

Digital Precision Pressure Indicator

DPG 3600

Absolute, gauge or differential pressure

Applications

- Calibration laboratories
- Service industries and calibration services
- Laboratories for research and development
- Pressure gauge, pressure switch and sensor manufacturing as well as transmitter calibration and creation of certificates
- Long-term measurements

Construction

- **Pressure ranges**
gauge pressure: -1 / +1 bar to 0 – 1000 bar
(-30 inHg / +15 psi to 0 – 15,000 psi)
absolute pressure: 0 – 1 bar to 0 – 1000 bar
(0 – 15 psi to 0 – 15,000 psi)
differential pressure: ± 30 mbar to ± 300 mbar (± 1 to ± 10 inHg) measurement
uncertainty (k = 2): better than 0.01 % FS,
better than differential pressure ± 0.03 % FS
- Up to two separate internal precision sensors possible
- Modular construction
- Fully digital measuring instrument
- Automatic creation of test certificates via optional calibration software DynaCal

Description

Application

The modular pressure indicator DPG 3600 is equipped with up to two precision sensors (in two separate channels) and an optional barometric reference. Due to an optionally certified measurement uncertainty of 0.01 % FS, differential pressure of ± 0.03 % FS of the entire measuring chain, it is primarily used as transfer / working standard for testing and calibrating various pressure measuring instruments.

Functionality

A colour touch screen and intuitive menu navigation ensure very easy operation. Especially with manual pressure generation, the very high measuring rate of this fully digital pressure indicator is of advantage, as pressure changes in the measuring system are indicated nearly in real time.

Software

Besides the optionally available calibration software DynaCal, which allows for comfortable calibration of pressure measuring instruments including automatic creation of test certificates, the user is able to create own software programmes, e.g. via LabVIEW®.

Communication

For integration in existing systems, an RS-232, Ethernet or optionally an IEEE-488.2 interface or an analogue output is available.

Complete Testing and Calibration Systems

Fully mobile or stationary test benches can be manufactured upon customer request.

barotec
KALIBRIERTECHNIK



Technical Data

Pressure Ranges

Gauge pressure	-1 / +1 bar	-30 inHg / +15 psi
	-1 / +3 bar	-30 inHg / +50 psi
	-1 / +10 bar	-30 inHg / +150 psi
	-1 / +30 bar	-30 inHg / +500 psi
	-1 / +100 bar	-30 inHg / +1500 psi
	0 – 2 bar	0 – 30 psi
	0 – 5 bar	0 – 70 psi
	0 – 20 bar	0 – 300 psi
	0 – 60 bar	0 – 800 psi
	0 – 200 bar	0 – 3,000 psi
Absolute pressure	0 – 400 bar	0 – 5,000 psi
	0 – 700 bar	0 – 10,000 psi
	0 – 1000 bar	0 – 15,000 psi
	0 – 1 bar	0 – 15 psi
	0 – 3 bar	0 – 50 psi
	0 – 10 bar	0 – 150 psi
	0 – 30 bar	0 – 500 psi
	0 – 100 bar	0 – 1,500 psi
	0 – 300 bar	0 – 4,000 psi
	0 – 700 bar	0 – 10,000 psi
Differential pressure	0 – 1000 bar	0 – 15,000 psi
	± 30 mbar	± 1 inHg
	± 100 mbar	± 3 inHg
	± 300 mbar	± 10 inHg

Optional Barometric Reference

The barometric reference is required for the change of absolute pressure \leftrightarrow gauge pressure.

Pressure range: 800 mbar to 1200 mbar abs. (12 psi to 17 psi abs.)

Accuracy: 0.008 % FS

Pressure Units

23 fixed and 1 freely programmable

Instrument Version

Desktop case

Optional: 19" rack mounting with side panels incl. mounting kit

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Technical Data, Options, Scope of Delivery, Ordering Information

Display

Screen division: 1 line per sensor
Resolution: 6 digits
Keypad: colour touch screen
Warm-up time: < 10 minutes
Response time: approx. 10 ms

Connections (see also on page 3)

Number of sensors that can be integrated 1 (channel A) or
Optional: 2 (channel B) and/or barometric reference
Optional: external installation of sensors with 1.5 m cable

Pressure Connections

G ¼" female
Optional: 6 mm (0.24") Swagelok® tube fitting or connection adapter

Medium

Clean, dry, non-corrosive, non-combustible and non-oxidising
gases (> 1 bar fluids possible)

