

With analog signal (mA or V) and switch output

DAIL Series Safety Pressure Transmitter



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The DAIL fulfils the requirements of EN 1114-1 for overpressure protection of extrusion lines and offers maximum comfort of operation.

The auto-zero function enables calibration directly on the device or from the observation point/ controller. On the output side, the melt pressure transmitter provides a switch output in addition to the analog signal which enables switching off the machine in case of overpressure according to EN 13849-1, PL=c.

Technical specifications

Pressure range	0..50 to 0..2000 bar 0..725 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:	—
Heater:	—
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:	± 0.02% from final value/°C With standard diaphragm, transmission medium NTX™ and 1/2"20 UNF
Zero deviation with temperature variations at the measuring head:	± 0.003% from final value/°C
Ingress protection housing	IP 65 /
Ingress protection connector	IP 55
Max torque	1/2" 20 UNF 30 Nm (22 lbf ft) M18 x 1.5 50 Nm (32 lbf ft)

- Switch output for overpressure protection
- Switch-off pressure freely selectable
- Analog output mA or V
- Performance Level c according to EN13849-1
- TÜV certified
- G-coating to counteract adhesive materials
- Compatible with common OEM sensors
- Longlife design

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www.gneussmeltsensors.com
info@gwsensors.com



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Order specification DAIL Series
Safety Pressure Transmitter with V or mA output

valid from: 01.01.2015

Order specification	→	-	-	-	-	-	-	-	-	-	-	-	-	-		
Standard configuration																
	DAIL															
Total measurement error FSO																
	0.15%	*1	0													
	0.25%	*1	1													
	0.50%		2													
Output signal																
	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												
Thread connection																
	1/2" UNF 2A (Standard)			1 2 A												
	M18 X 1.5 A			1 8 A												
	M18 X 1.5 B			1 8 B												
Pressure range																
	17 bar			B 1 7 E												
	35 bar			B 3 5 E												
	50 bar			B 5 0 E												
	100 bar			B 1 0 Z												
	200 bar			B 2 0 Z												
	350 bar			B 3 5 Z												
	400 bar			B 4 0 Z												
	500 bar			B 5 0 Z												
	600 bar			B 6 0 Z												
	700 bar			B 7 0 Z												
	800 bar			B 8 0 Z												
	1000 bar			B 1 0 H												
	1400 bar			B 1 4 H												
	2000 bar			B 2 0 H												
	250 psi			P 2 5 Z												
	500 psi			P 5 0 Z												
	750 psi			P 7 5 Z												
	1500 psi			P 1 5 H												
	3000 psi			P 3 0 H												
	5000 psi			P 5 0 H												
	6000 psi			P 6 0 H												
	7500 psi			P 7 5 H												
	9000 psi			P 9 0 H												
	10000 psi			P 1 0 T												
	12000 psi			P 1 2 T												
	15000 psi			P 1 5 T												
	20000 psi			P 2 0 T												
	30000 psi			P 3 0 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											
	38 mm, 1.5"	*4			S 6											
	50 mm, 2.0"	*4			S 7											
	76 mm, 3.0"				S 8											
	Special length				S 9											
Length of flexible capillary																
	No flexible capillary					F 0										
	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									B	
Alloy C4/GX-Coating									C	
Alloy 718/GX-Coating									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										
7-pole connection (Standard)	*6									7 P
6-pole connection (Standard)	*6									6 P
7-pole connection (with 80% function)	*6									7 S
8-pole connection										8 P
8-pole connection (with 80% function)										8 D
8-pole connection (Binder) M16	*6									8 B
Cable exit stainless steel , 3 m	*3									3 3
Optical Auto-Zero activation										A
Cut-off pressure										
in % of measuring range (min. 0.21=21%)										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.

*4 Only available with flexible capillary

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

*6 Available with optical Auto-Zero