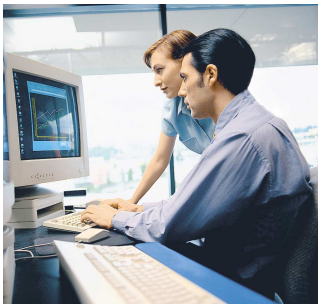
Product Review

Electrical
Temperature Measuring Instruments

WIKA

Part of your business

Contents



Our customers benefit from the creativeness and innovation demonstrated by our excellently trained specialists

In-house testing capability accelerates development times – here in the EMC laboratory

Quality without compromise

WIKA temperature and pressure measurement

Our customers all over the world can be certain that they receive quality without compromise in all respects. This, in turn, is ensured by technologically sophisticated products for precise and reliable measurement, and by competent employees who devote themselves to the set aims and follow these together with our customers; and by developing innovative technologies in the electronic measurement sector, in which WIKA leads the way. And last but not least, as a result of more than 50 years experience which has made us one of the leading companies today for pressure and temperature measurement.

Comprehensive solutions

WIKA offers a comprehensive product spectrum, complete packages of standard products or customised solutions. We take care to engineer your measuring point:

- selection of suitable components and materials
- thermowell calculations
- material testing
- test certificates

WIKA develops and manufactures in-house and can therefore guarantee excellent service backup to our customers.

Bus technology

Communication interfaces leading the way into the future integrate intelligent field instruments in asset management systems. They offer flexibility, help to reduce costs and improve quality.

Testing and calibration technology perfection

Due to the fact that we maintain calibration laboratories, accredited for pressure and temperature as measurement variables, we can offer our customers maximum safety, precision and quality, certified in accordance with many national calibration standards which are recognised in almost all industrialised countries.

Temperature calibration laboratory at WIKA

WIKA Product lines

The WIKA programme covers six product lines for various fields of application.

Electronic pressure measuring instruments

WIKA offers the complete range of electronic pressure measuring instruments: We offer solutions for the measurement of gauge, absolute and differential pressure in the measuring ranges 0...0.6 mbar to 0...10,000 bar.
Our pressure transmitters, transmitters with Turn down (UniTrans) and pressure switches come supplied with standard current or voltage output signals, or digital interfaces with protocols for various types of field buses.
In addition WIKA is also your competent partner for pressure sensors with non-amplified output signals.
Whether ceramic thick-film, metal thin-film or piezo-resistive pressure sensors, WIKA is the only manufacturer worldwide that produces the full range of essential sensor technologies possible today in-house.

Mechanical pressure measuring instruments

Indicating instruments for gauge, absolute and differential pressure with bourdon tube, diaphragm or capsule pressure element have been tested millions of times over. These instruments, which cover pressure ranges from 0 ... 2.5 mbar to 0 ... 7,000 bar and accuracies of up to 0.1 %, can also be equipped with mechanical, electrical and electronic accessories and combined with a variety of diaphragm seal solutions.

Diaphragm seals

Our know-how on the subject of chemical seal systems is appreciated and recognised internationally. In combination with diaphragm seals, which are available in many different designs and special materials, pressure gauges, pressure transducers, pressure transmitters and pressure switches can be used even under extreme conditions.
Thanks to the diaphragm seals the measuring instruments are suited to extreme temperatures as well as aggressive, corrosive, heterogeneous, abrasive, highly viscous or toxic media. In addition, diaphragm seals also enable a hygienic connection of measuring instruments to the process.

Electrical temperature measuring instruments

Our range of products includes thermocouples, resistance thermometers, analogue and digital temperature transmitters, digital indicators, controllers and calibrators for temperature ranges from -200 °C to +1,800 °C.

