

Instrumentation for Sanitary Applications

Pressure and Temperature Measurement



Instrument Requirements

WIKA combines world-class LeanSigma® operations and agile manufacturing to provide you with the industry's shortest lead time. Each of the over 9 million instruments produced annually in the United States meets rigorous ISO 9001:2008 standards. Utilizing state-of-the-art equipment, resident engineering and manufacturing technology, WIKA sets the standard for precision, dependability and innovation.

Best Practice for Instrumentation

A sanitary process flow requires peripheral components, such as pressure and temperature measuring instruments, to ensure that process and cleaning parameters are performing within allowable limits.

WIKA's best practice approach of designing and manufacturing sanitary instrumentation adds to the profitability and safety of the manufacturing process system. Additionally, our best practice approach to designing and manufacturing assists in ensuring compliance with the validation process of hygienic approval agencies.

Our best practice approach also explores the installation of the pressure and temperature measuring instruments into the process to minimize all potential contamination points and improve safety.



Hygienic Approval Agencies

WIKA's sanitary instrumentation meets or exceeds the stringent requirements of hygienic approval agencies that are referenced during the generation of the design requirements for the facility and process, as well as conforms to current Good Manufacturing Practices (cGMP) guidelines.



Documentation

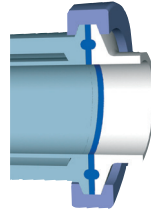
Where the documents icon (right) appears, it signifies that a Calibration Conformance Report and material conformance documents are supplied standard with the WIKA product series, at no additional charge.

The Calibration Conformance Report supplied with each assembly contains data from a 5-point calibration using equipment that is traceable to NIST, but is not a replacement for a NIST certificate. The Calibration Conformance Report also contains the product's unique serial number and references all applicable documents to meet validation requirements. (An electropolish certificate containing nominal surface finish and process parameters - [Ra microinch] - is an available option for additional cost and must be specified on the purchase order).

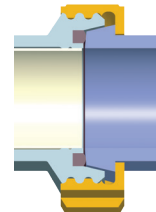
The material conformance documents supplied with each assembly are certificates provided by the raw material supplier, containing material composition and lot traceability for all process wetted surfaces. The material conformance documents are not a replacement for an 3.1 material certificate.

Process Connections

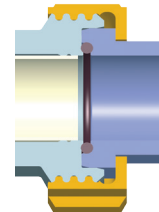
Sanitary connections are designed to be in compliance with the majority of cleanliness requirements in the pharmaceutical, food and beverage, and cosmetic industries. Below are only some of the available sanitary connections from WIKA: Tri-Clover® Tri-Clamp, Cherry-Burrell, DIN 11851 and DIN 32676, ISO 2852, Varivent®, 4" Tank Spud.



Clamp fitting
Tri-Clamp



Thread fitting
according to
DIN 11851



Thread fitting
according to
DIN 11864-1 Form A

Mechanical Gauge Cases

The external case finish on a WIKA sanitary mechanical gauge complies with the highest hygienic standards. They are often recommended to be made of stainless steel. Mechanical gauge cases that are used in clean rooms and in pharmaceutical and biotech industries are often electropolished, which improves the external surface area finish and minimizes the adherence of unwanted particles. The gauge case should also sufficiently protect against penetration of water and cleaning agents. WIKA mechanical gauges comply up to NEMA 6 (ingress protection up to IP 68), the optimal rating for thorough washdowns.

Cleanability

The Clean-In-Place (CIP) and Sterilization-In-Place (SIP) systems are influenced by the quality of the process wetted surfaces. In order to avoid a concentration of pathogenic organisms and/or the formation of biofilms, the surface in contact with the process needs to be passive and free of microscopic faults.

An average surface roughness of $Ra < 20\mu\text{in}$ is deemed sufficient for the majority of sanitary process fittings (ASME BPE surface designation SFF5). WIKA products containing a 316L SS electropolished finish have an average surface finish of $Ra < 13\mu\text{in}$ ($Ra < 20\mu\text{in}$ in the area of the diaphragm weld).



Process Connections

The use of a diaphragm seal adapts non-sanitary process connections to those that are designed to comply with domestic and international hygienic standards.

