bar PMDA PRECISION BAROMETER

Measuring system for measuring, displaying, monitoring and evaluating barometric ambient pressure

KEY FEATURES

- Display and analogue converter for pressure sensor readings in aluminium wall-mounted housing
- RS232 or USB data interface, measured value ASCII coded, continuous output
- Perfect for precision pressure transducers of type FP5000
- 2 user-programmable limit switching points
- Supply voltage: 22..26 Volt DC (approx. 10 Watt)
- Specific customisation for your measuring task

APPLICATIONS

- Building and room monitoring
- Clean rooms
- Hyperbaric chamber
- Negative pressure chamber

The PMDA is a measuring system for recording, displaying, monitoring and evaluating the barometric ambient pressure in facility areas. This includes, for example, clean rooms or positive/negative pressure chambers. Continuous monitoring helps to ensure product quality, to document in accordance with standards and to store goods/materials correctly.

The system is available in different versions. The pressure sensor reading is shown on a display and converted in parallel into an analogue voltage signal of 0 to 10 V and is available for further evaluation. Optionally, the measured value is ASCII coded and continuously transmitted via an RS232/USB data interface.

The measuring system is prepared for the installation of a precision pressure transducer type FP5000 or also PARO-6000-16B (not included in delivery). If the measuring system and the precision pressure transducer are ordered at the same time, the sensor is installed in the housing at the time of the sensor is installed in the housing.

VERSIONS

Generelle Spezifikationen general specifications			
Gerätename *Devicename*	PMDA-FP5000UQ-...	PMDA-FP5000UR-...	PMDA-PARO6000-...
Sensor *Sensor*	FP5000	FP5000	Paro-6000-16B
Messbereich *Measurement range*	580-1080 mBar	880-1080 mBar	800-1100 mBar
Genauigkeit [22 °C] *Accuracy*	± 0,8 mBar	± 0,3 mBar	± 0,08 mBar

PRESSURE CONNECTION

- Opening on underside of housing with air flow damper
- Optional pressure connection possible on request

DISPLAY (alternative versions)

- Colour capacitive HMI touch display in 3.2". [Mounting: on front panel]
- Colour, capacitive HMI touch display in 3.2" [Mounting: terminal box]
    - o Internal display only for configuration and test purposes

- Colour capacitive HMI touch display in 7".
  [Mounting: on front panel]
- Colour, resistive HMI touch display in 7".
  [Mounting: on front panel]

RESOLUTION

- A/D converter: 24 bit
- D/A converter: 16 bit

SCALING ANALOGUE OUTPUT/ FACTORY CONFIGURATION

Factory configurable within the measuring range of the selected pressure transducer.

- Analogue output options:
  - o 0 ... +5 volts (max. 5 mA)
  - o 0 ... +10 volts (max. 5 mA)
  - o -5 ... +5 volts (max. 5 mA)
  - o -10 ... +10 volts (max. 5 mA)
- Conversion rate: 4 Hz (other conversion rates available on request)
- Application-dependent programming in the factory of the filtering

OPTIONAL DIGITAL INTERFACE

- Measured value ASCII coded
- Continuous Output
- RS232 or USB data interface

LIMIT VALUE

- 2 user-programmable limit switch points
- 2 potential-free switching contacts (max. 30 V 0.3 A)
- Limit value status indication on display
- 2 limit value LEDS (with internal display)

SUPPLY VOLTAGE

- Ub: 22...26 Volt DC (approx. 10 Watt)

HOUSING

- Design: Aluminium wall-mounted housing
- Electrical connection via cable gland to internal screw terminals
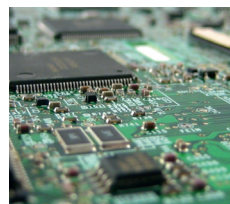- Dimensions approx. (WxHxD): 330 x 290 x120

- IP protection class according to DIN EN 60529
  o Version display on front panel (outside): IP50
  o With display inside: IP54
  o With inside display and pressure connection: IP65

TEMPERATURES

- Operating temperature range: 5...40 degrees C°
- Storage temperature range: -20...+60 degrees C°

