

BD | SENSORS

pressure measurement



pressure and level Switches International (011)462-4253 / www.switches.co.za



Pressure at the highest level

“Successful medium-size companies are not successful because they are active in many areas, but rather because they concentrate on one area and do it better than anyone else.”

This is our philosophy. That's why BD SENSORS has concentrated on electronic pressure measurement technology from the beginning.

With our unremitting product and quality strategy we have been successful in becoming a major player on the world market for electronic pressure sensing devices within a few years.

With 160 employees at 4 locations in Germany, the Czech Republic, Russia and the Benelux States BD SENSORS has solutions from **0.1 mbar to 2200 bar**:

- **Pressure sensors, pressure transducer, Pressure transmitters**
- **Electronic pressure switches**
- **Pressure measuring devices with display and switching output**
- **Hydrostatic level probes**

Two pressure transmitters and a submersible sensor, based on a stainless steel silicon sensor were the beginning. Today the range extends to more than **40 standard products**, from economical OEM devices to high-end products with HART® communication or field bus interface.

In addition we have developed hundreds of customerspecific **applications, underlining the competence and flexibility of BD SENSORS**. The excellent price/efficiency ratio of our products is proof of **the fact that our are able to meet the toughest demand: Being a problem-solver for our customer.**

For large production batches as well as for small production numbers, no matter for what medium or external factors, with almost any mechanical or electrical interface – we solve your problem flexibly, quickly and cost-consciously.



The requirement of the job for pressure and level measuring devices are multifarious and, in addition to intelligent design solutions, require most of all appropriate sensor technology.

BD SENSORS is one of the few companies worldwide using all for elements of sensor technology of modern pressure measurement.

Sensor Technology



Silicon sensor without media isolation

Type DSP 201

Pressure range: 0...10 to 0...1000 mbar

Application: Gases, compressed air, liquids and non-aggressive media

Stainless steel silicon sensor

Type DSP 401 / DSP 403 / DSP 404

Pressure range: 0...0.1 to 0...600 bar

Application: Gaseous and liquid media compatible with stainless steel



Stainless steel thin-film sensor

Type ST 01

Pressure range: 0...40 to 0...2200 bar

Application: Hydraulic applications, high dynamic pressure requirements



Ceramic thick film sensor

Type ME 501 with flush diaphragm

Type ME 651 in monolithic design

Pressure range: 0...1 to 0...500 bar

Application: **ME 501** for aggressive media and oxygen; with flush diaphragm preferred for materials with high viscosity or contaminated media

ME 651 for OEM products with excellent price/efficiency ratio



Capacitive ceramic sensor

Type ME 704

Pressure range: 0...0.06 bar to 0...20 bar

Application: preferred for hydrostatic level measurement, as screw-in or submersible sensor, and for aggressive media (acids, caustic solutions, etc.)

Thus showing that we live up to our philosophy of finding the right solution to every application involving electronic pressure measurement for our customers.



Industrial Pressure Transmitters

high precision and long-term stability

For under-, over- and absolute pressure measurement

Pressure range 0...10 mbar to 0...2200 bar

Differential pressure measurement

Pressure range 0...0.1 mbar to 0...16 bar

Based on different sensor technologies, combined with housing materials of stainless steel and various plastics, suitable for almost all industrial gases and fluids.

Can be adapted to almost any application due to a variety of electrical and mechanical connectors.

Standard



Silicon sensor without media isolation

DMP 343

Pressure range	0...10 to 0...1000 mbar
Accuracy	0.175 / 0.25 % FSO
Option	stainless steel field housing Ex-version
Application	extreme low pressure for gases and compressed air

Gases



Stainless steel silicon sensor

DMP 331

Pressure range	0...0.1 to 0...40 bar
Accuracy	0.05 / 0.1 / 0.125 / 0.175 / 0.25 % FSO
Option	stainless steel field housing Ex-version
Application	low pressure for gases, fluids and media, which are compatible with stainless steel and silicon oil filling

Universal

SIL



Stainless steel silicon sensor

DMP 333

Stainless steel thin-film sensor

DMP 334

Pressure range	0...60 to 0...600 bar	0...600 to 0...2200 bar
Accuracy	0.05 / 0.125 / 0.175 % FSO	0.125 / 0.175 % FSO
Option	stainless steel field housing SIL version Ex-version	stainless steel field housing

