

## PROCESS INSTRUMENTATION IN BEST HANDS

°C

INNOVATION PRECISION RESPONSIBILITY

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ABBR

# We live values as brand core



#### Dear Readers,

it is our aim as a responsible provider of hygienically designed process measurement solutions to offer innovative

products and services that sustainably support the success of our customers. In doing so, we look together with you ahead to the future and, besides economic criteria, we also let social and environmental considerations influence our corporate decisions. We are aware that our goal of long-term positive corporate development can only be achieved within social and ecological stable conditions. This results in the binding commitment for us to promote and value these framework conditions.

From appreciation to value creation – this is how the successful development of the family-owned company Hengesbach can be described. This modern understanding of value creation of a medium-sized company already has a long tradition with us. Based on many years of experience, we know that the success and strategic security of the company is the result of a lasting and uncompromising appreciation of all involved stakeholders – and this in a global context.

For you as our customer this means: Our product solutions and services are strictly oriented on your requirements. We are committed to you in the spirit of a trusting cooperation and long-term satisfaction.

Hengesbach, founded in 1953, has already focused on the development and production of high-quality measuring instruments for industrial use at an early stage. Almost 60 years later, the company, which is based in the industrial conurbation of Rhine-Ruhr, is one of the most distinguished manufacturers in this industry and has a broad variety of measuring instruments for a wide range of applications: In the food and beverage industry, in the life science industry and wherever high expectations on the performance of modern process measuring technology are mandatory requirements. Today, I lead the company in the second generation. Together with my team of colleagues, I continue what the name Hengesbach stands for: Combining technological thinking and entrepreneurial acting with the commitment to responsibility for the family and traditional performance. In addition to development and production, our dedicated team professionals supports you with application-oriented consulting and broad-based know-how.

Setting standards in measurement technology: Our entire product range in the areas of pressure / level, temperature, flow, analysis, limit level and additional components is based on quality standards that clearly differentiate themselves from the competition.

**Development, construction, design and materials** form the core of long-lasting, high-precision solutions that are used worldwide in the equipment and manufacturing processes of sensitive industries such as the food and beverage industry. Especially the "Hygienic Design" provides and guarantees a maximum of reliable safety within complex production processes.

Continuous optimization of customer requirements is a positive challenge for us. For example, the more interconnected integration of production processes between manufacturers and suppliers in the context of digitization represents a strategic focus of our further developments.

As a highly product- and industry-specialized company, Hengesbach offers you significant advantages with measurable effect: Highest quality and precision of the measurement technology, innovative and durable products as well as a consistent orientation of all services concerning the needs of the customers.

You can measure us against this - and thus be our most important quality standard!

Yours Gabriele Hengesbach



**ESTEEMED** 



VALUE-CREATING



VALUE-RETAINING VALUE-INCREASING





CULTURE OF VALUES

F VALUE-FORMING

## Welcome

Willkommen **Benvenuto** 

Bienvenida удо́бный Shòu huānyíng <sub>Sevilen</sub>

Witamy

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## Pressure / filling level Flush-mounted transmitters

### ELECTRONICS: Your benefit in detail

### Series 200 / 201 Highest precision and flexibility

 Accuracy ≤ ± 0.05% filling level Series 200 with on-site display
 Series 201 with OPUSi operating module
 TurnDown 10
 Communication and parametrisation via HART
 Functions: Dry adjustment, tank linearisation, EasyTransfer copying function, ...

### Series 100 / 101 Highest flexibility

Accuracy ≤ ± 0.15% filling level
 Series 100 with on-site display
 Series 101 with OPUSM operating module
 TurnDown 10

### Series 050D Highest standard

Accuracy ≤ ± 0.2% filling level
 TurnDown 4
 2 buttons and status LED for simple configuration



PIEZOMESS PZM modular pressure and filling level transmitter, process connection with O-ring seal, adjustable, EHEDG Type EL-CLASS I certified, Measuring ranges -1/0 ... 0/100bar

### Features

- Wide range of process connection adapters for hygienic applications, e.g. female union with DIN 11864-1 groove union nut, VARIVENT<sup>®</sup>, DRD flange, welded-in lugs for tank and pipe installation
- Also as a high-temperature configuration for media
- with a constant temperature of up to 200°C, CIP and SIP can be cleaned • IP67 and IP69K protection type
- As Series 050D. Series 100/101 and Series 200/201
- High precision
- Vibration-proof and robust

