Baumer

Baumer International

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Baumer

Product Overview.

Pressure, Temperature, Level, Conductivity, Strain and Force.

Passion for Sensors

Welcome
to the World of Process Instrumentation

The Baumer Process Instrumentation range includes a wide choice of pressure, temperature, level, analysis and force measurement instruments. Our sales staff understands your industry applications and so are always able to advise and offer you the correct product for your measurement requirements.

No range of products will ever be large enough to provide the optimal solution for every application. Often there are requirements that change or move towards a better concept that cannot be satisfied by existing products. This is why our development engineers are able to work closely with customers to design and offer the very best customised solution. This flexibility includes special mechanical housings or adaptations to existing sensor designs. This ability to offer our customers an innovative solution offers them a significant competitive advantage.

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Market segments

- Chemical
- Energy
- Food and beverage
- HVAC
- Petrochemical
- Pharmaceuticals / Cosmetics
- Transportation
- Water treatment
- And many others

Process Instrumentation

Baumer products keep processes running

Many applications are subject to strict constraints. Tight regulation and approvals by external agencies, such as materials and designs for food processing, hazardous area approvals for flammable risks or safety critical testing for aviation and rail transport, must be certified and met.

Baumer understand our customers needs in these industries, and thanks to our extensive experience and ongoing technological development, can provide high performance and reliable instruments to the required standards.

Electronic pressure measurement

Industrial pressure transmitter

- Outstanding accuracy over wide compensated temperature range
- Excellent long-term stability
- High overpressure resistance
- Abrasion and chemical resistant
- Wide range of process and electrical connections
- Suitable for outdoor applications
- 4 technologies : ceramic thick film, capacitive ceramic, metallic thin film and piezo-resistive silicon









Model	CTL (*), CTX	PBSN	PBCN	PBMN		PDRx (class B and C)	PBCX	PBMX	PFSX	TED6, YTED
Pressure range	-1 ... 0 to 0 ... 200 bar	-1 ... 0 to 0 ... 600 bar	-1 ... 0 bar to 0 ... 40 bar	-100 ... 100 mbar to 0 ... 1600 bar		40 ... 1600 bar	-1 ... 0 bar to 0 ... 40 bar	-100 ... 100 mbar to 0 ... 1600 bar	-1 ... 0 to 0 ... 400 bar	-1 ... 0 to 0 ... 400 bar
Overpressure	Max. 360 bar	Max. 800 bar	Max. 105 bar	Max. 3200 bar		Max. 3200 bar	Max. 105 bar	Max. 3200 bar	Max. 600 bar	Max. 600 bar
Accuracy (Linearity, repeatability, hysteresis)	±1.0% F.S.	±0.7% F.S., ±0.5% F.S.	±0.5% F.S..	±0.5% F.S, ±0.25% F.S., ±0.1% F.S.		±0.3% F.S, ±0.5% F.S	±0.5% F.S, ±0.25% F.S., ±0.1% F.S.	±0.5% F.S, ±0.25% F.S., ±0.1% F.S.	±0.5% F.S.	±0.5% F.S.
Output signal	4 ... 20 mA, 0 ... 10 V, 1 ... 5 V, 0.5 ... 4.5 V	4 ... 20 mA, 0 ... 5 V, 0 ... 10 V, 1 ... 5 V, 0.5 ... 4.5 V	4 ... 20 mA, 0 ... 5 V, 0 ... 10 V, 1 ... 5 V, 0.5 ... 4.5 V	4 ... 20 mA, 0 ... 5 V, 0 ... 10 V, 1 ... 5 V, 0.5 ... 4.5 V		4 ... 20 mA, 0 ... 5 V, 0 ... 10 V, 1 ... 5 V, 1 ... 10 V	4 ... 20 mA, 0 ... 5 V, 0 ... 10 V, 1 ... 5 V, 0.5 ... 4.5 V	4 ... 20 mA, 0 ... 5 V, 0 ... 10 V, 1 ... 5 V, 0.5 ... 4.5 V	4 ... 20 mA (3-wire), 2 static relays switching outputs	4 ... 20 mA, 2xPNP switching outputs
Process connection	G¼, G½, ¼NPT, ½NPT	G¼ EN 837, G½ EN 837, ¼NPT, ½NPT, G¼ DIN 3852, M20x150	G¼ EN 837, G½ EN 837, ¼NPT, ½NPT, G¼ DIN 3852, M20x150, G¼ female	G¼ EN 837, G½ EN 837, ¼NPT, ½NPT, G¼ DIN 3852, M20x150, M14x150 cone 60°, G½ DIN 3852		G¼ EN 837, G¼ DIN 3852, M12x1.5 EN 837, M12x1.5 DIN 3852	G¼ EN 837, G½ EN 837, ¼NPT, ½NPT, G¼ DIN 3852, M20x150, G½ DIN 3852	G¼ EN 837, G½ EN 837, ¼NPT, ½NPT, G¼ DIN 3852, M20x150, M14x150 cone 60°, G½ DIN 3852	G¼ EN 837, G½ EN 837, G¼ DIN 3852	G¼, ¼NPT, G½, ½NPT, M20x1.5, G¼ female
Electrical connection	DIN 43650, pig tail cable outlet, M12 plug, ...	DIN 43650, pig tail cable outlet, M12 plug, ...	DIN 43650, pig tail cable outlet, M12 plug, ...	DIN 43650, pig tail cable outlet, M12 plug, ...		M12 plug, MIL	DIN 43650, pig tail cable outlet, M12 plug, ...	DIN 43650, pig tail cable outlet, M12 plug, ...	M12-8 male	M12-5 plug
Technology	Ceramic thick film	Ceramic thick film	Capacitive ceramic	Piezoresistive silicon < 40 bar Metallic thin film ≥ 40 bar		Metallic thin film	Capacitive ceramic	Piezoresistive silicon < 40 bar Metallic thin film ≥ 40 bar	Ceramic thick film	Ceramic thick film
Protection class	IP 65	IP 65, IP 67	IP 65, IP 67	IP 65, IP 67		IP 65, IP 67	IP 65, IP 67	IP 65, IP 67	IP 65, IP 67	IP 67
Approval						UL	Ex ia IIC T5/T6, ATEX II 1G Ex nA IIC T4/T5, ATEX II 3G Ex tD A20 IP67 T100 °C, ATEX II 1D	Ex ia IIC T5/T6, ATEX II 1G Ex nA IIC T4/T5, ATEX II 3G Ex tD A20 IP67 T100 °C, ATEX II 1D	SIL 2	ATEX II 1G Ex ia IIC T6 or T5 (YTED)
Additional data	- (*) brass construction	- Configurable with FlexProgrammer	- Configurable with FlexProgrammer	- Configurable with FlexProgrammer			- Configurable with FlexProgrammer	- Configurable with FlexProgrammer		- 300° swivelling version (option)

Electronic pressure measurement

Hygienic pressure transmitter

- For food and pharmaceutical industries
- Standard hygienic and customer specifics fittings
- Products designed to support CIP (Cleaning-in-Place) and SIP (Sterilization-in-Place) cycles
- LCD or LED display available
- Option for high temperature application






Model	E93x	ED 701, hygienic with cooling neck	ED 701, hygienic	FlexBar HRT, hygienic		FlexBar HRT, homogeniser	FlexBar 3431, hygienic	TED6, hygienic		
Pressure range	-1 ... 0 to 0.25 ... 40 bar (60 ... 600 bar for homogeniser)	100 mbar ... 40 bar	100 mbar ... 40 bar	-1(0) ... 400 bar		0 ... 400 bar	-1(0) ... 400 bar	-1(0) ... 400 bar		
Overpressure	Max. 80 bar (max. 800 bar for homogeniser)	Max. 120 bar	Max. 120 bar	400% of M.R., max. 600 bar		Max. 600 bar	Max. 600 bar	Max. 600 bar		
Accuracy (Linearity, repeatability, hysteresis)	±1.0% F.S.	±0.2% F.S., ±0.4% F.S.	±0.1% F.S., ±0.2% F.S., ±0.4% F.S.	±0.2% F.S.		±0.2% F.S.	±0.2% F.S.	±0.5% F.S.		
Output signal	0 ... 20 mA, 4 ... 20 mA, 0 ... 10 V, 1 ... 5 V	4 ... 20 mA, 0 ... 10 V, 0 ... 5 V	4 ... 20 mA, 0 ... 10 V, 0 ... 5 V	4 ... 20 mA, HART® protocol		4 ... 20 mA, HART® protocol	Profibus® PA communication	4 ... 20 mA + 2 PNP switching output		
Process connection	Clamp, DIN, SMS, G½ or G1 with conical threading, homogeniser	Tri-Clamp, Clamp DIN 11864-3 and ISO 2852	Tri-Clamp, Clamp DIN 11864-3 and ISO 2852	ISO 2852 clamp, 3A hygienic, SMS 1145, DIN 11851, Varivent		Flush PN 400 A, B, C, D	G½, ½-14 NPT flush diaphragm	Clamp, DIN, SMS, G½ or G1 with conical threading		
Electrical connection	DIN 43650, pig tail cable outlet, M12 plug, HE302 plug	DIN 43650, cable output, M12 plug, field housing	DIN 43650, cable output, M12 plug, field housing	DIN 43650, pig tail cable outlet, M12 plug, ...		DIN 43650, pig tail cable outlet, M12 plug, ...	Cable, gland M16, M12 plug, DIN 13650 plug	M12 plug		
Technology	Ceramic thick film	Piezo-resistive silicon	Piezo-resistive silicon	Piezo-resistive silicon		Piezo-resistive silicon	Piezo-resistive silicon	Ceramic thick film		
Protection class	IP 65, IP 67	IP 65, IP 67	IP 65, IP 67	IP 65, IP 67		IP 65, IP 67	IP 66, IP 67	IP 67		
Approval	BV Marine, CSA, FM, 3A-Sanitary Standard ATEX (Y930)	Lloyd's Register, ATEX II 2 G and II 1D, Ex ia	Lloyd's Register, ATEX II 2 G and II 1D, Ex ia	Ex ia, ATEX, 3A			Ex ia, ATEX II 1G, Ex ia IIC T5/T6, 3A	Intrinsically safe version (Ex ia) conforms to ATEX Directive (YTED), 3A		
Additional data	- Intrinsically safe version (Ex ia)			- Configurable with FlexProgrammer and HART® configurator - FlexView LC-display optional - Turn down 25:1		- Configurable with FlexProgrammer and HART® configurator - FlexView LC-display optional - Turn down 25:1	- Configurable with FlexProgrammer and via Profibus PA - FlexView LC-display optional. Option: Hastelloy C276 - Turn down 25:1	- 300° swivelling version (option)		

