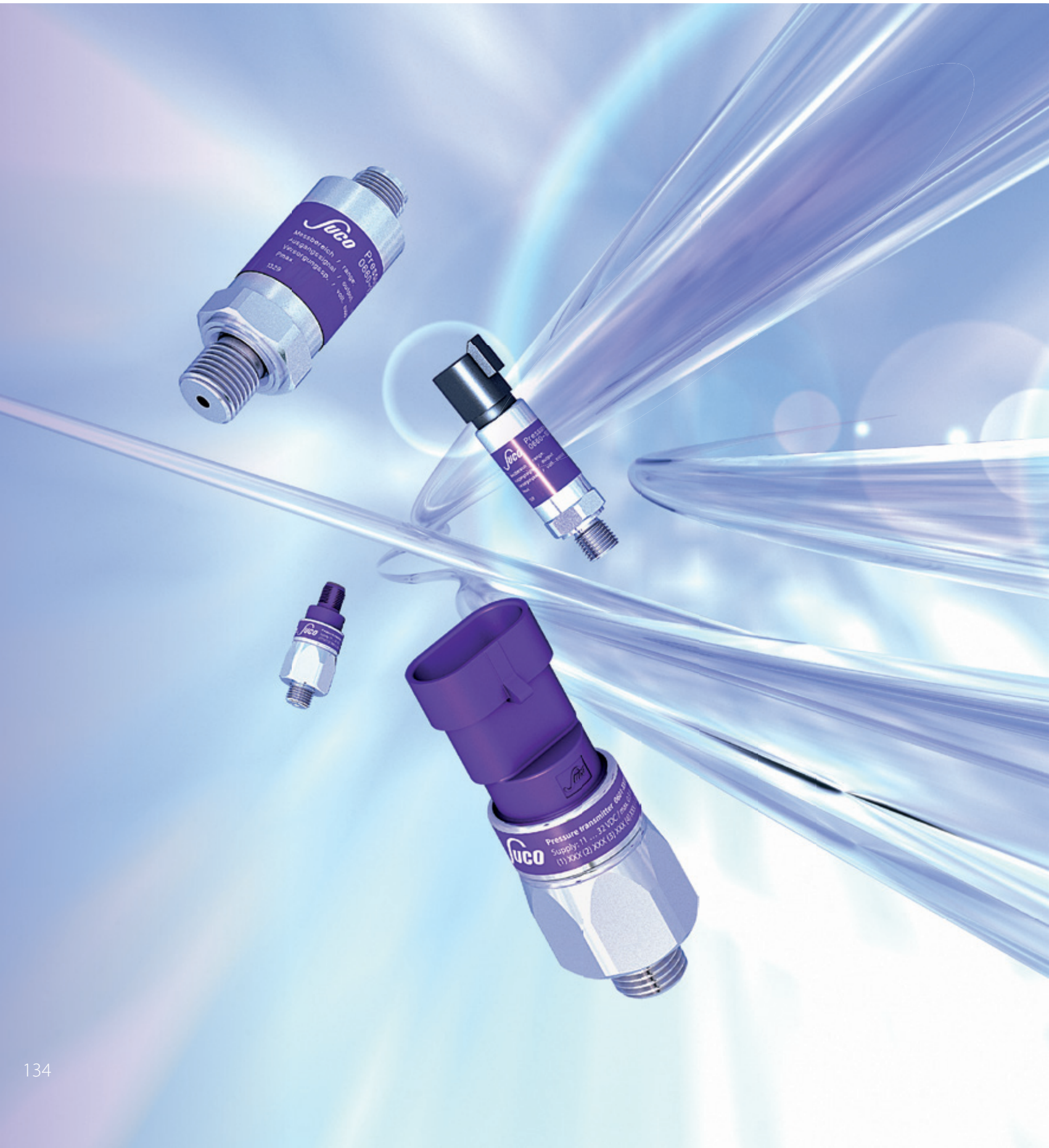


# T. Pressure Transmitters



## Pressure transmitters High-Performance series

hex 22



- 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

Type:	<b>0705</b>	<b>0710</b>	<b>0720</b>
Output signal:	0.5 - 4.5 V ratiometric	0 - 10 V (3-wire)	4 - 20 mA (2-wire)
Supply voltage $U_{V+}$ :	5 VDC $\pm$ 10 % max. 6.5 VDC	12 - 32 VDC	10 - 32 VDC
Permissible load apparent ohmic resistance:	$\geq 4.7 \text{ k}\Omega$	$\geq 4,7 \text{ k}\Omega$	$\leq (U_{V+} - 10 \text{ V}) / 20 \text{ mA}$
Idle power consumption:	approx. 5 mA		< 4 mA

Type:	<b>0705 / 0710 / 0720</b>									
Standard pressure ranges $p_{\text{nom}}$ in bar:	0 - 10	0 - 16	0 - 25	0 - 40	0 - 60	0 - 100	0 - 160	0 - 250	0 - 400	0 - 600
Overpressure protection $p_u^{1)}$ in bar:	40	64	100	160	240	400	640	1,000	1,600	1,650
Burst pressure <sup>1)</sup> in bar:	80	128	200	320	480	800	1,280	2,000	2,000	2,000
Mechanical life expectancy:	10,000,000 pulsations at rise rates to 5 bar/ms at $p_{\text{nom}}$									
Permitted pressure change rate:	$\leq 5 \text{ bar/ms}$									
Accuracy:	$\pm 0.5 \%$ full scale (FS) at room temperature, $\pm 0.25 \%$ BFSL									
Long term stability:	$\pm 0.1 \%$ FS p. a.									
Repeatability <sup>2)</sup> :	$\pm 0.1 \%$ FS									
Temperature error <sup>2)</sup> :	$\pm 0.01 \%$ FS / °C									
Compensated temperature range:	- 40 °C ... +50 °C (-40 °F ... 158 °F)									
Temperature range ambient:	- 40 °C ... +100 °C (-40 °F ... 212 °F)									
