

## Answers for industry.

Siemens Industry answers the challenges in the manufacturing and the process industry as well as in the building automation business. Our drive and automation solutions based on Totally Integrated Automation (TIA) and Totally Integrated Power (TIP) are employed in all kinds of industry. In the manufacturing and the process industry. In industrial as well as in functional buildings.

Siemens offers automation, drive, and low-voltage switching technology as well as industrial software from standard products up to entire industry solutions. The industry software enables our industry customers to optimize the entire value chain – from product design and development through manufacture and sales up to after-sales service. Our electrical and mechanical components offer integrated technologies for the entire drive train – from couplings to gear units, from motors to control and drive solutions for all engineering industries. Our technology platform TIP offers robust solutions for power distribution.

The high quality of our products sets industry-wide benchmarks. High environmental aims are part of our eco-management, and we implement these aims consistently. Right from product design, possible effects on the environment are examined. Hence many of our products and systems are RoHS compliant (Restriction of Hazardous Substances). As a matter of course, our production sites are certified according to DIN EN ISO 14001, but to us, environmental protection also means most efficient utilization of valuable resources. The best example are our energy-efficient drives with energy savings up to 60 %.

Check out the opportunities our automation and drive solutions provide. And discover how you can sustainably enhance your competitive edge with us.

ERP – Enterprise Resource Planning

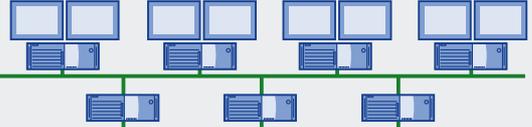
Management Level

MES – Manufacturing Execution Systems



Operations Level

SIMATIC PCS 7  
Process Control (DCS)

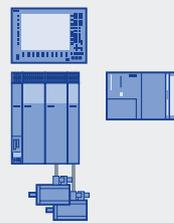


Control Level

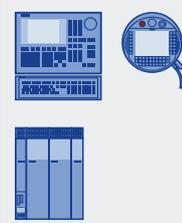
Industrial Software for

- Design and Engineering
- Installation and Commissioning
- Operation
- Maintenance
- Modernization and Upgrade
- Energy Management