The diaphragm seal isolates the pressure measuring instrument (gauge, switch, transducer or transmitter) from the process media. This isolation is achieved by means of a thin flexible metal diaphragm welded flush to a housing that is in compliance with the preferred sanitary process connection. The sanitary design ensures the pressure instrument connection to the process media is free of crevices and dead space or they are dramatically reduced.

The use of a diaphragm seal provides the option of remote mounting the instrument away from the process for safety concerns or when extreme process temperatures exceed the instrument rating. The diaphragm seal can be attached to the instrument in three basic configurations:

- Instrument direct mounted onto diaphragm seal
- Instrument mounted via cooling element – extreme process temperatures
- Instrument mounted via flexible capillary – remote – mount instrument and/or extreme process temperatures

Advantages of Diaphragm Seals

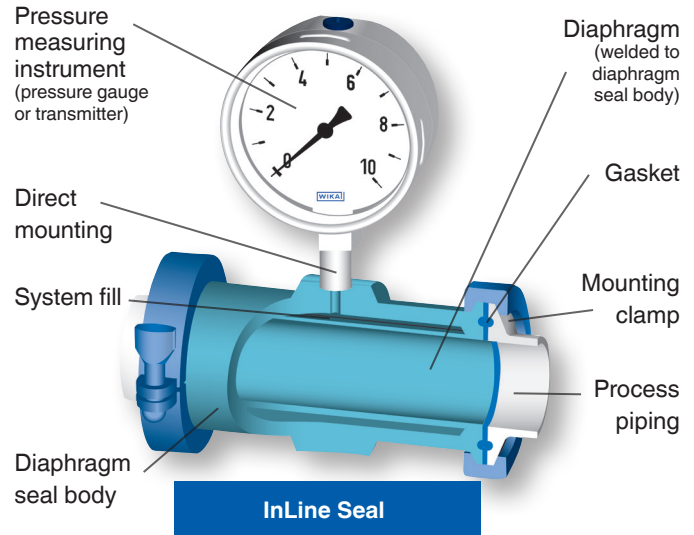
1. Converts instruments with threaded connections so that they meet acceptable hygienic industry standards
2. Various wetted materials and process connections are achieved without total redesign of the pressure measuring instrument
3. Can be used with extreme temperatures to keep the instrument within its operative temperature limits
4. Remove or reduce crevices and dead space at the tapping point of the process
5. Additional accessories can be added to the pressure measuring instrument while maintaining hygienic conditions. Examples include the following:
 - Pressure dampening device to slow the response time, therefore minimizing the fluctuation in the pressure reading
 - Two or more measuring instruments can be installed onto one sanitary diaphragm seal (local and remote readings of pressure and/or temperature)

System Fill Fluids for Diaphragm Seals

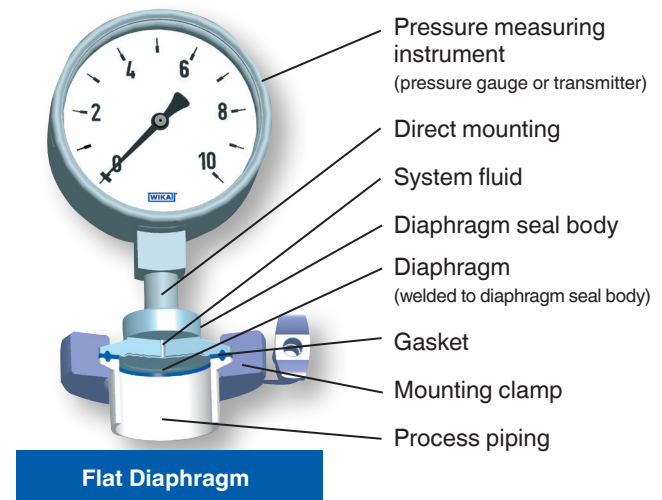
WIKA uses FDA and/or USP-compliant system fill fluids to transmit pressure from the diaphragm seal to the measuring instrument