Electronic pressure measurement

Pressure transmitter with flush diaphragm

- All stainless steel construction with flush diaphragm connection
- Measurements on viscous and heavy fluids
- Wide range of hydraulic connections
- Excellent repeatability
- Very good long term stability

Differential pressure transmitter

- Low differential, high line pressure

Model	E92x	ED711	ED 701			FlexBar HRT	FlexBar 3431	Model	EDD 575 FKC	
Pressure range	1.6 ... 600 bar	100 mbar ... 20 bar	100 mbar ... 40 bar			-0.1 ... 0.4 to -1 ... 400 bar	-1(0) ... 400 bar	Pressure range	1 mbar ... 30 bar	
Overpressure	Max. 800 bar	Max. 60 bar	Max. 120 bar			400% of M.R., max. 600 bar	Max. 600 bar	Static pressure	160 bar	
Accuracy (Linearity, repeatability, hysteresis)	±1.0% F.S.	±0.4% F.S.	±0.1% F.S., ±0.2% F.S., ±0.4% F.S.			±0.2% F.S.	±0.2% F.S.	Accuracy (linearity, hysteresis and repeatability at 20 °C)	±0.1% F.S.	
Output signal	0 ... 20 mA, 4 ... 20 mA, 0 ... 10 V, 1 ... 5 V	4 ... 20 mA, 0 ... 10 V, 0 ... 5 V	4 ... 20 mA, 0 ... 10 V, 1 ... 5 V			4 ... 20 mA, HART® protocol	Profibus® PA communication	Sensing element	Stainless steel Silicium capacitive sensor	
Process connection	G½, G¾, G1 and ½NPT flush diaphragm	Male thread G½ flush diaphragm DIN 3852 (CombiConnect)	G1 and G½ flush diaphragm with cone, G½ DIN 3852			G½ or ½-14 NPT flush diaphragm	G½ or ½-14 NPT flush diaphragm	Supply voltage	10.5 ... 45 VDC	
Electrical connection	DIN 43650, pig tail cable outlet, M12 plug, HE302 plug	DIN 43650 Plug ; M12, 4 pole Industrial Plug	DIN 43650, cable output, M12 plug, field housing			Cable DIN 13650 plug	Cable DIN 13650 plug	Output signal	4 ... 20 mA, HART®	
Technology	Ceramic thick film	Piezo-resistive silicon	Piezo-resistive silicon			Piezo-resistive silicon	Piezo-resistive silicon	Process connection	2 x 1/4 18 NPT female	
Protection class	IP 65, IP 67	IP 65	IP 65, IP 67			IP 65, IP 67	IP 65, IP 67	Protection class	IP 67	
Approval	BV Marine, CSA, FM, Lloyd's Register		Lloyd's Register, ATEX II 2G and II 1D, Ex ia			Ex ia, ATEX II 1G Ex ia IIC T5/T6	Ex ia, ATEX II 1G Ex ia IIC T5/T6	Approval	NEMA 4X, ATEX II 2G/D / Ex ia II CT T4 / T5	
Additional data	- Intrinsically safe version (Ex ia) conforms to ATEX Directive (Y92x)		- Adapter for high temperature (cooling device)			- Configurable with FlexProgrammer and HART® configurator - FlexView LC-display optional - Option : Hastelloy C276 - Turn down 25:1	- Configurable with FlexProgrammer - FlexView LC-display optional - Option: Hastelloy C276 - Turn down 25:1	Additional data		

Electronic pressure measurement

Pressure transmitter digital communication

- Standard communication protocol
- Very high reliability
- HeavyDuty transmitter

Barflex®: the most popular digital pressure gauge

- Data acquisition
- IrDA data transfer
- Leak detection

Model	FlexBar HRT, HART® protocol	FlexBar 3431, Profibus ® PA	PDRJ, PDAJ, CANopen	TEDM, Modbus™		BarFlex®				
Pressure range	-1(0) ... 400 bar	-1(0) ... 400 bar	0 ... 1 to 0 ... 1000 bar	-1(0) ... 400 bar		-1(0) ... 400 bar				
Overpressure	Max. 600 bar	Max. 600 bar	Max. 2000 bar	Max. 600 bar		Max. 800 bar				
Accuracy (Linearity, repeatability, hysteresis)	±0.2% F.S.	±0.2% F.S.	±0.3% F.S.	±0.5% F.S.		±0.1% F.S., ±0.25% F.S.				
Output signal	4 ... 20 mA, HART® protocol	Profibus® PA communication	CANopen DS404	RS-485, Modbus™ RTU 2 isolated switching output		IrDA (infrared)				
Process connection	G½ and ½NPT flush diaphragm, hygienic connections	G½ and ½NPT flush diaphragm, hygienic connections	G¼ female	G½, G¼, ½NPT, ¼NPT, hygienic connections		M12x5, DIN2353, adaptor G½, ½NPT				
Electrical connection	Cable, gland M16 or M20, M12 plug, Din 43650	Cable, gland M16, M12 plug	M12 plug, connector MIL C26482 or DIN 45322, PVC cable	M12-8 plug		IrDA port				
Technology	Piezo-resistive silicon	Piezo-resistive silicon	Metal thin film	Ceramic thick film		Ceramic thick film				
Protection class	IP 65, IP 67	IP 66, IP 67	IP 66	IP 67		IP 65				
Approval	Ex ia, ATEX II 1G Ex ia IIC T5/T6	Ex ia, ATEX II 1G Ex ia IIC T5/T6				Ex ia IIC T6, ATEX II 1G				
Additional data	- Configurable with FlexProgrammer and HART® configurator - FlexView LC-display optional - Option : Hastelloy C276 - Turn down 25:1	- Configurable with FlexProgrammer - FlexView LC-display optional - Option : Hastelloy C276 - Turn down 25:1		- Configurable with Modbus™ software						

Mechanical pressure measurement

Industrial pressure gauge

- Bourdon tube, capsule or diaphragm element
- Corrosive environment
- Wide range of pressure from a few mbar to 1600 bar
- Many types of mounting and process connections
- Many options: material of windows, filling liquid, overpressure protection device, pointers
- Nace compliant
- No oil filling with the DP series for hygienic application







Model	MEX2, MEX3	MEX5, DRC100	MIX7	MEX8		MCX5, MCX7	DPC100, DPC150	DP100 hygienic		
DN	50 and 63 mm	100 mm	150 mm	160 mm		100 and 150 mm	100 and 150 mm	100 mm		
Pressure range	-1 ... 0 to 0 ... 1000 bar -30"Hg to 0 ... 15.000 psi	-1 ... 0 to 0 ... 1600 bar -30"Hg to 0 ... 20.000 psi	-1 ... 0 to 0 ... 1600 bar -30"Hg to 0 ... 20.000 psi	-1 ... 0 to 0 ... 1600 bar -30"Hg to 0 ... 20.000 psi		-25 ... 0 to 0 ... 600 mbar	-25 ... 0 mbar to 0 ... 25 bar	0 ... 6 to 0 ... 10 bar		
Accuracy class	1.6	1.0	1.0	1.0		1.6 and 2.5	1.6	1.6		
Case material	Stainless steel	Stainless steel	Stainless steel	Stainless steel		Stainless steel	Stainless steel	Stainless steel		
Sensing element material	Stainless steel, option: Monel	Stainless steel, option: Monel	Stainless steel, option: Monel	Stainless steel, option: Monel		Stainless steel	Duratherm 600, option PTFE coated	Stainless steel		
Process connection	G¼, ¼NPT	G½, ½NPT, M20x1.5	G½, ½NPT, M20x1.5	G½, ½NPT, M20x1.5		G½, ½NPT	G½, flange	Clamp connection ISO 2852 Varivent connection® Paper connection with tubes		
Type of mounting	Bottom or back connection, panel mounting flange, clamp	Bottom or back connection, panel mounting flange, clamp	Bottom or back connection, panel mounting flange, clamp	Bottom or back connection, panel mounting flange, clamp		Bottom or back connection, panel mounting flange, clamp	Bottom connection	Bottom connection		
Protection class	IP 65	IP 65	IP 65	IP 65		IP 65	IP 54	IP 54		
Approval	EN 837-1, Lloyd's Register, ATEX 94/9/CE (option)	EN 837-1, Lloyd's Register, ATEX 94/9/CE (option)	EN 837-1, Lloyd's Register, ATEX 94/9/CE (option)	EN 837-1, Lloyd's Register, ATEX 94/9/CE (option)		EN 837-1, ATEX 94/9/CE (option)	DIN 16005			

