



PROCESS INSTRUMENTATION

Siwarex weighing **your world**

Dynamic and static instrumentation solutions.

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SIEMENS



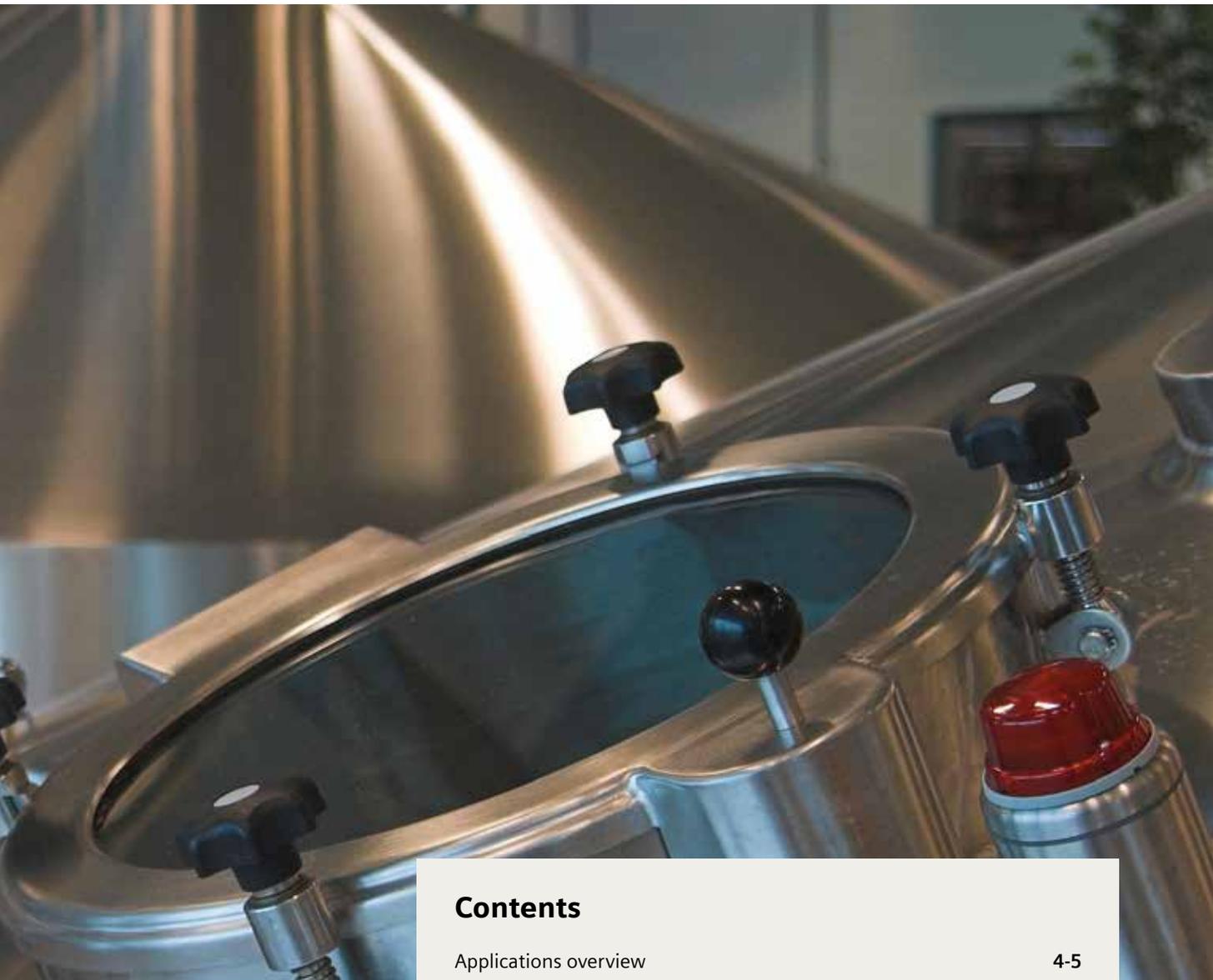
So, what do you need measured?

Crushed stone? We can do that.

Ore? That too.

Cement? Coal? Food? Chemicals? Absolutely.

With our field-proven weighing electronics, load cells, conveyor belt scales, solids flowmeters, and weighfeeders, Siemens weighs your world. Saving you money, time - and a whole lot of stress - along the way.