Common designation	WIKA code no. KN	Permissible temperature range		S.G. at temperature		Viscosity at temperature	
		Pabs < 1 bar [°C]	Pabs ≥ 1 bar [°C]	[g/cm ³]	[°C]	[m ² /s · 10 ⁻⁶]	[°C]
Glycerine	KN 7	---	-20 ... +230	1.26	+20	1110	+20
Glycerine/water	KN 12	---	-10 ... +120	1.22	+20	88	+20
Neobee® M20	KN 59	-20 ... +90	-20 ... +200	0.92	+20	10.1	+25
Mineral oil	KN 92	-20 ... +170	-20 ... +250	0.85	+15	56	+20
Food grade silicone	KN 93	---	0 ... +300	0.97	+20	350	+20

WIKA provides two types of sanitary seals: InLine Seal and the Flat Diaphragm Seal



InLine diaphragm seal designs exist for flow applications where they become an integral part of the piping system. These seals will not introduce any process turbulence, corners, dead space or obstructions to the flow; thus providing an accurate pressure measurement. InLine seals are self-draining to assist in the cleaning of the piping system.



The basic flat diaphragm seals are designed to be installed into the process flow by use of a "Tee" fitting. This "Tee" type of installation allows a pressure sensing diaphragm with a relative large surface area to be exposed to the process to ensure accurate pressure readings.

Pressure Measurement

WIKA offers fully configured sanitary pressure measurement assemblies, both electrical and analog. These instruments offer completely welded designs with no exposed wetted or non-wetted threads to ensure highest cleanliness standards. The process connection starts as small as 3/4" Tri-Clamp and as large as a 4" nominal connection. Various sanitary industry process connection types and sizes are available with the assemblies shown below.

3A Sanitary Pressure Transmitter

S-10-3A

Ranges: 15 psi to 1,500 psi vacuum, compound

Output: 4-20 mA, 0-5V, 0-10V

Accuracy: ≤ 0.25% B.F.S.L.

Process connection: 3/4" and larger Tri-Clamp



(S-10-3A-C)



All transmitters include, as a minimum, a stainless steel case with internal zero and span adjustments. Mechanical gauges with a case size of 2.5" and larger have the option of liquid filling the case to extend the operating life of the instrument.

A majority of these assemblies offer an optional integral heat exchanger between the process connection and the pressure instrument. This element removes the instrument from a process medium containing an extreme temperature (hot or cold) to ensure the instrument doesn't exceed its operative limits.

3A Sanitary Fractional Gauge

M93X.25

Size: 2 1/2"

Case: Polished stainless steel

Ring: Polished stainless steel, crimped

Wetted parts: 316L SS

Window: Polycarbonate or polysulfone

Process connection: 3/4", 1" Tri-Clamp

Accuracy: +2/1/2% of span



3A Sanitary Low Pressure

SA-11

Ranges: 100 InWC to 400 psi, vacuum, compound

Output: 4-20 mA

Accuracy: ≤ 0.25% B.F.S.L.

Process connection: 1 1/2" and 2" Tri-Clamp



3A Sanitary Gauge Assembly

M93X.3A

Size: 2 1/2", 4"

Case: Stainless steel, electropolished

Ring: Stainless steel, electropolished

Wetted parts: 316L SS electropolished

Window: Polycarbonate or polysulfone

Process connection: 1 1/2" up to 4" Tri-Clamp, lower or back mount

Accuracy: ±2/1/2% of span (2 1/2")
±1.0% of span (4")



3A Sanitary Pressure Transmitter

F-20-3A

Ranges: 15 psi to 1500 psi, vacuum, compound

Output: 4-20 mA

Accuracy: ≤ 0.25% B.F.S.L.

Process connection: 3/4" and larger Tri-Clamp



(3/4" Connection)



3A Sanitary Fractional Gauge

M932.2C

Size: 1 1/2", 2"

Case: Stainless steel

Wetted parts: 316L SS

Window: Glass or acrylic

Process connection: 3/4" Tri-Clamp, lower or center back mount

Accuracy: ±3/2/3% of span



Sanitary diaphragm seals are designed to facilitate ease of assembly and disassembly from its mated fitting to expedite the cleaning process. They are designed to be free of crevices and cavities that could create an area for bacterial or archaea growth. The most common sanitary diaphragm seals and fittings are held together by use of a clamp or union nut. All WIKA sanitary diaphragm seals are in compliance with 3A third party criteria.

