

Pressure Sensors

Reliable solutions for the automation industry



Pressure Sensors

Reliable Solutions for
the Automation Industry

Pressure sensors from Balluff guarantee the consistently high quality of your products.

The monitoring of hydraulic, pneumatic, vacuum, and various machine pressures is extremely critical in today's automation processes. Balluff's pressure sensors exceed the demands of your applications from the ease and flexibility of installation through the simple configuration of the outputs even under the most demanding conditions. Balluff's attention to quality, superior sensor design, and performance means better reliability, less down time and higher productivity.



Pressure Sensors

Reliable Solutions for
the Automation Industry



Bright 4 digit display with status LEDs

Programming buttons – no tool required

Plastic or stainless steel display housing – rotates 320°

M12 quick disconnect

IP67 stainless steel housing – rotates 320°

Ceramic measuring cell guarantees long term stability and durability

Process connection



Type	Standard	Stainless Steel
Page	6	8
Housing material		
Plastic	■	
Stainless steel		■
Special properties		
Standard temperature range –25...+85 °C	■	■
Extended temperature range –40...+85 °C		■
Display housing rotates 320°	■	■
Connection housing with M12 plug rotates 320°	■	■
Application areas and applications		
Hydraulics	■	■
Pneumatics	■	■
Machine tools	■	■
Plastics technology	■	■
Packaging machines	■	■
Wind turbines		■
Off-shore		■

Pressure Sensors

Applications

Balluff pressure sensors combine the advantages of a display, measuring transducer and pressure switch in a single device.

Holding pressure switchover on injection molding machines

Balluff pressure sensors measure the hydraulic pressure of the screw drive in order to regulate the switchover point between the injection and holding pressure systems. Controlling this parameter with a high degree of precision is crucial in achieving dimensional accuracy and quality of the products manufactured. A pressure sensor with analog output monitors the hydraulic pressure in order to control the process accurately while achieving a high degree of repeatability.

Coolant monitoring on machine tools

The pressure in the coolant supply system must be monitored continually to guarantee the consistently high surface quality of machined workpieces. Balluff pressure sensors can monitor the pressure level and shut down the machine within a few milliseconds if the system pressure exceeds the defined limits.



Features

- Switching point and analog output (0...10 V or 4...20 mA)
- Degree of protection IP 67
- Consistent quality of product

Features

- Ceramic measuring cells offer stability in the long term
- Display is easy to read
- Reliable machine operation

Pressure Sensors

Applications

Central hydraulic unit on wind turbines

Many central systems on a wind turbine such as the pitch control and braking system are operated hydraulically. The stainless steel version of the Balluff pressure sensor measures the actual system pressure reliably, even under harsh ambient conditions. The pump motor can be controlled directly via two programmable switching outputs to prevent the oil pressure from exceeding the maximum or minimum permitted levels.



Vacuum grippers

Vacuum grippers are used for a wide variety of material handling tasks. The grippers must be able to adapt to different materials and workpieces and operate continuously without error. Balluff pressure sensors designed for vacuum applications are used to monitor the pressure of the vacuum pads to make sure they grip reliably.



Features

- Compact housing
- Simple installation
- Vacuum sensors up to -1 bar relative pressure



Features

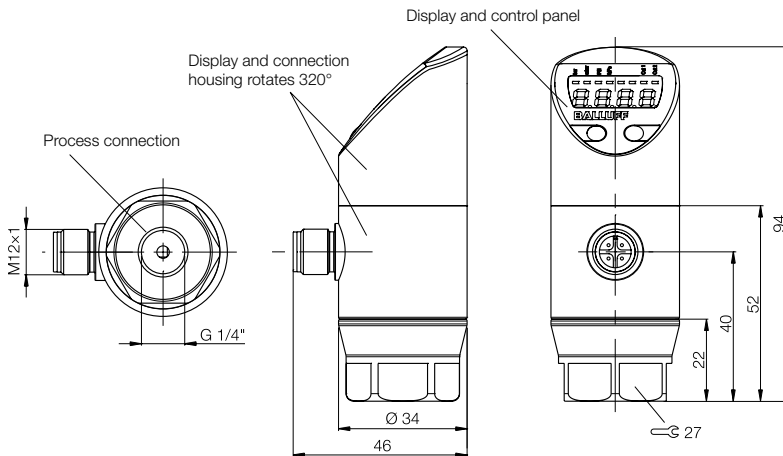
- Extended temperature range to -40 °C
- Two programmable outputs
- Increased system stability

Pressure Sensors

Standard Sensors

Standard Balluff pressure sensors offer an impressive price/performance ratio and are suitable for a wide variety of applications and pressure ranges in factory automation. A large display and simple operating concept save time when configuring parameters. Balluff pressure sensors are versatile and space-saving. The display and electrical output can be rotated independently of the flange. Other features of these sensors include:

- Compact housing design
- Local pressure indicator
- Digital switching outputs
- Analog output



