



## SSO SERIES COMPENSATED STAINLESS STEEL PRESSURE SENSORS

The SSO pressure sensors are calibrated and temperature compensated. The stainless-steel construction allows for high media compatibility with corrosive liquids and gases. Available packaging options include diaphragm versions with weld ring or housings with G 1/8 and 1/4 NPT threaded pressure ports. All SSO pressure sensors can be modified according to customer specific requirements.

### Features

- 200 mbar to 35 bar / 3 psi to 500 psi absolute, gage or vacuum / gage pressure
- Calibrated and temperature compensated
- Rugged stainless-steel isolated package

### Applications

- Industrial measurement
- Industrial control
- Medical devices
- Medical instrumentation

### Certificates

- Quality Management System according to EN ISO 13485 and EN ISO 9001
- RoHS and REACH compliant

### Media compatibility

Wetted materials: stainless steel 316/316 L

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## SSO SERIES – COMPENSATED STAINLESS STEEL PRESSURE SENSORS

### Maximum ratings

| Parameter                                  | Min. | Max.               | Unit |
|--|------|--------------------|------|
| Supply current                             |      | 2                  | mA   |
| Temperature ranges                         |      |                    |      |
| Compensated                                | 0    | +50                | °C   |
| Operating                                  | -40  | +125               |      |
| Storage                                    | -40  | +125               |      |
| Insulation resistance @100 V <sub>DC</sub> |      | 100                | MΩ   |
| Proof pressure <sup>(1)</sup>              |      | 2 x rated pressure |      |
| Burst pressure <sup>(2)</sup>              |      | 4 x rated pressure |      |

### Performance characteristics

(I<sub>S</sub>=1.5 mA<sub>DC</sub>, T<sub>A</sub>=25 °C)

| Parameter                                  |                  |        | Min. | Typ.  | Max.   | Unit |
|--|------------------|--------|------|-------|--------|------|
| Zero pressure offset                       |                  |        |      | ±1    | ±2     | mV   |
| Non-linearity <sup>(3)</sup>               |                  |        |      | ±0.1  | ±0.2   | %FSO |
| Repeatability                              |                  |        |      | ±0.01 | ±0.075 |      |
| Hysteresis <sup>(4)</sup>                  |                  |        |      | ±0.01 | ±0.075 |      |
| Thermal effects (0 to 50°C) <sup>(5)</sup> | 200 mbar devices | Offset |      | ±0.7  | ±1.0   |      |
|  |                  | Span   |      | ±0.5  | ±0.75  |      |
|  | all others       | Offset |      | ±0.3  | ±0.75  |      |
|  |                  | Span   |      | ±0.5  | ±0.75  |      |
| Long term stability <sup>(6)</sup>         |                  | Offset |      | ±0.1  |        |      |
|  |                  | Span   |      | ±0.1  |        |      |
| Input impedance                            |                  |        |      | 4     |        |      |
| Output impedance                           |                  |        |      | 5     |        |      |

### Specification notes

- (1) Proof pressure is the maximum pressure that can be applied without changing the transducers performance or accuracy
- (2) Burst pressure is the maximum pressure that can be applied to a transducer without rupture of either the sensing element or transducer case.
- (3) Non-linearity is based on Best Straight Line fit from the zero to the full-scale pressure.
- (4) Hysteresis is the maximum output difference at any point within the operating pressure range for increasing and decreasing pressure.
- (5) All specifications shown are relative to 25°C.
- (6) Long term stability over 1 year.

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### Pressure sensor characteristics

( $I_S=1.5\text{ mA}_{DC}$ ,  $T_A=25\text{ °C}$ )

#### Absolute devices

| Description | Operating pressure        | Full scale span <sup>(7)</sup> |        |
|-------------|---------------------------|--------------------------------|--------|
|             |                           | Min.                           | Typ.   |
| SSOM700Axxx | 0 to 700 mbar (10.15 psi) | 60 mV                          | 90 mV  |
| SSOB001Axxx | 0 to 1 bar (14.50 psi)    | 60 mV                          | 90 mV  |
| SSOB002Axxx | 0 to 2 bar (29.01 psi)    | 60 mV                          | 95 mV  |
| SSOB3x5Axxx | 0 to 3.5 bar (50.76 psi)  | 60 mV                          | 90 mV  |
| SSOB007Axxx | 0 to 7 bar (101.5 psi)    | 70 mV                          | 85 mV  |
| SSOB010Axxx | 0 to 10 bar (145.0 psi)   | 70 mV                          | 120 mV |
| SSOB020Axxx | 0 to 20 bar (290.1 psi)   | 70 mV                          | 130 mV |
| SSOB035Axxx | 0 to 35 bar (507.6 psi)   | 70 mV                          | 105 mV |

