Stainless diaphragm
Oil-free (Single-layer diaphragm structure)

Sensor unit: **Stainless steel 630**
Fitting parts: **Stainless steel 304**
The sensor unit and fitting parts are also applicable to stainless steel 316L.

---

**2-color display**
See abnormal values at a glance.

---

**3-step setting**
Adjust to the set-value by the or button.
Completion of setting

---

**Choice of 2 piping directions**
Rear ported
Bottom ported

---

**Rated pressure range**
0.0 to –101.0 kPa and –0.100 to 2.00 MPa available as standard
Leakage

\[ 1 \times 10^{-10} \text{ Pa} \cdot \text{m}^3/\text{s} \]

<Face seal and compression fitting>

\[ 1 \times 10^{-5} \text{ Pa} \cdot \text{m}^3/\text{s} \]

<Threaded type (R, Rc, NPT, G)>

Applicable Fluid Examples

- Water
- Hydraulic fluid (JIS-K2213)
- Silicon oil (JIS-K2213)
- Lubricant (JIS-K6301)
- Fluorocarbon
- Argon
- Carbon dioxide
- Air-containing drainage
- Nitrogen

Applications

- Suction verification of work pieces containing moisture
- Confirmation of supply pressure of cleaning lines
- Confirmation of working pressure of hydraulic cylinder
- Confirmation of pressure after lubricator unit

Restrictor installed fitting type (-X510) [Made to Order]

A pressure switch that has a restrictor installed in the fitting is available to prevent the sensor from being damaged by water hammer or inertia of the fluid.

Variations

<table>
<thead>
<tr>
<th>Series</th>
<th>ZSE80</th>
<th>ZSE80F</th>
<th>ISE80</th>
<th>ISE80H</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rated pressure range</td>
<td>0.0 to -101.0 kPa</td>
<td>-100.0 to 100.0 kPa</td>
<td>-0.100 to 1.000 MPa</td>
<td>-0.100 to 2.00 MPa</td>
</tr>
<tr>
<td>Withstand pressure</td>
<td>500 kPa</td>
<td>2 MPa</td>
<td>4 MPa</td>
<td></td>
</tr>
<tr>
<td>Minimum unit setting</td>
<td>0.1 kPa</td>
<td>0.001 MPa</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Repeatability</td>
<td>±0.2% F.S. ±1 digit</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Welded structure for sensor units and fitting parts
Select from a face seal or compression fitting.
2-color display (LCD)
Can select from 4 indicator patterns of color combinations.

<table>
<thead>
<tr>
<th>ON</th>
<th>OFF</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Red</td>
</tr>
<tr>
<td>2</td>
<td>Green</td>
</tr>
<tr>
<td>3</td>
<td>Red</td>
</tr>
<tr>
<td>4</td>
<td>Green</td>
</tr>
</tbody>
</table>

Output display
It lights when OUT1 or OUT2 outputs.

Convex rubber button
Convex button is adopted and provides IP65 rating. Improved maneuverability and operability.

Lead wire length
- 2 m (Standard)
- 3 m (Made to Order)

Piping
- R1/4 (M5 x 0.8 female threaded)
- NPT1/4 (M5 x 0.8 female threaded)
- G1/4 (M5 x 0.8 female threaded)
- Rc1/8 (female threaded) is newly added.
- URF1/4 (Face seal fitting)
- TSJ1/4 (Compression fitting)

Output
Analog current output is newly added.
- Advantageous when it is wired for a long distance.
- It is resistant against noise.
- NPN open collector 1 output
- PNP open collector 1 output
- NPN open collector 2 outputs
- PNP open collector 2 outputs
- NPN open collector 2 outputs + Analog voltage output/Auto-shift switching
- PNP open collector 2 outputs + Analog voltage output/Auto-shift switching
- NPN open collector 2 outputs + Analog current output/Auto-shift switching
- PNP open collector 2 outputs + Analog current output/Auto-shift switching

Secret code setting
This ensures that only authorized persons can operate the switch when the key is locked.