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Weighing what matters...

Siemens isn't new to the weighing game, as you'll see in the following application stories.

Flexible weighing system gets the rocks rolling

The main area of BMK's quarry operations includes the mining of shell limestone, which is used in various grain and stone sizes in construction and civil engineering as well as for the production of concrete.

An old conveyor belt scale was retrofitted in this factory with SIWAREX WP241 conveyor belt scale electronics, which got the scale back into operation.

The open design of the SIWAREX electronic weighing system enabled the customer to easily perform the conversion and commissioning themselves. The scale was integrated into the existing Eaton PLC system via Modbus.

Suitable Siemens weighing system products

- SIWAREX WP241 electronic weighing system
- SIWAREX FTC electronic weighing system

System-integrated weighing technology raises productivity

The Spanish company AiCrov offers filling solutions for various industries and products. Filling quantities range from 0.250 kg to 1,500 kg depending on the customer's requirements.

An important quality factor for filling and packaging is the precise agreement of the actual content with the specified filling quantity.

To develop a new series of filling machines, AiCrov relies on SIWAREX weighing components, which are directly integrated in SIMATIC S7. The seamless internal system communication thereby enables very fast, accurate, and reliable control of the filling process, especially at high speeds.

Suitable Siemens weighing system products

- SIWAREX WP231 electronic weighing system
- SIWAREX WP251 electronic weighing system
- SIWAREX FTA electronic weighing system
- SIWAREX WL230, WL260, WL280 load cells

Space-saving and precise checkweighing

Checkweighers are indispensable for companies in the food, pharmaceutical, and chemical industries. They check the final weight of the packaged food, cosmetics, and many other products. Not only speed, but also accuracy plays a significant role here.

Siemens offers the SIWAREX WL260 SP-S SC platform load cell with a very little deflection and a maximum accuracy rating of up to C4 MR.

It is a perfect and less expensive alternative for medium- to high-performance force compensation load cells and checkweighers. With its ingress protection rating of IP69K the SIWAREX WL260 SP-S SC is ideal for applications in the food and beverage or pharmaceutical industries.

Suitable Siemens weighing system products

- SIWAREX FTA electronic weighing system
- SIWAREX WL260 load cells SP-S-SC

Weighing without barriers

SIWAREX for smartphones: with Sm@rt Client

An app for SIWAREX? WinCC Sm@rtServer makes it possible. The app both modernizes and simplifies remote control and monitoring of SIMATIC HMI systems via wireless LAN or via the Intranet/Internet.



Easily equip your smartphone or tablet with the Sm@rtClient app for Android or iOS systems. Activate it on the touch panel of the Sm@rtServer service and watch as service and maintenance personnel can now conveniently access machinery and equipment around the world.

The Sm@rtServer design enables mobile, location-independent monitoring and operation of parameters and functions stored on the panel. On a SIMATIC TP700 Comfort Touch Panel, for example, directly connect up to eight scales via a switch.

Using the Sm@rtServer services on the SIMATIC Touch Panel and the Sm@rtClient app on the smartphone or tablet, you can transmit the user interface of the HMI directly to the smartphone or tablet via Wi-Fi. This means that operators have mobile access to all scales from the same operating layout of the touch panel, giving SIWAREX electronic weighing systems extreme flexibility.



Weighing systems without language barriers

What happens when humans and machines speak the same language? Training costs and operating errors are minimized and production safety is guaranteed.

Siemens weighing systems do exactly that - offering multilingual electronic weighing systems at the highest level.

SIWAREX scale applications can be implemented in a variety of languages thanks to seamless integration in SIMATIC. Language versions are available for filling, conveyor, and differential dosing scales - and can be added and adapted at any time.

Switch languages as needed - operators and service engineers can change the interface easily and quickly to their own native tongue.

Ready for use: the complete weighing application

You have enough going on in your facility - so we've made "ready-for-use" software packages for a variety of system configurations. CPU, HMI, TIA Portal WinCC flexible - whatever you're looking for.

And for all of your applications, from fill level measurement to differential dosing scales - and everything in between.

Of course, with all of Siemens' wide range of off-the-shelf software packages, our service and support team is always available when you need us.

Siemens weighing commissioning? Simple. Economical. And best of all? Quick.

A world of approvals and certificates

So, what certificates or approvals do you need? Legal-for-trade. Explosion proof. Food grade.

