

# P19

## Pressure Transmitters with voltage or current output

### Special features

- Output span and zero signal adjustable
- Rugged design
- High reliability and stability
- Available as gauge-pressure and absolute pressure version
- No filling liquid
- Various hermetically welded pressure ports as option
- Choice of various electrical connections
- Outputs:
  - 0...10 V or
  - 0...20 mA (3 wire) or
  - 4...20 mA (2 wire)
- Calibration signal (option)
- High EMC



Standard version

Electrical connectors (optionally)






Pg gland

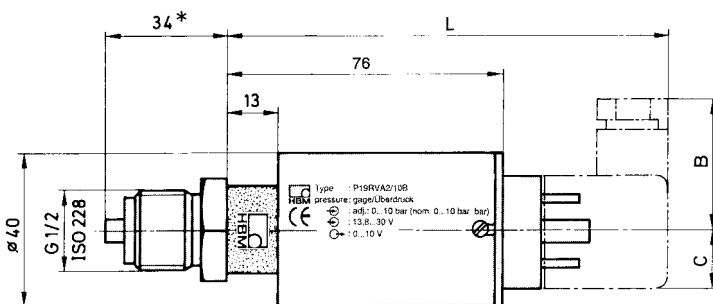


HS6P

Low price standard version for gauge pressure available from stock with pressure port G1/2 external thread, 0...10 V output, DIN-plug (Options, see last page).

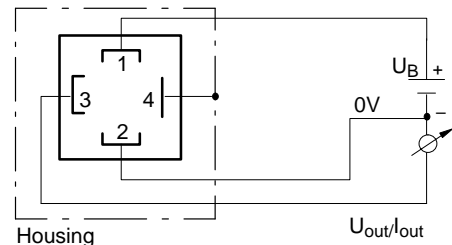
Meas. range, 0 bar...	Ordering designation
10 bar .....	P19 RV 218 15 V1 A2 N 0
20 bar .....	P19 RV 221 15 V1 A2 N 0
50 bar .....	P19 RV 225 15 V1 A2 N 0
100 bar .....	P19 RV 228 15 V1 A2 N 0
200 bar .....	P19 RV 231 15 V1 A2 N 0
500 bar .....	P19 RV 235 15 V1 A2 N 0

Electrical connection	L	B	C
<b>Standard</b> DIN 43650 plug 	120	36	15
<b>Optional</b>			
Plug HS6P  ≙ (PT06E-10-6S, Fa. Bendix) ≙ (UPT06J-10-6S, Fa. Cannon)	135	11	11
Pg gland  (with 3 m cable, free ends)	110	11	11



\* depends on the selected pressure port

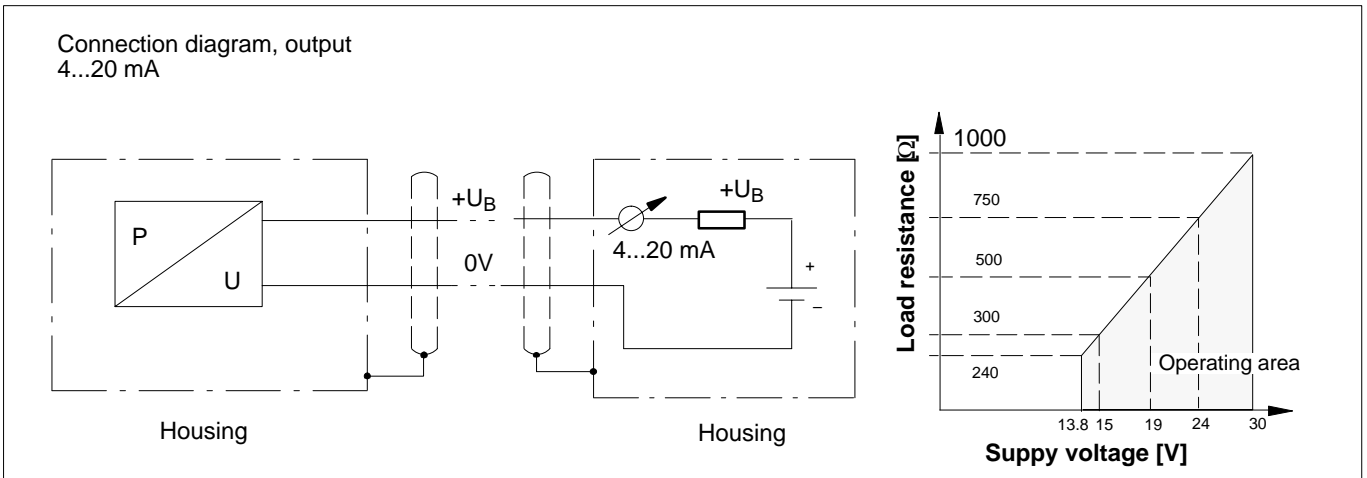
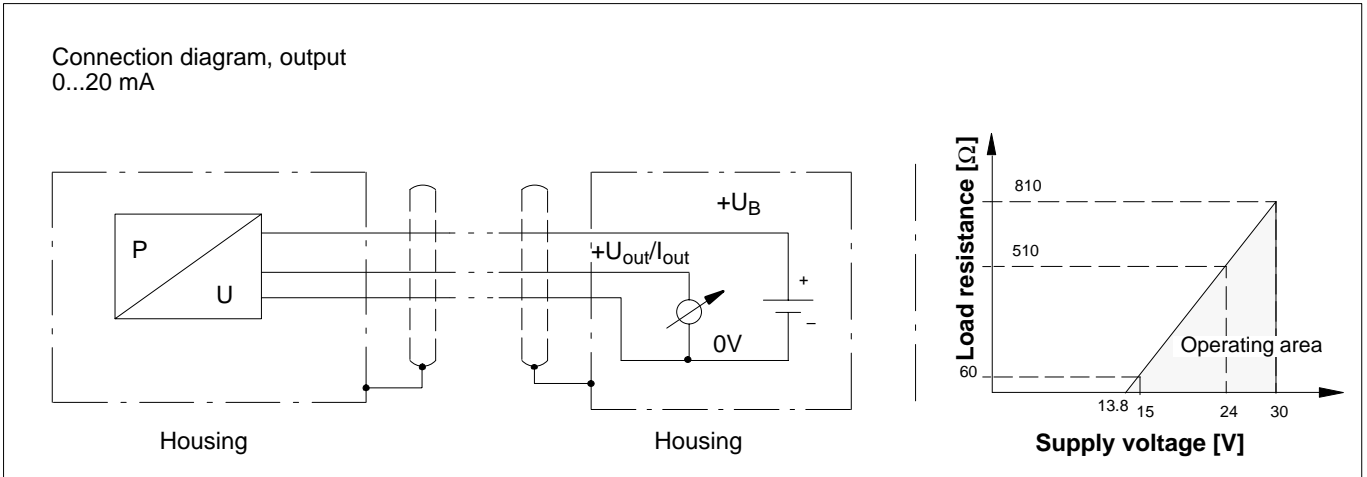
Pin assignment for the plug connector to DIN 43 650 mounted as standard (Output 0...10 V)



