



Features

- Compact and robust stainless steel assembly 1.4435 (316L)
- Piezoresistive measuring element
- Gauge, absolute or sealed gauge
- Standard DIN pressure ranges from 0...100 mbar to 0...1000 bar
- Calibration available for all common pressure units
- Complies with the EMC directive 89/336/EEC
- High reliability
- Short delivery time
- Customised versions due to modular assembly
- Reverse polarity and short circuit protected
- Media temperature up to 150°C (optional)
- Surge (lightning) protection according to EN 61000-4-5 as an option

Typical applications

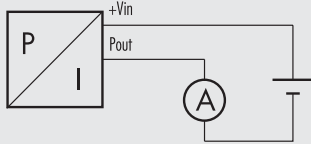
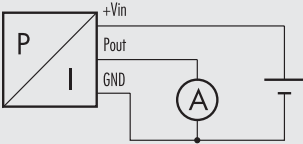
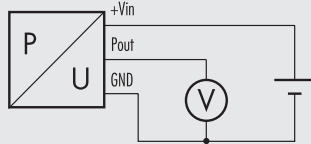
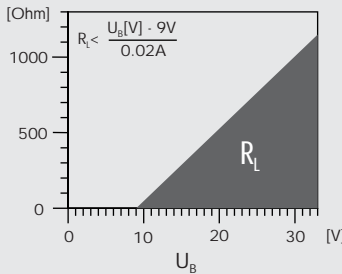
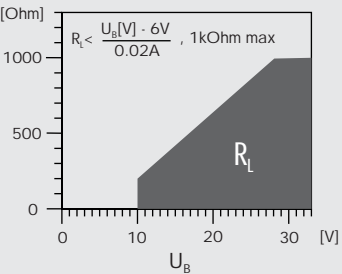
- Machine installations
- Industrial process control
- Heating and ventilation
- Environment monitoring
- Food industry
- Mobile hydraulics
- Test and calibration systems



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 [bar]	> 200	> 200	> 200	> 850 (optional 1500 bar)	1500
Accuracy¹⁾ [± % FS]	≤ 0.5 (optional ≤ 0.25)	≤ 0.5 (optional ≤ 0.25, ≤ 0.1)	≤ 0.5 (optional ≤ 0.25, ≤ 0.1)	≤ 0.5 (optional ≤ 0.25, ≤ 0.1)	≤ 1 (optional ≤ 0.5, ≤ 0.25)
Thermal shift [± % FS/°C]					
Zero	0...70°C	0.06	0.03	0.015	0.015
	-25...85°C	0.08	0.04	0.02	0.02
Span	0...70°C	0.015	0.015	0.015	0.015
	-25...85°C	0.02	0.02	0.02	0.02
Response time	< 1 ms/10...90% FS				
Long term stability (1 year)	< 4 mbar	< 4 mbar	< 0.2% FS	< 0.2% FS	< 0.2% FS

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

Output signal	4 ... 20 mA	0 ... 20 mA	0 ... 5 V / 0 ... 10 V
Type	Two wire current transmitter	Three wire current transmitter	Three wire voltage transmitter
Supply voltage	9...33 V DC	9...33 V DC	15...30 V DC
Supply voltage influence	< 0.1% FS	< 0.1% FS	< 0.1% FS
Circuit diagram			
Load resistance			$R_L > 10k\Omega$
Load resistance influence	< 0.1% FS	< 0.1% FS	< 0.1% FS

Materials

Process connection, diaphragm, housing	Stainless steel 1.4435 (316L)	(other materials on request)
Seals (standard)	Viton	(other materials see ordering information)

Electromagnetic compatibility

Standard	Level	Typical interferences	
Emission:			
EN 50081-1:1992	Generic emission standard		
EN 55022:1994	Emission, class B		
Immunity:			
EN 50082-2:1995	Generic immunity		
EN 61000-4-2:1995	Electrostatic discharge	4kV contact, 8kV air	
ENV 50140:1993	Radiated electro-magnetic field	10V/m, 80-1000 MHz, 80% AM 1kHz	Cellular phones, radio sets
ENV 50204:1995	Radiated electro-magnetic field (GSM)	10V/m, 950 MHz, 200Hz on/off	Digital portable phones
EN 61000-4-4:1995	Fast transients (burst)	2 kV	Motors, valves
ENV 50141:1993	Conducted radio-frequency	10V, 0.15-80 MHz, 80% AM 1kHz	Cellular phones, radio sets
EN 61000-4-5:1995 ²⁾	Surge	10 kA (8/20 μs)	Lightning strikes

²⁾ Only with optional surge (lightning) protection

The pressure transmitter ATM fulfill the emission and immunity requirements described in the EMC directive 89/336/EEC.