And how about functional requirements, like calibration capability, electrical safety, and EMC standards? With Siemens weighing technology, your questions are our answers.

Take the Siemens Milltronics MSI belt scale, for example - you're looking at a scale with the most approvals of any around the globe. And SIWAREX technology? It exceeds current EMC standards to ensure reliable measurement every time.

Perfectly suited to whatever your application requires. We approve of that.



**Efficient filling process? Fast weighing? Exact dosing?
SIWAREX WP251 controls dosing and bottling processes
autonomously, effortlessly filling the highest requirements.**

In conjunction with a SIMATIC S7-1200 CPU, SIWAREX WP251 offers a freely programmable, flexible, and powerful weighing system. Or, use the module as a stand-alone system, depending on your application.

With the SIWAREX family of electronics and load cells, not only are you choosing the highest quality in construction, longlasting performance, and easy integration into your weighing systems, you are also opening the doors to Siemens' comprehensive spectrum of automation and instrumentation.

Part of Siemens Totally Integrated Automation (TIA), SIWAREX modules can be integrated into SIMATIC S7 and expanded as required to meet your individual requirements. With TIA, Siemens is the only manufacturer to offer an integrated range of products and systems for automation in all industry sectors.

SIMATIC S7-1200 integrated weighing electronic for dosing and batching

- legal for trade
- state of the art accuracy and measurement rates
- stand-alone ability

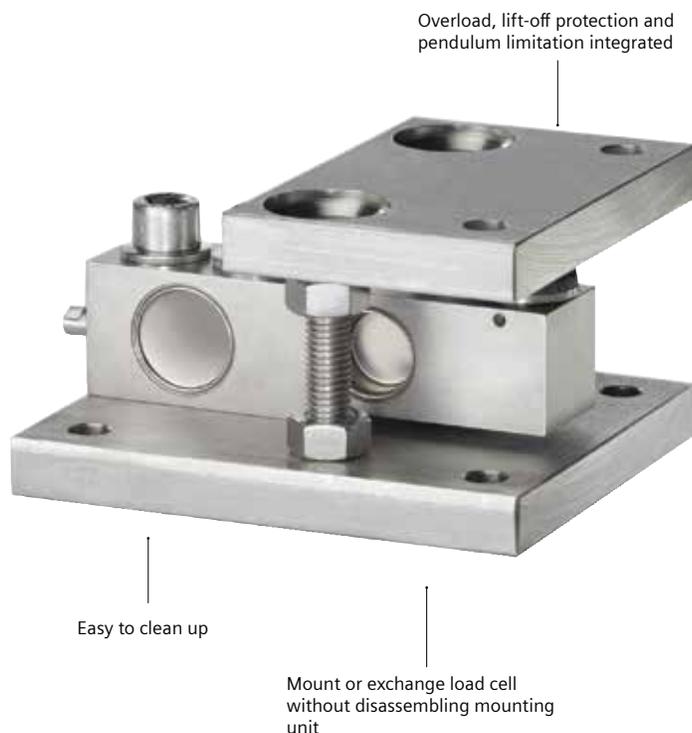
SIWAREX weighing modules

	SIWAREX WP231	SIWAREX WP241	SIWAREX WP251	SIWAREX WP321	SIWAREX WP521 ST/ SIWAREX WP522 ST
					
Order No.	7MH4960-2AA01	7MH4960-4AA01	7MH4960-6AA01	7MH4138-6AA00-0BA0	7MH4980-1AA01 7MH4980-2AA01
Type	Non-automatic weighing machines, fill level monitoring of silos, load measuring for industrial lifts and rolling mills, container weighing, platform and crane scales in SIMATIC S7-1200	Belt scales	Non-automatic weighing module for dosing and batching tasks, automatic gravimetric filling instrument, automatic catchweighing instrument in SIMATIC S7-1200	Technology module for the distributed I/O system SIMATIC ET 200SP. Suitable for non-automatic scales in silos and bunkers and platform scales	Technology modules for the SIMATIC S7-1500 advanced controller family. Optimally prepared for gravimetric level measurement of silos and hoppers as well as for platform scales
Key features	<ul style="list-style-type: none"> • Can be used stand-alone • High resolution of one million digits 	<ul style="list-style-type: none"> • Can be used stand-alone • Resolution of one million digits • Simulation mode for belt load and/or belt speed • Usable in hazardous applications ATEX zone 2 	<ul style="list-style-type: none"> • Resolution of up to \pm four million parts • Four digital in- and outputs, one analog output on board 	<ul style="list-style-type: none"> • Resolution of up to \pm two million parts • Compact design • "Ready for use" sample application • Scale internal control of freely definable limit values 	<ul style="list-style-type: none"> • Resolution of up to \pm four million parts • Integrated part of TIA portal • Automatic impedance control of the load cells, process, and diagnostic alarms

