



NZ Food & Beverage Solutions

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ifm electronic is committed to help your business succeed!

German quality industrial product, ex-stock NZ

Personal service:

Either by phone, email, in person or via an MS Teams online meeting, ifm is always there for you – anywhere, anytime. We process your purchase orders, issue test samples and provide accurate technical and pricing information to support your business as efficiently as we can.

Workshops / Seminars:

To help introduce the pipeline of new ifm products and technology innovations, we can support you with hands-on workshops at your company, or at our training centre.

Meet an ifm engineer:

Interested in discovering new possibilities for your business or production process? Wish to discuss advanced technologies and solve technical problems? Or seek practical insights into the latest automation practices? Why not meet one of our engineers - either at your premises, or at our customer service centre. Or visit us at a Tradeshow. Whichever is your preference - we will look forward to hearing from you!



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Order 24/7

Use your 'my ifm' account to check product availability, list and net prices, and to place orders at any time.



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Request a quote from customer service, or generate your own binding offer using 'my ifm'.



Fast / free delivery

Whether overnight or by forward date: You decide when your goods arrive (min. order value \$100).



Returns

If an item you receive is not quite right? Return it with no hassle (T&Cs apply).



Competent service

Our service centre staff are there for you if you have questions or need advice.

ifm's Food and Beverage Solutions catalogue represents our products designed for the industry

ifm electronic ltd:

We proudly support the New Zealand market with high-quality instrumentation and control solutions, backed by a large local stock holding for fast delivery. With a nationwide team of 25 staff located in Auckland, Hamilton, Hastings, Levin and Christchurch. We service over 4,000 New Zealand businesses – delivering 76% of orders overnight and the rest within 7–10 days from Germany.

Thank you to our loyal customers and the dedicated Kiwi team who have helped grow our business over the past three decades.

ifm electronic - global:

ifm electronic gmbh is a family-owned German company founded in 1969, built on continuous investment in R&D and automated manufacturing. We offer a comprehensive range of sensors, control products, and connection solutions for industrial automation, supporting customers in industries where quality and reliability are essential. With 8,760 employees across 145 countries serving more than 165,000 customers, we've grown globally while preserving the flexibility, customer focus, and values of our founding years.

ifm Innovation:

As one of the world's leading manufacturers of industrial sensors and control products, ifm is known for robust, compact, and user-friendly designs with flexible outputs. With significant annual investment in R&D, we hold over 1,300 worldwide patents and continue to earn major design awards for innovation and breakthrough technologies.



reddot winner 2024



Our commitment to you:

ifm products are distinguished by the highest precision and reliability. You have our word on that – hence the 5-year factory under written warranty!

We want you to use our products, confident that ifm is the right partner for your automation goals.

ifm – close to you!



5 YEARS
Warranty
on ifm products

Process Instruments for Food and Beverage Markets

Never settle for compromises on food safety



This catalog contains ifm smart process sensors and IO-Link components that reduce safety risks, complexity of technology, and operational costs. Improve processes, avoid downtime, and maintain quality during production with technology developed to meet the unique needs of food producers.

Over the last 30 years, ifm process sensors have aimed to improve product quality by:

- Improving safety and reliability with field-mountable sensors rated to withstand caustic washdown
- Improving measurement accuracy with IO-Link
- Reducing risk of errors with simplified setup, installation, and automatic device replacement

Smart sensors and field I/O solutions provide critical access to real-time process data that helps manufacturers make more informed decisions.

Food manufacturers are successfully using real-time machine health and process data to eliminate downtime and improve batch quality to meet increasing consumer expectations and contain rising costs.



Improve product quality

Digital data reduces risk of human errors during analog scaling that can impact product quality. Improve food safety and batch consistency with more accurate measurements from digital process sensors. Automated traceability from raw ingredients to finished products improves safety and reduces the risks of product recalls.



Increase machine availability

Plug-and-work sensors reduce planned downtime for line changeovers with simplified reprogramming requirements. Eliminate unplanned downtime due to common causes of sensor failures with more robust and durable sensors designed for food production environments.



Achieve sustainability goals

Real-time monitoring of process data helps benchmark current energy and water consumption and identify inefficiencies or waste. Measure reduction in excess consumption to quantify results and impact.

High performance products that improve process quality and safety

IP69

IP69K high-pressure cleaning test

This test duplicates pressure cleaning conditions on a plant floor. The instruments were exposed to a 1500 PSI spray of water at a temperature of 176°F in 30 second cycles. The test was performed at specified angles using a spray nozzle located at a distance of 4" from the switch. The instruments must withstand test conditions and still operate at 100% of their sensing range.



Thermal Shock

Thermal shock test

In this test, process instruments are exposed to extreme temperature changes to simulate a decade of normal use. Instruments are fully submerged in a bath at -15°C for 10 minutes and then transferred immediately (<10 seconds) to another bath at 140°C. We test for drift after every fifty cycles at a measured temperature of 123°C. Even after enduring 1,000 cycles of continuous temperature changes, the measurement results must still fall within the specified accuracy band.



Shock
Vibration
Resistant

Shock and vibration test

In this test, process instruments are tested at a shock level of up to 50g to far exceed normal levels found in manufacturing environments. The instruments are exposed to a level of up to 40g with the oscillation frequency spanning 0-2000 Hz to check the integrity of the electronic circuit and surface-mounted components.



Temperature
Aging Test

Steam boiler test

To simulate aging, process instruments are placed in a steam boiler at 80°C. After defined time intervals, the instruments are submerged into ice water. Following the test, the instruments are subjected to a variety of function tests that determine their durability.



Weld strength test

In this test, a cyclic flow force is applied over the entire weld pulling in all directions to simulate the forces experienced in pipes. This test measures the fatigue strength of the laser weld between the process connector and the tube of the probe. We secure the probe / connection assembly and rotate it while applying up to 50 lbf until the joint breaks. This process tests the assembly against the worst case scenario.

**76% of orders shipped
same or next day!**



IO-Link



IIoT Solutions



Flow Sensors



Pressure
Sensors



Level Sensors



Conductivity
Sensors



Temperature
Sensors



Valve Position



Wiring
Technology

Confidence in Quality Instruments from ifm

**X-TREME
TESTING**

Never settle for compromises when it comes to food safety. At ifm, we subject process sensors to rigorous extreme testing to simulate the toughest industrial conditions. We ensure they deliver the highest level of stability, reliability, and accuracy.

Our calibration lab is accredited by A2LA to the international standard ISO 17025, the most rigorous quality standard in the measurement industry. The equipment used in this lab is traceable to NIST standards and duplicated on our production line. In the calibration lab, we test out-of-the-box performance vs. data sheet specifications to ensure accuracy and reliability in our products.

Temperature shock impact on drift and sensor life

The constant cycling between hot and cold temperatures of CIP cycles or pasteurization can quickly cause fatigue of the electronic components and lead to drift or failure.



We simulate CIP in our thermal shock chamber. Instruments are fully submerged in a bath at -15°C for 10 minutes and then transferred immediately (<10 seconds) to another bath at 140°C. We test for drift after every fifty cycles at a measured temperature of 123°C. The ifm TCC sensor did not fail after 1000 cycles, at which point, we stopped the test.

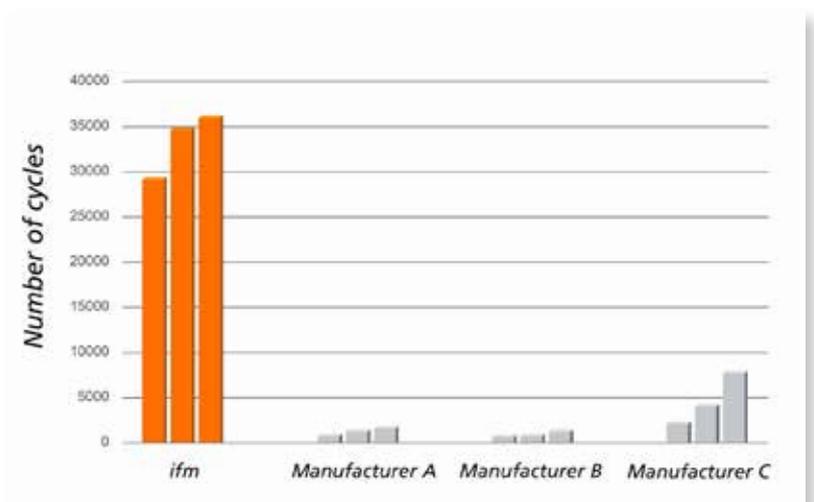


Pasteurization temperatures typically range between 72°C and 95°C before rapid cooling. Even after enduring 1,000 hours of continuous stress from rapid temperature changes, from sub-zero to double-digit °C temperatures, the SM Foodmag measurement results must fall within our specified accuracy band.

Flow velocity impact on weld strength

ifm tests resistance to fatigue failure due to mechanical bending forces caused by high velocity flow and water hammer. To test weld strength, we secure the probe / connection assembly and rotate it while applying up to 50 lbf until the joint breaks.

The simulation chart illustrates the stresses on the weld as we expose the weakest point – the weld bead overlap – to the cyclic force.



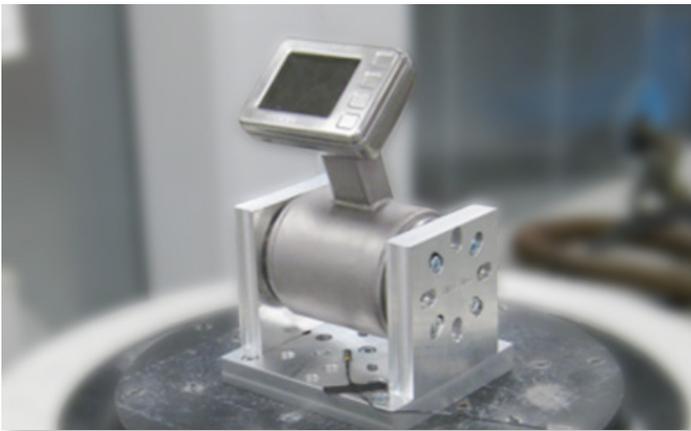


Shock & vibration tests

Extensive internal and external tests ensure that the SM Foodmag can withstand the extreme conditions of day-to-day processing in the food industry over the long term.

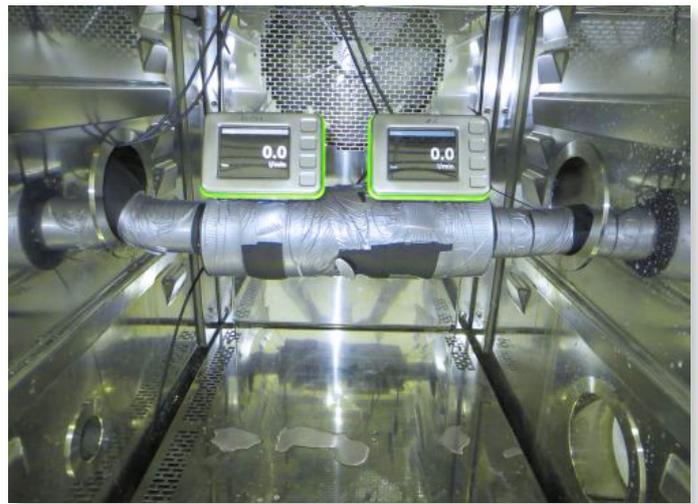
Intense shock and vibration tests are conducted along the X, Y, and Z axes on a shaker over several days to ensure that external influences do not significantly impact device performance.

A total of 18 different scenarios are tested in the shock resistance test with 20g (18ms), and vibration is tested at levels of 5g with oscillation frequency spanned between 0 and 20,000Hz.



Condensation tests

During this test, a cold medium passes through the pipe system and instrument while the ambient temperature remains warm. The SM Foodmag is exposed to high humidity and resulting condensation for several weeks. It undergoes high-pressure washing from various angles on the display and connector, using an 80°C cleaning solution at 100 bar, to ensure that no moisture can penetrate the device.



“



ifm's goal is to make the most stable, reliable, and accurate food and beverage process instruments using the latest technology for increasing reliability, safety and consistency.

— Michael Marhofer
Chairmen of the Board and co-CEO

PROCESS TANK

Dairy processing,
Beverages, Wine, Beer



More info



Process tanks are essential in the food and beverage industry for storage, CIP processing, mixing, pasteurization, fermentation, and more. They play a critical role in production by storing ingredients and facilitating key processes. Their effectiveness depends on:

- **Real-time monitoring.** Automation enables real-time tracking of temperature, pressure, and level rate, allowing immediate adjustments to maintain product quality.
- **Energy efficiency and cost savings.** Optimized temperature and pressure control improve efficiency and reduce costs by identifying areas for improvement through sensor data.
- **Competitiveness and consumer demands.** Automation ensures consistent quality, adaptability, and efficiency to meet evolving market demands and maintain a competitive edge.

Company	Process Tank	Clean-in-Place Skid	UHT Pasteurizer	Heat Exchanger	Centrifugal Pump	Brewhouse	Reverse Osmosis Skid	Centrifugal Separator	Valves in Process
									
2-7	8-9	10-11	12-13	14-15	16-17	18-19	20-21	22-23	24-25



- 1 Maintain batch consistency with volumetric flow measurements**
ifm's flowmeters offer high-precision measurements, totalized flow for consumption, tri-clamp process connections, high-temperature ratings, and sanitary approvals.



SMF
p.30
- 2 Reduce production planning issues with accurate continuous level measurements**
Non-contact radar sensors accurately measure the liquid level in tanks of varying shapes and sizes, minimizing errors in volume calculations.



LW
p.38
- 3 Prevent overflow events and wasted product with reliable point level detection**
ifm's LMT sensor uses high-frequency capacitive technology that ignores buildup eliminating overflows, underfills, and pump run dry events.



LMT
p.40
- 4 Eliminate product spoilage due to undetected drifting temperature measurements**
The TCC series of temperature sensors feature a dual element calibration check that provides real-time monitoring to ensure food safety between scheduled calibrations.



TCC
p.44
- 5 Improve level measurements in the presence of foam and turbulence**
Hydrostatic level sensors only monitor the force exerted by a fluid column, ignoring foam and turbulence to ensure reliable level monitoring.



PI
p.36
- 6 Prevent cross contamination due to valve leakage**
ifm's MVQ valve position sensor can detect seal wear and prevent leakage that can impact product quality.



MVQ
p.52
- 7 Maximize product transfer yield with automated phase shift detection**
ifm's conductivity sensors determine the transition between product and water, maximizing product transfer yield and enhancing efficiency.



LDL
p.42
- 8 Gain process insights with clamp-on temperature measurements**
ifm's TSM temperature sensors offer non-invasive, easy-to-install temperature monitoring for small pipes and tight surface spaces.



