

With integrated temperature measurement and integrated signal amplifier (mA or V)

DTAI Series Pressure Transmitter



The DTAI first of all offers the user the comfort of operating a DAI in combination with a temperature measurement. One process connection is enough to measure both values.

These model offers mA and V output signals for further processing. The popular and most commonly used 2-wire and 4...20 mA configurations provide unequalled interference in critical environments.

Technical specifications

Pressure range	0..17 to 0..2000 bar 0..250 to 30000 psi
Accuracy incl. linearity, hysteresis, and reproducibility in % to full scale	0.15 % 0.25 % 0.50 %
Reproducibility in % to full scale	± 0.1 %
Membrane coating	G-Coating
Resolution	16 Bit
Max. pressure overload without influence on operating value	2 x range up to 1000 bar (14500 psi) 1.5 x pressure range over 1000 bar (14500 psi)
Bridge resistance	350 Ω Wheatstone Bridge
Temperature element:	Type J; K; L; PT 100
Heater:	24V 150W
Supply voltage	15..32 V DC
Output signal	4..20 mA 0..20 mA 0..10 V
Transmission medium	NTX™ as standard
Process connection	1/2" 20 UNF or M18 x 1.5
Calibration point	80% of measuring range
Insulation resistance	>1000 MOhm at 50 V
Max. temperature at diaphragm	300°C NTX™ (572°F) 400°C Hg (750°F) 500°C NaK (932°F)
Max. temperature at terminal head during operation	- 40 .. + 85°C (40°F..185°F)
Zero deviation with temperature Variations at the diaphragm:	± 0.003% from final value/°C
Zero deviation with temperature Variations at the measuring head:	± 0.002% from final value/°C
Ingress protection housing Ingress protection connector	IP 65 / IP 55
Max torque	1/2" 20 UNF 30 Nm (22 lbf ft) M18 x 1.5 50 Nm (32 lbf ft)

- Liquid filled measuring system
- Maximum reliability through new membrane technology
- Standard G-coating to counteract adhesive materials
- Combined pressure and temperature measurement
- Robust design with G-Armor flexible components
- Applications with process temperatures of up to 500°C (932 °F) possible
- Pressure ranges from 0..17 and 0..2000 bar (0..240 to 0..29000 psi) available
- Interference resistant signals over long distances
- Stable output signals



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Order specification DTAI Series
Pressure Transmitter with V or mA output and temperature measurement

valid from: 01.01.2015

Order specification	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Standard configuration														
	DTAI													
Total measurement error FSO														
0.15%	*1	0												
0.25%	*1	1												
0.50%		2												
Output signal														
4..20 mA (2-wire)			E 2											
4..20 mA (3-wire)			E 3											
4..20 mA (4-wire)			E 4											
0..20 mA (3-wire)			D 3											
0..20 mA (4-wire)			D 4											
0..10 V (3-wire)			C 3											
0..10 V (4-wire)			C 4											
Thermocouple														
Thermocouple type J				TH J										
Thermocouple type L				TH L										
Thermocouple type K				TH K										
Meas. resistance PT-100 (2-wire)				PT 2										
Meas. resistance PT-100 (3-wire)				PT 3										
Meas. resistance PT-100 (4-wire)				PT 4										
Thread connection														
1/2" UNF 2A (Standard)					12 A									
M18 X 1.5 A					18 A									
M18 X 1.5 B					18 B									
Pressure range														
17 bar						B 17 E								
35 bar						B 35 E								
50 bar						B 50 E								
100 bar						B 10 Z								
200 bar						B 20 Z								
350 bar						B 35 Z								
400 bar						B 40 Z								
500 bar						B 50 Z								
600 bar						B 60 Z								
700 bar						B 70 Z								
800 bar						B 80 Z								
1000 bar						B 10 H								
1400 bar						B 14 H								
2000 bar						B 20 H								
250 psi						P 25 Z								
500 psi						P 50 Z								
750 psi						P 75 Z								
1500 psi						P 15 H								
3000 psi						P 30 H								
5000 psi						P 50 H								
6000 psi						P 60 H								
7500 psi						P 75 H								
9000 psi						P 90 H								
10000 psi						P 10 T								
12000 psi						P 12 T								
15000 psi						P 15 T								
20000 psi						P 20 T								
30000 psi						P 30 T								
Shaft length (rigid)														
152 mm, 6" (Standard)										S 0				
203 mm, 8.0"										S 1				
254 mm, 10.0"										S 2				
318 mm, 12.5"										S 3				
356 mm, 14.0"										S 4				
457 mm, 18.0"										S 5				
76 mm, 3.0"										S 8				
Special length										S 9				

Length of flexible capillary												
457 mm, 18" (Standard)											F 5	
610 mm, 24"											F 6	
760 mm, 30"											F 8	
Special length											F 9	
Diaphragm												
Stainless steel (Standard)	*2										R	
Alloy C4	*2										H	
Alloy 718	*2										I	
Stainless steel/GX-Coating	*2										B	
Alloy C4/GX-Coating	*2										C	
Alloy 718/GX-Coating	*2										D	
Special diaphragm											S	
Sensor medium												
Mercury-free (NXT 300°C / 572°F)											W	
Mercury-free high temp. (NaK 500°C 932°F)	*5										N	
Mercury (Hg 400°C / 752°F)											M	
Electrical connection												
6-pole connection (Standard)												6 P
6-pole connection with optic auto-zero												6 P A
8-pole connection												8 P
6-pole connection (type 98)												9 8
Cable exit stainless steel , 3 m	*3											3 3
Special design												
No special design												0 0 0
Special design												X X X

*1 Only available >= 100 bar (1500 psi)

*2 As a standard, all diaphragms are coated with Gneuss unique "G-Coating" against adhesive and glutinous media. Special coatings are available on request.

*3 For cable exit, please confirm cable length. Unless specified, the standard length will be 3 m.

*5 Mercury-free High Temperature >= 300°C (only available for 100 bar (1500 psi) up to 800bar (12000 psi))