### Applications

- Filling level measurements in depressurised or pressurised tanks (Series 200)
- Pressure measurements in pipes









## **ESTEEMED** BRAND: HENGESBACH

People make their mark on brands. For more than 50 years, the Hengesbach brand has been synonymous with our understanding of a brand's intrinsic value. We do not perceive this as a colourful tapestry, rather a deep obligation to a traditional promise of values we pursue intensively. We live this out every day. Our customers can measure what we achieve on a daily basis; after all, our measurement technology is the culmination of long experience, and creative and innovative processes driving us on. We have an obligation to people; as employees, customers and as part of social responsibility.





### **PIEZOTEC PZT** modular pressure and filling level transmitter, process connection with elastomer-free sealing cone, adjustable

#### Features

- Wide range of process connection adapters for hygienic applications, e.g. female union with DIN 11864-1 groove union nut, VARIVENT<sup>®</sup>, DRD flange
- Also as a high-temperature configuration for media with a constant temperature of up to 200°C, CIP and SIP can be cleaned
- IP67 and IP69K protection type
- Available as Series 050D, Series 080, Series 100/101 and Series 200/201
- Measuring ranges of -1/0...100bar

### Applications

- Filling level measurements in depressurised or pressurised tanks (Series 200)
- Pressure measurements in pipes

## TPF pressure and filling level transmitter with fixed connection and flush-mounted stainless steel diaphragm





## KERAMESS KS pressure and filling level transmitter with flush-mounted ceramic measuring cell

#### Features

- Oil-free, capacitive measuring cell with a ceramic membrane
- With fixed process connections for hygienic and standard applications, e.g. VARIVENT<sup>®</sup>, DRD flange, conical coupling with female union DIN11864, clamp DIN32676, G1/2" ISO 228 pressure gauge connection, flange connections, ...
- Extremely robust and mechanically durable
- For aggressive and abrasive media
- Available as Series 050D, Series 100/101 and Series 200/201
- Various housing shapes

### Applications

- Filling level measurements in tanks
- Pressure measurements in pipes







### Specific features in detail Pressure transmitter PZM Series 200/201

GERMAN PRECISION

- modular; one device for pressure and level "Superior precision" better than 0,05% FS EHEDG EL-Class I Certifikate
- economically advantageous

## Pressure / filling level / differential pressure Flush-mounted transmitters / switches



### MODULAR SYSTEMS: Thought through in detail

One basic device for various process adaptations Reduces storage and maintenance costs

- Increases availability of systems
- Reduces variety of device types, simplifying calibration in the framework of HACCP principles
- Wide range of process connection adapters for tank and pipe installation, e.g. female union with DIN 11864-1, VARIVENT<sup>®</sup>, clamp, conical coupling / thread coupling DIN11851, ...
- Efficient, increases value and sustainable

### **INNOVATIONS WITH QUALITY SEAL**



## VALUE-INCREASING FUTURE: HENGESBACH

Thousands of hectolitres of beer, water, milk, lemonade, and much more flow through our measuring devices around the world every day. The first measurable that flows through them is our heart and soul. This is the only way in which reliability and durability can arise as calculable and tangible product factors with stand-out characteristics. Product concept, modular structure and calibration friendliness are parts of the pillars upon which our developments build. As a modern manufacturer, we do not work on a conveyor belt, rather on the details; on the future of measuring devices which will still keep our promise even after many years.



PiezoSwitch PS pressure transmitter with switching function, onsite display and EHEDG-certified connection, hygienic design

- Features
- Piezoresistive measuring cell with a flush-mounted stainless steel
   membrane
- With fixed process connections, G1" ISO 228 with elastomer-free sealing cone and adjustable or PZM modular system
- Also as a high-temperature configuration for media with a constant temperature of up to 200°C
- Measuring ranges of -1/0...100bar
- · Robust and reliable, simple to operate on the device
- With signal output 4...20mA and up to 2 PNP switch outputs

- Pressure measurements in pipes
- Pressure measurements
- with switching tasks
- Filling level measurements in tanks







## Overload-proof pressure transmitters TCF, TCS, TPS, ... for wideband applications

### Features

- High overload protection, flush-mounted diaphragm, G1/2", O-Ring
- Low pressure connection dimensions for small pipe rated sizes