TSM
p.50





Our promise of quality

5-year warranty on ifm products.

Safe process / quality management:
 Certification ISO9001
 Approvals such as 3-A, ATEX certification, EHEDG,
 FDA, and ecolab are included.

IO-Link	IIoT Solutions	Flow	Pressure	Level	Conductivity	Temperature	Valve Position	Cordsets
								
26-27	28-29	30-33	34-39	38-41	42-43	44-51	52-53	54-55

CLEAN-IN-PLACE (CIP)

Dairy processing, Beverages, Sweets, Meat processing, Cane sugar processing, Farming, Alternative protein, Wine, Beer



More info



ifm understands the unique challenges of food and beverage manufacturing, especially the demands of the CIP process. A reliable CIP system is essential to maintaining food safety, taste, and quality by eliminating contaminants, bacteria, and allergens. Its effectiveness depends on four key factors:

- **Time.** Precise control of wash cycles, flow, and chemical concentration optimizes cleaning and reduces downtime.
- **Action.** ifm instruments withstand harsh flow, pressure, and temperature cycling for maximum machine availability.
- **Chemical.** Accurate conductivity measurement ensures proper chemical concentration for effective cleaning and material protection.
- **Temperature.** ifm sensors maintain accuracy across a wide range of CIP conditions, ensuring repeatable, and reliable performance.

Company	Process Tank	Clean-in-Place Skid	UHT Pasteurizer	Heat Exchanger	Centrifugal Pump	Brewhouse	Reverse Osmosis Skid	Centrifugal Separator	Valves in Process
									
2-7	8-9	10-11	12-13	14-15	16-17	18-19	20-21	22-23	24-25



- 1 Guarantee effective sanitization with reliable, washdown rated, temperature measurement**
The TCC sensors are the most accurate and reliable temperature sensors on the market. Designed for aggressive washdown environments, they provide real-time monitoring.



TCC
p.44
- 2 Ensure food safety with accurate chemical concentration measurement**
Accurate conductivity measurements from the LDL sensors improve cleaning effectiveness and prevent product contamination from residual chemicals.



LDL
p.42
- 3 Increase production availability with reliable level detection that ignores buildup**
ifm's LMT sensors use high-frequency capacitive technology that ignores buildup, eliminates overflows, underfills, and pump run dry events ensuring an efficient CIP process.



LMT
p.40
- 4 Provide reliable level monitoring in the presence of foam and turbulence**
Hydrostatic PI level sensors only monitor the force exerted by a fluid column, ignoring foam and turbulence ensuring an accurate level measurement.



PI
p.36
- 5 Increase process control with valve position feedback**
ifm's MVQ valve position sensor can detect seal wear and prevent leakage that can impact cleaning efficiency and contaminate products with cleaning chemicals.



MVQ
p.52
- 6 Ensure cleaning quality with continuous flow monitoring**
ifm's sanitary flowmeters optimize CIP, reducing waste and preserving quality. The ultrasonic flowmeter, SUH is an ideal solution for rinse water, while the magmeter SMF has integrated conductivity measurement for phase changes.



SMF
p.30
- 7 Eliminate analog-to-digital conversion errors and reduce commissioning**
ifm's IO-Link modules endure CIP washdowns, delivering precise digital values for quality control. M12 connections and field-mount modules enable fast sensor swaps and auto-replacement, minimizing downtime.



IO-Link
p.26
- 8 Gain process insights with clamp-on temperature measurements**
ifm's TSM temperature sensors offer non-invasive, easy-to-install temperature monitoring for small pipes and tight surface spaces.



TSM
p.50





X-treme testing

We develop products that are designed and tested to perform in harsh applications.

Thermal-shock, vibration, pressure cleaning, and chemical exposure tested.

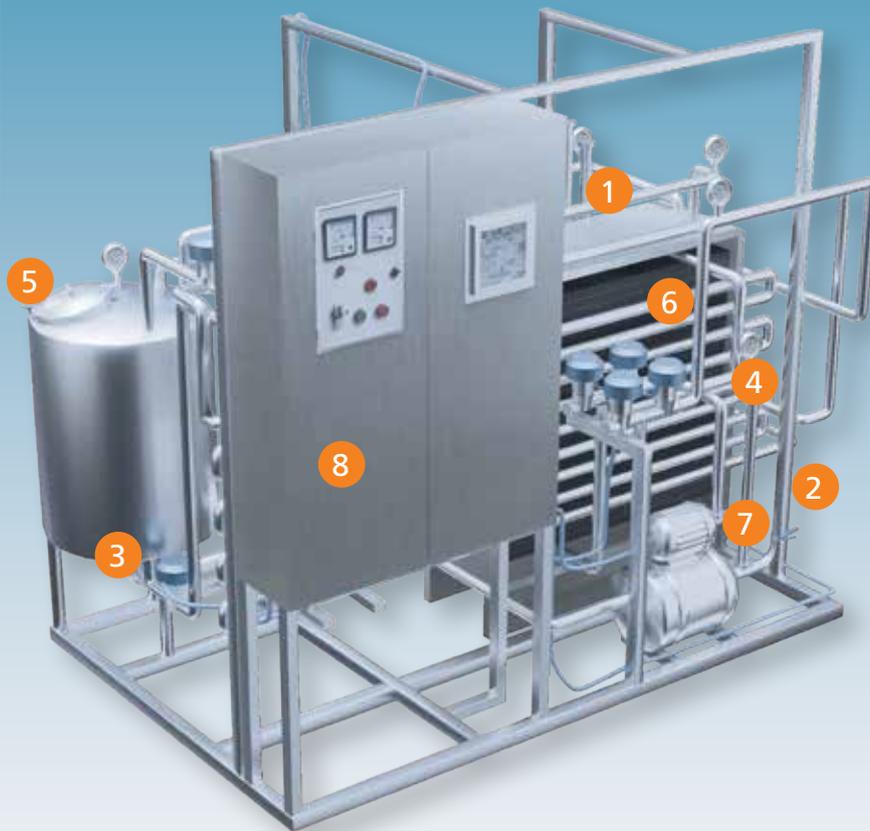
IO-Link	IIoT Solutions	Flow	Pressure	Level	Conductivity	Temperature	Valve Position	Cordsets
								
26-27	28-29	30-33	34-39	38-41	42-43	44-51	52-53	54-55

UHT PASTEURIZER

Dairy processing, Beverages, Sweets, Meat processing, Cane sugar processing, Farming, Alternative protein, Beer



More info



UHT (Ultra-High Temperature) pasteurizers are important for ensuring the safety and quality of liquid products like milk, juice, and soups. They require robust and reliable components to withstand the extreme temperature fluctuations used for sterilizing liquid products. This rapid heating and cooling process kills harmful bacteria just before aseptic packaging, thereby extending shelf life and maintaining quality until the product is opened.

- **Precise temperature control.** Ifm sensors can handle various pasteurization temperatures and temperature cycling – essential for safety and regulatory compliance – while maintaining accuracy and repeatability. Their fast response ensures that the system maintains the required temperature to kill harmful bacteria and microorganisms effectively for product safety.
- **Process optimization and efficiency.** Automated control systems allow for real-time adjustments of flow rates, heating times, and cooling rates based on data from flow, pressure, and temperature sensors. This leads to safe production, efficient energy usage, and reduced processing time.
- **Safety and quality assurance.** Monitoring critical control points like temperature and pressure provides insights into operating conditions and process health. Early detection of deviations enables prompt corrective actions, preventing potential safety hazards. Information can be logged, enhancing the visibility of potential quality issues.

Company	Process Tank	Clean-in-Place Skid	UHT Pasteurizer	Heat Exchanger	Centrifugal Pump	Brewhouse	Reverse Osmosis Skid	Centrifugal Separator	Valves in Process
									
2-7	8-9	10-11	12-13	14-15	16-17	18-19	20-21	22-23	24-25



- 1 Optimize energy transfer with continuous flow monitoring**
 ifm's SUH sanitary ultrasonic flowmeter offers high-precision measurement, totalized flow for consumption, tri-clamp process connections, a high-temperature rating, and sanitary approvals for food and beverage applications.



SUH
p.32
- 2 Enhance product quality and machine availability with flow monitoring**
 ifm's SM Foodmag with IO-Link accurately measures flow rate, total volume, temperature, and conductivity. It stores up to 200 events, monitoring process data that falls outside of expected values.



SMF
p.30
- 3 Ensure reliable level monitoring in the presence of foam and turbulence**
 The PI hydrostatic level monitor ignores media foam and turbulence, guaranteeing complete tank emptying. This prevents cross-contamination and improves machine efficiency.



PI
p.36
- 4 Gain process insights with clamp-on temperature measurements**
 ifm's TSM temperature sensors offer non-invasive, easy-to-install temperature monitoring for small pipes and tight surface spaces.



TSM
p.50
- 5 Increase production availability with reliable point level detection**
 ifm's LMT sensors use high-frequency capacitive technology that ignores buildup, eliminates overflows, underfills, and pump run dry events.



LMT
p.40
- 6 Eliminate product spoilage due to undetected drifting temperature measurements**
 The TCC series of temperature sensors feature a dual element calibration check that provides real-time monitoring to ensure food safety between scheduled calibrations.



TCC
p.40
- 7 Increase process control with valve position feedback**
 The diagnostics embedded in ifm's MVQ sensor detects seal wear to prevent leakage that can impact product quality.



MVQ
p.52
- 8 Eliminate analog-to-digital conversion errors and reduce commissioning**
 IO-Link eliminates analog-to-digital conversion errors and provides multiple process values from each sensor. Downtime is reduced, efficiency improved.



IO-Link
p.26





Price-performance

Process instruments are critical for maintaining quality.

The total cost of ownership for each measurement point must be affordable and with ifm, it is!

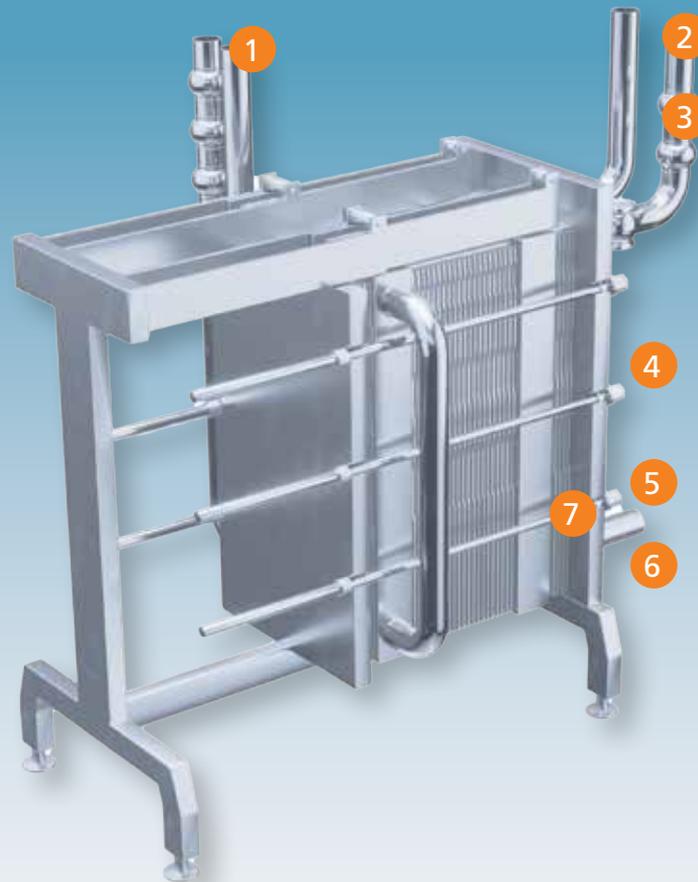
IO-Link	IIoT Solutions	Flow	Pressure	Level	Conductivity	Temperature	Valve Position	Cordsets
								
26-27	28-29	30-33	34-39	38-41	42-43	44-51	52-53	54-55

HEAT EXCHANGER

Dairy processing, Beverages, Sweets, Meat processing, Cane sugar processing, Farming, Alternative protein, Beer



More info



A heat exchanger transfers heat between two or more fluids without direct contact. In the food and beverage industry, they are commonly used for pasteurization, sterilization, cooking, and cooling. Heat exchangers enhance food safety by:

- **Improved shelf life.** Heat exchangers reduce or eliminate harmful microorganisms, enhancing food safety. Proper temperature control during heating ensures product longevity while preserving taste.
- **Efficiency and reduced downtime.** Longer run times yield more product, but fouling can decrease efficiency. Real-time monitoring detects fouling issues promptly. Real-time monitoring of critical parameters, such as pressure, temperature, and flow optimizes heat exchanger performance. Early alerts allow timely maintenance, minimizing unexpected shutdowns.
- **Contamination prevention.** Detecting leaks with conductivity sensors prevents contamination and ensures product integrity.

Company	Process Tank	Clean-in-Place Skid	UHT Pasteurizer	Heat Exchanger	Centrifugal Pump	Brewhouse	Reverse Osmosis Skid	Centrifugal Separator	Valves in Process
									
2-7	8-9	10-11	12-13	14-15	16-17	18-19	20-21	22-23	24-25



- 1 Ensure food safety with reliable temperature measurement**
 ifm's TCC is the most reliable and accurate temperature sensor on the market. It provides real-time monitoring to ensure food safety between calibration checks.



TCC
p.44
- 2 Reliable pressure monitoring to ensure safe and efficient flow**
 The PI pressure sensor monitors proper inlet and outlet pressure to detect blockages and restrictions.



PI
p.36
- 3 Reduce energy costs due to fouling and clogging of heat exchanger elements**
 ifm's pressure sensors withstand high-pressure cleaning cycles and recover quickly from temperature changes, ensuring the continuous operation of your system.



PG
p.34
- 4 Eliminate analog-to-digital conversion errors and reduce commissioning**
 IO-Link eliminates analog-to-digital conversion errors and provides multiple process values from each sensor. Downtime is reduced, efficiency improved.



IO-Link
p.26
- 5 Optimize energy transfer with continuous flow monitoring**
 ifm's SUH sanitary ultrasonic flowmeter provides high-precision measurement, totalized flow for water consumption, tri-clamp process connections, a high-temperature rating, and sanitary approvals.



SUH
p.32
- 6 Reduce scrap due to cross contamination**
 The LDL conductivity sensors detect leaks which prevents contamination and ensures product integrity.



LDL
p.42
- 7 Gain process insights with clamp-on temperature measurements**
 ifm's TSM temperature sensors offer non-invasive, easy-to-install temperature monitoring for small pipes and tight surface spaces.