-14.5...29 psi	PNP	Ordering code
-1...2 bar	NPN	Ordering code
-14.5...145 psi	PNP	Ordering code
-1...10 bar	NPN	Ordering code
0...29 psi	PNP	Ordering code
0...2 bar	NPN	Ordering code
0...73 psi	PNP	Ordering code
0...5 bar	NPN	Ordering code
0...145 psi	PNP	Ordering code
0...10 bar	NPN	Ordering code
0...290 psi	PNP	Ordering code
0...20 bar	NPN	Ordering code
0...725 psi	PNP	Ordering code
0...50 bar	NPN	Ordering code
0...1450 psi	PNP	Ordering code
0...100 bar	NPN	Ordering code
0...3626 psi	PNP	Ordering code
0...250 bar	NPN	Ordering code
0...5802 psi	PNP	Ordering code
0...400 bar	NPN	Ordering code
0...8702 psi	PNP	Ordering code
0...600 bar	NPN	Ordering code

Process connection	
Operating voltage UB	
Output current max.	
No-load supply current I0 max.	
Switching frequency f max.	
Accuracy	
Temperature error	
Reverse polarity/short-circuit protected	
Ambient/material temperature	
Display/function indicators	
Degree of protection per IEC 60529	
Material	Housing
	Measuring cell
	Seal
Connectors	

Design	Relative nominal pressure		Overload pressure		Burst pressure \geq		Permitted vacuum
Pressure sensors -1...2 bar	29 psi	2 bar	58 psi	4 bar	145 psi	10 bar	vacuum proof
Pressure sensors -1...10 bar	145 psi	10 bar	290 psi	20 bar	508 psi	35 bar	
Pressure sensors 0...2 bar	29 psi	2 bar	58 psi	4 bar	145 psi	10 bar	
Pressure sensors 0...5 bar	73 psi	5 bar	145 psi	10 bar	218 psi	15 bar	
Pressure sensors 0...10 bar	145 psi	10 bar	290 psi	20 bar	508 psi	35 bar	
Pressure sensors 0...20 bar	290 psi	20 bar	580 psi	40 bar	1088 psi	75 bar	
Pressure sensors 0...50 bar	725 psi	50 bar	1450 psi	100 bar	2176 psi	150 bar	
Pressure sensors 0...100 bar	1450 psi	100 bar	2900 psi	200 bar	3626 psi	250 bar	
Pressure sensors 0...250 bar	3626 psi	250 bar	5802 psi	400 bar	6527 psi	450 bar	
Pressure sensors 0...400 bar	5802 psi	400 bar	9428 psi	650 bar	10153 psi	700 bar	
Pressure sensors 0...600 bar	8702 psi	600 bar	10878 psi	750 bar	11603 psi	800 bar	

Pressure Sensors

Standard Sensors



2 programmable switching outputs (NO or NC)



0...10 V DC
Analog output and 1 programmable switching output (NO or NC)

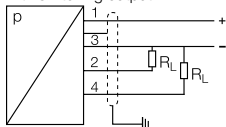


4...20 mA
Analog output and 1 programmable switching output (NO or NC)

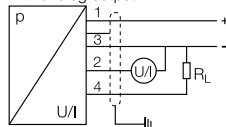
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BSP004N		BSP004R		BSP004U	
BSP004H	BSP005C	BSP004K	BSP005H	BSP004M	BSP005J
BSP004P		BSP004T		BSP004W	
BSP000F		BSP000T		BSP0014	
BSP003K		BSP003P		BSP003W	
BSP000H		BSP000U		BSP0015	
BSP003L		BSP003R		BSP003Y	
BSP000J		BSP000W		BSP0016	
BSP001F		BSP001M		BSP001U	
BSP000K		BSP000Y		BSP0017	
BSP001H		BSP001N		BSP001W	
BSP000L		BSP000Z		BSP0018	
BSP001J		BSP001P		BSP001Y	
BSP000M	BSP005E	BSP0010		BSP0019	
BSP001K		BSP001R		BSP001Z	
BSP000N	BSP005F	BSP0011		BSP001A	
BSP001L		BSP001T		BSP0020	
BSP000P		BSP0012		BSP001C	
BSP003M		BSP003T		BSP003Z	
BSP000R		BSP0013		BSP001E	
BSP003N		BSP003U		BSP0040	
G 1/4"	1/4" NPT	G 1/4"	1/4" NPT	G 1/4"	1/4" NPT
18...36 V DC		18...36 V DC		18...36 V DC	
500 mA		500 mA		500 mA	
≤ 50 mA		≤ 50 mA		≤ 50 mA	
200 Hz		200 Hz		200 Hz	
≤ ±0.5 % FSO BFS		≤ ±0.5 % FSO BFS		≤ ±0.5 % FSO BFS	
≤ ±0.3 % FSO/10 K		≤ ±0.3 % FSO/10 K		≤ ±0.3 % FSO/10 K	
Yes/yes		Yes/yes		Yes/yes	
-25...+85 °C/-25...+125 °C		-25...+85 °C/-25...+125 °C		-25...+85 °C/-25...+125 °C	
7 segment display/LED		7 segment display/LED		7 segment display/LED	
IP 67 (when connected)		IP 67 (when connected)		IP 67 (when connected)	
PA 6.6, stainless steel		PA 6.6, stainless steel		PA 6.6, stainless steel	
Ceramic		Ceramic		Ceramic	
Fluoroelastomer		Fluoroelastomer		Fluoroelastomer	
M12 connector, 4-pin		M12 connector, 4-pin		M12 connector, 4-pin	