SIMOTION  
Motion Control System



SINUMERIK  
Computer Numeric Control



Field Level

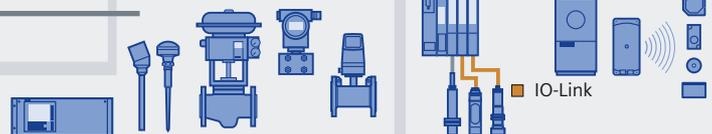
PROFIBUS PA



Process Instrumentation

SIMATIC Sensors

HART

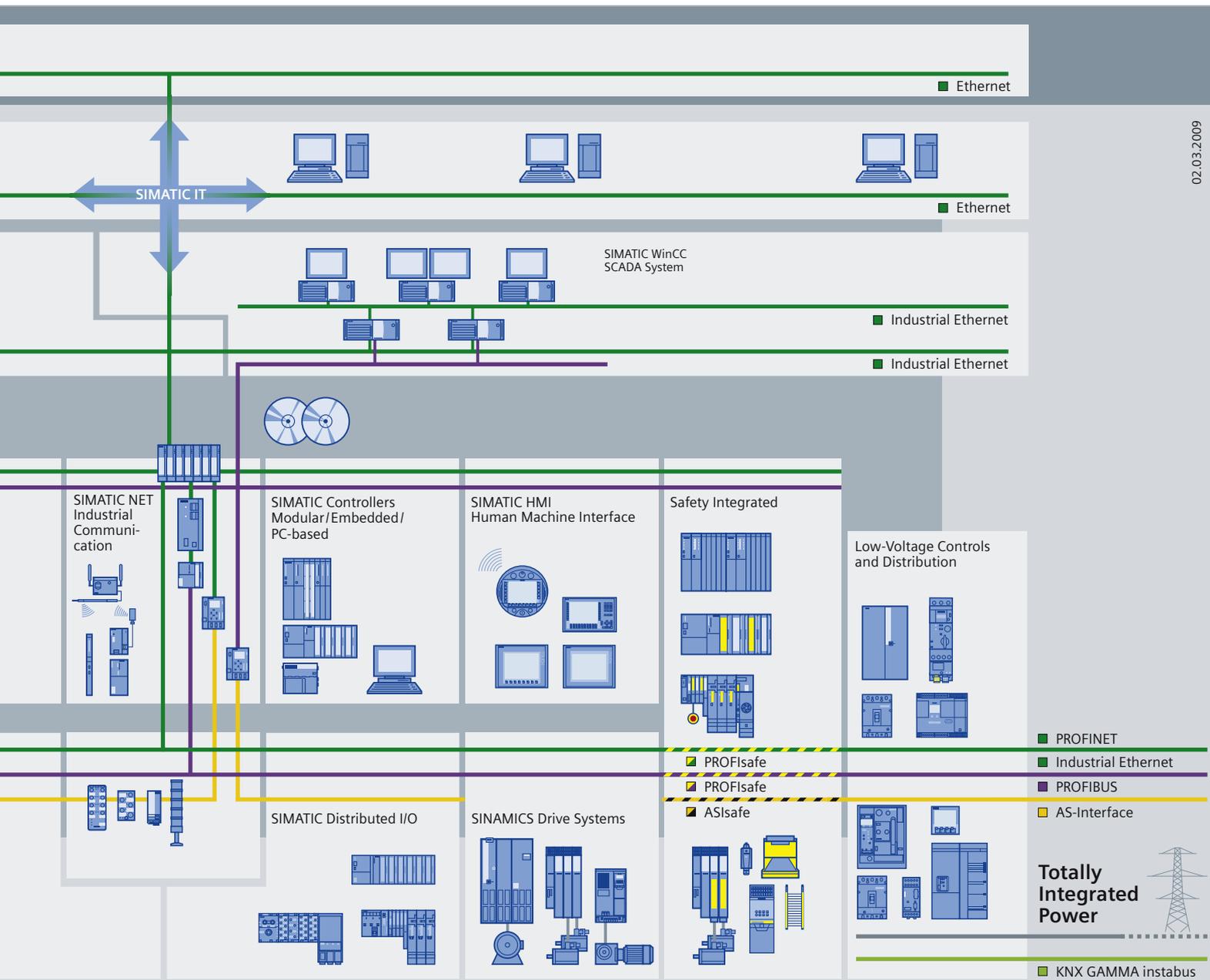


Totally  
Integrated  
Automation

## Setting standards in productivity and competitiveness.

Totally Integrated Automation.

Thanks to Totally Integrated Automation, Siemens is the only provider of an integrated basis for implementation of customized automation solutions – in all industries from inbound to outbound.



**TIA is characterized by its unique continuity.**

It provides maximum transparency at all levels with reduced interfacing requirements – covering the field level, production control level, up to the corporate management level. With TIA you also profit throughout the complete life cycle of your plant – starting with the initial planning steps through operation up to modernization, where we offer a high measure of investment security resulting from continuity in the further development of our products and from reducing the number of interfaces to a minimum.

**The unique continuity is already a defined characteristic at the development stage of our products and systems.**

The result: maximum interoperability – covering the controller, HMI, drives, up to the process control system. This reduces the complexity of the automation solution in your plant. You will experience this, for example, in the engineering phase of the automation solution in the form of reduced time requirements and cost, or during operation using the continuous diagnostics facilities of Totally Integrated Automation for increasing the availability of your plant.

## Weighing products with proven reliability

Quality, costs, and time are crucial factors for all production companies – especially in today's competitive environment. Accurate and dependable weighing and controlling equipment helps manage these factors by optimizing formulations, reducing waste, and increasing production. In the end, improved processes mean profitability increases.

Weighing and batching systems play a growing role in production within various industries. Siemens weighing equipment offers reliable, accurate and integrated results that are cost-effective and long-term.