Universal Hydraulic/Heavy Duty



Ceramic sensor

DMK 331

Pressure range	0...0.4 to 0...600 bar
Accuracy	0.25 % FSO
Option	stainless steel field housing Ex-version
Application	low and high pressure for media, which are not compatible with stainless steel or silicon oil fillings (e.g. oxygen or medial applications) PVDF ports for aggressive media

Aggressive Media

SIL





Output signal:	2-wire (4...20 mA) or 3-wire (e.g. 0...10 V, 0...20 mA, ...)
Electrical connection:	various plug connectors (DIN or circular plug) or cable outlet
Mechanical connection:	Inch, NPT and UNF Thread
Options:	Ex-version (Zone 0) Stainless steel field housing RS 232 Interface

Precision



Stainless steel silicon sensor

DMP 331i

DMP 333i

LMP 331i

Pressure range	0...0.17 to 0...35 bar	0...70 to 0...600 bar	0...0.17 to 0...35 bar
Filling Height			0...1.7 to 0...350 mH ₂ O
Accuracy	0.05 % FSO		
Option	Ex-version		
Features	intelligent electronics for linearisation and active temperature compensation (temperature tolerance: 0.02 %/10 K) with analogue output 4...20 mA/2-wire optional with communication interface for offset and span adjustment with analogue output 4 ... 20 mA / 2-wire or 0 ... 10 V / 3-wire		
Application	high precision pressure transmitter with outstanding thermal behavior for laboratories, calibration units and test stands		



Programming kit

CIS-Set

Software	With the software „Config“ pressure range, turn-down, damping and unit can be set.
Scope of delivery	- Software „Config“ on CD (Windows® programs) - Adapt 1 with integrated connection cables - 24 VDC power supply unit



Differential Pressure



Stainless steel silicon sensor

DMD 331

Pressure range	0...0.2 to 0...16 bar
Differential pressure	0...20 mbar to 0...16 bar
Accuracy	0.25 % FSO
Application	mechanical engineering and plant construction filter monitoring hydraulic applications

Gases / wet-wet



Silicon sensor without media isolation

DMD 341

Pressure range	0...6 to 0...1000 mbar
Accuracy	0.175 / 0.5 / 1.0 % FSO
Option	with display and 1 or 2 contacts
Application	filter controlling air conditioning technology

Gases



Inductive sensor with capsule element

DPS 100

Pressure range	0...0.1 to 0...1000 mbar
Accuracy	0.1 / 0.25 / 0.5 % FSO
Option	LC-display limit contacts
Application	heating and air conditioning clean room technology filter technology medical equipment

Gases



Stainless steel silicon sensor

DPS 200

Pressure range	0...1 to 0...2.5 mbar
Accuracy	0.5 / 1 % FSO
Option	5-digit LC-display
Application	heating and air conditioning clean room technology filter technology medial equipment

Gases

Processing Industry

Capacitive pressure sensor

LD 301



Differential pressure	0...0.05 kPa to 0...25 MPa
Pressure port	1/4"-18 NPT, 1/2"-14 NPT
Accuracy	0.075 % FSO
Option	LC-display mounting bracket
Features	Ex-version, HART®-Communication Turn-Down 1:120 PID-Communication

HART®



Screw-in Transmitters for Level Monitoring and Processing Industry

with semi-flush stainless steel
or ceramic diaphragm



Due to the ability to combine stainless steel and ceramic diaphragms with housing materials of stainless steel or plastic and different sealing materials, our screw-in transmitters are suitable for almost all liquids occurring in industrial level and process measurement.

Output signal:	2-wire (4...20 mA) or 3-wire (0...10 V, 0...20 mA, etc.)
Housing material:	Stainless steel, PVC, PVDF
Diaphragm material:	Stainless steel, ceramic (for aggressive media with media resistant coating)
Options:	Ex-version, Zone 0 Stainless steel field housing



Stainless steel silicon sensor

LMP 331

Pressure range	0...0.1 to 0...40 bar
Level	0...1 to 0...400 mH ₂ O
Process connection	G 3/4" flush
Accuracy	0.05 / 0.125 / 0.175 / 0.25 % FSO
Option	Ex-version
Recommended for	water, heating and diesel oil

