Compact Pressure Transmitter
Model C-10

Applications
- Mechanical engineering
- Hydraulics / Pneumatics
- General industrial applications

Special Features
- Pressure ranges from 0 ... 0.25 bar to 0 ... 100 bar
- Wiring with L-connector or flying lead
- Ingress protection IP 65 or IP 67
- Medium temperature
  -30 ... + 100 °C / -22 ... + 212 °F
- Vacuum tight

Description
The compact transmitter line of WIKA is especially designed for hydraulic applications which are subject to severe shocks, vibrations and electromagnetic interference (EMI). The price/performance ratio is getting particularly interesting where quantities of medium or large size are required.

Flexible sensing principles give the optimum sensing solution for every measuring application.

Measuring tasks in low pressure ranges are carried out by a fully welded, piezoresistive measuring cell (inhouse made), while a thin film (strain gauge) sensor system which is also supplied by our own production is used for dynamic and static measurements in high pressure ranges.

A wide range of standardized and customer-specific output signals enables a simple connection into process measuring chains.

Available are, among other things: current output 4 ... 20 mA (2-wire) and voltage outputs 0 ... 10 V and 0 ... 5 V.
The accuracy comprising non-linearity, hysteresis, non-repeatability, zero point and full scale error amounts to 1 %.
Combined with an excellent long-term stability, a reliable measured value registration is ensured even over prolonged periods of time.

All wetted parts and the casing are exclusively made of stainless steel. Special welding procedures guarantee an excellent long-term sealing completely eliminating the need for additional sealing materials.

A wide range of standardized and customer-specific pressure connections ensure a simple integration into the applications.
## Specifications

<table>
<thead>
<tr>
<th>Model C-10</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pressure ranges</strong></td>
</tr>
<tr>
<td><strong>Over pressure safety</strong></td>
</tr>
<tr>
<td><strong>Burst pressure</strong></td>
</tr>
<tr>
<td><strong>Pressure ranges</strong></td>
</tr>
<tr>
<td><strong>Over pressure safety</strong></td>
</tr>
<tr>
<td><strong>Burst pressure</strong></td>
</tr>
</tbody>
</table>

### Materials

- **Wetted parts**: Stainless steel
- **Case**: Stainless steel
- **Internal transmission fluid**: Synthetic oil

1. Not with pressure ranges > 25 bar

### Power supply UB

- **UB in VDC**: 10 < UB ≤ 30 (14 ... 30 with signal output 0 ... 10 V)

### Response time (10 ... 90 %)

- **ms**: ≤ 1 (≤10ms at medium temperatures below <-30°C for pressure ranges up to 25 bar)

### Dielectric strength

- **VDC**: 500

2. NEC Class 02 power supply (low voltage and low current max. 100 VA even under fault conditions)

### Accuracy

- **% of span**: ≤ 0.5 (BFSL)
- **% of span**: ≤ 1.0
- **% of span**: ≤ 0.4

### Non-linearity

- **% of span**: ≤ 0.4 (BFSL) according to IEC 61298-2

### 1-year stability

- **% of span**: ≤ 0.2 (at reference conditions)

### Permissible temperature of

- **Medium**: -30 ... +100 °C
- **Ambience**: -30 ... +85 °C
- **Storage**: -40 ... +100 °C

4. Also complies with EN 50178, Tab. 7, Operation (C) 4K4H, Storage (D) 1K4, Transport (E) 2K3

### Compensated temp. range

- **0 ... +80 °C**
- **32 ... +176 °F**

### Temperature coefficients within compensated temp range

- **Mean TC of zero**: % of span ≤ 0.3 / 10 K
- **Mean TC of range**: % of span ≤ 0.2 / 10 K

### CE-conformity

- **Pressure equipment directive**: 97/23/EC
- **EMC directive**: 89/336/EEC emission (class B) and immunity according to EN 61 326

### Shock resistance

- **g**: 1000 according to IEC 60068-2-27 (mechanical shock)

### Vibration resistance

- **g**: 20 according to IEC 60068-2-6 (vibration under resonance)

### Wiring protection

- **Overvoltage protection**: VDC 36
- **Short-circuit proofness**: Sig+ towards UB-
- **Reverse polarity protection**: UB+ towards UB-

### Weight

- **kg**: Approx. 0.1

---

### Signal output and admissible load

**Output current (2-wire)**

- **4 ... 20 mA**: RA ≤ (UB – 10 V) / 0.02 A in Ohm and UB in Volt

**Output voltage (3-wire)**

- **0 ... 5 V**: RA > 5 kOhm
- **0 ... 10 V**: RA > 10 kOhm

---

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

---

**Items in curved brackets are optional extras for additional price.**
Dimensions in mm

Ingress Protection IP per IEC 60529. The ingress protection classes specified only apply while the pressure transmitter is connected with female connectors that provide the corresponding ingress protection.

**Electrical connections**

*“Mini-Hirschmann” L-connector,* for conductor cross section up to max. 0.5 mm², conductor outer diameter 4 to 7.5 mm, IP 65
Order code: II

* M 12x1, 4-pin. circular connector, IP 65
Order code: M4

*) Flying leads with 1.5 m of cable, conductor cross section up to max. 0.5 mm², AWG 20 with end splices, conductor outer diameter 6.8 mm, IP 67
Order code: DL

**Case**

**Pressure connections**

G 1/4
EN 837
Order code: GB

G 1/4
DIN 3852-E
(over pressure safety max. 600 bar)
Order code: HD

1/4 NPT
per „Nominal size for US standard tapered pipe thread NPT“
Order code: NB

For installation and safety instructions see the operating instructions for this product.
For tapped holes and welding sockets please see Technical Information IN 00.14 for download at www.wika.de -Service

*) Connectors are not included in delivery.
## Wiring details

<table>
<thead>
<tr>
<th></th>
<th>2-wire</th>
<th>3-wire</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Mini-Hirschmann</em> L-Connector</td>
<td><img src="image1" alt="Diagram" /></td>
<td><img src="image2" alt="Diagram" /></td>
</tr>
<tr>
<td>M 12x1, 4-pin, Circular connector</td>
<td><img src="image3" alt="Diagram" /></td>
<td><img src="image4" alt="Diagram" /></td>
</tr>
<tr>
<td>Flying leads</td>
<td><img src="image5" alt="Diagram" /></td>
<td><img src="image6" alt="Diagram" /></td>
</tr>
</tbody>
</table>

### Legend:
- **power supply**
- **load (e.g. display)**

### Further information

You can obtain further information (data sheets, instructions, etc.) via our internet address www.wika.de