

Pressure Transmitter for Relative Pressure Measurement, Type VD61



Supply voltage	8 ... 30 VDC
Output signal and maximum permissible load	4 ... 20 mA, 2-wire, $RA \leq (UB - 8 V) / 0.02 A$
Electrical connection	Connecting terminal for max. 1.5 mm ²
Pressure connection	G $\frac{1}{4}$ female thread (adapter for G $\frac{1}{2}$ male thread available, see accessories)
Reverse voltage protection	X1+ against X1-
Protection class	IP64 according to EN 60529
Vibration resistance	IEC 60068-2-6: 10 g (resonance)
Shock resistance	IEC 60068-2-27: 500 g (mechanical)



Pressure transmitter VD61



Scope of application

Type VD61 pressure transmitters are mainly used in: Shipbuilding industry, transport technology, machinery and equipment. They acquire the pressure of diesel engines, pumps, filters, compressors, hydraulic and pneumatic control systems.

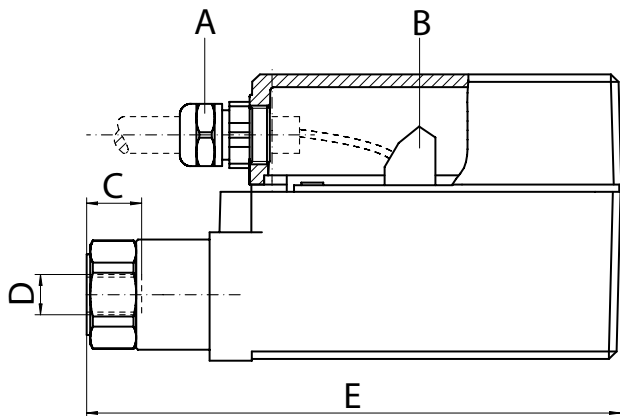
Outstanding EMC properties

The EMC properties guarantee reliable signal acquisition even under harsh ambient conditions. All parts that come in contact with the measured medium are made of CrNi steel and fully welded. There are no internal sealing elements that involve restriction in the selection of the measured medium.

Special features

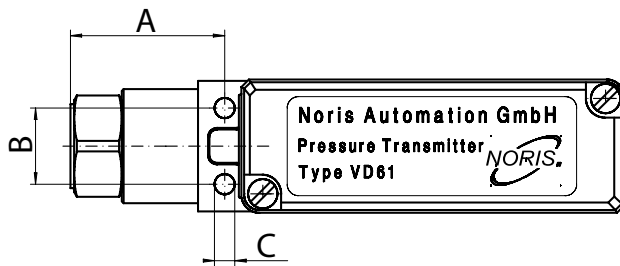
- Robust housing for the use in harsh environments
- Suitable for relative pressure measurement
- Suitable for pressure measurement up to 600 bar
- Simple assembly
- Certified for shipbuilding industry and offshore by DNV-GL

Dimensions, connections and drawings



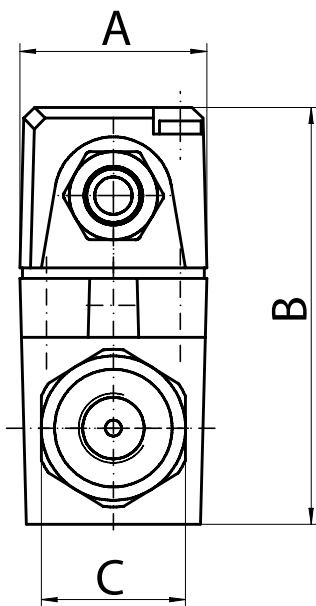
Side view

- A) Cable gland M16 (cable \varnothing 5...10 mm)
- B) Terminal for cable up to 1.5 mm²
- C) 15 mm
- D) G1/4 female thread
- E) 146 mm



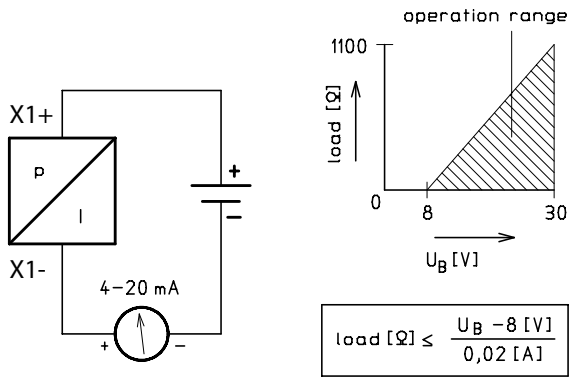
Top view

- A) 40.5 mm
- B) 20 mm
- C) \varnothing 5.3 mm



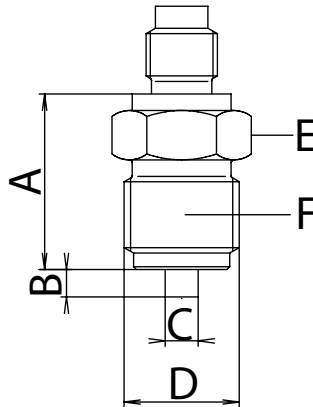
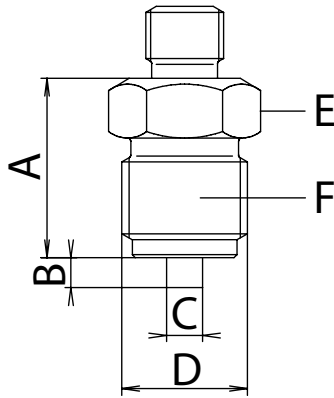
Front view

