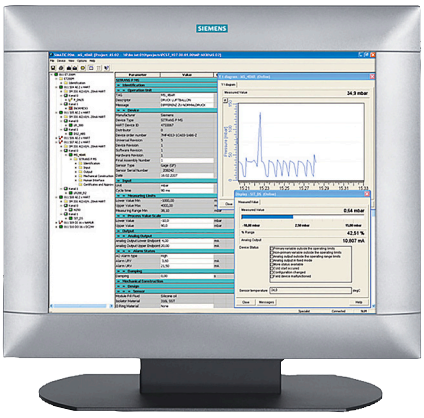


Overview

SITRANS SCM IQ is a Siemens Insights Hub-based cloud application, used in conjunction with SITRANS MS200 and SITRANS CC220, for smart condition monitoring and predictive maintenance.

SITRANS CC220 is an industrial IIOT gateway that collects measurement and status data from up to eight SITRANS MS200 multisensors. It then forwards the data, via the plant network or a secondary data channel, to the SITRANS SCM IQ cloud application.

SITRANS MS200 is a battery-powered, wireless multisensor that provides process condition data that is not normally available for typical process control functions. MS200 can monitor conditions such as vibration states and temperature.

Benefits

- Detects changes to the normal operating conditions of industrial machinery such as pumps, motors, gears, etc., in industrial settings
- Detects the on/off state of each connected device
- Labels detected anomalies and sends notifications
- Allows for more efficient maintenance planning through early warnings
- Improves control, protection, and availability of machinery
- Can help to reduce plant downtime
- Built-in configuration tools and device management
- Easy commissioning, minimal training required, and long maintenance cycles

Application

SITRANS MS200 multisensors are suitable for use with a wide range of rotating equipment, within all industries that require rugged IIoT sensors. The sensors are suitable for measurement within any industrial environment and at extreme temperatures. They can be used indoors and outdoors.

SITRANS MS200 sensors and corresponding SITRANS SCM IQ application, can be used in process industries such as food and beverage, power generation, utilities, and chemical. Typical applications include filling stations, agitating vessels, and many types of pumps, gears, compressors, fans or bearings.

Design

SITRANS MS200 is contained within a rugged, IP69 enclosure for use with rotating equipment. SITRANS CC220 is an IP20 device and is typically mounted inside a cabinet.

SITRANS SCM IQ is designed for use on the Siemens cloud-based IoT ecosystem, Insights Hub. SITRANS SCM IQ can be combined with an array of Siemens cloud-based applications for complete plant supervision and control.

Function

SITRANS MS200, Battery powered clamp-on sensor

- Monitors temperature and vibration of rotating equipment

SITRANS CC220, IIOT gateway

- Cyclically polls data from MS200 multisensors
- Securely uploads data to SITRANS SCM IQ
- Can handle up to eight SITRANS MS200 sensors

SITRANS SCM IQ, Insights Hub application for smart condition monitoring

- Manages connected SITRANS CC220 gateways and SITRANS MS200 multisensors
- Intuitive training of machine learning models to automatically detect anomalies
- Supports labelling anomalies and sends notifications via email or push notification (when used with SIMATIC Notifier)

Selection and ordering data

Selection and ordering data	Article No.
SITRANS MS200 A battery-powered, wireless multisensor that provides process condition data that is collected in addition to the core process control data.	**7MP2210-2AB21-2-AB1**
SITRANS CC220 A cloud connector that collects measurement and status data from up to eight SITRANS MS200 multisensors, then forwards it to the SITRANS SCM IQ cloud application	**7MP2200-2CB05-2-AA1**
SITRANS SCM IQ SITRANS SCM IQ is a Siemens Insights hub-based application, used in conjunction with SITRANS MS200 and SITRANS CC220, for smart condition monitoring and predictive maintenance	**SITRANS SCM IQ is distributed by the Siemens Digital Exchange. Please visit:** https://www.dex.siemens.com
Operating Instructions All literature is available to download for free, in a range of languages, at http://www.siemens.com/processinstrumentation/documentation.	
Spare Parts SITRANS MS200 replacement battery with plug, 3.6 V/2.6 Ah	**7MP2210-2AB21-2-AB8**

Technical specifications

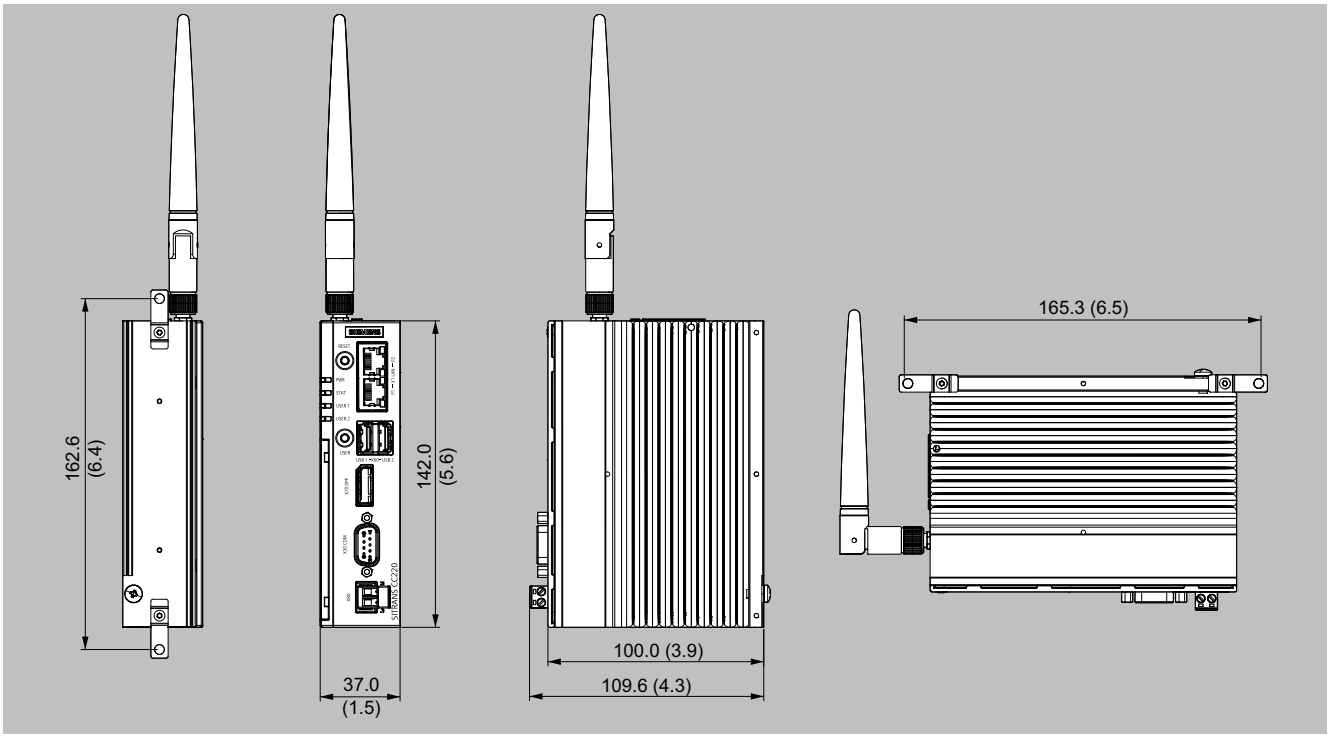
SITRANS MS200	
Scope of measurement	Vibration and temperature
Data transmission	
Polling	Cyclic, via SITRANS CC220
Vibration sensor	3-axis accelerometer
Frequency range	15 ... 3.3 kHz
Resolution	0.122 mg (nominal at ± 4 g measurement range, 0.488 mg at ± 16 g)
Sampling rate	6.6 kHz
Temperature sensor	
Temperature range	-30 ... +80 °C (-22 ... +176 °F)
Accuracy	± 4 °C
Repeatability	0.1 °C
Voltage supply	
Voltage	3.6 V
Capacity	2.6 Ah
Lithium content	0.65 g (0.023 oz)
Weight of battery	18 g (0.63 oz)
Battery life at 25 °C (77 °F)	2 ... 5 years
Replacement	Replacement batteries are offered by Siemens. Please see spare parts for more details.
Communication	
Bluetooth	Bluetooth BLE 5.0
Data transmission cycle	1 per 100 seconds
Environment	
Storage temperature	-40 ... +85 °C (-40 ... +185 °F)
Ambient temperature	-30 ... +80 °C (-22 ... +176 °F)
Altitude	• Operation: -1 000 ... 2 000 m (3 280 ... 6 561.68 ft) • Pressure: 795 ... 1 080 hPa
Rating	IP69 2 m/24 h, according to IEC 60529