SIL



Ceramic sensor

LMK 331

Pressure range	0...0.16 to 0...60 bar
Level	0...1.6 to 0...600 mH ₂ O
Process connection	G 3/4" flush / G1 1/2" flush
Accuracy	0.25 % FSO
Option	Ex-version PVC or PVDF pressure port
Recommended for	sewage, pasty and viscous media

SIL



Capacitive ceramic sensor

LMK 351

Pressure range	0...0.04 to 0...10 bar
Level	0...0.4 to 0...100 mH ₂ O
Process connection	G1 1/2" flush
Accuracy	0.125 / 0.175 % FSO
Option	Ex-version; PVC or PVDF pressure port; high-purity ceramic 99.9% stainless steel field housing
Recommended for	sewage, pasty and viscous media



Submersible Probes (Hydrostatic Level Measurement)

Long-life and high media compatibility

In order to record the levels of aggressive or pasty media, it is necessary to combine housing, cable and diaphragm materials according to the situation.

The separable submersible sensors LMP 308 / LMK 808 / LMK 358 / LMK 858 are a speciality, the cable can be separated from the sensor effortlessly and without tools. This is an enormous advantage for many of our customers during assembly as well as when performing service and maintenance.

Special versions, such as integrated overvoltage protection, temperature sensor or data logger, with GL- / DNV-approval (marine shipping) are just as much a part of our standard program as the communication versions with RS-232-interface or HART®-Protocol.

A large variety of accessories such as terminal boxes and clamps, flanges etc. complement the program.

Stainless steel diaphragm



Stainless steel silicon sensor

LMP 305

Level	0...1 to 0...250 mH ₂ O
Housing material	stainless steel 1.4571
Accuracy	0.125 / 0.175 / 0.25 % FSO
Recommended for	water
Special feature	level measurement in 1" observation pipes (ground water measurement)

Diameter 19 mm



Stainless steel silicon sensor

LMP 307

Level	0...1 to 0...250 mH ₂ O
Housing material	stainless steel 1.4571
Accuracy	0.05 / 0.125 / 0.175 / 0.25 % FSO
Recommended for	water, heating and diesel oil
Option	Ex-version cable protection with corrugated pipe

Diameter 27 mm



Stainless steel silicon sensor

LMP 308

LMP 308i

Level	0...1 to 0...250 mH ₂ O	0...1.7 to 0...170 mH ₂ O
Housing material	stainless steel 1.4571	
Accuracy	0.05 / 0.125 / 0.175 / 0.25 % FSO	0.05 % FSO
Recommended for	water, heating and diesel oil	
Special feature	transmitter head and cable assembly separable	
Option	Ex-version cable protection with corrugated pipe communication interface for adjusting offset, span and damping	

Diameter 35 mm



Stainless steel silicon sensor

LMP 808

Level	0...1 to 0...100 mH ₂ O
Housing material	PVC
Accuracy	0.125 / 0.175 / 0.25 % FSO
Recommended for	water, heating and diesel oil
Special feature	transmitter head and cable assembly separable
Option	cable protection with PVC pipe

Diameter 35 mm

SIL



Ceramic sensor

LMK 306

Level	0...6 to 0...200 mH ₂ O
Housing material	stainless steel 1.4571
Accuracy	0.25 % FSO
Recommended for	water and thin fluid media
Special feature	hydrostatic level measurement in 3/4" pipes

Diameter 17 mm



Ceramic sensor

LMK 307

LMK 309

Level	0...4 to 0...250 mH ₂ O	0...1.6 to 0...6 mH ₂ O
Housing material	stainless steel 1.4571	
Accuracy	0.25 % FSO	
Recommended for	water, sewage, heating or diesel oil and for pasty and viscous media	
Option	Ex-version	

Diameter 27 / 39.5 mm

SIL



Capacitive ceramic sensor

LMK 358

LMK 358H

Level	0...40 cmH ₂ O to 0...100 mH ₂ O	
Housing material	stainless steel 1.4571	
Accuracy	0.125 / 0.175 % FSO	0.1 % FSO
Recommended for	sewage, pasty and viscous media	
Special feature	transmitter head and cable assembly separable	
Option	Ex-version; cable protection with corrugated pipe; HART®-communication (LMK 358 H); high-purity ceramic 99.9 %	