### Device types

- TCF with highly overload-safe, piezoresistive ceramic measuring cell, available as Series 050D, Series 100 and 200, for all standard process connections
- TCS with compact standard housing and piezoresistive ceramic measuring cell

### Applications

• For all standard process pressure measurements and customer-specific solutions



### KERADIFF differential pressure transmitter with measuring ranges of 2mbar to 40bar for various applications

#### Features

- · Self-monitoring from the measuring cell through to signal output
- Simple to operate through parametrisation

#### Device types



- KERADIFF 100 in standard configuration with process connection 1/4 - 18 NPT
- KERADIFF 140 with diaphragm seals and capillary line built onto both sides, particularly for volume and filling level measurements free from dead storage capacity in tanks
- KERADIFF 150 with diaphragm seal built onto one side

#### Applications

- Filling level and differential pressure measurement for fluid media, e.g. in pressurised containers, for filter monitoring, ...
- Flow measurement using differential pressure measurement with dynamic pressure probe or orifice plates



## TPS-T hydrostatic depth measuring probe for wells and water level measurements

### Features

- Measuring ranges from 0...0.25bar to 0...20bar
- · Compact and robust shape, various materials
- Maximum cable length 100m
- With temperature output 4...20mA

### Applications

• Continuous filling level measurement in wells, drilled holes, standing water, sewage, ...



## <u>Pressure</u> Pressure gauges / diaphragm seals



### Pressure gauges in chemical configuration, contact pressure gauges, transmitter pressure gauges with pressure gauge connection G½" or flush-mounted

#### Features

- Various sizes NG63, NG100 and NG160
- 1...3x limit value as normally closed, normally open or change-over contacts
- Installation of pressure sensors 0/4...20mA, 2/3 conductors
- Measuring ranges 0/0.6...-1/1600bar
- · Contact switch available as an option

### Device types

• Bourdon pressure gauges RC, capsule pressure gauges KC, diaphragm pressure gauges PC, differential pressure gauges DIR, transmitter pressure gauges DMU

### Applications

- · Pressure measurements of gas, vapour and fluids
- A wide range of use opportunities if connected to a membrane diaphragm seal and in-line seal

### Efficient, value-creative, and economically – our contribution to your sustainability





### Diaphragm seals for the process and procedural industries

### Features

- Membrane diaphragm seals and in-line seals, e.g. VARIVENT®, conical coupling with a DIN 11851 groove union nut, DIN11864, PZM modular system, flange diaphragm seal, EN1091 ...
- Membranes made from special materials, e.g. Hastelloy, tantalum, 1.4539, ...

FD

CIP / SI

- safe

- · With capillary line, CIP and SIP can be cleaned
- Piggable in-line seals
- Application-appropriate filling media, FDA-conform
- · Also with works approval report EN10204

### Applications

· Use of diaphragm seals to separate pressure and differential pressure transmitters, pressure switches and pressure gauges from the measuring substance - with capillary line, if necessary



### **Chemical seal with PTFE - foil**

### Features

- High pressure and temperature resistance
- · perfectly suited in media with particles, i.e. ice pieces or coffee granulate high abrasion protection and excellent anti-adhesive qualities due to very good sliding properties
- high chemical resistance (pH 0-14) and against numerous solvents
- high-strength and homogeneous fitting of the PTFE-foil (FDA) with the stainless steel diaphragm of the pressure transmitter

- pressure and level measuremt in food processing; liquid / solid
- i.e.: Ketchup; marinade; oil; acid; caustic; vinegar; pickling and salt-solutions; coffee; sugar - crystallization; wort; slurry; vinasse; pulp; stillage; residue



## Volume Flow



## VOLUMTEC magnetically inductive flow measurement device, design: compact or separate

#### Features

- Measuring tube lining is resistant to acid and lye and also vacuum-proof
- Piggable and precise
- Female union process connection DIN11864-2 shape A with wide range of connection adapters, e.g. for welding onto DIN11866 pipes type A, DIN32676 and DIN11851 clamps
- For rated sizes from DN10 to DN150, separated or compact
- Electronics are self-monitoring and self-readjusting
- 0/4...20mA signal output and 3 pulse outputs
- VolumMess: Compact design for small pipe dimensions

