

PROCESS AUTOMATION & INSTRUMENTATION



Measure everything that matters

www.ued.co.uk



“Ongoing Commitment”

Underwoods offer a full range of process instrumentation from the world’s leading manufacturers.

Gaining control with measurements is key to unlocking value, enhancing quality, leveraging flexibility, boosting profitability and maintaining reliability. Whether it is the technology to break through bottlenecks, improve quality or to provide early warning of failure.

With over 50 years of experience serving the UK industry, we have the knowledge of industrial processes and the applications to keep customers on the road to success. Process Automation and Instrumentation is part of our ongoing commitment to provide the best solutions possible.

Process Measurements

Robust and reliable measurement instruments let you get on with your day. Easy programming and graphical Quick Start Wizards deliver headache-free installation and setup. Advanced processing means that operators aren't spending valuable time repeatedly troubleshooting devices. Instead they can be confident that these instruments are delivering reliable, repeatable results.

Level



Level measurement instruments serve process industries worldwide, including water and wastewater, aggregate, cement, oil and gas, food and beverage, and pharmaceutical. A wide portfolio of technologies and products lets you choose the right solution for your application.

Two different approaches to level measurement - A good way to reduce the number of level measurement options is to categorize them into two broad categories: contact and non-contact. Then you can filter choices by the type of material they can measure.

The characteristics of the process material being measured, such as tank size and shape, the pressure and temperature that the process requires, amount of material agitation, available power, etc., must be taken into account when determining if a contact or non-contact approach is the right option.

Contact

- Level Sight Gauge
- RF Capacitance
- Float
- Displacer
- Contacting Radar
- Bubble Tube

Non-Contact

- Radar
- Non-Contacting Ultrasonic
- Load Cells

Flow



Choosing the right flowmeter for the right application can dramatically improve efficiency. With many options and methods of measuring liquids, gases and vapours; it's not always easy to choose the right one.

When it comes to boosting your productivity, choosing the right flowmeter can make all the difference. That's why the Siemens flow portfolio includes a wide range of measurement technologies along with all the options you need to fully customise and optimise your installation.

- Electromagnetic
- Coriolis
- Ultrasonic
- Vortex
- Variable Area
- Differential Pressure

Temperature



Whether monitoring operating conditions or controlling of sensitive processes, the accurate and repeatable measurement of temperature is of vital importance in many industry segments.

Pressure



Measurement of pressure plays a central role in many areas of plant and mechanical engineering, the manufacturing industry, machine tooling, process engineering and the manufacture and processing of food and beverages.

Positioners



As the interface between the control system and valves, positioners play an important role in ensuring reliability and optimal performance in your automated process plants. The SIPART PS100 and SIPART PS2 are just right for your applications and requirements. You have the choice. The PS2 gives you access to valve monitoring and testing remotely, and information on the life span and maintenance requirement of your valves.

Weighing



Since a wide variety of weighing applications are to be found in industrial production sequences, reliable recording of weights is of decisive importance for optimization of the process costs and quality.

An optimum solution for continuous or discontinuous weighing and batching applications is achievable with field-proven SIWAREX weighing electronics, SIWAREX load cells, conveyor belt scales, solid flowmeters and weighfeeders.



SIWAREX weighing electronics for SIMATIC.

Real integration of all weighing applications into the SIMATIC automation environment.

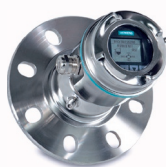
SIWAREX provides a comprehensive range of weighing electronics for hopper-, platform-, batching-, bagging-, belt scales as well as solids flowmeters and loss-in-weight applications. The continuous SIMATIC hardware, the seamless integration into Step 7, TIA Portal and PCS7 and the long-term availability secure your investments.

Popular Products



SITRANS LR100 family with LR150

Level and volume measurement of aggressive liquids, lime and other slurries, alum, polymers, sodium hypochlorite <20 %, etc. in chemical storage tanks within water and wastewater treatment plants.



Sitrans FCS 100/500/600/700

Strong signals over long distances, reliable measurements unaffected by temperature change, and clear echo profiles in dusty environments.



SITRANS Probe LU240

Cost-effective, compact, intelligent level solution for liquid chemical inventory, monitoring small process vessels and level monitoring measurement in the environmental industry.