Diameter 39.5 mm



Capacitive ceramic sensor

LMK 382

LMK 382H

Level	0...40 cmH ₂ O to 0...100 mH ₂ O	
Housing material	stainless steel 1.4571	
Accuracy	0.125 / 0.175 % FSO (Standard) 0.1 % FSO (HART®)	
Recommended for	sewage, pasty and viscous media	
Option	Ex-version flange version HART®-communication (LMK 382 H) high-purity ceramic 99.9 %	

Diameter 39.5 mm



Ceramic sensor

Capacitive ceramic sensor

LMK 807

LMK 809

Level	0...4 to 0...100 mH ₂ O	0...0.4 to 0...100 mH ₂ O
Housing material	PVC, PVDF	
Accuracy	0.25 % FSO	0.125 / 0.175 % FSO
Recommended for	level measurement for pasty and aggressive media	
Option	FKM, EPDM or FFKM seals high-purity ceramic 99.9 % (LMK 809) SIL version (LMK 807)	

Diameter 35 / 45 mm

SIL



Capacitive ceramic sensor

LMK 858

Level	0...40 cmH ₂ O to 0...100 mH ₂ O	
Housing material	PVC	
Accuracy	0.125 / 0.175 % FSO	
Special feature	transmitter head and cable assembly separable	
Recommended for	level measurement for pasty and aggressive media	
Option	cable protection with PVC pipe high-purity ceramic 99.9 %	

Diameter 45 mm



Shipbuilding and Offshore

with semi-flush stainless steel or ceramic diaphragm

Different pressure ranges, high accuracies, overload protection and salt-water resistance are only a few criteria with which our pressure measuring devices have to comply for shipbuilding and offshore applications.

From level measurement in tanks on ships (f. ex. for seawater, industrial water, fuel and oil) to pressure measurement (e. g. diesel engines, pumps, compressors and boilers), our GL /DNV approved pressure and level transmitter are suitable for nearly every medium.

Housing material: stainless steel, seawater resistant alloy CuNiFe
Pressure sensors: stainless steel silicon sensor, ceramic sensor, capacitive ceramic sensor
Options: intrinsic safety Ex-version zone 0
 different electrical and mechanical connections



Stainless steel silicon sensor

DMP 457

Pressure range	0...0.1 to 0...600 bar
Accuracy	0.125 / 0.175 / 0.25 % FSO
Housing material	stainless steel 1.4301
Recommended for	low- and high-pressure for gases, fluids and media which are compatible with stainless steel and silicon oil filling
Option	flush pressure port stainless steel field housing



Ceramic sensor

DMK 457

Pressure range	0...0.6 to 0...600 bar
Accuracy	0.25 % FSO
Housing material	stainless steel 1.4301 CuNiFe
Recommended for	viscous, pasty and polluted media
Option	pressure port CuNiFe stainless steel field housing



Capacitive ceramic sensor

LMK 457

Level	0...40 cmH ₂ O to 0...200 mH ₂ O
Housing material	stainless steel 1.4571, CuNiFe
Accuracy	0.125 / 0.175 % FSO
Recommended for	level measurement on ships (seawater, brackish water, diesel and waste oil)
Option	high-purity ceramic 99.9% flange version

Based on the mechanically robust and reliable capacitive ceramic sensor ME 704, which has been exclusively designed for the hydrostatic level measurement of fluids and pasty media in open tanks, containers and pools, LMK 457 is suitable for shipbuilding and offshore applications.

In addition, different housing materials (e. g. seawater resistant CuNi-alloy) and mounting options are available.



Diameter 39.5 mm



Process industry



Pressure transmitters for process industry must show not only precision, long-term stability and a high overload pressure, but also easy integration in modern process control systems.

With our XMP series, we offer a professional and uncompromising answer to these requirements. XMP with flush welded metal diaphragm (stainless steel, hastelloy etc.) or with flush diaphragm in 99.9 % ceramics is suitable for all gaseous or liquid media in process industry, whether pasty, corrosive or with a high medium temperature up to 300 °C. A multiline LC display and operating module (with integrated bargraph) as well as clearly structured operating software enable a quick and easy on-site device configuration.

Via HART® protocol a great variety of parameters can be configured and process measured values transferred.