Safety pattern gauge

- Stainless steel process connection for corrosive applications
- Robust construction
- Watertight and fillable with dampening liquid
- Standard or "turret" design for oil and gas application
- Blow out back and baffle wall
- Nace compliant

Model	MEP5	MPG6, MPE6	MAN7	
DN	100 mm	130 mm (4"½)	150 mm	
Pressure range	-1 ... 0 to 0 ... 1600 bar -30"Hg to 0 ... 20.000 psi	-1 ... 0 to 0 ... 1600 bar -30"Hg to 0 ... 20.000 psi	-1 ... 0 to 0 ... 1600 bar -30"Hg to 0 ... 20.000 psi	
Accuracy class	1.0	0.5 (Grade 2A)	1.0	
Case material	Stainless steel	Polypropylene (MPG6) Phenol (MPE6)	Stainless steel	
Sensing element material	Stainless steel, option: Monel	Stainless steel, option: Monel	Stainless steel, option: Monel	
Process connection	G½, ½NPT, M20x1.5	G½, ½NPT	G½, ½NPT	
Type of mounting	Bottom connection, panel mounting (3 back lugs fixing)	Bottom connection, panel mounting (back fixing)	Bottom or back connection, panel mounting flange	
Protection class	IP 65	IP 65	IP 52	
Approval	EN 837-1, Lloyd's Register, ATEX 94/9/CE (option)	ANSI B40.1	EN 837-1, ATEX 94/9/CE (option)	
Additional data	Fillable	Fillable	Not fillable	

Differential pressure gauge

- Low differential pressure
- High static pressure
- Stainless steel, Monel, Hastelloy

Model	MCD7	MX7, MZ7	MFT	
DN	150 mm	150 mm	100 and 150 mm	
Pressure range	0 ... 10 mbar to 0 ... 250 mbar	0 ... 0.1 to 0 ... 25 bar	0 ... 25 mbar to 0 ... 25 bar	
Static pressure	Max. 250 mbar	Max. 100 bar	Max. 400 bar	
Accuracy class	2.0	2.0	1.0	
Case material	Stainless steel	Stainless steel	Stainless steel	
Sensing element material	Stainless steel capsule	Two Stainless steel bellows	Stainless steel cell	
Process connection	G½, ½NPT	G½, ½NPT	G½, ½NPT, ¼NPT	
Type of mounting	Bottom connection, panel mounting (back fixing)	Bottom or back connections, panel mounting flange, pipe fitting	Wall mounting, panel mounting and mounting on 2" tube	
Protection class	IP 66	IP 65	IP 65	
Approval		ATEX 94/9/CE (option)	ATEX CE II 2 GD (option)	

Pressure gauge with electrical contacts

- All Stainless steel
- Local indication of the pressure
- Regulation or alarm actuation
- Intrinsically safe or explosion-proof version (conforms to ATEX)
- Chemical, Petrochemical, Energy or Gas industries

Model	MS5, MR5, DRCE 100, MCE	MG5	M17, M27, M37	
DN	100 mm	100 mm	150 mm	
Pressure range	-1 ... 0 to 0 ... 1600 bar -30"Hg to 0 ... 20.000 psi	-1 ... 0 to 0 ... 1600 bar -30"Hg to 0 ... 20.000 psi	-1 ... 0 to 0 ... 1600 bar -30"Hg to 0 ... 20.000 psi	
Accuracy class	2.5	1.6	2.5	
Set points	1 or 2	1 or 2	1 or 2	
Current rating	Dry contact / 0.4W-0.4VA min. 30W-50 VA max.	Inductive contact	Dry contact / 0.4W-0.4VA min. 30W-50 VA max. or inductive contact	
Case material	Stainless steel	Stainless steel	Stainless steel	
Sensing element material	Stainless steel	Stainless steel	Stainless steel	
Process connection	G½, ½NPT	G½, ½NPT	G½, ½NPT	
Type of mounting	Bottom or back connection, panel mounting flange	Bottom or back connection, panel mounting flange	Bottom or back connection, panel mounting flange	
Protection class	IP 65	IP 65	IP 65	
Approval	CE	CE, ATEX Ex ia	CE, ATEX Ex ia	

The broad product range contains first-class solutions for pressure measurement in demanding environmental conditions as in the petro-chemistry or in salt-water applications. In addition, we develop special solutions like for example for military and civil aeronautics or ship building. Many EPC-Contractors value Baumer as a competent partner for process instruments for the construction of refineries, power plants or water treatment plants.

Digital pressure switch

- Pressure control for industrial process management (level management, jack control, ...)
- Can be configured on site
- Auto-zero function
- Two set points, configured parameters of each threshold

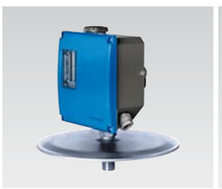



Model	CPX	TED5	TED6	
Pressure range	-1 ... 0 to 0 ... 600 bar	-1 ... 0 to 0 ... 400 bar	-1 ... 0 to 0 ... 400 bar	
Overpressure	Max. 800 bar	Max. 600 bar	Max. 600 bar	
Accuracy (Linearity, repeatability, hysteresis)	±0.5% F.S.	±0.5% F.S.	±0.5% F.S.	
Supply voltage	11 ... 40 VDC, unregulated	18 ... 32 VDC, unregulated	10 ... 32 VDC, unregulated	
Output signal	2 PNP switching out put	4 ... 20 mA, 3 wire, 2 isolated switching output	4 ... 20 mA, 2 wire, 2 PNP switching out put	
Process connection	G¼ EN837, G¼ DIN 3852-E, G½ EN 837, ¼NPT,½NPT	G¼, ¼NPT, G½, ½NPT, M20x1.5, G¼ female	G¼, ¼NPT, G½, ½NPT, M20x1.5, G¼ female	
Electrical connection	M12-5 plug	M12-8 plug	M12-5 plug	
Technology	Ceramic thick film	Ceramic thick film	Ceramic thick film	
Protection class	IP 65	IP 67	IP 67	
Approval		Lloyd's Register	Lloyd's Register ATEX Ex ia IIC T6 and T5 (YTED)	
Additional data	- Programmable by Flexprogrammer	- 300° swivelling version (option)	- 300° swivelling version (option)	

Mechanical pressure switch

- From vacuum to 600 bar
- All industrial environments
- Power generation safety equipments
- Intrinsically safe or explosion-proof version (conforms to ATEX)
- Nuclear versions





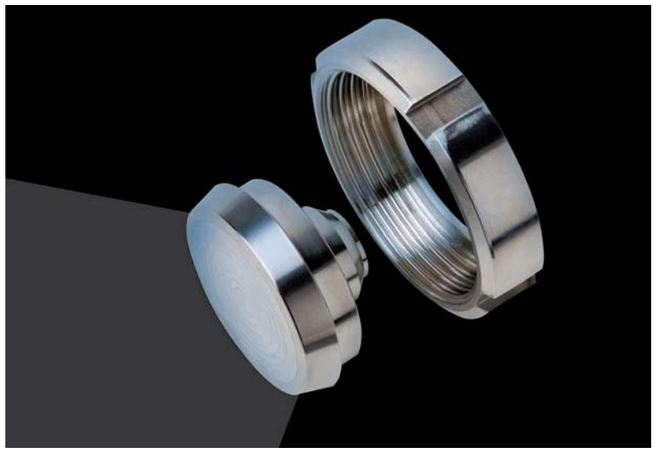
Model	RP2 series	RP series	RD series	
Pressure range	1 ... 100 bar	-50 ... 0 mbar to 60 ... 600 bar	-2.5 ... 2.5 mbar to 2.5 ... 30 bar	
Overpressure / Static pressure	Max. 200 bar	Max. 800 bar	0.15 ... 220 bar	
Reproducibility	±1% F.S.	±1% F.S.	±1% F.S.	
Current rating	10 mA ... 10 A, 250 VAC max. / 220 VDC max.	5 mA ... 10 A, 250 VAC max. / 220 VDC max.	5 mA ... 10 A, 250 VAC max. / 220 VDC max.	
Set points	1	1 or 2	1 or 2	
Measuring element	1.4404 (316L) Stainless steel	According to range and model: steel, Viton®, stainless steel, EPDM	According to range and model: steel, Viton®, stainless steel, EPDM	
Process connection	¼NPT, G½, ½NPT	G¼, ¼NPT, G½, ½NPT	G¼, ¼NPT, G½, ½NPT	
Housing / body material	Polyamide PA6 / Aluminium alloy	Aluminium alloy	Aluminium alloy	
Protection class	IP 66	IP 66	IP 66	
Approval	ATEX, Ex ia (RP2Y) ATEX, Ex d (RP2E)	ATEX, Ex ia (RPPY) ATEX, Ex d (RPPE)	ATEX, Ex ia (RDY) ATEX, Ex d (RDE)	

Diaphragm seal

Diaphragm seal

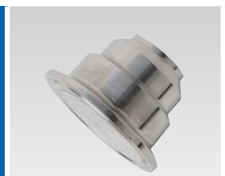
- All Stainless steel is the standard
- Various material
- PTFE, Halar or Gold coating
- Easy maintenance
- Cleaning-In-Place (CIP) and Sterilization-In-Place (SIP) without major disassembly and assembly work
- Flange connection for Chemical or Oil industries
- Thread connection for industrial uses