Tri-Clamp

L990.22

Process connection: 1½" to 4"
Tri-Clamp

Pressure rating: Up to 1500 psi*

Suitable pressure: 15 psi to 1500 psi

Wetted parts: 316L SS
Other (consult factory)



*Proper clamp design mandatory above 600 psi

Threaded Sanitary, DIN 11851

L990.18

Process connection: DN25, DN80
per DIN 11851

Pressure rating: Up to 40 bar

Suitable pressure: 15 psi to 600 psi

Wetted parts: 316L SS
Other (consult factory)



Inline Seal Tri-Clamp

L981.22

Process connection: ¾" to 4"
Tri-Clamp

Pressure rating: Up to 600 psi

Suitable pressure: 15 psi to 600 psi

Wetted parts: SST
Other (consult factory)



Tank Spud

L990.SD

Process connection: 4" Tri-Clamp

Pressure rating: Up to 600 psi

Suitable pressure: 15 psi to 600 psi

Wetted parts: 316L SS
Other (consult factory)



Varivent®

L990.24

Process connection: Form F, form N

Pressure rating: 15 psi to 600 psi

Suitable pressure: -30" Hg to 0 psi up to
-30" Hg to 600 psi

Wetted parts: 316L SS
Other (consult factory)



I- Clamp

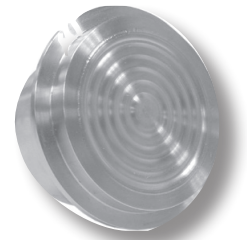
L990.57

Process connection: 1½" to 3"
I- Clamp

Pressure rating: Up to 500 psi

Suitable pressure: 15 psi to 500 psi

Wetted parts: 316L SS
Other (consult factory)



Solutions for Special Applications Meeting the Highest Hygienic Standards

Pressure Transmitter Output Signal, Single or Dual Switch and Local Display – Types PSD-30 and L990.22

The WIKA PSD-30 pressure transmitter, when installed on a diaphragm seal, combines three instruments into one device: a pressure transmitter; switch; and local display. Combining several pressure instruments into one device reduces the number of required taps within the process piping, which reduces cleanliness concerns in sanitary industry applications.

The PSD-30 assembly features include a highly visible 14-segment red LED display, intuitive 3-key programming operation, 4-20mA output signal and a choice of a single or a dual NPN or PNP solid-state switch. In order to ensure compliance with most manufacturers design policies, WIKA can install a sanitary diaphragm seal onto the PSD-30, which is compatible with most industry-standard, hygienic process connections.



PSD-30 w/L990.22

Homogenizer Gauge – Type M990.30

The mechanical pressure gauge Type M990.30 was especially designed for extremely high static and dynamic pressure loads typically present with homogenizing processes.

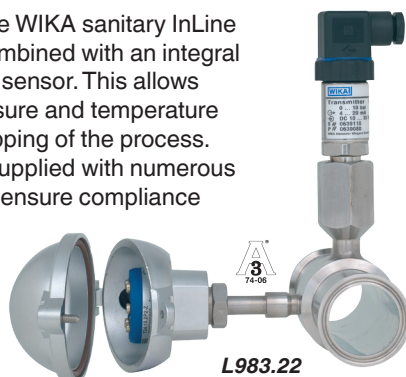
This engineered solution allows static pressures up to 23,000 psi with pressure surges exceeding 30,000 psi to ensure a long service life of the instrument. This model is available with either a mechanical pressure gauge or an electronic pressure transmitter with a 4 ... 20 mA output signal.



M990.30

INLINE Diaphragm Seal with Integrated Temperature Measurement – Type L983.22

All the advantages of the WIKA sanitary InLine diaphragm seals are combined with an integral temperature measuring sensor. This allows measuring of both pressure and temperature from one unintrusive tapping of the process. This assembly can be supplied with numerous sanitary connections to ensure compliance with a wide variety of hygienic applications.



L983.22

Dry Cell Mechanical Pressure Gauge – Type PG43SA

This sanitary gauge has no fluid behind the measuring diaphragm. This innovative measuring technology is being introduced into the sanitary industry for all applications where possible contamination of the process media can be extremely expensive.



PG43SA



This innovative measuring method provides various advantages to the user. The largest advantage is the reduced potential of contamination in the case of an unforeseen breach in thin measuring diaphragm. If a breach in the thin measuring diaphragm was to occur, there is no fill fluid behind the diaphragm that can enter into the process media and destroy the batch.