Input an arbitrary 3-digit value.

* The set-value can be confirmed even when the key is locked.

Power-saving mode
Turning off the display can save power consumption.
(Power consumption: reduced by up to 18%)

The numerical value disappears and the decimal points blink.

Resolution switching function
It prevents minor variation of the indicated value.

1/1000
1/100
(Only the indicated value changes without changing precision.)

MPa/kPa switching function
The indication unit for vacuum, compound pressure and positive pressure can be integrated into either MPa or kPa.

Panel mount
Suitable for side-by-side mounting
- Space-saving
- Reduced panel fitting labor

Bracket mount

Only one opening
# 2-Color Display Digital Pressure Switch

## For General Fluids

### ZSE80/ISE80 Series

**How to Order**

### Rated pressure range

<table>
<thead>
<tr>
<th>Option</th>
<th>Part no.</th>
<th>Piping direction</th>
</tr>
</thead>
<tbody>
<tr>
<td>80</td>
<td>ZS-24-A</td>
<td>Rear ported</td>
</tr>
<tr>
<td>80H</td>
<td>ZS-35-A</td>
<td>Bottom ported</td>
</tr>
</tbody>
</table>

**Piping specifications**

<table>
<thead>
<tr>
<th>Piping direction</th>
<th>Part no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nil</td>
<td>ZS-24-D</td>
</tr>
<tr>
<td>Bottom ported</td>
<td>ZS-35-B</td>
</tr>
</tbody>
</table>

**Option 1**

**Panel mount adapter**

**Option 2**

**Panel mount adapter + Front protection cover**

**Table 1**

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>-X500</td>
<td>Wetted parts: Stainless steel 316L</td>
</tr>
<tr>
<td>-X501</td>
<td>Lead wire length 3 m</td>
</tr>
<tr>
<td>-X510</td>
<td>Restrictor installed fitting</td>
</tr>
<tr>
<td>-X531</td>
<td>M12 4-pin pre-wired connector</td>
</tr>
<tr>
<td>-X555</td>
<td>Rated pressure –100 to 300 kPa</td>
</tr>
</tbody>
</table>

**Note 1)** Not applicable to the rated pressure range –0.1 to 2 MPa specification. Refer to page 103 for detail.

**Note 2)** Excluding A2 and B2 piping specifications

**Note 3)** Suitable for output specifications A, B only

**Note 4)** Suitable for output specifications R, T only

**System specifications**

- Made to Order
  - **Symbol**: Nil
  - **Operation Note**: With unit display switching function
  - **Calibration Note**: None
  - **Unit specifications**
    - Nil
    - M: Fixed SI unit
    - P: With unit display switching function

**Option 2**

- Made to Order
  - **Symbol**: Nil
  - **Operation Note**: With unit display switching function
  - **Calibration Note**: None
  - **Unit specifications**
    - Nil
    - M: Fixed SI unit
    - P: With unit display switching function

**Operation Note**

- Nil

**Calibration Note**

- Nil

---

**Rated pressure range**

<table>
<thead>
<tr>
<th>80</th>
<th>80H</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 to –101 kPa</td>
<td>–0.1 to 2 MPa</td>
</tr>
</tbody>
</table>

**For positive pressure**

**For vacuum/compound pressure**

**Option 1**

**Panel mount adapter**

**Option 2**

**Panel mount adapter + Front protection cover**

**Note 1)** Not applicable to piping direction “L (Bottom ported)”.

**Note 2)** According to ISO 228-1

**Note 3)** Not applicable to piping specifications “F02(G1/4)”.

**Note 4)** Not applicable to piping specifications “FL0(G1/4)”.

**Unit specifications**

- Nil
- Y
- K
- T

**Symbol Specifications**

- X500 Note 1
- X501
- X510 Note 3
- X531 Note 2
- X555 Note 4

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>-X500</td>
<td>Wetted parts: Stainless steel 316L</td>
</tr>
<tr>
<td>-X501</td>
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</tr>
<tr>
<td>-X510</td>
<td>Restrictor installed fitting</td>
</tr>
<tr>
<td>-X531</td>
<td>M12 4-pin pre-wired connector</td>
</tr>
<tr>
<td>-X555</td>
<td>Rated pressure –100 to 300 kPa</td>
</tr>
</tbody>
</table>

