

5N Detector Switches

Japan

Type: **ESE11**

Standard type with a wide range of customizable features

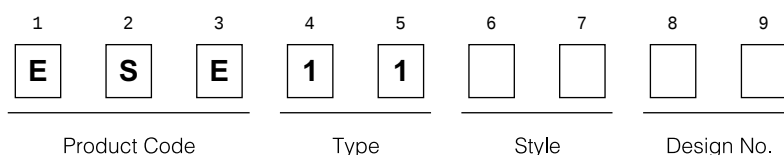
■ Features

- Attachable type, wide range of customizable features including operational directions
- Light operating force
- Wide available range for reflow soldering

■ Recommended Applications

- Mechanism and detection for Car audio equipment

■ Explanation of Part Numbers



■ Specifications

Rating	50 μ A 3 Vdc to 10 mA 5 Vdc (Resistive load)
Contact Resistance	500 m Ω max.
Insulation Resistance	100 M Ω max. (100 Vdc)
Dielectric Withstanding Voltage	100 Vac for 1 minute
Operating Force	350 mN max. (Full Travel)
Mounting Height	· Type SV 4.9 mm · Type MV 4.9 mm (MV2, 7 : 5.4 mm) · Type SH 5.25 mm · Type MH 4.25 mm · Type HS, SF 3.6 mm
Poles and Throws	1-pole 1-throw
Full Travel (Pushing distance)	· Type SV 6.1 mm (2.4 mm) · Type MV 6.1 mm (2.4 mm) · Type SH 3.0 mm (2.4 mm) · Type MH 1.7 mm (2.4 mm) · Type HS, SF 6.3 mm (2.4 mm)
Operating Life	50000 cycles min.
Temperature Range	-10 °C to +70 °C
Heat Resistance	+80 °C for 96 hours
Low Temperature Resistance	-25 °C for 96 hours
Humidity Resistance	+40 °C 90 % to 95 % RH for 96 hours

Design and specifications are each subject to change without notice. Ask factory for the current technical specifications before purchase and/or use.
Should a safety concern arise regarding this product, please be sure to contact us immediately.

Minimum Quantity/Packing Unit	ESE11SV□ ESE11MV□ ESE11SH□ ESE11MH□ ESE11HS□ ESE11SF□	200 pcs. Polyethylene Bag (Bulk)
	ESE11MV□T	800 pcs. Embossed Taping (Reel Pack)
	ESE11MH□T	1500 pcs. Embossed Taping (Reel Pack)
Quantity/ Carton	ESE11SV□ ESE11MV□ ESE11SH□ ESE11MH□ ESE11HS□ ESE11SF□	10000 pcs. Polyethylene Bag (Bulk)
	ESE11MV□T	4800 pcs. Embossed Taping (Reel Pack)
	ESE11MH□T	9000 pcs. Embossed Taping (Reel Pack)

■ Dimensions in mm (not to scale)

	No. 1	ESE11SV1 For wave soldering 1-pole 1-throw	No. 2	ESE11MV1 For reflow soldering 1-pole 1-throw
	Gold plating ESE11SV7		Gold plating ESE11MV5	
Vertical Type	Top view dimensions: 5.2, 6.4, 2.2, 3.0, 6.4, 5.2, 2.45, 1.0, 0.8, 1.27, 1.0, 4.9, 8.5, 1.0, (2.7), 2.3, 1.0, 0.95, 2.3, 0.95, 3.3, 2.3, 0.95, 2.45. Side view dimensions: 1.27, 6.1, 7.75, 0.1, (3.3), 1.2, 0.1. Lever view dimensions: 4-φ1.10 +0.05, φ1.25 +0.05, 3.3, 2.3, 0.95, 2.45. Labels: Lever center, Recommended PWB piercing plan View from (A), Full travel, ON starting position.		Top view dimensions: 1.51.75, 1.0, 2.2, 3.0, 5.2, 6.4, 1.65, 1.0, 1.65±0.1, 1.75, 1.0, 1.85, 1.4, 1.4, 2.0±0.2, 1.4, 3.25, 3.35. Side view dimensions: 1.27, 6.1, 7.75, 0.8, 1.2, 0.1. Lever view dimensions: 2-φ1.3 Hole, 1.4, 3.25, 3.35. Labels: Full travel, ON starting position, Recommended land pattern View from (A).	

Vertical Type

No. 3 ESE11MV9 For reflow soldering
1-pole 1-throw

Technical drawing of ESE11MV9 switch, vertical type, for reflow soldering. The drawing includes three views: top view, side view, and recommended land pattern view.

Top View: Dimensions include 1.5, 1.75, 1.0, 2.2, 3.0, 5.2, 6.4, and a center-to-center distance of 2.0. A note indicates $2-\phi 1.30^{+0.05}_0$ for the mounting holes.

Side View: Dimensions include 1.0, 1.65, 1.27, 0.8, 6.1, 7.75, 4.9, 8.5, 1.0, 1.65, and 1.75. A note indicates "Full travel ON starting position". The mounting hole diameter is $\phi 1.2^{+0.1}_0$.

Recommended land pattern View from (A): Dimensions include 1.85, 4-1.4, 2.0, 2.0, 3.25, and 3.35.