#### Gage devices

| Description | Operating pressure        | Full scale span <sup>(7)</sup> |        |
|-------------|---------------------------|--------------------------------|--------|
|             |                           | Min.                           | Typ.   |
| SSOM200Gxxx | 0 to 200 mbar (2.901 psi) | 45 mV                          | 65 mV  |
| SSOM350Gxxx | 0 to 350 mbar (5.076 psi) | 60 mV                          | 110 mV |
| SSOM700Gxxx | 0 to 700 mbar (10.15 psi) | 70 mV                          | 105 mV |
| SSOB001Gxxx | 0 to 1 bar (14.50 psi)    | 70 mV                          | 90 mV  |
| SSOB002Gxxx | 0 to 2 bar (29.01 psi)    | 70 mV                          | 110 mV |
| SSOB3x5Gxxx | 0 to 3.5 bar (50.76 psi)  | 70 mV                          | 90 mV  |
| SSOB007Gxxx | 0 to 7 bar (101.5 psi)    | 70 mV                          | 90 mV  |
| SSOB010Gxxx | 0 to 10 bar (145.0 psi)   | 70 mV                          | 130 mV |
| SSOB020Gxxx | 0 to 20 bar (290.1 psi)   | 70 mV                          | 120 mV |
| SSOB035Gxxx | 0 to 35 bar (507.6 psi)   | 70 mV                          | 115 mV |

#### Vacuum/gage devices

| Description | Operating pressure           | Full scale span |        |
|-------------|------------------------------|-----------------|--------|
|             |                              | Min.            | Typ.   |
| SSOM700Vxxx | -700 to 700 mbar (10.15 psi) | 60 mV           | 105 mV |
| SSOB001Vxxx | -1 to 1 bar (14.50 psi)      | 60 mV           | 90 mV  |
| SSOB002Vxxx | -1 to 2 bar (29.01 psi)      | 60 mV           | 110 mV |
| SSOB3x5Vxxx | -1 to 3.5 bar (50.76 psi)    | 60 mV           | 90 mV  |
| SSOB007Vxxx | -1 to 7 bar (101.5 psi)      | 60 mV           | 90 mV  |
| SSOB010Vxxx | -1 to 10 bar (145.0 psi)     | 60 mV           | 130 mV |
| SSOB020Vxxx | -1 to 20 bar (290.1 psi)     | 60 mV           | 120 mV |
| SSOB035Vxxx | -1 to 35 bar (507.6 psi)     | 60 mV           | 115 mV |

