

SENSORS FOR FOOD AND LIFE SCIENCES.



HYGIENIC BY DESIGN

ANDERSON-NEGELE



PRODUCT OVERVIEW

FLUID FOOD

BEVERAGE

DAIRY

ENGLISH 

-  TEMPERATURE
-  PRESSURE
-  CONTINUOUS LEVEL
-  POINT LEVEL
-  FLOW
-  CONDUCTIVITY
-  TURBIDITY
-  WEIGHING SYSTEMS
-  PROCESS RECORDERS

ANDERSON-NEGELE.COM

Welcome to **ANDERSON-NEGELE**




Anderson-Negele is a global company specializing in the development and production of sensors and measuring equipment for hygienic applications. As your reliable and flexible partner, we aim to always provide you with the best solution for your process.

Anderson Instrument Co, founded over 90 years ago, and Negele Messtechnik, founded almost 50 years ago, came together in 2004 to form Anderson-Negele. Separately the businesses were pioneers in hygienic measurement equipment, focused on the specific needs of the food, beverage and pharmaceutical industry from the very beginning. While bringing our innovations together, we continue strive to give our customers the economic and technological edge that will contribute to their success. To achieve this, we look at your particular needs and develop solutions that specifically address the demands for your production processes.

Anderson-Negele is among the trusted brands united by Ralliant, a global technology company. Ralliant empowers engineers with precision technologies essential for breakthrough innovation in automation and digitization. With a commitment to continuous improvement, customer success and operational rigor, Ralliant creates confidence for the innovators making everyday impact.

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-  Sensor based on modular platform
-  IO-Link integrated as a standard
-  Remote version available

Process and inventory temperature control in pipes and vessels



Modular, configurable
Temperature sensor for all applications

- » Modular adaptation concept for all standard process connections
- » Compact, rugged design for increased sensor life
- » Elastomer-free, hygienic installation without dead legs
- » Individual configuration through two head sizes and optimal display

TSBA, TSMA (Mini)



RTD elements and wiring heads

- » All stainless steel construction and no exposed threads make this ideal for hygienic processing
- » Extensive process connections available
- » Single or dual element, single or dual output, with optional LCD display
- » Hart and Intrinsic Safety available for special applications

SA/CT



Temperature sensor with digital display

- » Large digital display for easy readings
- » Optionally available with switch output allowing simple automation
- » Secondary RTD output gives redundant measurement
- » FDA and USDA compliant model for temperature monitoring in retort applications

FH-DTG





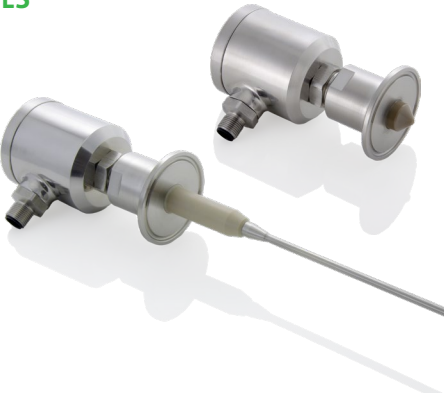
Point level detection in pipes and vessels



Capacitive point level switch for pipes and vessels

- » Insensitive to foam and adhesion
- » Available lengths up to 10"
- » Conductivity independent
- » Fast response time
- » Selectable sensitivity
- » PNP or NPN output

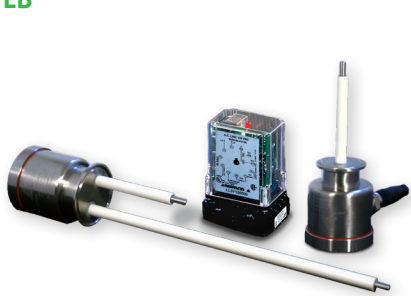
LS



Conductive point level switch for pipes and vessels

- » Integrated stainless steel head makes retrofits simple
- » Water-tight quick-disconnect includes pre-wired tank ground reference
- » Up to four probes per fitting for multiple level applications
- » Rated for Process temperatures from 30° F (-1 °C) to 200 °F (94 °C)

LB



Continuous potentiometric level control



Continuous level sensor in modular design

- » For vessels from 50 mm to 3 m
- » Insensitive to foam and adhesion
- » Rapid response time, therefore ideal for control tasks (e.g. filler)
- » Also available as remote version for wall and pipe mounting and double rod sensor for plastic vessels

NSL-F, NSL-M, NSL-FR



Hydrostatic level and differential pressure measurement



Level sensor for pressurized tanks / differential pressure sensor

- » Parallel output of differential and-head pressure
- » Integrated tank linearization and-density compensation
- » Digital communication without capillaries
- » Components' replacement on site possible