### Applications

• Flow measurements of fluid and pasty or pump-capable media, e.g. in bottling and canning systems in dairies, breweries, fruit juice companies



## Calorimetric Flow Transmitter / Flow controller StreamTec for hygienic applications

#### Features

- Flow transmitter (flow controller) with integrated measuring value converter
- Quick reaction times
- Suited for velocities of aqueous fluids from 2... 150cm/s
- Process adapter: Varivent®; Clamp; Food; sanitary tube union (DIN 11851)
- Metallically, elastomer free sealing G1/2"
- Medium operating temperature : 0...100°C; CIP/SIP temp. max 140°C (30min)

- Suitable for all applications in the food and life science industries v.a.
- dairies, breweries, beverage producer, food producer, food processor, fermenter

## Filling level / threshold level Conductive / vibration / capacitive



### LIQUITEC vibration threshold level switch

### Features

- Practically immune to turbulences, slight forming of foam a nd external vibrations
- Surface is standard polished or electropolished
- G1" process connection, 2" Tri-clamp, VARIVENT®, flange, ...
- Compact configuration
- with PNP or relay contact

### Applications

- Threshold level detection for fluid media in tanks as min or max switch-off
- Dry running protection for pumps in pipes



## NCT capacitive filling level probe with continuous output signal

### Features

- Capacitive measuring method for continuously measuring the filling level of fluid media
- CIP and SIP can be cleaned
- G1/2" process connection with elastomer-free sealing cone
- ECTFE-coated electrode rod, from 400mm to 2000mm
- Fully cast electronics
- 0/4...20mA signal output in 3-conductor configuration
- Simple calibration via infra-red remote control

### Applications

• Continuous filling level measurement in small tanks and containers, particularly for density fluctuations with simple installation



## NKS11/NKS13 conductive threshold level probes and NM/NC1 level modules

### Features

- Secure threshold level detection for conductive media thanks to a conductive measuring process; can be custom shortened
- 1-rod probes, NKS 11 Ø=4 mm/ 8mm, NKS13 Ø=11mm
- Configurations with level module or resistance output

### Device types

- NKS11 with G1/2" process connection with elastomer-free sealing cone
- NKS13 with G3/4" process connection and union nut
- NM level module for single level, can be switched from full/empty, with active output max. 50mA
- NC1 level module for single level, self-adjusting, for product and foam recognition

- Reliable threshold level detection for conductive fluids in tanks, specially as overfilling protection
- Also for foam media through NC1 level module







### LEVELTEC capacitive threshold level switch

#### Features

- Secure threshold level detection for conductive and non-conductive media thanks to a capacitive measuring process
- CIP and SIP can be cleaned
- Fast and simple calibration using teach-in button
- With active output, max. 50mA and switching state display
- M12x1.5 or G1/2" process connection with elastomer-free sealing cone
- Variability through process connection adapter, e.g. VARIVENT®, ...

### Device types

- LEVELTEC S standard configuration for threshold level measurements
- LEVELTEC L configuration with detached sensor tip made from PFA, specially for use in tanks with empty running protection, e.g. for viscose and adhesive media, e.g. ketchup, quark, ...
- LEVELTEC LR configuration with detached sensor tip made from PFA, specially for use in pipes e.g. as pump protection

## VALUE-RETAINING

### PROFILE: HENGESBACH

## Our measurement technology is our benchmark. Our benchmark for highest performance and commitment.

We do not view the concept of quality as a cliché, rather as the foundation for a quality standard presupposing proximity to the customer and achieving customer retention. We do not want to be the biggest, but the best – pure and simple. We do not look for the shortest way, rather for the most permanent solution. In continuous dialogue with the users of our measurement technology, we gain the stimuli which drive on everyone and combine precision with sustainability in an appropriate manner. Esteem leads to value creation.

### ELECTRONICS AND MECHANICS Sophisticated synthesis

## Combination of SHAPE & FUNCTION

- Smooth, flush transition from the glass surface to the metal edge
- Enormous tightness and high pressure resistance
- Optimally protected electronics in relation to the external influence of moisture

## Absolutely easy to clean

- 'High Safe' for secure products and production sequences
- Rounded edges for non-compromising cleaning options



Seamless, hygienic and simple
 A sure thing in all aspects



## Conductivity / turbidity / ph-value measuring Conductive / inductive

### ANALYSIS: CONDUCTIVITY, OPTICAL TURBIDITY AND PH-VALUE MEASURING

### (in dairies, breweries...) Tried-and-tested applications

- Separating phases: product/water (CIP) or product/product
- Supervising the concentration of disinfectants
- Monitoring/recovering condensate
- Monitoring milk fats, Quality control
- Monitoring filters on UF/MF/RO systems
- Monitoring and controlling cleaning treatment
- Heat exchanger monitoring
  - Optimise process performance!
  - Restrict product losses!
  - Increase quality and consistence, e.g. of dairy products!