	SIWAREX CS	SIWAREX U	SIWAREX FTA	SIWAREX FTC
				
Order No.	7MH4910-0AA01	7MH4950-1AA01 one channel 7MH4950-2AA01 two channel	7MH4900-2AA01	7MH4900-3AA01
Type	Basic weighing and force measuring tasks in SIMATIC S7-300 and S7-400	Basic weighing and force measuring tasks in SIMATIC S7-300 and S7-400	Automatic and non-automatic weighing, for production of mixtures, filling, loading, monitoring, checkweighing and bagging in SIMATIC S7-300 and S7-400	Continuous weighing for conveyor scales, solids flowmeters, and loss in weight feeders in SIMATIC S7-300 and S7-400
Key features	<ul style="list-style-type: none"> • Resolution of 65,000 digits • Extensive diagnostic capabilities 	<ul style="list-style-type: none"> • Resolution of 65,000 digits • Space saving through use of two-channel version for two scales 	<ul style="list-style-type: none"> • Resolution of 16 million digits • Legal for trade • Fast dosing with fast communication 	<ul style="list-style-type: none"> • Resolution of 16 million digits • Application in Ex-Zone 2 • Extensive diagnostic functions



SIWAREX load cells have high precision and repeatability for weighing and batching processes. They are designed for a range of applications, especially when accuracy is a must. With Siemens, you can source both your load cells and electronics. Choose from our extensive, performance-graded line of weighing products - everything you need for the whole range of tasks in your industry.



SIWAREX load cells are ideal in almost any industrial sector - food-processing, steel-making, chemical and pharmaceutical, to name a few.

With the diverse construction types and comprehensive, graded load classes ranging from 3 kilograms to 500 tons, you are sure to find the right load cell for your application.

Avoid installation troubles by complementing your load cells with SIWAREX mounting accessories. Mounting accessories get you ready for operation in the shortest possible period.

Load cells: the foundation of every scale

SIWAREX load cells

	SIWAREX WL230 BB	SIWAREX WL230 SB	SIWAREX WL250	SIWAREX WL260	SIWAREX WL270	SIWAREX WL280	SIWAREX WL290
							
Order no	7MH5106-...	7MH5107-...	7MH5105-...	7MH5102/03/04/16/17/18/20/23	7MH5108/10/14-...	7MH5113-...	7MH5122-...
Type	Bending beam for platform and hopper scales	Shear beam load cell for platform and hopper scales, overhead track scales	S-type load cell for tension and pressure applications, hanging and hopper scales, hybrid scales	Single point load cell for platform scales	Compression load cell for hopper scales, overhead truck scales, vehicle scales	Ring torsion load cell for platform and hopper scales, conveyor belt scales, roller table scales	Double shear beam load cell for big platform, hopper, and vehicle scales
Key features	<ul style="list-style-type: none"> Rated load from 10 kg to 500 kg C3 to OIML R60 IP68 	<ul style="list-style-type: none"> Rated load from 0.5 to 5t C3 to OIML R60 IP68 	<ul style="list-style-type: none"> Rated load from 50 kg to 10 t C3 to OIML R60 IP67 	<ul style="list-style-type: none"> Rated load from 3 kg to 200 kg C3 to OIML R60 IP66, IP67, IP68, IP69K 	<ul style="list-style-type: none"> Rated load from 2.8 t to 500 t C3 to OIML R60 IP66/IP68 	<ul style="list-style-type: none"> Rated load from 60 kg to 60 t C3 to OIML R60 IP66/IP68 	<ul style="list-style-type: none"> Rated load from 13.6 t to 34 t C3 to OIML R60 IP67