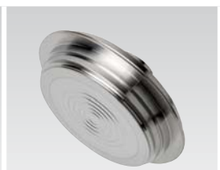
Model	D040, D041	D05x series	D1xx, D2xx, D3xx series	D6xx series		D4xx series				
Type	Single piece threaded connection	Flush diaphragm threaded connection	Standard threaded connection	Flanged connection		Flanged connection				
Pressure range	D040 : 0 ... 1 to 0 ... 16 bar D041 : 0 ... 16 to 0 ... 250 bar	0 ... 1 to 0 ... 600 bar	D1xx: 0 ... 4 to 0 ... 160 bar D12x: 0 ... 160 to 0 ... 1000 bar D2xx: 0 ... 1 to 0 ... 40 bar D3xx: 0 ... 0.16 to 0 ... 25 bar	-1 ... 0 to 0 ... 400 bar		-1 ... 0 to 0 ... 400 bar				
Wetted parts	Stainless steel	Stainless steel	Stainless steel, Hastelloy, Tantalum, Monel, Plastic	Stainless steel, Hastelloy, Tantalum, Monel, Plastic		Stainless steel, Hastelloy, Tantalum, Monel, Plastic				
Working temperature	-60 °C ... +200 °C	-60 °C ... +200 °C	-60 °C ... +200 °C	-60 °C ... +200 °C		-60 °C ... +400 °C				
Process connection	G¼, ¼NPT, G½, ½NPT, ¾NPT, ¼BSP-Tr, ½BSP-T	G¼, G½, ½NPT, G¾, ¾NPT, G1, 1NPT, G1½, 1½NPT, G2, 2NPT	G¼, ¼NPT, G½, ½NPT, G⅜, ⅜NPT,	ISO / ANSI / EN 1092-1 - Flanges		ISO / ANSI / EN 1092-1 - Flanges				



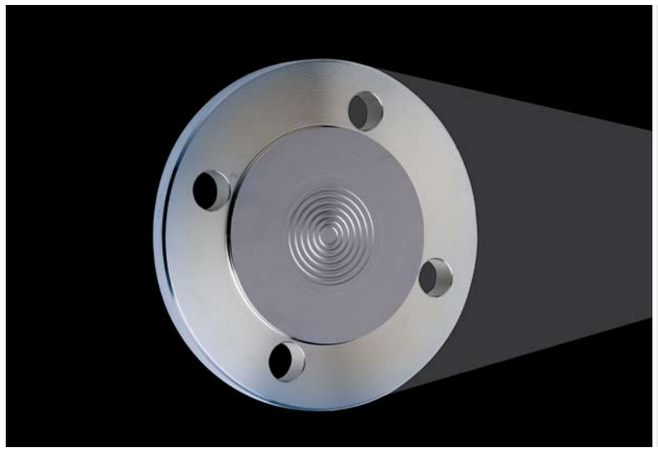
Diaphragm seal

- Hygienic connections for Food and Beverage or Pharmaceutical, 3A-approval
- Cleaning-In-Place (CIP) and Sterilization-In-Place (SIP) without major disassembly






Model	DANC - Clamp Diaphragm seals	DADL - Hygienic Diaphragm seals	DAVA - Varivent® Diaphragm seals	15xx, 16xx series
Pressure range	0 ... 1 to 0 ... 40 bar -1 ... 1.5 to -1 ... 39 bar	0 ... 1 to 0 ... 40 bar -1 ... 1.5 to -1 ... 39 bar	0 ... 1 to 0 ... 40 bar -1 ... 1.5 to -1 ... 39 bar	0 ... 1 to 0 ... 60 bar
Process connection	Clamp DN 25 ... 50 to NF, ISO, DIN	Hygienic with nut, smooth housing DN 25 ... 50 to DIN	Varivent® DN 25, 40, 125	Clamp ISO/DIN, SMS 1145, DIN 11851, Sterile connection
Media temperature	-20...+225 °C max.	-20 ... +150 °C max.	-20 ... +150 °C max.	
Operating temperature	-20 ... +225 °C Product specific application complies with FDA recommendations	-20 ... +150 °C Product specific application complies with FDA recommendations	-20 ... +150 °C Product specific application complies with FDA recommendations	-20 °C ... +150 °C
Special material	Hastelloy C276 on request	Hastelloy C276 on request	Hastelloy C276 on request	
Approval	3A-Sanitary standard	3A-Sanitary standard	3A-Sanitary standard	
Protection class	IP 65 (not air sensor)	IP 65	IP 65	
Additional data	- Material: stainless steel 1.4404 - Diaphragm laser welded - Diaphragm material stainless steel 1.4435 - Surface roughness Ra ≤ 0,8 µm - Option: e-polished	- Material: stainless steel 1.4404 - Diaphragm laser welded - Diaphragm material stainless steel 1.4435 - Surface roughness Ra ≤ 0,8 µm - Option: e-polished	- Material: stainless steel 1.4404 - Diaphragm laser welded - Diaphragm material stainless steel 1.4435 - Surface roughness Ra ≤ 0,8 µm - Option: e-polished	- Wetted parts: stainless steel - One-piece tubular seal

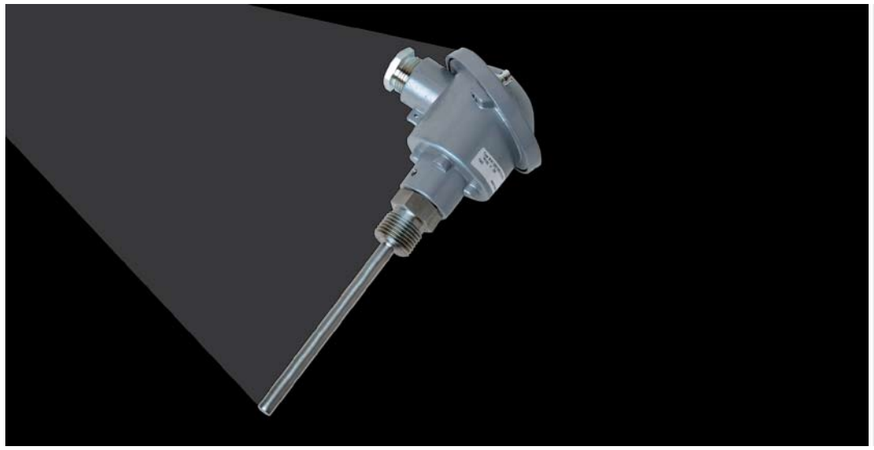


Diaphragm seal

- Flange connection for Chemical or Oil industries
- Various types of ISO and ANSI flanges
- High temperature applications up to 400°C
- Compatible with process pressure transmitters


Model	D902	D8xx series		
Pressure range	- Relative and differential min.10 mbar, absolute pressure. min. 50 mbar - Typical specifications: max. pressure: 100 bar	-1 ... 0 to 0 ... 400 bar		
Process connection	316L stainless steel flanges DN 10 ... 100 / 1/2" ... 4"	ISO / ANSI / EN 1092-1 - Flanges		
Wetted parts		Stainless steel, Hastelloy, Tantalum, Monel		
Media temperature	Max. +400 °C			
Operating temperature		-60 °C ... +400 °C		
Special material	Hastelloy C276 on request			
Additional data	- Material: stainless steel 1.4404 - Diaphragm: 316L stainless steel or Hastelloy C276 - Capillary tube: max. 12 m - Drain valve - Vent valve - Steam tracing	- Flush diaphragm threaded connection		

Electronic temperature measurement



CombiTemp

- User-configurable system
- Stainless steel ø 80mm housing or DIN-B housing
- Standard or hygienic process connection

TE system

- Hygienic design - rugged, nice looking, compact, flexible
- TE1 - field housing
- TE2 - industrial housing

										
Model	CombiTemp	CombiTemp	CombiTemp			TE1	TE2			
Operating temperature	Sensor -50 ... +400 °C Transmitter -40 ... +85 °C ambient	Sensor -50 ... +400 °C Transmitter -40 ... +85 °C ambient	Sensor -50 ... +400 °C Transmitter -40 ... +85 °C ambient			Sensor -50 ... +250 °C Transmitter -40 ... +85 °C ambient	Sensor -50 ... +250 °C Transmitter -40 ... +85 °C ambient			
Response time (6 mm tube) $\tau_{0,5}$	1.5 ... 6.1 sec., measured in liquids	1.5 ... 6.1 sec., measured in liquids	1.5 ... 6.1 sec., measured in liquids			3 sec., measured in liquids	3 sec., measured in liquids			
Housing	DIN-B	Ø 80 mm	Ø 55 mm			Stainless steel	Stainless steel			
Material	Metal Alloy, grey	Stainless steel	Stainless steel			10 standard or hygienic	6 standard or hygienic			
Process connections	20 standard or hygienic	20 standard or hygienic	20 standard or hygienic			Ø 55 mm field housing M16 cable gland or M12 plug	Ø 18 mm case M12 or DIN 43650-A plug			
Pt100 elements	DIN-A 1/1 ; DIN-B 1/1, 1/3, 1/6 Single or duplex	DIN-A 1/1 ; DIN-B 1/1, 1/3, 1/6 Single or duplex	DIN-A 1/1 ; DIN-B 1/1, 1/3, 1/6 Single or duplex			DIN-A 1/1 ; DIN-B 1/3 Single or duplex	DIN-A 1/1 ; DIN-B 1/1, 1/3, 1/6 Single or duplex			
Additional data	- User-configurable building block system - FlexTop transmitter	- User-configurable building block system - Cover, FlexView, BattTemp - FlexTop transmitter	- User-configurable building block system - FlexTop transmitter			- User-configurable building block system - FlexTop transmitter	- Integrated transmitter			