Mechanical temperature measuring instruments

Our mechanical temperature measuring instruments work on the bimetal or gas actuation principle and cover temperature ranges from -200 °C to +700 °C.
A large variety of thermowells are available for the thermometers, so that they can even be used under extreme process conditions.
The thermowells can also be ordered in special materials, e.g. hastelloy or titanium, or with special coatings of tantalum, teflon etc.
As an engineering service we offer thermowell calculations in accordance with Dittrich/Klotter or ASME/ANSI PTC 19.3.

Testing and calibration technology

WIKA maintains DKD (German calibration service) calibration laboratories for pressure and temperature as measurement variables. Not only do we calibrate instruments manufactured by WIKA, but also, on customer request, instruments from other manufacturers in pressure ranges from -1 bar to 5,000 bar with the smallest possible measurement uncertainties and in temperature ranges from -196 °C to +1,300 °C with measurement uncertainties up to 2 mK. Due to multilateral agreements by the European co-operation for Accreditation (EA) DKD calibration certificates are recognised in 25 European member countries.

Outside of Europe the national accreditation bodies of Australia, Brazil, China, India, Japan, Canada, New Zealand, Singapore, South Africa, Taiwan, United States of America and Vietnam are currently cosignatories of these agreements.
This confirms the increasing worldwide acceptance of the DKD calibration certificates.

For all product lines product reviews are available and may be ordered by telefax request.

Resistance thermometers

Resistance thermometers are equipped with sensor elements on the basis of metallic conductors which change their electrical resistance dependent on temperature.
In our range of products you will find resistance thermometers with connected cable as well as versions with connection head. A temperature transmitter can be installed in the connection head. Connection to the electronic evaluation system (controller, display, recorder, etc.) can be a 2, 3 or 4 wire circuit dependent on application.
Resistance thermometers are suitable for applications between -200 °C and +600 °C (dependent on instrument model, sensor element and materials coming into contact with the medium).

Thermocouples

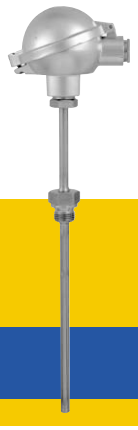
Thermocouples are temperature sensors which directly supply a voltage dependent on the temperature without additional power supply due to their thermo-electric properties. You are given a choice of various types of thermocouples matched to the appropriate temperature to be measured.
In our range of products you will find thermocouples with connected cable as well as versions with connection head. A temperature transmitter can be installed in the connection head. For connection to the electronic evaluation system (controller, display, recorder, etc.) special thermo-electric compensating cable must be used.
Thermocouples are suitable for applications between -100 °C and +1,800 °C (dependent on instrument model, type of thermocouple and materials coming into contact with the medium).

Temperature transmitters

Transmitters convert the temperature-dependent change in resistance (for resistance thermometers) or the temperature-dependent change in voltage (for thermocouples) into a load-independent current signal.
Currently the analogue 4 ... 20 mA signal is the most frequently used signal, however digital signals (field bus technology) are becoming more and more prominent.
Using intelligent wiring concepts, both the measured value (as a 4 ... 20 mA signal) and sensor errors can be signalled simultaneously through a 2-wire cable (current loop). Conversion and transmission is achieved with complete interference immunity, even over long distances.

Temperature controllers and indicators

Temperature indicators read the output signal from an electrical thermometer and show this value in a recognised temperature scale in a visual format.
Temperature controllers are used in all applications where, for example, the temperature of a medium has to be kept stable. The temperature controller receives the process value, i.e. the process temperature from any connected electrical thermometer or transmitter. The controller calculates the optimal control value from the deviation between the process value and the adjusted setting value to control a tempering facility such as a heating or cooling system, for example.