**Note:** Not all possible sensor configurations are active products. MOQ may apply. Contact TE Connectivity.

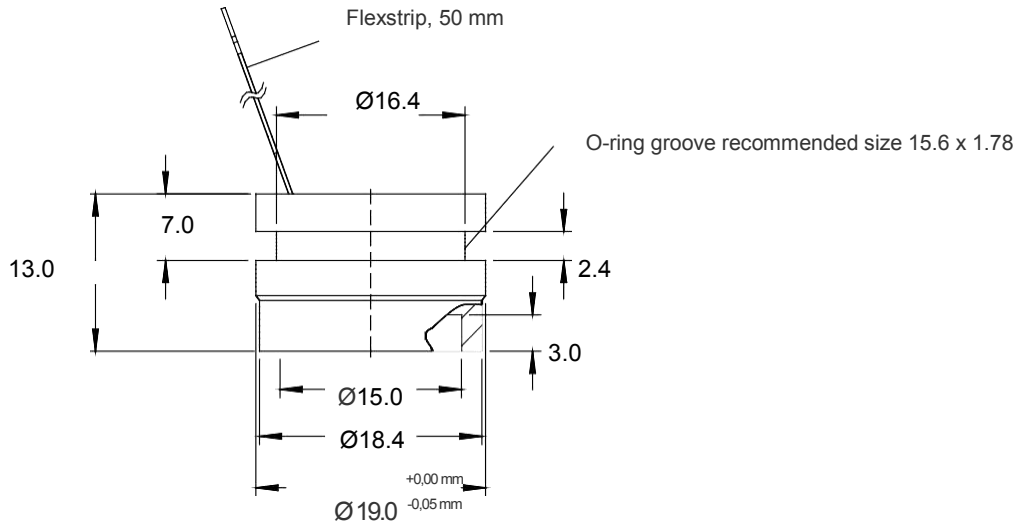
### Specification notes

(7) Only min. values are controlled and guaranteed, max. values are for reference only. Span is the algebraic difference between the output voltage at full scale pressure and the output at zero pressure. Full scale span is ratiometric to the supply current.

# SSO SERIES – COMPENSATED STAINLESS STEEL PRESSURE SENSORS

## Physical dimensions

### SSOxxx1 (weld ring)



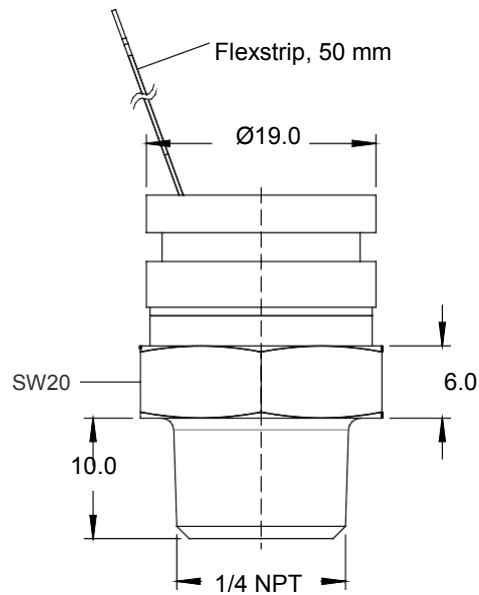
Do not touch diaphragm!

Mass: approx. 17 g

A clearance fit 19H8 with 20° phase is recommended for mounting.

dimensions in mm

### SSOxxx5 (1/4" NPT)



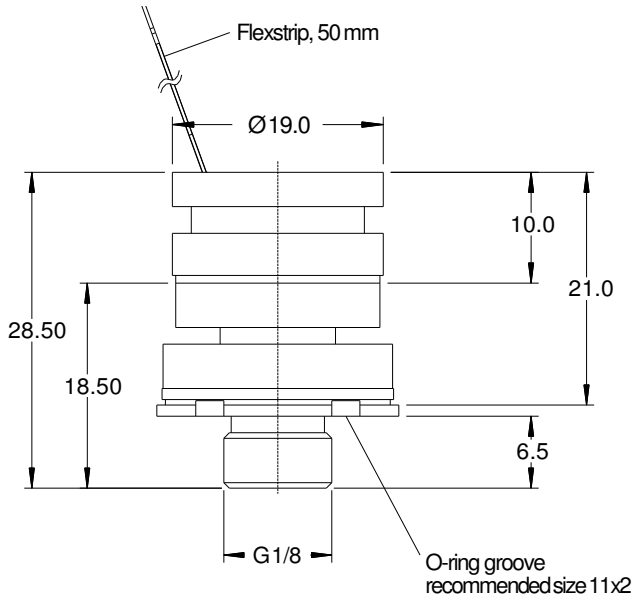
Mass: approx. 50 g

dimensions in mm

# SSO SERIES – COMPENSATED STAINLESS STEEL PRESSURE SENSORS

## Physical dimensions

### SSOxxx8 (G 1/8")



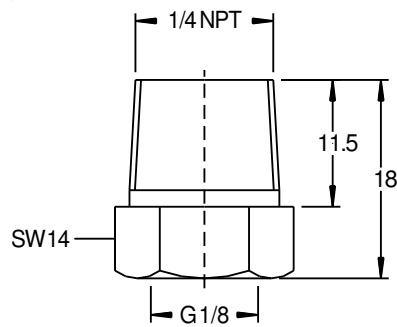
Mass: approx. 35 g

dimensions in mm

A G 1/8 version with spanner flat is available on request. Please contact TE Connectivity.

