

Digital High-pressure Gauge 4...20 mA LILLY_{press} PLUS with Large Graphic Display

Pressure ranges 0 – 1000 bar to 0 – 3000 bar, accuracy $\leq \pm 0.25$ % FS

DPG 1500

Application

The digital pressure gauge DPG 1500 is suitable for measuring positive overpressures of gaseous and liquid media for pressure ranges from 0 – 1000 bar to 0 – 3000 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 for quick changes. 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 $\leq \pm 0.25$ % FS
- Thin film sensor (electron beam welding)
- Bayonet ring case stainless steel, NCS 100 (4"), rotatable approx. 340°
- Large LC graphic display, digit height 14 mm (0.55")
- Temperature indication
- 4...20 mA current output
- High burst pressures and high overload

Standard Versions

Process Connection

Material: stainless steel 1.4404 (1.4542)
 Connection threads: G $\frac{1}{2}$ B ($\frac{1}{2}$ " BSP) (DIN EN 837) ≤ 2500 bar
 $\frac{1}{4}$ " HPF $\frac{3}{16}$ " – 18 UNF 0 – 3000 bar

Measuring Cell/Sensor

Thin film measuring cell stainless steel 1.4548 (AISI 630/17-4PH)
 Hermetically welded, electron beam welding

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 and Burst Pressure

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: $-20 / +70$ °C ($-4 / +158$ °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

¹⁾ at +23 °C (73.4 °F), limited temperature range 0 – 50 °C (32 – 122 °F)



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

$\leq \pm 0.25$ % 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

≤ 0.1 % FS/10 K

Reference Temperature

$+25$ °C ($+77$ °F)

Long-term Stability

≤ 0.08 % 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: $\frac{1}{2}$ " NPT max. 0 – 1600 bar
 $\frac{1}{4}$ " NPT max. 0 – 1600 bar
 M20x1.5 max. 0 – 1600 bar
- High-pressure connection: $\frac{1}{4}$ " HPF $\frac{3}{16}$ " – 18 UNF 0 – 1000 bar to (for $\frac{1}{4}$ " high pressure tube) 0 – 2500 bar
- Front foil neutral or according to customer request
- Increased measurement accuracy 0.1 % FS¹⁾

Ordering Information

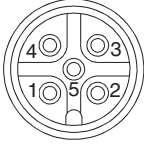
Please specify in your order:

Basic model DPG 1500
Process connection e.g. G $\frac{1}{2}$ B
Pressure range e.g. 0 – 1600 bar
Option e.g. increased measurement accuracy 0.1 % FS

Example: DPG 1500, G $\frac{1}{2}$ B, 0 – 1600 bar

Measuring range		Overload		Burst pressure	
bar	psi	bar	psi	bar	psi
0 – 1,000	0 – 15,000	1,500	20,000	5,000	72,000
0 – 1,600	0 – 20,000	2,400	30,000	6,000	85,000
0 – 2,000	0 – 30,000	3,000	40,000	4,000	55,000
0 – 2,500	–	3,700	–	5,000	–
0 – 3,000	0 – 40,000	4,000	55,000	6,000	85,000

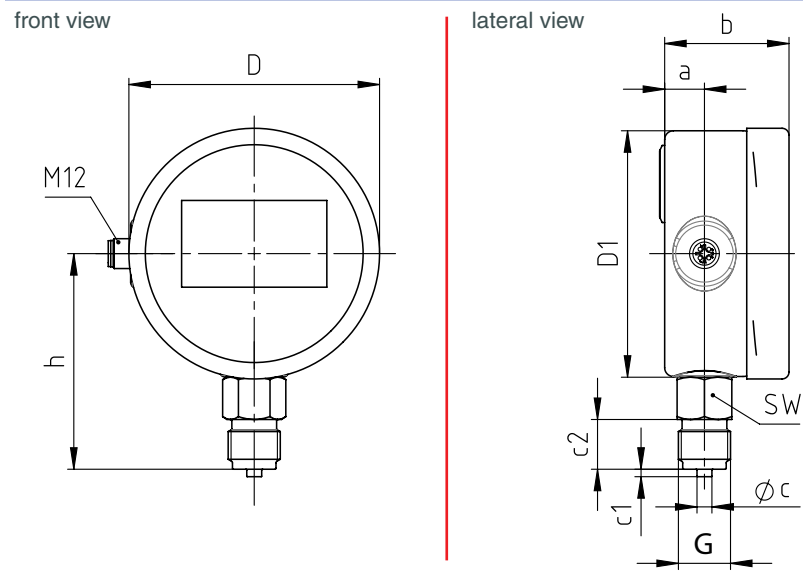
Electrical Connection



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

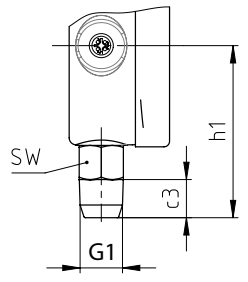
Process Connection

Standard: G ½ B / optional: M20x1.5

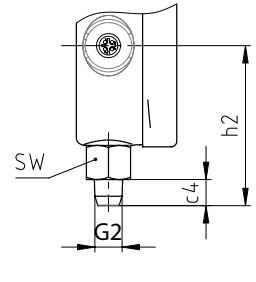


Optional process connections

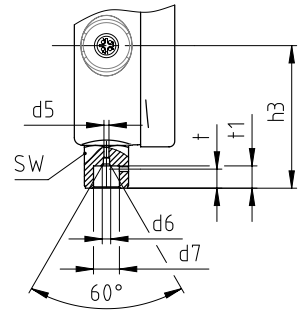
½" NPT



¼" NPT



High-pressure connection ¼" HPF ¼" – 18 UNF



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

NCS	a	b	c	c1	c2	c3	c4	D	D1	d5	d6	d7	G	G1	G2
100 4"	16 0.63	50 1.97	6 0.24	5 0.2	20 0.79	19 0.75	13 0.51	101 3.98	99 3.9	3 0.12	4 0.16	¼" HPF ¼" – 18 UNF	G ½ B (½" BSP) M20x1.5	½" NPT	¼" NPT

h ^{±1}	h1 ^{±1}	h2 ^{±1}	h3 ^{±1}	t	t1	SW	approx. weight
87 3.43	84 3.31	80 3.15	71 2.8	9.5 0.37	11 0.43	22 0.87	0.46 1.01

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