Vacuum/Pressure Switch or Transmitter with Backlit LCD Pressure Indication

Series ZSE4/ISE4B

- Large LCD display shows actual pressure and permits easy setting of ON/OFF
- Series allows choice of applicable pressure range and output type
- A variety of switch output modes can be selected by push button settings
- Display can be set to show peak or minimum pressures during normal operation
- Complete self diagnosis with error indication
- Panel mountable

### Technical Specifications

<table>
<thead>
<tr>
<th>Vacuum Models</th>
<th>Pressure Models</th>
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</tr>
</thead>
<tbody>
<tr>
<td>NPN output</td>
<td>ZSE4B-01-25L</td>
<td>ISE4B-01-25L</td>
</tr>
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<td>NPN output</td>
<td>ZSE4B-01-65L</td>
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</tr>
<tr>
<td>Analogue output</td>
<td>ZSE4B-01-26L</td>
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Operating pressure range
- +10 to -101kPa (+75 to -760mmHg) to -1~10 bar (0.1~1.0 MPa)

Maximum pressure
- +1 bar (100kPa)
- 2 bar (100kPa)
- 10 bar (1.0 MPa)

Minimum displayed unit
- Hmitt: 5
- kPa: 1
- bar: 0.01

Switch indicator
- ON (green light)

Switch Output Type
- NPN output: -25
- PNP output: -65
- Analogue output: -26

### Output Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>Item</th>
<th>Output Method</th>
<th>Output Specifications</th>
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<tbody>
<tr>
<td>ZSE4B-01-25</td>
<td>Vacuum</td>
<td>NPN output</td>
<td>NPN open collector 10V, 80MA, residual voltage: 1V or less</td>
</tr>
<tr>
<td>ZSE4B-01-26</td>
<td></td>
<td>Analogue output</td>
<td>1-5V (±5%F.S.), load impedance: 4kΩ</td>
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<tr>
<td>ZSE4B-01-65</td>
<td></td>
<td>NPN output</td>
<td>NPN open collector 20V, 80MA, residual voltage: 1V or less</td>
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<td>ZSE4B-01-65</td>
<td>Pressure output</td>
<td>Analogue output</td>
<td>1-5V (±5%F.S.), load impedance: 4kΩ</td>
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<td>ISE4B-01-25</td>
<td>Positive pressure 100kPa</td>
<td>NPN output</td>
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### Output Circuit and Wiring

Switch Output Type (-25)

Analog Output Type (-26)

### Output Circuit and Wiring

**Precautions:**
1. When handling the switch, hold the body, not the wire. Electrical cable must not be subjected to excessive force.
2. When connecting the switch, use a spanner on the hexagon fitting. NEVER use tools on the switch body.
3. Do not use switch near corrosive materials.
4. The switch is not liquid sealed. Protect from rain, dew, spray or use enclosed type ZSE4BD/ISE4BD as shown on page 7.16
INSTRUCTIONS

LCD ............ Displays present pressure
Displays ON/OFF setting
Displays error code
Displays unit
LED (Green) .... Displays switch operation conditions
LED (Red) ...... Blinks on and off when an error occurs
SET key ........ Switches to the setting mode
When the button is pressed for one second or more, the mode changes to the output mode.
UP key .......... Increases ON/OFF setting value.
When the button is pressed during pressure display the mode changes to the peak display mode.
DOWN key ...... Decreases ON/OFF setting value.
When the button is pressed during pressure display, the mode changes to the bottom display mode. * Used for unit change and output mode change.
RESET .......... Clears anomaly
Displays “O” (Press up and down key together)

* Peak and bottom display allows the LCD to show the highest and lowest pressures encountered by the switch but normal switch or analogue operation is unaffected.

ERROR INDICATION AND INSTRUCTIONS

When an error occurs, take the following steps.

<table>
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<tr>
<th>Display</th>
<th>Situation</th>
<th>Solution</th>
</tr>
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<tbody>
<tr>
<td>E1 □E</td>
<td>Set data is corrupted by some external influence</td>
<td>Push “Reset” and re-insert settings</td>
</tr>
<tr>
<td>E2 □E1</td>
<td>Over current is evident in (Output 1) switch</td>
<td>Switch off power supply. Remove cause of the excess load.</td>
</tr>
<tr>
<td>E3 □E2</td>
<td>&gt;500 kPa pressure applied to vacuum switch. 150% of rated pressure applied to pressure switch</td>
<td>Setting pressure must be less than maximum rated pressures</td>
</tr>
</tbody>
</table>

HOW TO ORDER
VACUUM PRESSURE SWITCH SERIES ZSE4

ZSE4B

Piping Specifications
01 ... Direct piping 1/8

Switch Specifications
65 ... 3 wire output PNP
25 ... 3 wire output NPN
26 ... 3 wire analogue output

Wiring Specifications
L ... Grommet entry 3m lead

HOW TO ORDER
POSITIVE PRESSURE SWITCH SERIES ISE4

ISE4

Operating Pressure
Nil ... 10 bar (1.0 MPa)
L ... 1 bar (100 kPa)

Piping Specifications
01 ... Direct piping 1/8

Switch Specifications
65 ... 3 wire output PNP
25 ... 3 wire output NPN
26 ... 3 wire analogue output

Wiring Specifications
L ... Grommet entry 3m lead

STOCKED PRODUCTS
For a list of Stocked Products, please see the current SMC Price List

ACCESSORIES
ZSE4/ISE4
Panel Mount Adaptor ...... ZS-22-A

PANEL MOUNTING KIT
ZS-22-A

STOCKED PRODUCTS
For a list of Stocked Products, please see the current SMC Price List
**Water Drop Resistant Type Digital Indication Pressure Switch Series ZSE4BD/ISE4BD**

- IP66 Environment Protection. This pressure switch is constructed to resist water spray and fine particles for use in adverse environmental conditions.
- DIN rail mountable
- Direct wall mountable

**Technical Specifications**

As for ZSE4B/ISE4B except:
- Weight .................................. 110g
- Port size .................................. Rc 1/8 (taper female)
- Enclosure .............................. IP66 according to IEC 529

**Breather Piping Method**

If there is the possibility that the switch will be used in an atmosphere where there is excessive water, oil or dust around the body, and these substances may enter through the atmospheric port, insert a 0.4mm tube into this port and pipe away to a cleaner area.

**How To Order**

**Vacuum Pressure Switch Series ZSE4**

**ZSE4BD**

**Piping Specifications**

01 ... Direct piping 1/8

**Switch Specifications**

65 ... 3 wire output PNP
23 ... 3 wire output NPN
26 ... 3 wire analogue output

**Wiring Specifications**

L ....... Grommet entry 3m lead

**Dimensions ZSE4BD/ISE4BD**

- Mounting hole (h) 15
- Atmosphere releasing port For tube size 1/4
- Piping port 01: NPT1/8
  03: M12 x 0.75

**DIN Rail Mounting**

To mount, hook on to bottom rail and hand push in direction of arrow.
To remove, use a screwdriver in the direction shown by the arrow.

**Stocked Products**

For a list of Stocked Products, please see the current SMC Price List

**How To Order**

**Positive Pressure Switch Series ISE4**

**ISE4 BD**

**Operating Pressure**

Nil ...... 10 bar (1.0 MPa)
L ...... 1 bar (100kPa)

**Piping Specifications**

01 ... Direct piping 1/8

**Switch Specifications**

63 ... 3 wire output PNP
23 ... 3 wire output NPN
26 ... 3 wire analogue output

**Wiring Specifications**

L ....... Grommet entry 3m lead