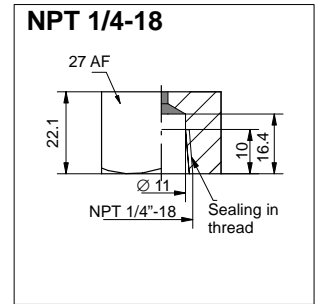
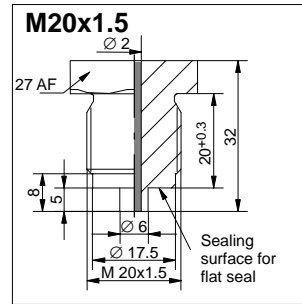
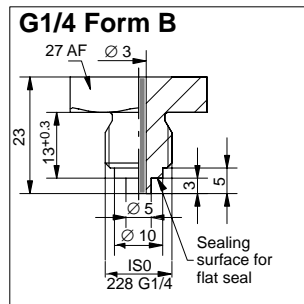
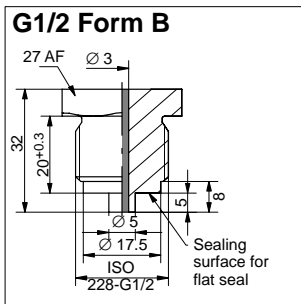
**Specifications (according to DIN 16 086)**