Switching function

4-wire pressure sensors with switching output



4-wire pressure sensors with analog output



Pin assignments

Electrical connections	Pressure sensors with switching output	Pressure sensors with analog output
Supply +	1	1
Supply -	3	3
Signal +		2
Switching output 1	4	4
Switching output 2	2	
Shield	Connector housing	Connector housing

Pressure Sensors

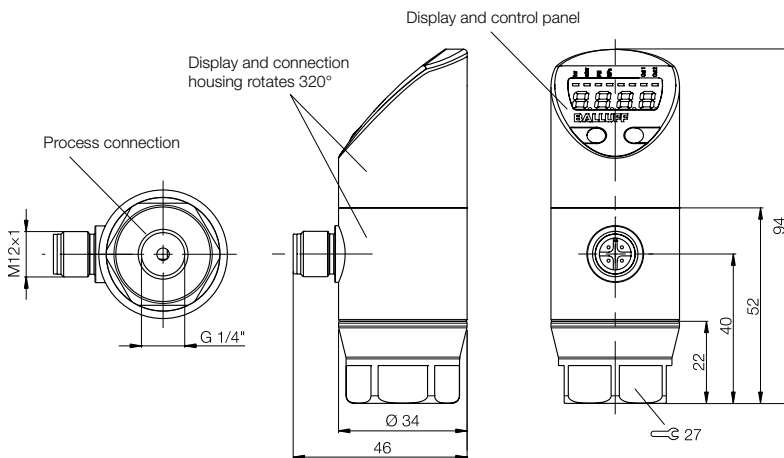
Stainless Steel Sensors

Balluff pressure sensors with stainless steel housings are designed for the demanding requirements of extended temperature ranges and harsh environments. Parameters are configured quickly and easily in conformance with VDMA standards. Features of these sensors include:

- Extended temperature range
- Complete stainless steel housing
- Digital switching outputs
- Analog output



-14.5...29 psi	PNP	Ordering code
-1...2 bar	NPN	Ordering code
-14.5...145 psi	PNP	Ordering code
-1...10 bar	NPN	Ordering code
0...29 psi	PNP	Ordering code
0...2 bar	NPN	Ordering code
0...73 psi	PNP	Ordering code
0...5 bar	NPN	Ordering code
0...145 psi	PNP	Ordering code
0...10 bar	NPN	Ordering code
0...290 psi	PNP	Ordering code
0...20 bar	NPN	Ordering code
0...725 psi	PNP	Ordering code
0...50 bar	NPN	Ordering code
0...1450 psi	PNP	Ordering code
0...100 bar	NPN	Ordering code
0...3626 psi	PNP	Ordering code
0...250 bar	NPN	Ordering code
0...5802 psi	PNP	Ordering code
0...400 bar	NPN	Ordering code
0...8702 psi	PNP	Ordering code
0...600 bar	NPN	Ordering code



Process connection	
Operating voltage U_B	
Output current max.	
No-load supply current I_0 max.	
Switching frequency f max.	
Accuracy	
Temperature error	
Reverse polarity/short-circuit protected	
Ambient/material temperature	
Display/function indicators	
Degree of protection per IEC 60529	
Material	Housing
	Measuring cell
	Seal
Connectors	

Design	Relative nominal pressure		Overload pressure		Burst pressure \geq		Permitted vacuum
Pressure sensors -1...2 bar	29 psi	2 bar	58 psi	4 bar	145 psi	10 bar	vacuum proof
Pressure sensors -1...10 bar	145 psi	10 bar	290 psi	20 bar	508 psi	35 bar	
Pressure sensors 0...2 bar	29 psi	2 bar	58 psi	4 bar	145 psi	10 bar	
Pressure sensors 0...5 bar	73 psi	5 bar	145 psi	10 bar	218 psi	15 bar	
Pressure sensors 0...10 bar	145 psi	10 bar	290 psi	20 bar	508 psi	35 bar	
Pressure sensors 0...20 bar	290 psi	20 bar	580 psi	40 bar	1088 psi	75 bar	
Pressure sensors 0...50 bar	725 psi	50 bar	1450 psi	100 bar	2176 psi	150 bar	
Pressure sensors 0...100 bar	1450 psi	100 bar	2900 psi	200 bar	3626 psi	250 bar	
Pressure sensors 0...250 bar	3626 psi	250 bar	5802 psi	400 bar	6527 psi	450 bar	
Pressure sensors 0...400 bar	5802 psi	400 bar	9428 psi	650 bar	10153 psi	700 bar	
Pressure sensors 0...600 bar	8702 psi	600 bar	10878 psi	750 bar	11603 psi	800 bar	

