

# Digital Precision Pressure Gauge LILLYpress PLUS

# DPG 1510

With analogue output 4...20 mA and large graphic display

Pressure ranges 0 – 2.5 bar to 0 – 1000 bar: accuracy up to  $\pm 0.05\%$  FS<sup>1)</sup>

## Application

The digital pressure gauge DPG 1510 is suitable for measuring positive and negative overpressures of gaseous and liquid media for pressure ranges from 0 – 2.5 bar to 0 – 1000 bar. It also offers a 4...20 mA output for electronic processing of the measured data.

The device has an easy-to-read, 5-digit indication for the operating pressure as well as a bargraph indication. Furthermore, the temperature of the measuring cell and the set pressure unit are displayed.

The robust pressure measuring instruments are built into standard stainless steel instrument cases and are suitable both for use as accurate operating pressure gauge and as reference standard for calibrations.

## Construction

- Bayonet ring case stainless steel, NCS 100 (4"), rotatable approx. 280°
- Large LC graphic display, digit height 14 mm (0.55")
- Temperature indication
- 4...20 mA current output
- Turn-down adjustable to 1:3

## Standard Versions

### Process Connection

Material stainless steel 1.4404 (1.4542)  
Connection thread G 1/2 B (1/2" BSP) (DIN EN 837)

### Measuring Cell / Sensor

Piezoresistive sensor made of stainless steel 316L, hermetically welded<sup>2)</sup>

### Case

With bayonet ring polished, stainless steel 304 (1.4301), NCS 100 (4"), rotatable  
Degree of protection IP65 according to DIN EN 60529  
Window aluminum with PE membrane keypad

### Pressure Ranges / Overload Capability in bar / psi

See page 2

### Display

LC graphic display 400 x 240 dot  
Visible area 58.8 x 35.3 mm (2.31 x 1.39")  
Main indication pressure 5 digits, digit height 14 mm (0.55")  
Additional indication temperature 0 – 50 °C (32 – 122 °F), digit height 3 mm (0.12")  
Indicating range  $\pm 99999$   
Pressure units bar, psi, kPa / MPa, kp/cm<sup>2</sup>  
Temperature units °C, °F

### Features

TARE / ZERO function  
MIN / MAX memory  
Measuring rate adjustable  
Damping adjustable  
Number of decimal places adjustable  
Bargraph indication (pressure)

### Supply Voltage U<sub>v</sub>

12...30 V DC / 100 mA



### Electrical Connection

M12 circular plug connector, 5-pin, A-coded radial at 9 o'clock (1: +Vcc; 3: GND, 4: signal)

### Output Signal

4...20 mA, 3-wire connection  
Load impedance  $R_{max} = (U_v - 11.5) / 0.0215$  A  $\Omega$

### Measurement Accuracy

$\pm 0.1\%$  FS optional  $\pm 0.05\%$  FS<sup>1)</sup>  $\pm 1$  digit

### Temperature

Ambient temperature -20 °C to +70 °C (-4 °F to +158 °F)  
Medium temperature -40 °C to +85 °C (-40 °F to +185 °F)  
Compensated range -20 °C to +70 °C (-4 °F to +158 °F)

### Temperature Influence

$\leq 0.02\%$  FS / 10 K

### Reference Temperature

+25 °C (+77 °F)

### Recommended Calibration Interval

1 year (DAkKS-DKD R-6-1 appendix F)

### Sample Rate

Analogue output < 50 ms (16 bit DAC)  
Refresh rate display 3 Hz

### Electromagnetic Compatibility

Interference emission and stability according to DIN EN 61326

## Options

- Connection threads ISO 1179-2-G 1/4" A-S max. 0 – 600 bar  
1/2" NPT  
1/4" NPT  
M 20x1.5
- Front foil neutral or according to customer request
- Absolute pressure
- Increased measurement accuracy 0.05 % FS<sup>1)</sup>

## Ordering Information

Please specify in your order:

**Basic model** DPG 1510  
**Process connection** e.g. 1/2" NPT  
**Pressure range** e.g. 0 – 4 bar  
**Option** e.g. absolute pressure

**Example** DPG 1510, 1/2" NPT, 0 – 4 bar

<sup>1)</sup> at +23 °C (+73.4 °F), limited temperature range 0 – 50 °C (32 – 122 °F), no turn-down