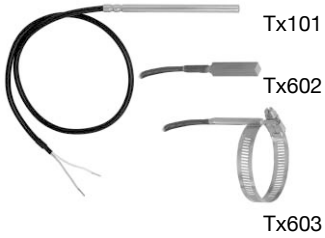


RTDs

Thermocouples

Temperature transmitters

Temperature controllers and indicators



Designation	Measuring insert	Cable probe Surface probe	Thermometer with thread
Application	for electrical thermometers with interchangeable measuring insert	to plug in, for flat surfaces, for pipe surfaces	machine industry, processing machinery, building automation, air conditioning and refrigeration systems
Model / Data sheet www.wika.de	resistance thermometers: TR002 / TE 60.01 thermocouples: TC002 / TE 65.01	resistance thermometers: TR101 / TE 60.05 TR602 / TE 60.35 TR603 / TE 60.35 thermocouples: TC101 / TE 65.05 TC602 / TE 65.35 TC603 / TE 65.35	resistance thermometers: TR21X / TE 60.17 thermocouples: TC21X / TE 65.17
Sensor	Pt100; class A; 3 or 4 wire class B; 2, 3 or 4 wire DIN EN 60751 thermocouples, class 1; 2 DIN EN 60584, ISA (ANSI) MC96.1-1982	Pt100; class A; 3 or 4 wire class B; 2, 3 or 4 wire DIN EN 60751 thermocouples, class 1; 2 DIN EN 60584, ISA (ANSI) MC96.1-1982	Pt100; class A; 2, 3 or 4 wire DIN EN 60751 thermocouples, class 1; 2 DIN EN 60584, ISA (ANSI) MC96.1-1982
Process connection	–	TR101 / TC101: thread, compression fitting TR60X / TC60X: contact block, pipe clip	thread, compression fitting
Wetted parts	stainless steel	stainless steel	stainless steel
Optional extras	■ lengths and diameters standard and customer specific ■ other tolerance classes ■ transmitter mounted on measuring insert ■ explosion protection	■ lengths and diameters standard and customer specific ■ other tolerance classes ■ cable: silicon, PTFE ■ plug mounted on cable ■ explosion protection	■ explosion protection

TR221/223 TR227

Tx201 Tx401

Designation	Compact design	For additional thermowell	With thermowell
Application	machine industry, processing machinery, building automation, air conditioning and refrigeration systems	to mount into an existing thermowell	with thread, with flange
Model / Data sheet www.wika.de	resistance thermometers: TR221 / TE 60.18 with transmitter, 4 ... 20 mA: TR223 / TE 60.18 with programmable transmitter, 4 ... 20 mA: TR227 / TE 60.19	resistance thermometers: TR200 / TE 60.10 thermocouples: TC200 / TE 65.10	resistance thermometers: TR201 / TE 60.15 TR401 / TE 60.25 thermocouples: TC201 / TE 65.11 TC401 / TE 65.25
Sensor	Pt 100; class B; 2, 3 or 4 wire DIN EN 60 751	Pt 100; class A; 3 or 4 wire class B; 2, 3 or 4 wire DIN EN 60 751 thermocouples, class 1; 2 DIN EN 60 584, ISA (ANSI) MC96.1-1982	Pt 100; class A; 3 or 4 wire class B; 2, 3 or 4 wire DIN EN 60 751 thermocouples, class 1; 2 DIN EN 60 584, ISA (ANSI) MC96.1-1982
Process connection	thread G ½ B, G ¼ B, ½ NPT	thread, mounting into a thermowell is necessary	thread, flange
Wetted parts	stainless steel	–	stainless steel
Optional extras	■ lengths and diameters standard and customer specific ■ plug M12 ■ plug with quick connection	■ lengths and diameters standard and customer specific ■ other tolerance classes ■ transmitter ■ explosion protection	■ lengths and diameters standard and customer specific ■ other tolerance classes ■ special designs and materials as well as claddings or coatings ■ transmitter ■ explosion protection

