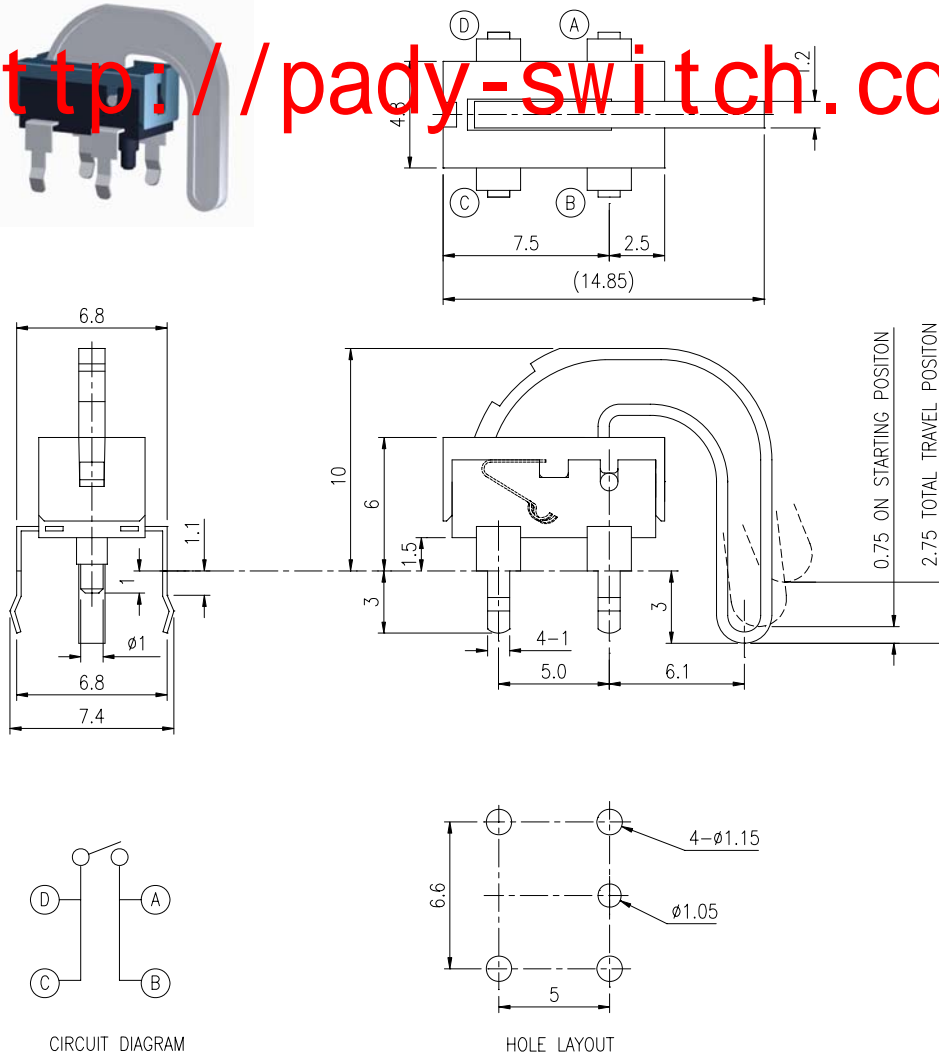
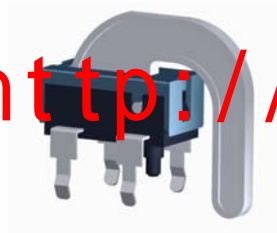
Mechanical & Solderability Performance

Operating force	Terminal Strength	Actuator Strength	Solderability	Resistance to soldering heat	
				Dip soldering	Manual soldering
20 gf	5.1 kgf for 60 seconds	0.1 kgf for 15 seconds	230 ± 5 °C	260 °C, 5 seconds	380 °C, 3 seconds

Endurance, Environmental Performance

Operating life without load	Operating life with load (load: DC 5V, 0.001A)	Cold	Dry heat	Damp heat
100,000 cycles	1,000 mΩ max.	-30 °C for 168 hrs	85 °C for 168 hrs	40 °C, 90 to 95% RH for 168 hrs

<http://pady-switch.com>



CIRCUIT DIAGRAM

HOLE LAYOUT

DETECTOR SWITCH

Characteristics

Series	Circuit	Travel	Free Mode	Operating temperature range	Soldering
DTS-24	1P1T	1.2mm	OFF	-20 °C to 80 °C	Dip ; Manual ; Reflow

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.