SIWAREX mounting units and junction boxes

	SIWAREX WL230 BB	SIWAREX WL230 SB	SIWAREX WL270 CP	SIWAREX WL270 K	SIWAREX WL280 RN	SIWAREX WL290	Junction boxes
							
Order No.	7MH5707-...	7MH4133-... 7MH5707-...	7MH5708-... 7MH5710-...	7MH3115-...	7MH4130-... 7MH4125-... 7MH4115-..	7MH5722-...	7MH4710-...
Type	Base plate and elastomer bearing for platform and hopper scales, roller table scales	Compact mounting unit for platform and hopper scales, roller table scales	Compact mounting unit for hopper scales	Self-aligning bearing for hopper scales, silo scales	Compact installation unit and arm, Elastomer bearings for platform and hopper scales, roller table scales	Mounting unit for platform and hopper scales	Junction boxes to connect several load cells to one SIWAREX weighing system
Key features	<ul style="list-style-type: none"> Rated load from 500 kg to 5 t Material: stainless steel and neoprene 	<ul style="list-style-type: none"> Rated load from 10 kg to 500 kg, 0.5 t to 5 t Material: stainless steel 	<ul style="list-style-type: none"> Rated load from 2t to 50 t, 100 t Material: stainless steel 	<ul style="list-style-type: none"> Rated load from 2.8 t to 500 t Material: steel, enameled 	<ul style="list-style-type: none"> Rated load from 60 kg to 60 t Material: stainless steel and neoprene 	<ul style="list-style-type: none"> Rated load from 13,6 kg to 34 t Material: Nickel-plated steel 	<ul style="list-style-type: none"> Material: aluminium or stainless steel IP66

Weighing modules with optional stand-alone displays

The new SIWAREX WT231 weighing terminals for non-automatic scales and SIWAREX WT241 for conveyor belt scales combine the proven quality of Siemens components in a single device: a high-performance electronic weighing system and a Siemens Touch Panel with an application-specific user interface.

Thanks to the integrated terminal panel for up to four load cells, a separate junction box is not required. The two weighing terminals can be quickly and easily implemented as a stand-alone solution. They can also be integrated into all common controller environments via an RS485 Modbus RTU interface.



SIWAREX WT231
Optional: Stand-alone display



SIWAREX WT241
Optional: Stand-alone display

	SIWAREX WT231	SIWAREX WT241
		
Order No.	7MH4965-2AA01	7MH4965-4AA01
Applications	Platform scales, silo and bunker weighing, scales in hazardous areas, force measurement	Conveyor belt scale applications
Key features	<p>Resolution: Up to \pm four million parts</p> <p>Measurement rate: 10 ms/100 Hz</p> <p>Interfaces:</p> <ul style="list-style-type: none"> • RS485 Modbus RTU • 4 digital inputs (floating) • 4 digital outputs (floating) • 1 analog output (0/4...20 mA) <p>Connections:</p> <ul style="list-style-type: none"> • 3 EM16 EMI-proof cable gland for load cells • 1 EM16 EMI-proof cable gland for load cells • 4 16 mm drill holes with dummy plugs • 1 power supply connection • 1 ground connection • Mounting bracket for wall mounting <p>Dimensions: 263.5 mm x 185 mm x 95 mm</p>	



Sales and support

Custom engineering

Siemens provides custom-engineered products to solve your special application needs. From material compatibility challenges to unique size requirements, Siemens custom engineering team can help.

Service around the world

Plants must function reliably at all times. Efficient and effective process instrumentation and analytics are an indispensable requirement to this end. You also need to be certain of fast and competent service from your supplier. Siemens is a global company that reacts locally. Whether you require consulting, quick delivery, or installation of new devices, the Siemens network of specialists is available to you around the world, wherever your location.

Service around the clock

Our online support system offers rapid, comprehensive assistance regardless of time or location. From product support to service information, Siemens Industry online support is your first choice - around the clock, 365 days a year.

[siemens.com/automation/service&support](https://www.siemens.com/automation/service&support)

Totally Integrated Automation

Products from the controller level to the field level

With Totally Integrated Automation (TIA), Siemens is the only provider of an end-to-end integrated portfolio of products and systems for the automation of the entire production workflow. From the goods receiving area to the finished goods warehouse.

Totally Integrated Automation reduces the complexity of the automation solution and enables what really counts: the practical combination of optimally coordinated individual components without interface problems.