TSM
p.50





Compatible materials

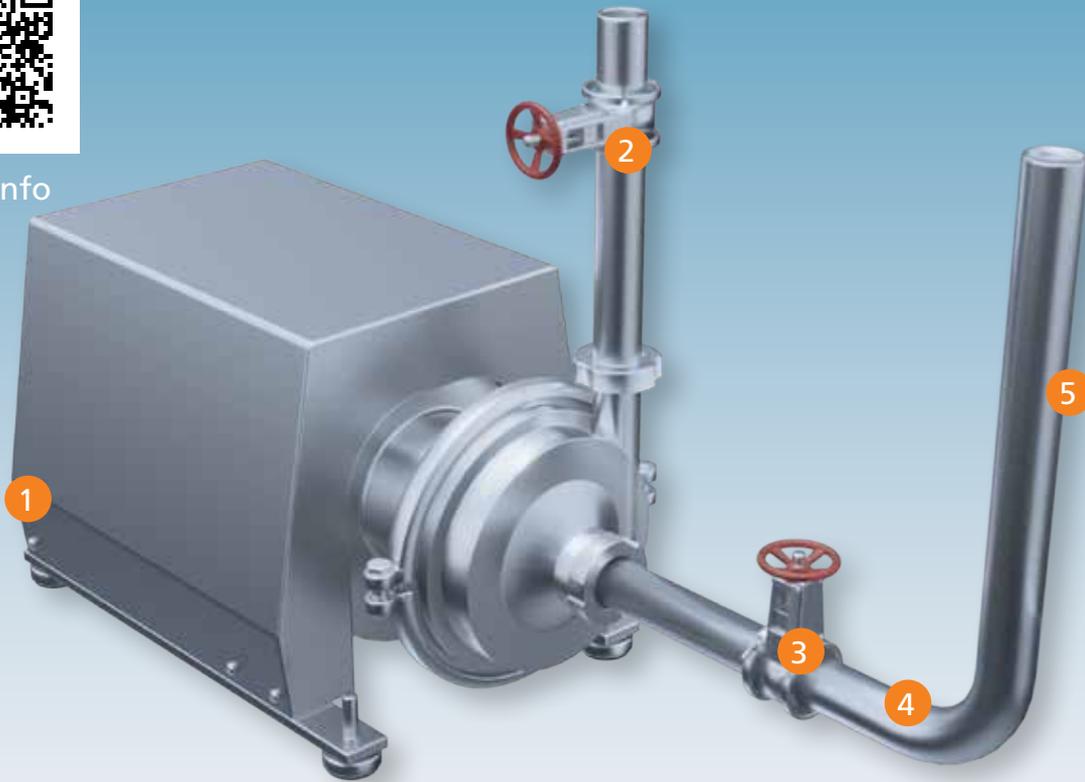
We utilize the highest grade stainless steel and compatible O-rings for food and beverage applications.

Absolutely no compromises!

IO-Link	IIoT Solutions	Flow	Pressure	Level	Conductivity	Temperature	Valve Position	Cordsets
								
26-27	28-29	30-33	34-39	38-41	42-43	44-51	52-53	54-55



More info



Centrifugal pumps play a vital role in fluid transfer, water pressure boosting, and sustaining industrial processes. Centrifugal pumps move fluid by transferring rotational energy from driven rotors, called impellers. Automation controls are essential for maximizing their availability:

- **Reduced downtime.** Maintaining an adequate liquid supply prevents dry running, which can damage the pump.
- **Pressure optimization.** Proper pressure management prevents cavitation. Cavitation damages components, leads to leaks, and reduces efficiency.

Company	Process Tank	Clean-in-Place Skid	UHT Pasteurizer	Heat Exchanger	Centrifugal Pump	Brewhouse	Reverse Osmosis Skid	Centrifugal Separator	Valves in Process
									
2-7	8-9	10-11	12-13	14-15	16-17	18-19	20-21	22-23	24-25



- 1 Minimize downtime and enhance quality with IO-Link**
 IO-Link eliminates analog-to-digital conversion errors and provides multiple process values from each sensor. Downtime is reduced, efficiency improved.



IO-Link
p.26
- 2 Increase production availability with reliable detection of process media**
 ifm's LMT sensors use high-frequency capacitive technology that ignores buildup and eliminates overflows, underfills, and pump run dry events.



LMT
p.40
- 3 Provide reliable pressure monitoring of the process**
 ifm's PI pressure sensor provides accurate measurement of system pressure and helps to detect blockages in the pipe improving machine efficiency.



PI
p.36
- 4 Enhance process control with continuous discharge pressure measurement**
 ifm's pressure sensors use ceramic sensing elements which allow the sensors to withstand pressure spikes, ensuring the continuous operation of your pump.



PG
p.34
- 5 Optimize pump performance with continuous flow monitoring**
 ifm's SUH sanitary ultrasonic flowmeter provides high-precision measurement, totalized flow for water consumption, tri-clamp process connections, a high-temperature rating, and sanitary approvals.



SUH
p.32

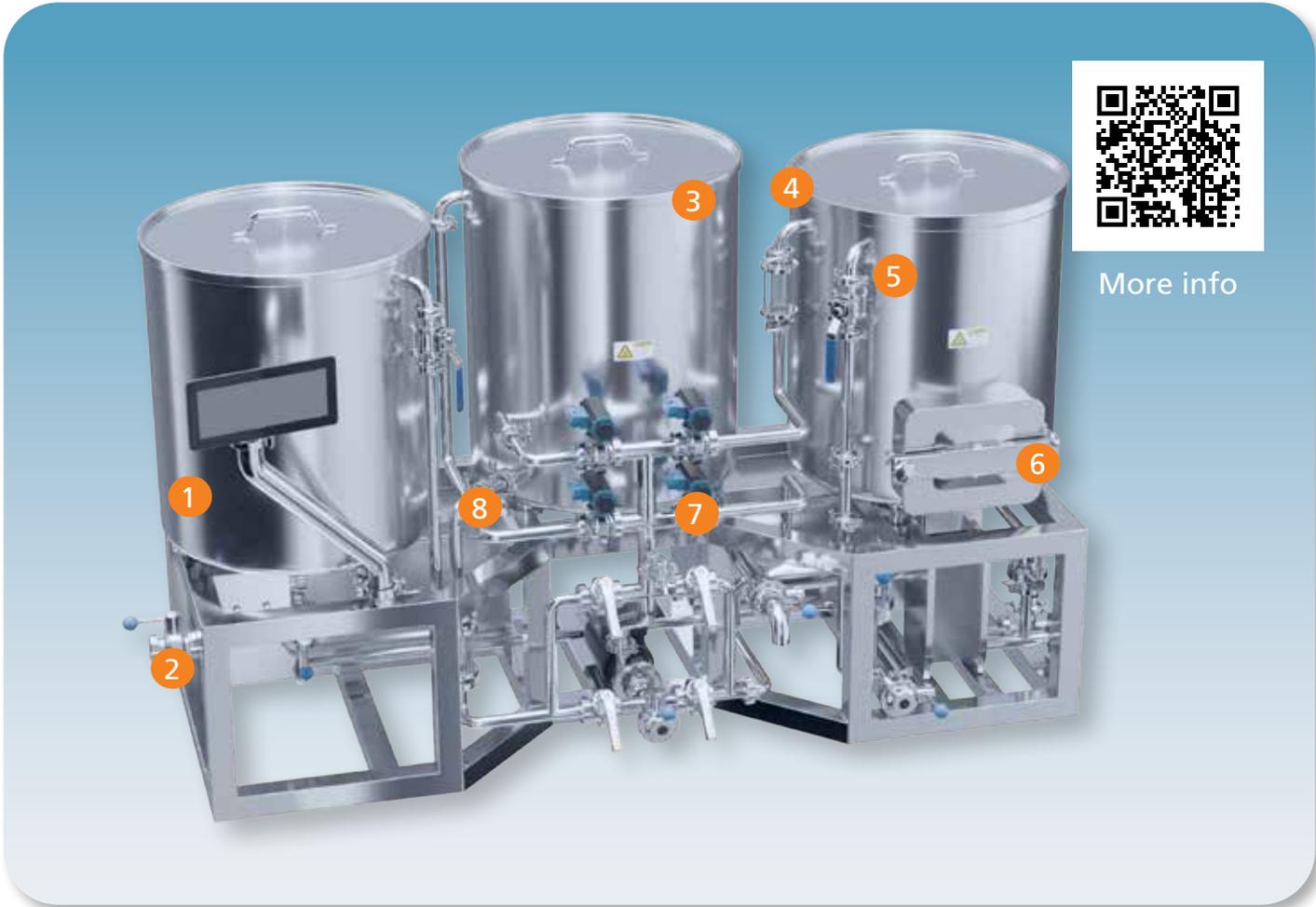



IIoT ready

Process instruments are ready for the future with pure digital signals and diagnostic health information.

moneo can help visualize process dashboards with real-time notifications.

IO-Link	IIoT Solutions	Flow	Pressure	Level	Conductivity	Temperature	Valve Position	Cordsets
								
26-27	28-29	30-33	34-39	38-41	42-43	44-51	52-53	54-55



More info

The brewing process relies on an interconnected system of several key components: the mash tun, brew kettle, hot liquor tank, and pumps. They work together for automation of the brewing process. Precise control over the sequence of time, temperature, and ingredients ensures a consistently high-quality product. In addition to maintaining product quality, there are ways to reduce production delays and manage waste effectively:

- **Real-time process observation.** With all components visible and accessible in the system, operators can easily observe the brewing process in action. Real-time monitoring allows for quick adjustments and ensures consistent quality throughout the brewing cycle.
- **Energy efficiency and quality.** Precise water level and temperature control during mashing are crucial. Automation in the brew kettle ensures accurate levels and pressures. Separating foam from the control system guarantees reliable data, optimizing energy efficiency. Consistent temperature and pressure management results in high-quality wort, directly impacting the taste and characteristics of the final product.
- **Time savings.** Lautering, which involves recirculating wort, is optimized by monitoring flow rates and adjusting pump speed for efficiency. Precise pressure control during filtration prevents clogs and ensures smooth wort flow. Automation maintains optimal viscosity, minimizing delays and enhancing overall efficiency.

Company	Process Tank	Clean-in-Place Skid	UHT Pasteurizer	Heat Exchanger	Centrifugal Pump	Brewhouse	Reverse Osmosis Skid	Centrifugal Separator	Valves in Process
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- 1 Provide reliable level monitoring in the presence of foam and turbulence**
 ifm's hydrostatic PI level monitor ignores media foam and turbulence. This ensures a completely empty tank preventing cross-contamination and improving machine efficiency.



PI
p.36
- 2 Minimize downtime and enhance quality with IO-Link**
 IO-Link eliminates analog-to-digital conversion errors and provides multiple process values from each sensor. Downtime is reduced, efficiency improved.



IO-Link
p.26
- 3 Increase production availability with reliable level detection**
 ifm's LMT sensors use high-frequency capacitive technology that ignores buildup and eliminates overflows, underfills, and pump run dry events.



LMT
p.40
- 4 Eliminate false flow indication with solid state flow sensing**
 ifm's SUH sanitary ultrasonic flowmeter provides high-precision measurement, totalized flow for water consumption, tri-clamp process connections, a high-temperature rating, and sanitary approvals.



SUH
p.32
- 5 Ensure batch consistency with continuous flow monitoring**
 ifm's SMF sanitary magmeter provides high-precision measurement of media in brewing and keg filling applications. It offers accuracy independent of particles that may be present in the lauter tun-to-kettle process.



SMF
p.30
- 6 Ensure food safety with reliable temperature measurement**
 Reliable and accurate temperature sensors provide real-time monitoring to ensure food safety between calibration checks.



TCC
p.44
- 7 Increase process control with valve position feedback**
 Diagnostics embedded in ifm's MVQ sensor detect seal wear to prevent leakage that can impact beverage quality.



MVQ
p.52
- 8 Gain process insights with clamp-on temperature measurements**
 ifm's TSM temperature sensors offer non-invasive, easy-to-install temperature monitoring for small pipes and tight surface spaces.



TSM
p.50



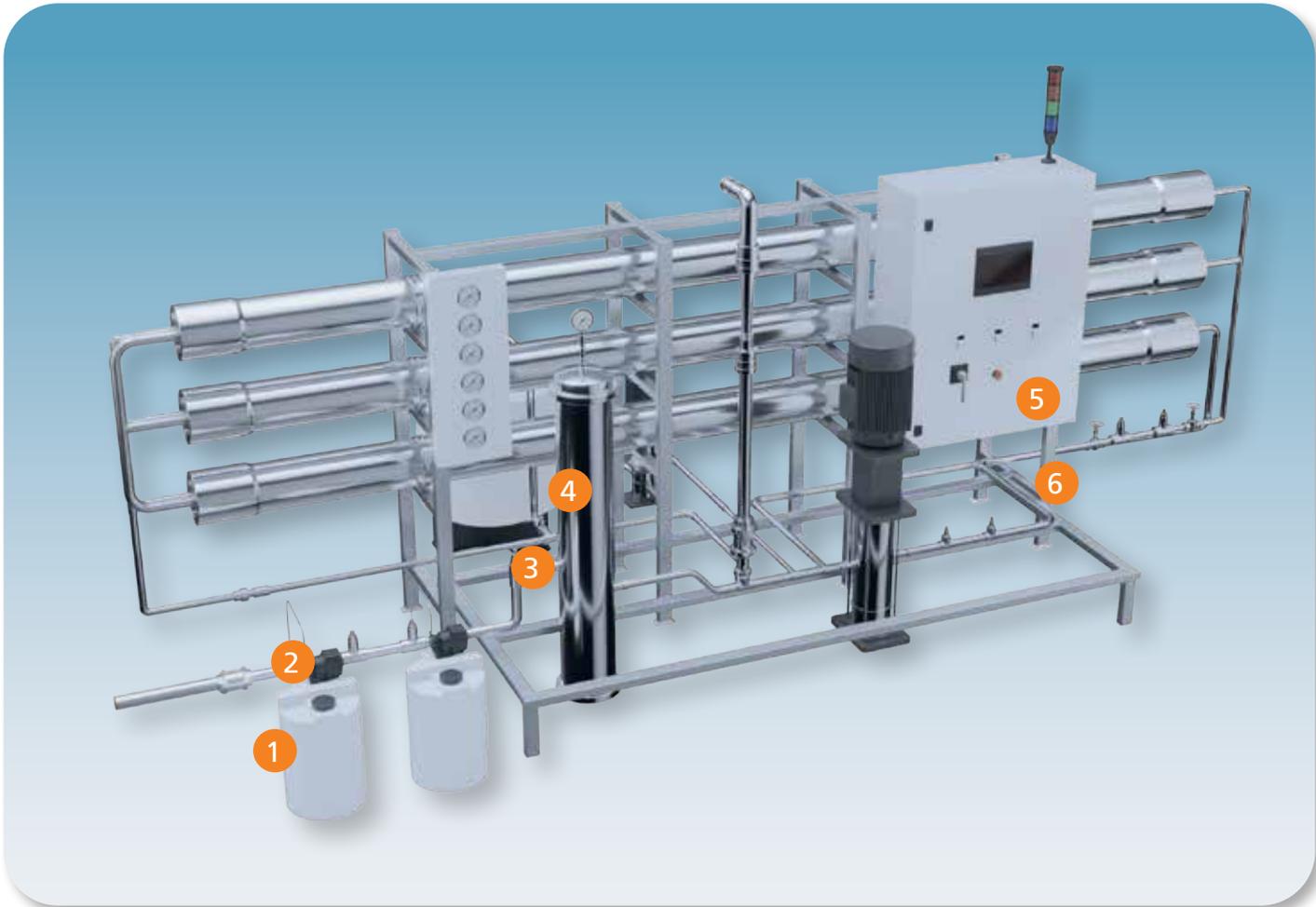


Our promise of quality

5-year warranty on ifm products.