SITRANS CC220	
Functions	
Connecting	Connects SITRANS MS200 multisensor with SITRANS SCM IQ cloud application
Polling	Cyclic polling of SITRANS MS200
Cloud connect	Forwards data to SITRANS SCM IQ cloud. Connection through plant network or Internet Access Point (e.g. SCALANCE M876-4).
Voltage supply	
Voltage	24 V nominal
Fuse	No
Fan	Passive cooling
Communication	
To sensor	Bluetooth BLE 5.0
To cloud	MQTT
Environment	
Storage temperature	-20 ... +70 °C (-4 ... +158 °F)
Ambient temperature	0 ... +50 °C (-32 ... +122 °F)
Altitude	• Operation: -1 000 ... 2 000 m (3 280 ... 6 561.68 ft) • Pressure: 795 ... 1 080 hPa
Rating	IP20, according to IEC 60529

Technical specifications (continued)

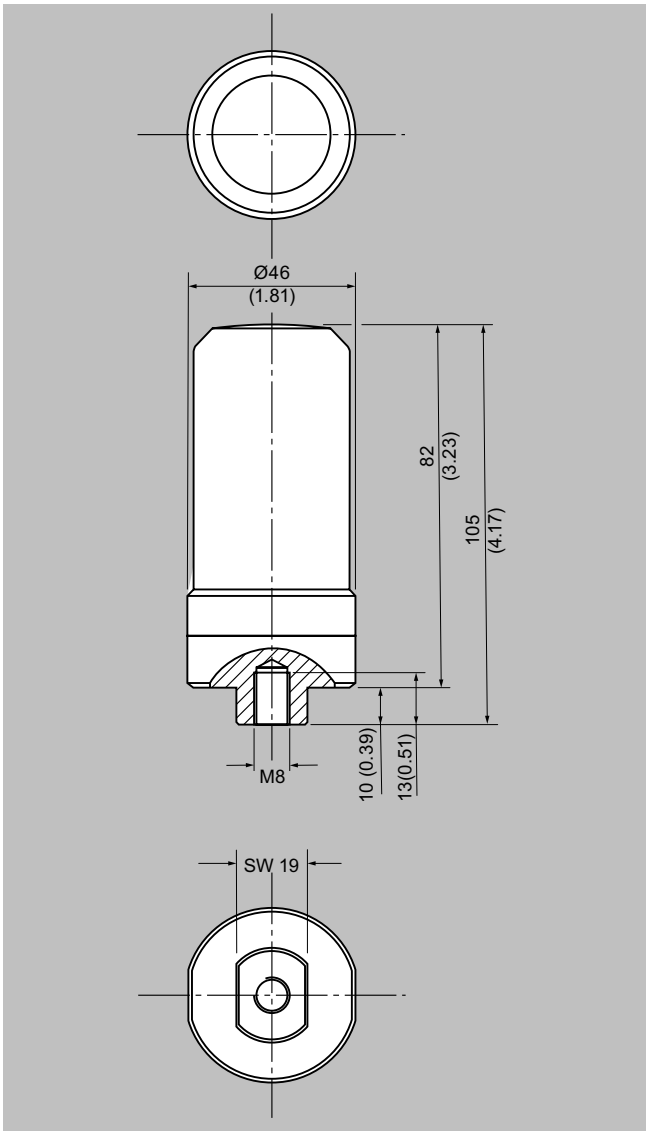
SITRANS SCM IQ	
Device connectivity	Manages connection of SITRANS MS200 and SITRANS CC220 through a convenient user interface
Sensor data modeling	Activation and management of machine learning models
Anomaly management	Documentation and management of detected anomalies
Notifications	Provides notification of detected anomalies via email or push notification (when used with SIMATIC Notifier).

Dimensional drawings



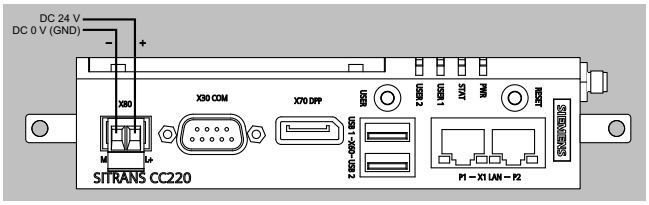
SITRANS CC220, dimensions in mm (inch)

Dimensional drawings (continued)



SITRANS MS200, dimensions in mm (inch)

Circuit diagrams



SITRANS CC220, connections

Overview

SITRANS store IQ is a Siemens cloud based application used to monitor and manage inventories in process and discrete industries.

Benefits

- Manage entire inventory network from a central location.
- Reduce overhead required to monitor and plan stock levels.
- Avoid unnecessary downtime and cost associated with unexpected shortages.
- Increase transparency of measurement reliability.

Application

Inventory management is a necessary task in virtually every value chain. Inventories are required whenever material is processed, produced, or assembled. SITRANS store IQ is an inventory management app based on Siemens cloud resources, that records measurements and data from various types of instrumentation, including a level device at a process tank or scales mounted in storage shelves. SITRANS store IQ also monitors auxiliary measurements, helping to better characterize inventories, for example, with temperature readings or binaries.

SITRANS store IQ records readings and visualizes them in a customizable way, offering structuring with hierarchies, map views, and graph views. The acquired data can be used to create proactive alarms via email or SMS, exactly as required for your application. The SITRANS store IQ app can be used on a desktop computer or mobile device.

Design

- A reliable and accurate record of inventory data from anywhere.
- A flexible structure for configuring an inventory network of any size.
- Provides a visualization of an inventory mix, with material breakdown.
- KPI thresholds to easily assess inventory levels.
- Custom alarms for proactive notifications.
- Based on cloud and cloud connectivity solutions.
- Open to virtually every measurement technology.
- Ability to monitor any process values, including humidity, temperature, digital inputs.

The following standard SITRANS store IQ base package and extensions are available:

SITRANS store IQ can be ordered via the Siemens PLM store:
https://www.dex.siemens.com/ccrz__ProductList?cartID=&operation=quickSearch&searchText=Sitrans%20store%20iq&portalUser=&store=&cclcl=en_US&selected=industrial-iot

Pricing Model	
Application subscription	**SITRANS Store IQ Package Base**
	See order[1)]
Billing cycle	Full amount in advance
SITRANS Store IQ application	✓
Base environment[2)]	✓
Asset attributes	100[3)]
Time series data ingest rate	0.05 KB/s[4)]
Time series data storage	1 GB
Notification emails	1 000 email notifications
Users	100
	According to your specific configuration, the required number of the above mentioned cloud resources might differ.
Extension (for cloud resources)	**SITRANS Store IQ Package Asset Attributes Extension**
	See order[1)]
Billing cycle	Full amount in advance
Asset attributes	100 additional asset attributes
Time series data ingest rate	0.03 KB/s additional time series data ingest rate
Time series data storage	1 GB additional time series data storage
Extension (for cloud resources)	**SITRANS Store IQ Package Data Ingest Extension**
	See order[1)]
Billing cycle	Full amount in advance
Time series data ingest rate	0.10 KB/s additional time series data ingest rate
Extension (for cloud resources)	**SITRANS Store IQ Package Data Storage Extension**
	See order[1)]
Billing cycle	Full amount in advance
Time series data storage	5 GB additional time series data storage
Extension (for cloud resources)	**SITRANS Store IQ Package Notification Extension**
	See order[1)]
Billing cycle	Full amount in advance
Notification emails	1 000 additional email notifications
SMS notifications	25 additional SMS notifications

Design (continued)

Pricing Model	
Extensions (for Third-Party Resources)	Call notifications may be offered in/for certain countries. Offered call notifications are provided as Third-Party technology. Please see Third-Party terms section. Call notifications may be blocked, delayed or prevented from being delivered by reasons outside of our control and there is no warranty that the call notifications will be uninterrupted, secure or error free or that calls will reach their intended destination during any stated time-frame. For the avoidance of doubt, Siemens may discontinue this service without prior notice at any time.