Additional advantages: this system offers over-pressure protection of 5x the full scale (considerably greater than a Bourdon tube measuring system), little to no external temperature influence due to no fill fluid behind the diaphragm and the assembly is designed to comply with CIP, SIP and autoclaving.

InLine Thermowell, Zero Dead Space

The new WIKA sanitary thermowell is designed for applications where the utmost cleanliness requirements are a necessity (e.g. biopharmaceutical industry). Obtaining an electrical temperature measurement of the process media doesn't need to add to your list of cleaning concerns.



TW61

This thermowell becomes an integral part of the piping system without adding any dead space to the process. The welding of this temperature measuring-component into the piping system removes all potential crevices and dead space associated with instrumentation tees used with normal installations. This thermowell is suitable for CIP and SIP and is self draining. This flow-through design allows the temperature measuring element to be removed for calibration without opening the process.

Mechanical Pressure Gauges

The WIKA mechanical gauge product portfolio ranges from the tried and tested Bourdon tube gauge, capsule gauge for absolute pressure, bellows for low pressure, Sealgauges for tough applications and differential pressure. These mechanical gauges can be used to measure pressure by three different methods; gauge, absolute and differential pressure.

A number of optional features are readily available to assist in monitoring the process: case fill, alarm contact, minimum/maximum pointer and restrictor, and mounting flange. Some of these gauges can be adapted with sanitary connections by installing a diaphragm seal or InLine diaphragm seal.

Types 232.53/233.53 are ideal choices for general industrial applications requiring an economical dry or liquid-filled pressure gauge. When vibration and/or pulsation are present, the glycerine case fill dampens the Bourdon tube and minimizes pointer oscillation, which reduces wear on the gauge movement and extends operating life. Typical applications include hydraulic and pneumatic equipment.

With all stainless steel construction, high-quality industrial gauges ensure long service life in the harshest, most demanding environments. Typical applications include; water purification, steam generation, transfer systems and gas delivery. The large 6" diameter of the Type 232.50/233.50 gauge makes it ideal for applications that require dial reading from a distance.

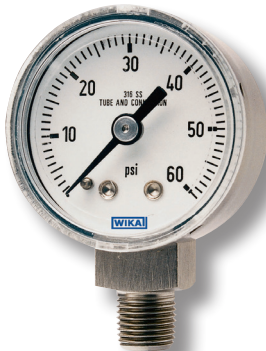
Stainless Steel Case, Stainless Steel Internals, Dry Case

131.11

Size: 1½", 2"
Case: 304 SS
Wetted parts: 316 SS
Window: Plastic

Scale ranges: 1½": 0 - 30 psi
 2": 0 - 15 psi
 (compound ranges available)

Accuracy: 2.5% of full span



All Stainless Steel, Field Liquid-fillable

232.54, 233.54

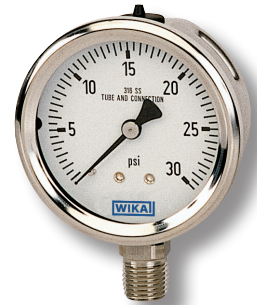
Size: 2½", 4"
Case: Stainless steel
Bayonet ring: Stainless steel (twist on)
Wetted parts: 316 SS
Window: Laminated safety glass
Liquid fill: None (232.54)
 Glycerine (233.54)
Accuracy: ±2/1/2% of span (2½")
 ±1.0% of span (4")



Stainless Steel Case, Stainless Steel Internals, Field Liquid-fillable

232.53, 233.53

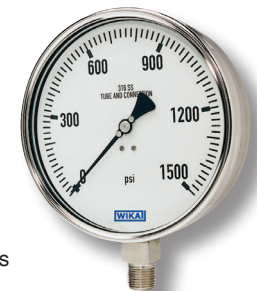
Size: 2½", 4"
Case: Stainless steel
Ring: Polished stainless steel (crimped on)
Wetted parts: 316 SS
Window: Acrylic
Liquid fill: None (232.53);
 Glycerine (233.53)
Accuracy: ±2/1/2% of span (2½")
 ±1.0% of span (4")