Pt100 sensors

- Part of the CombiTemp system
- DIN-A or DIN-B – single or duplex element
- Pt100 sensors for standard mounting in a protection pipe for easy service
- Air sensor for mounting in a ventilation duct
- Insertion sensor for meat cooking
- Hygienic conical sensor for welding into a pipe or tank wall

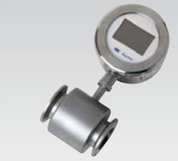
Model	Cable sensors	Insertion sensors	Conical sensors	
Temperature range	-50 ... +205 °C	-50 ... +205 °C	-50 ... +205 °C	
Accuracy	DIN/EN/IEC 60751 1/1 DIN-B: ±(0.3 + 0.005 x t) °C 1/1 DIN-A: ±(0.15 + 0.002 x t) °C	DIN/EN/IEC 60751 1/1 DIN-B: ±(0.3 + 0.005 x t) °C 1/1 DIN-A: ±(0.15 + 0.002 x t) °C	DIN/EN/IEC 60751 1/1 DIN-B: ±(0.3 + 0.005 x t) °C 1/1 DIN-A: ±(0.15 + 0.002 x t) °C	
Sensor tube	Acid-proof stainless steel AISI 316 (W 1.4571)	FPM and Acid-proof stainless steel AISI 304 (W 1.4301)	Acid-proof stainless steel AISI 316L (W 1.4404)	
Sheath dimensions	5.8 x 60 mm standard or air sensor with 8 holes	105 x Ø 3 mm	Tip Ø 3 mm Length 20 or 25 mm	
Response time $\tau_{0,5}$	< 8 sec., measured in liquids 0.4 m/sec.	< 1.5 sec. in Water at 0.4 m/sec., < 25 sec. in Air at 3 m/sec.	< 1 sec., measured in liquids 0.4 m/sec.	
Media pressure	< 25 bar (water flow 3 m/sec.)		< 25 bar (water flow 3 m/sec.)	
Protection class	IP 65 (not air sensor)	IP 65	IP 65	
Additional data	- Sensors with 4-wire silicone cable - For pockets or tubes - 4-wire sensors - High-flexible silicone grey cable	- Sensor tube in stainless steel - Fast response time - Tolerates damp - 4-wire sensors - High-flexible silicone grey cable	- Hygienic, without gasket - Compact mounting - Fast response time - Wide temperature range - Acid-proof, stainless steel - High-flexible silicone grey cable	

BattTemp digital Pt100 thermometer

- Memorisation of highest and lowest temperature
- Offset function for precise calibration
- High readability even in faint light
- Battery life time over 3 years

TAR Temperature probe

- All parts in stainless steel and welded
- Surface measurement – at the inner side of the pipe
- No "dead zones"



Model	BattTemp	Model	TAR
Temperature range	-200 ... +850 °C	Temperature range	-20 ... +200 °C
Accuracy	±0.3 °C	Accuracy	Pt100 class B
Operating temperature	-10 ... +70 °C	Ambient temperature	-25 ... +80 °C
Temperature sensor input	Pt100, 2-wire, DIN/EN/IEC 60751	Process connection	Clamp ISO 2852 Thread type DIN 11887
Protection class	IP 65	Wetted parts	W 1.4571 or W 1.4435
Approvals	Ex ia IIC T4/T5, ATEX II 1G	Protection class	IP 65
Additional data	- Ø 80 mm housing in stainless steel AISI 304 (W 1.4301) - Front-configurable display - Battery powered - Part of the CombiTemp series - Direct or remote mounting - High cleanability and rugged design	Additional data	- Hygienic pipe system - SIP and CIP

Temperature switch

Temperature Switch

- Ideal for safety circuit
- On site configuration suitable for hazardous area
- Good vibration resistance
- Nuclear versions



Model	ETTN / YTTN	RTA / RTN	RT2N / RT2E / RT2Y
Type	Digital	Mechanical	Mechanical
Temperature range	-200 ... +400 °C	-46 ... +350 °C	-46 ... +350 °C
Ambient temperature	-25 ... +85 °C	-30 ... +55 °C	-30 ... +70 °C
Repeatability	±0.2% F.S.	±1% F.S.	±1% F.S.
Set points	2	1 or 2	1
Current rating	4 ... 20 mA, 2 threshold outputs, PNP transistors, 400 mA at 24 VDC	5 mA ... 10 A 250 VAC max. / 220 VDC max.	10 mA ... 10 A 250 VAC max. / 220 VDC max.
Electrical connection	M12-5 pin connector	Via internal terminal block	Via internal terminal block
Sensor type	Pt1000 probe, class A	Rigid stem or Capillary tube	Rigid stem or Capillary tube
Sensor material	Stainless steel	Stainless steel	Stainless steel
Connection	Sliding union G¼, G½, ¼NPT or ½NPT	Stainless steel sliding male connection (G½-½NPT)	Stainless steel sliding male connection (G½-½NPT)
Body / Housing material	St. steel AISI 316L (1.4404)	Aluminium Alloy	Zamak plated black / Plastic
Protection class	IP 67	IP 66	IP 66
Approval	YTTN: Intrinsically safe	RTNE: Explosion Proof RTxY: Intrinsically safe	RT2E: Explosion Proof RT2Y: Intrinsically safe
Additional data	- ETTNM: Modbus communication, outputs: static relays, 400 mA at 60 VDC or 40 VAC	- Electronuclear version	

Configurable temperature transmitter

DIN-rail mounted transmitter

- Compact DIN-rail housing
- User-configurable transmitters like FlexTop
- Damping and status indication
- On-site configuring with the dedicated tool, FlexProgrammer 9701
- 4...20 mA or HART® output
- Designed for OEM



Model	FlexTemp 2301	FlexTemp 2311	FlexTemp 2321
Output	4 ... 20 mA	4 ... 20 mA	4 ... 20 mA with HART®
Pt100, 2-, 3-, 4-wire	yes	yes	yes
T/C, mVolt and Ohm input		yes	yes
Namur NE21	yes		
Linearisation table		0 ... 30 points	0 ... 30 points
Damping	0 ... 30 sec.	0 ... 30 sec.	0 ... 15 sec.
Accuracy (Pt100)	< 0.25 °C	< 0.1 °C	< 0.1 °C
Galvanic isolation		2 kVAC	2 kVAC
Resolution	14 bit	16 bit	16 bit
Operating temperature	-40 ... +85 °C	-40 ... +85 °C	-40 ... +85 °C
Status indication	23/3.5 mA	23/3.5 mA	23/3.5 mA
Power supply	8 ... 35 VDC	6.5 ... 35 VDC	8 ... 35 VDC

Configurable temperature transmitter

FlexTop In-head mounted transmitter

- User-configurable, in-head transmitters
- On-site configuring with the dedicated tool, FlexProgrammer 9701
- 4...20 mA, HART® or ProfiBus PA output
- Designed for OEM

										
Model	FlexTop 2202	FlexTop 2203	FlexTop 2204			FlexTop 2211	FlexTop 2221	FlexTop 2231		
Output	4 ... 20 mA	4 ... 20 mA	4 ... 20 mA			4 ... 20 mA	4 ... 20 mA / HART®	Profibus PA		
Measuring range	-200 ... +850 °C	-100 ... +1820 °C -10 ... 100 mV	-100 ... 160 °C 0 ... 1000 Ohm			-270…2300 °C 0 ... 2200 Ohm	-270…2300 °C 0 ... 2200 Ohm	-270…2300 °C 0 ... 2200 Ohm		
Input	Pt100, 2-, 3-, 4-wire	T/C, mV	Pt500 and Ohm			RTD, T/C, mV and R inputs	RTD, T/C, mV and R inputs	RTD dual, RTD, T/C, mV and R		
Accuracy	< 0.1% FS	< 0.1% FS	< 0.1% FS			< 0.1 °C	< 0.1 °C	< 0.1 °C		
Operating temperature	-40 ... +85 °C	-40 ... +85 °C	-40 ... +85 °C			-40 ... +85 °C	-40 ... +85 °C	-40 ... +85 °C		
Power supply	8 ... 35 VDC	8 ... 35 VDC	8 ... 35 VDC			6.5 ... 35 VDC / 8 ... 35 VDC	8 ... 35 VDC / 8 ... 35 VDC	9 ... 32 VDC		
Approvals	Ex ia IIC T5/T6, ATEX II 1G	Ex ia IIC T5/T6, ATEX II 1G	Ex ia IIC T5/T6, ATEX II 1G			Ex ia IIC T5/T6, ATEX II 1G	Ex ia IIC T5/T6, ATEX II 1G	Ex ia IIC T5/T6, ATEX II 1G		
Additional data	- NAMUR NE21	- NAMUR NE21 - Compensation for "cold junction" (CJC) internal, external or fixed	- NAMUR NE21			- NAMUR NE21 - Local, remote or fixed compensation for "cold junction" (CJC)	- NAMUR NE21 - Local, remote or fixed compensation for "cold junction" (CJC)	- NAMUR NE21 - Local, remote or fixed compensation for "cold junction" (CJC)		