Safe process / quality management:
 Certification ISO9001
 Approvals such as 3-A, ATEX certification, EHEDG, FDA, and ecolab, are included.

IO-Link	IIoT Solutions	Flow	Pressure	Level	Conductivity	Temperature	Valve Position	Cordsets
								
26-27	28-29	30-33	34-39	38-41	42-43	44-51	52-53	54-55



Reverse Osmosis (RO) skids are designed to remove contaminants from water. Consistent water quality is essential for food and beverage production. Automated controls and monitoring systems allow for real-time performance tracking and simplified maintenance procedures. This reduces the need for specialized personnel and minimizes operational disruptions.

- **Improved machine availability.** By continuously monitoring feed, permeate, and concentrate pressures, as well as flow rates and tank levels, these sensors detect early signs of fouling, scaling, membrane damage, blockages, leaks, and inappropriate water levels. This enables preventive maintenance and quick interventions to reduce unplanned downtime and maintain continuous operation.
- **High-quality water production.** By measuring TDS levels, maintaining optimal feed water temperature, and ensuring correct flow rates. Conductivity, temperature, and flow sensors collectively enhance membrane efficiency, filtration efficiency, and throughput, ensuring high-quality water production.
- **Operational efficiency.** Temperature and flow sensors optimize energy consumption by ensuring efficient operation of pumps and components, while accurate monitoring of water quality parameters ensures efficient use of chemicals and resources, reducing waste and operational costs.

Company	Process Tank	Clean-in-Place Skid	UHT Pasteurizer	Heat Exchanger	Centrifugal Pump	Brewhouse	Reverse Osmosis Skid	Centrifugal Separator	Valves in Process
									
2-7	8-9	10-11	12-13	14-15	16-17	18-19	20-21	22-23	24-25



1 Improve machine control with reliable level detection

ifm's LW non-contact radar sensor accurately measures the liquid level in tanks of varying shapes and sizes, minimizing errors in volume calculations.



2 Optimize feedwater flow rates with continuous flow monitoring

ifm's SUH sanitary ultrasonic flowmeter offers high-precision measurement, totalized flow for consumption, tri-clamp process connections, a high-temperature rating, and sanitary approvals.



3 Ensure effective temperature compensation with reliable temperature measurement

Reliable and accurate temperature sensors provide real-time monitoring to ensure optimal performance.



4 Maintain optimal performance with pressure monitoring

ifm's PI pressure sensor can measure feed, permeate, and concentrate pressure, detecting early signs of fouling, scaling, or membrane damage.



5 Eliminate analog-to-digital conversion errors and reduce commissioning

IO-Link eliminates analog-to-digital conversion errors and provides multiple process values from each sensor. Downtime is reduced, efficiency improved.



6 Maximize the water treatment process and impact water quality

Conductivity sensors can detect changes in water quality enabling swift adjustments to flow rates or chemical dosing, optimizing performance.




X-treme testing

We develop products that are designed and tested to perform in harsh applications.

Thermal-shock, vibration, pressure cleaning, and chemical exposure tested.

IO-Link	IIoT Solutions	Flow	Pressure	Level	Conductivity	Temperature	Valve Position	Cordsets
26-27	28-29	30-33	34-39	38-41	42-43	44-51	52-53	54-55

CENTRIFUGAL SEPARATOR

Dairy processing, Beverages, Sweets, Meat processing, Cane sugar processing, Farming, Alternative protein, Beer



More info



A centrifugal separator is used in food and beverage manufacturing to isolate liquid and solid components of fluids, slurries, and other process streams. The overall effectiveness of a centrifugal separator depends on:

- **Critical parameter monitoring.** Real-time monitoring of pressure and temperature is vital. Proper conditions prevent damage to sensitive components and ensure efficient separation. Maintaining optimal liquid levels prevents overflows or underfills, contributing to reliable performance. Detecting transitions between different fluids or slurries allows timely adjustments, avoiding cross-contamination.
- **Precise separation for quality assurance.** Consistent separation prevents contamination and maintains product purity. Operators can make immediate adjustments based on real-time data. Whether it's fine-tuning separation parameters or addressing anomalies, quality remains consistent. By optimizing separation efficiency, energy consumption is minimized, contributing to sustainable operations.

Company	Process Tank	Clean-in-Place Skid	UHT Pasteurizer	Heat Exchanger	Centrifugal Pump	Brewhouse	Reverse Osmosis Skid	Centrifugal Separator	Valves in Process
									
2-7	8-9	10-11	12-13	14-15	16-17	18-19	20-21	22-23	24-25



- 1 Increase production availability with reliable level detection**
 ifm's LMT sensors use high-frequency capacitive technology that ignores buildup and eliminates overflows, underfills, and pump run dry events.



LMT
p.40
- 2 Maximize product transfer yield with automated phase shift detection**
 Conductivity sensors determine the transition between media types during separation, maximizing product transfer yield and enhancing product quality.



LDL
p.42
- 3 Ensure optimal viscosity separation with reliable temperature measurement**
 Reliable and accurate temperature sensors provide real-time monitoring to ensure food safety between calibration checks.



TCC
p.44
- 4 Provide reliable separation with efficient flow rates**
 ifm's SM Foodmag accurately measures total volume, temperature, and conductivity. It offers high-precision flow measurement ensuring proper separation of media.



SMF
p.30
- 5 Optimize separation efficiency with continuous system pressure monitoring**
 ifm's pressure sensors use ceramic sensing elements which allow the sensors to withstand pressure spikes, ensuring the continuous operation of your pump.



PG
p.34
- 6 Eliminate analog-to-digital conversion errors and reduce commissioning**
 IO-Link eliminates analog-to-digital conversion errors and provides multiple process values from each sensor. Downtime is reduced, efficiency improved.



IO-Link
p.26





Price-performance

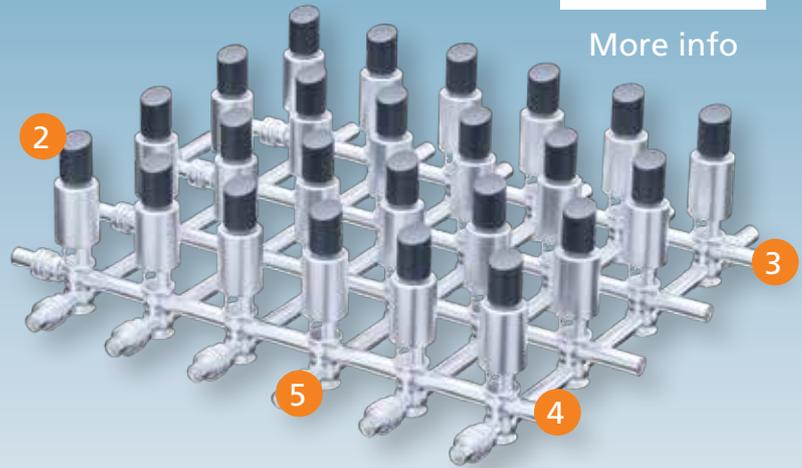
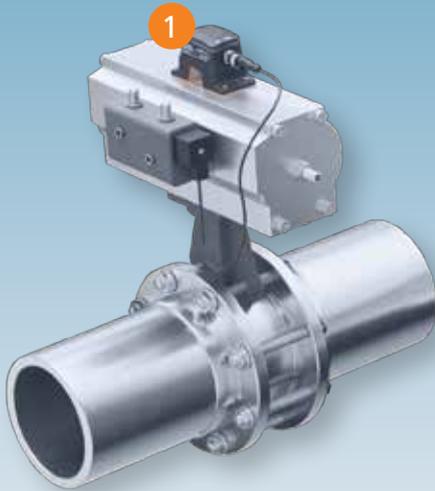
Process instruments are critical for maintaining quality.

The total cost of ownership for each measurement point must be affordable and with ifm, it is!

IO-Link	IIoT Solutions	Flow	Pressure	Level	Conductivity	Temperature	Valve Position	Cordsets
								
26-27	28-29	30-33	34-39	38-41	42-43	44-51	52-53	54-55



More info



In industrial processes involving liquids, air or gases, valves are needed for dosing and control. In food and beverage applications, where ingredients and recipes often change based on the product being made, interconnected valves control the conveyance of materials through pipes to the desired tanks and locations, more efficiently than flow panels.

The overall effectiveness of the valve relies on the seal, position, and time it takes to open and close. The use of ifm solutions can monitor seal wear that may cause the valve to exceed its closed position, detect deposits preventing the valve from fully closing, and assess proper valve operation by monitoring open/close times.

Company	Process Tank	Clean-in-Place Skid	UHT Pasteurizer	Heat Exchanger	Centrifugal Pump	Brewhouse	Reverse Osmosis Skid	Centrifugal Separator	Valves in Process
									
2-7	8-9	10-11	12-13	14-15	16-17	18-19	20-21	22-23	24-25



1 Increase process control with valve position feedback
 The diagnostics embedded in ifm's MVQ sensor detects seal wear, preventing leakage that can impact food and beverage quality.



2 Eliminate analog-to-digital conversion errors and reduce commissioning
 IO-Link eliminates analog-to-digital conversion errors and provides multiple process values from each sensor. Downtime is reduced, efficiency improved.



3 Ensure correct product transfer and detect leaks
 Conductivity sensors determine the transition between media types, maximizing product transfer yield and preventing potential contamination.



4 Optimize fluid transfer with real-time flow feedback
 ifm's SUH sanitary ultrasonic flowmeter offers high-precision measurement, totalized flow for consumption, tri-clamp process connections, a high-temperature rating, and sanitary approvals.



5 Reliable detection of blockages and flow restrictions
 ifm's PI pressure sensor accurately detects changes in line pressure, improving machine efficiency.

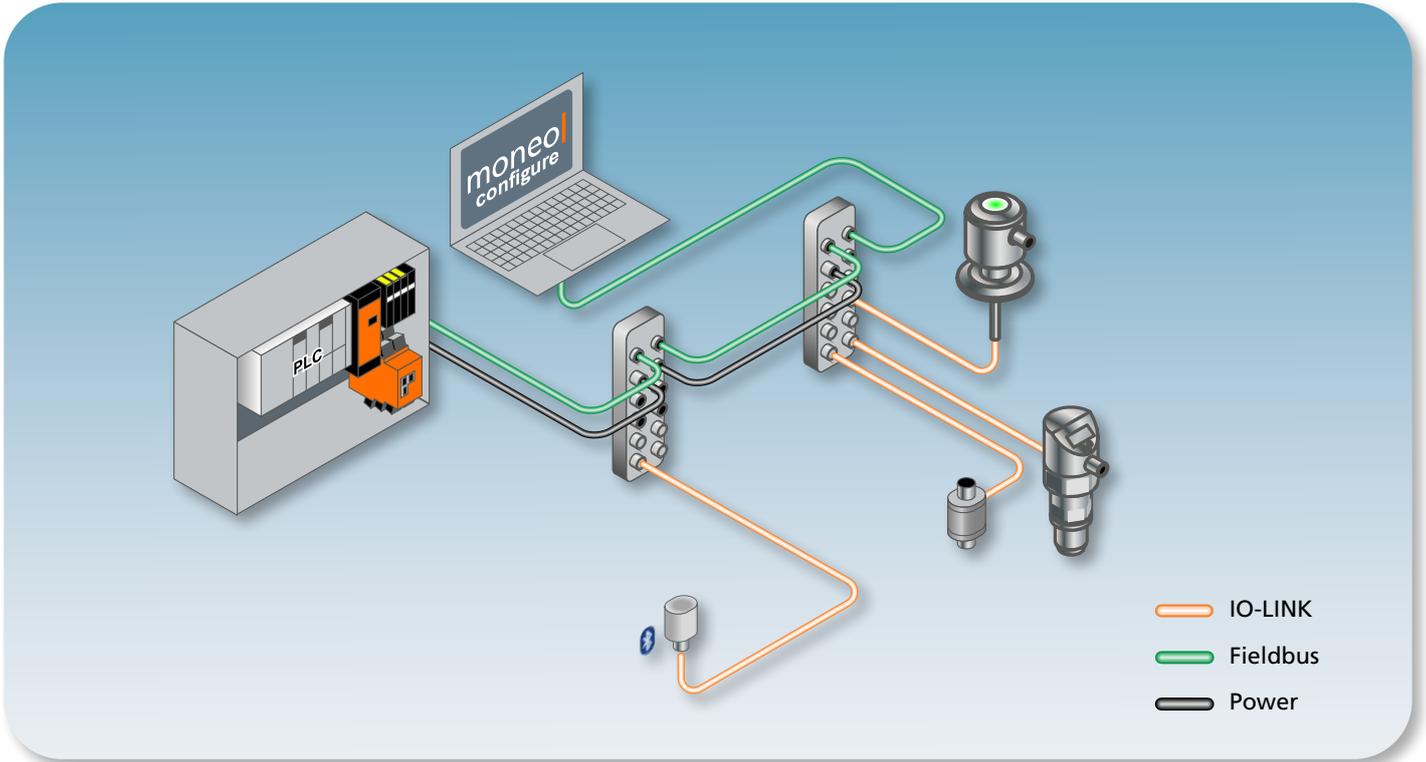


 **IIoT ready**

Process instruments are ready for the future with pure digital signals and diagnostic health information.

moneo can help visualize process dashboards with real-time notification.

IO-Link	IIoT Solutions	Flow	Pressure	Level	Conductivity	Temperature	Valve Position	Cordsets
								
26-27	28-29	30-33	34-39	38-41	42-43	44-51	52-53	54-55



How does IO-Link unlock the potential of your machine?