All Stainless Steel, Field Liquid-fillable

232.50, 233.50

Size: 2½", 4", 4½", 6"
Case: Stainless steel
Bayonet ring: Stainless steel (twist on)
Wetted parts: 316 SS
Window: Laminated safety glass
Liquid fill: None (232.50)
 Glycerine (233.50)
Accuracy: ±2/1/2% of span (2½")
 ±1.0% of span (4", 4½", 6")



Mechanical Temperature Measuring Instruments

WIKA manufactures bimetal thermometers available in a variety of connections, case sizes and temperature ranges. This flexibility makes WIKA bimetal thermometers the ideal choice for temperature applications.

Twin-Temp, Local and Remote Readings

WIKA's unique Twin-Temp thermometer combines the accuracy, reliability and readability dial of a bimetal or solar digital thermometer with the precision output and data acquisition capability of a thermocouple or RTD sensor. Every thermowell in your process can provide both local and remote readings.

TT.30, TT.32, TT.50, TT.52, TT.80, TT.82

Dial size:	3", 5"
Case:	Adjustable angle case or back-connected case
Stem:	1/4" O.D.
Length:	T/C 2 1/2" to 48"; RTD 4" to 48"
Connection:	1/2" NPT
Scale:	Dual °F/°C; single °F or °C
Range:	-100°F (-70°) to 550°F (260°C)
Thermocouple:	Type K thermocouple Standard types J, E, and T are optional
RTD:	100 Ohm thin film platinum DIN curve (.00385 Ohm/Ohm/°C)

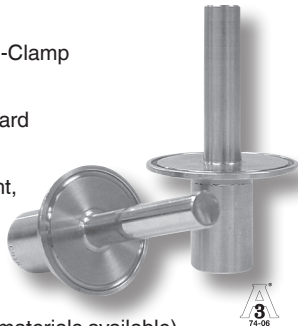


Thermowells

Thermowells for temperature instruments are recommended for all process insertion points. WIKA thermowells are available from a complete selection of base materials, as well as shields and coatings, and in sanitary connections. WIKA sanitary thermowells meet the criteria for USDA and 3A sanitary standard 74-06 requirements.

TW.SC

Process connections:	1/2" and larger Tri-Clamp
Instrument connection:	1/2" NPSM standard
Shank configurations:	Stepped, straight, tapered
Bore diameter:	.260"
Bore depth:	Up to 72"
Materials:	AISI 316 (other materials available)
Surface finish:	AISI 316: 16-32Ra microinch



Process-grade Bimetal Thermometers

WIKA process grade bimetal thermometers are suitable for nearly every local reading thermometer application. Their durable construction and finish ensure reliable readings and long-lasting service. The superior quality of the WIKA Types 30, 31, 32, 50, 51, 52 is reflected in the seven-year warranty.

TI.30, TI.31, TI.32, TI.50, TI.51, TI.52

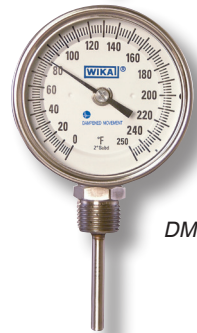
Dial Size:	3", 5"
Case and stem:	304 SS
Stem lengths:	2 1/2" to 72"
Case configuration:	Back-connected, bottom-connected, adjustable angle
Connection:	1/2" NPT
Window:	Flat instrument glass (see options for additional material)
Dial:	White aluminum; anti-parallax
Pointer:	Black aluminum
Accuracy:	±1.0% of span ASME B40.3 Grade A
Scale:	Dual °F/°C; single °F or °C
Ranges:	-100°F (-70°C) to 1000°F (500°C),
External reset:	A slotted hex adjustment head offers screwdriver or wrench use to field calibrate the thermometer
Fill policy:	WIKA does not recommend continued use of filled instruments at operating temperatures above 400°F (204°C) or below -100°F (-70°C)
Hermetic seal:	Hermetically sealed per ASME B40.3., guaranteed not to fog
Options:	Lexan®, acrylic and safety glass windows; dampened movement (as shown); min-max pointer; 3/8" stem; 316 SS wetted parts; silicone fill



TI.32



TI.51



DM



TI.82

Process Grade Bimetal Options

Dampened Movement

Engineered solution providing benefits of case fill in a dry configuration. This silicone-free option provides dampening of pointer fluctuation in tough environments at all available temperature ranges. Available in all process grade models.