1) Subscription-based pricing is set forth in the order.
2) You can decide if a base environment shall be created and provisioned to you as part of your SITRANS Store IQ Package Base subscription or if the SITRANS Store IQ Package Base (without a base environment) shall be added to an existing account (base environment or capability package account). A package can only be added to an existing account if the account and package are hosted in the same data center location. If you decide to add various packages to one existing account, please note the following: The cloud resources included in the various packages will be combined under one account; it is your responsibility to allocate the cloud resources to the various packages according to your needs. The combination of cloud resources under one account may lead to technical limitations in their accessibility.
3) Depending on the configuration of e.g., the transmitter and/or gateway, single or multiple asset attributes are being used by the SITRANS Store IQ application.
4) Equals an update of up to 30 asset attributes approximately every five minutes.

Customer Requirement in Relation to Cloud Resources			
Requirement from Customer	**Effect on Required Number of Asset Attributes**	**Effect on Required Time Series Data Ingest Rate**	**Effect on Required Time Series Data Storage**
Increase number of measurements	Increase	Higher rate required	Increase
Consideration of complex tank geometries	Increase[1)]	Higher rate required	Increase
Increase frequency of data capture	None	Higher rate required	Increase
Increase storage (extend duration of stored data)	None	None	Increase

1) Using the features of SITRANS Store IQ application for e.g., for tank monitoring, each measurement might consume over 32 asset attributes.

Note:

The standard subscription term for SITRANS Store IQ Package Base is 12 or 36 months. The subscription term shall automatically renew if stated in the order. Siemens reserves the right to discontinue the SITRANS store IQ app with a 12 months notice and replace the SITRANS store IQ app with a different app that is similar but not identical in functionality.

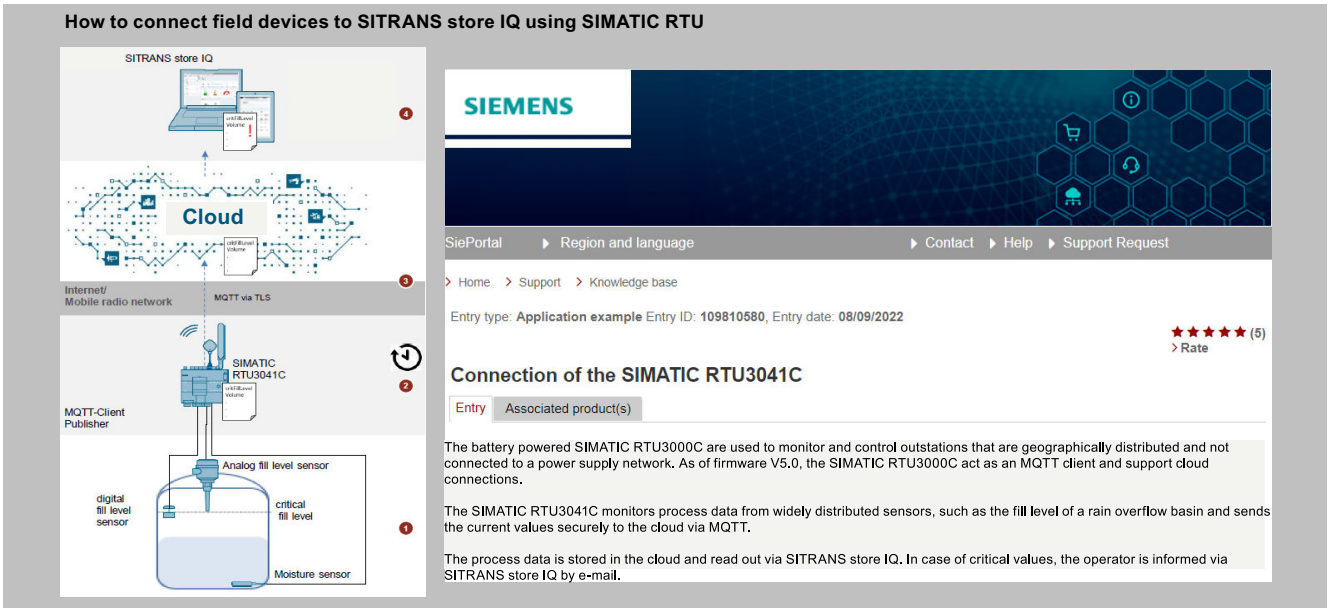
The subscription term for extensions will be co-termed with the subscription term of the application and therefore can be shorter than the standard subscription term.

If an application subscription is terminated, the associated extensions will also be terminated at the same time.
For all terms and conditions please see the SITRANS Store IQ Package
product sheet.

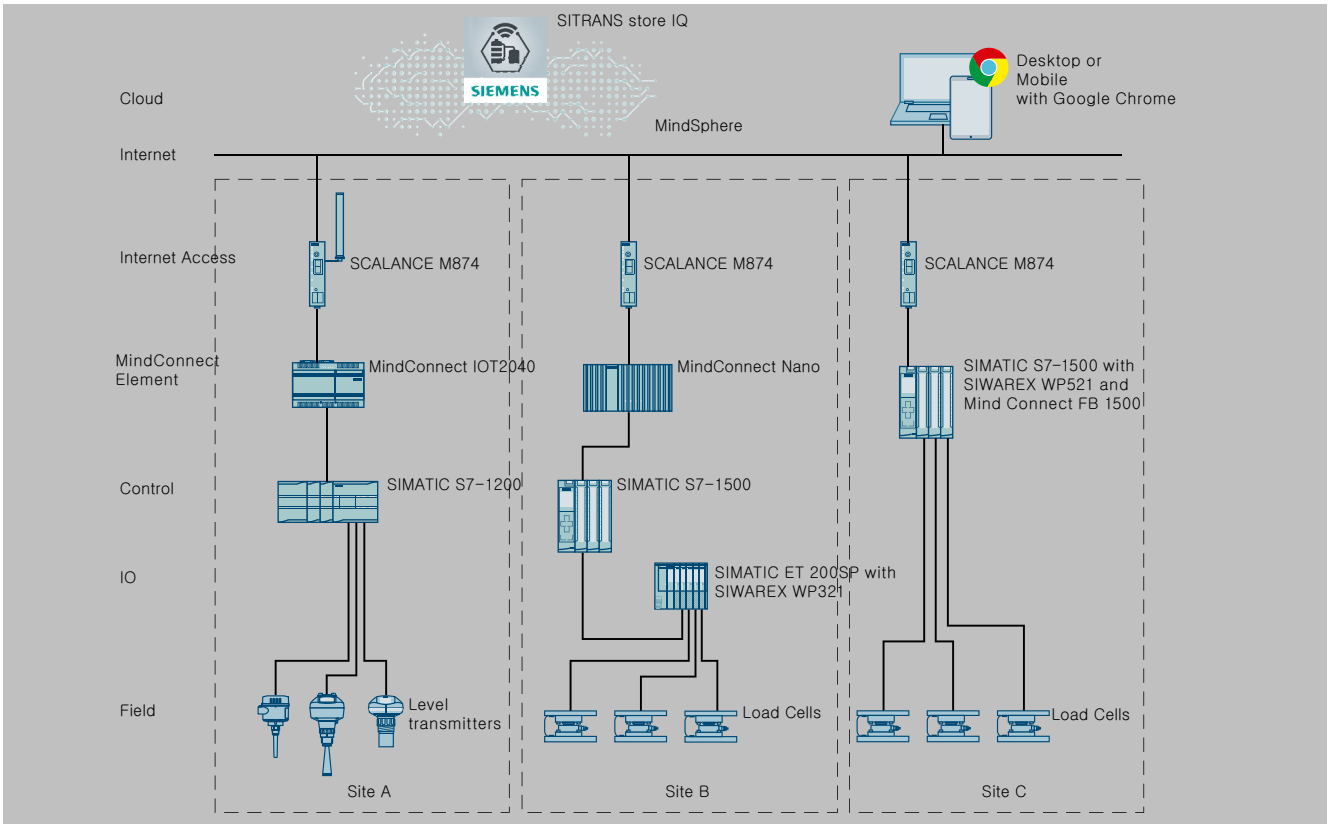
The subscription fee for SITRANS Store IQ Package Base and for any of the extensions described herein are fully charged in advance for the entire subscription term unless otherwise expressly provided in an order.