As a leader in automation and weighing for more than 50 years, Siemens is the only company that offers a complete range of weighing products that fit the rigorous demands of our customers. That's why manufacturers as well as end customers use Siemens weighing products. You will find us in almost any industry that involves the handling of bulk materials, from mining, aggregates, and cement, to food processing, chemicals or pharmaceuticals.



# Experience you can trust

With more than 50 years of weighing experience, Siemens is the right partner for your application. With Siemens, you benefit from:

- Specialized weighing products with a broad range of function and flexibility
- legal-for-trade products
- Seamless integration in Siemens' world-class automation systems – SIMATIC S7 and PCS7
- Versatile and flexible systems that allow you to expand as your needs change
- A global company that provides worldwide support whenever, wherever you need it
- The best cost of ownership available through highly accurate and reliable products



# Not just about products ...



## Platform scales

Platform scales are the most common scale in industry. No matter what your load is, a truck, a bin, a bucket or raw material. Siemens provides you with a broad range of load cells and weighing electronics to build cost-effective platform scales.

Use SIWAREX load cells to measure loads ranging from 5 kg to 1000 t with an accuracy class up to C3 according to OIML R60.

Weighing data is easy to process with SIWAREX weighing processors. Use SIWAREX MS, U, or CS for simple applications and SIWAREX FTA for legal trade applications.



## Hopper weighing

Liquids, powders, solids, and gases are stored or produced in a wide variety of tanks and bins. It is essential to know the precise levels of stored materials to ensure product availability for processing.

With Siemens weighing solutions, you can measure the level, no matter what kind of material is stored – whether it is corrosive, foamy, high or low dielectric or dusty.

Using SIWAREX mounting units avoids incorrect measurement due to the transmission of secondary forces (e.g. through tank restraint or pipes). These devices make installation of the load cells quick and easy.



## Conveyor scales

Belt scales help maximize the use of raw materials, control inventories, and aid in the consistent manufacturing. Siemens conveyor belt scales combine simple, drop-in installation, low maintenance (no moving parts) and repeatable accuracy for productive operation. They show minimal hysteresis and superior linearity, and ignore side loading. All load cells feature overload protection. With hazardous and trade approvals, Siemens belt scales can be used in almost any industrial environment or application. Combined with a Milltronics BW100 or BW500 integrator, or SIWAREX FTC, Siemens conveyor scales offer field proven technology for reliable performance. High accuracy, light-loading and heavy-duty models are available.

- SIWAREX load cells and mounting units
- SIWAREX MS
- SIWAREX CS
- SIWAREX U
- SIWAREX FTA

- SIWAREX load cells and mounting units
- SIWAREX MS
- SIWAREX CS
- SIWAREX U
- SIWAREX FTA

- Milltronics belt scales
- Milltronics speed sensors
- Integrators Milltronics BW500 and BW100
- SIWAREX FTC

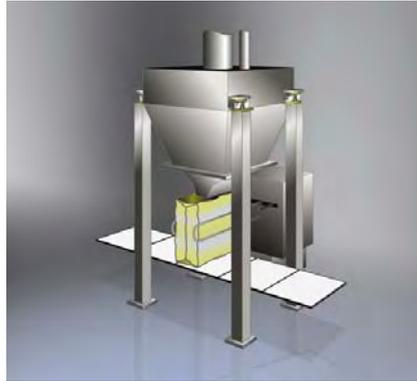
## ... but about solving problems.



### Batch system

Successful, high quality products depend on precise dosing of components. High quality measuring equipment ensures precise dosing.

SIWAREX weighing electronics and load cells achieve best results for accurately and quickly controlling coarse and fine material flow, as well as filling and emptying. Due to SIWAREX's high scalability and integration in SIMATIC, it is easy to automate single or multiple dosing units with one SIMATIC automation station.



### Filling machines

Filling, sack filling, and big bag machines are used in a wide range of industries. The filling of solid or liquid goods, like cement has to be completed quickly and accurately.