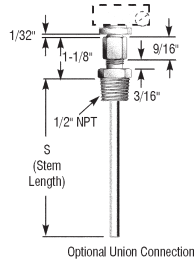


Maximum or Minimum Indicating Pointer

This resettable option allows the operator to view the highest or lowest temperature obtained within the process.

Adjustable Union Connection

The WIKA adjustable union connection allows for the installation of a Type 32 or 52 adjustable angle thermometer without rotating the case. Ideal for use in a confined space.



Left, Right or Top Connection

All WIKA 3" and 5" bottom connected thermometers are available with the connection oriented to the left, right or top.

Additional Options


- Thermometers may be ordered with sharp tips for piercing media to be measured
- 316 SS wetted parts are available
- Acrylic, Lexan®, shatterproof and glass windows
- Certificates of Conformance, Origin and Calibration available



Laboratory Thin Stem Thermometers

WIKA laboratory thin stem thermometers deliver fast, accurate readings. They are high-quality, economical thermometers designed for laboratory and OEM applications.


TI.T17, TI.T20

Dial Size:	1 3/4", 2"	
Case and stem:	304 SS	
Stem lengths:	5", 8", 12", 18"	<i>TI.T17</i>
Connection:	Plain, 7/16" hex hub with no threads	
Window:	Flat instrument glass Lexan® optional	
Dial:	White aluminum	
Pointer:	Black aluminum	
Accuracy:	1.0% full scale value	
Scale:	Dual °F/°C; single °F or °C	
Ranges:	-100°F (-70°C) to 750°F (500°C)	
External reset:	Externally adjustable on plain connection	
Options:	Stem lengths, threaded connections, scales and dial markings, beaker clip, stem tip	

Pocket Thermometer

Type TI.1005 is a bimetal dial thermometer for quick, accurate readings. The thermometer includes a pocket case which can be used to protect the stem and is popular in the food service industry for temperature safety monitoring.

TI.1005

Dial size:	1"	
Accuracy:	±1% of full scale	
Case:	Stainless steel	
Stem:	.142" diameter	
Length:	5"	
Range:	-40/160°F; 0/220°F; 50/550°F	
Pointer:	Aluminum with matte red finish	



Transmitters / Switches

WIKA's pressure transmitters and switches feature fully-welded measuring cells without any internal sealing elements, most with stainless steel cases, moisture and vibration protection, and all are calibrated prior to shipment. WIKA offerings include fixed range transmitters along with programmable ranges and linearity (horizontal tank level). Pressure switches are fully programmable to fine tune with the process. A wide range of digital indicators are available to accessorize the pressure transmitter.

Standard Industrial Pressure Transmitters

These rugged pressure transmitters are designed for use in harsh environments where accuracy, reliability and repeatability are critical. Applications include hydraulics and pneumatics, and numerous other processing operations.

S-10

Ranges: 50 InWC to 40,000 psi, vacuum, compound, absolute

Output: 4-20 mA 2-wire, 0-5 V 3-wire, 0-10 V 3-wire

Accuracy: $\leq 0.25\%$ B.F.S.L.

S-11: Flush diaphragm version

IS-20-S/IS-21-S: Intrinsically safe version



Flush Diaphragm Pressure Transmitters

The S-11 flat diaphragm pressure transmitter is designed for level measurement or high viscosity media applications.

S-11

Ranges: 50 InWC to 8,000 psi, vacuum, compound, absolute

Output: 4-20 mA, 0-5 V, 0-10 V

Switch points: $\leq 0.25\%$ B.F.S.L.



Attachable Loop Powered Local Indicator

The A-AI-1 is designed for use with the 4-pin DIN 43650 "L" plug supplied with Electronic Pressure Measurement industrial and A-10 4-20 mA output pressure transmitters. User-adjustable digital filtering stabilizes the display during rapid pressure changes.

A-AI-1

Display: -1999 to +9999 user-programmable

Power: Loop powered with 3 VDC drop

Application: For use with WIKA industrial and A-10 pressure transmitters with DIN plug



Attachable Loop Powered Local Indicator

Field Case Pressure Transmitters

The Type F-20 pressure transmitter features an integral stainless steel junction box for installation in washdown and harsh environments.

