# SENSORS FOR FOOD AND LIFE SCIENCES.





# 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 80 years ago, and Negele Messtechnik, founded over 35 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.

As part of the FORTIVE Corporation – a global "Fortune 500" technology leader – Anderson-Negele practices the successful Fortive Business System (FBS). With the help of FBS, we ensure the high quality of our products in development and production and continuously improve our processes and methods.

FLUID FOOD BEVERAGE DAIRY

# CONDUCTIVITY & REFRACTION



### ILM-4

## INDUCTIVE CONDUCTIVITY SENSOR IN MODULAR DESIGN

- » Maintenance free inductive measurement principle
- » Accurate measurement through compensation of temperature influences
- » Freely selectable and combinable outputs: Conductivity, temperature, concentration
- » Rapid temperature response time  $t_{90}$  approx. 15 s

- » Installation in tube diameters from 1 1/2"
- » Sensor made entirely of stainless steel, submersible body made of PEEK
- » CIP/SIP cleaning up to 150 °C / maximum 60 minutes
- » Remote version available for wall and pipe mounting
- » Settings can be made on a PC or directly on the device

#### IRM-11

#### INLINE REFRACTOMETER

- » All integral design
- » 3 on board scales for Refractive Index, Brix or Plato
- » Custom scales available
- » Simple to install and use





# TURBIDITY



## ITM-51

# TURBIDITY SENSOR (BACKSCATTER LIGHT)

- » Front-flush mounted, hygienic sensor
- » For medium to high turbidities (e.g., milk, yeast)
- » Maintenance free LED technology
- » Color independent measurement 860nm wavelength
- » High reproducibility and rapid response time
- Analog and switch output (freely adjustable switch point and hysteresis)
- » Two freely programmable measurement ranges, selectable via digital input



#### ITM-4

## TURBIDITY SENSOR (4-BEAM ALTERNATING LIGHT)

- » Precise measurement at low and medium turbidities
- » Automatic compensation for fouling of optics.
- » Units switchable between NTU and EBC (11 ranges per unit)
- » Optimized version available for process and drinking water





# LEVEL







#### NSL

#### CONTINUOUS LEVEL SENSOR

- » 2-wire compact sensor
- » 4-wire sensor for vessels up 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

#### NVS

#### CONDUCTIVE POINT LEVEL

- » Conductivity as low as 2m²/cm
- » Up to 3 probes, coated or uncoated
- » up to 100" probe length
- » Can be trimmed in field
- » Compact version available
- » Integrated PNP output available for single probe
- » External Transmitter (Vnv-2, Znv-2) available for multiple outputs



#### LS

#### CAPACITIVE POINT LEVEL SWITCH

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





# LEVEL







## LD

# TOP MOUNT / DIPSTICK LEVEL TRANSMITTER

» Ideal for fillers and process vessels with foaming products



#### HB

# CONTROL GRADE HYDROSTATIC LEVEL TRANSMITTER

- » Specifically designed for control applications such as Balance Tanks and CIP vessels
- » Ranges up to 160 in. of water column accommodate a wide variety of vessel sizes
- » Factory calibrated and preconfigured - saves installation time
- » Temperature compensated for improved accuracy



#### SL

### INVENTORY GRADE HYDROSTATIC LEVEL TRANSMITTER

- » Superior accuracy for reliable inventory management
- » One-Touch Zero and span allows for simplified field calibration and setup
- » Factory preconfigured for your tank
  eliminates errors at start-up
- » Dual Diaphragm design for superior reliability



# PRESSURE & LEVEL



## L3

# MODULAR PRESSURE AND LEVEL SENSOR

- » Pressure measurement in pipes and vessels
- » Hydrostatic level measurement in inventory vessels
- » Reliable in dynamic temperature applications
- » Continuous process up to 110°C (230°F) and CIP/SIP up to 130°C (266°F)
- » Switch output assignable to alarm or error



