Air Checker: Electronic Pressure Switch

**PS1000/PS1100/PS1200 Series**

(For Positive Pressure) (For Vacuum, Residual Pressure) (For Vacuum)

**Applicable fluid:**
Air, Non-corrosive gas, Non-flammable gas

**Compact/lightweight electronic pressure switch**

**Addition of vacuum range** (-100 to 0 kPa)
Easy adjustment of pressure setting trimmer

**Easy mounting**
Plug-in reducer port for One-touch fittings

**Easy adjustment of pressure setting**

**High visibility**
A large LED display for an easily visible switch

**2-wire type**
Applicable to either NPN or PNP output

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**Dimensions:**

- **PS1000/1100:***
  - 30 x 30 x 13 mm

- **PS1200 (For vacuum):***
  - 30 x 30 x 30 mm

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**Features:**

- Compact/lightweight
- Electronic pressure switch
- Addition of vacuum range (-100 to 0 kPa)
- Easy adjustment of pressure setting trimmer
- High visibility
- A large LED display for an easily visible switch
- 2-wire type

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**Model Numbers:**

- PS1000
- PS1100
- PS1200

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**Technical Specification:**

- Positive pressure adjustment range
  - PS1200 (For vacuum): -100 kPa to 0 kPa
  - PS1000/PS1100: 0 kPa to 0.45 MPa

- Vacuum adjustment range
  - PS1200 (For vacuum): -0.1 MPa to 0 kPa
  - PS1000/PS1100: 0 MPa to 0.4 MPa

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**Options:**

- NPN or PNP output

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**Company:**

SMC
Air Checker: Electronic Pressure Switch

**PS1000/1100/1200 Series**

How to Order

**Output specifications**

Output specifications:

- **10**: For positive pressure
- **11**: For vacuum and residual pressure
- **12**: For vacuum

**Piping specifications**

Piping specifications:

- **R06**: ø6 reducer
- **R07**: 1/4” reducer

**Lead wire length**

- **L**: 3 m

**Option (CE-compliant*)**

- Nil
- Q

* The PS1200 series is CE-compliant (with Q) only.

**Specifications**

Refer to pages 11 and 12 for Pressure Switch Precautions. For details about the Specific Product Precautions, refer to the Operation Manual on the SMC website, http://www.smcworld.com Click here for details.

<table>
<thead>
<tr>
<th>Model</th>
<th>PS1000</th>
<th>PS1100</th>
<th>PS1200</th>
</tr>
</thead>
<tbody>
<tr>
<td>Switch output</td>
<td>Present pres. ≥ Setting pres.: ON</td>
<td>Present pres. ≤ Setting pres.: ON</td>
<td>ON</td>
</tr>
<tr>
<td>Max. operating pressure</td>
<td>1 MPa</td>
<td>500 kPa</td>
<td>–0.1 to 0.45 MPa</td>
</tr>
<tr>
<td>Set pressure range</td>
<td>–0.1 to 0.45 MPa</td>
<td>–0.1 to 0.4 MPa</td>
<td>–100 to 0 kPa</td>
</tr>
<tr>
<td>Fluid</td>
<td>Air/Non-corrosive gas/Non-flammable gas</td>
<td>ON: When red LED turns on</td>
<td>±3% F.S.</td>
</tr>
<tr>
<td>Indicator light</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Temperature characteristics</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Repeatability</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Hysteresis</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Load voltage</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Load current</td>
<td></td>
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<tr>
<td>Leakage current</td>
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<tr>
<td>Internal voltage drop</td>
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<tr>
<td>Operating temperature range</td>
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<tr>
<td>Insulation resistance</td>
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<tr>
<td>withstand voltage</td>
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<td></td>
<td></td>
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<tr>
<td>Weight</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Port size</td>
<td>R06: ø6 reducer, R07: 1/4” reducer</td>
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<td></td>
</tr>
<tr>
<td>Enclosure</td>
<td>IP40</td>
<td></td>
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<tr>
<td>Lead wire</td>
<td>Grommet oilproof heavy-duty vinyl cable 2 cores, ø2.55, 3 m, Conductor area: 0.18 mm², Insulator O.D.: 0.96 mm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wetted parts material</td>
<td>Pressured sensor part: Silicon, Body part: PBT, O-ring: HNBR</td>
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<td></td>
</tr>
<tr>
<td>Standards</td>
<td>CE (Option), RoHS</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Switch Specifications

**PS1000, PS1100**

- Use the pressure setting trimmer to set ON pressure.
- Rotate clockwise to increase the set pressure. For setting vacuum, rotate counterclockwise.
- To set, use a flat head screwdriver suited for the groove of the trimmer, and rotate it lightly with fingertip.

**PS1200**

- The switch turns ON when the set pressure is reached or exceeded.
- The switch turns ON when at the set pressure or below.

Setting of Pressure Switch

- Use the pressure setting trimmer to set ON pressure.
- Rotate clockwise to increase the set pressure. For setting vacuum, rotate counterclockwise.
- To set, use a flat head screwdriver suited for the groove of the trimmer, and rotate it lightly with fingertip.

Trimmer

- Rotation angle of the trimmer is 220°.
- There is a stop provided to prevent the trimmer from rotating beyond its limits. Rotation beyond the limit can damage the trimmer. Adjust the trimmer gently within the rotation angle.

Internal Circuits and Wiring Examples

Example of connection with a PLC (Sequence controller)

**For source type input unit**

- Brown OUT (+) Load
- Blue OUT (−) 12 to 24 VDC

**For sink type input unit**

- Brown Input
- Switch
- Blue COM

Dimensions

<table>
<thead>
<tr>
<th>Applicable One-touch fittings</th>
<th>A</th>
</tr>
</thead>
<tbody>
<tr>
<td>KQ2H/L/T/S/Y06-M5</td>
<td>16</td>
</tr>
<tr>
<td>KQ2H/L07-M5</td>
<td>16</td>
</tr>
<tr>
<td>Other KQ2/KS series</td>
<td>13</td>
</tr>
<tr>
<td>KJ series</td>
<td>16</td>
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</tbody>
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