Pressure Sensors

Stainless Steel Sensors



2 programmable switching outputs (NO or NC)



0...10 V DC
Analog output and 1 programmable switching output (NO or NC)

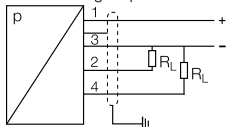


4...20 mA
Analog output and 1 programmable switching output (NO or NC)

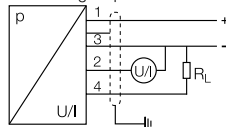
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BSP0054	BSP0056	BSP0058
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BSP0021	BSP002A	BSP002N
BSP0041	BSP0045	BSP0049
BSP0022	BSP002C	BSP002P
BSP0042	BSP0046	BSP004A
BSP0023	BSP002E	BSP002R
BSP0031	BSP0036	BSP003C
BSP0024	BSP002F	BSP002T
BSP0032	BSP0037	BSP003E
BSP0025	BSP002H	BSP002U
BSP0033	BSP0038	BSP003F
BSP0026	BSP002J	BSP002W
BSP0034	BSP0039	BSP003H
BSP0027	BSP002K	BSP002Y
BSP0035	BSP003A	BSP003J
BSP0028	BSP002L	BSP002Z
BSP0043	BSP0047	BSP004C
BSP0029	BSP002M	BSP0030
BSP0044	BSP0048	BSP004E
G 1/4"	G 1/4"	G 1/4"
18...36 V DC	18...36 V DC	18...36 V DC
500 mA	500 mA	500 mA
≤ 50 mA	≤ 50 mA	≤ 50 mA
200 Hz	200 Hz	200 Hz
≤ ±0.5 % FSO BFSL	≤ ±0.5 % FSO BFSL	≤ ±0.5 % FSO BFSL
≤ ±0.3 % FSO/10 K	≤ ±0.3 % FSO/10 K	≤ ±0.3 % FSO/10 K
Yes/yes	Yes/yes	Yes/yes
-40...+85 °C/-40...+125 °C	-40...+85 °C/-40...+125 °C	-40...+85 °C/-40...+125 °C
7 segment display/LED	7 segment display/LED	7 segment display/LED
IP 67 (when connected)	IP 67 (when connected)	IP 67 (when connected)
Stainless steel	Stainless steel	Stainless steel
Ceramic	Ceramic	Ceramic
Fluoroelastomer	Fluoroelastomer	Fluoroelastomer
M12 connector, 4-pin	M12 connector, 4-pin	M12 connector, 4-pin

Switching function

4-wire pressure sensors with switching output



4-wire pressure sensors with analog output



Pin assignments

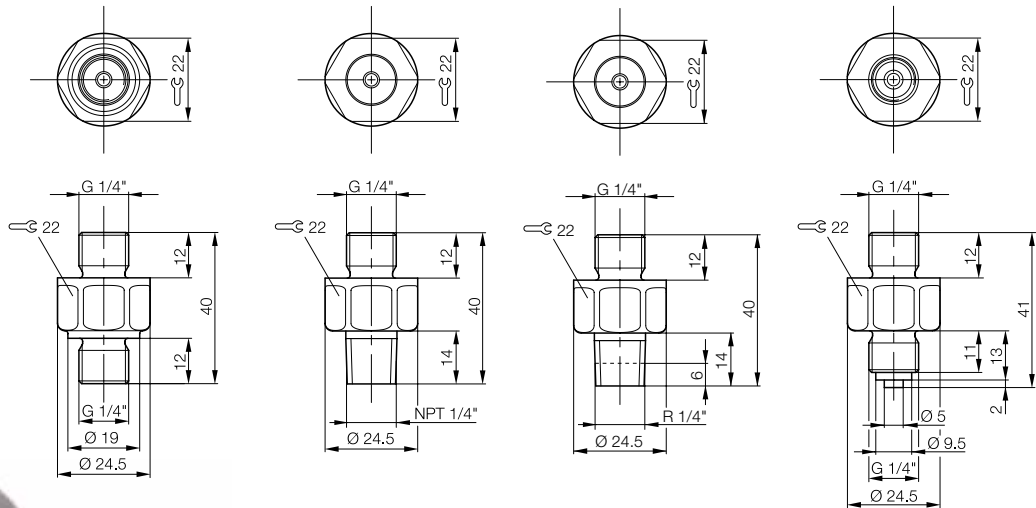
Electrical connections	Pressure sensors with switching output	Pressure sensors with analog output
Supply +	1	1
Supply -	3	3
Signal +		2
Switching output 1	4	4
Switching output 2	2	
Shield	Connector housing	Connector housing

Accessories

Adapters



Description	Adapter G 1/4"	Adapter NPT 1/4"	Adapter R 1/4"	Adapter G 1/4"
Version				for attachment to pressure gauge
Ordering code	BAM01KP	BAM01KT	BAM01RP	BAM01KR
Housing material	Stainless steel	Stainless steel	Stainless steel	Stainless steel
Sensor end connection	G 1/4"	G 1/4"	G 1/4"	G 1/4"
Process end connection	G 1/4"	NPT 1/4"	R 1/4"	G 1/4" for attachment to pressure gauge as per EN 837









Balluff pressure sensors can be adapted for different process connections.