**Note 1)** Not applicable to the rated pressure range –0.1 to 2 MPa specification. Refer to page 103 for detail.

**Note 2)** Excluding A2 and B2 piping specifications

**Note 3)** Suitable for output specifications A, B only

**Note 4)** Suitable for output specifications R, T only

---

**Option**

- Made to Order
  - **Symbol**: Nil
  - **Operation Note**: With unit display switching function
  - **Calibration Note**: None
  - **Unit specifications**
    - Nil
    - M: Fixed SI unit
    - P: With unit display switching function

**Option 2**

- Made to Order
  - **Symbol**: Nil
  - **Operation Note**: With unit display switching function
  - **Calibration Note**: None
  - **Unit specifications**
    - Nil
    - M: Fixed SI unit
    - P: With unit display switching function

**Operation Note**

- Nil

**Calibration Note**

- Nil
## Specifications

### ZSE80/ISE80 Series

**For General Fluids**

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](http://www.smcworld.com) Click here for details.

### Piping Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>Port size</th>
<th>Weight (Bottom ported)</th>
<th>Weight (Rear ported)</th>
<th>Leakage</th>
</tr>
</thead>
<tbody>
<tr>
<td>ZSE20</td>
<td>O2</td>
<td>R1/4</td>
<td>117 g</td>
<td>$1 \times 10^{-5}$ Pa·m²/s</td>
</tr>
<tr>
<td></td>
<td></td>
<td>NPT1/4</td>
<td>118 g</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>G1/4</td>
<td>—</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Rc1/8</td>
<td>114 g</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>URJ1/4</td>
<td>120 g</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>TSJ1/4</td>
<td>111 g</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>B2</td>
<td>89 g</td>
<td>$9 \times 10^{-10}$ Pa·m²/s</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>90 g</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>86 g</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 x $10^{-5}$ Pa·m²/s</td>
<td>1 x $10^{-10}$ Pa·m²/s</td>
<td></td>
</tr>
</tbody>
</table>
Set Pressure Range and Rated Pressure Range

Set the pressure within the rated pressure range.
The set pressure range is the range of pressure that is possible in setting.
The rated pressure range is the range of pressure that satisfies the specifications (accuracy, linearity, etc.) on the switch.
Although it is possible to set a value outside the rated pressure range, the specifications will not be guaranteed even if the value stays within the set pressure range.

<table>
<thead>
<tr>
<th>Switch</th>
<th>Pressure range</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>–100 kPa</td>
</tr>
<tr>
<td>For vacuum pressure</td>
<td>ZSE80</td>
</tr>
<tr>
<td></td>
<td>–111.1 kPa</td>
</tr>
<tr>
<td>For compound pressure</td>
<td>ZSE80F</td>
</tr>
<tr>
<td></td>
<td>–110 kPa</td>
</tr>
<tr>
<td>For positive pressure</td>
<td>ISE80</td>
</tr>
<tr>
<td></td>
<td>–0.105 MPa</td>
</tr>
<tr>
<td></td>
<td>–0.1 MPa</td>
</tr>
<tr>
<td></td>
<td>–0.105 MPa</td>
</tr>
</tbody>
</table>