## Optional pressure fitting

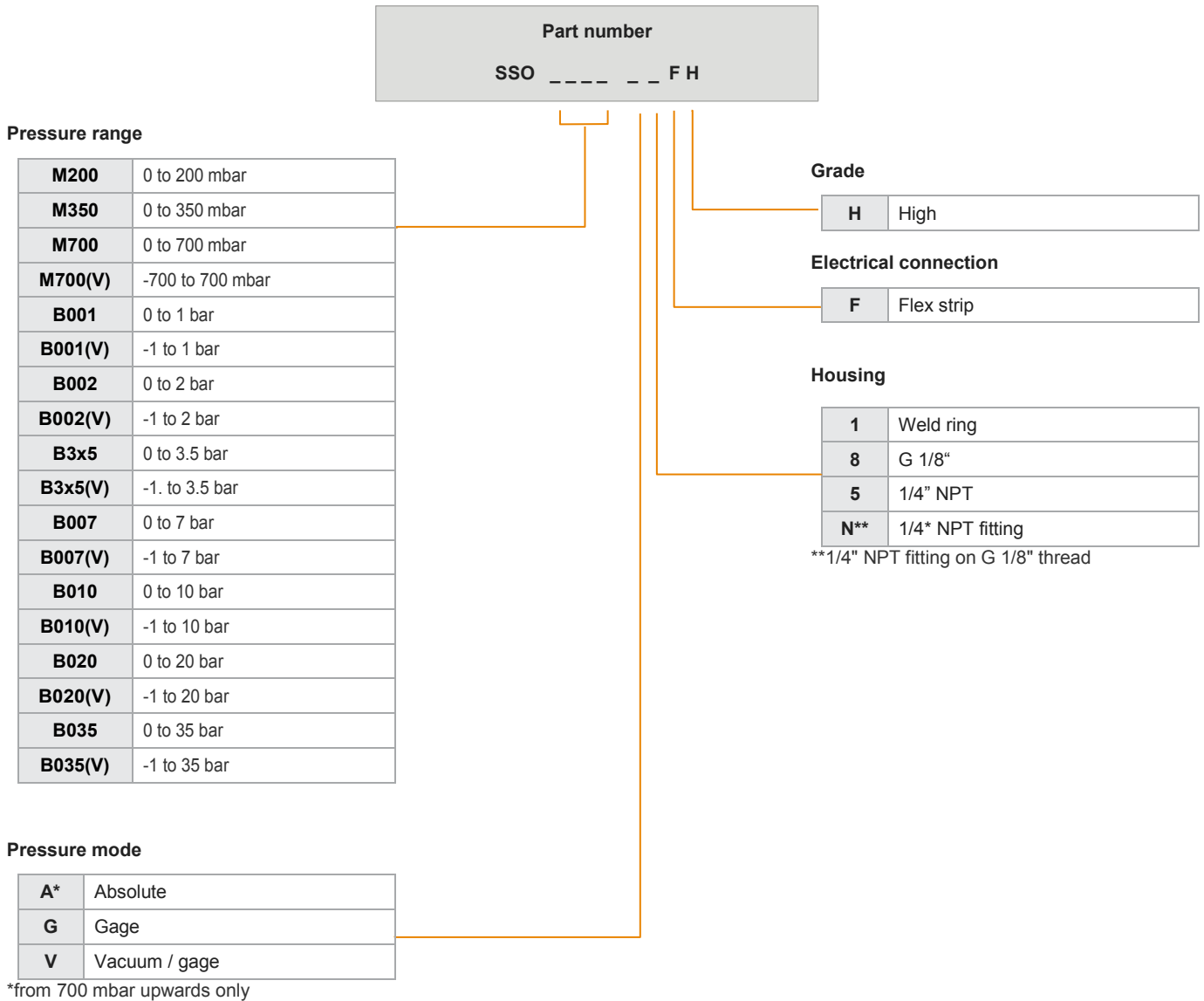
### SSOxxxN (1/4" NPT fitting for G 1/8" thread)



Other fittings are available on request. Please contact TE Connectivity.

# SSO SERIES – COMPENSATED STAINLESS STEEL PRESSURE SENSORS

## Part numbering key



Example: SSOB001G8FH

**Note:**

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