F-20

Ranges: 30"- 0 inHg to 15,000 psi

Output: 4-20 mA, 0-5 V 3-wire, 0-10 V 3-wire

Accuracy: $\leq 0.25\%$ B.F.S.L.

F-21: Flush diaphragm version

IS-20-S/IS-21-S: Intrinsically safe version



Pressure Transmitter with Integral LED Display and Switch Options

The PSD-30 features an integral red LED display that provides three-way adjustability for a wide variety of installation requirements. It is available with PNP or NPN solid state switches for intelligent control applications and meets VDMA standards for ease of programming.

PSD-30

Ranges: Vacuum, compound and gauge ranges up to 8000 psi

Display: Red 4 digit LED, .35" high, 14 segments

Switch points: Solid state user programmable, NPN or PNP, single or dual



Universal Process Transmitter

The UPT-20 has a turndown capability of up to 20:1 and is available with the HART® communications protocol. The high readability LCD display rotates 330° to optimize the viewing angle after installation. The intuitive programming menu is user-friendly for easy setup.

UPT-20

Ranges: 10 psi to 10,000 psi

Output: 4-20 mA 2-wire, 4-20mA w/ HART

Accuracy: up to 0.10% of span



High Precision & Calibration Test Equipment

WIKA offers a wide range of testing and calibration instruments: pressure and temperature, analog, electrical, portable and laboratory. Mechanical gauges can be supplied with accuracies as stringent as $\pm 0.1\%$ of full span and electrical devices as stringent as $\pm 0.006\%$ of full span. With NIST and EN traceable products, WIKA can provide the required equipment to maintain metrology and calibration laboratories.

High Precision Gauge

332.54

Accuracy: $\pm 0.25\%$ of span
-30 inHG to 800 psi
 $\pm 0.5\%$ of span
1000 psi to
10,000 psi

Size: 4" dial

Pressure ranges: -30 inHG ... 10,000 psi



Pneumatic & Hydraulic Hand Pumps

WICP-L100, WICP-M500, WICP-H10K

Operating Pressure Range

WICP-L100
-12...100 psi

WICP-M500
12...600 psi

WICP-H10K
0...10,000 psi

Maximum Pressure Range

WICP-L100
150 psi

WICP-M500
750 psi

WICP-H10K
10,000 psi

Connection

WICP-L100
1, 1/8" FNPT port

WICP-M500
1, 1/4" FNPT (top)
1, 1/8" FNPT (side)

WICP-H10K
2, 1/4" FNPT (top and side)
1, 1/8" FNPT port
(for use with pressure relief valve only)



Hand Held Pressure Indicator

CPH 6600

Accuracy: 0.025% (Calibration Certificate included)

Pressure generation: Via integral electric vac/pressure pump

Measuring ranges: Vac ... 30 psi
vac ... 150 psi
vac ... 300 psi



Digital Test Gauge

CPG 1000

Pressure units: Displays in 18 standard pressure units with 1 custom unit

Features: MIN/MAX, TARE, dampening

Approvals: CSA/US intrinsically safe, Class 1, Div. 2 Groups A, B, C & D; CE approved



With almost 70 years of experience, WIKA Instrument, LP is the leading global manufacturer of pressure and temperature measurement instrumentation, producing more than 43 million pressure gauges, diaphragm seals, pressure transmitters, thermometers and other instruments annually. WIKA's extensive product line, including mechanical and electronic instruments, provides measurement solutions for any application in a large variety of industries. A global leader in lean manufacturing and instrumentation experience, WIKA also offers a broad selection of stock and custom instrumentation as well as dedicated services to provide customers with the right solutions, at the right time, wherever they need us.

**ISO 9001
Certified**



3A Sanitary Low Pressure

SA-11



Dry Cell Mechanical Pressure Gauge

PGA3SA

WIKA Instrument, LP
 1000 Wiegand Boulevard • Lawrenceville, GA 30043
 Toll Free 1-888-WIKA-USA (945-2872)
 Tel (770) 513-8200 • Fax (770) 338-5118
 info@wika.com • www.wika.com
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