The conformity was tested by KEMA Nederland BV. The certificate and the test report (KEMA 54285-KRQ/ECM 96-4184) are available on request.

Ordering Information

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Type	ATM	23				
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		
	1/4 NPT M			10		
	1/2 NPT M (Fig. 8)			19		
	G 1/4 M (Fig. 2)			11		
	G 1/4 M flush diaphragm			21		
	G 1/4 M, Manometer DIN 16288 (Fig. 3)			12		
	G 1/2 M (Fig. 4)			13		
	G 1/2 M Hastelloy C276			98		
	G 1/2 M, frontal diaphragm (Fig. 5)			14		
	G 1/2 M Hastelloy frontal diaphragm			37		
	G 1/2 M, flush diaphragm (Fig. 6)			15		
	G 1/2 M, Manometer DIN 16288 (Fig. 7)			16		
	G 1/2 M with 14mm diameter hole			17		
Special process connection			99			
Electrical connection	DIN43650 plastic PA (screwed on ³⁾) ⁵⁾ (Fig. 10)	IP 65		01		
	DIN43650 with thread 1.4435	IP 65		66		
	Binder 723, 5-pin ⁵⁾ (Fig. 11)	IP 67		03		
	Binder 723, 5-pin (screwed on ³⁾) ⁵⁾ (Fig. 12)	IP 67		43		
	MIL C26482, (10-6) ⁵⁾ (Fig. 13)	IP 40		06		
	Lumberg RSF 4, 4 pin			07		
	PE cable ⁶⁾ ⁷⁾ ⁸⁾ (Fig. 14)	IP 67		13		
	PUR cable ⁶⁾ ⁷⁾ (Fig. 14)	IP 67		15		
	PUR cable with level sensor fixing	IP 68		24		
	PUR cable with anti kink nozzle	IP 67		16		
	Teflon cable ⁶⁾ (Fig. 14)	IP 67		21		
	Special electrical connection			99		
Output signal	0... 5 V DC			46		
	0...10 V DC			47		
	0...20 mA			00		
	4...20 mA			05		
	4...20 mA surge (lightning) protection			08		
	0...5 V DC surge (lightning) protection			50		
	0...10 V DC surge (lightning) protection			49		
	Special output signal			99		
Accuracy	- ± 0.5 % FS			0		
	- ± 0.25 % FS			1		
	- ± 0.1 % FS (on request)			2		
Temperature range	Compensated 0...70°C (media temperature 0... 80°C)			0		
	Compensated 25...100°C (media temperature -25...100°C)			7		
	Compensated -25...85°C (media temperature -25...100°C) ⁷⁾			1		
	Compensated -25...85°C (media temperature -25...150°C) ⁷⁾ with cooling fins			2		
	Compensated 20...100°C (media temperature -25...150°C) ⁷⁾ with cooling fins			6		
Special temperature range			9			
Options	Throttle ⁴⁾					A
	Electronics packed in gel: Gauge pressure					C
	Absolute and sealed gauge pressure					D
	With field housing (ABS, grey)					F
	Special oil filling: ASEOL Food					G
	Halocarbon					H
	AS100 (media temp. -55 to 150°C)					J
	PAO4 (free of silicon)					Q
	Seals: EPDM					S
	Kalrez					T
Titanium version					K	

³⁾ Zero offset and span adjustable

⁴⁾ Please specify the required cable length

⁴⁾ Available only with fig. 2, fig. 4 or fig. 7

⁷⁾ For media temperature > 50°C a teflon cable must be used

⁵⁾ Cable socket connector not included

⁸⁾ Suitable for drinking water (food approved)

