

DS Series

Detect Switches



Description

The DS series detect switch is designed to give audio & visual equipment, appliance, and consumer electronics designers the high-performing yet compact switch they need to create a successful product. Known for their quality and performance, the DS series is designed to be compact, can detect mechanical movement, and have a low actuation force.

Features & Benefits

- Compact design
- Low actuation force
- Detect mechanical movement
- Left and right options
- Right angle options

Applications

- Computer peripherals
- Office equipment
- Consumer electronics
- Appliances
- Audio and visual equipment

Ordering Number

Part number list is shown below. For individual part details, please refer to the following pages.

Part Number (Part Description)	Product Details
DS-02005 DS-02005 (30)	Detect switch normally open top actuated
DS-040-02	Detect switch normally open SPST
DS-080 DS-080-C PA	Detect switch normally open SPDT
DS-09005-02 RP	Detect switch normally open SPST
DS-180 RT	Detect switch normally open side actuated

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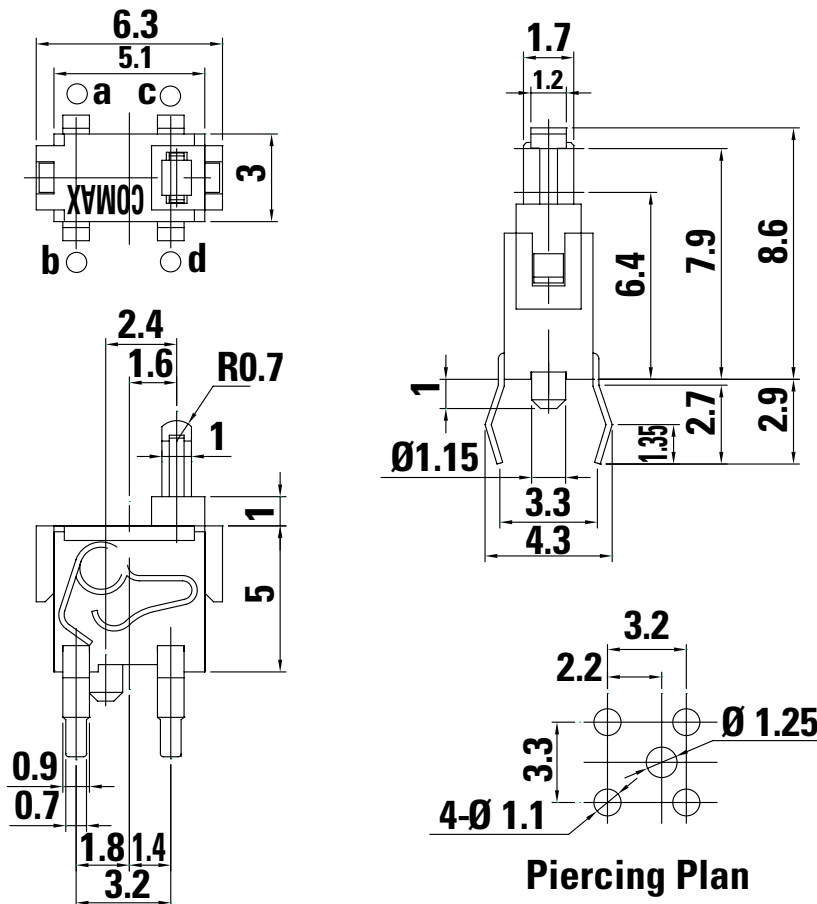
DS-02005 Specifications

Contact Arrangement	SPST, NO
Contact Rating	100mA @ 30 VDC
Operating Life	50,000 cycles
Operating Force	50 gf max.
Pre-Travel	0.7 mm
Total Travel	2.6 mm
Initial Contact Resistance	1 Ω max.
Insulation Resistance	100 M Ω min. @ 100 VDC 60 sec.
Dielectric Strength	100 V AC (50-60 Hz) 60 sec.
Operating Temperature	-40°C to 85°C
Materials	
Knob	PA
Cover	PA
Spring	Gold Plated, copper alloy
Housing	PA
Terminal	Silver plated, copper alloy

Part Number	Packaging	Schematic
DS-02005	1,000 pieces	

Note: Complete part numbers for DS Series are shown above.