IO-Link master benefit:



- Pure digital signal without analog conversion
- No analog or RTD input cards necessary
- Field ready modules replace cabinet space
- Simple, M12 module connections
- Bi-directional communication
- Shorten design and commissioning time

IO-Link sensor benefits



- Automatic device replacement and verification
- Remote parameterization
- Cyclic, acyclic, and diagnostic data from sensors

Company	Process Tank	Clean-in-Place Skid	UHT Pasteurizer	Heat Exchanger	Centrifugal Pump	Brewhouse	Reverse Osmosis Skid	Centrifugal Separator	Valves in Process
2-7	8-9	10-11	12-13	14-15	16-17	18-19	20-21	22-23	24-25



Product + accessory selector

Field Bus	IloT Comm.	Power Input Coding	IOL Ports	Port Type	Output (max. ea pin)	IP Rating	Part No.
For standard applications and northbound IloT connections							
Multiprotocol	MQTT/JSON/OPC UA	L-M12M	8	4xA 4xB	4000 mA	IP69K	AL1591
Ethernet/IP	MQTT/JSON	A-M12M	8	8XA	300 mA	IP69K	AL1327
ProfiNet	MQTT/JSON	A-M12M	8	8XA	300 mA	IP69K	AL1307
Ethernet/IP	N/A	A-M12M	8	4xA 4xB	2000mA	IP69K	AL1423
ProfiNet	N/A	A-M12M	8	4xA 4xB	2000mA	IP69K	AL1403
Ethernet/IP	MQTT/JSON	Cage clamp	8	8XA	300 mA	IP20	AL1921
ProfiNet	MQTT/JSON	Cage clamp	8	8XA	300 mA	IP20	AL1901

Accessories

Type	Description	Part No.
	Protective caps	E12542
	Analog input converter	DP4200
	Analog output converter	DP3213
	Frequency converter	DP4122
	Pulse counting converter	DP4302
	Pulse stretcher converter	DP4402
	RTD converter	TP2003
	Mounting brackets	E78002
	Mounting brackets	E78000

Connection cables

Type	Length	Signal / type	Part No.
	2 m	Sensor	EVF043
	5 m	Sensor	EVF044
	2 m	Sensor	EVF071
	5 m	Sensor	EVF072
	5 m	Fieldbus	EVF552
	10 m	Fieldbus	EVF553
	2 m	Fieldbus	EVF531
	5 m	Fieldbus	EVF532
	2 m	Fieldbus	EVF523
	5 m	Fieldbus	EVF524
	2 m	Fieldbus	EVF538
	5 m	Fieldbus	EVF539
	2 m	L-M12 Power	EVF611
	5 m	L-M12 Power	EVF612
	2 m	L-M12 Power	EVF616
	5 m	L-M12 Power	EVF617
	2 m	L-M12 Power	EVF624
	5 m	L-M12 Power	EVF625
	2 m	A-M12 Power	EVF480
	5 m	A-M12 Power	EVF481

IO-Link



26-27

IloT Solutions



28-29

Flow



30-33

Pressure



34-39

Level



38-41

Conductivity



42-43

Temperature



44-51

Valve Position



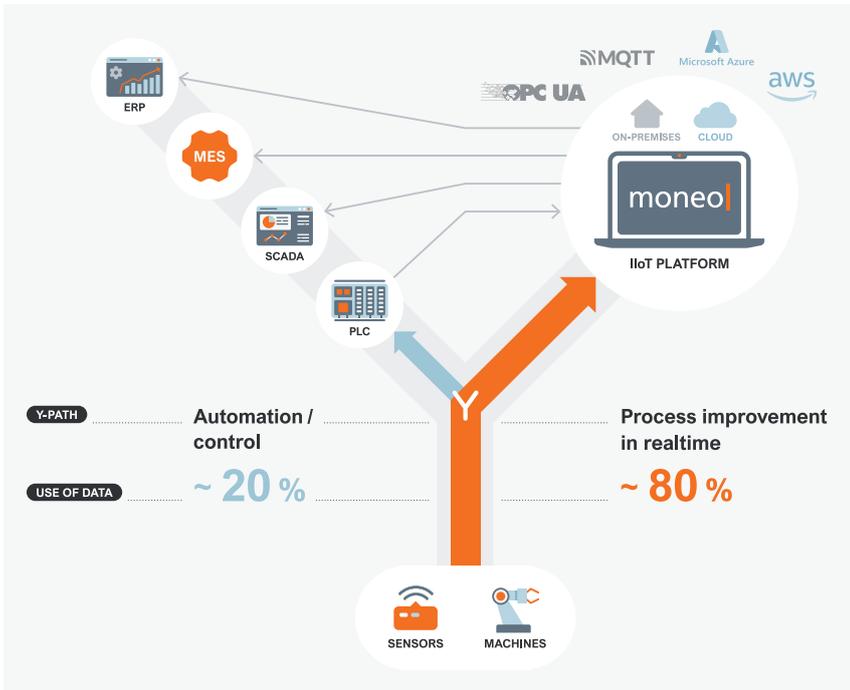
52-53

Cordsets



54-55

IloT Journey



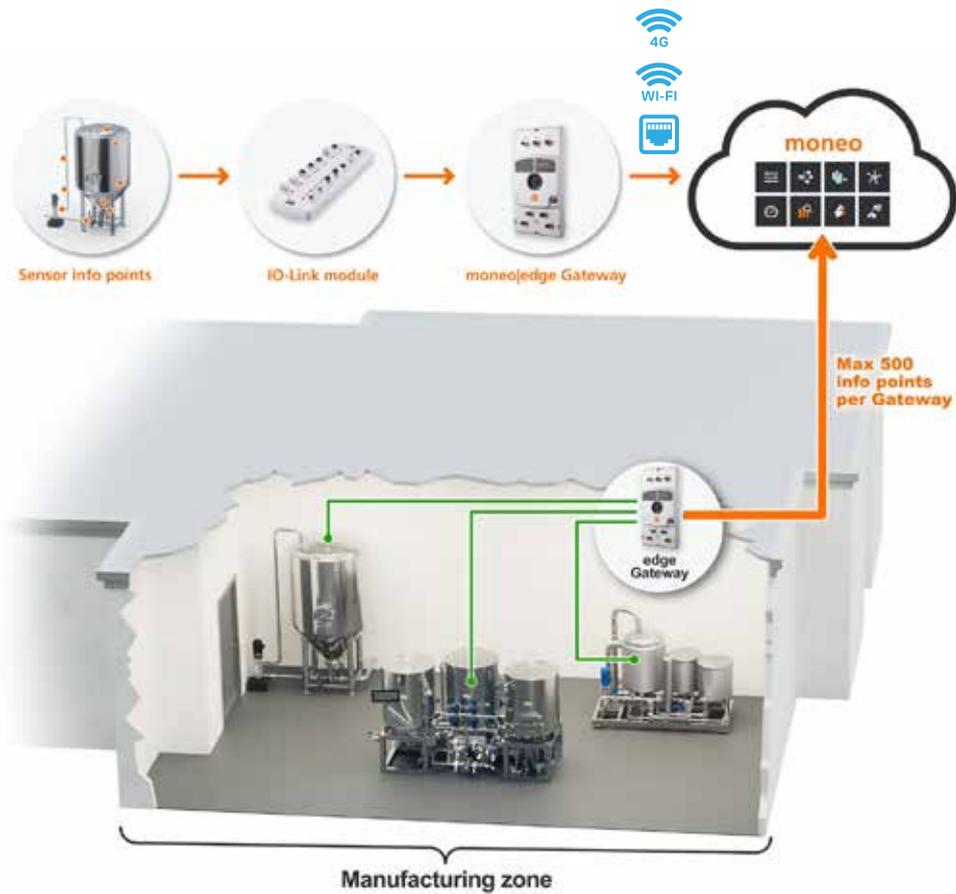
- Achieve consistent results and improve quality by monitoring process drifts in real time.
- Improve machine availability by predicting downtime.
- Measure energy waste at the machine and at each production step.
- Real-time visibility for raw materials, work-in-progress, and finished goods for track and traceability.

ifm's commitment to IIoT

- IIoT projects should offer clear and measurable benefits for manufacturing.
- Hardware and software should be easy to implement without requiring specialist expertise and integration consulting.
- No-code software solutions are ideal for shortening the time to market of IIoT projects.

- The technology should be "plug-and-work" and involve minimal effort so that customers can quickly reap the benefits.
- The system architecture should be "open" for communication with the most important hardware and software platforms.
- Proof-of-value projects can enhance project definition and add value that results in a faster return on investment.

Company	Process Tank	Clean-in-Place Skid	UHT Pasteurizer	Heat Exchanger	Centrifugal Pump	Brewhouse	Reverse Osmosis Skid	Centrifugal Separator	Valves in Process
2-7	8-9	10-11	12-13	14-15	16-17	18-19	20-21	22-23	24-25



Integration steps

1. Divide the production facility into machine zones.
2. Install sensors and IO-Link hardware on the machines.
3. Connect the machines in the production line with an ifm edgeGateway.
4. Connect the gateway to the cloud via LTE, Wi-Fi, or Ethernet.
5. Set up dashboard visualization and set parameters for notifications.
6. Improve your maintenance processes in real time!

IO-Link



26-27

IIoT Solutions



28-29

Flow



30-33

Pressure



34-39

Level



38-41

Conductivity



42-43

Temperature



44-51

Valve Position



52-53

Cordsets



54-55



SM Foodmag flow sensor



Bright LED display and status ring provide process information in real time

IO-Link provides process insight and no signal loss (only 1x M12 connection)

IP69 washdown rated with 3A authorization

Flow, temperature, conductivity measurements

0.5% accuracy, 0.1% repeatability

Standard flow meter dimensions, seals, and process adapters for plug & work functionality



Traditional magmeters

- Labor and assembly challenges
- Unnecessary ingress risks
- Hardware constraints
- Structural vulnerability
- Reduced process visibility
- Complex interface
- Programming challenges
- Complex part configuration options
- Limited failure diagnostics

ifm's sanitary magmeter

- Labor and assembly streamlined
- Reduced ingress points
- Hardware flexibility
- Structural integrity
- Process transparency
- Improved operator experience
- Programming streamlined
- Simplified part configuration
- Comprehensive event tracking



Company	Process Tank	Clean-in-Place Skid	UHT Pasteurizer	Heat Exchanger	Centrifugal Pump	Brewhouse	Reverse Osmosis Skid	Centrifugal Separator	Valves in Process
2-7	8-9	10-11	12-13	14-15	16-17	18-19	20-21	22-23	24-25



Product selector



BODY					
Nominal diameter	Measuring range flow [m3/h]	Factory Setting Range (ASP/AEP)	Display (metric units)	NO display (metric & imperial units)	Weight
DN15	0.06 ... 6 m3/h	0 ... 2 m3/h	SMF120	SMF150	3.6 kg
DN25	0.15 ... 18m3/h	0 ... 4 m3/h	SMF220	SMF250	3.7 kg
DN40	0.3 ... 45 m3/h	0 ... 11 m3/h	SMF320	SMF350	4,6kg
DN50	0.6 ... 72 m3/h	0 ... 18 m3/h	SMF420	SMF450	6,1 kg
DN65	1.2 ... 120 m3/h	0 ... 30 m3/h	SMF520	SMF550	7 kg
DN80	1.8 ... 180 m3/h	0 ... 45 m3/h	SMF620	SMF650	7,9 kg
DN100	3.0 ... 300 m3/h	0 ... 70 m3/h	SMF720	SMF750	9,9kg
DN125	4.5 ... 450 m3/h	0 ... 110 m3/h	SMF820	SMF850	15 kg
DN150	6.0 ... 600 m3/h	0 ... 160 m3/h	SMF920	SMF950	17,25 kg



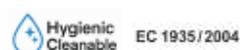
Find suitable accessories for each sensor

Build a customised solution for your system consisting of sensor, process adapter, seals and more now!



Scan to visit the SMF solution builder

NOTE: RJT, BSM adaptors available on request.



<i>IO-Link</i>	<i>IIoT Solutions</i>	<i>Flow</i>	<i>Pressure</i>	<i>Level</i>	<i>Conductivity</i>	<i>Temperature</i>	<i>Valve Position</i>	<i>Cordsets</i>
26-27	28-29	30-33	34-39	38-41	42-43	44-51	52-53	54-55



SUH flow sensor



Bright LED display and status bar provide information in real time

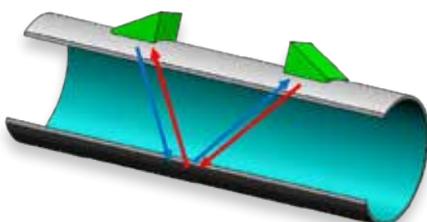
I69K washdown rated with 3A authorization

Flow rate up to 1,585 gpm, totalizer, temperature, or health diagnostics available per output or collectively over IO-Link

No obstructions or moving parts within the pipe section

2.0% accuracy, 0.2% repeatability

Integrated 316L Tri-Clamp adapters



ifm's SUH ultrasonic flow meter technology using non-contact measuring principles senses through pipe

- There are no obstructions or moving parts in the pipe of ifm's SUH flow sensor, which ensures long service life.
- Minimized pressure drop.
- One-piece housing concept with 100% stainless steel wetted materials.
- IP69K with NO seals and NO chance of ingress or media contamination.
- Robust, chemically resistant PFA window display.
- Guaranteed accuracy and repeatability, continuously monitors signal strength.
- Factory calibrated to cover flow range. No field calibration required.
- Works with: non-conductive water-based media such as deionized water, water mixtures up to 10% additives, oil mixtures from 7...68 mm2/s at 40°C.