Stainless steel silicon sensor

XMP i



Pressure range	0...0.35 to 0...600 bar
Accuracy	0.05 % FSO
Process connection	G ½", ½" NPT, G1" flush, DRD, flange (DIN 2501) DN 25 / 50 / 80, flange (ANSI) DN2" / DN3"
Housing	aluminium die cast case stainless steel field housing
Option	integrated display and operating module cooling element up to 300 °C PROFIBUS PA (in preparation)



Ceramic sensor

XMP ci



Pressure range	0...0.06 to 0...20 bar
Accuracy	0.1 % FSO
Process connection	G ½", ½" NPT, G 1 ½" flush, DRD flange (DIN 2501) DN 25 / 50 / 80 flange (ANSI) DN 2" / DN 3"
Housing	aluminium die cast case stainless steel field housing
Option	integrated display and operating module PROFIBUS PA (in preparation) high-purity ceramic (99.9%)





Hygienic application and food industry

with flush diaphragms
(optional: Hastelloy, Tantal, etc.)

Our pressure transmitters for food industry, chemical and pharmaceutical applications have hygienically designed process connections and correspond to the guidelines of the EHEDG and FDA. They can be supplied with material and manufacturing test certificates to EN 10204 (e.g. 3.1).

Output signal: 2-wire (4...20 mA) or 3-wire (0...10 V, 0...20 mA, etc.)
Electrical connection: various plugs (DIN or circular plug), cable outlet
Mechanical connection: inch threads, clamp, dairy pipe
Options: Ex-version, Zone 0
 stainless steel field housing
 cooling elements up to 300°C



Ceramic sensor

DMK 331P

Pressure range	0...1 to 0... 400 bar
Accuracy	0.25 % FSO
Process connection	G 1/2" flush / G 3/4" flush / G 1" flush
Option	cooling element up to 150 °C stainless steel field housing

SIL



Silicon sensor

DMP 331P

Pressure range	0...0.1 to 0...40 bar
Accuracy	0.125 / 0.175 / 0.25 % FSO
Process connection	G 1" flush clamp (ISO 2852) DN 1" / 1 1/2" / 2" dairy pipe (DIN 11851) DN 25 / 40 / 50
Option	cooling element up to 300 °C stainless steel field housing

SIL



Capacitive ceramic sensor

DMK 351P

Pressure range	0...0.04 to 0...20 bar
Accuracy	0.125 / 0.175 % FSO
Process connection	G 1 1/2" flush dairy pipe (DIN 11851) DN 40 / 50 clamp (ISO 2852) DN 1 1/2" / 2" Varivent® DN 40 / 50 flange (DIN 2501) DN 25 / 50 / 80
Option	high-purity ceramic 99.9 %





Stainless steel silicon sensor

x|act i

Pressure range	0...0.35 to 0...35 bar
Accuracy	0.05 % FSO
Process connection	G 1" cone, clamp (ISO 2852) DN 1" / 1 1/2" / 2" dairy pipe (DIN 11851) DN 25 / 40 / 50 VARIVENT®, DRD flange (DIN 2501) DN 25 / 50 / 80
Option	HART®-communication; Ex-version cooling element up to 300 °C PROFIBUS PA (in preparation)



Ceramic sensor

x|act ci

Pressure range	0.06 to 0...20 bar
Accuracy	0.1 % FSO
Process connection	G 1 1/2" flush, clamp (ISO 2852) DN 1 1/2" / 2" dairy pipe (DIN 11851) DN 40 / 50 VARIVENT®, DRD flange (DIN2501) DN 25 / 50 / 80
Option	HART®-communication Ex-version PROFIBUS PA (in preparation)



Pressure Switches



Stainless steel silicon sensor

DS 200P

Pressure range	0...0.1 to 0...40 bar
Accuracy	0.125 / 0.175 / 0.25 % FSO
Process connection	G 1" flush clamp (ISO 2852) DN 1" / 1 1/2" / 2" dairy pipe (DIN 11851) DN 25 / 40 / 50
Features	4-digit LED display, rotatable display module; up to 4 independent contacts configurable
Option	cooling element up to 300 °C adjustable output signal



Ceramic sensor

DS 201P

Pressure range	0 ...1 bar to 0...400 bar
Accuracy	0.25 % FSO
Process connection	G 1/2", G 3/4", G 1" flush version
Features	4-digit LED display, rotatable display module; up to 4 independent contacts configurable
Option	cooling element up to 150 °C adjustable output signal