Dimensions (in mm)



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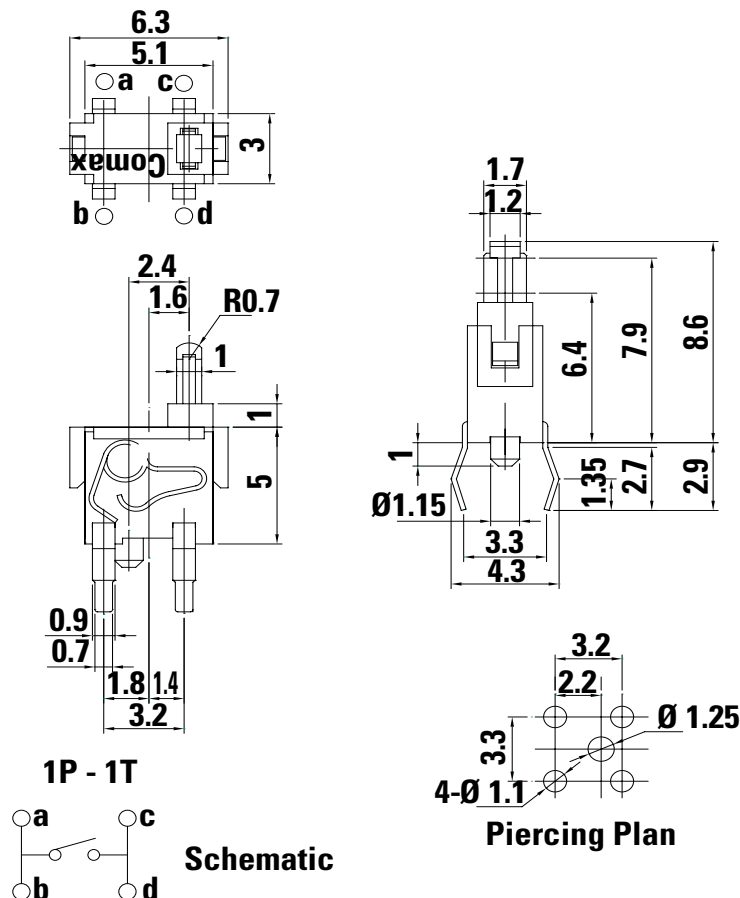


DS-02005 (30) Specifications

Contact Arrangement	SPST, NO
Contact Rating	100mA @ 30 VDC
Operating Life	50,000 cycles
Operating Force	30 gf max.
Pre-Travel	0.7 mm
Total Travel	2.2 mm
Initial Contact Resistance	1 Ω max.
Insulation Resistance	100 M Ω min. @ 100 VDC 60 sec.
Dielectric Strength	100 V AC (50-60 Hz) 60 sec.
Operating Temperature	-40°C to 85°C
Materials	
Knob	PA
Cover	
Spring	Gold Plated, copper alloy
Housing	PA
Terminal	Silver plated, copper alloy

Part Number	Packaging	Schematic
DS-02005 (30)	1,000 pieces	

Dimensions (in mm)



DS-040-02 Specifications

Part Number	Packaging	Schematic
DS-040-02	1,000 pieces	1P - 1T  N.O.

Technical drawing of a mechanical part showing three views: Front View, Top View, and Side View.

Front View Dimensions:

- Overall Width: 10.2
- Overall Height: 4.2
- Chamfer Angle: 60°
- Chamfer Width: 0.7
- Top Flange Width: 1.8
- Top Flange Height: 2.8
- Bottom Flange Width: 1.5
- Bottom Flange Height: 3.8
- Internal Hole Diameter: $\varnothing 1.6$
- Internal Hole Position: 6.5 from left edge, 1.7 from bottom edge
- Internal Hole Diameter: $\varnothing 1.5$
- Internal Hole Position: 8.4 from left edge, 1.5 from bottom edge
- Internal Hole Diameter: $\varnothing 1.5$
- Internal Hole Position: 10.2 from left edge, 1.5 from bottom edge
- Internal Hole Diameter: $\varnothing 1.5$
- Internal Hole Position: 11.1 from left edge, 1.5 from bottom edge
- Internal Hole Diameter: $\varnothing 1.5$
- Internal Hole Position: 11.1 from left edge, 1.5 from bottom edge

