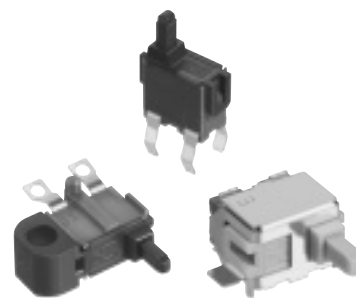


### 5N Detector Switches

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

|              |   |   |      |   |       |   |            |   |
|--------------|---|---|------|---|-------|---|------------|---|
| 1            | 2 | 3 | 4    | 5 | 6     | 7 | 8          | 9 |
| E            | S | E | 1    | 1 |       |   |            |   |
| Product Code |   |   | Type |   | Style |   | Design No. |   |

#### ■ Specifications

|                                 |                                                                                                                                                                                                                             |
|---------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Rating                          | 50 $\mu$ A 3 Vdc to 10 mA 5 Vdc (Resistive load)                                                                                                                                                                            |
| Contact Resistance              | 500 m $\Omega$ max.                                                                                                                                                                                                         |
| Insulation Resistance           | 100 M $\Omega$ max. (100 Vdc)                                                                                                                                                                                               |
| Dielectric Withstanding Voltage | 100 Vac for 1 minute                                                                                                                                                                                                        |
| Operating Force                 | 350 mN max. (Full Travel)                                                                                                                                                                                                   |
| Mounting Height                 | <ul style="list-style-type: none"> <li>· Type SV 4.9 mm</li> <li>· Type MV 4.9 mm (MV2, 7 : 5.4 mm)</li> <li>· Type SH 5.25 mm</li> <li>· Type MH 4.25 mm</li> <li>· Type HS, SF 3.6 mm</li> </ul>                          |
| Poles and Throws                | 1-pole 1-throw                                                                                                                                                                                                              |
| Full Travel (Pushing distance)  | <ul style="list-style-type: none"> <li>· Type SV 6.1 mm (2.4 mm)</li> <li>· Type MV 6.1 mm (2.4 mm)</li> <li>· Type SH 3.0 mm (2.4 mm)</li> <li>· Type MH 1.7 mm (2.4 mm)</li> <li>· Type HS, SF 6.3 mm (2.4 mm)</li> </ul> |
| 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□<br>ESE11MV□<br>ESE11SH□<br>ESE11MH□<br>ESE11HS□<br>ESE11SF□ | 200 pcs.<br>Polyethylene Bag (Bulk)      |
|                               | ESE11MV□T                                                            | 800 pcs.<br>Embossed Taping (Reel Pack)  |
|                               | ESE11MH□T                                                            | 1500 pcs.<br>Embossed Taping (Reel Pack) |
| Quantity/<br>Carton           | ESE11SV□<br>ESE11MV□<br>ESE11SH□<br>ESE11MH□<br>ESE11HS□<br>ESE11SF□ | 10000 pcs.<br>Polyethylene Bag (Bulk)    |
|                               | ESE11MV□T                                                            | 4800 pcs.<br>Embossed Taping (Reel Pack) |
|                               | ESE11MH□T                                                            | 9000 pcs.<br>Embossed Taping (Reel Pack) |

■ Dimensions in mm (not to scale)

| Vertical Type | <div data-bbox="226 1135 292 1160">No. 1</div> <div data-bbox="357 1135 711 1187"> <b>ESE11SV1</b> For wave soldering<br/>1-pole 1-throw         </div> <div data-bbox="188 1178 319 1225">           Gold plating<br/>ESE11SV7         </div> <div data-bbox="201 1252 764 2020"> </div> | <div data-bbox="861 1135 927 1160">No. 2</div> <div data-bbox="992 1135 1366 1187"> <b>ESE11MV1</b> For reflow soldering<br/>1-pole 1-throw         </div> <div data-bbox="829 1178 960 1225">           Gold plating<br/>ESE11MV5         </div> <div data-bbox="842 1207 1418 2038"> </div> |
|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

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.

## ■ Dimensions in mm (not to scale)

|               |                                                                                                                                     |                                                                                                                                                                          |
|---------------|-------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Vertical Type | <p><b>No. 3</b>    <b>ESE11MV9</b>    For reflow soldering<br/>1-pole 1-throw</p> <p>Recommended land pattern<br/>View from (A)</p> | <p><b>No. 4</b>    <b>ESE11MV2</b>    For reflow soldering<br/>1-pole 1-throw</p> <p>Recommended land pattern<br/>View from (A)</p>                                      |
|               | <p><b>No. 5</b>    <b>ESE11MV7</b>    For reflow soldering<br/>1-pole 1-throw</p> <p>Recommended land pattern<br/>View from (A)</p> | <p><b>No. 6</b>    <b>ESE11SH1C</b>    For wave soldering<br/>1-pole 1-throw</p> <p>Gold plating<br/>ESE11SH5</p> <p>Recommended PWB piercing plan<br/>View from (A)</p> |

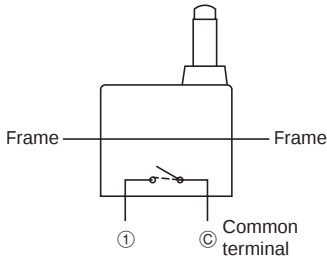
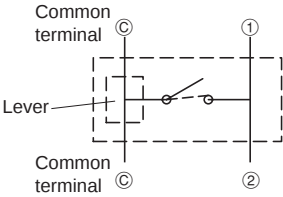
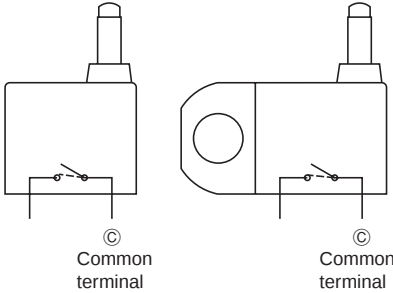
### ■ Dimensions in mm (not to scale)

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

## ■ Dimensions in mm (not to scale)

|                 |                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                              |
|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Horizontal Type | <p><b>No. 11</b>    <b>ESE11MH6</b>    For reflow soldering<br/>1-pole 1-throw</p> <p>Recommended land pattern<br/>View from (A)</p> <p>Full travel<br/>ON starting position</p> <p>View from side (A)    View from side (B)</p> <p>Recommended piercing plan</p> | <p><b>No. 12</b>    <b>ESE11HS1</b>    With mounting hole<br/>1-pole 1-throw</p> <p>ON starting position</p> <p>Full travel</p> <p>Full travel<br/>ON starting position</p> <p>View from side (A)    View from side (B)</p> <p>Recommended piercing plan</p> |
|                 | <p><b>No. 13</b>    <b>ESE11HS2</b>    With mounting hole<br/>1-pole 1-throw</p> <p>ON starting position</p> <p>Full travel</p> <p>Full travel<br/>ON starting position</p> <p>View from side (A)    View from side (B)</p> <p>Recommended piercing plan</p>      | <p><b>No. 14</b>    <b>ESE11SF1A</b>    Snap-in type<br/>1-pole 1-throw</p> <p>Full travel<br/>ON starting position</p> <p>Recommended piercing plan<br/>(PWB thickness=0.80±0.05)<br/>View from (A)</p>                                                     |

### ■ 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)

