

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

Technical details

hidra[matic]

Downloaded from: www.hidramatic.com

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

Type:	0705 / 0710 / 0720									
Standard pressure ranges p_{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 ¹⁾ 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_{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 ²⁾ :	$\pm 0.1 \%$ FS									
Temperature error ²⁾ :	$\pm 0.01 \%$ FS / °C									
Compensated temperature range:	-40 °C ... +80 °C (-40 °F ... 176 °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%:	$< 2 \text{ ms}$									
Vibration resistance:	20 g at 4 – 2000 Hz sine wave; DIN EN 60068-2-6									
Shock resistance:	half sine wave 500 m/s ² ; 11ms; DIN EN 60068-2-27									
Protection class	IP67 for M 12x1, 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)									

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.

T.4

hex 22
High-Performance

hidra[matic]

Downloaded from: www.hidramatic.com



0705 / 0710 / 0720

Electrical connectors and threads

DIN EN 175301-803-A

0705 + 0710	0720
1: U _{out}	1: nc
2: Gnd	2: I _{out}
3: Uv+	3: Uv+
IP65	
x ~ 60 / 76 mm*	
d ~ Ø 30 mm	
Order number: 001	

M 12 – DIN EN 61076-2-101 A

0705 + 0710	0720
1: Uv+	1: Uv+
2: U _{out}	2: nc
3: Gnd	3: I _{out}
4: nc	4: nc
IP67	
x ~ 54 mm	
d ~ Ø 22 mm	
Order number: 002	

ISO 15170-A1-4.1

0705 + 0710	0720
1: Uv+	1: Uv+
2: Gnd	2: nc
3: U _{out}	3: I _{out}
4: nc	4: nc
IP67, IP6K9K	
x ~ 65 mm	
d ~ Ø 27 mm	
Order number: 004	

AMP Superseal

0705 + 0710	0720
1: U _{out}	1: nc
2: Gnd	2: I _{out}
3: Uv+	3: Uv+
IP67	
x ~ 73 mm	
d ~ Ø 26 mm	
Order number: 007	

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

DEUTSCH DT04-4P

0705 + 0710	0720
1: GND	1: I _{out}
2: Uv+	2: Uv+
3: nc	3: nc
4: U _{out}	4: nc
IP67, IP6K9K	
x ~ 74 mm	
d ~ Ø 23 mm	
Order number: 008	

DEUTSCH DT04-3P

0705 + 0710	0720
A: Uv+	A: Uv+
B: GND	B: nc
C: U _{out}	C: I _{out}
IP67, IP6K9K	
x ~ 74 mm	
d ~ Ø 23 mm	
Order number: 010	

Cable connection

0705 + 0710	0720
1: Uv+	1: Uv+
2: Gnd	2: nc
3: U _{out}	3: I _{out}
IP67	
x ~ 44 mm (+ 20 mm bend relief) Cable length ~ 2 m	
d ~ Ø 22 mm	
Order number: 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



0705 / 0710 / 0720

Order matrix for pressure transmitters

	Type	Pressure range	Pressure connection	Seal material	Electrical connection
0.5 – 4.5 V, ratiometric	0705				
0 – 10 V, 3-wire	0710				
4 – 20 mA, 2-wire	0720				

Max. overpressure¹⁾

Pressure range	Max. overpressure ¹⁾	
0 – 10 bar (approx. 145 PSI)	40 bar	101
0 – 16 bar (approx. 232 PSI)	64 bar	161
0 – 25 bar (approx. 362 PSI)	100 bar	251
0 – 40 bar (approx. 580 PSI)	160 bar	401
0 – 60 bar (approx. 870 PSI)	240 bar	601
0 – 100 bar (approx. 1,450 PSI)	400 bar	102
0 – 160 bar (approx. 2,320 PSI)	640 bar	162
0 – 250 bar (approx. 3,620 PSI)	1000 bar	252
0 – 400 bar (approx. 5,800 PSI)	1600 bar	402
0 – 600 bar (approx. 8,700 PSI)	1650 bar	602

Pressure connection

G 1/4 – DIN 3852-E	41
G 1/4 – DIN 3852-A	03
NPT 1/8 (max. to 250 bar)	04
NPT 1/4	09
M 10 x 1 tap. DIN 3852-A (max. to 250 bar)	30
7 / 16 – 20 UNF (max. to 250 bar)	20
9 / 16 – 18 UNF	21
M 14 x 1.5 – DIN 3852-E	42

Pressure unit

bar	B
PSI	P

Electrical connection

DIN EN 175301-803-A (DIN 43 650-A) ; socket device included	001
M 12 – DIN EN 61071-2-101 D	002
Bayonet ISO 15170-A1-4.1 (DIN 72585-A1-4.1)	004
AMP Superseal 1,5 [®]	007
Deutsch DT04-4P	008
Deutsch DT04-3P	010
Cable connection (length of cable 2 m standard)	011

Order number:	07XX	XXX	XX	X	XXX
----------------------	-------------	------------	-----------	----------	------------

T.4

hex 22
High-Performance

hidra[**matic**]

Downloaded from: www.hidramatic.com

Suco

T

¹⁾ Static pressure, dynamic pressure 30 to 50% lower. Values refer to the hydraulic or pneumatic part of the pressure transmitter.