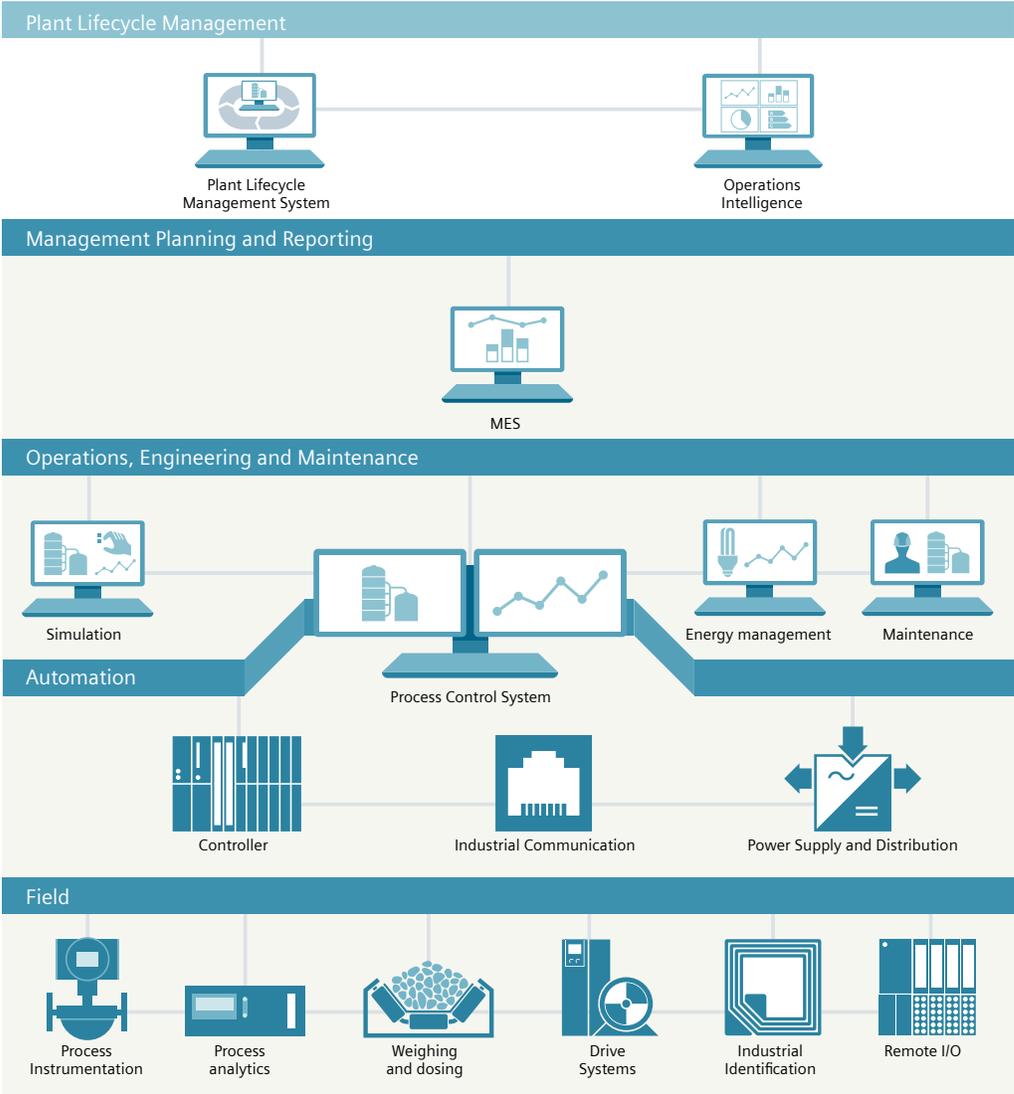
Totally Integrated Automation integrates not only the production process but all parts of the company from the field level to the management level. The result: a perfectly coordinated overall concept that enables higher productivity.

Communication flexibility

Siemens TIA approach offers ease of connection to a DCS system such as SIMATIC PCS 7 using industrial standards. Siemens provides communication flexibility, supporting:

- SIMATIC PDM
- PROFIBUS
- HART
- FOUNDATION Fieldbus
- Model 375/475 HART field communicator and Emerson AMS
- SmartLinx (cards are available for PROFIBUS DP, Modbus RTU, and DeviceNet)
- FDT Software via SITRANS DTM

Efficient interoperability of all automation components



Added value in all automation tasks



Measuring everything that matters:

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Siemens Process Instrumentation offers best-in-class measurement and seamless integration into your automation system. We are the total solution provider for flow, level, pressure, temperature, weighing, positioners and more.

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