Pointek CLS100

An RF inverse frequency shift capacitance point level switch for liquids and solids or liquid interface applications. Unique product design allows for sensitivity adjustment to tune out and ignore buildup.



SITRANS F C Coriolis

For reliable monitoring of liquids and gases in virtually all applications. Driven by powerful digital signal processing, best-in-class flow systems provide extremely precise multiparameter measurements of direct mass flow rate, volumetric flow rate, temperature, density, and fraction flow such as Brix and Plato.



SITRANS FS230 clamp-on

SITRANS FS230 is an ultrasonic clamp-on flowsystem and is compatible with pipe diameters from DN10 up to DN10.000.

For applications in hazardous areas, the external electronics module SITRANS FS DSL is used.



SITRANS F M MAG 5100 W

The SITRANS FM MAG 5100 W with its patented liners of hard rubber NBR or ebonite and EPDM is a sensor for all water applications.





SITRANS TH100

The SITRANS TH100 provides a low-cost alternative for Pt100 measurements and offers economic plant operation and reliable measurements. Setup is quick and easy with the transmitter modem and SIPROM T. This configuration tool can be downloaded for free.



SITRANS P320 / P420

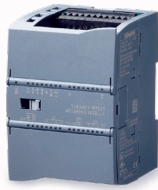
SITRANS P320/420 is the first pressure transmitter on the market to feature remote safety handling. Operators can program transmitters from the control room, this reduces the commissioning time in applications requiring functional safety. With testing periods of up to fifteen years rather than every two they are lowering maintenance costs significantly.



SIPART PS 2

The SIPART PS 2 is the most widely used valve positioner for linear and part-turn actuators in industrial applications. It has proved reliable in many valve control applications thanks to its diagnostics capability and extensive range of functions. Also available with Flameproof enclosure.

**Measure
everything that
matters,
with many more
product
options to
explore.**



SIWAREX WP231

SIWAREX WP231 is a weighing module for SIMATIC S7-1200 and through this is programmable via the Totally Integrated Automation (TIA) Portal engineering platform. SIWAREX WP231 offers four digital inputs and outputs and one analog output. The module also offers extensive diagnostic functions for commissioning and operation like trace of weight or monitoring of limit values. Thanks to the automatic adjustment the application is ready-to-use in only a few minutes.



SIWAREX Stand Alone

The standard functions for the belt scale control, such as flow rate, belt speed and belt loading can be adapted and extended as required. The simulation mode allows users to test functions like belt speed, belt loading, flow rate and many others, without a moving conveyor belt. Can also be used in hazardous areas.