Temperature range media:	- 40 °C ... +125 °C (-40 °F ... +257 °F)									
Wetted parts material:	stainless steel 1.4305 / SAE Grade 303, titanium									
Insulation resistance:	$> 100 \text{ M}\Omega$ (500 VDC, $R_i > 42 \Omega$ )									
Response time 10 – 90 %:	$\leq 2 \text{ ms}$									
Vibration resistance:	20 g at 4 – 2000 Hz sine wave; DIN EN 60068-2-6									
Shock resistance:	half sine wave 500 m/s <sup>2</sup> ; 11ms; DIN EN 60068-2-27									
Protection class:	IP67 for M12x1, DIN 72585 (bayonet) and cable connector IP65 for DIN EN 175301-803									
Electromagnetic compatibility:	EMC 2014/30/EU, EN 61000-6-2, EN 61000-6-3									
Max. length of connection cable:	30 m									
Protection against reverse polarity, short-circuit and overvoltage:	Built-in									
Weight:	approx. 80 g (DIN 175301 approx. 110 g, cable outlet approx. 135 g)									

<sup>1)</sup> Static value. Dynamic value is 30 to 50% lower. Values refer to the hydraulic/pneumatic part of the pressure transmitter / transducer.

<sup>2)</sup> Within the compensated temperature range.

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# 0705 / 0710 / 0720

Electrical connectors and threads



**DIN EN 175301- 803 - A**

Pin	0705 / 0710	0720
1	U <sub>out</sub>	nc
2	Gnd	I <sub>out</sub>
3	U <sub>v+</sub>	U <sub>v+</sub>
PE		

IP65

x ~ 60 / 76 mm\*

d ~ Ø 30 mm

**Order number: 001**

**M12 DIN EN 61076 - 2-101 A**

Pin	0705 / 0710	0720
1	U <sub>v+</sub>	U <sub>v+</sub>
2	U <sub>out</sub>	nc
3	Gnd	I <sub>out</sub>
4	nc	nc

