OEM pressure transmitter
For general industrial applications
Model OT-1

Applications
- Machine building
- Hydraulics
- Pneumatics

Special features
- Fully automated production for OEM volumes
- Compact design
- MTTFd values > 100 years

Description

For universal application
The OT-1 is the ideal product for customers who want to use a cost optimised pressure transmitter.

As many electrical output signals and pressure connections are available, the pressure transmitter can be easily integrated into a wide variety of applications.

The case consists of a highly resistive, fiberglass-enforced plastic material (PBT). This material has been successfully used in the automotive industry for many years. Inside the case a metal pod is responsible for a good EMI-protection.

Excellent performance
The hermetically welded thin film measuring cell guarantees long-term leak tightness. There are no additional sealings required.

The thin film measuring cell is made of high quality stainless steel using sputtering technology to offer high long-term stability and excellent burst pressure values.

Interesting price/performance ratio
The pressure transmitter OT-1 has been specially developed for OEM applications in the machine building industry, particularly hydraulics and pneumatics. The transmitter is manufactured on a fully automated production line.

For high-volume OEM requirements this product concept is particularly interesting due to its excellent price/performance ratio.

Individual versions to customer specifications
Due to its manufacturing know-how gained in many years of experience WIKA can offer customised solutions.
## Specifications

### Pressure ranges in bar
- 0 ... 6
- 0 ... 10
- 0 ... 16
- 0 ... 25
- 0 ... 40
- 0 ... 100
- 0 ... 160
- 0 ... 250
- 0 ... 400
- 0 ... 600

### Over pressure safety in bar
- 20
- 20
- 32
- 50
- 80
- 120
- 200
- 320
- 500
- 800
- 1200

### Burst pressure in bar
- 100
- 100
- 160
- 250
- 400
- 550
- 800
- 1000
- 1200
- 1700
- 2400

### Materials
- **Wetted parts**: Stainless steel
- **Case**: Highly resistive, fiberglass-enforced plastic (PBT)

### Signal output

<table>
<thead>
<tr>
<th>Power supply U+</th>
<th>Maximum load RA</th>
</tr>
</thead>
<tbody>
<tr>
<td>DC 8 ... 36 V</td>
<td>R_A ≤ (U+ – 8 V)/0.02 A</td>
</tr>
<tr>
<td>DC 9 ... 36 V</td>
<td>R_A &gt; 2.5 kOhm</td>
</tr>
<tr>
<td>DC 8 ... 36 V</td>
<td>R_A &gt; 2.5 kOhm</td>
</tr>
<tr>
<td>DC 14 ... 36 V</td>
<td>R_A &gt; 5 kOhm</td>
</tr>
<tr>
<td>DC 5±0.5 V</td>
<td>R_A &gt; 4.5 kOhm</td>
</tr>
</tbody>
</table>

### Response time (10 ... 90 %)
- ≤ 2 ms

### Insulation voltage
- DC 500 V

### Accuracy
- ≤ 1.0 % of span
- ≤ 2.0 % of span for pressure ranges ≤ 16 bar

### Non-linearity
- ≤ 0.4 % of span (BFSL) according to IEC 61298-2

### 1-year stability
- ≤ 0.3 % of span (at reference conditions)

### Permissible temperature
- **Medium**: -40 ... +125 °C [-40 ... +257 °F]
- **Ambience**: -40 ... +100 °C [-40 ... +212 °F]
- **Storage**: -40 ... +120 °C [-40 ... +248 °F]

### Rated temperature range
- **0 ... +80 °C [+32 ... 176 °F]

### Wiring protection
- **Short-circuit proofness**: S+ towards U-
- **Reverse polarity protection**: U+ towards U- (not with ratiometric output signal)

### Weight
- Ca. 70 g

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1) Including non-linearity, hysteresis, non-repeatability, zero point and full scale error (corresponds to error of measurement per IEC 61298-2).
Approvals

<table>
<thead>
<tr>
<th>Logo</th>
<th>Description</th>
<th>Country</th>
</tr>
</thead>
</table>
| CE     | EU declaration of conformity  
■ EMC directive, EN 61326 emission (group 1, class B) and immunity (industrial application)  
■ Pressure equipment directive  
■ RoHS directive | European Union |
| GOST   | Metrology, measurement technology                                           | Russia      |
| KazInMetr | Metrology, measurement technology                                          | Kazakhstan  |
| -      | MTSCHS Permission for commissioning                                         | Kazakhstan  |
| UkrSEPRO | Metrology, measurement technology                                          | Ukraine     |
| Uzstandard | Metrology, measurement technology                                          | Uzbekistan  |

Dimensions in mm [in]

Electrical connections

<table>
<thead>
<tr>
<th>Circular connector, M 12 x 1</th>
<th>Connector, Metri Pack Serie 150</th>
<th>Flying leads</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="" alt="Circular connector diagram" /></td>
<td><img src="" alt="Connector diagram" /></td>
<td><img src="" alt="Flying leads diagram" /></td>
</tr>
</tbody>
</table>

Others on request.
### Electrical connections

<table>
<thead>
<tr>
<th>Electrical connections</th>
<th>M 12x1 circular connector, 4-pin</th>
<th>Connector Metri Pack Series 150, 3-pin</th>
<th>Flying leads (TPE with 0.5 m or 2 m length)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-wire</td>
<td>U+ = 1  U- = 3</td>
<td>U+ = B  U- = A</td>
<td>U+ = brown U- = green</td>
</tr>
<tr>
<td>3-wire</td>
<td>U+ = 1  U- = 3 S+ = 4</td>
<td>U+ = B  U- = A S+ = C</td>
<td>U+ = brown U- = green S+ = white</td>
</tr>
<tr>
<td>Wire gauge</td>
<td>-</td>
<td>-</td>
<td>0.34 mm² (with end splices)</td>
</tr>
<tr>
<td>Diameter of cable</td>
<td>-</td>
<td>-</td>
<td>5.2 mm</td>
</tr>
<tr>
<td>Ingress protection per IEC 60529</td>
<td>IP67 ¹)</td>
<td>IP67 ¹)</td>
<td>IP67</td>
</tr>
</tbody>
</table>

¹) The ingress protection classes specified only apply while the pressure transmitter is connected with female connectors that provide the corresponding ingress protection.

### Legend

2-wire The two connection lines are used for the power supply. The measurement signal also provides the supply current.

3-wire Two of the connection lines are used for the power supply. One connection line is used for the measurement signal.

U+ Positive power terminal

U- Negative power terminal

S+ Positive measurement terminal

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