



Features

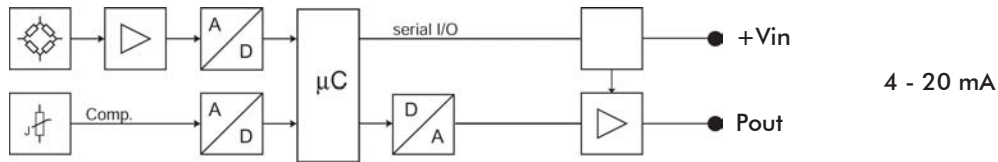
- Piezoresistive measuring element
- Adjustable 1:4 of the nominal range within -5% to +105%
- Standard DIN pressure ranges from 0...100 mbar to 0...1000 bar
- Calibration available for all common pressure units
- Adjustable delay
- Complies with the EMC directive EN 61000
- Reverse polarity and short circuit protected

Typical applications

- Industrial measurement
- Process and control
- Food & beverage
- Hydraulic
- Test benches



Specifications



Pressure range [bar]	0.1 ... 0.5	> 0.5 ... 2	> 2 ... 25	> 25 ... 600	> 600 ... 1000
Overpressure	3 bar	3 x FS (min. 3 bar)	3 x FS	3 x FS (max. 850 bar, optional 1500 bar)	1500 bar
Burst pressure	> 200 bar	> 200 bar	> 200 bar	> 850 bar (optional to 1500 bar)	> 1500 bar
Thermal shift [± % FS/°C]					
Zero					
0...70°C	0.06	0.03	0.015	0.015	0.015
-25...85°C	0.08	0.04	0.02	0.02	0.02
Span					
0...70°C	0.015	0.015	0.015	0.015	0.015
-25...85°C	0.02	0.02	0.02	0.02	0.02
Accuracy¹⁾	≤ ± 0.25 % FS ≤ ± 0.1 % FS, ≥ 500 mbar				

¹⁾ Zero based non-conformity according to DIN 16086, including hysteresis and repeatability

Electrical specifications

Supply voltage	Range:	9...33 V DC
	Supply voltage influence:	< 0.1 % FS
Analog Output	Resolution:	12 bit
	Output 4 mA:	adjustable between -5% FS...105% FS
	Output signal 4mA:	adjustable between -5% FS...105% FS
	Span:	adjustable between 25% FS...110% FS, min. 50 mbar
	Adjustable delay:	100 ms, 1 s, 10 s, (standard ca. 30 ms)
Interface	VART199 incl. PC-Program (VART244) ³⁾	

Materials

Process connection, Diaphragm, Housing Seals (standard)	Stainless steel 1.4435 (316L) other materials (e.g. titanium) on request Viton (other materials see ordering code)
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Electromagnetic compatibility

Standard	Level	Typical interferences	
Emission:			
EN 61000-6-3	Generic emission standard		
EN 55022	Emission, class B		
Immunity:			
EN 61000-6-2	Generic immunity		
EN 61000-4-2	Electrostatic discharge	4kV contact, 8kV air	
EN 61000-4-3	Radiated electro-magnetic field	10V/m, 80-1000 MHz, 80% AM 1kHz	Cellular phones, radio sets
EN 61000-4-3	Radiated electro-magnetic field (GSM)	10V/m, 950 MHz, 200Hz on/off	Digital portable phones
EN 61000-4-4	Fast transients (burst)	2 kV	Motors, valves
EN 61000-4-6	Conducted radio-frequency	10V, 0.15-80 MHz, 80% AM 1kHz	Cellular phones, radio sets
EN 61000-4-5	Surge	10 kA (8/20 ms) ²⁾	Lightning strikes

²⁾ Only with optional surge (lightning) protection

³⁾ Interface not included



The pressure transmitter PTM fulfill the emission and immunity requirements described in the EMC directive EN 61000

Ordering Information

		40	X	XXXX	XXXX	XX	XXX
Type	PTM	40					
Pressure type	Gauge	1					
	Absolute	2					
	Sealed gauge	3					
Pressure range	0...100 mbar			00			
	0...160 mbar			01			
	0...250 mbar			02			
	0...400 mbar			03			
	0...600 mbar			04			
	0...1.0 bar			05			
	0...1.6 bar			06			
	0...2.5 bar			07			
	0...4.0 bar			08			
	0...6.0 bar			09			
	0...10 bar			10			
	0...16 bar			11			
	0...25 bar			12			
	0...40 bar	3		13			
	0...60 bar	3		14			
	0...100 bar	3		15			
	0...160 bar	3		16			
	0...250 bar	3		17			
	0...400 bar	3		18			
	0...600 bar	3		19			
0...1000 bar	3		20				
Special calibration			99				
Process connection	G 1/4 female (Fig. 1)			00			
	G 1/4 M (Fig. 2)			11			
	G 1/4 M, Manometer DIN 16288 (Fig. 3)			12			
	G 1/2 M (Fig. 4)			13			
	G 1/2 M, frontal diaphragm (Fig. 5)			14			
	G 1/2 M, flush diaphragm (Fig. 6)			15			
	G 1/2 M, Manometer DIN 16288 (Fig. 7)			16			
	1/4 NPT M			10			
	1/2 NPT M (Fig. 8)			19			
	Special process connection			99			
Electrical connection	DIN 43650 (screwed on) ²⁾ (Fig. 10) IP 65			01			
	Binder 723, 5-pin ²⁾ (Fig. 11) IP 67			03			
	Binder 723, 7-pin ²⁾ (Fig. 12) IP 67			04			
	MIL C26482, (10-6) ²⁾ (Fig. 13) IP 40			06			
	PE cable ^{3) 4) 5)} (Fig. 14) IP 67			13			
	PUR cable ^{3) 5)} (Fig. 14) IP 67			15			
	Teflon cable ³⁾ (Fig. 14) IP 67			21			
	Special electrical connection			99			
Output signal	4...20 mA			05			
	4...20 mA surge (lightning) protection			08			
Accuracy	- ± 0.25 % FS					1	
	- ± 0.1 % FS, > 500 mbar					2	
Temperature range	0...70°C (-10°C...50°C comp. media temp. 0... 80°C)						0
	-25...85°C comp. (media temperature -25...100°C)						1
	-25...85°C comp. (media temperature -25...150°C)						2
Options	Throttle ¹⁾						A
	Electronics packed in gel: Gauge pressure						C
	Absolute and sealed gauge pressure						D
	Special oil filling: ASEOL Food						G
	Halocarbon						H
Seals: Viton (standard)						U	
EPDM						S	
Kalrez						T	
Special options							Z