Pressure Connection

Dimensions

Electrical Connection

Version for media temperature up to 100°C

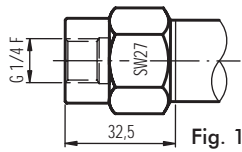


Fig. 1

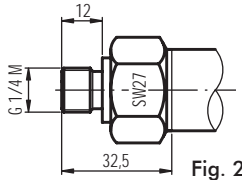


Fig. 2

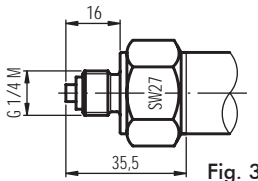


Fig. 3

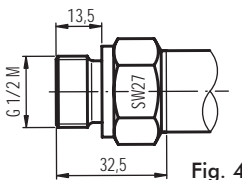


Fig. 4

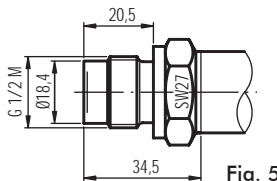


Fig. 5

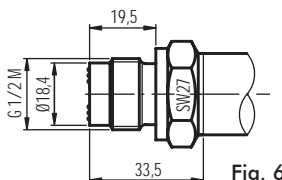


Fig. 6

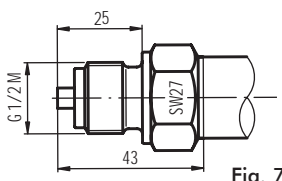


Fig. 7

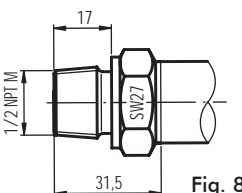
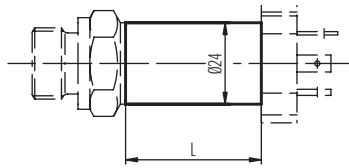
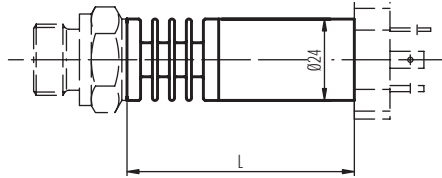


Fig. 8



L = 40 mm for connector DIN 43650 (Fig. 10)
L = 45 mm for all other versions
L = 94 mm for version with surge (lightning) protection

Version for media temperature up to 150°C



L = 67 mm for connector DIN 43650 (Fig. 10)
L = 72 mm for all other versions
L = 121 mm for version with surge (lightning) protection

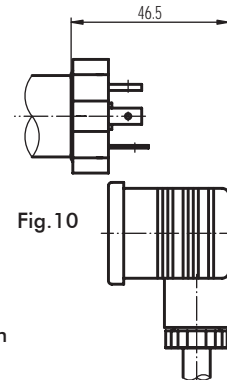


Fig. 10

Pin	2-Wire	3-Wire
1	+Vin	+Vin
2	Pout	Pout
3		GND

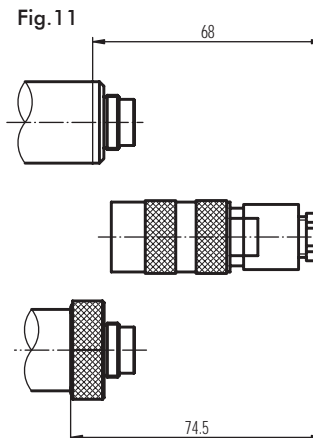


Fig. 11

Cable socket connector



Pin	2-Wire	3-Wire
1	Pout	Pout
3	+Vin	+Vin
4		GND

Fig. 12

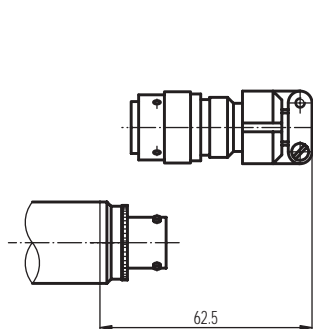


Fig. 13

Cable socket connector



Pin	2-Wire	3-Wire
A	+Vin	+Vin
B		GND
C	Pout	Pout

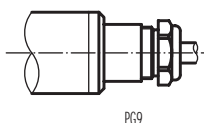


Fig. 14

Colour	2-Wire	3-Wire
white	+Vin	+Vin
yellow	Pout	GND
brown		Pout

Specifications may change without notice. Release 06/01