#### **D**3

#### ELECTRONIC DIFFERENTIAL PRESSURE AND LEVEL SENSOR

- » Level measurement on pressurized vessels
- » State of the art temperature compensation minimizes error in dynamic temperature applications
- » Integrated tank tables allows volume and mass output when tank and product information are input
- » Modular design allows field repairability, reconfiguration and replacement of components
- » Dual mA output allows primary output for level or differential pressure and secondary output selectable for head pressure or total system pressure



# PRESSURE





#### MPF

# MODULAR PRESSURE AND LEVEL SENSOR

- » Pressure measurement in pipes and vessels
- » Process temperature up to 177°C (350 °F)
- » LED display with bar graph and alarm indicators
- » Available with HART<sup>©</sup>

#### HH

#### 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

#### SR

### SANITARY ELECTRONIC PRESSURE TRANSMITTER

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







# GAUGES







EN

#### **DIGITAL PRESSURE GAUGE**

- » Large, digital display (battery-operated)
- » Automatic registration of min and max values
- » Optionally available with switch output and external power supply

#### ELH

## PRESSURE GAUGE WITH INTEGRATED TRANSMITTER FOR HOMOGENIZERS

- » Designed for extreme process conditions and pressures up to 1000 bar
- » Very high reliability and durability
- » Optional analog output









# EL

# PRESSURE GAUGE WITH DIRECT ADAPTATION

- » 90 mm case diameter
- » All stainless steel design
- » Numerous hygienic process connections
- » 3-A certification

# TEMPERATURE





## SA/CT

# RTD TRANSMITTERS AND WIRING HEADS

- » Modular design, with standard or mini head
- » All stainless steel construction and no exposed threads make this ideal for hygienic processing
- » Extensive process connections mean we have the right sensor for your application
- » Single or dual element, single or dual output, with optional LCD indicator
- » Hart and Intrinsic Safety available for special applications



## TSM/TSB

#### **TEMPERATURE SENSOR**

- » Compact and rugged transmitter package increases sensor life
- » IP69K ingress protection ensures electronics are protected from moisture
- » Backlit display makes readings visible from across the room





#### **FH-DTG**

# TEMPERATURE SENSOR WITH DIGITAL DISPLAY

- » Large digital display makes readings easier than dial thermometers
- » Optionally available with switch output allowing simple automation
- » Secondary RTD output gives redundant measurement in a single process connection
- » FDA and USDA compliant model for temperature monitoring in retort applications



# FLOW







## IZMAG

#### MAGNETIC-INDUCTIVE FLOWMETER

- » Flow and volume measurement of media with minimum conductivity
  > 5 µS/cm
- » High measurement accuracy and reproducibility: ±0.2 % ±1 mm/s
- » 100 to 1 turn down for low velocity applications
- » Suitable for metering and filling applications
- » Ethernet communication



## FTS

#### CALORIMETRIC FLOW SWITCH

- » One piece design eliminates elastomers
- » Sensor made completely of stainless steel
- » Suitable for high purity media
- » Integrated safety switch-off
- » Digital display makes setup a simple task

## HM

#### TURBINE FLOWMETER

- » Cost-efficient and reliable alternative to vortex and VA flow meters
- » Hygienic design for the food and beverage industry
- » 3-A certification
- » Usable in non-conductive media





# CONTROLS





## BC110

#### **BATCH CONTROLLER**

- » EZ Setup Feature Speeds Instrument Setup
- » Advanced Batching Features, Including Quick Batching Sequence
- » Two Line OLED Display
- » 4-20 mA Analog Output
- » Isolated Pulse Output
- » RS-232 Port Standard
- » Advanced Printing Capabilities
- » Data Logging



#### AV-9000

## 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
- » No pen lag all printing to same time-line





## AJ-300

## RECORDER / RECORDING CONTROLLER

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





Anderson-Negele is a leading producer of Sanitary Process Instrumentation for the Dairy, Fluid Food, and Beverage Industries. As an innovative manufacturer, we provide our customers with engineered products that solve application-specific problems.

Our vertical integration enables Anderson-Negele to control all facets of design through manufacture, ensuring the reliability and performance of our products.

Sanitary by Design means we exceed the rigorous sanitary requirements of your most critical sanitary Fluid Flood, Beverage, and Dairy applications – better, faster and more cost-effectively.





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