Rated pressure range of switch
Set pressure range of switch

Analog Output

Voltage output

Current output

<table>
<thead>
<tr>
<th>Range</th>
<th>Rated pressure range</th>
</tr>
</thead>
<tbody>
<tr>
<td>For vacuum pressure</td>
<td>0.0 to –101.0 kPa</td>
</tr>
<tr>
<td>For compound pressure</td>
<td>–100.0 to 100.0 kPa</td>
</tr>
<tr>
<td>For positive pressure</td>
<td>–0.100 to 1.000 MPa</td>
</tr>
</tbody>
</table>

Note) Analog output is 0.8 [V] or 3.2 [mA] at the pressure A.
Internal Circuits and Wiring Examples

-N
NPN (1 output)

-P
PNP (1 output)

-A
NPN (2 outputs)

-B
PNP (2 outputs)

-R/-S
-R: NPN (2 outputs) + Analog voltage output
-S: NPN (2 outputs) + Analog current output

-R/-S
NPN (2 outputs) + Auto-shift input

-T/-V
-T: PNP (2 outputs) + Analog voltage output
-V: PNP (2 outputs) + Analog current output

-T/-V
PNP (2 outputs) + Auto-shift input
Note) If it is predicted that the pressure, such as the water hammer or surge pressure fluctuates rapidly, refer to the Handling Precautions stated in the Operation Manual at SMC website (http://www.smcworld.com).

When the pressure switch is used in a place where water and dust splashes may occur, insert a tube into the atmospheric vent port, and route the other end of the tube to a safe place away from water and dust.

- SMC TU0425 (polyurethane, O.D. ø4, I.D. ø2.5) suits to the pressure switch.

Note) If it is predicted that the pressure, such as the water hammer or surge pressure fluctuates rapidly, refer to the Handling Precautions stated in the Operation Manual at SMC website (http://www.smcworld.com).
Note) If it is predicted that the pressure, such as the water hammer or surge pressure fluctuates rapidly, refer to the Handling Precautions stated in the Operation Manual at SMC website (http://www.smcworld.com).

- A2L: URJ1/4
- B2L: TSJ1/4

ZSE/ISE80 Series

Dimensions

ZSE/ISE80

When the pressure switch is used in a place where water and dust splashes may occur, insert a tube into the atmospheric vent port, and route the other end of the tube to a safe place away from water and dust.

- SMC TU0425 (polyurethane, O.D. ø4, I.D. ø2.5) suits to the pressure switch.

Note) If it is predicted that the pressure, such as the water hammer or surge pressure fluctuates rapidly, refer to the Handling Precautions stated in the Operation Manual at SMC website (http://www.smcworld.com).
ZSE80/ISE80 Series

Dimensions

With bracket (Rear ported)
• ZS-24-A

With bracket (Rear ported)
• ZS-24-D

With bracket (Bottom ported)
Dimensions

Panel mount adapter (Rear ported)

Panel fitting dimensions
**ZSE80/ISE80 Series**

**Dimensions**

**Panel mount adapter (Bottom ported)**

Panel thickness: 1 to 5 mm

Piping port

**Panel fitting dimensions**

4 x R3 or less

36 ± 0.3

36 (3.7)

4 x R3 or less

36 x n pcs. + 4 x (n pcs. – 1)
2-Color Display Digital Pressure Switch
For General Fluids ZSE80/ISE80 Series

Function Details

A Auto-shift function (F4)
When there are large fluctuations in the supply pressure, the switch may fail to operate correctly. The auto-shift function compensates such supply pressure fluctuations. It measures the pressure at the time of auto-shift signal input and uses it as the reference pressure to correct the set-value on the switch.

Set-value correction by auto-shift function

- Rectified value
  When the auto-shift is selected, “ooo” will be displayed for approximately 1 second, and the pressure value at that point will be saved as a rectified value “C_5”. Based on the saved rectified values, the set-value of “P_1”, “H_1”, “P_2”, and “H_2” will likewise be rectified.

Note) When an output is reversed, “n_1”, “H_1”, “n_2”, “H_2” will be rectified.