Multi-point measurement	Thermocouple V-PAD	Flue gas thermometer	Sheathed design
Chemical reactors, refineries, storage tanks	tube skin measurement, furnaces and heat exchanges; chemical industry, refineries, furnaces, power boilers	flue gas measurement, furnaces and smelts, up to 1,800 °C (ceramic thermowell)	flexible and vibration proof, for tanks, pipelines, apparatus and machines
customer-specific	V-PAD / TE 65.36	resistance thermometers: TR501 / TE 60.30 thermocouples: TC501 / TE 65.30 TC51x / TE 65.31	resistance thermometers: TR7x0 / TE 60.40 thermocouples: TC7x0 / TE 65.40
Pt100; class A; 3 or 4 wire class B; 2, 3 or 4 wire DIN EN 60751 thermocouples, class 1; 2 DIN EN 60584, ISA (ANSI) MC96.1-1982	thermocouples, class 1; 2 DIN EN 60 584, ISA (ANSI) MC96.1-1982	Pt100; class A; 3 or 4 wire class B; 2, 3 or 4 wire DIN EN 60751 thermocouples, class 1; 2 DIN EN 60584, ISA (ANSI) MC96.1-1982	Pt100; class A; 3 or 4 wire class B; 2, 3 or 4 wire DIN EN 60751 thermocouples, class 1; 2 DIN EN 60584, ISA (ANSI) MC96.1-1982
customer-specific	weld on pad	stop flange / mating flange or gastight pipe coupling	compression fitting, thread
stainless steel Hastelloy, Inconell	Inconell, stainless steel, Haynes	steel, steel enamelled, stainless steel, ceramics	stainless steel, Inconel
■ lengths and diameters standard and customer specific ■ transmitter ■ explosion protection Ex	■ lengths and diameters standard and customer specific ■ transmitter ■ explosion protection Ex	■ lengths and diameters standard and customer specific ■ other tolerance classes ■ corrosion- and abrasive-resistant materials ■ claddings or coatings ■ thermowell made of special material ■ transmitter	■ lengths and diameters standard and customer specific ■ other tolerance classes ■ transmitter ■ explosion protection Ex Ex

TR45x TR48x

TR812 TR813

Designation	Sanitary standards for sterile technology	In-line resistance thermometers	Outdoor / indoor thermometers
Application	food, beverage, bio and pharmaceutical industry, clean room technology	food, beverage, bio and pharmaceutical industry, paints/lacquers	ambient temperature measurement (air conditioning, cold storage or office rooms), building automation
Model / Data sheet www.wika.de	resistance thermometers: TR45x / TE 60.27 TR48x / TE 60.29	resistance thermometers: TR472 / TE 60.28	resistance thermometers: TR812 / TE 60.45 TR813 / TE 60.45
Sensor	Pt 100; class A; 3 or 4 wire class B; 2, 3 or 4 wire DIN EN 60 751	Pt 100; class A; 3 or 4 wire DIN EN 60 751	Pt 100; class A; 3 or 4 wire class B; 2, 3 or 4 wire DIN EN 60 751
Process connection	aseptic process connections	Pipe body with clamp or threaded connections, aseptic process connections	wall mounting stainless steel
Wetted parts	stainless steel 1.4435	stainless steel	
Optional extras	■ lengths and diameters standard and customer specific ■ other tolerance classes ■ thermowell electropolished ■ transmitter ■ approvals per hygienic guidelines ■ explosion protection	■ transmitter ■ explosion protection	■ lengths and diameters standard and customer specific ■ other tolerance classes ■ perforated thermowell ■ transmitter ■ explosion protection (only TR812)