## Optical Sensor – measuring the reflected radiation – for the food industry

### Features

- Turbidity sensor with 2-wire 4....20 mA output
- Process connections Clamp; Varivent; DIN 11851
- 2 individual programmable switch-points with status LEDs
- Easy parametrizing with three push buttons
- 2 operating modes:
  - NTU mode (linear) for turbidities between 0 and 4.000 NTU
- 9 selectable support points for fat contents up to 30%
- potted design for rough applications and environment
  Temperature resistant long-term: 125°C / short-term 150°C
- Applications
- Detection of product change (e.g. milk cream whey)
- Continuous monitoring of e.g. milk fat content / quality inspection
- Detection of yeast and cloudy fruit juice...







### pH-value measuring peHaMess for hygienic processes

### Features

- Suitable particularly for the use in the food and life science industries
- Good life time due to an enameled pH-measuring sensor
- Highest mechanical resistance against vibrations and pressures also with high velocities and very viscous media
- Glass-breaking-free measuring sensor excludes product and process risk
- · Smooth enameled surface reduces product adherence
- · Continuous operation also during CIP/SIP because of self-regeneration
- Hygienic design with Varivent®, clamp, dairy fitting (DIN11851)







### **CONDUTEC** conductive conductivity signal converter

### Features

- Available in compact or separate design
- 4...20mA signal output for conductivity and temperature
- 2 freely programmable alarm outputs, compact and separate
- Conical coupling process connections with a DIN 11851 groove union nut, DIN32676 clamp, PZM modular system or VARIVENT<sup>®</sup>, G1B
- · Smooth sensor, blockage not possible, 4-electrode measuring cell
- Stable in the long term and wear-free
- Conductivity measurement possible also in a standing medium
- Measuring ranges of 0...5 $\mu\text{S/cm}$  to 0...500mS/cm
- Measuring at small pipe diameters

### Applications

- Steering and control in CIP circuits
- Monitoring condensate circuits
- Measurement of high-purity water with 2 electrode measuring cells



### INDUTEC inductive conductivity signal converter

### Features

- Available in compact or separate design
- 4...20mA signal output for conductivity and temperature
- Measuring ranges from 0...500µS/cm to 0...2000mS/cm, freely programmable
- 2 freely programmable switching outputs, up to 4 measuring ranges can be activated
- Short response times
- Conical coupling process connections with a DIN 11851 groove union nut, or VARIVENT<sup>®</sup>
- · Stable in the long term and wear-free

### Applications

- Steering and control in CIP circuits
- Measuring the concentration of cleaning agents



## **VALUE-CREATING**

### SYSTEM: HENGESBACH

Almost nowhere is precision more important than in measurement technology! It's not the individual benefits of the technology that are important here, rather their sum total. A measuring device must be able to do accomplish more than simply measuring precisely at the correct point. It must be able to satisfy a raft of requirements: first and foremost – safety specifications, besides hygiene, health, commercial viability, ease of operating and handling, not to mention being a reliable variable as part of the overall sustained consideration of system investment. That's the reason why Hengesbach devices prove their worth in settings requiring the absolute peak of what can be attained!



## **Temperature / transmitters Temperature probes / modular**



## Resistance thermometer with Quicktemp modular system TP60/TW39...T500

#### Features

- High flexibility with Quicktemp modular system, only 1 resistance thermometer for a wide range of process connections
- Measuring insert retains length, can be replaced
- No process interruption for replacing or calibration
- With resistor output at the clamping block or 2-conductor transmitter 4...20mA, HART<sup>®</sup> or Profibus
- Sleeves with tapered probe tip for optimised response times
- With 'Quick Calibrate Inside', for calibration without disconnection

#### Device types

- TP60 and TP62 for installation in Quicktemp protective sleeves,
- TP38 with collar and G3/8" union nut for protective sleeves
- Quicktemp protective sleeves for welding in or with process connections, e.g. TP16 - G1/2" with elastomer-free sealing cone, VARIVENT<sup>®</sup>, DIN32676, G1B, ...