Settable Range for Auto-Shift Input

<table>
<thead>
<tr>
<th>Compound pressure</th>
<th>Set pressure range</th>
<th>Settable range</th>
</tr>
</thead>
<tbody>
<tr>
<td>−110.0 to 110.0 kPa</td>
<td>−220 to 220 kPa</td>
<td></td>
</tr>
<tr>
<td>Vacuum pressure</td>
<td>10.0 to −111.0 kPa</td>
<td>121.0 to −121.0 kPa</td>
</tr>
<tr>
<td>Positive pressure</td>
<td>−0.105 to 1.100 MPa</td>
<td>−1.205 to 1.205 MPa</td>
</tr>
<tr>
<td></td>
<td>−0.105 to 2.20 MPa</td>
<td>−2.31 to 2.31 MPa</td>
</tr>
</tbody>
</table>

Auto-shift zero
The basic function of auto-shift zero is the same as the function for auto-shift. Also, it corrects values on the display, based on a pressure value of 0, when the auto-shift is selected.

Output specifications: -R/-S
NPN (2 outputs) + Auto-shift input

Output specifications: -T/-V
PNP (2 outputs) + Auto-shift input

B Auto-preset function (F8)
Auto-preset function, when selected in the initial setting, calculates and stores the set-value from the measured pressure. The optimum set-value is determined automatically by repeating vacuum and break with the target workpiece several times.

Suction Verification

Formula for Obtaining the Set-Value

\[ P_1 \ (P_2) = A - \frac{A-B}{4} \]
\[ n_1 \ (n_2) = B + \frac{A-B}{4} \]

C Display calibration function (F7)
Fine adjustment of the indicated value of the pressure sensor can be made within the range of ±5% of the read value. (The scattering of the indicated value can be eliminated.)

Note) When the display calibration function is used, the set pressure value may change ±1 digit.

D Peak/Bottom value indication
This function constantly detects and updates the maximum (minimum) value and allows to hold the maximum (minimum) pressure value. When the buttons are simultaneously pressed for 1 second or longer, while “holding”, the hold value will be reset.

E Keylock function
Prevents operation errors such as accidentally changing setting values.

F Zero-clear function
This function clears and resets the zero value on the display of measured pressure. For the pressure switch with analog output, the analog output shifts according to the indication. The indicated value can be adjusted within ±10% F.S. of the pressure when ex-factory.
Function Details

G Error indication function

<table>
<thead>
<tr>
<th>Error name</th>
<th>Error code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overcurrent error</td>
<td>Er1</td>
<td>Load current of 80 mA or more is applied to the switch output (OUT1).</td>
</tr>
<tr>
<td>Overcurrent error</td>
<td>Er2</td>
<td>Load current of 80 mA or more is applied to the switch output (OUT2).</td>
</tr>
<tr>
<td>Residual pressure error</td>
<td>Er3</td>
<td>It is still applied with pressure that is ±10% over the atmospheric pressure and the upper limit of the rated pressure range when it is cleared to zero. AT after displaying the error code for 1 second, the switch automatically returns to the measuring mode. Due to individual product differences, the setting range varies ±1 digits.</td>
</tr>
<tr>
<td>Applied pressure error</td>
<td>HHH</td>
<td>Supply pressure exceeds the maximum set pressure.</td>
</tr>
<tr>
<td>Applied pressure error</td>
<td>LLL</td>
<td>Supply pressure is below the minimum set pressure.</td>
</tr>
<tr>
<td>Auto-shift error</td>
<td>or</td>
<td>The value measured at the time of auto-shift input is outside the set pressure range. AT after displaying the error code for one second, the switch returns to the measuring mode.</td>
</tr>
<tr>
<td>System error</td>
<td>Er0</td>
<td>Internal data error</td>
</tr>
<tr>
<td>System error</td>
<td>Er4</td>
<td>Internal data error</td>
</tr>
<tr>
<td>System error</td>
<td>Er7</td>
<td>Internal data error</td>
</tr>
</tbody>
</table>

H Anti-chattering function (F3)

A large bore cylinder or ejector consumes a large volume of air in operation and may experience a temporary drop in the supply pressure. This function prevents detection of such temporary drops in the supply pressure as an error.