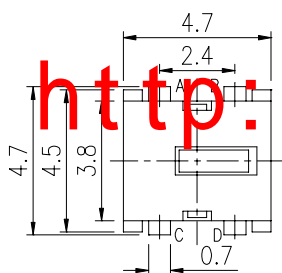
Mechanical & Solderability Performance

Operating force	Terminal Strength	Actuator Strength	Solderability	Resistance to soldering heat		
				Dip soldering	Manual soldering	Reflow soldering
41gf max.	102gf , for 15 seconds	500 gf ,for 15 seconds	230 ± 5 °C	260°C , 5 seconds	350°C , 3 seconds	250°C , 5 seconds

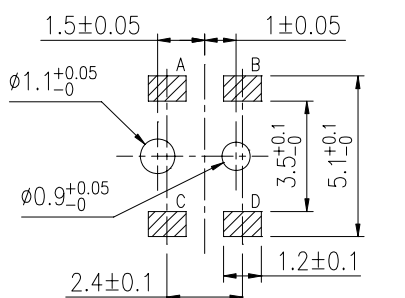
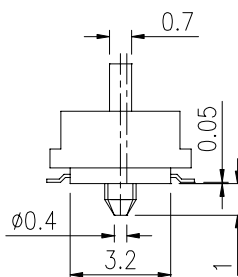
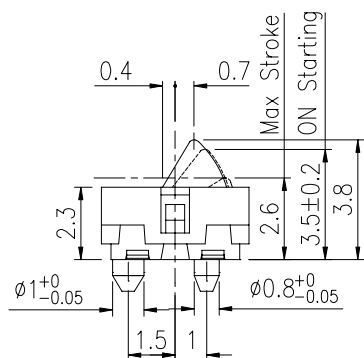
Endurance, Environmental Performance

Operating life without load	Cold	Dry heat	Damp heat
100,000 cycles , 2000mΩ max.	-40 °C for 96 hrs	85 °C for 96 hrs	40 °C , 90 to 95% RH for 96 hrs

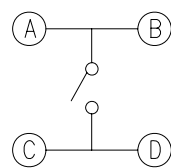
Carrier taping available



<http://pady-switch.com>



HOLE LAYOUT $\oplus 0.05$
TOP VIEW



CIRCUIT DIAGRAM

DETECTOR SWITCH

Characteristics

Series	Circuit	Travel	Free Mode	Operating temperature range	Soldering
DTS-26	1P1T	1.0mm	OFF	-10 °C to 70 °C	Dip ; Reflow ; Manual

Electrical Performance

Rating (max.)	Contact resistance	Insulation resistance	Withstand voltage
10mA DC 5V	2000 mΩ max.	100 MΩ min. 100 V DC	100 V AC for 1 min.

Mechanical & Solderability Performance

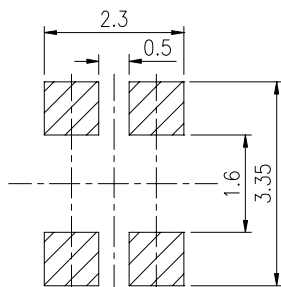
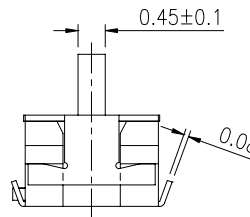
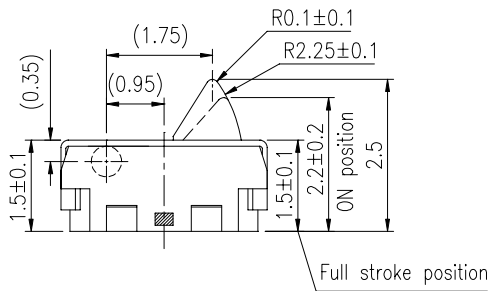
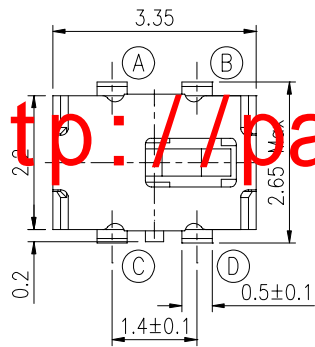
Operating force	Terminal Strength	Solderability	Resistance to soldering heat		
			Dip soldering	Reflow soldering	Manual soldering
26 gf Max.	102 gf for 15 seconds	230 ± 5 °C	260°C , 5 seconds	250°C , 5 seconds	350°C , 3 seconds

Endurance, Environmental Performance

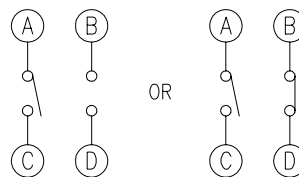
Operating life without load	Cold	Dry heat	Damp heat
50,000 cycles	-25 °C for 96 hrs	70 °C for 96 hrs	40 °C, 90 to 95% RH for 96 hrs

<http://pady-switch.com>

Carrier taping available



PCB LAND DIMENSION ± 0.05



CIRCUIT DIAGRAM