Mechanical temperature measurement

Bi-metal

- Versions for HVAC and Industry
- All housings in stainless steel
- TBHI liquid fillable for applications with heavy vibration
- Protection up to IP 68
- High accuracy







Model	TB	TBH	TBI	TBHI		TBA	TBL	TBX / TBW		
Housing	Ø 40, 63, 80, 100, 160 mm	Ø 80, 100 mm	Ø 80, 100, 120, 130, 160 mm	Ø 100, 130 mm		Ø 72 mm	Ø 80, 100, 160 mm	Ø 80, 100, 160 mm		
Temperature range	-30 ... +500 °C	-20 ... +250 °C	-70 ... +600 °C	-70 ... +600 °C		0 ... 120 °C / 0 ... 60 °C -20 ... +40 °C	-30 ... +50 °C / -20 ... +60 °C 0 ... 80 °C	-20 ... +250 °C		
Accuracy	Class 1 (≤ 250 °C) Class 2 (> 250 °C) According to EN 13190	Class 1 According to EN 13190	Class 1 (≤ 250 °C) Class 2 (> 250 °C) According to EN 13190	Class 1 (≤ 250 °C) Class 2 (> 250 °C) According to EN 13190		Class 1 According to EN 13189	Class 1 According to EN 13190	Class 1 According to EN 13190		
Case material	Stainless steel AISI 304 (1.4301)	Stainless steel AISI 304 (1.4301)	Stainless steel AISI 304 (1.4301)	Stainless steel AISI 304 (1.4301)		Synthetic	Stainless steel AISI 304 (1.4301)	Stainless steel AISI 304 (1.4301)		
Sensing element	Bi-metal	Bi-metal	Bi-metal	Bi-metal		Bi-metal	Bi-metal	Bi-metal		
Immersion tube material	Cu-Alloy (≤ 250 °C) Stainless steel AISI 316 Ti (1.4571) (> 250 °C)	Cu-Alloy (≤ 120 °C) Stainless steel AISI 316 Ti (1.4571) (> 200 °C)	Stainless steel AISI 316 Ti (1.4571)	Stainless steel AISI 316 Ti (1.4571)		Cu-Alloy	Cu-Alloy	Cu-Alloy		
Zero adjustment	Yes	Yes	Yes	Yes		Yes	Yes	Yes		
Protection class	IP 52	IP 50	IP 67	IP 68		IP 50	IP 50	IP 50 (TBX) / IP 65 (TBW)		
Additional data	- Especially suitable for use in chemistry and in the food industry	- Especially suitable for central heating units	- Usable in ATEX Zone 1 + 2	- "Every angle" housing - Safety glass - Stainless steel housing AISI 316L (1.4404) - Oil filling - "S" version available		- For temperature measurement on pipes from 1 ... 5 inches	- Special thermometer for climate applications			

Gas filled thermometer

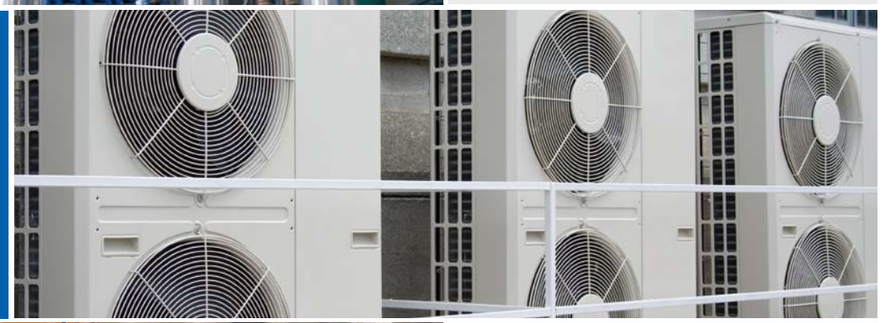
- Flexible system with fix stem or capillary tube
- Wide range of diameters
- All stainless steel design
- Suitable for high temperature up to 800 °C
- Electrical contacts available

Model	TSS	TSF
Housing	Ø 63, 80, 100, 160, 250 mm	Ø 63, 80, 100, 160, 250 mm
Temperature range	-200 ... +800 °C	-200 ... +800 °C
Accuracy	Class 1 (Option 0.5 and 0.6)	Class 1 (Option 0.5 and 0.6)
Case and sleeve material	Stainless steel AISI 304 (1.4301) or AISI 316L (1.4404)	Stainless steel AISI 304 (1.4301) or AISI 316L (1.4404)
Sensing element	Plunger	Capillary tube + plunger
Material wetted parts	Stainless steel 1.4541	Stainless steel 1.4541
Protection	IP 65	IP 65
Additional data	- Electrical contacts (TSFE): 100 and 160 mm case	- Electrical contacts (TSFE): 100 and 160 mm case

Our electronic temperature instruments includes a wide range of standard and hygienic process connections.

Mechanical thermometers are still a good solution for the local indication near to process. They work reliably even if there is no power on the system and allow to check the state of the process.

Our higly reliable temperature switches are especially suited for critical applications in power plants and in the process industry.



Level switch

Level detection based on frequency sweep technology

- No mechanical part in movement
- Visible alarm status on site

Conductive level sensor

- Rugged housing

Proximity switch

- Up to 15 mm

Photo electric level switch

- Chemical resistant

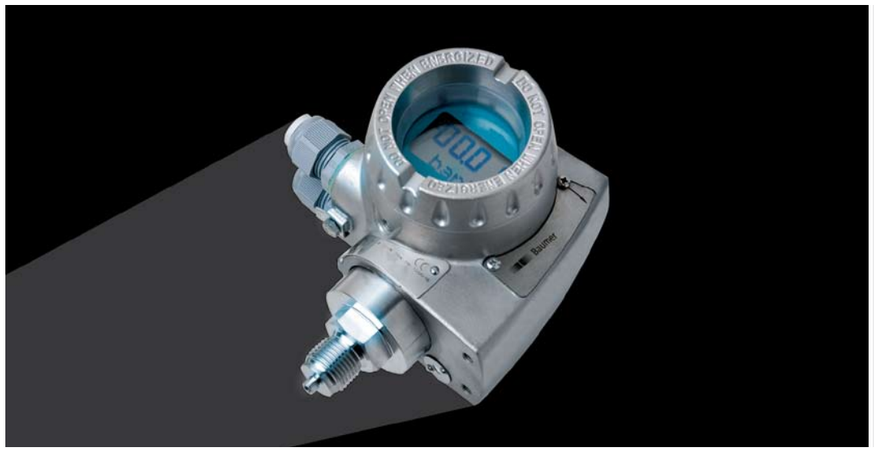






Model	Level Switch LFFS	Level Switch LFFS Sliding connection	Level Switch LBFS	Level Switch LBFS G½ for reverse assembly		Level Switch LBFS G½ hygienic	LSK x2x	LSK x5x		
Supply voltage	12 ... 36 VDC	12 ... 36 VDC	12 ... 30 VDC	12 ... 30 VDC		12 ... 30 VDC	18 ... 36 VDC	18 ... 36 VDC		
Ambient conditions	PN ≤ 40 bar T = -40 ... +115 °C	PN ≤ 16 bar T = -40 ... +200 °C	PN ≤ 40 bar T = -40 ... +85 °C	PN ≤ 40 bar T = -40 ... +85 °C		PN ≤ 40 bar T = -40 ... +85 °C	PN ≤ 16 bar T = -20 ... +140 °C	PN ≤ 16 bar T = -20 ... +140 °C		
Current consumption	≤ 35 mA	≤ 35 mA	≤ 35 mA	≤ 35 mA		≤ 35 mA	≤ 10 mA with amplifier			
Switching current	≤ 50 mA	≤ 50 mA	≤ 20 mA	≤ 20 mA		≤ 20 mA	50 mA max. including amplifier	5 A max. including amplifier Type DNGA		
Connection thread	G½", 3A/DN38	Sliding connection	G½", G¾", G1"	G½ for reverse assembly		G½ hygienic	G½"	G1"		
Protection class	IP 67	IP 67	IP 67	IP 67		IP 67	IP 67	IP 67		
Approvals	ATEX gas + dust, 3A	ATEX gas + dust	ATEX gas + dust	ATEX gas + dust		ATEX gas + dust	3A	3A		
Additional data	- Wetted parts in acid-proof, stainless steel and PEEK - Measures media with DK-values >1.5 - Not influenced by foam - LED level monitor in the cover - Configurable by FlexProgrammer 9701	- Wetted parts in acid-proof, stainless steel and PEEK - Process temperature -40 ... 200 °C - Measures media with DK-values >1.5 - Not influenced by foam - LED level monitor in the cover - Configurable by FlexProgrammer 9701	- Stainless steel housing - Process temperature -40 ... 115 °C - Measures media with DK-values >1.5 - LED monitor in the cover - Configurable by FlexProgrammer 9701	- Stainless steel housing - Process temperature -40…85 °C - Measures media with DK-values Dk >1,5 - LED monitor in the cover - Configurable by FlexProgrammer 9701		- Stainless steel housing - Process temperature -40…115 °C - Measures media with DK-values Dk >1,5 - LED monitor in the cover - Configurable by FlexProgrammer 97011	- Stub or single rod: L = 17 ... 2000 mm - Signal detection: contact with media - Output / Supply voltage: External / internal switching module - Conductivity of media: ≥ 10µS/cm	- Multi rod: 1.4404 L = 200 ... 2000 mm - Signal detection: contact with media - Output / Supply voltage: external switching module - Conductivity of media: ≥ 10µS/cm		