Top View Dimensions:

- Overall Width: 10.2
- Overall Height: 4.2
- Chamfer Angle: 60°
- Chamfer Width: 0.7
- Top Flange Width: 1.8
- Top Flange Height: 2.8
- Bottom Flange Width: 1.5
- Bottom Flange Height: 3.8
- Internal Hole Diameter: $\varnothing 1.6$
- Internal Hole Position: 6.5 from left edge, 1.7 from bottom edge
- Internal Hole Diameter: $\varnothing 1.5$
- Internal Hole Position: 8.4 from left edge, 1.5 from bottom edge
- Internal Hole Diameter: $\varnothing 1.5$
- Internal Hole Position: 10.2 from left edge, 1.5 from bottom edge
- Internal Hole Diameter: $\varnothing 1.5$
- Internal Hole Position: 11.1 from left edge, 1.5 from bottom edge
- Internal Hole Diameter: $\varnothing 1.5$
- Internal Hole Position: 11.1 from left edge, 1.5 from bottom edge

Side View Dimensions:

- Overall Width: 1.5
- Overall Height: 5.8
- Chamfer Angle: 60°
- Chamfer Width: 0.7
- Top Flange Width: 1.8
- Top Flange Height: 2.8
- Bottom Flange Width: 1.5
- Bottom Flange Height: 3.8
- Internal Hole Diameter: $\varnothing 1.6$
- Internal Hole Position: 6.5 from left edge, 1.7 from bottom edge
- Internal Hole Diameter: $\varnothing 1.5$
- Internal Hole Position: 8.4 from left edge, 1.5 from bottom edge
- Internal Hole Diameter: $\varnothing 1.5$
- Internal Hole Position: 10.2 from left edge, 1.5 from bottom edge
- Internal Hole Diameter: $\varnothing 1.5$
- Internal Hole Position: 11.1 from left edge, 1.5 from bottom edge
- Internal Hole Diameter: $\varnothing 1.5$
- Internal Hole Position: 11.1 from left edge, 1.5 from bottom edge

Labels:

- Travel
- Operating Position
- Operating Position

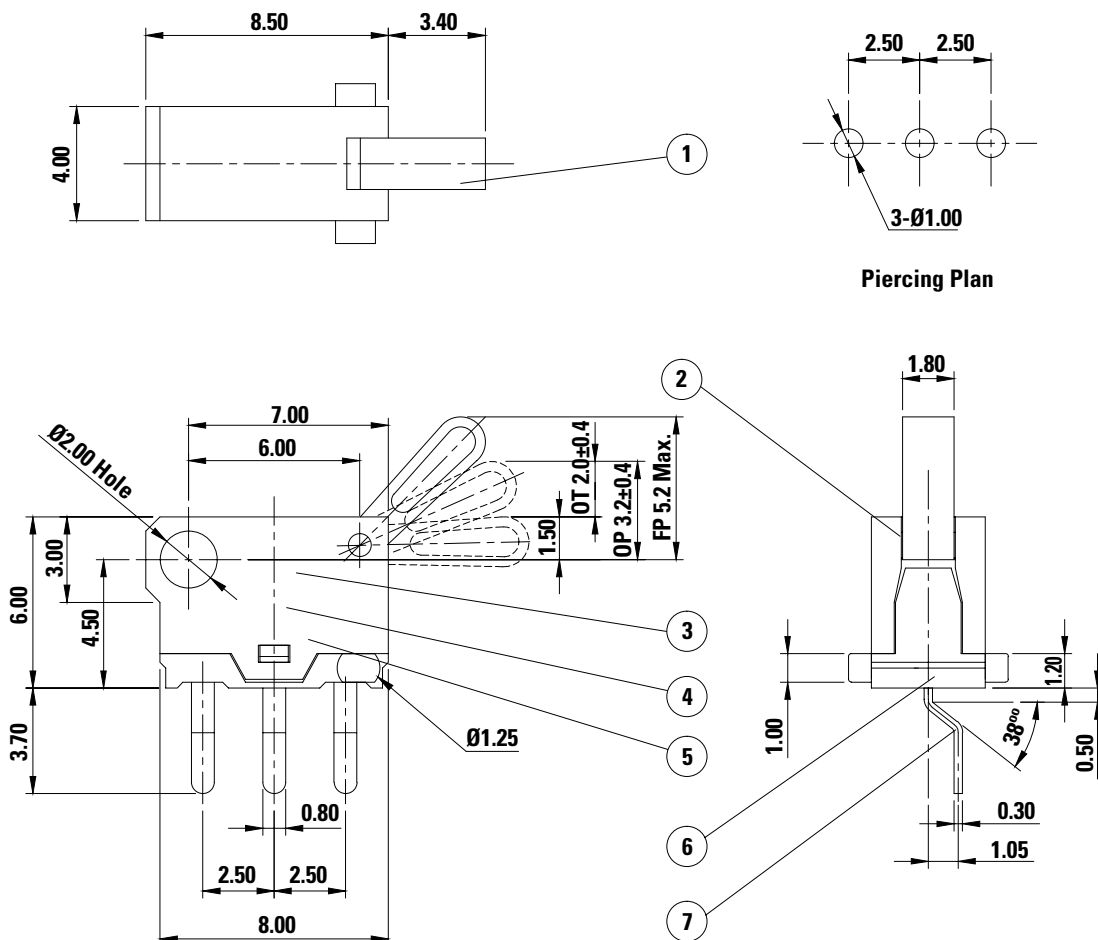
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DS-080 Specifications