<Principle>

This function averages pressure values measured during the response time set by the user and then compares the average pressure value with the pressure set point value to output the result on the switch.

Available response time settings

- 20 ms, 100 ms, 500 ms, 1000 ms, 2000 ms

Switch output operation in normal conditions

Switch output operation when anti-chattering function is on.

I Display unit switching function (F0)

Display units can be switched with this function.

<table>
<thead>
<tr>
<th>Pressure range</th>
<th>For compound pressure</th>
<th>For vacuum pressure</th>
<th>For positive pressure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>ZSE80F</td>
<td>ZSE80</td>
<td>ISE80</td>
</tr>
<tr>
<td>PkPa</td>
<td>0.1</td>
<td>0.1</td>
<td>1</td>
</tr>
<tr>
<td>MPa</td>
<td>0.001</td>
<td>0.001</td>
<td>0.001</td>
</tr>
<tr>
<td>kgf/cm²</td>
<td>0.001</td>
<td>0.001</td>
<td>0.01</td>
</tr>
<tr>
<td>bar</td>
<td>0.001</td>
<td>0.001</td>
<td>0.01</td>
</tr>
<tr>
<td>psi</td>
<td>0.02</td>
<td>0.02</td>
<td>0.1</td>
</tr>
<tr>
<td>inHg</td>
<td>0.1</td>
<td>0.1</td>
<td>—</td>
</tr>
<tr>
<td>mmHg</td>
<td>1</td>
<td>1</td>
<td>—</td>
</tr>
</tbody>
</table>

* ISE80H: Does not indicate the last digit when the pressure is 2.000 MPa or higher.

J Power-saving mode (F9)

Power-saving mode can be selected. It shifts to the power-saving mode without button operation for 30 seconds. It is set to the normal mode (Power-saving mode is OFF.) when ex-factory. (Decimal points and operation indicator light (only when the switch output is turned ON.) blink in the power-saving mode.)

K Setting of secret code (F10)

Input an arbitrary 3-digit value.

Users can select whether a secret code must be entered to release key lock. At the time of shipment from the factory, it is set such that the secret code is not required.
ZSE80/ISE80 Series
Made to Order 1
Please contact SMC for detailed dimensions, specifications and lead times.

1 Wetted Parts: Stainless Steel 316L

This pressure switch has better corrosion resistance that uses stainless steel 316L for the wetted parts (pressure sensor and fitting).

How to Order

ZSE80(F)/ISE80—□—□—□—X500
Piping specifications* □ Output specifications* □ Option*

Note 1) Not applicable to the rated pressure –0.1 to 2 MPa specifications (ISE80H).
Note 2) A restrictor (equivalent to -X510) is installed inside the fitting. (Piping specifications A2(L) and B2(L) are excluded.)

Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>ZSE80(F)</th>
<th>ISE80</th>
</tr>
</thead>
<tbody>
<tr>
<td>Withstand pressure</td>
<td>500 kPa</td>
<td>1.5 MPa</td>
</tr>
<tr>
<td>Applicable fluid</td>
<td>Liquids and gases do not corrode stainless steel 316L</td>
<td></td>
</tr>
</tbody>
</table>

Models other than above are the same specifications as standard.

2 Lead Wire Length 3 m

It has a lead wire extended to 3 meters.

How to Order

ZSE80(F)/ISE80(H)—□—□—□—X501
Piping specifications* □ Output specifications* □ Option*

Note 1) Not applicable to piping specifications A2(L) and B2(L).
Note 2) Sometimes does not work for suppression of water hammer effect even if this product is used. Take other measures in such a case.

3 Restrictor Installed Fitting

A restrictor is installed inside the fitting in order to improve endurance of water collision with inertia force in the piping when adsorption is broken.