Accessories

Connectors

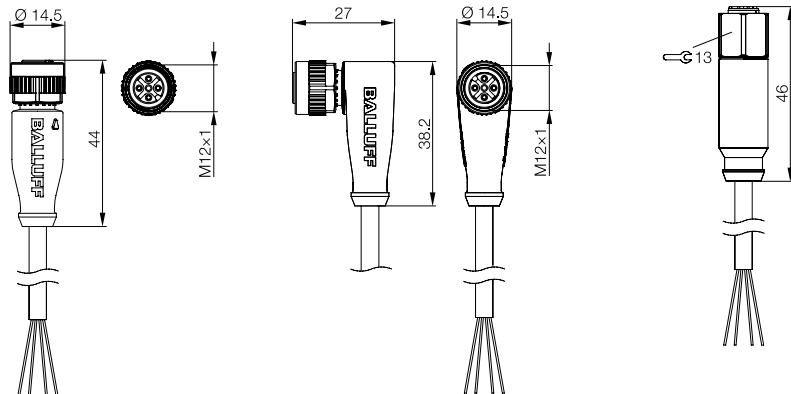


ECOLAB

Version	Connection cable for standard pressure sensors Straight female	Connection cable for standard pressure sensors Right-angle female	Connection cable for stainless steel pressure sensors Straight female
Type			
Connector diagram and wiring	 <p>PIN 1: brown PIN 2: white PIN 3: blue PIN 4: black</p> 	 <p>PIN 1: brown PIN 2: white PIN 3: blue PIN 4: black</p> 	 <p>PIN 1: brown PIN 2: white PIN 3: blue PIN 4: black</p> 
Max. operating voltage U_o	250 V DC	250 V DC	32 V AC/DC
Cable	Molded	Molded	Assembled
No. of wires × conductor cross-section	22 AWG	22 AWG	4×0.34 mm ²
Degree of protection per IEC 60529	IP 67	IP 67	IP 68/IP 69K
Ambient temperature T_a	TPE: -50...+105 °C PUR: -50...+80 °C PVC: -40...+105 °C	-50...+105 °C -50...+80 °C -40...+105 °C	-40...+85 °C (momentarily +105 °C)

Cable material	Color	Length	Straight Ordering code	Right-Angle Ordering code	Ordering code
TPE	Yellow	2 m	BCC05F8	BCC05T6	
TPE	Yellow	5 m	BCC05F9	BCC05T7	
TPE	Yellow	10 m	BCC05FA	BCC05T8	
PUR	Yellow	2 m / 3 m	BCC0C6K (3 m)	BCC05TA (2 m)	
PUR	Yellow	5 m	BCC05FE	BCC05TC	
PUR	Yellow	10 m	BCC0ATN	BCC05TE	
PVC	Yellow	2 m	BCC05FF	BCC05TF	BCC02FE
PVC	Yellow	5 m	BCC05FJ	BCC05TJ	BCC02FF
PVC	Yellow	10 m	BCC05FK	BCC05TK	

Other cable materials, colors and lengths on request.

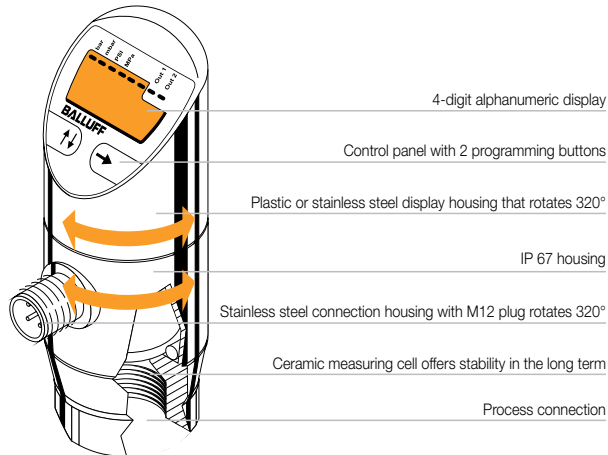


More about our cables and connectivity products can be found in our catalog or online at:
www.balluff.com/connectivity



Basic Information and Definitions

Sensor design

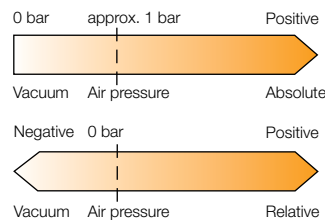


Principle of operation

Balluff pressure sensors convert the physical pressure variable (force per surface) into an electrical output variable that serves as a pressure indicator. Balluff pressure sensors use a ceramic membrane to perform this conversion process. The electrical signal is amplified and linearized and interfering factors such as temperature are compensated.

