Pressure transmitter for low pressure applications  
Model SL-1

Applications

- Filter technology
- Blow-moulding machines for glass and plastics industries
- Heating, ventilation and air-conditioning

Special features

- Measuring ranges from 0 ... 25 mbar to 0 ... 60 mbar
- Various industrial standard signals
- Plug connection or cable outlet
- Ingress protection up to IP 67

Description

The model SL-1 pressure transmitter has been designed for measurement of the lowest pressures in dry, gaseous and non-aggressive media.

It is characterised by its high accuracy and its very robust and compact design.

Through its versatile ability to combine different industrial standard signals and electrical connections it offers a wide range of instrument variants.

Design

The robust case is made from stainless steel and, dependent on the electrical connection, offers ingress protection of up to IP 67.

The model SL-1 can be powered with an unregulated direct voltage of DC 10 (14) ... 30 V and delivers any of the commonly used output signals.
### Specifications Model SL-1

<table>
<thead>
<tr>
<th>Specifications</th>
<th>mbar</th>
<th>mbar</th>
<th>mbar</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measuring range</td>
<td>25</td>
<td>40</td>
<td>60</td>
</tr>
<tr>
<td>Overpressure safety</td>
<td>500</td>
<td>500</td>
<td>500</td>
</tr>
<tr>
<td>Burst pressure</td>
<td>1000</td>
<td>1000</td>
<td>1000</td>
</tr>
<tr>
<td>Type of pressure</td>
<td>Relative pressure</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Material**
- **Wetted parts**: Stainless steel, silicon, aluminium, gold, silicone
- **Case**: Stainless steel

**Power supply $U_+$**
- DC 10 ... 30 V (14 ... 30 V with output 0 ... 10 V)

**Output signal and permissible max. load $R_A$**
- $R_A$ in $\Omega$: 4 ... 20 mA, 2-wire, $R_A \leq (U_+ - 10 V) / 0.02 A$
- 0 ... 20 mA, 3-wire, $R_A \leq (U_+ - 3 V) / 0.02 A$
- 0 ... 5 V, 3-wire, $R_A > 5 k$
- 0 ... 10 V, 3-wire, $R_A > 10 k$

**Adjustability of zero point/span**
- $\pm 5\%$ through potentiometer within the instrument

**Settling time (10 ... 90 %)**
- ms $\leq 1$

**Insulation voltage**
- DC 500 V $^1$

**Accuracy $^2$**
- $\%$ of span $\leq 0.5$

**Non-linearity**
- $\%$ of span $\leq 0.2$ (BFSL) per IEC 61298-2

**Non-repeatability**
- $\%$ of span $\leq 0.1$

**Long-term stability**
- $\%$ of span $\leq 0.3 /$ year (at reference conditions)

### Permissible temperature ranges
- **Medium**: °C -30 ... +80
- **Ambient**: °C -20 ... +80
- **Storage**: °C -40 ... +80

**Rated temperature range**: °C 0 ... +80

**Temperature coefficients in rated temperature range**
- Mean TC of zero $\%$ of span 25 mbar: 0.5 / 10 K 40 mbar: 0.4 / 10 K 60 mbar: 0.3 / 10 K
- Mean TC of span $\%$ of span $\leq 0.3 /$ 10 K

**CE conformity**
- **EMC directive**
  - 2004/108/EC, EN 61326 emission (group 1, class B) and interference immunity (industrial application)

**Short-circuit resistance**
- $S_+$ vs. $U_-$

**Reverse polarity protection**
- $U_+$ vs. U

**Weight**
- kg approx. 0.3

---

$^1$ Items in curved brackets are optional extras for an additional price.

$^2$ Including non-linearity, hysteresis, zero point and full scale value deviations (corresponds to measured error per IEC 61298-2).

Calibrated in vertical mounting position with process connection facing downwards.

---

Page 2 of 4 WIKI data sheet PE 81.36 ∙ 05/2011
Dimensions in mm

Electrical connections

Angular connector
DIN 175301-803 A

Circular connector
M12 x 1

Cable outlet

Process connections

G 1/2 B
EN 837

1/2 NPT
ANSI/ASME B1.20.1

For information on tapped holes and welding sockets, see Technical Information IN 00.14 at www.wika.com.
### Electrical connections

<table>
<thead>
<tr>
<th></th>
<th>Angular connector DIN 175301-803 A</th>
<th>Circular connector M12 x 1, 4-pin</th>
<th>Cable outlet with 1.5 m length</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-wire</td>
<td>U+ = 1 U- = 2</td>
<td>U+ = 1 U- = 3 U+ = brown U- = green</td>
<td></td>
</tr>
<tr>
<td>3-wire</td>
<td>U+ = 1 U- = 2 S+ = 3</td>
<td>U+ = 1 U- = 3 S+ = 4 U+ = brown U- = green S+ = white</td>
<td></td>
</tr>
<tr>
<td>Cable shield</td>
<td>-</td>
<td>-</td>
<td>grey</td>
</tr>
<tr>
<td>Wire cross-section</td>
<td>up to max. 1.5 mm²</td>
<td>-</td>
<td>0.5 mm² (AWG 20)</td>
</tr>
<tr>
<td>Cable diameter</td>
<td>6...8 mm</td>
<td>-</td>
<td>6.8 mm</td>
</tr>
<tr>
<td>Ingress protection per IEC 60529</td>
<td>IP 65</td>
<td>IP 67</td>
<td>IP 67</td>
</tr>
<tr>
<td></td>
<td>The stated ingress protection only applies when plugged in using mating connectors that have the appropriate ingress protection.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>