Contact Arrangement	SPDT
Contact Rating	100mA @ 30 VDC
Operating Life	20,000 cycles
Operating Force	30 ± 20 gf
Travel	2.0 ± 0.40 mm
Initial Contact Resistance	200 m Ω max.
Insulation Resistance	10 M Ω min. @ 250 VDC 60 sec.
Dielectric Strength	250 V AC (50-60 Hz) 60 sec.
Operating Temperature	-20°C to 70°C
Materials	
Knob	POM
Cover	PA46
Slider	PBT
Housing	PA46
Terminal	Silver plated

Part Number	Packaging	Schematic
DS-080	1,000 pieces	1P - 2T <u>2</u> 1 N.O.

Dimensions (in mm)



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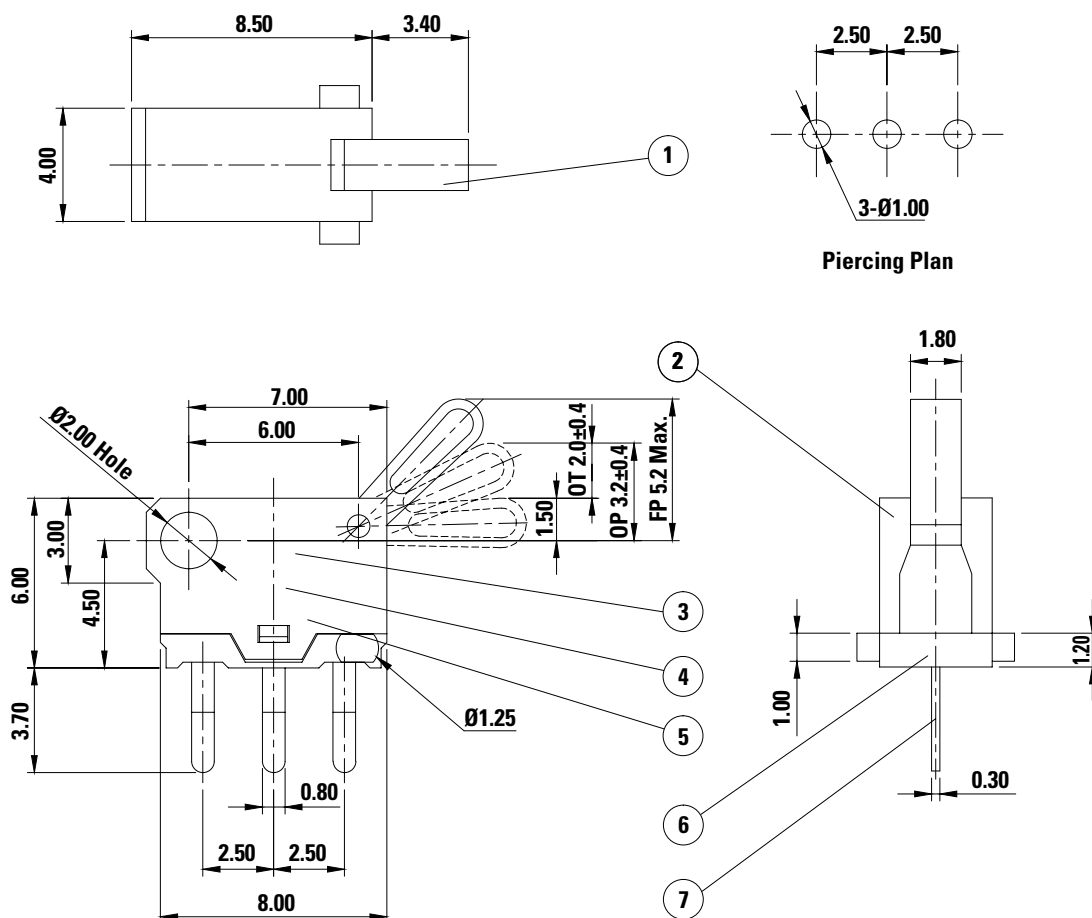