¹⁾ Only for process connections fig. 2, fig. 4 or fig. 7

⁴⁾ Suitable for drinking water (food approved)

²⁾ Cable socket connector not included

⁵⁾ For media temperature > 50°C a teflon cable must be used

³⁾ Please specify the medium and the required cable length

Pressure Connection

Dimensions

Electrical Connection

Version for media temperature up to 100°C

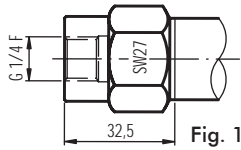


Fig. 1

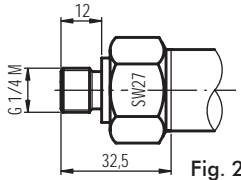


Fig. 2

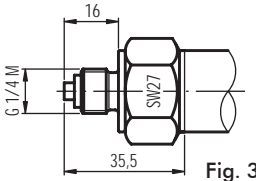


Fig. 3

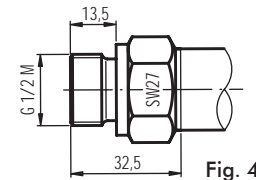


Fig. 4

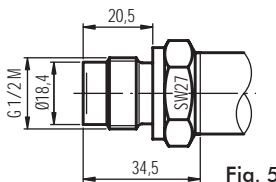


Fig. 5

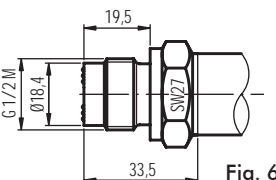


Fig. 6

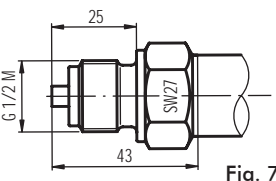


Fig. 7

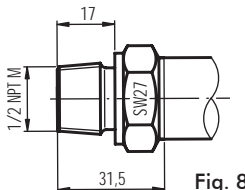
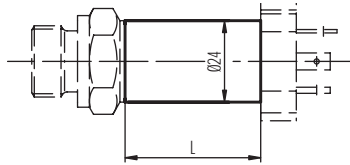
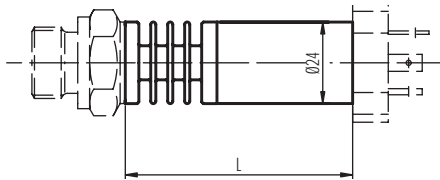


Fig. 8



L = 55 mm for connector DIN 43650 (Fig. 10)

Version for media temperature up to 150°C



L = 82 mm for connector DIN 43650 (Fig. 10)

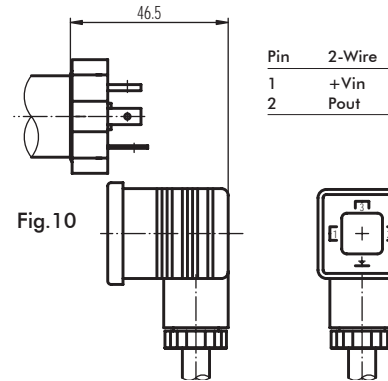


Fig. 10

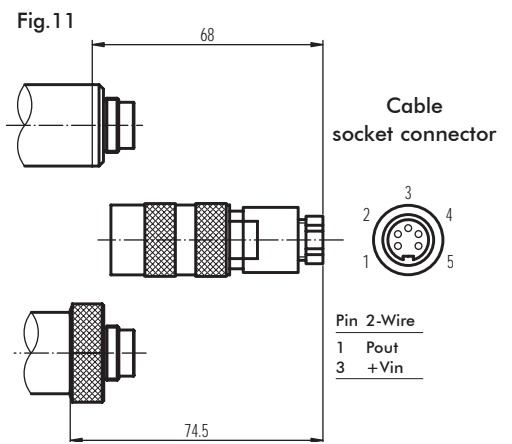


Fig. 11

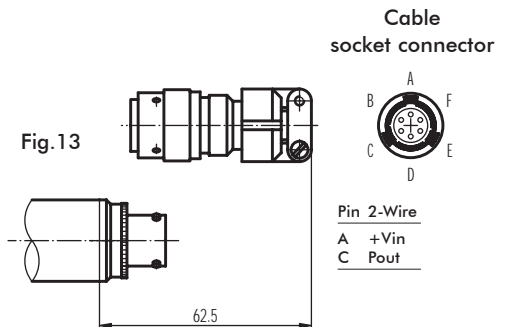


Fig. 13

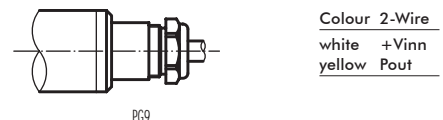


Fig. 14

Specifications may change without notice. Release 02/2003