Level measurement



Hydrostatic level transmitter

- Very high accuracy
- HeavyDuty
- Fully programmable
- Communication protocol
- Integrated digital display

Submersible transmitter

- Compact design
- Excellent repeatability and long term stability

Model	FlexBar HRT	Flexbar 3501	FlexBar 3431, Profibus ® PA
Measuring range	0 ... 20 mbar to -1 ... 400 bar	-1 ... 70 bar relative, absolute	0 ... 20 mbar to -1 ... 400 bar
Span	30 points linearisation	Auto Zero push button Turn down 25:1 / 30 point linearization	30 points linearisation
Overpressure	400% of measuring range	Up to 15 times	400% of measuring range
Accuracy (linearity, hysteresis and repeatability at 20 °C)	±0.2% F.S.	±0.1% F.S.	±0.2% F.S.
Supply voltage	6.5 ... 35 VDC	12 ... 35 VDC	9 ... 32 VDC
Output signal	4 ... 20 mA, HART®	4 ... 20 mA HART®	Profibus PA
Process connection	Standard: G½", 3A hygienic, flush diaphragm, Varivent®	Standard: G½" EN 837-1 Clamp, hygienic, Varivent®	Standard: G½", 3A hygienic, flush diaphragm, Varivent®
Protection class	IP 65, IP 67	IP 67	IP 65, IP 67
Approval	Ex ia IIC T5 / T6	Ex ia IIC T4 / T5	Ex ia IIC T5 / T6
Additional data	- Field housing Ø 80 mm: stainless steel 1.4301, polished - FlexView LC-display optional	- Stainless steel, diecast housing size: 32 x 152 x140 mm	- Field housing Ø 80 mm: stainless steel 1.4301, polished - FlexView LC-display optional

Model	PSMN / PSMX	PSSN
Measuring range	0 ... 1 mH_2O 0 ... 250 mH_2O	0 ... 6 mH_2O - 0 ... 10 mH_2O 0 ... 16 mH_2O - 0 ... 20 mH_2O
Supply voltage	8 ... 30 VDC (mA output) 13 ... 30 VDC (voltage output)	8 ... 30 VDC
Accuracy (linearity, hysteresis and repeatability at 20 °C)	±0.1% F.S., ±0.25% F.S	±1% F.S.
Output signal	4 ... 20 mA, 0 ... 10 V 0 ... 5 V, 1 ... 5 V, 0.5 ... 4.5 V	4 ... 20 mA
Media temperature	-5 ... +80 °C	5 ... +40 °C
Process connection	- G½ flush, diaphragm protection cap open or closed (POM) - G½ flush diaphragm, with hexa 27 mm	- Open or closed version (protection cap POM)
Protection class	IP 68	IP 68
Approval	- CE - ATEX II 1G / Ex ia IIC T5/T6 - German Lloyd (planned)	- CE
Additional data	- Configurable with Flexprogrammer 9701	

Level measurement

Potentiometric level transmitter

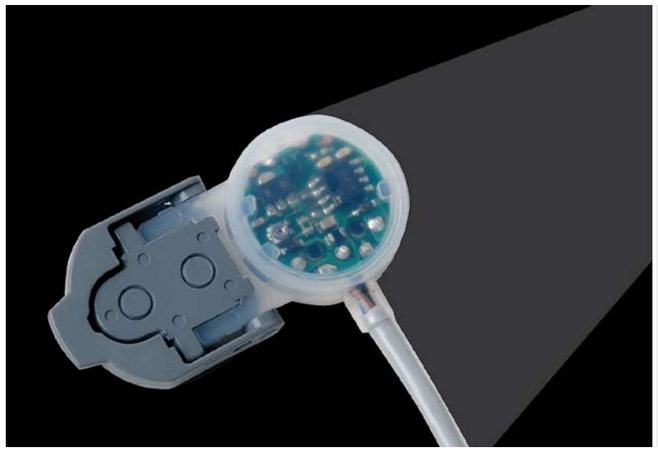
- Wetted parts in acid-proof, stainless steel or PEEK
- Unaffected by strong adhesive media

Ultrasonic sensor

- Hight accuracy
- No mechanical parts in movement

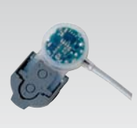
Model	LSP 050
Measuring range	Configurable, mini: 50 mm
Output signal	4 ... 20 mA
Ambient condition	PN ≤ 16 bar T = -20 ... +140 °C
Conductivity of media	≥ 50µS/c
Supply voltage	18 ... 36 VDC
Process connection	G1"
Protection class	IP 67
Approval	3A-Sanitary Standard
Additional data	- Single rod: 1.4404 L = 200 ... 3000 mm - Current consumption 200 mA

Leak monitoring



Leak monitoring

- Optical leak detection
- Chemical resistant



Model	FODK 23
Measuring System	Photoelectric sensor
Supply voltage	10.8 ... 26.4 VDC
Output current	< 50 mA
Operating temperature	-25 ... +50 °C
Mounting thread	2 x knockouts Ø 4.5
Protection class	
Additional data	- Integrated electronics - Detects liquid amounts of approx. 1 ml - Chemically resistant, protection by Teflon® PFA sheath

In level measurement we distinguish between continuous measurement and limit detection.

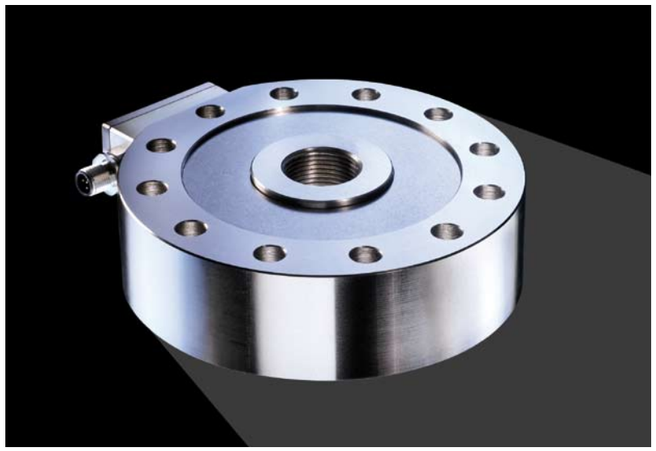
There are requirements regarding mounting, cleaning as well a precision and costs. The main task is to chose the right technology for the specific need. Thanks to our broad technology competence we are able to offer you the right solution for your application.

Conductivity

- Accurate and qualitative control of the process
- Conductivity and temperature measurement
- Four preset measuring ranges
- 3A process connection

Model	ISL 05x Conductivity transmitters
Measuring range	- 14 conductivity ranges from 0 ... 0,5 to 0 ... 999 mS/cm - 7 temperature ranges from 0 ... +50 to -20 ... +150 °C
Accuracy	±1% of selected measuring range
Span and zero adjustment	Given by adjusted pressure and temperature ranges
Supply voltage	18 ... 36 VDC, 180 mA max.
Output signal	Conductivity: 4 ... 20 mA, Temperature: 4 ... 20 mA
Operating temperature	-20 ... +130 °C (short time up to +140 °C)
Process connection	G 1“ hygienic design acc. 3A requirements
Protection class	IP 67
Additional data	- Housing: stainless steel 1.4301, with screw cap incl. window - Adjustment through menu using push-turn button - Programme sequence: external selection of up to 4 pre adjusted measuring ranges possible - Media pressure: 10 bar max. - Wetted materials: stainless steel 1.4404, PEEK - Process connection: G1" rotating gland allows easy positioning of the instrument - 3A approval

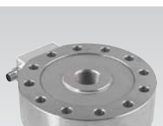
Force sensor



Force sensor

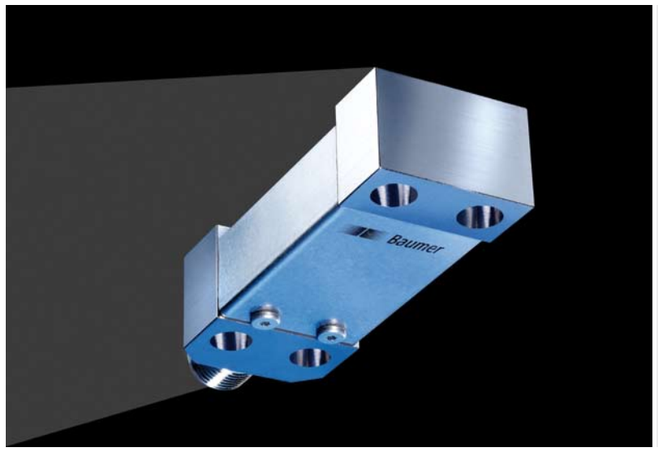
- Static and dynamic applications
- Accuracy 0,3 %
- Sensibility 2 mV/V
- Force range 500 N to 100 kN
- Tension / compression applications
- Protection class IP 67