Resistance thermometer DiwiTherm ®	Electronic temperature switch	Designation	Connection head with digital display
digital display, battery powered or solar powerd	display with switch functions	**Application**	local digital indicator for installation with electrical thermometers
DiwiTherm ® / TE 50.01 DiwiTherm ® Solar / TE 50.02	TR70 / TE 67.02	**Features**	programmable loop display range, display of units °C, °F (engageable), Min / Max memory
Pt 100; class B; 2 wire DIN EN 60 751 DiwiTherm ® Solar: NTC	Pt 100; class A or B	**Model / Data sheet** www.wika.de	DIH10 / AC 80.08
DR1X1: compression fitting DR2X0: thread, compression fitting, fitting with a thermowell required DR6X0 / DR6X1: pipe-surface mounting	thread, compression fitting	**Input**	4 ... 20 mA
stainless steel	stainless steel	**Accuracy**	± 0.2 % (measuring span) ± 1 digit
■ analogue output 4 ... 20 mA ■ explosion protection	■ analogue output 4 ... 20 mA / 0 ... 10 V	**Power supply**	supplied by the 4 ... 20 mA-loop
		Optional extras	■ explosion protection

T19.10 T19.30

T12.10 T12.30

Application	Ideal for industrial applications	Universal for industrial and process industry	For applications where high flexibility is needed
Features	■ for all purposes transmitter, designs for RTDs and TCs ■ configurable meas. ranges ■ analogue signal processing	■ universal, configurable via PC ■ analogue signal processing	■ universal for all temperature sensors ■ galvanic isolation
Model / Data sheet www.wika.de	head mounting design T19.10 / TE 19.01 rail mounting design T19.30 / TE 19.02	head mounting design T24.10 / TE 24.01	head mounting design T12.10 / TE 12.01 rail mounting design T12.30 / TE 12.02
Input	Pt 100, Pt 1000, thermocouples	Pt 100	Pt 100, thermocouples, other sensors (mV, Ω)
Configuration	measuring range configurable via soldering pads and potentiometer	measuring range and sensor remote configurable via the 4 ... 20 mA-loop with easy to use Windows-programme	measuring range and sensor remote configurable via the 4 ... 20 mA-loop with easy to use Windows-programme
Typ. measuring deviation	< 0.5 %	< 0.2 %	< 0.25 %
EMC	CE	CE	CE
Output	4 ... 20 mA	4 ... 20 mA	4 ... 20 mA
Ambient conditions	-40 ... +85 °C	-40 ... +85 °C -50 °C / +105 °C optional 100 % Rh protection condensation permissible	-40 ... +85 °C -50 °C / +105 °C optional 100 % Rh protection condensation permissible
Dimensions head design rail design	Ø 43 x 22.4 mm 98.8 x 58 x 17.5 mm	Ø 43 x 20 mm	Ø 49 x 28.5 mm 75 x 98.5 x 22.5 mm
Optional extras	■ head or rail mounting design		■ head or rail mounting design

T32.10 T32.30

Ideal solution for applications in the process industry	Bus technology, industrial automation and process industry	Bus technology, industrial automation and process industry
■ universal for all temperature sensors ■ high accuracy ■ EMC per NAMUR NE 21 ■ galvanic isolation ■ functional safety (SIL)	■ universal for all temperature sensors ■ high accuracy ■ EMC per NAMUR NE 21 ■ galvanic isolation	■ universal for all temperature sensors ■ automatic switch between protocols ■ EMC per NAMUR NE 21 ■ galvanic isolation
head mounting design T32.10 / TE 32.01 rail mounting design T32.30 / TE 32.02	head mounting design T42.10 / TE 42.01	head mounting design T53.10 / TE 53.01
Pt 100, thermocouples, other sensors (mV, Ω)	Pt 100, thermocouples, other sensors (mV, Ω)	Pt 100, thermocouples, other sensors (mV, Ω)
measuring range and sensor configurable with easy to use Windows-programme and all current asset management systems, as well as HART® Communicator	measuring range and sensor configurable with all current asset management systems	measuring range and sensor configurable with all current asset management systems
< 0.12 %	< 0.08 %	< 0.1 %
CE, NAMUR NE 21	CE, NAMUR NE 21	CE NAMUR NE 21
4 ... 20 mA, HART® Protocol	PROFIBUS® PA	FOUNDATION™ fieldbus PROFIBUS® PA
-40 ... +85 °C -50 °C / +105 °C optional 100 % Rh protection condensation permissible	-40 ... +85 °C -50 °C / +105 °C optional 100 % Rh protection condensation permissible	-40 ... +85 °C 95 % Rh max. non-condensation
Ø 49 x 28.5 mm 75 x 98.5 x 22.5 mm	Ø 49 x 28.5 mm	Ø 44 x 20.2 mm
■ head or rail mounting design		