No. 4 ESE11MV2 For reflow soldering
1-pole 1-throw

Technical drawing of ESE11MV2 switch, vertical type, for reflow soldering. The drawing includes three views: top view, side view, and recommended land pattern view.

Top View: Dimensions include 1.5, 1.75, 1.0, 2.2, 3.0, 5.2, 6.4, and a center-to-center distance of 2.0. A note indicates $2-\phi 1.3$ Hole for the mounting holes.

Side View: Dimensions include 1.0, 1.65, 1.27, 0.8, 8.6 max., 10.25, 5.4, 7.5, 11.0, 1.0, 1.65, and 1.75. A note indicates "Full travel ON starting position". The mounting hole diameter is $\phi 1.2^{+0.1}_0$.

Recommended land pattern View from (A): Dimensions include 1.85, 1.4, 1.4, 2.0, 2.0, 3.25, and 3.35.

No. 5 ESE11MV7 For reflow soldering
1-pole 1-throw

Technical drawing of ESE11MV7 switch, vertical type, for reflow soldering. The drawing includes three views: top view, side view, and recommended land pattern view.

Top View: Dimensions include 1.5, 1.75, 1.0, 2.2, 3.0, 5.2, 6.4, and a center-to-center distance of 2.0. A note indicates $2-\phi 1.30^{+0.05}_0$ for the mounting holes.

Side View: Dimensions include 1.0, 1.65, 1.27, 0.8, 8.6 max., 10.25, 5.4, 7.5, 11.0, 1.0, 1.65, and 1.75. A note indicates "Full travel ON starting position". The mounting hole diameter is $\phi 1.2^{+0.1}_0$.

Recommended land pattern View from (A): Dimensions include 1.85, 4-1.4, 2.0, 2.0, 3.25, and 3.35.

No. 6 ESE11SH1C For wave soldering
1-pole 1-throw

Technical drawing of ESE11SH1C switch, horizontal type, for wave soldering. The drawing includes three views: top view, side view, and recommended PWB piercing plan view.

Top View: Dimensions include 1.5, 1.75, 1.0, 2.2, 3.0, 5.2, 6.4, and a center-to-center distance of 2.0. A note indicates "Gold plating ESE11SH5". A note indicates "Full travel ON starting position". The mounting hole diameter is $\phi 1.2$.

Side View: Dimensions include 1.0, 1.65, 1.27, 0.8, 8.6 max., 10.25, 5.4, 7.5, 11.0, 1.0, 1.65, and 1.75. A note indicates "Full travel ON starting position". The mounting hole diameter is $\phi 1.2$.

Recommended PWB piercing plan View from (A): Dimensions include 1.85, 4-1.4, 2.0, 2.0, 3.25, and 3.35. A note indicates "Lever center".

Horizontal Type

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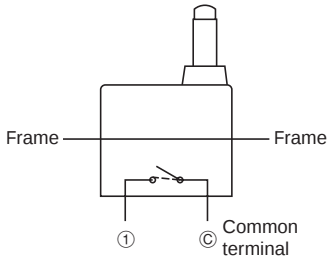
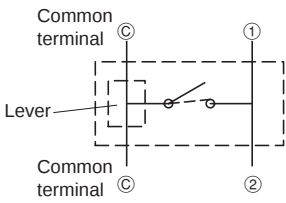
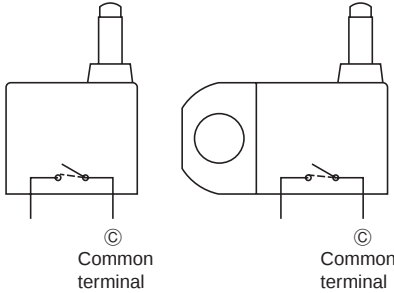
■ Dimensions in mm (not to scale)

Horizontal Type	No. 7 ESE11SH2C For wave soldering 1-pole 1-throw Gold plating ESE11SH6 Full travel ON starting position Recommended PWB piercing plan View from (A)	No. 8 ESE11MH1 For reflow soldering 1-pole 1-throw Gold plating ESE11MH3 Recommended land pattern View from (A)
	No. 9 ESE11MH2 For reflow soldering 1-pole 1-throw Gold plating ESE11MH4 Recommended land pattern View from (A)	No. 10 ESE11MH5 For reflow soldering 1-pole 1-throw Gold plating ESE11MH5 Recommended land pattern View from (A)

■ Dimensions in mm (not to scale)

Horizontal Type	No. 11 ESE11MH6 For reflow soldering 1-pole 1-throw Recommended land pattern View from (A)	No. 12 ESE11HS1 With mounting hole 1-pole 1-throw View from side (A) View from side (B) Recommended piercing plan
	No. 13 ESE11HS2 With mounting hole 1-pole 1-throw View from side (A) View from side (B) Recommended piercing plan	No. 14 ESE11SF1A Snap-in type 1-pole 1-throw Recommended piercing plan (PWB thickness=0.80±0.05) View from (A)

■ Circuit Diagram

MH, SH Type	MV, SV Type	SF, HS Type
1-pole 1-throw (N.O)	1-pole 1-throw (N.O)	1-pole 1-throw (N.O)
		

■ Packaging Specifications

Standard Reel Dimensions in mm (not to scale)