Stainless steel silicon sensor

DS 400P

Pressure range	0...0.1 to 0...40 bar
Accuracy	0.125 / 0.175 / 0.25 % FSO
Process connection	G 1" flush, clamp (ISO 2852) DN 1" / 1 1/2" / 2" dairy pipe (DIN 11851) DN 25 / 40 / 50
Features	stainless steel globe housing up to 2 independent contacts configurable
Option	cooling element up to 300 °C adjustable output signal



Ceramic sensor

DS 401P

Pressure range	0...1 to 0...400 bar
Accuracy	0.25 % FSO
Process connection	G 1/2", G 3/4", G 1" flush version
Features	stainless steel globe housing up to 2 independent contacts configurable
Option	cooling element up to 150 °C adjustable output signal





Pressure Measuring Devices with Display and Switching Output

Depending on the job, the universal pressure measuring devices with display and switching contacts can be used as **pressure transmitter**, **electronic pressure switch**, **digital gauge**.

Due to the simple handling as well as the variety of software features (switching points and hysteresis freely configurable, delay function, Min/Max-value data storage, display and analog output signal scalable, etc.) the DS 200 series is especially suitable as an intelligent pressure switch for general plant and machine construction and the processing industry.

Output signal: 2-wire (4...20 mA) or 3-wire (0...10 V), up to 4 independent contacts
Electrical connection: various plugs (e.g. DIN or circular plug) or cable outlet
Options: Intrinsically safe versions:
 Zone 0 (transmitter), Zone 1 (display + switching module)



Stainless steel silicon sensor

DS 200

Pressure range	0...0.1 to 0...600 bar
Pressure port	Inch and NPT-thread flush version
Accuracy	0.125 / 0.175 / 0.25 % FSO
Features	4-digit LED display; display and housing rotatable; up to 4 configurable contacts; adjustable output signal
Application	pneumatic, hydraulic, level measurement in open tanks



Ceramic sensor

DS 201

Pressure range	0...0.16 to 0...600 bar
Pressure port	Inch and NPT-thread; G 1/2" (PVDF); flush version (level measurement)
Accuracy	0.25 % FSO
Features	4-digit LED display; display and housing rotatable; up to 4 configurable contacts; adjustable output signal
Application	low- and high-pressure for gases, fluids, and media which are compatible with stainless steel and silicon oil filling



Silicon sensor

DS 210



Pressure range	0...10 mbar to 0...1 bar and vacuum -1...0 bar
Pressure port	Inch-thread
Accuracy	0.175 / 0.25 % FSO
Features	4-digit LED display display and housing rotatable up to 4 configurable contacts adjustable output signal
Application	extreme low and low pressure for gases and non-aggressive media



Stainless steel silicon sensor

DS 400



Pressure range	0...0.1 to 0...600 bar
Accuracy	0.125 / 0.175 / 0.25 % FSO
Pressure port	Inch and NPT-thread
Features	stainless steel globe housing 4-digit LED display 1 or 2 freely configurable contacts
Option	analogue output
Application	machine and plant engineering test benches environmental engineering



Ceramic sensor

DS 401



Pressure range	0...0.16 to 0...600 bar
Accuracy	0.25 % FSO
Pressure port	Inch and NPT-thread
Features	stainless steel globe housing; 4-digit LED display; 1 or 2 freely configurable contacts
Option	analogue output
Application	environmental engineering; machine and plant engineering chemical industry and pharmacy oxygen application





OEM Pressure Transmitters and Electronic Pressure Switches

Of course we can adapt the OEM standard products listed below to your technical requirements in regard to electrical and mechanical connections, output signals and housing material.

With this you receive a tailor-made, customer-specific solution - without having to make compromises in pricing and performance.