CS4R CS4S CS4H CS4L CF2S CF1H CF1L

Designation	Self tuning, 4-digit display	Self tuning, with fuzzy-logic, 4-digit display
Application	for standard control tasks	for sophisticated control tasks
Features	configurable as PID-, PD-, PI- or ON/OFF controller; dual display: one for process value, one for setpoint; Models CS4H and CS4L as standard and Model CS4S as an option with memory for a 2nd setpoint (externally selectable via rear terminals)	configurable as PID-Fuzzy-, PID-, PD-, PI- or ON/OFF controller; as standard with memory for 7 sets of parameters for use as a programme controller; optional for CF1H and CF1L: ON/OFF server output
Model / Data sheet www.wika.de	CS4S / AC 85.02 48 x 48 mm CS4H / AC 85.03 48 x 96 mm CS4L / AC 85.04 96 x 96 mm CS4R / AC 85.05 22.5 x 75 mm	CF2S / AC 85.21 (old: TE 87.13) 48 x 48 mm CF1H / AC 85.22 (old: TE 87.14) 48 x 96 mm CF1L / AC 85.23 (old: TE 87.15) 96 x 96 mm
Input	flexible with multi-function input Pt100, 3 wire thermocouples: type K, J, R, S, B, E, T, N, C 4 ... 20 mA, 0 ... 20 mA 0 ... 1 V, 0 ... 5 V, 0 ... 10 V, 1 ... 5 V	flexible with multi-function input Pt100, 3 wire thermocouples: type K, J, N, R, B, S, T, E, C CF1H and CF1L additional: 4 ... 20 mA, 0 ... 20 mA, 0 ... 1 V
Control output	relay or logic level DC 0/12 V or analogue current signal 4 ... 20 mA	relay or logic level DC 0/12 V or analogue current signal 4 ... 20 mA
Accuracy	between ± 0.1 % and ± 0.2 % (depending on input configuration)	CF2S: ± 0.3 % CF1H, CF1L: ± 0.2 %
Power supply	AC 100 ... 240 V, 50 ... 60 Hz or AC/DC 24 V	AC 100 ... 240 V, 50 ... 60 Hz or AC/DC 24 V
Alarm output	standard: 1 alarm contact optional: 2 alarm contacts (not CS4R)	standard: 1 alarm contact optional: 2 alarm contacts or 4 alarm contacts (only CF1L)
Optional extras (with smaller controllers the choice of options is limited due to the instrument size)	■ heater burnout alarm ■ 2nd control output ■ transmitter power supply ■ serial interface	■ heater burnout alarm ■ 2nd control output ■ transmitter power supply ■ retransmission output ■ serial interface, external parameter setting