#### Applications

- Temperature measurements in tanks and pipes with the most stringent requirements
- Optimal for HACCP measuring points with short maintenance and calibration intervals





## Modular resistance thermometer with redundant double transmitter Quicktemp TP62/TW39...T500

#### Features

- 1 basic device process adaptation using protective sleeve designs
- Quicktemp modular process connection system for device changes and QA checking without process interruptions/opening
- Redundant measuring system (PT100, transmitter) in one device
- Spring-mounted measuring insert for optimum metallic contact with the protective sleeve and short reaction times
- Exact and long-term stability by means of high-quality basic technology
- Electrical connection with round connector M12x1



### **Resistance Thermometer with integrated display TEMA**

### Features

- TEMA may be combined with different types of thermometers (e.g. TP60, TP70, TP16)
- Integrated red display with status LEDs
- · Easy operation using 3 keys
- Menu operated setting of the measuring range between 50...+ 200°C, min. measuring span 10 °C
- Reading in °C or °F, signal output 4...20mA
- Dismounting of the device without interference with the process, simplifies calibration of CCP's

- Temperature measurement in tanks and pipes,
- e.g. UHT, heat exchanger, cooling processes, ...







### Resistance thermometer with modular system Quicktemp RS TP70/TW39...T800, sensor tip D = 2,2mm, excellent quickresponse

### Features

- Excellent quick response times with protection-sleeve d = 2,2mm, Measuring insert replaceable
- 1 basic device process adaptation using protection-sleeve designs
- Quicktemp modular process connection system for device replacement and QS checking without process interruptions/opening
- Extensive range of protective sleeves available for welding, e.g. VARIVENT®
- Spring-mounted measuring insert for optimal metallic contact with the protection sleeve
- · Accurate and long-term stable by means of high-quality basic technology



## CULTURE OF VALUES REAL: HENGESBACH

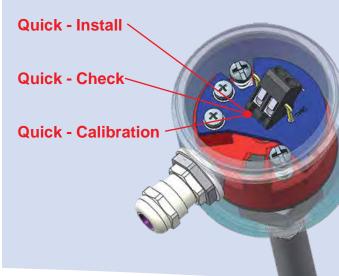
A company acting responsibly defines its position always as being in the centre of social togetherness. Ethical values must not express placative well-meaning, rather they must be comprehensible references of a culture of values. This culture must encompass the big picture: employees, business partners, economic environment and society. This refers to social responsibility to as great an extent as the sparing use of resources, preventative actions and associative management. We strive to bring to life the culture of values – both internally and externally, in large contexts and day-to-day dealings.

### QUICKTEMP AND QUICK CALIBRATE INSIDE

Sustained positive characteristics accompanying you over the entire product lifecycle of our measurement technology.



### QUICK-CALIBRATE-INSIDE





## Temperature / transmitters Temperature probes





## Resistance thermometer with field housing and fixed connection

#### Features

- Also includes a mineral-insulated measuring insert for the most stringent requirements
- Tapered probe tips for extremely short response times
- With resistor output at the clamping block or 2-conductor transmitter 4...20mA, HART<sup>®</sup> or Profibus, also with double transmitter
- Pt100 or double Pt100 in various precision classes

### Device types

- TP16 with G1/2" and elastomer-free sealing cone
- TP26 with M12x1.5 and elastomer-free sealing cone
- TP19 with VARIVENT®, welded
- TP15 with smooth probe
- Further configurations DIN32676 clamp, conical coupling with DIN11851 groove union nut, ...