Company	Process Tank	Clean-in-Place Skid	UHT Pasteurizer	Heat Exchanger	Centrifugal Pump	Brewhouse	Reverse Osmosis Skid	Centrifugal Separator	Valves in Process
2-7	8-9	10-11	12-13	14-15	16-17	18-19	20-21	22-23	24-25



Product selector

Hygienic ultrasonic flow meter - ideal for non-conductive liquids



Ideal for non-conductive liquids - oil, diesel, glycol, demineralised water etc

Process connection	Measuring range	Medium temperature [°C]	(Water, oil, glycol)	(Water)
	[l/min]		Article no.	Article no.
IO-Link, Output function 2 x or analogue (4...20 mA / 0...10 V) · DC PNP/NPN				
Display and programming push buttons				
Hygienic 1" Tri-Clamp	1...240 L/min	-20...100	-	SUH200
Hygienic 2" Tri-Clamp	5...1,000 L/min	-20...100	-	SUH400
No-display, programming via IO-Link				
Hygienic 1/2"	1...65	-40...120	-	-
Hygienic 3/4"	1...75	-40...120	SUH801	-
Hygienic 1"	1...240	-40...120	SUH251	SUH200
Hygienic 1 1/2"	3...375	-40...120	SUH301	-
Hygienic 2"	5...1,000	-40...120	SUH451	SUH400
Hygienic 2 1/2"	20...2,400	-40...120	SUH501	-
Hygienic 3"	25...3,600	-40...120	SUH601	-
Hygienic 4"	45...6,000	-40...120	SUH701	-



Accessories

Type	Description	Part No.
	Grounding clamp	E40234

IO-Link



26-27

IIoT Solutions



28-29

Flow



30-33

Pressure



34-39

Level



38-41

Conductivity



42-43

Temperature



44-51

Valve Position



52-53

Cordsets



54-55



PG pressure sensor



Fast compensation for temperature changes

32 bit IO-Link digital resolution with 20,000 steps over the entire range

Multi-color LED display provides simple visual indication of process values

150°C / 302°F media temperature

Pushbutton setup allows the sensor to be installed in less than 5 minutes

316 stainless steel housing with IP69K protection against high pressure washdown eliminates failure due to moisture ingress

0.2% accuracy, 0.1% repeatability

Ceramic cell offers the most resilient technology on the market, especially when compared to stainless steel diaphragms

FCM CE UK FDA EHEDG Certified IO-Link EC 1935/2004 A



- The smart LED display, with its adjustable multi-color LED ring for clear visualization, combines the excellent readability of a mechanical gauge with the precision of an electronic pressure sensor.
- The robust ceramic measuring cell resists overpressure, abrasion, and corrosion, delivering long-lasting performance even in harsh process environments.
- The ceramic measuring cell operates without filling fluid, eliminating the risk of medium contamination.
- Ceramic is harder and more abrasion-resistant than thin stainless steel diaphragms, helping prevent damage such as small dents and dings during handling or installation.
- Continuous monitoring of the measuring cell status through integrated diagnostics enhances process reliability and ensures early detection of any anomalies.

Company	Process Tank	Clean-in-Place Skid	UHT Pasteurizer	Heat Exchanger	Centrifugal Pump	Brewhouse	Reverse Osmosis Skid	Centrifugal Separator	Valves in Process
									
2-7	8-9	10-11	12-13	14-15	16-17	18-19	20-21	22-23	24-25



Product + accessory selector

Ceramic PG Series - G1 (BSP) Aseptoflex Vario, Flush Pressure & Temperature Sensor with LED visualisation



Factory setting measuring range relative pressure [bar]	Measuring range relative pressure [bar]	Temp range [°C]	Article no.
Hygienic - G1 (BSP) Aseptoflex Vario, Prog, PNP/NPN NO/NC + 4...20 mA, -25...+125° C			
0...40	-1...40	-25...150	PG1743
0...25	-1...25	-25...150	PG1703
0...16	-1...16	-25...150	PG1714
0...10	-1...10	-25...150	PG1704
0...6	-1...6	-25...150	PG1715
0...4	-1...4	-25...150	PG1705
2.5	-0.124...2.5	-25...150	PG1706
1.6	-0.1...1.6	-25...150	PG1717
-1...1	-1...1	-25...150	PG1709
1	-0.05...1	-25...150	PG1707
0.25	-12.4...250 mBar	-25...150	PG1708

Factory calibration and material certifications are available on ifm.com/us

Accessories

Type	Description	Part No.
	1.5" tri-clamp fitting 316L	E33208
	2" tri-clamp fitting 316L	E33209
	Weld fitting 316L	E30130
	Weld mandrel -	E30452



Ceramic measuring cell

Mechanical sensor design



IO-Link

IIoT Solutions

Flow

Pressure

Level

Conductivity

Temperature

Valve Position

Cordsets

26-27

28-29

30-33

34-39

38-41

42-43

44-51

52-53

54-55



PI pressure sensor



Bright LED display eliminates the need for a reference gauge and provides at-a-glance pressure indication

Pushbutton setup allows the sensor to be installed in less than 5 minutes

32 bit IO-Link digital resolution with 20,000 steps over the entire range

316 stainless steel housing with IP69K protection against high-pressure washdowns eliminates failure due to moisture ingress

0.2% accuracy, 0.1% repeatability

Ceramic cell offers the most resilient technology on the market, especially when compared to stainless steel diaphragms

CE FDA UK CA EHEDG Certified TSDP/TÜV ACS FCM IO-Link LISTED US EC 1935/2004 CRN



- The robust ceramic measuring cell resists overpressure, abrasion, and corrosion, delivering long-lasting performance even in harsh process environments.
- The ceramic measuring cell operates without filling fluid, eliminating the risk of medium contamination.
- Ceramic is harder and more abrasion-resistant than thin stainless steel diaphragms, helping prevent damage such as small dents and dings during handling or installation.
- Continuous monitoring of the measuring cell status through integrated diagnostics enhances process reliability and ensures early detection of any anomalies.
- The highly durable, wear-resistant ceramic maintains long-term measurement accuracy and minimizes the need for recalibration or replacement.

Company	Process Tank	Clean-in-Place Skid	UHT Pasteurizer	Heat Exchanger	Centrifugal Pump	Brewhouse	Reverse Osmosis Skid	Centrifugal Separator	Valves in Process
2-7	8-9	10-11	12-13	14-15	16-17	18-19	20-21	22-23	24-25



Product + accessory selector

Ceramic PI series - G1 Connection



Type	Factory setting measuring range [bar]	Measuring range [bar]	P _{overload} max. [bar]	Article no. (high res)
1 switching output and 1 analogue output 4...20 mA / 20...4 mA G 1 male Aseptoflex Vario				
	0...25	-1...25	100	PI1703
	0...16	-1...16	75	PI1714
	0...10	-1...10	50	PI1704
	0...6	-1...6	30	PI1715
	0...4	-1...4	30	PI1705
	0...2.5	-0.124...2.5	20	PI1706
	0...1.6	-0.1...1.6	15	PI1717
	-1...1	-1...1	10	PI1709
	-0.05...1	-0.05...1	10	PI1707
	0...400 mB	-50...400 mB	6	PI1718
	0...250 mB	-12...250 mB	6	PI1708
	0...100 mB	-5...100 mB	4	PI1789

Ceramic PM series - G1 connection - NO DISPLAY



Type	Factory setting measuring range relative pressure [bar]	Measuring range relative pressure [bar]	P _{overload} max. [bar]	Article no.
Aseptoflex Vario, 4...20 mA, IO-Link				
	0...25	-1...25	100	PM1703
	0...16	-1...16	75	PM1714
	0...10	-1...10	50	PM1704
	0...6	-1...6	30	PM1715
	0...4	-1...4	30	PM1705
	0...2.5	-0.125...2.5	20	PM1706
	0...1.6	-0.1...1.6	15	PM1717
	-1...1	-1...1	10	PM1709
	0...1	-0.05...1	10	PM1707
	0...400 mB	0...400 mB	6	PM1718
	0...250 mB	12.5...250 mB	6	PM1708
	0...100 mB	5...100 mB	4	PM1789

IO-Link

IIoT Solutions

Flow

Pressure

Level

Conductivity

Temperature

Valve Position

Cordsets



26-27

28-29

30-33

34-39

38-41

42-43

44-51

52-53

54-55



LW radar level sensor



IO-Link digital communication provides detailed process insight with no signal conversion losses

316 stainless steel welded housing eliminates ingress and protects the electronics in washdown environments

Flexible alignment adaptations for easy installation in tanks or open air applications

Reliable non-contact 80 GHz radar level measurement; +/- 2 mm accuracy, 1 mm resolution

CE FDA UKFC IO-Link c UL LISTED US EC 1935/2004 A CRN

IO-Link	IP69	316 Stainless Steel	Shock Vibration Resistant	Thermal Shock	Radar	Time Savings
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Select by application. For tanks 1 - 4 select LW2720 if sanitary approvals i.e. 3-A are required.

1 Storage tank	2 Mixing tank	3 CIP tank	4 Process / batch filling tank	5 Open tank (LW2120 only)
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Company	Process Tank	Clean-in-Place Skid	UHT Pasteurizer	Heat Exchanger	Centrifugal Pump	Brewhouse	Reverse Osmosis Skid	Centrifugal Separator	Valves in Process
2-7	8-9	10-11	12-13	14-15	16-17	18-19	20-21	22-23	24-25



Product + accessory selector

Device not ready for operation in delivered state! Reference height parameter must be entered to get a measurement output.

Type	Process Connection	Measuring Range	Technology	Signal	Open vs. Closed Tanks	Approvals	Part No.
	G1	0.01...10 m	80 GHz radar (unguided)	Transmitter, switch, IO-Link	Sanitary sensor for closed tanks	3-A, EHEDG, FDA, washdown rated CIP/SIP	LW2720
	G1	0.01...10 m			Radio approvals for open tanks	FCC, FDA, washdown rated CIP/SIP capable	LW2120

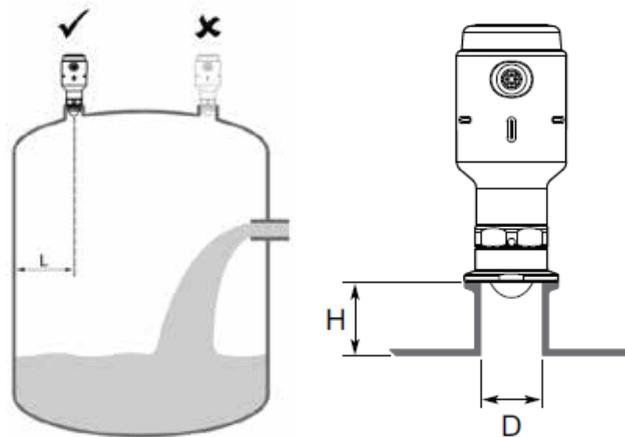
Factory calibration and material certifications are available on ifm.com/us

Accessories

Type	Description	Part No.
LW2720 and LW2120		
	weld adapter	E30130
	tank top weld adapter	E30528
	IO-Link USB master	ZZ1060
	Weld mandrel	E30452

moneo configure free downloadable software

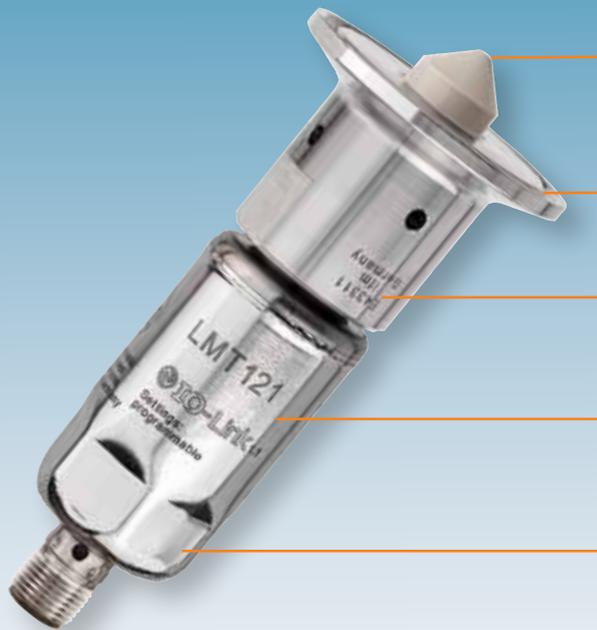
Type	Description	Part No.
LW2720		
	1.5" tri-clamp fitting	E33208
	2" tri-clamp fitting	E33209
LW2120		
	antenna extension	E33705
	mounting bracket	E33706



IO-Link	IIoT Solutions	Flow	Pressure	Level	Conductivity	Temperature	Valve Position	Cordsets
26-27	28-29	30-33	34-39	38-41	42-43	44-51	52-53	54-55



LMT level sensor



Sanitary PEEK sensing tip with food grade surface finish is ideal for sensing sticky or viscous media

No obstruction to flow path or bridging of sensor tips

Sanitary design can be in direct contact with food products and remain installed in cleaning (CIP) processes

High frequency capacitance technology provides reliable level indication

Pre-adjusted for media type, no field adjustment necessary

CE FDA UK EHEGD Certified ACS FCM IO-Link c UL LISTED US EC 1935/2004 CRN



High and low point level detection of liquids and bulk solids

- ifm's LMT family of sensors are a reliable alternative to fork sensors using a frequency sweeping technology that detects the difference between buildup and actual media.
- Eliminate downtime and reduce maintenance costs by ignoring foam or build-up that cause false tripping.
- Protect pumps from run-dry conditions with reliable media presence detection.
- Using IO-Link, the relative value of the media can be transmitted, stored, and analyzed for process transparency.

Company	Process Tank	Clean-in-Place Skid	UHT Pasteurizer	Heat Exchanger	Centrifugal Pump	Brewhouse	Reverse Osmosis Skid	Centrifugal Separator	Valves in Process
2-7	8-9	10-11	12-13	14-15	16-17	18-19	20-21	22-23	24-25



Product selector

Style	Probe Length (mm)	Process Connection	Factory Setting	Medium Temperature (C)	Supply Voltage	Part No.
	11	G1/2 sealing cone	Water-based media	-40...100 (150 for 1 hour)	18...30 DC	LMT100
	11	G1/2 sealing cone	Oil-based media	-40...100 (150 for 1 hour)	18...30 DC	LMT110
	11	G1/2 sealing cone	High sugar; low water content media	-40...100 (150 for 1 hour)	18...30 DC	LMT121
	38	G1/2 sealing cone	Water-based media	-20...100 (150 for 1 hour)	18...30 DC	LMT102
	153	G1/2 sealing cone	Water-based media	-20...100 (150 for 1 hour)	18...30 DC	LMT104
	253	G1/2 sealing cone	Water-based media	-20...100 (150 for 1 hour)	18...30 DC	LMT105
	28	G3/4 BSPP	Water-based media	-20...100 (150 for 1 hour)	18...30 DC	LMT202
	38	G1 BSPP	Water-based media	-20...100 (150 for 1 hour)	18...30 DC	LMT302

Accessories for G1/2 sealing cone

Type	Description	Part No.
	Weld adapter for tanks; with leakage port (3A)	E43309
	Weld adapter for pipes; with leakage port (3A)	E43310
	1..1.5" tri-clamp; with leakage port (3A)	E43311
	2" tri-clamp; with leakage port (3A)	E43312
	Varivent Form F, DN 25, Ø 50 mm	E43306
	Varivent Form N, DN40...DN150, Ø 68 mm	E43307
	Cover plug G1/2 sealing	E43308
	Weld mandrel	E43314

Cordsets

Type	Description	Part No.
	M12 MPPE 2 m	EVF064
	M12 MPPE 5 m	EVF001
	M12 MPPE 2 m	EVF067
	M12 MPPE 5 m	EVF004

IO-Link

IIoT Solutions

Flow

Pressure

Level

Conductivity

Temperature

Valve Position

Cordsets



26-27

28-29

30-33

34-39

38-41

42-43

44-51

52-53

54-55



LDL conductivity sensor



Factory calibrated analog and digital conductivity measurements that eliminate the need for separate evaluation units or field calibration