In this case, SIWAREX FTA is an excellent choice. It provides a resolution of 16 million intervals, comes with a high accuracy of  $3 \times 6000$  d and is legal for trade. With switching of dosing signals below 1 ms, the FTA works well even on the fastest applications. SIWAREX FTA seamlessly integrates into Siemens automation systems S7 or PCS7 ensuring proper communication of the weighing system with the automation environment.



### Checkweighing

Checkweighing assures the correct weight of the product package. The electronics are essential to the functionality of the checkweigher along with the proper mechanical construction.

SIWAREX FTA is a state-of-the-art weighing electronic, providing high resolution of 16 million intervals and a high accuracy of  $3 \times 6000$  d. It is programmable and applicable for a broad spectrum of checkweighers. SIWAREX FTA seamlessly integrates into Siemens SIMATIC automation system. With SIWAREX FTA, it is easy to establish a control station for the complete checkweighing loop based on the SIWAREX weighing module, including machine vision, proximity switches or motion control.

- SIWAREX load cells and mounting units

- SIWAREX FTA

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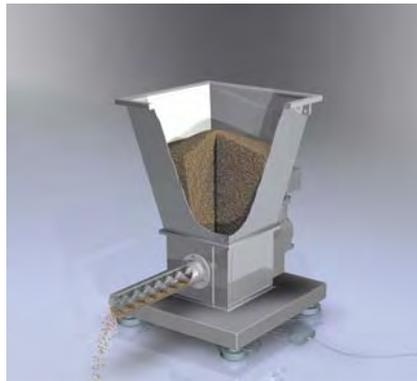
# At the best cost of ownership!



## Solids flowmeter

Solids flowmeters enhance process control, contributing to improved quality of your end product. These heavy-duty, low-maintenance, LVDT type solids flowmeters provide continuous in-line weighing of dry bulk solids, free-flowing powders, or granular material. A stand-alone SF500 integrator or SIWAREX FTC completes the system, processing sensor signals into operating data for flow measurement.

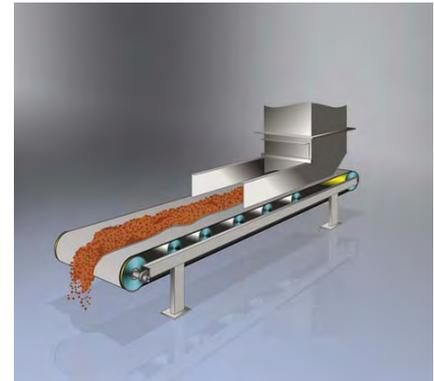
All models produce accurate, repeatable results and may be used for critical functions such as batch load-out and blending. Safe overload protection is a standard feature. All models are totally enclosed and dust-tight, and are constructed of painted mild steel. Stainless steel and hazardous area versions are also available.



## Loss-in-weight

A loss-in-weight system can help you to achieve the needed level of accuracy in continuous dosing applications. With SIWAREX FTC weighing modules, you can set up and integrate the loss-in-weight system easily. Here the auto-setup functionality helps you in the commissioning of the scale. The electronic determines the most important settings like output, PID or stability parameter. While processing SIWAREX FTC steadily optimises these settings.

SIWAREX FTC provides high measurement resolution, real-time signal processing, detection and filtering of signals that enables extremely high proportioning accuracy. Via HMI, PC connection or the control system the operator has of course the option to manually control the system.



## Weighfeeder

A weighfeeder system is an engineered-to-order conveyor integrated with a belt weigh bridge and speed sensor. A variable speed drive allows the flow of material to be controlled by a given set-point chosen in the BW500 integrator or with a PLC through SIWAREX FTC. This allows the weighfeeder to provide precision weighing accuracies, and to improve blend consistencies, accountability and record keeping. Weighfeeders are indispensable when automated production processes require continuous in-line weighing and feeding. Their virtually maintenance-free construction promises unmatched performance. Belt widths and conveyor lengths are made to measure for the required application.

- Milltronics E, V and A series
- Milltronics ILE sensing heads
- Milltronics SF500
- SIWAREX FTC

- SIWAREX load cells and mounting units
- SIWAREX FTC

- SITRANS weighfeeders
- Milltronics BW500
- SIWAREX FTC