D3



Continuous Hydrostatic Level and Pressure control



Modular pressure and level sensor

- » High precision pressure and hydro-static level measurement
- » Accurate display of pressure, mass or volume even with rapid temperature variations
- » Integrated tank linearization and density compensation
- » Components' replacement on site possible

L3



Climate-independent level sensor

- » Dual diaphragm design – no drift problems due to condensation
- » Atmospheric reference measured with a hygienic un-clogable diaphragm
- » Superior accuracy and long-term stability
- » Measurement up to 130 °C (265 °F) medium temperature
- » One-Touch Zero and span simplifies field calibration

SL





Hydrostatic level measurement



Top mount / Dipstick level transmitter

- » Ideal for fillers and process vessels with foaming products
- » Top-mount for applications where bottom access is not available
- » Standard lengths from 15" to 72" adaptable to any existing vessel

LD



Hydrostatic level control in small vessels



Level control for balance tanks, filler bowls and similar vessels

- » Dual diaphragm design – no drift problems due to condensation or wash-downs
- » Atmospheric reference measured with a hygienic un-clogable diaphragm
- » Factory calibrated and preconfigured – saves installation time
- » Temperature compensated for improved accuracy

HB



Pressure measurement in pipes and vessels



Compact pressure sensor with IO-Link

- » Robust and durable – even at process temperatures up to 250 °C (482 °F)
- » Relative, Absolute or Compound pressure measurement
- » Fast, accurate and economic solution for standard applications
- » Digital IO-Link data transmission

P42



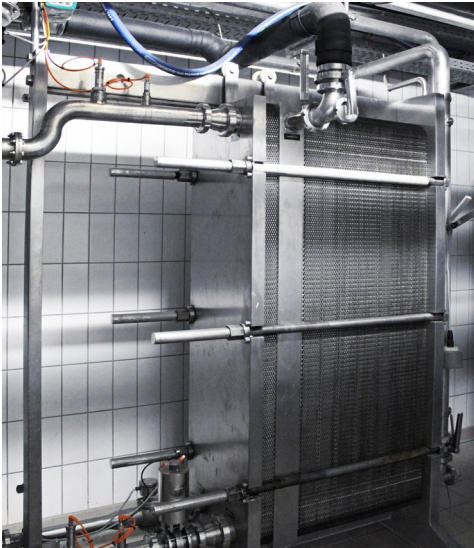
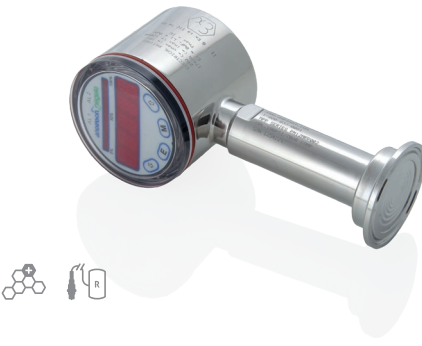
Process pressure control



Modular pressure sensor

- » Pressure measurement in pipes and vessels
- » Process temperature up to 177 °C (350 °F)
- » LED display with bar graph and alarm indicators

MPF



Compact pressure sensor

- » Robust and durable – even at process temperatures up to 150 °C (300 °F)
- » Rapid response time
- » Available as relative or absolute pressure transmitter

HH



Hygienic electronic pressure transmitter

- » All-welded stainless steel construction
- » Compact, low profile design
- » Options for high pressure applications like homogenizer up to 20,000 PSI
- » 3-A compliant; Third party verified
- » Optional display

SR





Pressure monitoring in pipes, vessels and homogenizers



Pressure gauge with direct adaptation 90 mm

- » For superior mechanical stress and extended process requirements
- » Extremely robust design
- » High quality stainless steel design
- » ELH Pressure gauge with optional transmitter, ideal for homogenizers and pressures up to 1000 bar

EL, ELH



Pressure monitoring in pipes and vessels



Digital pressure gauge

- » Large digital display (battery-operated)
- » Automatic registration of min and max values
- » Optionally available with switch output and external power supply
- » Up to 6 times more accurate than mechanical gauges

EN



Steam pressure monitoring



Hygienic steam pressure gauge

- » For applications with pressure up to 600 psi / 40 bar and temperatures up to 400 °F / 205 °C
- » Compact, integrated design with hygienic diaphragm replacing traditional industrial syphon gauges
- » Improved long-term reliability and operator safety

ELS



Flow Measurement



Magnetic-inductive flowmeter

- » Flow and volume measurement of media with minimum conductivity > 5 µS/cm
- » High measurement accuracy (±0.2 % ±1 mm/s) and repeatability (±0.1 %)
- » 100 to 1 turn down for low velocity applications
- » Process temperature up to 325 °F (163 °C)
- » ...20 mA or serial interface: RS485 (CS3 bus)