IP67

x ~ 54 mm

d ~ Ø 22 mm

**Order number: 002**

**ISO 15170 - A1 - 4.1**

Pin	0705 / 0710	0720
1	U <sub>v+</sub>	U <sub>v+</sub>
2	Gnd	nc
3	U <sub>out</sub>	I <sub>out</sub>
4	nc	nc

IP67, IP6K9K

x ~ 65 mm

d ~ Ø 27 mm

**Order number: 004**

**AMP Superseal 1.5 ®**

Pin	0705 / 0710	0720
1	U <sub>out</sub>	nc
2	Gnd	I <sub>out</sub>
3	U <sub>v+</sub>	U <sub>v+</sub>

IP67

x ~ 73 mm

d ~ Ø 26 mm

**Order number: 007**

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

**Deutsch DT04 - 4P**

Pin	0705 / 0710	0720
1	Gnd	I <sub>out</sub>
2	U <sub>v+</sub>	U <sub>v+</sub>
3	nc	nc
4	U <sub>out</sub>	nc

IP67, IP6K9K

x ~ 74 mm

d ~ Ø 23 mm

**Order number: 008**

**Deutsch DT04 - 3P**

Pin	0705 / 0710	0720
1	U <sub>v+</sub>	U <sub>v+</sub>
2	Gnd	nc
3	U <sub>out</sub>	I <sub>out</sub>

IP67, IP6K9K

x ~ 74 mm

d ~ Ø 23 mm

**Order number: 010**

**Cable connection**

Pin	0705 / 0710	0720
1	U <sub>v+</sub>	U <sub>v+</sub>
2	U <sub>out</sub>	nc
3	Gnd	I <sub>out</sub>

IP67

x ~ 44 mm  
(+ 20 mm bend relief)  
Cable length ~ 2m

d ~ Ø 22 mm

**Order number: 011**

**Order number: 41**

**Order number: 03**

**Order number: 04**

**Order number: 09**

**Order number: 30**

**Order number: 20**

**Order number: 21**

**Order number: 42**

# 0705 / 0710 / 0720

## Order matrix for pressure transmitters

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	Type	Pressure range	Pressure connection	Pressure unit	Electrical connection
	↓	↓	↓	↓	↓
0.5 - 4.5 V ratiometric	<b>0705</b>				
0 - 10 V, 3-wire	<b>0710</b>				
4 - 20 mA, 2-wire	<b>0720</b>				

Pressure range	Max. overpressure <sup>1)</sup>	
0 - 10 bar (approx. 145 PSI)	40 bar	<b>101</b>
0 - 16 bar (approx. 232 PSI)	64 bar	<b>161</b>
0 - 25 bar (approx. 362 PSI)	100 bar	<b>251</b>
0 - 40 bar (approx. 580 PSI)	160 bar	<b>401</b>
0 - 60 bar (approx. 870 PSI)	240 bar	<b>601</b>
0 - 100 bar (approx. 1,450 PSI)	400 bar	<b>102</b>
0 - 160 bar (approx. 2,320 PSI)	640 bar	<b>162</b>
0 - 250 bar (approx. 3,620 PSI)	1,000 bar	<b>252</b>
0 - 400 bar (approx. 5,800 PSI)	1,600 bar	<b>402</b>
0 - 600 bar (approx. 8,700 PSI)	1,650 bar	<b>602</b>

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

Pressure unit	
bar	<b>B</b>
PSI	<b>P</b>

Electrical connection	
DIN EN 175301-803-A (DIN 43 650-A) ; socket device included	<b>013</b>
M 12 – DIN EN 61071-2-101 D	<b>002</b>
Bayonet ISO 15170-A1-4.1 (DIN 72585-A1-4.1)	<b>004</b>
AMP Superseal 1.5*	<b>007</b>
Deutsch DT04-3P	<b>008</b>
Deutsch DT04-3P	<b>010</b>
Cable connection (length of cable 2 m standard)	<b>011</b>

<b>Order number:</b>	<b>06XX</b>	<b>XXX</b>	<b>XX</b>	<b>X</b>	<b>XXX</b>
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<sup>1)</sup> Static pressure, dynamic pressure 30 to 50% lower. Values refer to the hydraulic or pneumatic part of the pressure transmitter.



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