For all terms and conditions, please see the SITRANS Store IQ packages in the Siemens PLM store at
https://www.dex.siemens.com/ccrz__ProductList?cartID=&operation=quickSearch&searchText=Sitrans%20store%20iq&portalUser=&store=&cclcl=en_US&selected=industrial-iot

Integration



How to connect field devices to SITRANS store IQ using SIMATIC RTU, for more details please visit:
https://support.industry.siemens.com/cs/de/en/view/109810580



SITRANS store IQ is based on MindSphere and supports various possibilities to onboard instrumentation devices and acquire data. The figure shows several integration examples.

Overview

SITRANS mobile IQ is an app that gives you easy access to SITRANS field devices via your smartphone or tablet.

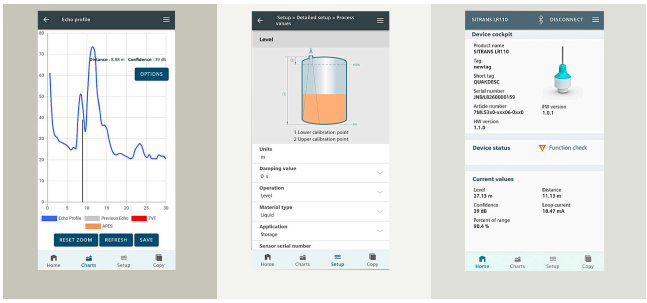
Benefits

- Commissioning and parameterization of field devices.
- Displays device status and measurement values.
- Helps with identifying errors and troubleshooting in case of failures.
- Direct link to manuals, certificates, FAQs, and much more.

Application

Commissioning and parameterization of field devices:

- **Device list**
  All supported devices in the environment are displayed.
- **Device Cockpit**
  Overview of the connected device, device status, and current measured values.
- **Setup**
  Commissioning and parameterization of the device, including graphical support.
- **Charts**
  History of selected measurement and diagnostic values.



Mode of operation

Mobile devices / operating systems

SITRANS mobile IQ is compatible with supported Android and iOS mobile devices.

SITRANS mobile IQ uses a Bluetooth interface to communicate with the field devices. Your mobile device must have a Bluetooth interface, version 4.2 or better.

Currently supported field devices are listed on SIOS (http://www.siemens.com/osSITRANSmobileIQ) and in the App Store and Google Play. Additional field devices are in preparation and require a new installation of the App on your mobile device. Only the listed field devices are compatible with SITRANS mobile IQ.

Data connection: internet connection is required to access additional information such as manuals of supported field devices.

Integration

Further information

Product note in Industry Online Support – Product Support

https://support.industry.siemens.com/cs/document/109775578/sitrans-mobile-iq?dti=0&lc=en-WW

Download App

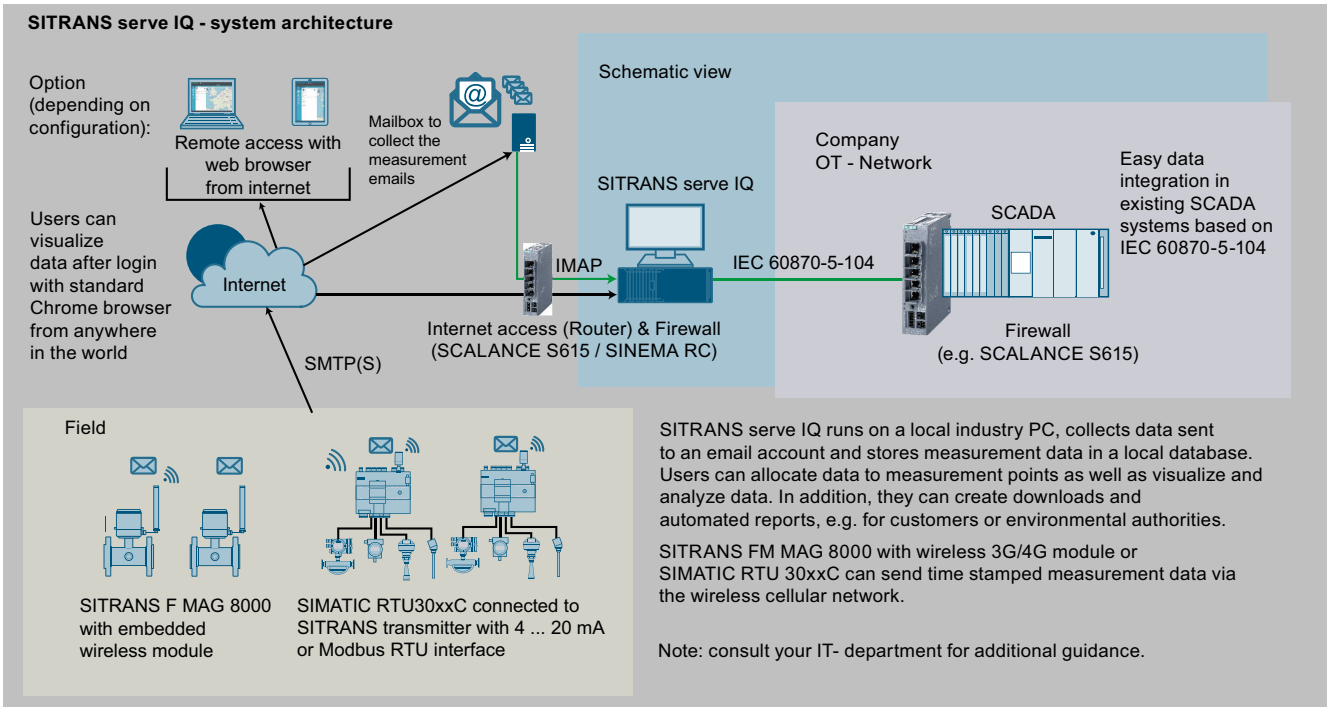
Available on the App Store

https://apps.apple.com/us/app/sitrans-mobile-iq/id1496146361

Google play

https://play.google.com/store/apps/details?id=com.siemens.sitransmobileiq&hl=en_US

Overview



SITRANS serve IQ is an on-premise application that acquires measurement data sent by email (CSV file attachments) from remote sensors. The data is stored locally on an Industry PC and visualized in charts and tables. If configured, authorized users can access this on-premise application via the Internet.

Optionally, users can create and send customized reports on measurement data and log events in a log-book to, for example, document services. An interface for forwarding data to a SCADA system using the telemetry protocol IEC 60870-5-104 is also available.

Benefits

Widely distributed measuring points are used in a range of applications and industries. These include:

- Flow measurement in water supply networks.
- Level measurement in tanks and silos.
- Height measurement in bodies of water.

Today, remote devices send measurement data and alarms in csv-format via email (e.g. SITRANS MAG 8000 3G/4G or SIMATIC RTU 30xxC).

SITRANS serve IQ supports you by:

- Reading and parsing the email attachment containing the measurement data from the email address provided by you.
- Visualizing historical and current process values in charts or tables and displaying alarms.
- As customers or environmental authorities ask for measurement data, users can create customized reports on totalizer values and send them automatically by email. This optional license also enables the logbook functionality that allows users to comment on measurement data or to document service activities.
- Forwarding process values to SCADA via the optional telemetry protocol IEC 60870-5-104.
- If enabled, users can access the application from the Internet using the Google Chrome web-browser. Access is limited to the organization holding the license. Additional measures to ensure IT-security are required (e.g. firewall).

Application

SITRANS serve IQ software must be installed on a local IPC, on-premise and must have access to an email account used for receiving data from remote devices.

When data from supported devices is sent to the predefined email account, SITRANS serve IQ performs the following activities:

- Reads and parses the email attachment containing the valid measurement data from the user provided email address.
- Reads the time stamped measurement data and store it locally on your PC.
- Visualizes the data in trends, display alarms, and downloads the data in tables to authorized users.

Optional features include:

- Customized reports on totalizer values and the ability to send them automatically by email.
- Logbook functionality allowing users to comment on measurement data or to document service activities.
- On further request, ability to forward measurement data to a SCADA system via IEC 60870-5-104 telemetry protocol that is widely used in the water and power industries.