How to Order

ZSE80(F)/ISE80(H)—□—□—□—X510
Piping specifications* □ Output specifications* □ Option*

Note 1) Not applicable to piping specifications A2(L) and B2(L).
Note 2) Sometimes does not work for suppression of water hammer effect even if this product is used. Take other measures in such a case.

4 M12 4-pin Pre-wired Connector (Lead wire length 100 mm)

How to Order

ZSE80(F)/ISE80(H)—□—□—□—X531
Piping specifications* □ Output specifications* □ Option*

A: NPN open collector 2 outputs
B: PNP open collector 2 outputs

Connector pin numbers

<table>
<thead>
<tr>
<th>Pin no.</th>
<th>Pin name</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>DC(+)</td>
</tr>
<tr>
<td>2</td>
<td>OUT(2)</td>
</tr>
<tr>
<td>3</td>
<td>DC(–)</td>
</tr>
<tr>
<td>4</td>
<td>OUT(1)</td>
</tr>
</tbody>
</table>
5 Rated Pressure -100 to 300 kPa

It has an extended pressure range of ZSE80F (compound pressure) to -100 to 300 kPa.

How to Order

Refer to “How to Order” on page 92 for standard specifications.

Option

Output specifications (Note)
R: NPN open collector 2 outputs + Analog voltage output/Auto-shift switching
T: PNP open collector 2 outputs + Analog voltage output/Auto-shift switching

Note) The output is applicable to R, T only.

Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>ZSE80F-□□□□□□□□-X555</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rated pressure range</td>
<td>-100 to 300 kPa</td>
</tr>
<tr>
<td>Set pressure range</td>
<td>-110 to 330 kPa</td>
</tr>
<tr>
<td>Set display resolution</td>
<td>1 kPa</td>
</tr>
<tr>
<td>Analog output voltage</td>
<td>1 to 5 V ±3% F.S. Linearity: 1.5% F.S.</td>
</tr>
<tr>
<td>Display accuracy</td>
<td>± 3% F.S. ±1 digit (Ambient temperature of 25 ±3°C)</td>
</tr>
</tbody>
</table>

Unit switching function

<table>
<thead>
<tr>
<th>Pressure unit</th>
<th>Set display resolution</th>
<th>Rated pressure range</th>
<th>Set pressure range</th>
<th>Settable Range for Auto-Shift Input</th>
</tr>
</thead>
<tbody>
<tr>
<td>kPa</td>
<td>1</td>
<td>-100 to 300</td>
<td>-110 to 330</td>
<td>-440 to 440</td>
</tr>
<tr>
<td>MPa</td>
<td>0.001</td>
<td>-1.00 to 0.300</td>
<td>-0.110 to 0.330</td>
<td>-0.440 to 0.440</td>
</tr>
<tr>
<td>kgf/cm²</td>
<td>0.01</td>
<td>-1.02 to 3.06</td>
<td>-1.12 to 3.37</td>
<td>-4.49 to 4.49</td>
</tr>
<tr>
<td>bar</td>
<td>0.01</td>
<td>-1.00 to 3.00</td>
<td>-1.10 to 3.30</td>
<td>-4.40 to 4.40</td>
</tr>
<tr>
<td>psi</td>
<td>0.1</td>
<td>-14.5 to 43.5</td>
<td>-16.0 to 47.9</td>
<td>-63.9 to 63.9</td>
</tr>
<tr>
<td>inHg</td>
<td>0.1</td>
<td>-29.5 to 88.5</td>
<td>-32.5 to 97.4</td>
<td>-129.9 to 129.9</td>
</tr>
<tr>
<td>mmHg</td>
<td>1</td>
<td>-750 to 2250</td>
<td>-825 to 1999²</td>
<td>-1999 to 1999²</td>
</tr>
</tbody>
</table>

* The setting or display over the range of ±1999 is not available when mmHg is selected.