<sup>2)</sup> except measuring ranges > 160 bar to  $\leq 1000$  bar: O-ring FKM

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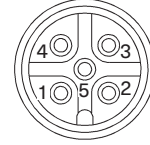
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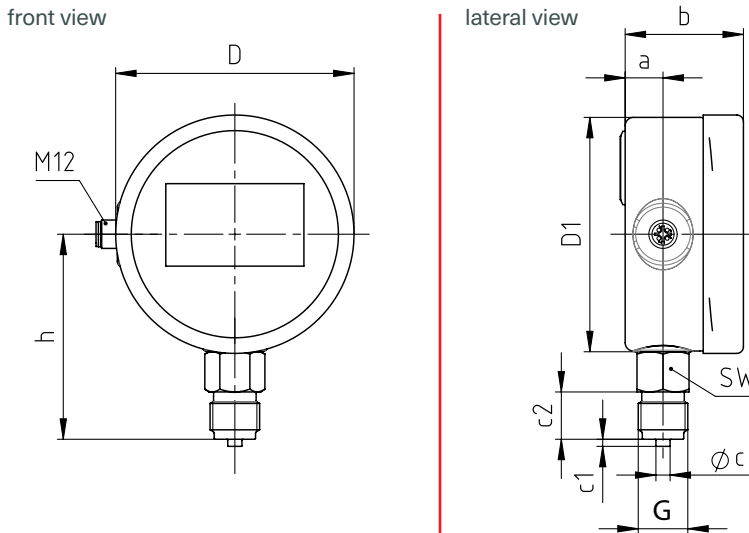
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Measuring Ranges / Overload Capability in bar / psi			
Measuring range		Overload	
bar	psi	bar	psi
-1 / +1.5	-14.5 / +30	3.5	50
-1 / +3	-14.5 / +60	5.5	80
-1 / +5	-14.5 / +100	9	130
-1 / +9	-14.5 / +160	14	200
-1 / +15	-14.5 / +200	22	320
0 - 2.5 <sup>1)</sup>	0 - 30 <sup>1)</sup>	3.5	50
0 - 4 <sup>1)</sup>	0 - 60 <sup>1)</sup>	5.5	80
0 - 6 <sup>1)</sup>	0 - 100 <sup>1)</sup>	9	130
0 - 10 <sup>1)</sup>	0 - 160 <sup>1)</sup>	14	200
0 - 16 <sup>1)</sup>	0 - 200 <sup>1)</sup>	20	300
0 - 25 <sup>1)</sup>	0 - 400 <sup>1)</sup>	38	550
0 - 40 <sup>1)</sup>	0 - 600 <sup>1)</sup>	55	800
0 - 60 <sup>1)</sup>	0 - 1000 <sup>1)</sup>	90	1300
0 - 100 <sup>1)</sup>	0 - 1500 <sup>1)</sup>	150	2200
0 - 160	0 - 2500	220	3500
0 - 250	0 - 4000	400	6000
0 - 400	0 - 6000	600	9000
0 - 600	-	900	-
0 - 700	0 - 10000	1100	13000
0 - 1000	0 - 15000	1500	20000

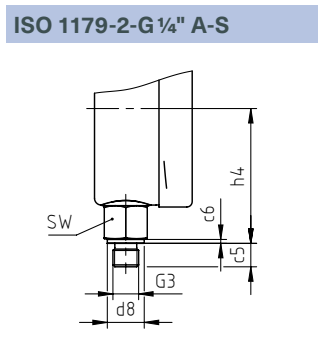
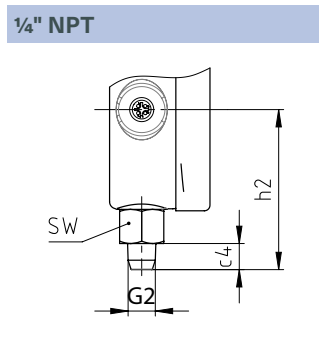
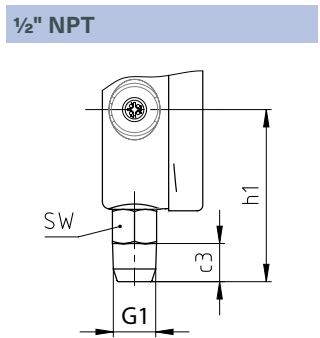
Electrical Connection	
Pin assignment	Description
1	+U <sub>V</sub> : 12...30 V DC
2	free
3	GND
4	I <sub>OUT</sub> : 4...20 mA
5	free



**Process Connection**  
**Standard: G 1/2 B / optional: M 20x1.5**



**Optional process connections**



**Dimensional Data (mm / inch) and Weight (kg / lb)**

NCS	a	b	c	c1	c2	c3	c4	c5	c6	D	D1	d8	G	G1	G2	G3
100 4"	16 0.63	50 1.97	6 0.24	3 0.12	20 0.79	19 0.75	13 0.51	12 0.47	2 0.08	101 3.98	99 3.9	18.9 0.74	G 1/2 B (1/2" BSP) M 20x1.5	1/2" NPT	1/4" NPT	G 1/4 A

h <sup>±1</sup>	h1 <sup>±1</sup>	h2 <sup>±1</sup>	h4 <sup>±1</sup>	SW	approx. weight
87 3.43	84 3.31	80 3.15	69 2.72	22 0.87	0.5 1.1

<sup>1)</sup> pressure range also as absolute pressure