IZMAG



Compact magnetic-inductive flowmeter

- » Compact, robust, reliable: The affordable all-rounder for almost all applications
- » Measuring range for metering and filling from 0.14...1,200 gal/min (30...80,000 l/h)
- » High accuracy: ±0,5 % ±2 mm/s

FMQ



Flow Measurement in milk receiving systems



NTEP certified magnetic-inductive flowmeter

- » Measuring accuracy: ±0.25 % ±2 mm/s
- » NTEP Certified (No. 20-050) for U.S. milk receiving – delivers legal-for-trade accuracy
- » For liquids, slurries, and pastes with a minimum conductivity of > 5 µS/cm
- » Process temperature up to 163 °C (325 °F)

IZM-Q





Flow Measurement in pasteurization processes



Magnetic flow meter for regulated applications

- » PMO M-b approved for meter-based timing applications in pasteurization processes.
- » Measuring accuracy: $\pm 0.25\%$ ± 2 mm/s
- » For liquids, slurries, and pastes with a minimum conductivity of $> 5 \mu\text{S/cm}$
- » Process temperature up to 163°C (325°F)

IZMS



Flow Measurement of non-conductive fluids



Turbine flowmeter

- » Measurement independent of the conductivity of the media
- » Cost-effective and reliable alternative to mass flow meters
- » Extended lifetime due to easy rotor exchange
- » Hygienic design for the food and beverage industry, with 3-A certification

HM



Flow Monitoring and dry-run protection



Calorimetric flow switch

- » Fully compensated measurement up to 100°C
- » Integrated safety switch-off at a medium temperature of $t > 100^\circ\text{C}$
- » Also suitable for highly pure media
- » Integrated electronics with on-site display

FTS



Mass flow, volume and density control



Micro Motion Coriolis Sensor (Emerson)

- » Measuring accuracy up to $\pm 0.05\%$ (Flow) / $\pm 0.0005 \text{ g/cm}^3$ (Density)
- » Hygienic (3-A, EHEDG), compact All-arounder
- » Many transmitters available, incl. Smart Meter Verification™ (for Diagnostic / Maintenance)

H-Series, G-Series



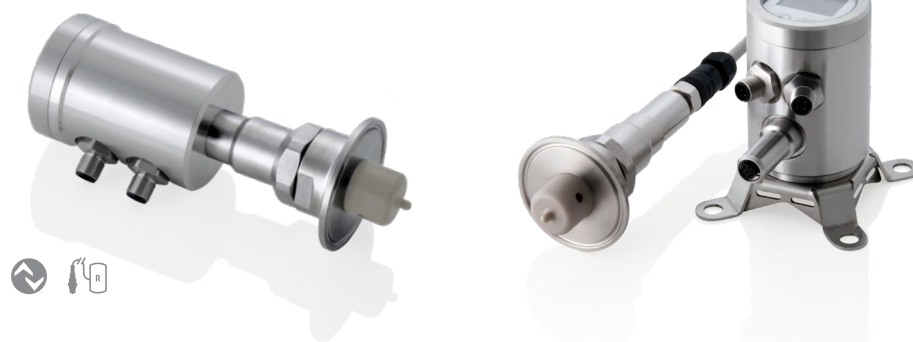
Control of CIP processes, product monitoring and quality assurance



Inductive conductivity sensor in modular design

- » Individual configuration from a cost-efficient basic model up to the high end version
- » Freely selectable outputs: Conductivity, temperature and also concentration
- » Selectable measurement range: $1\text{...}1000 \text{ mS/cm}$
- » Extremely short response time of 1.2 s for highest efficiency
- » Fully compensated measurement up to a temperature of 130°C
- » Housing in stainless steel, submersible body made of PEEK for tubes from DN 40

ILM-4, ILM-4R





Phase separation, filter and separator monitoring



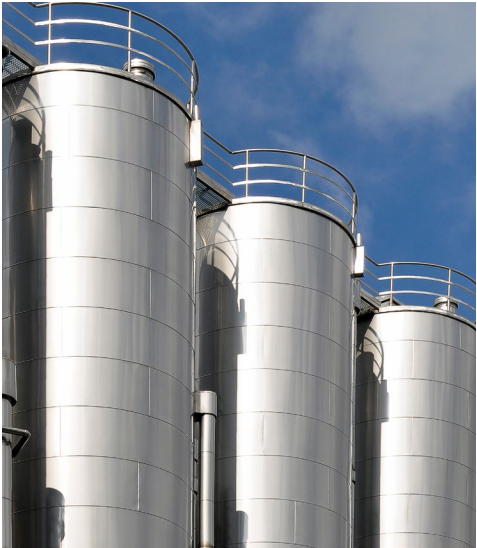
Phase separation, filter and separator monitoring