Accuracy: 0.25 / 0.5 % FSO

Electrical connection: various plug connectors (DIN or circular plug) cable outlet



Stainless steel silicon sensor

17.600

Pressure range	0...6 to 0...600 bar (heavy-duty) -1...6 to -1...60 bar (refrigeration)
Accuracy	0.25 % FSO
Output signal	4...20 mA / 2 wire 0...10 V / 3 wire
Pressure port	G 1/2", G 1/4", 1/4" NPT, 1/4" NPT, 1/4" flare
Application	heavy-duty refrigeration



Ceramic sensor

26.600

Pressure range	0...1 to 0...400 bar
Accuracy	0.25 % FSO
Output signal	4...20 mA / 2 wire 0...10 V / 3 wire
Pressure port	G 1/4", 1/4" NPT
Application	hydraulic oxygen version



**Stainless steel silicon sensor
Ceramic sensor**

18.600

Pressure range	0...0.25 to 0...10 bar
Accuracy	0.25 % FSO
Output signal	4...20 mA / 2 wire 0...10 V / 3 wire
Pressure port	G 1/4"
Application	pneumatics



Stainless steel silicon sensor

18.601

Pressure range	0...0.1 to 0...10 bar
Accuracy	0.5 % FSO
Output signal	4...20 mA / 2 wire 0...10 V / 3 wire
Pressure port	G 1/4", 1/4" NPT
Application	universal application



Stainless steel silicon sensor

18.605

Pressure range / level	0...0.1 to 0...1 bar 0...1 to 0...10 mH ₂ O
Accuracy	0.5 % FSO
Output signal	4...20 mA / 2-wire 0...10 V / 3-wire
Pressure port	G 1/4"
Application	level measurement in water and fuel oil tanks



Stainless steel silicon sensor

18.607

Pressure range / level	0...0.16 to 0...1 bar 0...1.6 to 0...10 mH ₂ O
Accuracy	0.5 % FSO
Output signal	10 % to 90 % UB 3 wire rat.
Pressure port	G 1/4", M10 x 1
Application	level measurement in water and fuel oil tanks

Pressure Switches



Silicon sensor without media isolation

DS 4

Pressure range	0...1 to 0...10 bar
Contacts	1 or 2
Pressure port	G 1/8" internal thread M 5 internal thread
Application	pneumatic, vacuum technology



ceramic sensor

DS 6

Pressure range	0...2 to 0...400 bar
Contacts	1 or 2
Pressure port	G 1/4"
Application	machine building industry hydraulics oxygen application



Ceramic sensor

DS 230

Pressure range	0...2 to 0...400 bar
Contacts	1 or 2
Pressure port	G 1/4", 1/4" NPT
Features	4-digit LED display 1 or 2 freely configurable contacts
Application	machine tool, hydraulic presses, pumps and hydraulic machines





Display and evaluation devices

In order to correctly interpret analogue signals, display and evaluation devices are indispensable. Besides the classic version with display and analogue outputs (PA 430, ASM 430), BD SENSORS offers with the process display CIT 100 an evaluation device that can be combined with our pressure measuring devices and hydrostatic submersible probes and is furthermore also suitable for acquiring for example measuring and potentiometer signals.

The multifunctional process transmitter CIT 400/CIT 401 has been exclusively developed for supplying 2- and 3-wire sensors with current signal and for acquiring measuring results. Two different types of housing and a combination of independent limit contacts and a freely configurable analogue output are available. We are therefore able to offer you solutions for nearly every measurement task.



Plug-on display, self powered

PA 430

Display	4-digit LED display display and housing rotatable
Analogue signal	4...20 mA / 2 wire 0...10 V / 3 wire
Option	Ex-version 1 or 2 freely configurable switching contacts
Dimensions	47 x 47 x 68 mm (W x H x D)



Display and switching unit

ASM 430

Display	4-digit LED display display and housing rotatable
Analogue signal	4...20 mA / 2 wire 0...10 V / 3 wire
Option	Ex-version 1 or 2 freely configurable switching contacts
Dimensions	47 x 47 x 68 mm (W x H x D)



Process display

CIT 100

Display	4-digit 14 segment LED display
Analogue signal	voltage (e.g. 4...20 mA etc.) current (e.g. 0...10 V etc.) PT 100, potentiometer
Option	2 relay outputs analogue output
Dimensions	96 x 48 x 120 mm (W x H x D)



Process display

PM 190

Display	3-digit fluorescent display
Analogue signal	voltage (e. g. 4 ... 20 mA , etc.) current (e.g. 0 ... 10 V etc.)
Switching output	4 x relays
Dimensions	37 x 144 x 195 mm (W x H x D)