SITRANS serve IQ can be used with the following products:

- SITRANS F MAG8000 with integrated wireless communication module.
- All transmitters in the SITRANS product family with 4 to 20 mA or Modbus RTU interface that can be connected to a SIMATIC RTU30xxC.

SITRANS serve IQ continuously monitors received measurement values against configurable upper and lower limits. Values exceeding the limits will be reported as warnings or alarms, depending on the user setting.

For details and limitation, consult the Product page available at www.siemens.com/SIOS/sitransserveiq.

Design

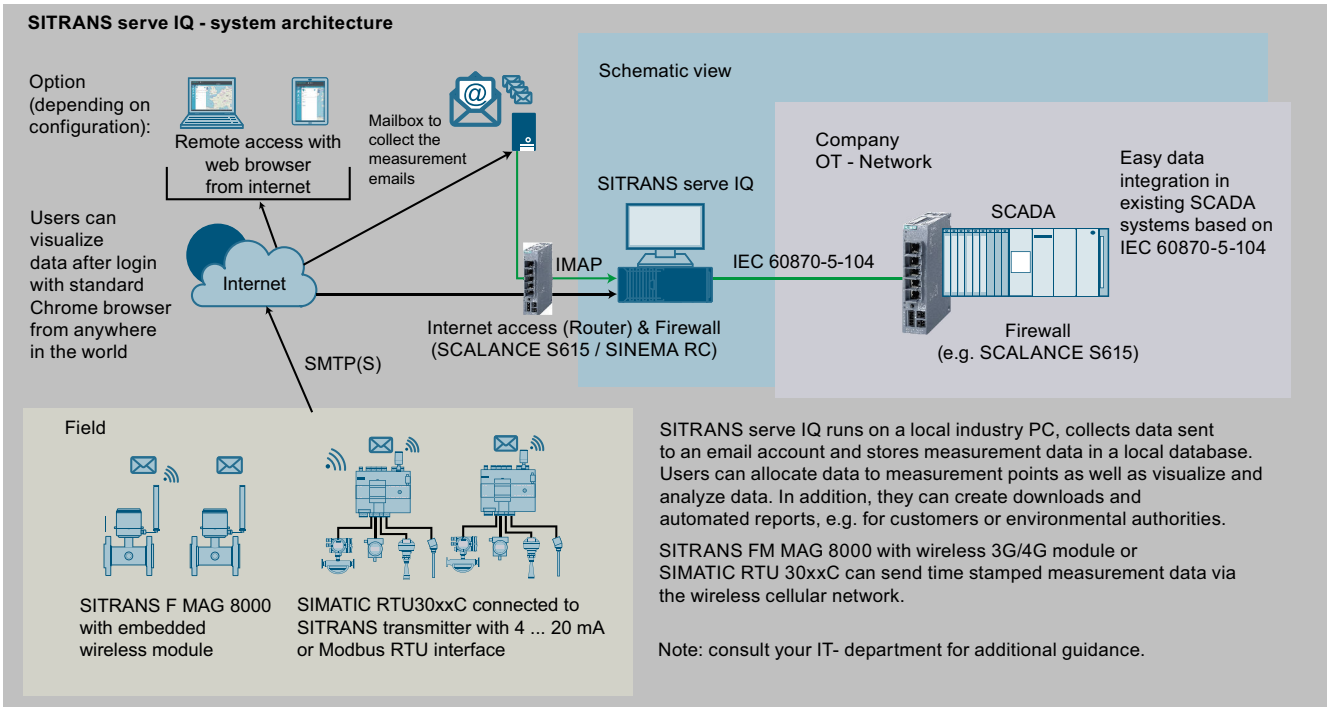
SITRANS serve IQ software is supplied with a Media Package on a USB stick or online software download with an installation program.
SITRANS serve IQ consists of a software package and several license upgrade options.

Software packages	SITRANS serve IQ perpetual[1)]
Number of sending units supported	10 units, with a maximum of 40 variables each
License type	Perpetual license

License upgrade options:	
Additional devices	SITRANS serve IQ license upgrade for 1, 10, 100, or 500 additional devices according to the customer's requirements, to a maximum of 1 300 devices in total.
Logbook and automated reports	• Comment on measurement data or document service activities • Create reports on totalizer values and send automatically by email.
IEC 60870-5-104 telemetry protocol	• Data interface to SCADA server (single or redundant) with the standardized IEC 60870.5.104 telemetry protocol. • Enables easy integration in SIMATIC PCS 7 Telecontrol.

[1)] SITRANS serve IQ software is protected against unauthorized copying by the Automation License Manager (ALM) tool.

Note: a trial version for 90 days for two (2) devices is available.
Following these 90 days, the installed software must be updated to the professional version by means of SITRANS serve IQ perpetual.



SITRANS serve IQ, communication paths: processing, archiving, displaying and transmitting measured values

Selection and ordering data

SITRANS Serve IQ V1.3 Software Package Complete, 10 devices with logbook and automated reports functionality and support of IEC 60870-5-104 protocol Perpetual license[1)2)]	Article No.
• Software and license on USB stick	6BG0000-0AA10-2CS1
• Software and license via Online software download	6BG0000-0AA10-0CS1

SITRANS Serve IQ V1.3 Software Package Base, 10 devices Perpetual license for 10 devices[1)2)]	Article No.
• Software and license on USB stick	6BG0000-0AA10-2CS0
• Software and license via Online software download	6BG0000-0AA10-0CS0

SITRANS Serve IQ, License upgrade for logbook and automated reports functionality License activates access to the logbook and report functionalities.[1)2)]	Article No.
• Software and license on USB stick	6BG0000-0AA10-3CY5
• Software and license via Online software download	6BG0000-0AA10-1CY5

SITRANS Serve IQ V1.3 Software Package Demo On-premise application for Windows to acquire measurement data from remote sensors as well as store, and visualize data in trends and tables via web browser. 90-day trial license for 2 devices[1)2)]	Article No.
• License and software on USB stick	6BG0000-0AA10-2CR0
• License and software via Online software download	6BG0000-0AA100-0CR0

SITRANS Serve IQ, license upgrade, add IEC 60870-5-104 SITRANS Serve IQ license upgrade to add IEC 60870-5-104 telemetry protocol for data integration to SCADA.[1)]	Article No.
• License on USB stick	6BG0000-0AA10-3CY1
• License via Online software download	6BG0000-0AA10-1CY1

Selection and ordering data (continued)

SITRANS Serve IQ, license upgrade, add 1 unit SITRANS Serve IQ license upgrade to add 1 additional device.[1)2)]	Article No
• License on USB stick	6BG0000-0AA10-3CA0
• License via Online software download	6BG0000-0AA10-1CA0

SITRANS Serve IQ, license upgrade, add 10 units SITRANS Serve IQ license upgrade to add 10 additional devices.[1)2)]	Article No
License on USB stick	6BG0000-0AA10-3CB0
License via Online software download	6BG0000-0AA10-1CB0

SITRANS Serve IQ, license upgrade, add 100 units SITRANS Serve IQ license upgrade to add 100 additional devices.[1)2)]	Article No
• License on USB stick	6BG0000-0AA10-3CC0
• License via Online software download	6BG0000-0AA10-1CC0

SITRANS Serve IQ, license upgrade, add 500 units SITRANS Serve IQ license upgrade to add 500 additional devices.[1)2)]	Article No
• License on USB stick	6BG0000-0AA10-3CD0
• License via Online software download	6BG0000-0AA10-1CD0

1) SITRANS serve IQ product sheet and specific terms and software licensing conditions shall apply.
2) The number of devices refers to, for example, the number of SITRANS FM MAG8000 flowmeters with a wireless communication module or the number of SIMATIC RTU30xxC devices. Per device, a maximum of 40 values (e.g. process values, indication of battery power, alarms) is possible.