Content control for process vessels and tanks



Inventory control for storage tanks and silos, retrofitting



Inventory control for storage tanks and silos



Turbidity sensor (backscatter light) in modular design

- » Front-flush mounted, hygienic sensor
- » Reduction of water consumption
- » Cost reduction in CIP processes
- » Active phase separation in the production process: precise switching between product, mixed phase and water
- » Automation of the yeast harvest in breweries
- » High reproducibility and rapid response time
- » Glass-free sapphire optics
- » Front flush sensor: simplified pipe cleaning (pigging possible), ideal for media with adhesive fibers or particles

ITM-51, ITM-51R



Turbidity sensor (4-beam alternating light)

- » Filter monitoring
- » Control and automation of separators
- » Supervision of the water quality
- » Ideal for lauter tun control or Condensate of whey applications
- » Eventual pollution of the optics is compensated

ITM-4



Weighing Modules Load Disc

- » Highly accurate dynamic content measurement based on the weight
- » Many versions and options to fit all process, stirring and mixing tanks or horizontal tanks
- » Solid, firmly bolted mounting between tank leg and foundation
- » Nominal loads 100 to 11,500 kg
- » Measuring accuracy up to 0.03 %

LD360s, LD3, LD3xi, LD3xiC



Bolt-On Strain Gauge Sensors Load Cells

- » Continuously reliable content measurement for all vessels and silos from 35 tons upwards
- » Extremely durable (> 20 million measuring cycles)
- » Simple installation on metal stands or silo skirts
- » For vertical legs and horizontal beams
- » Ideal for retrofitting existing vessels

Microcell, L-Cell



Integrated Weighing System Load Stand

- » High-precision inventory measurement of medium to very large vessels and silos up to 450 tons / 1,000,000 lbs
- » Measurement accuracy up to 0.2 % due to four built-in Microcell strain gauges
- » Static load-bearing element with fixed bolted connection
- » Fatigue life of > 20 million cycles

Load Stand II





Process Control with paperless and chart recorders



Paperless process recorder and cloud software

- » M-b proving it meets PMO requirements for safety thermal limit recording and safety flow limit recording
- » Efficient annotation and approval on-premise and cloud-based
- » Supervisors and quality teams can review, annotate, and approve records from anywhere.
- » Secure Storage: Safeguard all historical records with secure access for authorized personnel.
- » Record up to 8 inputs

PPR, Legendary™



Recorder / Recording Controller

- » Four inputs recorded in four colors for enhanced legibility
- » Four additional inputs for indicating, control, switching, alarming
- » Four PID controllers assignable to any inputs
- » Printing scales allows one chart for all applications
- » AV-9900 has M-b for safety thermal limit recording and safety flow limit recording

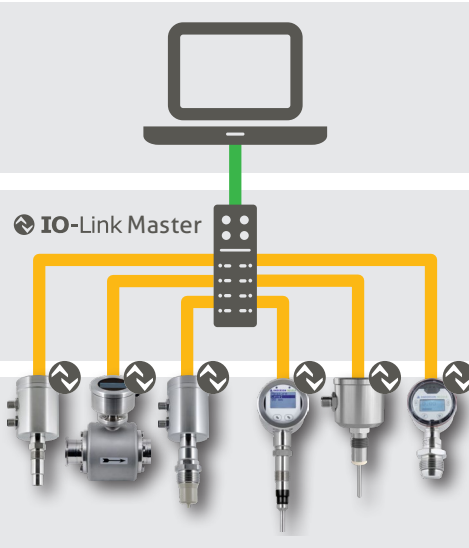
AV-9000 / AV-9900



Recorder / Recording Controller

- » 12" chart for maximum readability and accuracy
- » Modular relay and 4...20 mA output options
- » Universal, field selectable input type
- » Simple Keypad Programming
- » 3 Year Warranty

AJ-300



IO-Link

Sensors with digital IO-Link communication and Flex Hybrid technology make planning, commissioning and operating your plants easier, faster and more flexible.

Your key to greater efficiency

For the safe process control of an entire plant with a large number of measuring devices, control and operating elements, IO-Link offers significant advantages. We have opted for Anderson-Negele Flex Hybrid technology featuring IO-Link in parallel with the analog 4...20 mA connection.

Assembly and commissioning are extremely time- and cost-saving. For interference-free signal transmission and power supply itself, a three-pin standard cable without special shielding is sufficient. Each sensor is connected to the control center and can be parameterized via an IO-Link master. Thanks to bidirectional communication, potential faults, signs of wear or an increased risk of failure can be detected at an early stage, and production downtimes can be better avoided.

Plug-and-play takes on a new meaning: With IO-Link, sensor replacement is easier and safer than ever before and can be carried out independently, at any time and by any employee without any programming effort. For this purpose, the device configuration of each connected sensor can be stored in the IO-Link master. The new sensor is automatically recognized, configured and parameterized by the IO-Link master when it is plugged in and is immediately ready for use.

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