Pressure characteristics

Absolute pressure: the absolute pressure is the pressure in relation to zero pressure (vacuum). The value range of absolute pressure is always positive.



Relative pressure: pressure is usually measured in relation to the relevant atmospheric pressure. Measuring pressures greater than air pressure always produces positive values. Pressures lower than air pressure produce negative values.

Nominal pressure: corresponds to the maximum design pressure.

Burst pressure: minimum pressure that the pressure sensor must withstand without being destroyed. If this pressure is exceeded, it is certain that pressurized components will burst, the device will begin to leak or internal mechanisms will be destroyed.

Pressure peaks: pressure load pulses that can be several times the measured pressure.

Material characteristics

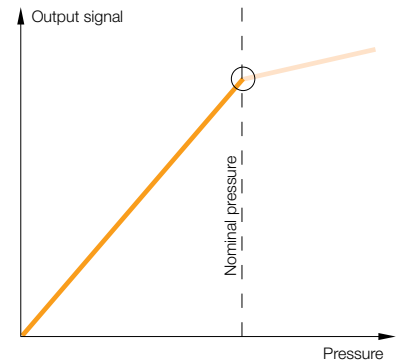
Incompressible material: changes in the pressure of fluids such as water and hydraulic fluid do not initially have an effect on volume.

Compressible material: typical compressible materials include gases, which decrease in volume when their pressure increases.

Material temperature: indicates the permitted temperature range of the pressurized material.

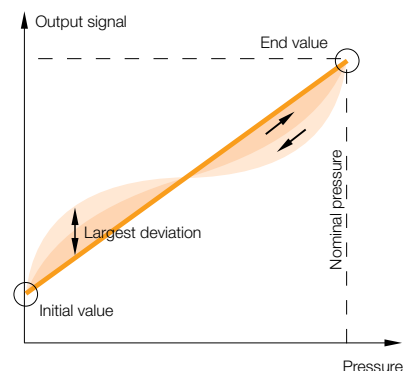
Characteristic

Describes the relationship between the measured and output variable. On pressure sensors, the characteristic indicates how dependent the output signal is on the pressure. In an ideal scenario, the characteristic should be a straight line.



Accuracy

The accuracy indicates how much the actual characteristic can deviate from the ideal characteristic (according to IEC 60770 non-linearity, Hysteresis and repeatability). Accuracy specifications represent a percentage value of the measurement range (FSO) and never include dimensions.



Nominal pressure 50 bar
Accuracy 0.5 %
Max. deviation 0.25 bar

Measuring range

Working range with specific tolerances within which the measured deviation lies.

Full scale end value (FS)

Maximum measuring variable to which a device is adjusted, e.g. 20 mA.

Full scale output (FSO)

The range represents the difference between the upper and lower limit values of the display range. Example: a pressure sensor with a measuring range of 0...6 bar and a corresponding output signal of 4...20 mA has an FSO of 16 mA

Response time

The time between the change in pressure and the change in the switching output status.

Repeatability

Repeat accuracy of two measurements under standardized conditions.

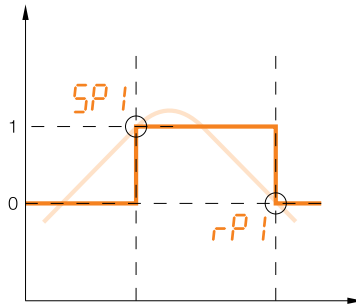
Basic Information and Definitions

Hysteresis, adjustable

The difference between the switching point (SP) and return point (RP) is known as a hysteresis. On electronic pressure switches, any hysteresis can be selected within the measuring range.

Hysteresis function:

the hysteresis keeps the switching status of the outputs stable, even if the system pressure fluctuates either side the setpoint value. The output is activated when the system pressure rises and the relevant switching point (SP) is reached. The output is deactivated when the pressure decreases again and the return point (RP) is reached.

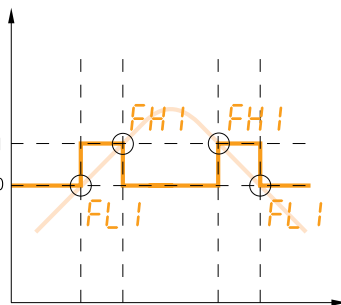


Window, adjustable

The output function is activated when the measured value falls between the preset switching and return point.

Window function:

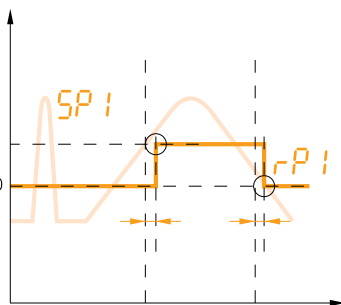
the range between a defined lower pressure limit and a defined upper limit is known as a window. A switching operation is initiated as soon as the upper or lower limit of the programmed pressure range is exceeded.