Technical specifications

SITRANS serve IQ	
Technical specifications for the on-premise installation	
Operating system	Windows 10 Pro, 64-bit, version 2019 LTSC
Docker Desktop, Version 4.16.2	Software and Docker ID to be supplied by customer. Software download available at https://docs.docker.com/desktop/release-notes/. Docker ID available at https://docs.docker.com/docker-id/. Subscription fees may apply.
RAM	Minimum: 8 GB, recommended: 16 GB
Hard disk	At least 250 GB, SSD recommended
Security	Firewall, additional security measures supplied by customer
Internet access	Routers that allow the forwarding of IP ports and address transformations.
Notes	• We recommend installing SITRANS serve IQ on a standalone SIMATIC IPC 427E Microbox PC • To minimize the risk of software conflicts, we recommend installing only Microsoft Office (Windows® 10 Pro 64-bit, Enterprise), Docker Desktop, and SITRANS serve IQ on the IPC. Installation on any other PC and with other software may have a negative impact on performance and proper functioning of SITRANS serve IQ.
Other technical requirements	• Fixed IP address for the PC hosting SITRANS serve IQ • Internet access for the PC hosting SITRANS serve IQ, to read emails, and to access OpenStreetMap. • A dedicated email mailbox supporting IMAP and SMTP protocol to which the measurement data will be sent in a specific protocol.
Limitation of service - ability period	The maximum serviceability period of SITRANS serve IQ is limited to two years. For further information on service, please visit: https://support.industry.siemens.com/cs/sc/5508/process-information?lc=en-DE
For more details, please visit the product page at www.siemens.com/SIOS/sitransserveiq.	

Overview

SITRANS AW050 is a Bluetooth adapter for compatible SITRANS field devices. In combination with the SITRANS mobile IQ, SITRANS AW050 allows you to easily parametrize and maintain compatible SITRANS field devices via a smartphone or tablet.

Benefits

- Connects to the existing service or display port of the field device
- Enables remote access to field devices for:
  - Commissioning and parameterization
  - Displaying device status and measurement values
  - Identifying errors and troubleshooting in case of failures
  - Displaying graphs and trend views of measurements and diagnosis information
  - Direct links to manuals, certificates, FAQs, and much more

Application

SITRANS AW050 supports commissioning, parameterization, and maintenance of compatible field devices. AW050 will establish a secure connection to your field device. In combination with SITRANS mobile IQ, several functions are supported:

- **Device list**
  All supported devices in the environment are displayed.
- **Device cockpit**
  Overview of the connected device, device status, and current measured values.
- **Setup**
  Commissioning and parameterization of the device, including graphical support.
- **Charts**
  History of selected measurement and diagnostic values.

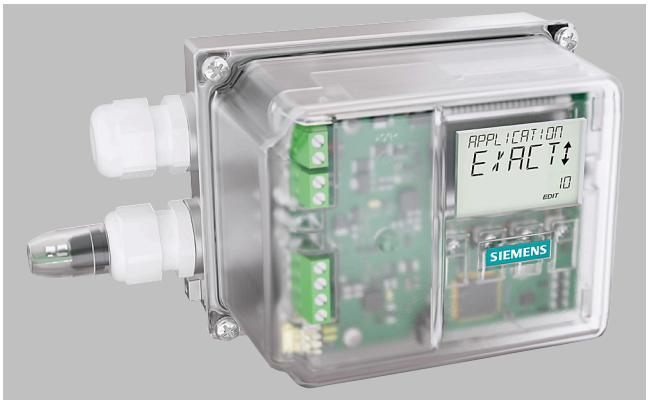
Design

SITRANS AW050 provides a Bluetooth interface for communication with SITRANS mobile IQ.

Integration

SITRANS AW050 is mounted in the existing cable gland and connected to the service or display port of the device.

SITRANS AW050, mounted on SITRANS Probe LU240



SITRANS AW050, mounted on SIPART PS100

Selection and ordering data

Selection and ordering data	Article No.
SITRANS AW050 Bluetooth adapter, used in combination with SITRANS mobile IQ for easy parametrization and maintenance of compatible SITRANS field devices.	
• SITRANS AW050 including mounting kit for SIPART PS100	**7MP3210-0AA01**
• SITRANS AW050 including mounting kit for SITRANS Probe LU240	**A5E50514198**
SITRANS mobile IQ Application to monitor and parameterize compatible field devices via Bluetooth.	**Download via Google Play Store or Apple App Store**
Operating instructions All literature is available to download for free, in a range of languages, at http://www.siemens.com/processinstrumentation/documentation	

https://apps.apple.com/us/app/sitrans-mobile-iq/id1496146361

https://play.google.com/store/apps/details?id=com.siemens.sitransmobileiq&hl=en_US

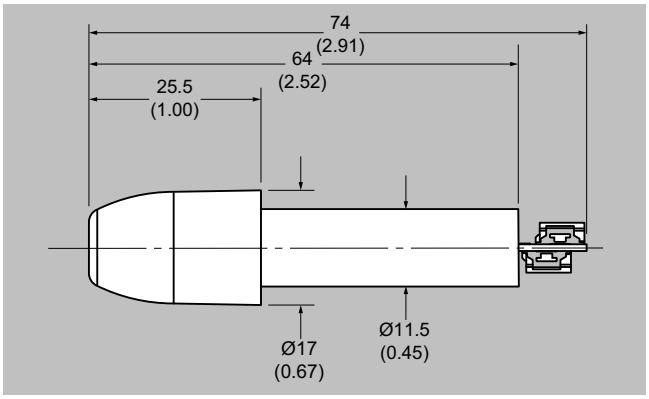
Technical specifications

SITRANS AW050	
Software requirements	SITRANS mobile IQ • Available for iOS 12.0 or higher and Android 7.0 or higher
Operating conditions and structural design	
Ambient conditions	For use indoors and outdoors
Ambient temperature	For ambient temperature ranges, please refer to the operating instructions for the connected SITRANS field device
• Permissible ambient temperature for operation (SITRANS AW050 only)	-40 ... +80 °C (-40 ... +176 °F)
• Relative humidity	0 ... 100 %
Degree of pollution	2
Overvoltage category	II
Input voltage range	2.2 ... 3.4 V DC
Maximum current consumption	2.5 mA
Weight	13 g (0.46 oz)
Degree of protection	• Type 4X, Type 6 according to UL 50E • IP66, IP68 in accordance with IEC 60529
EMC	EN 61326
Material	Polycarbonate
Communication, interface	Bluetooth BLE 4.2
Range	Class 2, approx. 10 m (32.8 ft)
Certificates and approvals	Radio approvals • Europe: CE • UK: UKCA • USA: Contains FCC ID RYYEYSHJN • Canada: Contains IC: 4389B-EYSHJN • China: CMIIT ID: 2020DJ15120

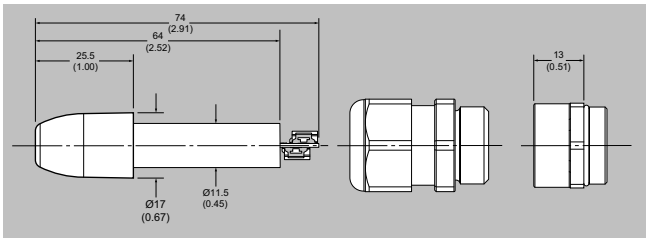
Notes:

- SITRANS mobile IQ is available for Android and iOS. For more information see: https://support.industry.siemens.com/cs/ww/en/view/109775578.
- The instruction manual for the SITRANS AW050, including mounting description is included in the operating instructions of the compatible SITRANS field device.
- Compatible with:
  - SIPART PS100 with FW 1.03.00 or higher.
  - SITRANS Probe LU240 with measurement range 6 m (19.69 ft) and 12 m (39.37 ft).

