

Digital Precision Pressure Gauge 4...20 mA LILLY_{press} PLUS with Large Graphic Display

Pressure ranges from 0 – 2.5 bar to 0 – 700 bar, accuracy $\leq \pm 0.1$ % FS

DPG 1510

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 – 700 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

- Accuracy $\leq \pm 0.1$ % FS
- Piezoresistive sensor made of stainless steel
- 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 $\frac{1}{2}$ B (½" BSP) (DIN EN 837)

Measuring Cell/Sensor

Piezoresistive sensor made of stainless steel 316L

Case

With bayonet ring polished, stainless steel 304 (1.4301), NCS 100 (4"), rotatable
Degree of protection IP65 according to DIN EN 60 529
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: ± 99999
Pressure units: bar, psi, kPa/MPa, kp/cm²
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_v

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 Ω

Measurement Accuracy

$\leq \pm 0.1$ % FS

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

≤ 0.05 % FS/10 K

Reference Temperature

+25 °C (+77 °F)

Long-term Stability

≤ 0.05 % FS/a (at reference conditions)

Sample Rate

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

Electromagnetic Compatibility

Interference emission and stability according to DIN EN 61 326

Options

- Connection threads: ISO 1179-2-G ¼"A-S max. 0 – 600 bar
½" NPT
¾" NPT
M20x1.5
- Front foil neutral or according to customer request
- Absolute pressure

Ordering Information

Please specify in your order:

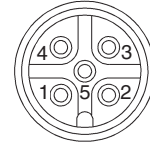
Basic model DPG 1510
Process connection e.g. ½" NPT
Pressure range e.g. 0 – 4 bar
Option e.g. absolute pressure

Example: DPG 1510, ½" NPT, 0 – 4 bar

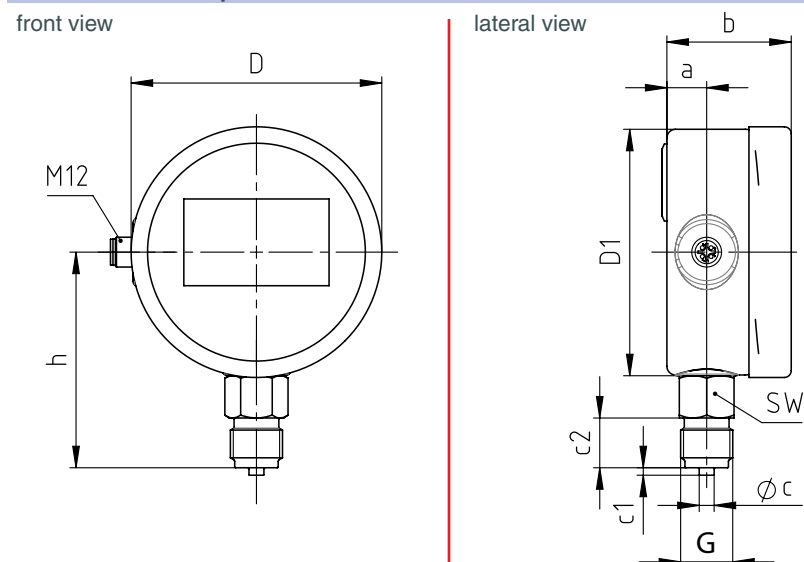
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Measuring Ranges/Overload Capability in bar/psi			
Measuring range		Overload	
bar	psi	bar	psi
-1 / +1.5	-14.5 / +30	3.5	50
-1 / +3	-14.5 / +60	5.5	80
-1 / +5	-14.5 / +100	9	130
-1 / +9	-14.5 / +160	14	200
-1 / +15	-14.5 / +200	22	320
0 - 2.5	0 - 30	3.5	50
0 - 4	0 - 60	5.5	80
0 - 6	0 - 100	9	130
0 - 10	0 - 160	14	200
0 - 16	0 - 200	20	300
0 - 25	0 - 400	38	550
0 - 40	0 - 600	55	800
0 - 60	0 - 1000	90	1300
0 - 100	0 - 1500	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

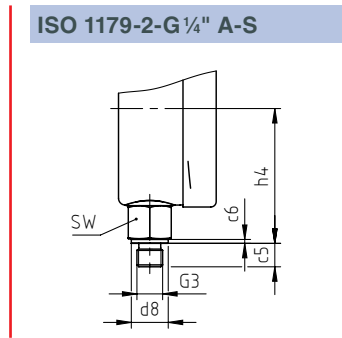
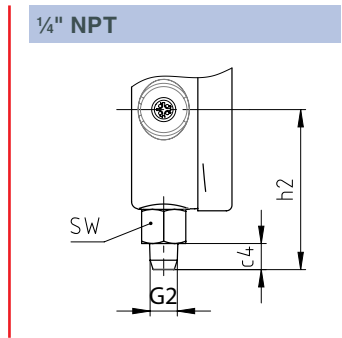
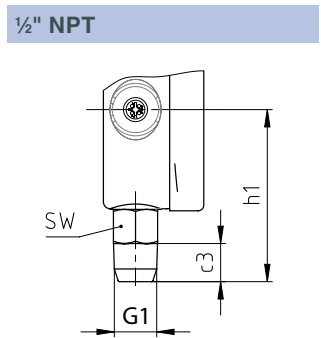
Electrical Connection	
Pin assignment	Description
1	+U _v : 12...30 V DC
2	free
3	GND
4	I _{OUT} : 4...20 mA
5	free



Process Connection
Standard: G ½B / optional: M20x1.5



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 ½B (½" BSP) M20x1.5	½" NPT	¼" NPT	G ¼A

h ^{±1}	h1 ^{±1}	h2 ^{±1}	h4 ^{±1}	SW	approx. weight
87 3.43	84 3.31	80 3.15	69 2.72	22 0.87	0.5 1.1

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