3A sanitary rated process connection

Rotatable coupling nut allows for easy aligning of the sensor's measuring channel in the piping system

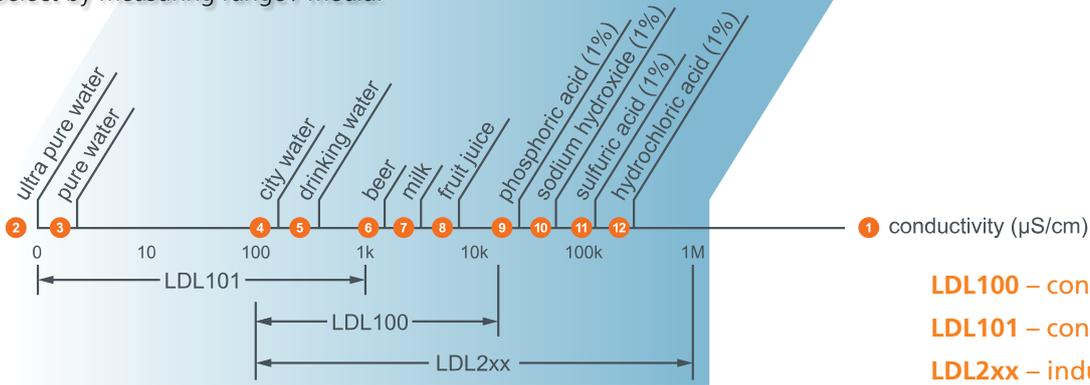
Fully welded 316L stainless steel housing prevents moisture ingress and protects electronics in washdown environments

Standard M12 electrical connector eliminates wiring issues and improves ingress protection

FCM FDA CE UK IO-Link c UL LISTED US EC 1935/2004 A

IO-Link	IP69	316 Stainless Steel	Shock Vibration Resistant	Thermal Shock	Time Savings	Health Indicator
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Select by measuring range / media:



Company	Process Tank	Clean-in-Place Skid	UHT Pasteurizer	Heat Exchanger	Centrifugal Pump	Brewhouse	Reverse Osmosis Skid	Centrifugal Separator	Valves in Process
2-7	8-9	10-11	12-13	14-15	16-17	18-19	20-21	22-23	24-25



Product + accessory selector

Type	Measuring Range	Process Connection	Min Line Size	Insertion Depth	Part No.
	0.04...1000 µS/cm	G1/2	1-1/2"	22.4 mm	LDL101
	100...15,000 µS/cm	G1/2	1-1/2"	22 mm	LDL100
	100...1,000,000 µS/cm	G1/2	1-1/2"	24 mm	LDL220
	100...1,000,000 µS/cm	G1	2"	37 mm	LDL200
	100...1,000,000 µS/cm	G1	2-1/2"	77 mm	LDL201

Factory calibration and material certifications are available on ifm.com/us

Accessories

Type	G1/2 Sealing Cone	Part No.
	weld adapter	E43310
	1-1/2" Tri-Clamp *	E43311
	2" Tri-Clamp *	E43312

* not with LDL220

Type	G1 Aseptoflex Vario	Part No.
	weld adapter	E30500
	1-1/2" Tri-Clamp **	E33208
	2" Tri-Clamp **	E33209

** not with LDL200

Cordsets

Type	Description	Part No.
	M12 MPPE 5 m	EVF001
	M12 MPPE 10 m	EVF002

IO-Link



26-27

IIoT Solutions



28-29

Flow



30-33

Pressure



34-39

Level



38-41

Conductivity



42-43

Temperature



44-51

Valve Position



52-53

Cordsets



54-55



TCC temperature sensor



At-a-glance LED indication of sensor health

IO-Link provides process insight and no signal loss

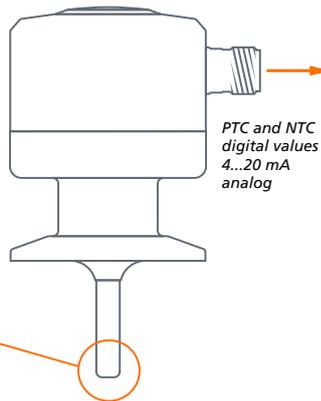
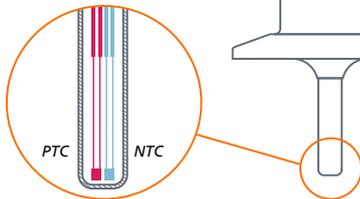
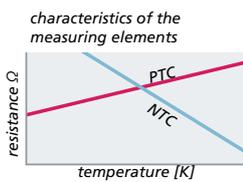
One-piece welded 316 stainless steel housing eliminates moisture ingress – leading cause of measurement drift

Multiple probe lengths and fittings solve a variety of applications

0.2K accuracy, 0.2K precision IO-Link

Dual element tip design alerts to potential increase in measurement uncertainty

CE FDA UK CA EHEDG Certified IO-Link c UL US EC 1935/2004 A CRN LISTED



Self-detecting signal drift

The design of the TCC sensor includes two sensing elements: PTC and NTC that self-detect and send a warning if any signal drift is occurring. Because the PTC and NTC react to temperature change in opposite directions, the microprocessor can measure the differential between the two elements and alert the user to a potential decrease in accuracy.

Company	Process Tank	Clean-in-Place Skid	UHT Pasteurizer	Heat Exchanger	Centrifugal Pump	Brewhouse	Reverse Osmosis Skid	Centrifugal Separator	Valves in Process
2-7	8-9	10-11	12-13	14-15	16-17	18-19	20-21	22-23	24-25



Product + accessory selector

Insertion Length (in)	Process Connection	Maximum Temperature Range	Factory Default Temperature Range (scaled 4... 20 mA)	Part No.
2"	1... 1.5" Triclamp	-25...160°C	-10...150°C	TCC811
3.9"	1... 1.5" Triclamp	-25...160°C	-10...150°C	TCC831
2"	2" Triclamp	-25...160°C	-10...150°C	TCC911
3.9"	2" Triclamp	-25...160°C	-10...150°C	TCC931

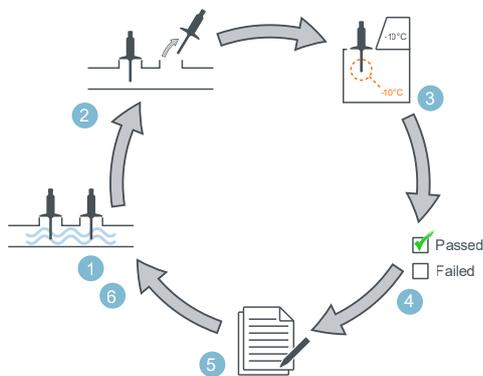
Cordsets

Description					Part No.
	Straight cordset	M12 Micro DC	4-wire	5 m MPPE cable	EVF001
	Straight cordset	M12 Micro DC	4-wire	10 m MPPE cable	EVF002
	Right-angle cordset	M12 Micro DC	4-wire	5 m MPPE cable	EVF004
	Right-angle cordset	M12 Micro DC	4-wire	10 m MPPE cable	EVF005

Reinventing the calibration process

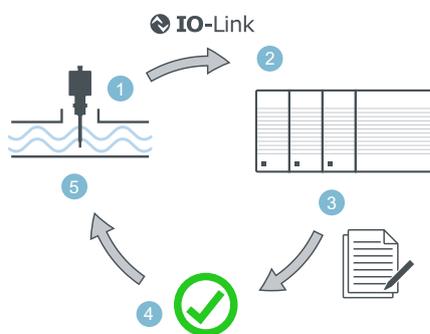
ifm's "Calibration Check" technology automates manual periodic calibration checks. By eliminating mistakes from manual measurements and hand-recorded values, you ensure accurate time-stamped quality records. The automated Calibration Check uses the process value and reference value from the dual element tip. The user can monitor these values over IO-Link for process transparency, record keeping, and validation requirements.

Typical calibration verification cycle



1. Install two identical units next to each other.
2. Periodically, remove a unit from service.
3. Check the calibration of the unit against a known standard.
4. Validate the results manually.
5. Document the results manually.
6. Reinstall the unit.

Automated calibration verification with IO-Link



1. A single TCC takes the place of two standard transmitters.
2. Measured process value sent to PLC via IO-Link for process control.
3. Automatically record time-stamped PTC and NTC measured values via IoT port.
4. Automatically check documented values for drift.
5. This verification cycle continues without the need to remove the TCC from service.

IO-Link



26-27

IIoT Solutions



28-29

Flow



30-33

Pressure



34-39

Level



38-41

Conductivity



42-43

Temperature



44-51

Valve Position



52-53

Cordsets



54-55



TD temperature sensor



0.3K accuracy, 0.04K resolution

4-digit display indicates the actual process temperature and is unaffected by scaling

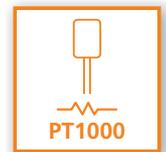
2-wire loop power and 4-wire IO-Link operation for easy installation

169K washdown rated with 3A authorization

1-piece design is factory calibrated and tested which guarantees out-of-the box performance

Tip design ensures fast response time with constant measurement from -50 to 150°C

FCM CE FDA UK EHEHG Certified C UL US IO-Link EC 1935/2004 A



X Traditional temperature sensors fail frequently due to moisture ingress.

They require costly calibration and matching of the transmitter with the RTD probe. They do not have displays for local indication.



ifm's TD transmitter's one-piece fully welded 316 stainless steel IP69K hermetically sealed construction eliminates moisture ingress.

The sensor features integrated electronics, RTD probe, and display. It is calibrated, accurate, and ready to install right out-of-the box.

Company	Process Tank	Clean-in-Place Skid	UHT Pasteurizer	Heat Exchanger	Centrifugal Pump	Brewhouse	Reverse Osmosis Skid	Centrifugal Separator	Valves in Process
2-7	8-9	10-11	12-13	14-15	16-17	18-19	20-21	22-23	24-25



Product + accessory selector

Insertion Length (mm)	Process Connection	Maximum Temperature Range	Factory Default Temperature Range (scaled 4... 20 mA)	Part No.
30	Clamp DN25...DN40 (1...1.5")	-50...150°C	0... 100°C	TD2807
50	Clamp DN25...DN40 (1...1.5")	-50...150°C	0... 100°C	TD2817
100	Clamp DN25...DN40 (1...1.5")	-50...150°C	0... 100°C	TD2837
150	Clamp DN25...DN40 (1...1.5")	-50...150°C	0... 100°C	TD2847
30	Clamp DN50 (2")	-50...150°C	0... 100°C	TD2907
50	Clamp DN50 (2")	-50...150°C	0... 100°C	TD2917
100	Clamp DN50 (2")	-50...150°C	0... 100°C	TD2937
150	Clamp DN50 (2")	-50...150°C	0... 100°C	TD2947

Hygienic Temperature transmitter, 4...20 mA output - NO DISPLAY



Measuring range [°C]	Process connection	Installation depth [mm]	Article no.
Process connection 1 - 1.5" Tri clamp, Factory setting [°C] 0...200			
-50...200	Tri-clamp 1 - 1.5"	30	TA2802 ☺
		50	TA2812 ☺
		100	TA2832 ☺
		150	TA2842 ☺

Hygienic Temperature transmitter, 4...20 mA output - NO DISPLAY

Type TA temperature transmitter
 Operating status indication via LED.
 Scalable analogue output 4...20 mA.
 Hygienic process connections.
 Installation depths of 25 to 150 mm.
 IO-Link. T05 / T09: ≤ 0.5 / ≤ 2 s.
 Accuracy [K]: ± 0.3 + (± 0.1 % Ms).



Measuring range [°C]	Process connection	Installation depth [mm]	Factory setting [°C]			Price
			0...200 Article no.	-10...150 Article no.	0...100 Article no.	
Process connection G1/2 with sealing cone						
-50...200	G 1/2 with hygienic sealing cone	30	TA2502 ☺	-	-	\$465.20
		50	TA2512 ☺	-	-	\$468.40
		50	-	-	TA2517 ☺	\$468.40
		50	-	TA2511 ☺	-	\$468.40
		100	TA2532 ☺	-	-	\$475.70
		100	-	-	TA2537 ☺	\$475.70
		100	-	TA2531 ☺	-	\$475.70
		150	TA2542 ☺	-	-	\$483.10

Sensors with fast response times for hygienic applications:

- **Performance:** Fast response times < 0.25 / < 1 s [T05/T09] allow precise temperature control.
- **Verified:** Free 3-point factory certificate available online.

Accessories TA25 series hygienic weld fittings

Type	Description	Article no.	Price
	G1/2 - weld fitting (for Tanks)	E43300	\$62.80
	G1/2 - weld fitting (or Pipes)	E43301	\$73.70
	G1/2 - weld fitting (for deep insertion)	E30055	\$87.10

IO-Link



26-27

IIoT Solutions



28-29

Flow



30-33

Pressure



34-39

Level



38-41

Conductivity



42-43

Temperature



44-51

Valve Position



52-53

Cordsets



54-55



Temperature sensors

Hygienic Temperature transmitter, 4...20 mA output

Type TA132x temperature transmitters

Are spring loaded for a perfect connection to a thermowell.



Measuring range [°C]	Process connection	Installation depth [mm]	Factory setting [°C]		
			0...200 Article no.	-10...150 Article no.	0...100 Article no.
Process connection G 3/8 with coupling nut Ø 3 mm					
-50...200	G 3/8 internal thread	83	TA1322 ☺	TA1321 ☺	TA1327 ☺

Industrial temperature transmitter and switch - local display & configuration

Type TN temperature sensor

Selectable colour display. Operation via 3 buttons. 2 x NO / NC or 1 x NO / NC and 1 analogue output 4...20 mA / 0...10 V, scalable. T05 / T09: 1 / 3 s.

Pressure-resistant up to 400 bar.

Accuracy [K]: ± 0.3 + (± 0.1 % Ms).



Measuring range [°C]	Process connection	Installation depth [mm]	Factory setting [°C]
			-50...150 Article no.
2 switching outputs or 1 switching and 1 analogue output 4...20 mA or 0...10 V			
-50...150	G 1/2	30	TN2405 ☺
		50	TN2415 ☺
		100	TN2435 ☺
		150	TN2445 ☺

Industrial configurable temperature switch

Type TV temperature sensor

Two solutions: Continuous transmission of measured values via IO-Link – and two switching outputs.

Tamper free.

T05 / T09: 1 / 3 s.

Pressure-resistant up to 400 bar.

Accuracy [K]: ± 0.3.



Measuring range [°C]	Process connection	Installation depth [mm]	Article no.
2 switching outputs			
-50...150	G 1/4	25	TV7105 ☺
	G 1/2	30	TV7405 ☺

Industrial Temperature Switch

Type TK temperature sensor

Easy adjustment of the switch points via two setting rings allowing optimum read-out.