Dimensional drawings

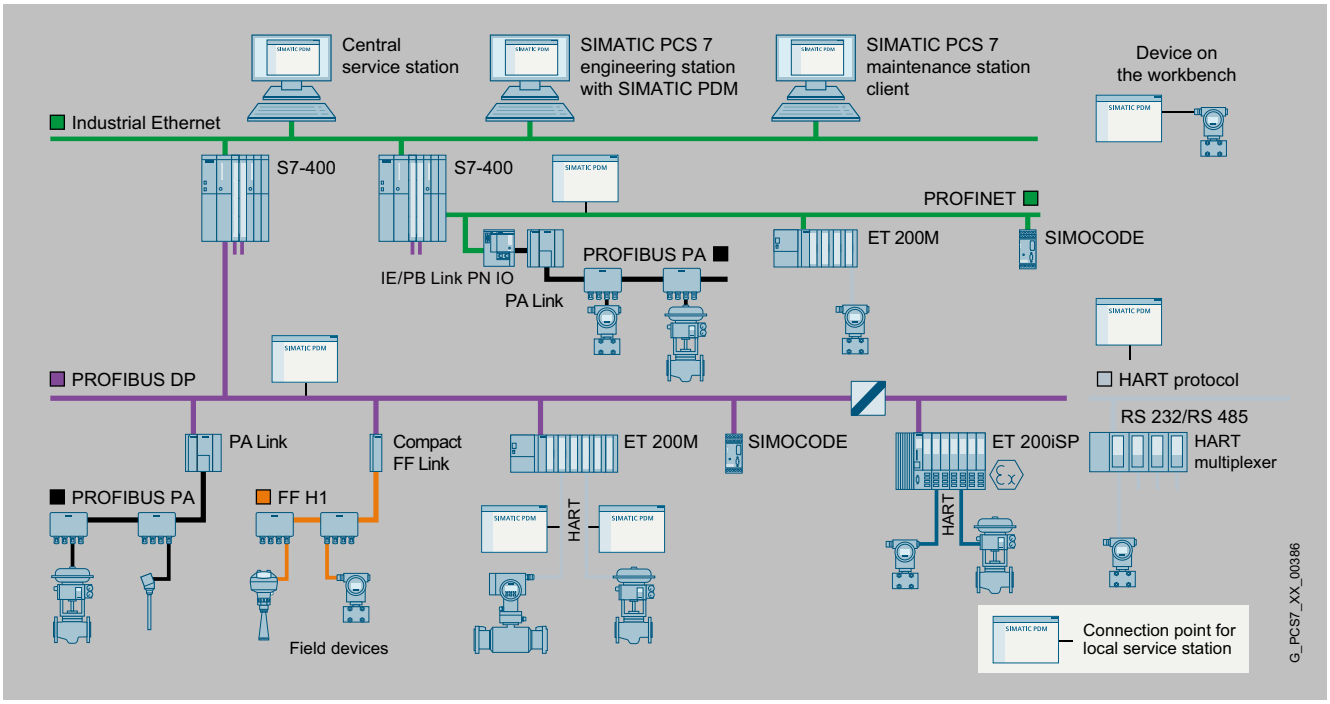


SITRANS AW050, dimensions in mm (inch)



SITRANS AW050 with cable gland and SIPART PS100 mounting kit, dimensions in mm (inch)

Overview



Configuration options with SIMATIC PDM

SIMATIC PDM (Process Device Manager) is a universal, vendor-independent tool for the configuration, parameter assignment, commissioning, diagnostics and servicing of intelligent field devices (sensors and actuators) and field components (remote I/Os, multiplexers, control-room devices, compact controllers), which in the following sections will be referred to simply as devices.

With *one* software product, SIMATIC PDM enables users to work with over 4 000 devices and device variants from Siemens and over 200 other manufacturers worldwide on a *single* homogeneous user interface.

The user interface satisfies the requirements of the VDI/VDE GMA 2187 and IEC 65/349/CD directives. Parameters and functions for all supported devices are displayed in a consistent and uniform fashion independent of their communications interface. Even complex devices with several hundred parameters can be represented clearly and processed quickly. Using SIMATIC PDM it is very easy to navigate in highly complex stations such as remote I/Os and even connected field devices.

From the viewpoint of device integration, SIMATIC PDM is the most powerful open process device manager on the global market. Devices not previously supported can be integrated in SIMATIC PDM by importing their device description packages (either EDD or FDI). This provides security for your investment and saves you investment costs, training expenses and follow-up costs.

SIMATIC PDM supports the operative system management in particular through:

- Uniform representation and operation of devices
- Uniform representation of diagnostics information
- Indicators for preventive maintenance and servicing
- Detection of changes in the project and device
- Increasing the operational reliability
- Reducing the investment, operating and maintenance costs
- Quantity options for
  - Transfer of parameters between devices
  - Transfer of parameter sets to the devices
  - Export and import functions
  - Diagnostics update

SIMATIC PDM can be used extremely flexibly and tailored to a specific task for field device service:

- Single-point station for point-to-point connection to field devices
- Local service and parameter assignment station with connection to fieldbus segments

Overview (continued)

- Central service and parameter assignment station with connection to plant bus
- Central HART service and parameter assignment station for HART multiplexers and WirelessHART field devices
- Integrated into the stand-alone SIMATIC PDM Maintenance Station
- Integrated into the SIMATIC PCS 7 process control system

Maintenance personnel can assign field device parameters at mobile and stationary workstations with SIMATIC PDM. Practically every workstation integrated in the production plant can be used for configuration. Service personnel are thus able to work directly at the location of the field device, while data is stored centrally in the engineering station or maintenance station. This leads to a significant shortening of maintenance and travel times. Additional device-independent system functions support higher-level maintenance stations for creating progress lists for work and servicing.

When a maintenance station is configured in the SIMATIC PCS 7 process control system, SIMATIC PDM is integrated into it and transmits parameter data, diagnostic information and processing information. You can switch directly to the SIMATIC PDM views from the diagnostics faceplates in the maintenance station to perform diagnostics and work on the device in more detail.

A SIMATIC PDM user administration system based on SIMATIC Logon is used to assign various roles with defined function privileges to users. These function privileges refer to SIMATIC PDM system functions, e.g. writing to the device.

For all devices integrated with device description packages, SIMATIC PDM provides a range of information for display and further processing on the maintenance station, for example:

- Device type information (electronic rating plate)
- Detailed diagnostics information (manufacturer information, information on error diagnostics and troubleshooting, further documentation)
- Results of internal condition monitoring functions
- Status information (for example local configuration changes), device test completed
- Information on changes (audit trail report)
- Parameter information

Design

Components	Product packages							
	SIMATIC PDM Stand alone				SIMATIC PDM system-integrated			
	Minimum configuration	Basic configuration	Service and parameter assignment station		in the configuration environment			
			local	central	SIMATIC S7	SIMATIC PCS 7		
	PDM Single Point	**PDM Basic**	**PDM Service**	**PDM Stand alone Server**	**PDM S7**	**PDM PCS 7**	**PDM PCS 7 Server**	**PDM PCS 7 FF**
SIMATIC PDM TAGs[1] in scope of supply	1	4	4 + 50	4 + 100	4 + 100	4 + 100	4 + 100	4 + 100
SIMATIC PDM expansion options								
Count Relevant Licenses (accumulative) - 10 TAGs - 100 TAGs - 1 000 TAGs	*cannot be expanded*	o	o	o	o	o	o	o
SIMATIC PDM Basic		●	●	●	●	●	●	●
SIMATIC PDM Extended		o	o	●	●	●	●	●
SIMATIC PDM integration in STEP 7/PCS 7		o	o	o	●	●	●	●
SIMATIC PDM Routing[2]		●	●	●	o	●	●	●
SIMATIC PDM Server		o	o	●	o	o	●	o
SIMATIC PDM 1 Client[3]		o	o	● (2 ×)	o	o	o	o
SIMATIC PDM Communication FOUNDATION Fieldbus		–	–	–	o	o	o	●
SIMATIC PDM HART Server		o	o	o	o	–	–	–

SIMATIC PDM product structure
● Product component is part of the product package
o Optional product component for the product package; order additive
– Product component is not relevant for the product package or not available
1) For TAG definition, see "Design" section under "SIMATIC PDM TAGs"
2) In combination with SIMATIC PDM Integration in STEP 7/PCS 7
3) In combination with SIMATIC PDM Server

Customer-oriented product structure

The customer-oriented product structure of SIMATIC PDM provides optimal support for the named main use cases and enables you to adapt the scope of functions and performance to your individual requirements. The product range is organized as follows:

SIMATIC PDM Stand alone product packages

- SIMATIC PDM Single Point, a minimum configuration for single device handling
- SIMATIC PDM Basic for local service and parameter assignment stations as well as basic configuration for individual product package with optional product components
- SIMATIC PDM Service for local service and parameter assignment stations
- SIMATIC PDM Stand alone Server for central service and parameter assignment stations, e.g. for various plant units

SIMATIC PDM system-integrated product packages

- SIMATIC PDM S7 for local SIMATIC S7 engineering and service stations
- Various configurations for central SIMATIC PCS 7 engineering and service stations:
  - SIMATIC PDM PCS 7
  - SIMATIC PDM PCS 7 Server (enables device parameter assignment and diagnostics on clients of the PCS 7 engineering station and PCS 7 Maintenance Station)
  - SIMATIC PDM PCS 7-FF (supports the FOUNDATION Fieldbus H1)

In some circumstances, the product packages can be expanded with optional product components (for details, see the Design section).

