Outstanding overpressure protection (up to 4 x)

Ideal choice for mobile hydraulic applications

Long service life even under high pressure change rates

Wetted parts made of stainless steel and titanium ensuring excellent media compatibility

All welded design, no elastomeric seal

Silicon-on-sapphire technology (SoS) for highest reliability, accuracy and reliable process monitoring

Very low temperature error and very good long-term stability

Customer specific solutions available on request
Pressure transmitters
High-Performance series
Technical details

<table>
<thead>
<tr>
<th></th>
<th>0705</th>
<th>0710</th>
<th>0720</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output signal:</td>
<td>0.5 - 4.5 V ratiometric</td>
<td>0 - 10 V (3-wire)</td>
<td>4 - 20 mA (2-wire)</td>
</tr>
<tr>
<td>Supply voltage $U_{V+:}$</td>
<td>5 VDC ±10 % max. 6.5 VDC</td>
<td>12 - 32 VDC</td>
<td>10 - 32 VDC</td>
</tr>
<tr>
<td>Permissible load / apparent ohmic resistance:</td>
<td>≥ 4.7 kΩ</td>
<td>≥ 4.7 kΩ</td>
<td>≤ $\frac{(U_{V+:} - 10 V)}{20 mA}$</td>
</tr>
<tr>
<td>Idle power consumption:</td>
<td>approx. 5 mA</td>
<td></td>
<td>&lt; 4 mA</td>
</tr>
</tbody>
</table>

**Pressure range in bar**

<table>
<thead>
<tr>
<th></th>
<th>0705 / 0710 / 0720</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard pressure ranges $p_{nom}$:</td>
<td>0 - 10</td>
</tr>
<tr>
<td>Overpressure protection $p_U$ (1):</td>
<td>40</td>
</tr>
<tr>
<td>Burst pressure (1):</td>
<td>80</td>
</tr>
</tbody>
</table>

**Pressure range in PSI**

<table>
<thead>
<tr>
<th></th>
<th>0705 / 0710 / 0720</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard pressure ranges $p_{nom}$:</td>
<td>0 - 150</td>
</tr>
<tr>
<td>Overpressure protection $p_U$ (1):</td>
<td>300</td>
</tr>
<tr>
<td>Burst pressure (1):</td>
<td>450</td>
</tr>
</tbody>
</table>

**Technical parameters**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Mechanical life expectancy:</td>
<td>10,000,000 pulsations at rise rates to 5,000 bar/s at $p_{nom}$</td>
</tr>
<tr>
<td>Permitted pressure change rate:</td>
<td>≤ 5,000 bar/s</td>
</tr>
<tr>
<td>Accuracy:</td>
<td>±0.5 % full scale (FS) at room temperature, ±0.25 % BFSL</td>
</tr>
<tr>
<td>Long term stability:</td>
<td>±0.1 % FS p.a.</td>
</tr>
<tr>
<td>Repeatability (2):</td>
<td>±0.1 % FS</td>
</tr>
<tr>
<td>Temperature error (2):</td>
<td>±0.01 % FS / °C</td>
</tr>
<tr>
<td>Compensated temperature range:</td>
<td>-40 °C … +80 °C (-40 °F … 176 °F)</td>
</tr>
<tr>
<td>Temperature range ambient:</td>
<td>-40 °C … +100 °C (-40 °F … 212 °F)</td>
</tr>
<tr>
<td>Temperature range media:</td>
<td>-40 °C … +125 °C (-40 °F … 257 °F)</td>
</tr>
<tr>
<td>Wetted parts material:</td>
<td>stainless steel 1.4305 / SAE Grade 303, titanium</td>
</tr>
<tr>
<td>Insulation resistance:</td>
<td>&gt; 100 MΩ (35 VDC)</td>
</tr>
<tr>
<td>Response time 10 – 90 %:</td>
<td>≤ 2 ms</td>
</tr>
<tr>
<td>Vibration resistance:</td>
<td>20 g at 4 – 2000 Hz sine wave; DIN EN 60068-2-6</td>
</tr>
<tr>
<td>Shock resistance:</td>
<td>half sine wave 500 m/s²; 1 ms; DIN EN 60068-2-27</td>
</tr>
<tr>
<td>Protection class:</td>
<td>IP67 for M12x1, DIN 72585 (bayonet) and cable connector IP65 for DIN EN 175301-803</td>
</tr>
<tr>
<td>Electromagnetic compatibility:</td>
<td>EMC 2014/30/EU, EN 61000-6-2, EN 61000-6-3</td>
</tr>
<tr>
<td>Max. length of connection cable:</td>
<td>30 m</td>
</tr>
<tr>
<td>Protection against reverse polarity, short-circuit and overvoltage:</td>
<td>Built-in</td>
</tr>
<tr>
<td>Weight:</td>
<td>approx. 80 g (DIN 175301 approx. 110 g, cable outlet approx. 135 g)</td>
</tr>
</tbody>
</table>

---

1) Static value, dynamic value is 30 to 50% lower. Values refer to the hydraulic/pneumatic part of the pressure transmitter / transducer.
2) Within the compensated temperature range.
0705 / 0710 / 0720