Delay times

Delay times can reliably filter out undesired pressure peaks that occur momentarily. The status of the switching output does not change immediately after the switching event occurs, but only once a preselected delay time of 0...50 s has elapsed.

If the switching event no longer exists by the time the delay has elapsed, the switching output does not change.



Operating voltage U_B

is the voltage range in which flawless functioning of the sensor is assured. It includes all voltage tolerances and ripple.

Output current max.

is the maximum current with which the output of the sensor may be loaded in continuous operation.

No-load supply current I_0 max.

is the power consumption of the sensor with a maximum operating voltage U_0 and with no connected load.

Short-circuit protection and overload protection

All DC sensors feature this protection device. In the event of overload or short-circuit at the output, the output transistor is automatically switched off. As soon as the malfunction has been corrected, the output stage is reset to normal functioning.

Polarity reversal protection

The sensor electronics are protected against possible polarity reversal or interchanging of the connection wires.

Ambient temperature range T_a

The device operates reliably within this temperature range. The ambient temperature range of the device must remain within the range specified on the relevant data sheet and should not exceed the upper or lower range limits.

Temperature drift

When changes in the ambient temperature range cause the switching point to shift.

Switching frequency f max.

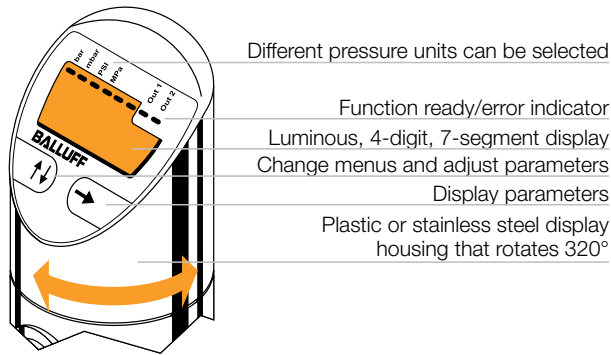
is a succession of periodically repeated sensor switching cycles that occur during one second.

Materials

Material	Use and characteristics
Plastics	
PA 6.6 polyamide	Good mechanical strength. Temperature resistance.
FKM Fluoroelastomer	Resistant to pressure deformation. Temperature resistance. Good chemical resistance.
PUR Polyurethane	Elastic, abrasion-resistant, impact-resistant. Good resistance to oils, greases, solvents (used for gaskets and cable jackets).
PVC Polyvinylchloride	Good mechanical strength. Chemical resistance (cable).
Metal	
Stainless steel	Excellent corrosion resistance and strength. Quality 1.4301: Standard material for the foods industry.
Other	
Ceramic	Very good strength and chemical resistance. Electrically insulating. Excellent temperature resistance.

Basic Information and Definitions

Display



	Description	ASCII
SP 1	Switching point (1)	SP1
rP 1	Return point (1)	RP1
SP 2	Switching point (2)	SP2
rP 2	Return point (2)	RP2
FH 1	Pressure window, upper value (1)	FH1
FL 1	Pressure window, lower value (1)	FL1
FH 2	Pressure window, upper value (2)	FH2
FL 2	Pressure window, lower value (2)	FL2
EF	Extended function	EF
rES	Reset	RES
dS 1	Switching delay time (1)	dS1
dS 2	Switching delay time (2)	dS2
dR 1	Return delay time (1)	dR1
dR 2	Return delay time (2)	dR2
oU 1	Output (1)	Ou1
oU 2	Output (2)	Ou2
Hno	NO with hysteresis function	HNO
Fno	NO with window function	FNO
Hnc	NC with hysteresis function	HNC
Fnc	NC with window function	HNC
Un	Unit selection	Uni
bAr	Unit bar	bar
rPa	Unit MPa	MPa
Pa	Unit Pa	Pa
PS	Unit psi	psi
FL iP	Rotate display	Flip
Lo	Min. value	LO
Hi	Max. value	HI
codE	Access protection	Code
d iR	Diagnostic function	DIA
Err	Error indicator	ERR
d iS	Display	DIS
YES	Yes	Yes
no	No	No

Setting and adjusting parameters

Balluff pressure sensors are easy to configure in conformance with VDMA standards: **Change menus** – Press the button to switch to programming mode and modify the pressure sensor settings. **Display parameters** – Press the button to show the relevant parameter on the display. **Set parameter** – Press the button in any menu to select the relevant value.

Display mode

The current process pressure is displayed here. You can check this parameter directly on location at any time.



Switching point 1

Here you can select the switching point (pressure value) of output 1, which determines when the output status of the sensor changes. The switching point can be set to any value within the measuring range.



Return point 1

Return point 1 is used to select the pressure value that defines when output 1 switches back. The difference between SP 1 (9.05 bar) and RP 1 (7.05 bar) produces the hysteresis (2 bar) of switching output 1.



Switching point 2

For setting output 2. Proceed as described for switching point 1.



Return point 2

For setting output 2. Proceed as described for return point 1.



Extended functions

Additional settings such as switching functions for outputs 1 and 2 can be configured in the "Extended functions" menu.