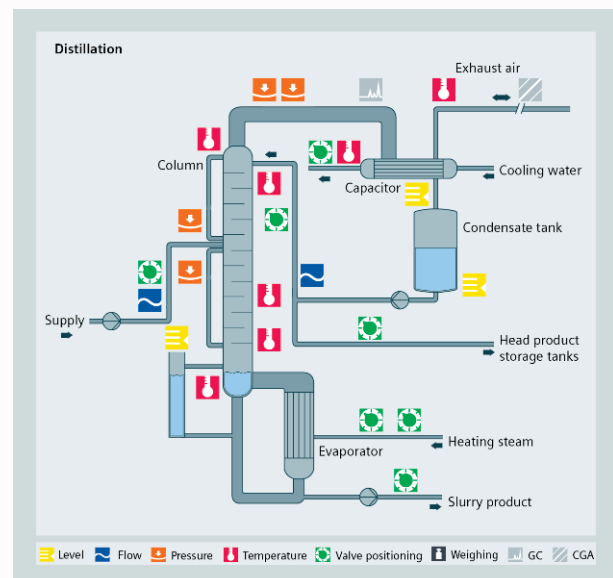
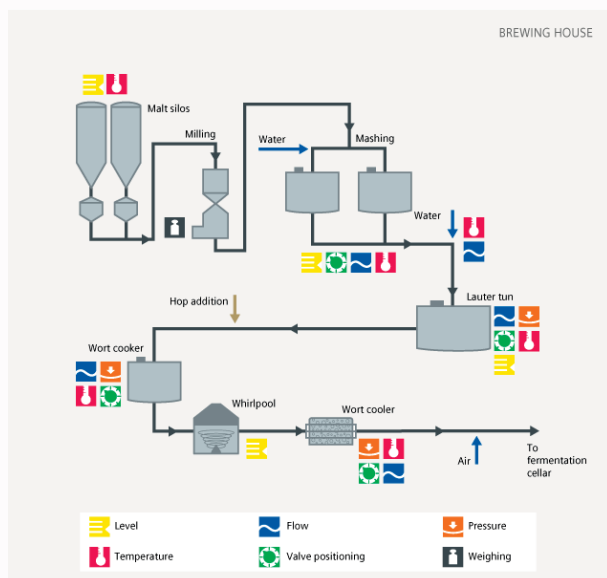
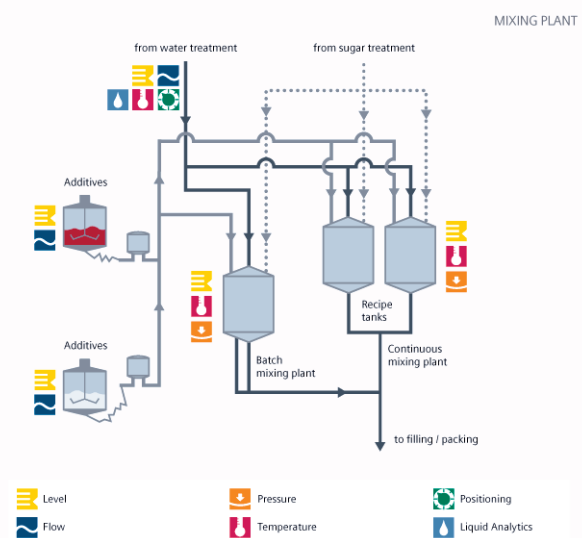
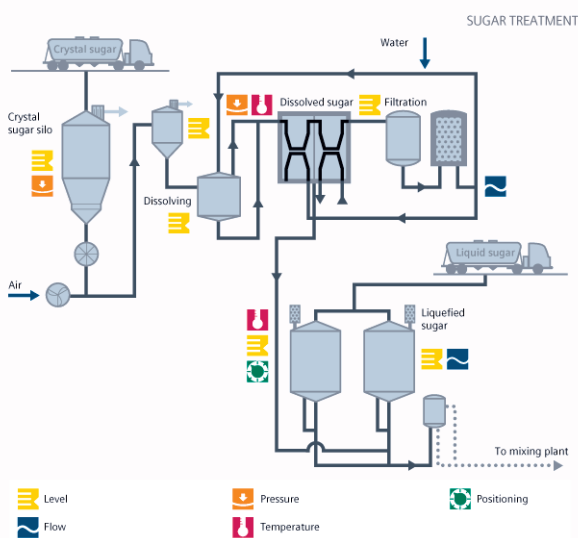


SITRANS FCT070

The SITRANS FCT070 Coriolis Mass flow transmitter is a technology module which can easily integrate Coriolis flow meters into the SIMATIC ET 200SP system and connect to SIMATIC S7 controllers. Faceplates and drivers are included for direct integration into the SIEMENS TIA Portal and SIMATIC PCS 7. Making access to critical parameters from your process readily available. Giving you access to real-time data.

Common Applications

- Tanks
- Silos
- Reactor Vessels
- CIP (Clean in Place)
- Dosing
- Crushing
- Conveyer Belts
- Pipe Lines



Reliability of Measurements

Repeatability is the ability of an instrument to reproduce a measurement each time a set of conditions is repeated, better repeatability will measure with a smaller variance and thus provide repeatable and reliable results.

Accurate instruments are desirable because they are repeatable and yield measurements that closely reflect the true process variables. Repeatable instruments may not yield accurate measurements, but they will perform in the same manner under the same conditions. Which is appropriate depends in part on the application. Underwoods and its suppliers can ensure you select the correct instrument for your application.

Communication Protocols

Communication Protocols in conjunction with fieldbuses provide better digital transmission of measured values while maintaining the original accuracy, diagnostic options and remote parameterisation. Our process instruments support all major industry standards for modern fieldbus communication, including HART, PROFIBUS, PROFINET, FOUNDATION Fieldbus, Modbus and IO Link – making them suitable for use in all automation systems.