- A) 35 mm
- B) 78 mm
- C) WAF27



VD61 Connection diagram

Accessories for type VD61 pressure transmitters



Adapter with G $\frac{1}{2}$ male thread

- A) 32 mm
- B) 5 mm
- C) Ø 6 mm
- D) G1/2
- E) WAF22
- F) Material 1.4435

Attenuator with G $\frac{1}{2}$ male thread

- A) 32 mm
- B) 5 mm
- C) Ø 6 mm
- D) G1/2
- E) WAF22
- F) Material 1.4435

Pos.	Description	Drawing no.	Order no.
01	Adapter with G $\frac{1}{2}$ male thread	59.201	522004
02	Attenuator K6 for heavy oil	59.201	522001
03	Attenuator K7 for light oil	59.201	522002
04	Attenuator K8 for air/water	59.201	522003

Technical data

Electrical connection	
Supply voltage	8 ... 30 VDC
Current limitation	Power supply by energy-limited electrical circuit in accordance with 9.3 of UL/EN/IEC 61010-1 or LPS in accordance with UL/EN/IEC 60950-1 or Class 2 in accordance with UL1310/UL1585 (NEC or CEC) (the power supply must also be suitable for operation at an altitude above 2000 m, if used in these heights)
Reverse voltage protection	X1+ against X1-
Electrical connection	Connecting terminal for max. 1.5 mm ²
Pressure connection	G¼ female thread (adapter for G½ male thread available, see accessories)

Signal acquisition	
Standard measuring range	See measuring range table

Electrical output	
Output signal and maximum permissible load	4 ... 20 mA, 2-wire, $RA \leq (UB - 8 \text{ V}) / 0.02 \text{ A}$
Accuracy	$\leq \pm 1 \%$ of the range (including non-linearity, hysteresis, zero point and final value deviation (IEC 6198-2))
Non-linearity	$\leq \pm 0.5 \%$ of range
Non-repeatability	$\leq 0.1 \%$ of range
Long-term drift	$\leq \pm 0.1 \%$ of range (under reference conditions)
Transient response	Transient recovery time < 4 ms; turn on-time < 15 ms

Environmental influences	
Operating temperature	Permissible measured medium temperature: -30 ... +100 °C Permissible ambient temperature: -30 ... +100 °C
Storage temperature	-30 ... +100 °C
Vibration resistance	IEC 60068-2-6: 10 g (resonance)
Shock resistance	IEC 60068-2-27: 500 g (mechanical)
Protection class	IP64 according to EN 60529

Mechanical properties	
Material	Parts in contact with measured medium: < 10 bar CrNi steel 303 and CrNi steel 316L; > 10 bar CrNi steel 316L and 13-8 PH (AISI), housing: Aluminium, powder-coated (check the pressure medium for suitability for medium-contacting parts)
Weight	Approx. 560 g

Other	
Approvals	DNV
CE Conformity	Pressure Equipment Directive 97/23/EC; EMC Directive 2004/108/EC EN 61326 Emission (Group 1, Class B) and interference immunity (industrial environment)

Measuring range VD61			
Code	Measuring range	Overload	
1	0 ... 1 bar	2 bar	
1,6	0 ... 1.6 bar	3.2 bar	
2,5	0 ... 2.5 bar	5 bar	✱
3	0 ... 3 bar	6 bar	
4	0 ... 4 bar	8 bar	✱
5	0 ... 5 bar	10 bar	
6	0 ... 6 bar	12 bar	✱
10	0 ... 10 bar	20 bar	✱
15	0 ... 15 bar	30 bar	
16	0 ... 16 bar	32 bar	✱
20	0 ... 20 bar	40 bar	
25	0 ... 25 bar	50 bar	✱
30	0 ... 30 bar	60 bar	
40	0 ... 40 bar	80 bar	✱
50	0 ... 50 bar	100 bar	
60	0 ... 60 bar	120 bar	
100	0 ... 100 bar	200 bar	
120	0 ... 120 bar	240 bar	
150	0 ... 150 bar	300 bar	
160	0 ... 160 bar	320 bar	
180	0 ... 180 bar	360 bar	
250	0 ... 250 bar	500 bar	
300	0 ... 300 bar	600 bar	
400	0 ... 400 bar	800 bar	
600	0 ... 600 bar	1200 bar	
150P	0 ... 150 psi	300 psi	
1M1	-1 ... 1 bar	4 bar	✱
1,6M1	-1 ... 1.6 bar	5.2 bar	
2,5M1	-1 ... 2.5 bar	7 bar	
3M1	-1 ... 3 bar	8 bar	
4M1	-1 ... 4 bar	10 bar	

Preferred types

Features marked with a ✱ symbol at the end of the line are preferred features. If you select a preferred feature for each place-holder, the device is specified as preferred type. Preferred types are available quickly from stock. Other types will be delivered according to scheduled appointments.

Type code

Type code structure			
VD	6	1	-15 Example: VD61-15
	Construction type 6		
		Signal output	
		Measuring range	

Type code VD61-...			
Construction type	6	Construction type 6	
Signal output	1	4 ... 20 mA	
Measuring range	-	See table 'Measuring range' [5]	
VD	6	1	-300 Example: VD61-300