Overrange Protection

150 %
Optional: external pressure relief valves

Supply Voltage

Auxiliary energy 88...264 V AC, 47...63 Hz

Permissible Ambient Conditions

Operating temperature: +10 °C to +40 °C (+50 °F to +104 °F)
Storage temperature: 0 °C to +70 °C (+32 °F to +158 °F)
Relative humidity: 0 to 95 % r. h. (non-condensing)
Compensated
temperature range: +15 °C to +35 °C (+59 °F to +95 °F)

Communication

Interfaces: RS-232, USB, Ethernet
Optional
Interface: IEEE-488.2
Analogue output (16 bit): 0...1 V, 0...5 V, 0...10 V or 4...20 mA
Switching outputs: 24 V DC PWM or TTL level
Analogue inputs: 4...20 mA or 0...10 V,
others upon request

Instruction Sets

DPG 3600
Optional: alternative instruction sets possible,
alignment to existing HOST software upon request

Approvals and Certificates

EMC directive 2014/30/EU, DIN EN 61 326-1 emission
(group 1, class A) and stability (industrial sector)

Calibration certificate 3.1 according to DIN EN 10 204
Optional: internationally traceable calibration certificate

Options

- Connections:
 - second sensor (channel B)
 - external installation of sensors with 1.5 m cable
 - 6 mm Swagelok® tube fitting or connection adapter
- Barometric reference
The barometric reference is required for the change of absolute pressure ⇔ gauge pressure.
pressure range: 800 mbar to 1200 mbar abs. (12 psi to 17 psi abs.)
accuracy: 0.008 % FS
- 19" rack mounting with side panels incl. mounting kit
- Portable case
- Communication
 - IEEE-488.2 interface
 - analogue output: 0...1 V, 0...5 V, 0...10 V or 4...20 mA
 - switching outputs: 24 V DC PWM or TTL level
 - analogue inputs: 4...20 mA or 0...10 V, others upon request
- Instruction sets DPI or DPG, alternative instruction sets possible, alignment to existing HOST software upon request
- Calibration software DynaCal
- Internationally traceable calibration certificate
- External pressure relief valves
- Dirt traps
- Medium separators
- Pressure generators
- Vacuum pumps

Scope of Delivery

- Digital precision pressure indicator
- Mains cable 1.5 m
- Operating instruction
- Calibration certificate 3.1 according to DIN EN 10 204

Ordering Information

Please specify in your order:

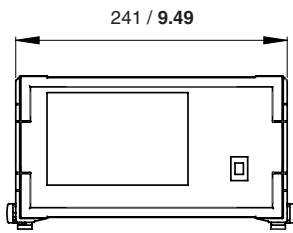
Basic model	DPG 3600
Pressure range	pressure range 1, e.g. 0 – 200 bar
Connection	pressure sensor (channel A)
Options	e.g. pressure sensor (channel B)

Example:	DPG 3600, 0 – 200 bar, pressure sensor (channel A), pressure sensor (channel B)
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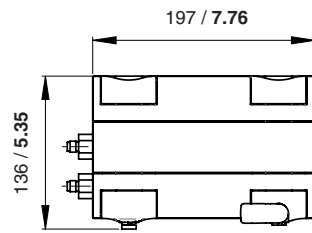
Dimensional Data and Weight

Dimensional Data in mm/inch

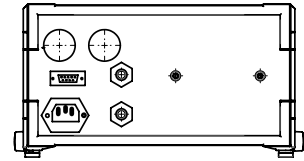
Front view



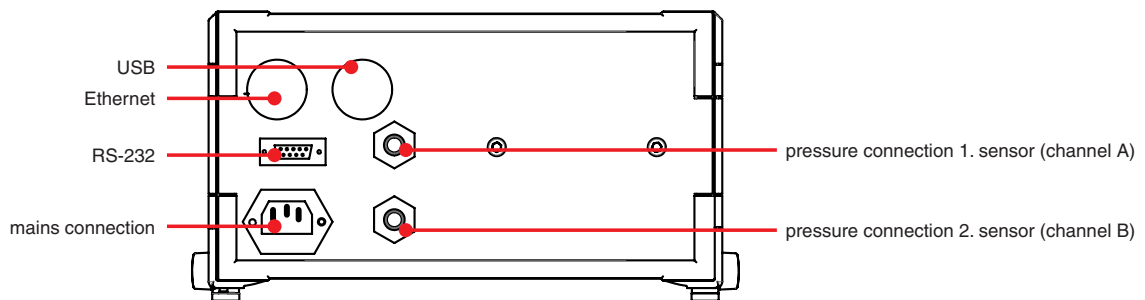
Lateral view



Back view



Electrical connections and pressure connections – back



Weight

Approx. 2.0 kg (4.41 lb)