Multifunctional process transmitter

CIT 400 / CIT 401



Display	4-digit LED display
Signal input	current (e.g. 4...20 mA etc.)
Option	Ex-version 2 (4) limit value relays and 1 alarm relay
Dimensions	70 x 75 x 110 mm (W x H x D) housing for hat rail and wall mounting 72 x 72 x 123 mm (W x H x D) housing for panel mounting



Special versions

Pressure calibrator with automatically recognizing different pressure transmitters

PKD 4420



Display	4-digit, 7 segment LED display
Accuracy (display)	0.05 %
Connection	4 (optional 8) 2-wire pressure transmitter via screw connector
Application	leakage measurement test bench monitoring

The pressure calibrator PKD 4420 serves as a pressure monitoring system/pressure displaying device, whereas the connected pressure transmitter will automatically be recognized via a code encrypted in the sensor. An additional LED at the housing front will signalize, up to which maximum pressure range the pressure transmitter may be used.

Battery powered display

CIT 500



Display	4-digit LED-display
Supply	9V battery
Connection	M12 x 1
Features	integrated battery monitoring connection of differential pressure transmitter easy usability

The hand held measuring device CIT 500 is an all-purpose display device for mobile use. It is often used for leakage measurement. The device is characterised by an easy handling and operability as well as by an integrated battery control.



Digital pressure gauges

With a great variety of mechanical and electrical connections, BD SENSORS offers a new generation of digital pressure gauges for different applications. Due to the two sensor technologies in use (stainless steel silicon sensor and ceramic sensor), our digital pressure gauges are suitable for nearly all fluids, pasty and contaminated media.

The display module is continuously rotatable so that a clear readability is guaranteed even in unusual installation positions.

Battery powered digital pressure gauge

BAROLI



Pressure range	0 ... 0.1 to 0 ... 600 bar
Accuracy	0.125 / 0.25 % FSO
LC-display	4.5-digit measured value display 6-digit alphanumeric additional display
Pressure port	G 1/2", G 1/4", 1/2" NPT, 1/4" NPT
Application	pneumatic, hydraulic mechanical engineering

The battery powered digital pressure gauge BAROLI has been designed for applications in hydraulics and pneumatics. Besides showing information about the nominal pressure range as well as minimal and maximal pressure of the process, several pressure units and the position of decimal point can be set. Factory setting of calibration information can be loaded by menu.

Direct-voltage powered digital pressure gauge

DM 200 / DM 201



Pressure range	0...0.1 to 0...600 bar
Accuracy	0.125 / 0.25 % FSO
Display	4-digit LED display
Pressure port	G 1/2", G 1/4", 1/2" NPT, 1/4" NPT, G 1/2" open port
Application	pneumatic, hydraulic mechanical engineering environmental engineering

The digital pressure gauges DM 200 is equipped with a piezoresistive stainless steel sensor, which is particularly suitable for measuring non-aggressive gases and fluids. Due to the mechanically and chemically robust ceramic sensor our DM 201 is preferentially used in applications with aggressive, pasty and contaminated media.

Certificates and test reports – everything from one source



A qualified calibration of measuring devices is, especially in connection with companies' in-house quality management systems, obtaining more and more significance. The traceability back to national measuring standards is hence very important if f. ex. measuring devices are used as reference.

BD SENSORS therefore established in 1996 a nationally accredited metrological calibration laboratory belonging to ILAC (International Laboratory Accreditation Cooperation). ILAC is the highest international institution for laboratory calibration and deals with developing methods and procedures for laboratory accreditation. This organisation's objective is among other things promoting global commerce facilitations by the approval of qualified examination and calibration equipment.

This accredited calibration laboratory is thus a central component of BD SENSORS for being able to perform internationally approved and standard compliant calibration activities within the technique of pressure measurement solutions for nearly every measurement task.



An increasing number of countries is still more demanding higher security standards of people, equipment and environment, which can only be complied with by the latest state-of-the-art technology.

SIL (safety integrity level) is based on the international standards IEC 61508/61511; it is regarded as a standard of functional safety and describes the type of risk assessment as well as procedures for integrating certain safety functions into sensors and plants.

In response to the increasing importance of these international security standards, BD SENSORS has with SIL certification completed the next step in the development of its highly successful industrial pressure transmitters.

Within the SIL conformity declaration, BD SENSORS declares that its products have been examined conforming to IEC 61508/61511 and thus proves the high quality of its pressure transmitters.