Product family	DLRx L001	DLRx L002	DLRx L002	DLRx L003
Load transmission	Compressive load	Compressive load	Tension / Compressive load	Tension / Compressive load
Sensibility	1 mV/V	2 mV/V	2 mV/V	2 mV/V
Force range	0 ... 5 kN 0 ... 10 kN	0 ... 0.5 kN 0 ... 1 kN 0 ... 2 kN 0 ... 5 kN 0 ... 10 kN	0 ... 0.5 kN 0 ... 1 kN 0 ... 2 kN 0 ... 5 kN 0 ... 10 kN	0 ... 10 kN 0 ... 20 kN 0 ... 30 kN 0 ... 50 kN 0 ... 100 kN
Dimension	ø 32 x 17 mm	ø 55 x 30 mm	ø 55 x 51 mm	ø 155 x 46 mm
Output	0 ... 10 V, 4 ... 20 mA	0 ... 10 V, 4 ... 20 mA	+/-10 V, 4 ... 20 mA	+/-10 V, 4 ... 20 mA
Characteristics	- Full bridge - Amplification with DABx AD2T	- Full bridge - Amplification with DABx AD2T	- Full bridge - Amplification with DABx AD2T	- Full bridge - Amplification with DABx AD2T

Strain sensor

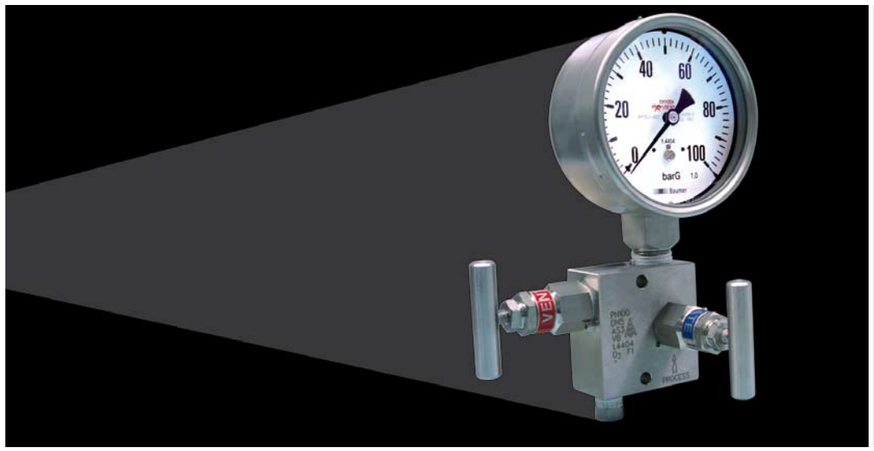


Strain sensor

- Static and dynamic applications
- Accuracy < 1 %
- Measuring range +/-100 … +/-750 µε
- Transducer, CANopen, voltage or current output
- Protection class IP 65


Product family	DSRT 22Dx	Classification	DSPN 27
Measuring range	+/-100 ... +/-750 µε	Measuring range	0 ... 500 µε
Output signal	CANopen, +/-10 V, 4 ... 20 mA	Sensibility	900 pC/µε
Accuracy	< 1 %	Linearity	< +/-1 %
Dimension	26 x 80 x 17 mm	Dimension	ø 40 x 18 mm
Protection class	IP 65	Protection class	IP 65
Characteristics	- Full bridge - Excellent signal to noise ratio - For static and dynamic applications	Characteristics	- Ideal for mold protection - Measures smallest strains - For cyclic applications - Amplification with DACU 820

Accessories



Pressure accessories

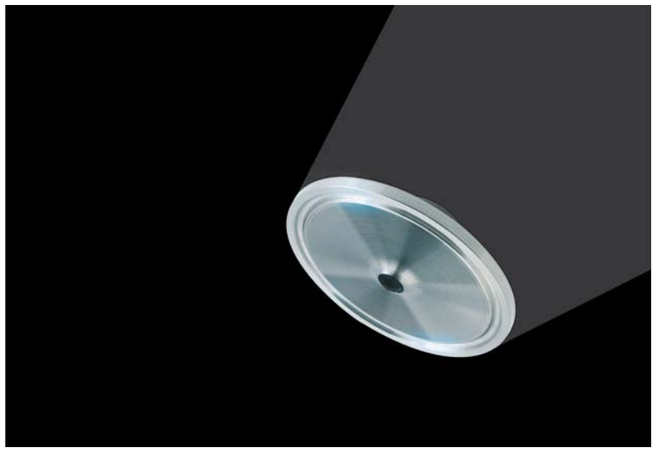
- All Stainless steel is the standard
- Various materials
- Easy maintenance
- A siphon for condensable fluids
- A capillary for non-condensable fluids

Temperature accessories

- Welded and bored thermowells
- Sliding connections

Model	AORP, AORPB	ARA	ASIP	AKPL		ARPX	AMFD
Type	Pressure limitor	Pressure dampener	Siphon	Capillary		Needle valve	Manifold
Range	AORP: 3 ... 400 bar AORPB: 0.1 ... 16 bar and Vacuum						
Max. pressure	700 bar	600 bar	400 bar	1000 bar		400 bar	420 bar
Wetted parts	Stainless steel, Viton®	Stainless steel, Steel or Brass	Stainless steel, Carbon steel	Stainless steel		Stainless steel / PTFE	Stainless steel / PTFE
Working temperature	+150 °C maxi	+250 °C maxi	+400 °C maxi	+400 °C		+250 °C maxi	+200 °C maxi
Process connection	½NPT female thread	G½, ½NPT female thread	G½, ½NPT male or female thread	G½, ½NPT male or female thread		G½, ½NPT male or female thread	½NPT female thread

Model	8139	T8410, T8911, T669x, T9093
Type	Temperature sensor pockets	Thermowells
Process temperature	Up to 500 °C	Up to 650 °C
Pipe lenght	Up to 6000 mm	From 60 to 1000 mm
Materials	Stainless steel	Brass, steel, stainless steel



Accessories universal

- High quality stainless steel
- Wide variety of process connections for critical process applications
- Also used in sterile environment



Model	Adapters CAM, VAM, LAM, RAM, SAM	Welding Sleeves, Tanks PM020, PM021, PM023, PM050, PM053, PM200	Welding Sleeves, Pipes PM022, PM025, PM031, PM032, PM033, PM035, PM052, PM200
Compatible sensors	FlexBar / ED701 / LSP /LSK / ISL / LFFS / LBFS	FlexBar / ED701 / LSP /LSK / ISL / LFFS / LBFS	FlexBar / ED701 / LSP /LSK / ISL / LFFS / LBFS
Sensor thread options	M12 / G1/2“ / G1“	M12 / G1/2“ / G1“	M12 / G½" / G1"
Media pressure	See device	See device	See device
Approval	3A Sanitary standard Depending on the sensor specification	3A Sanitary standard Depending on the sensor specification	3A Sanitary standard Depending on the sensor specification
Additional data	- Execution: with Clamp DIN/ISO, Varivent®, hygienic, ... - Material: stainless steel 1.4404 - Sealing material: no seal or EPDM gasket - Cleaning: According to specifications CIP and SIP - Material certificate: 3.1 B (option)	- Material: Stainless steel 1.4404 - Sealing material: No seal - Cleaning: According to specifications CIP and SIP - A mark indicates the final gland or plug position - Material certificate: 3.1 B (option)	- Material: Stainless steel 1.4404 - Sealing material: no seal - Cleaning: According to specifications CIP and SIP - Material certificate: 3.1 B (option)

FlexProgrammer 9701

- Dedicated configuring tool for Baumer products (pressure, temperature and level)
- Portable flexibility with battery supply
- Operated and recharged from a USB port
- Display for remote monitoring
- DMT-based device drivers
- Easy-to-use dedicated software

Model	FlexProgrammer 9701
Supply voltage	From USB-port or from rechargeable battery
Software	FDT/DTM based
Ambient values	0 ... +50 °C, rel. humidity <90%
Protection class	IP 42
Additional data	- Easy configuring with menu control function - Data transfer from PC to device via USB - Configuration of a device on the spot without a PC - Robust plastic case with digital display and buttons - Rechargeable battery type NiMH 2,4 V, 450mAh - Free FlexProgram updates from our web site

Development at Baumer

The success story of the Baumer Group is heavily marked by innovations. In the past years, many trend setting Baumer products have been brought to the market. Particular attention was given to miniaturization, precision and measuring speed as well as robustness of sensors. These attributes set Baumer products apart.

In order to realize ambitious future targets, Baumer attaches great importance to research and development. Over 12% of our staff, whether hard- and software engineers, designers or process engineers, develop new products and systems. The Baumer development teams are part of an international network and cultivate close contact with research institutions and universities. As one of the technological leaders, Baumer strives to maintain its advantage and to protect its innumerable innovations with patents.

- Photoelectric sensors
- Inductive sensors
- Capacitive sensors
- Ultrasonic sensors
- Magnetic sensors
- Vision sensors
- Force and strain sensors
- Precision switches My-Com
- Encoders
- Resolvers
- Speed switches
- Tachogenerators
- Counters
- Process displays
- Spindle positioning systems
- Actuators and positioning drives
- Angle measuring systems
- Digital cameras
- Intelligent cameras
- Camera modules
- Smart vision sensors
- Optical inspection systems
- OCR- and code identification

Worldwide presence

At Baumer we like to be close to our customers; we listen to them and, understanding their needs, provide the best solution. Worldwide customer service for Baumer starts with on-the-spot personal discussions and qualified consultation. Our application engineers speak your language and strive from the start, through an interactive problem analysis, to offer comprehensive and user-compatible solutions.
The worldwide Baumer sales organizations guarantee short delivery times and local product availability. Many of our customers are directly linked via our electronic order system with the Just In Time logistics process.
A worldwide network coupled with the most modern communication techniques enable us to deliver information quickly and transparently to decision makers in all Baumer locations.
Closeness to the customer for Baumer means being available for your needs anywhere and at any time.

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