### Applications

 Temperature measurements in tanks and pipes with stringent requirements when it comes to reliable measuring results in the long term



### Resistance thermometer with strap-on sensor

#### Features

- · As a configuration with field housing or directly connected cable
- With resistor output at the clamping block or 2-conductor transmitter 4...20mA, HART<sup>®</sup> or Profibus, also with double transmitter
- Pt100 in 2, 3 or 4-conductor configuration or double Pt100 in 2 or 3-conductor configuration
- Assembly using welded-in/welded-on collar or with band strip for cable probes

### Applications

· Temperature measurements on pipes and tanks



## Measuring inserts and transmitters for top mounting

### Features

- Transmitters with freely programmable measuring ranges, sensor type, etc. via set-up plug on the device, even during measurement
- For original equipment or retrofitting in resistance thermometers with connection heads
- Optionally, transmitter with 4...20mA HART<sup>®</sup> or Profibus, as well as with galvanised separation and for explosive areas
- Measuring inserts in 2, 3, or 4-conductor switching with loose wire ends, clamping block or transmitter



## **TP50 / TP51 / TP52 resistance thermometer with compact housing and fixed or modular connection**

### Features

- · Small design for installation locations under space restraints
- Pt100 in 4-conductor configuration, class A
- with resistance output or transmitter 4...20mA 2 conductors, programmable
- Electrical connection with round connector M12x1
- · With fixed connection or Quicktemp modular system

### Device types

- Various process connections available
- TP52 with spring-mounted measuring insert

### Applications

• Temperature measurements in tanks and pipes subject to space constraints and high-vibration locations

## Service / support Evaluation

a www.

## Visualisation for complex measuring and control tasks in many industries

### Visualisation software, adjusted to each task

Analysis functions

11,01.2017 T2.58.41

- Control, display and archiving values from pumps, valves and measuring devices
- Linearisation of the widest range of tank geometries
  'Modular system' enables inexpensive solutions,
- Amount of tanks can be expanded as desired • Commissioning and training on site
- Complete automation solutions

### **SERVICE** Calibration / on-site revision

In hygienic production processes, product quality, operational safety and efficiency are usually directly linked with the exact and reliable recording of the relevant process variables.

Here the parameters pressure and temperature play an essential role. Various factors, such as harsh operating conditions, outmost process temperatures as well as mechanical stress, affect over time the accuracy and characteristics of the pressure and temperature measuring instruments.

Tested and calibrated measuring instruments can also ensure in the long term correct and valid process results to meet sustainably the requirements of the increasing number of standards / guidelines, globalization and growing quality- awareness along the entire value chain all the way to the consumer

Hengesbach co-operates with specialist partners and co-ordinates within the framework of a holistic scope of services the testing equipment monitoring and calibration / revision for the measured values of pressure and temperature with standard-compliant documentation directly on site.

With our partners, we offer one-stop service: On-site inspection equipment monitoring, advice on control valves & recorders, supply of spare parts and new products as well as repairs / maintenance.

### **SUPPORT**

We assume responsibility and accompany the product over its entire lifecycle, from support in adjusting the measuring point, through to on-site support by experienced service or development staff, as well as after-sales service.

Once the feedback from our Support department has been evaluated, the lessons learned flow directly into advancing our products – we are always pleased to learn.

### We accompany you reliable and committed!



Cooperation with Hengesbach means that you are more secure, flexible and competitive. Lay down the challenge to us.



## Process pressure measurement 200 Highest precision



## PRESSURE AND LEVEL TRANSMITTER WITH FLUSH-MOUNTED PROCESS CONNECTION

- modular; one type of device for pressure and level
- "Superior precision" better than 0.05% FS
- EHEDG EL-Class I certificate
- economically advantageous

- Level measurement in tanks
- Pressure measurement in pipelines



## VALUE-FORMING PARTNER: HENGESBACH

A good product, an excellent measuring device, outstanding technology: these are the aspects at the forefront of our activities. But there's a lot more to this than meets the eye – some of which is conspicuous: customer consultation and guiding in all phases; support by way of targeted consultation approaches with expert depth and high expectations. Short decision-making paths at all times thanks to flat hierarchies; fast, unbureaucratic responses to all subjects commensurate with a long-term partnership. As a manufacturer of high-quality ,Made in Germany' products, we view ourselves at the same time as a service provider with high expectations when it comes to supporting and transferring specialist knowledge. Holistic thinking in a partner-like atmosphere – successful management with empathy and individuality of the Hengesbach brand.





The fine art of measuring.

## QUALITY WITH GLOBAL REACH

Egypt Ron Benelux Rus Bulgaria Swit China Sing Denmark Spa Great Britain Sou India Sou Israel Tha Malaysia Cze Mexico Turk Austria Ukra

et Romania x Russia a Switzerland a Singapore k Spain n South Afrika a South Amerika el Thailand a Czech Republic o Turkey a Ukraine d Vietnam



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