DS-080-C PA Specifications

Contact Arrangement	SPDT
Contact Rating	100mA @ 30 VDC
Operating Life	20,000 cycles
Operating Force	30 ± 20 gf
Travel	2.0 ± 0.40 mm
Initial Contact Resistance	200 m Ω max.
Insulation Resistance	10 M Ω min. @ 250 VDC 60 sec.
Dielectric Strength	250 V AC (50-60 Hz) 60 sec.
Operating Temperature	-20°C to 70°C
Materials	
Knob	POM
Cover	PA46
Slider	PBT
Housing	PA46
Terminal	Silver plated

Part Number	Packaging	Schematic
DS-080-C PA	1,000 pieces	1P - 2T 2 1 N.O.

Dimensions (in mm)



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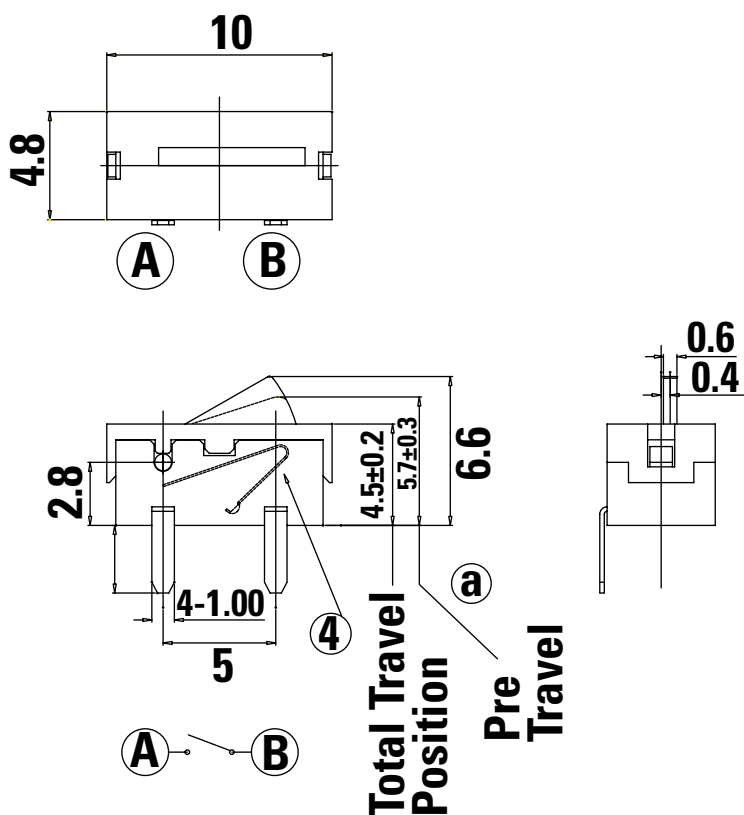