Type		P19																	
<b>Mechanical input characteristics</b>																			
<b>For gauge pressure</b> , measuring span (1 bar=14.5 psi) Initial value	bar	4	5	6	10	16	20	25	40	50	60	100	160	200	250	400	500		
Ambient pressure																			
<b>For absolute pressure</b> , measuring span Initial value	bar	4	5	6	10	16	20	25	40	50									
Vacuum																			
<b>Resonant frequency</b> of the diaphragm	kHz	12			16			23			45			65			85		
<b>Damping capacity</b> of the diaphragm	1	< 0.02																	
<b>Operating range</b> at 23 °C [73 °F]	%	0...160																	
<b>Overload limit</b> at 23 °C [73 °F]	%	200																	
<b>Test pressure</b>	%	200																	
<b>Destruction range</b>	%	> 200																	
<b>With dynamic load</b>																			
admissible pressure	%	100																	
adm. amplitude of vibration to DIN 50100	%	100							70										
<b>Material of the component parts in contact with the medium</b>		1.4542, 1.4301 stainless steel [17-4 PH]																	
<b>Dead volume</b> , without modular pressure port	mm <sup>3</sup>	1000							1300										
<b>Volume change</b>	mm <sup>3</sup>	1.5							1.0										
<b>Output characteristics</b>																			
<b>Span</b>																			
At voltage output 0...10 V (standard)	V	10 V ± 0.5% (max. output signal 11 V)																	
At current output 4...20 mA (option)	mA	16 mA ± 0.5% (max. output signal 22 mA)																	
At current output 0...20 mA (option)	mA	20 mA ± 0.5% (max. output signal 22 mA)																	
Output-signal adjustment range related to the nominal value, coarse adjustment in 3 steps	%	60; 100; 140																	
Fine adjustment	%	± 20																	
<b>Limit load resistance</b> , voltage output	Ω	> 900																	
<b>Load resistance</b> , current output		please see diagram "Transmitter supply voltage"																	
<b>Zero signal</b> , factory setting																			
0...10 V	V	0.015...0.200																	
4...20 mA	mA	3.95...4.24																	
0...20 mA	mA	0.03...0.4																	
Tare range, rel. to the output range, approx.	%	± 20																	
<b>Temp. coeff. of the zero signal</b> per 10 K in the nominal temperature range	%	< ± 0.5; typ. < ± 0.3																	
<b>Temperature coeff. of the span</b> per 10 K in the nominal temperature range	%	+0.2; ± 0.1																	
<b>Non-conformity</b> , zero-based	%	± 0.5							< ± 0.3										
<b>Repeatability</b>	%	< ± 0.04																	
<b>Max. meas. frequency</b> with volt. outp. (-3 dB)	kHz	2																	
with current output (-3 dB)	kHz	1																	
<b>Supply energy</b>																			
Supply voltage, nominal range	V	13.8...30																	
Max. power consumption, voltage output (stand.)	mA	30																	
Max. power consumption, current outputs (option)	mA	50																	
<b>Ambient conditions</b>																			
Nominal temperature range	°C [°F]	-20...+70 [-4...158]																	
Service temperature range	°C [°F]	-25...+70 [-13...158]																	
Storage temperature range	°C [°F]	-40...+85 [-40...185]																	
Max. temperature of the medium (with horizontal installation or pointed downward, i.e. with cooling through ambient temperature < 60 °C [140 °F])	°C [°F]	105 [221]																	
Reference temperature	°C [°F]	23 [73.4]																	
<b>Impact resist.</b> (Type-tested to DIN IEC 68)																			
Impact acceleration	m/s <sup>2</sup> [g]	650 [66]																	
<b>Type of protection</b> to EN 50 529		IP65																	
<b>Material</b> , wetted parts		stainless steel 1.4542 [17-4 PH]																	
Housing		1.4301, housing cover: AlMgCu <sub>2</sub>																	
<b>Mounting position</b>		any																	
<b>Weight</b> , with DIN plug, approx.	kg [oz]	0.25 [8.82]																	

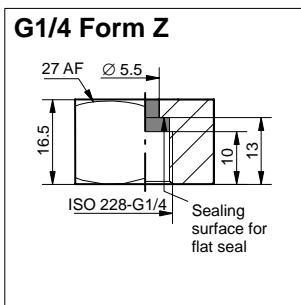
**Accessories:** Supply unit in setup housing on request



**Dimensions of the connection elements with external thread**



**Dimensions of the connection elements with internal thread**



## Options for P19

Code	Option 1: Type of pressure
RV	Gauge pressure (up to 500 bar)
AV	Absolute pressure (up to 50 bar)

Code	Option 2: Measure range, 0... [bar]
213	4.00
215	5.00
216	6.00
218	10.00
220	16.00
221	20.00
222	25.00
224	40.00
225	50.00
226	60.00
228	100.00
230	160.0
231	200.0
232	250.0
234	400.0
235	500.0

Code	Option 3: Pressure port	
13	M20x1.5	
14	G1/4 Form B	external thread
15	G1/2 Form B	
17	NPT 1/4	
51	G1/4 Form Z	internal thread

Code	Option 4: Factory-set type of output signal
V1	0...10 V (three wire operation)
I4	4...20 mA (two wire operation)
I0	0...20 mA (three wire operation)

Code	Option 5: Electrical connection and EMC
A1	Cable, 3 m, free ends, EMC up to 3 V/m (with shield. cable)
A2	DIN 43 650 plug connector <sup>*)</sup> EMC up to 10 V/m (DIN IEC 803-2)
A3	HS6P plug <sup>*)</sup> , EMC up to 3 V/m (with shield. cable)

<sup>\*)</sup> Cable sockets included in the supply

Code	Option 6: Version
N	Standard version
T	+125°C [+257°F] max. permissible ambient temperature Only with Code V1 and A2 or A3

Code	Option 7: Calibrationsignal <sup>**)</sup>
0	Without Calibrationsignal
1	With Calibrationsignal

<sup>\*\*)</sup> For easy readjustment of factory setting.  
The calibration value is given on the trans-  
mitter housing

Ordering-No.: P19-

R	V	2	2	6	1	5	V	1	A	1	N	0

Example: P19-

Devices marked  are available off-the-shelf on short term of delivery at a reasonable price as standard versions. These devices include all marked options and correspond to standard versions as specified on the front page.

Modifications reserved.  
All details describe our products in general form only. They are not to be understood as express warranty and do not constitute any liability whatsoever.

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