DI15

DI25

DI35

A-AI-1

Panel mounting design, 4-digit display	Panel mounting design, 4-digit display	Panel mounting design, 5-digit display	Attachable design, 4-digit display
for panel mounting (dimensions 48 x 24 mm) for the indication of measured values	for panel mounting (dimensions 96 x 48 mm) for the indication of measured values	for panel mounting (dimensions 96 x 48 mm) for the indication of measured values	local digital indicator for electrical thermometers, which are equipped with DIN L-plug and transmitter
configurable input	configurable input, HOLD function, retransmission output 4 ... 20 mA as standard	configurable input, Min / Max memory, up to 30 sampling points for linearisation. only DI35-D: 2 input channels with calculation (+, -, /, *)	configurable indication range, connection for DIN plug
DI15 / AC 80.01	DI25 / AC 80.02	DI35 / AC 80.03	A-AI-1 / AC 80.07 A-IAI-1 / AC 80.07
flexible with multi-function input Pt100, 3 wire Pt1000, 2 wire thermocouples: type K, J, S, T, N 4 ... 20 mA, 0 ... 20 mA 0 ... 50 mV 0 ... 1 V, 0 ... 2 V, 0 ... 10 V	flexible with multi-function input Pt100, 3 wire thermocouples: type K, J, R, S, B, E, T, N, C 4 ... 20 mA, 0 ... 20 mA 0 ... 1 V, 0 ... 5 V, 0 ... 10 V 1 ... 5 V	DI35-D: 2x 0/4 ... 20mA, 0 ... 10 V DI35-M: flexible with multi-function input, Pt100, Pt200, Pt500, Pt1000, thermocouples: type K, J, L, N, R, B, S, T, E 4 ... 20 mA, 0 ... 20 mA 0 ... 10 V, other voltage signals	4 ... 20 mA
–	–	–	–
between ± 0.2 % and ± 0.5 % (depending on input configuration)	between ± 0.1 % and ± 0.2 % (depending on input configuration)	between ± 0.01 % and ± 0.1 % (depending on input configuration)	± 0.2 %
DC 9 ... 28 V	AC 100 ... 240 V, 50 ... 60 Hz or AC/DC 24 V	AC 230 V, 50 ... 60 Hz or AC 115 V, 50 ... 60 Hz or DC 24 V	supplied by the 4 ... 20 mA-loop
2 alarm contacts, configurable as NPN, PNP or PUSH/PULL contacts	standard: 3 alarm contacts 2 alarm contacts with optional transmitter power supply	optional: 2 or 4 alarm contacts	–
	■ transmitter power supply ■ serial interface ■ other signal outputs	■ transmitter power supply ■ serial interface ■ retransmission output	■ explosion protection ⟨Ex⟩

Designation	Hand-Held thermometer	Precision Hand-Held thermometer
Model	CTH6200	CTH6500 CTH65IO (ATEX version)
Application	flexible temperature measurement or data recording	accurate temperature measuring (on-site or in a laboratory)
Temperature range	-50 ... 250 °C	-200 ... 850 °C (Pt100, Ex) -200 ... 1760 °C (TC)
Accuracy	< 200 mK optional: < 50 mK	30 ... 50 mK for -200 ... 200 °C, above 200 °C: 0.1 % of reading (Pt100)
Resolution	0.01 K up to 200 °C, then 0.1 K	0.01 K up to 200 °C, then 0.1 K
Probes	Pt100	Pt100 and TC's: K, J, L, N, T, S and R
Special features	■ 2-row LCD-display (second row for: Min, Max, Hold-function) ■ data logger ■ data logger evaluation software available ■ incl. factory calibration	■ large LCD-display with bargraph ■ RTD´s and TC´s can be connected ■ second input optional ■ software: "SmartGraph" available ■ incl. factory calibration ■ explosion proof Hand-Held thermometer with ATEX 
Data sheet www.wika.de	CT 51.01	CT 55.10

Temperature Calibration Technology

Portable instruments, Precision Temperature Indicator,
Dry Well Calibrators, Baths,
Primary Standards, incl. Software

Calibration and maintenance centre in Germany

DKD laboratory and service workshop
DKD calibrations, competent repair and maintenance of instruments as well as consulting and individual training on topics concerning calibration or servicing.

Mobile calibration and maintenance service in Germany

Mobile DKD laboratory and service vehicles
Calibrations (DKD, inspection certificates, etc.) as well as maintenance and repair at customer premises.
Your benefit: minimum downtime and equipment reliability through expert maintenance.

Service tools

Our Service Tools catalogue will give you all the required information regarding calibration, adjustment, and servicing of any pressure or temperature instrument.

Detailed information over the products and services can be found in the Product Review Testing and Calibration Technology

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