DS-09005-02 RP Specifications

Contact Arrangement	SPST
Contact Rating	1mA @ 5 VDC
Operating Life	100,000 cycles
Operating Force	50 gf max.
Travel	4.5 ± 0.2 mm
Initial Contact Resistance	500 m Ω max.
Insulation Resistance	10 M Ω min. @ 500 VDC 60 sec.
Dielectric Strength	500 V AC (50-60 Hz) 60 sec.
Operating Temperature	-20°C to 70°C
Materials	
Lever	POM
Cover	PA
Housing	PA
Terminal	Silver plated

Part Number	Packaging	Schematic
DS-09005-02 RP	500 pieces	 N.O.

Dimensions (in mm)



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Detect Switches

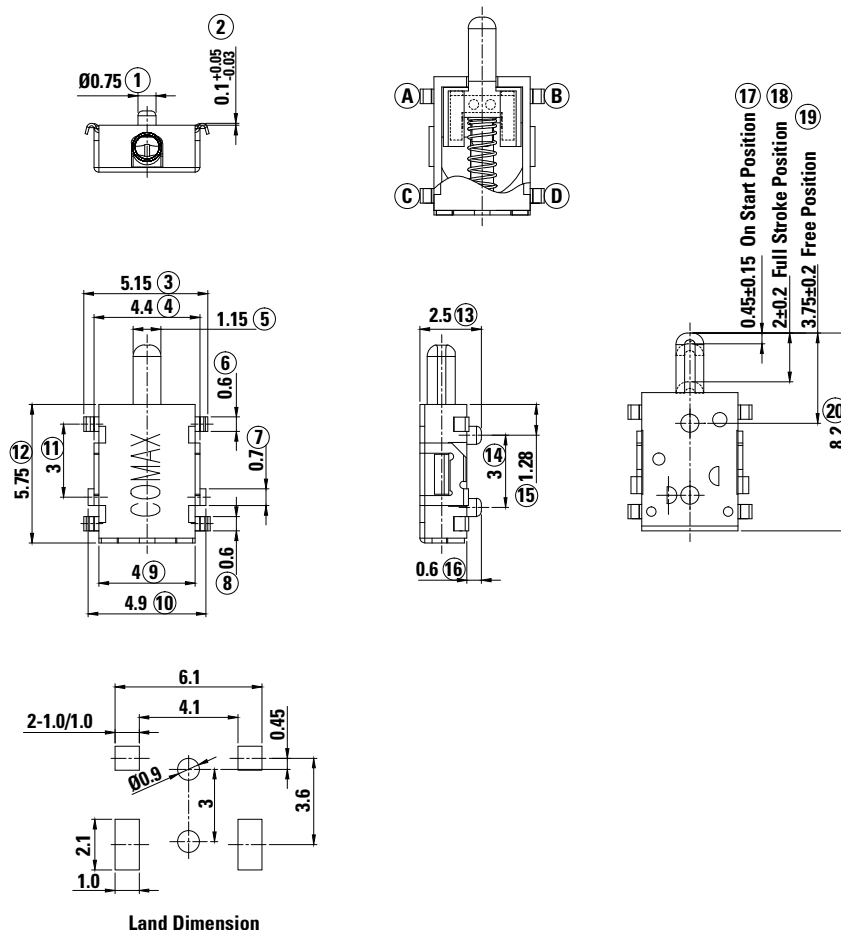


DS-180 RT Specifications

Contact Arrangement	SPST NO
Contact Rating	1mA @ 5 VDC
Operating Life	50,000 cycles
Operating Force	60 gf max.
Travel	2.0 ± 0.2 mm
Initial Contact Resistance	5Ω max.
Insulation Resistance	100 M Ω min. @ 100 VDC 60 sec.
Dielectric Strength	100 V AC (50-60 Hz) 60 sec.
Operating Temperature	-40°C to 85°C
Materials	
Knob	PA
Cover	SPTE
Spring	SUS
Housing	LCP
Terminal	Silver plated

Part Number	Packaging	Schematic
DS-180 RT	3,000 pieces	1P - 1T N.O.

Dimensions (in mm)



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