Electrical connectors and threads

Pin 0705 / 0710 / 0720

**T.4**

hex 22

High Performance

DIN EN 175301- 803 - A

M12 DIN EN 61076 - 2- 101 A

ISO 15170 - A1 - 4.1

AMP Superseal 1.5 *

**Deutsch DT04 - 4P**

**Deutsch DT04 - 3P**

**Cable connection**

* x ~ 60 / 76 mm* without coupler socket, x ~ 76 mm with coupler socket

Connection code: 001

Connection code: 002

Connection code: 004

Connection code: 007

Connection code: 008

Connection code: 010

Connection code: 011

Thread code: 41

Thread code: 03

Thread code: 04

Thread code: 09

Thread code: 30

Thread code: 20

Thread code: 21

Thread code: 42

Viton®-Sealing ring

M10x1,5

DIN 3852-A

ISO 15170 - A1 - 4.1
# Article matrix for pressure transmitters

## Type | Pressure range bar / PSI | Pressure connection | Pressure unit | Electrical connection
---|---|---|---|---
0.5 - 4.5 V ratiometric | 0705 | 0705 | 0705 | 0705
0 - 10 V, 3-wire | 0710 | 0710 | 0710 | 0710
4 - 20 mA, 2-wire | 0720 | 0720 | 0720 | 0720

### Pressure range in bar ¹)

<table>
<thead>
<tr>
<th>Pressure range in bar ¹)</th>
<th>Pressure range in PSI ¹)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 – 10 bar</td>
<td>0 – 150 PSI</td>
</tr>
<tr>
<td>0 – 16 bar</td>
<td>0 – 200 PSI</td>
</tr>
<tr>
<td>0 – 25 bar</td>
<td>0 – 300 PSI</td>
</tr>
<tr>
<td>0 – 40 bar</td>
<td>0 – 600 PSI</td>
</tr>
<tr>
<td>0 – 60 bar</td>
<td>0 – 1,000 PSI</td>
</tr>
<tr>
<td>0 – 100 bar</td>
<td>0 – 1,500 PSI</td>
</tr>
<tr>
<td>0 – 160 bar</td>
<td>0 – 2,500 PSI</td>
</tr>
<tr>
<td>0 – 250 bar</td>
<td>0 – 3,000 PSI</td>
</tr>
<tr>
<td>0 – 400 bar</td>
<td>0 – 6,000 PSI</td>
</tr>
<tr>
<td>0 – 600 bar</td>
<td>0 – 8,700 PSI</td>
</tr>
</tbody>
</table>

### Pressure connection

<table>
<thead>
<tr>
<th>Pressure connection</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>G1/4 – DIN EN ISO 1179-2 (DIN 3852-11), form E</td>
<td>41</td>
</tr>
<tr>
<td>G1/4 – DIN 3852-A</td>
<td>03</td>
</tr>
<tr>
<td>NPT 1/8 (max. to 250 bar)</td>
<td>04</td>
</tr>
<tr>
<td>NPT 1/4</td>
<td>09</td>
</tr>
<tr>
<td>M 10 x 1 cyl. DIN 3852-A (max. to 250 bar)</td>
<td>30</td>
</tr>
<tr>
<td>7 / 16 – 20 UNF (max. to 250 bar)</td>
<td>20</td>
</tr>
<tr>
<td>9 / 16 – 18 UNF</td>
<td>21</td>
</tr>
<tr>
<td>M 14 x 1,5 – DIN EN ISO 9974-2 (DIN 3852-11), form E</td>
<td>42</td>
</tr>
</tbody>
</table>

### Pressure unit ²)

<table>
<thead>
<tr>
<th>Pressure unit ²)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>bar</td>
<td>B</td>
</tr>
<tr>
<td>PSI</td>
<td>P</td>
</tr>
</tbody>
</table>

### Electrical connection

<table>
<thead>
<tr>
<th>Electrical connection</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>DIN EN 175301-803-A (DIN 43 650-A) ; socket device included</td>
<td>001</td>
</tr>
<tr>
<td>M 12 – DIN EN 61076-2-101 A</td>
<td>002</td>
</tr>
<tr>
<td>Bayonet ISO 15170-A1-4-1 (DIN 72585-A1-4-1)</td>
<td>004</td>
</tr>
<tr>
<td>AMP Superseal 1.5&quot;</td>
<td>007</td>
</tr>
<tr>
<td>Deutsch DT04-4P</td>
<td>008</td>
</tr>
<tr>
<td>Deutsch DT04-3P</td>
<td>010</td>
</tr>
<tr>
<td>Cable connection (length of cable 2 m standard)</td>
<td>011</td>
</tr>
</tbody>
</table>

### Article number

| Article number | 07XX | XXX | / | XXX | XX | X | XXX |

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¹) The respective overpressure and burst pressure values of the individual pressure ranges (in bar and PSI) can be found in the Technical data on page 157.

²) The pressure unit (bar or PSI) must correspond to the selected pressure range (in bar or PSI).