SPECIAL VERSIONS (CUSTOMER REQUIREMENTS)

The order designation ...-Zxxxx describes the customer-specific special version. Technical modifications/adaptations are possible. **Please contact us for more information!**

WITH ALTHEN YOU BENEFIT FROM

- Customised sensor solutions for your complex measurement tasks
- Support for your planning with our expertise
- In-house laboratory and production
- Guaranteed quality and durability of our products
- Sensor solutions and measuring chains from a single source
- Reliable solutions at fair prices

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Anzeige Displays	
PMDA-...-D3CO-...	Farbiges, kapazitives HMI-Touchdisplay 3.2" [auf Frontplatte] Colored, capacitive HMI touch display 3.2" [on front panel]
PMDA-...-D3CI-...	Farbiges, kapazitives HMI-Touchdisplay 3.2" [im Anschlusskasten] Colored, capacitive HMI touch display 3.2" [in terminal box]
PMDA-...-D7CO-...	Farbiges, kapazitives HMI-Touchdisplay 7" [auf Frontplatte] Colored, capacitive HMI touch display 7" [on front panel]
PMDA-...-D7RO-...	Farbiges, resistives HMI-Touchdisplay 7" [auf Frontplatte] Colored, resistive HMI touch display 7" [on front panel]

Optionale digitale Schnittstellen Optional digital interfaces	
PMDA-...-232-...	RS232, kontinuierliche Datenausgabe, ASCII kodiert RS232, continuous data output, ASCII coded
PMDA-...-USB-...	USB, kontinuierliche Datenausgabe, ASCII kodiert USB, continuous data output, ASCII coded
PMDA-...-000-...	---

Analog-Digital Wandler Analog-Digital Converter		---
Auflösung resolution	24 bit	---

Digital-Analog Wandler Digital-Analog Converter	
Auflösung resolution	16 bit

Analogausgang Analog output	Werkseitig konfigurierbar innerhalb des Messbereiches Factory configurable within the measuring range
PMDA-...-005-...	0 .. +5 Volt (max. 5 mA)
PMDA-...-010-...	0 .. +10 Volt (max. 5 mA)
PMDA-...-B05-...	-5 .. +5 Volt (max. 5 mA)
PMDA-...-B10-...	-10 .. +10 Volt (max. 5 mA)
PMDA-...-000-...	kein Analog Ausgang no analog output

Grenzwertüberwachung Limit value monitoring	
Ausführung Type	potentialfreie Schaltkontakte potential-free switching contacts
Anzahl quantity	2
Belastbarkeit Load capacity	max. 30 V / 0,3 A
Schaltpunkte	Vom Benutzer einstellbar User adjustable

Druckanschluss Pressure port	
PMDA-...-AFS-...	Luftströmungsdämpfer Air flow silencer
PMDA-...-XXX-...	Externer Druckanschluss auf Anfrage External pressure connection on request

Gehäuse Case	
Typ Type	Wandgehäuse, Aluminium wall mounted casing, aluminium
Maße (BxHxT) Dimension (WxHxD)	330 x 290 x 120 mm
IP-Schutzklasse IP-Protection class	IP50 höher auf Anfrage IP50 higher on demand

Betriebstemp.-Bereich Operating temp. range	5 .. 40 °C
Lagertemp.-Bereich Storage temp. Range	-20 .. 60 °C

Anschlussbelegung
Terminal assignment

1	Ub +24 Volt DC
2	Ub GND
3	Schaltkontakt SK1 / Switching contact SK1
4	Schaltkontakt SK1 / Switching contact SK1
5	Schaltkontakt SK2 / Switching contact SK2
6	Schaltkontakt SK2 / Switching contact SK2
7	Analogausgangssignal / Analog output signal
8	Masse Analogausgang / Ground analog output
9	nicht beschaltet / not connected
10	Masse Digital Ground / Ground Digital
11	RS232 (RX)
12	RS232 (TX)

Figure shows device with open terminal compartment and option „PMDA-…-D3CI-…„

Versorgungsspannung
Powersupply

Spannungsbereich / Supply voltage range	22 .. 26 V DC
Leistungsaufnahme / Power consumption	10 W

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