Mechanical lock to prevent accidental adjustment.

T05 / T09: 1 / 3 s.

Pressure-resistant up to 400 bar.

Accuracy [K]: ± 3.



Measuring range [°C]	Process connection	Installation depth [mm]	Article no.
Normally open / normally closed complementary			
-20...140	G 1/4	50	TK6110
2 x NO			
-20...140	G 1/4	50	TK7110
1 x NO / 1 x NC			
-20...140	G 1/4	50	TK7460

Company	Process Tank	Clean-in-Place Skid	UHT Pasteurizer	Heat Exchanger	Centrifugal Pump	Brewhouse	Reverse Osmosis Skid	Centrifugal Separator	Valves in Process
2-7	8-9	10-11	12-13	14-15	16-17	18-19	20-21	22-23	24-25



Temperature sensor accessories selector



No.	Type	Device connection	Process connection	Article no.	For sensor type			
Industrial applications								
1	Progressive ring fitting	Ø 6 mm	G 1/2	E30047	TA	TD	TCC	TT
1	Progressive ring fitting	Ø 10 mm	G 1/2	E30016				TT



No.	Device connection	Process connection	Installation depth [mm]	Article no.	For sensor type			
Hygienic applications								
2	Clamp adapter	Ø 6 mm	G 1/2 with sealing cone	E30144	TA	TD		TT



Industrial applications								
3	G 1/2	G 1/2	27	E37600	TA241x	TN2415	TM4411	TT0281 ¹⁾
			74	E37610	TA243x	TN2435	TM4431	TT1281 ¹⁾
			82	E35010				TT1081 ⁴⁾
			124	E37620	TA244x	TN2445	TM4441	TT2281 ¹⁾
			174	E37630				TT2281 ¹⁾
			182	E35020				TT2081 ⁴⁾
			224	E37640			TM4461	TT3281 ¹⁾
			282	E35030				TT3081 ⁴⁾
482	E35050				TT5081 ⁴⁾			



No.	Device connection	Installation depth [mm]	Article no.	For sensor type			
Hygienic applications							
4	G 1/2 with sealing cone	68	E37511	TA253x	TD253x	TM4531	TT1291 ²⁾
		118	E37521	TA2542	TD254x	TM4541	TT2291 ²⁾
5	G 1/2 with sealing cone	49	E37411	TA2512	TD251x	TM4511	TT0291 ²⁾
		99	E37421	TA253x	TD253x	TM4531	TT1291 ²⁾
		149	E37431	TA2542	TD254x	TM4541	TT2291 ²⁾



No.	Type	Device connection	Process connection	Article no.	For sensor type	
6	Stainless steel adapter	M18 x 1.5	G 1/2	E30073	TM	TN
	Titanium adapter	M18 x 1.5	G 1/2	E40114	TM	TN



IO-Link

IIoT Solutions

Flow

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Conductivity

Temperature

Valve Position

Cordsets

26-27

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38-41

42-43

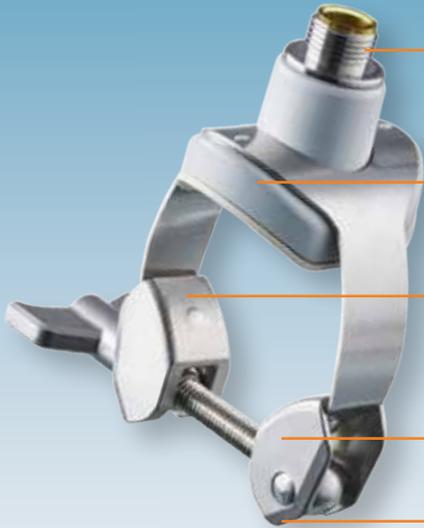
44-51

52-53

54-55



TSM clamp-on temperature sensor



High-accuracy, high-resolution temperature data when used with TP IO-Link plug

Protected from ambient temperature influence on the measured signal

Chemically resistant materials and IP69K design maintain hygiene standards without breaching the process line, streamlining CIP/SIP compatibility

Non-invasive clamp design eliminates welding and sanitary validation steps

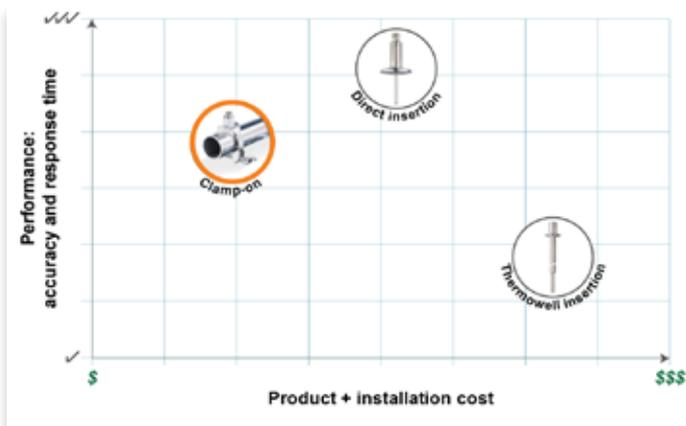
Clamp-on design installs without process shutdowns or pipe modifications

IP69

316
Stainless
Steel



Performance vs Total cost of ownership



- Unlike other clamp-on RTDs, the TSM features a gasket sealed enclosure around the PT1000 measuring cell. This provides an accurate reading even when process temperature differs from ambient temperature.
- ifm's TSM clamp-on temperature sensor has a better response time than a sensor installed in a thermowell. This is because the thermowell acts as a heat sink slowing down the change in temperature at the probe tip.
- Thanks to its non-invasive mounting style, the TSM sensor can be installed in just a few minutes without the necessity of cutting openings in the pipe.

Company

Process
Tank

Clean-in-Place
Skid

UHT
Pasteurizer

Heat
Exchanger

Centrifugal
Pump

Brewhouse

Reverse
Osmosis Skid

Centrifugal
Separator

Valves
in Process



2-7



8-9



10-11



12-13



14-15



16-17



18-19



20-21



22-23



24-25



Product + accessory selector

Temperature Range	Pipe Diameter	ASME BPE Tube Size	RTD Type	Part No.
-25...160°C	17...21mm	3/4"	PT1000	TSM201
-25...160°C	21...24mm	–	PT1000	TSM301
-25...160°C	25...30mm	1"	PT1000	TSM401
-25...160°C	32...36mm	–	PT1000	TSM501
-25...160°C	38...45mm	1-1/2"	PT1000	TSM601
-25...160°C	48...54mm	2"	PT1000	TSM701

Accessories

Type	Description	Measuring Range	Factory Setting	Part No.
	TP Temperature Plug	-100...300°C	0...100 °C	TP2007
	TP Temperature Plug	-100...300°C	-10...150°C	TP2001

Benefits of clamp-on RTD vs. thermowell for pipe applications



	1.Clamp-on	2.Thermowell insertion
Accuracy	++	+
Response time	7.5/25 seconds	15/140 seconds
Cost of components	\$	\$\$\$
Cost of fabrication	0	\$\$
Cleanability	+++	+
Pressure drop (obstructions)	+++	+

IO-Link



26-27

IIoT Solutions



28-29

Flow



30-33

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34-39

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38-41

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42-43

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44-51

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52-53

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54-55



Valve position



Configurable RGB LED for a fast visual localization of the sensor

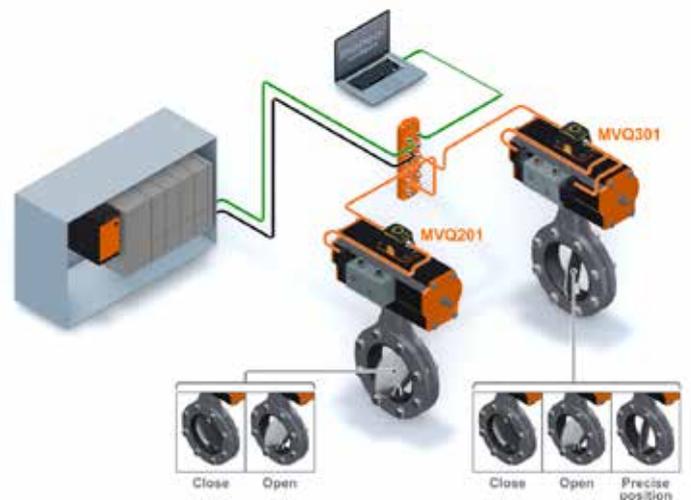
Rugged plastic housing - no need for mechanical alignment

Standard M12 connection

Visible window indicating the status of the valve

Industry standard mounting for quick installation

- One-stop shop for rotary (quarter-turn) valve solutions from simple position monitoring to precise valve positioning (for modulating valves).
- Improve product quality and process visibility.
- Monitor valve asset health with continuous position feedback. Early wear and tear warning (e.g., seal damage).
- Version with direct solenoid output (MVQ201) controls local solenoid valve directly for optimized process control and simplified cable management.
- Troubleshooting made extremely easy with 360° bright LED for status indication.



Company	Process Tank	Clean-in-Place Skid	UHT Pasteurizer	Heat Exchanger	Centrifugal Pump	Brewhouse	Reverse Osmosis Skid	Centrifugal Separator	Valves in Process
									
2-7	8-9	10-11	12-13	14-15	16-17	18-19	20-21	22-23	24-25

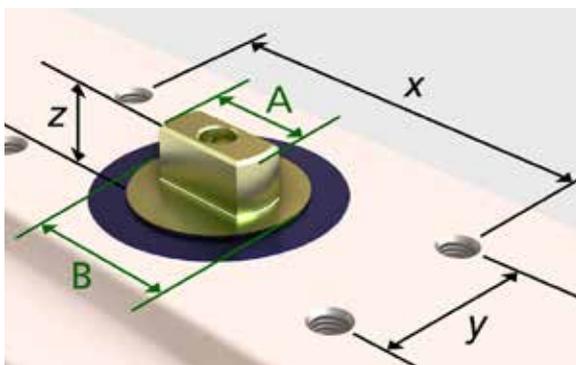


Product + accessory selector

Type	Function	Monitoring Range	Switching Output	Communication Protocol	Part No.
	Valve monitoring	360° m	3 PNP/NPN selectable NO/NC selectable	IO-Link SIO (standard I/O)	MVQ101
	Valve monitoring with direct solenoid control	360° m	2 PNP/NPN selectable NO/NC selectable	IO-Link SIO (standard I/O)	MVQ201
	Valve monitoring with direct solenoid control	360° m	2 PNP/NPN selectable NO only	IO-LINK B-port	MVQ301
	Valve positioning single acting	0 – 100%	N/A	IO-Link B-port	ZZ0687
	Valve positioning double acting	0 – 100%	N/A	IO-Link B-port	ZZ0686
	Valve positioning double acting with defined home position	0 – 100%	N/A	IO-Link B-port	ZZ0688

Mounting accessories

The intelligent valve sensors and positioners from ifm are designed according to NAMUR standard. Mounting interface between sensor and actuator shaft is regulated by VDI/VDE 3845 standard. Mounting accessories for different actuators are available. Refer to the actuator dimensions to determine any required mounting accessories.



Type	X (mm)	Y (mm)	Z (mm)	A (mm)	B (mm)	Part No.
	80 / 130	30	20 / 30 / 40	>38	N/A	E12674
	80 / 130	30	30 / 40 / 50	>38	N/A	E12628
	80	30	30	>35	<38	E12569
	130	30	30	>35	<38	E12573

IO-Link



26-27

IIoT Solutions



28-29

Flow



30-33

Pressure



34-39

Level



38-41

Conductivity



42-43

Temperature



44-51

Valve Position



52-53

Cordsets



54-55

Cordsets



ifm has developed a complete line of M12 cordsets and patchcords that provide outstanding performance in aggressive washdown environments.

The cordsets and patchcords are subjected to a variety of tests that ensure reliable performance in the application. Tests include IP69K, thermal shock, mechanical shock, and vibration.

Only high quality materials are used to manufacture these products, such as high-grade stainless steel coupling nuts, EPDM O-rings, and gold-plated contacts.

The cable is made of robust Halogen/silicon-free MPPE material and can withstand very harsh environments.

Company	Process Tank	Clean-in-Place Skid	UHT Pasteurizer	Heat Exchanger	Centrifugal Pump	Brewhouse	Reverse Osmosis Skid	Centrifugal Separator	Valves in Process
2-7	8-9	10-11	12-13	14-15	16-17	18-19	20-21	22-23	24-25

Wiring				
	EVF	EVF	EVF	EVF
	EVF F&B	EVF F&B	EVF F&B	EVF F&B
Cable Material	Grey, MPPE	Grey, MPPE	Grey, MPPE	Grey, MPPE
Nut Material	SS 316 L	SS 316 L	SS 316 L	SS 316 L
2 m	EVF067	EVF064	EVF088	EVF071
5 m	EVF004	EVF001	EVF090	EVF072
10 m	EVF005	EVF002	EVF327	EVF073
15 m	EVF094	EVF092	EVF726	-
20 m	EVF095	-	EVF727	-
25 m	EVF006	EVF003	-	-
50 m	EVF479	EVF484	-	-

Wirable - Washdown M12 Sockets & M12 Plugs, 4pin, IP69K, 4 Amp (max)

Wiring				
	EVF	EVF	EVF	EVF
	EVF F&B	EVF F&B	EVF F&B	EVF F&B
Cable Material	Grey, PA	Grey, PA	Grey, PA	Grey, PA
Nut Material	SS316L	SS316L	SS316L	SS316L
-	EVF565	EVF566	EVF567	EVF568

Jumper, M12 Socket / Plugs, 4pin, IP69K, 4 Amp (max)

M12, 4-pole (1 mm²)

Ethernet D-coded

Wiring			Cable		
	EVF	EVF		EVF	EVF
	EVF F&B	EVF F&B		EVF F&B	EVF F&B
Cable	Grey, MPPE	Grey, MPPE	Cable	Grey, MPPE	Grey, MPPE
Nut	SS 316 L	SS 316 L	Nut	SS 316 L	SS 316 L
0.3 m	EVF040	EVF046	0.25 m	EVF490	-
0.6 m	EVF041	EVF047	0.5 m	EVF491	EVF549
1 m	EVF042	EVF048	1.0 m	EVF492	EVF550
2 m	EVF043	EVF049	2.0 m	EVF493	EVF551
3m	-	EVF445	5 m	EVF494	EVF552
5 m	EVF044	EVF050	10 m	EVF495	EVF553
10 m	EVF045	EVF051	20 m	EVF496	EVF554
20 m	EVF663	-			

IO-Link

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Temperature

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Cordsets



26-27

28-29

30-33

34-39

38-41

42-43

44-51

52-53

54-55



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