- On delay for SP 1 and SP 2
- Return point delay for RP 1 and RP 2
- Switching function for Out 1 and Out 2
- NO
- NC
- Window function
- Hysteresis function
- Unit selection
- Min./max. value
- Access protection
- Rotate display

Alphanumerical Directory

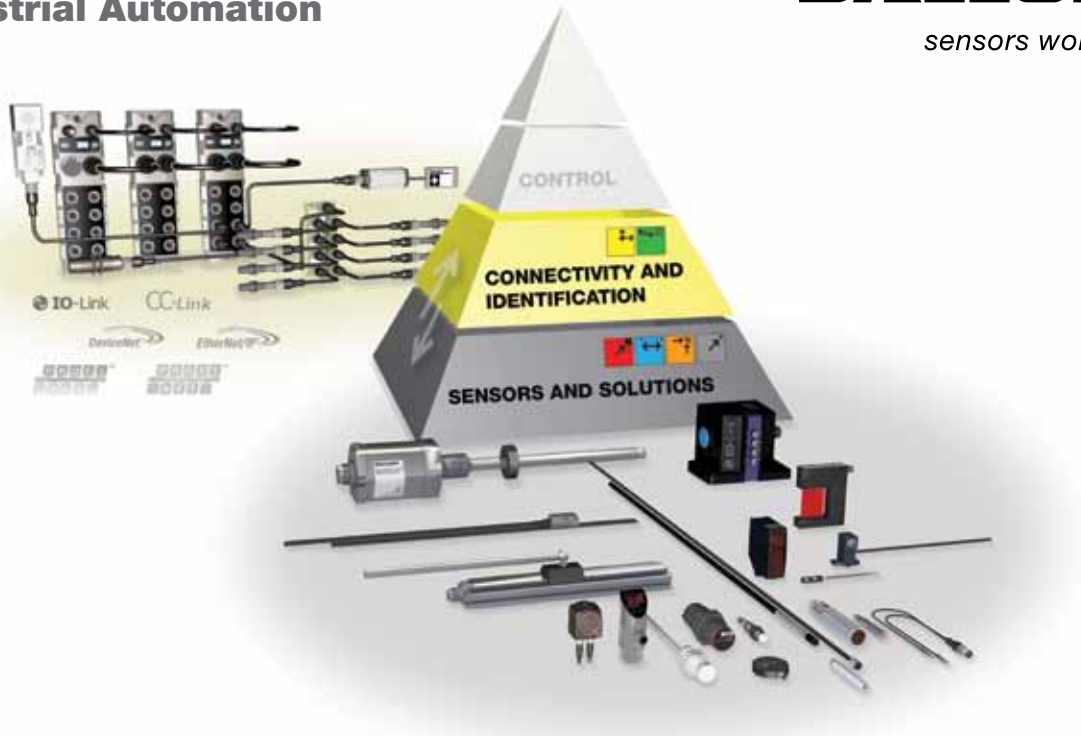
Ordering code	Part number	Page
BAM01KP	BAM AD-SP-008-1G4/1G4-4	10
BAM01KR	BAM AD-SP-008-1G4/1G4-4-EN837	10
BAM01KT	BAM AD-SP-008-1G4/1N4-4	10
BAM01RP	BAM AD-SP-008-1G4/1R4-4	11
BCC02FE	BKS-S260-3-02	11
BCC02FF	BKS-S260-3-05	11
BCC05F8	BCC M415-0000-1A-003-EX44T2-020	11
BCC05F9	BCC M415-0000-1A-003-EX44T2-050	11
BCC05FA	BCC M415-0000-1A-003-EX44T2-100	11
BCC05FE	BCC M415-0000-1A-003-PX44T2-050	11
BCC05FF	BCC M415-0000-1A-003-VX44T2-020	11
BCC05FJ	BCC M415-0000-1A-003-VX44T2-050	11
BCC05FK	BCC M415-0000-1A-003-VX44T2-100	11
BCC05T6	BCC M425-0000-1A-003-EX44T2-020	11
BCC05T7	BCC M425-0000-1A-003-EX44T2-050	11
BCC05T8	BCC M425-0000-1A-003-EX44T2-100	11
BCC05TA	BCC M425-0000-1A-003-PX44T2-020	11
BCC05TC	BCC M425-0000-1A-003-PX44T2-050	11
BCC05TE	BCC M425-0000-1A-003-PX44T2-100	11
BCC05TF	BCC M425-0000-1A-003-VX44T2-020	11
BCC05TJ	BCC M425-0000-1A-003-VX44T2-050	11
BCC05TK	BCC M425-0000-1A-003-VX44T2-100	11
BCC0ATN	BCC M415-0000-1A-003-PX44T2-100	11
BCC0C6K	BCC M415-0000-1A-003-PX44T2-030	11
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BSP000K	BSP B020-EV002-D00A0B-S4	7
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BSP005H	BSP V010-GV002-A00A0B-S4	7
BSP005J	BSP V010-GV002-A02A0B-S4	7

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