Product range	SIMATIC PDM V9.1							
	Single Point	**Basic**	**Service**	**Stand alone Server**	**S7**	**PCS 7**	**PCS 7 Server**	**PCS 7-FF**
TAGs contained	**1**	**4**	**4 + 50**	**4 + 100**	**4 + 100**	**4 + 100**	**4 + 100**	**4 + 100**
Project: Create offline	●	●	●	●	●	●	●	●
Project: Usable TAG extensions	–	●	●	●	●	●	●	●
Project: Process device network view	●	●	●	●	●	●	●	●
Project: Process device plant view	●	●	●	●	●	●	●	●
Project: Export/import devices	–	–	●	●	–	–	–	–
Project: Export/import parameters	–	o	●	●	●	●	●	●
Project: HW Config	–	o	o	o	●	●	●	●
Project: Utilization of SIMATIC PDM options	–	●	●	●	●	●	●	●

Design (continued)

Product range	SIMATIC PDM V9.1 Single Point	Basic	Service	Stand alone Server	S7	PCS 7	PCS 7 Server	PCS 7-FF
Project: Integration in STEP 7/PCS 7	–	o	o	o	●	●	●	●
Group operations	–	o	o	●	o	●	●	●
Setting device IDs	–	o	o	●	o	●	●	●
Communication: HART modem	●	●	●	●	●	–	–	–
Communication: HART interface	●	●	●	●	●	–	–	–
Communication: PROFIBUS DP/PA	●	●	●	●	●	●	●	●
Communication: HART over PROFIBUS DP	●	●	●	●	●	●	●	●
Communication: FF H1	–	–	–	–	o	o	o	●
Communication: Modbus	●	●	●	●	●	●	●	●
Communication: Ethernet	●	●	●	●	●	●	●	●
Communication: PROFINET	●	●	●	●	●	●	●	●
Communication: HART over PROFINET	●	●	●	●	●	●	●	●
Devices: Export/import parameters	–	o	o	●	●	●	●	●
Devices: Comparison of parameter values	–	o	o	●	●	●	●	●
Devices: Saving parameters	●	●	●	●	●	●	●	●
Devices: Change log (Audit Trail)	–	o	o	●	●	●	●	●
Devices: Calibration report	–	o	o	●	●	●	●	●
Devices: Print function	●	o	o	●	●	●	●	●
Devices: Document manager	–	o	o	●	●	●	●	●
Lifelist: Basic functionality	●	●	●	●	●	●	●	●
Lifelist: Expanded functionality (scan range, diagnostics, export, addressing)	–	o	o	●	●	●	●	●
Communication: Data record routing	–	o	o	o	o	●	●	●
Communication: HART multiplexer	–	o	o	o	o	–	–	–
Communication: WirelessHART	–	o	o	o	o	–	–	–
Function: HART SHC mode (increased communication speed)	●	●	●	●	●	●	●	●
Function: Device parameterization on PCS 7 maintenance station clients	–	o	o	o	o	o	●	o
Function: Device parameter assignment on SIMATIC PDM clients	–	o	o	● (2 ×)	o	o	o	o

SIMATIC PDM overview of functions and features
● Product component is part of the product package
o Optional product component for the product package; order additive
– Product component is not relevant for the product package or not available

SIMATIC PDM Stand alone product packages

SIMATIC PDM Single Point V9.1

This minimum configuration with handheld functionality is intended for handling exactly *one* field device via point-to-point coupling. It cannot be expanded with functions or with SIMATIC PDM TAG or SIMATIC PDM 1 Client licenses. Upgrading to a different product variant, e.g. SIMATIC PDM Basic, or a different product version is also not possible.

Supported communication types:

- PROFIBUS DP/PA
- HART communication (modem, RS 232 and via PROFIBUS/PROFINET)
- Modbus
- Ethernet
- PROFINET

The functionality is matched accordingly. The device functions are supported as defined in the device description, for example:

- Managing the device library and unlimited device selection
- Parameter assignment and diagnostics according to the device description
- Exporting and importing of parameter data
- Device identification
- Lifelist

Design (continued)

- Printing the parameter list

SIMATIC PDM Basic V9.1

SIMATIC PDM Basic is for local service and parameter assignment stations on any computers (IPC/notebook) with local connection to bus segments or direct connection to the device.

Supported communication types:

- PROFIBUS DP/PA
- HART communication (modem, RS 232 and via PROFIBUS/PROFINET)
- Modbus
- Ethernet
- PROFINET

SIMATIC PDM Basic is equipped with all basic functions required for operation and parameter assignment of devices. That is, compared to SIMATIC PDM Single Point, it has the following additional functions:

- EDD-based diagnostics in the lifelist
- Memory function (only exporting and importing of parameter data)
- Report function
- Communication with HART field devices via remote I/Os

As a basic block for an individual configuration, SIMATIC PDM Basic can be expanded with all functional SIMATIC PDM options (PDM Routing only in combination with PDM Integration in STEP 7/PCS 7 required) as well as with cumulative sets of 10, 100 or 1 000 SIMATIC PDM TAGs. Without TAG expansion, SIMATIC PDM Basic is suitable for projects with up to 4 TAGs. SIMATIC PDM 1 Client licenses (sets of 1) can also be added in combination with the SIMATIC PDM Server option.

The SIMATIC PDM Extended option allows the activation of additional SIMATIC PDM system functions (for details, see SIMATIC PDM Extended V9.1 under "Optional product components").

SIMATIC PDM Service V9.1

With this product package for extended service, local service and parameter assignment stations can be realized on any type of computer (IPC/notebook) with a local connection to a bus segment or direct connection to field devices.

It comprises:

- SIMATIC PDM Basic (incl. 4 SIMATIC PDM TAGs)
- 50 SIMATIC PDM TAGs

Like SIMATIC PDM Basic, SIMATIC PDM Service can be expanded with all functional SIMATIC PDM options (PDM Routing only in combination with PDM Integration in STEP 7/PCS 7 required) as well as with cumulative SIMATIC PDM TAGs (sets of 10, 100 or 1 000) (see "Optional product components"). SIMATIC PDM 1 Client licenses (sets of 1) can also be added in combination with the SIMATIC PDM Server option. It is permitted to upgrade to another product version.

Note: For use of gateways and for PROFINET or Ethernet communication with field devices, SIMATIC PDM TAG licenses are charged for according to the objects configured in the process device plant view as follows:

- 10 SIMATIC PDM TAGs per S7 DSGW (data record gateway) with one PROFIBUS subnet
- 20 SIMATIC PDM TAGs per S7 DSGW with more than one PROFIBUS subnet
- 10 TAGs per IE/PB Link
- 1 TAG per field device (except in the case of special specifications)

SIMATIC PDM stand-alone server V9.1

With the SIMATIC PDM Stand alone Server product package, you can establish central service and parameter assignment stations that operate according to the client/server principle. Portals opened on licensed SIMATIC PDM clients (SIMATIC PDM sessions) enable handling of production plant field devices via the SIMATIC PDM server on the plant bus assigned via registration. The product package can be used multiple times within a plant, e.g. for various plant units. It comprises:

- SIMATIC PDM Basic (incl. 4 SIMATIC PDM TAGs)
- SIMATIC PDM Extended
- SIMATIC PDM Server
- 2 × SIMATIC PDM 1 Client
- 100 SIMATIC PDM TAGs

SIMATIC PDM Stand alone Server can be expanded with all functional SIMATIC PDM options (PDM Routing only in combination with PDM Integration in STEP 7/PCS 7 required) as well as with cumulative sets of 10, 100 or 1 000 SIMATIC PDM TAGs and SIMATIC PDM 1-client licenses (see "Optional product components"). The portals opened on these clients (SIMATIC PDM sessions) must also be licensed with the SIMATIC PDM 1-client licenses besides the SIMATIC PDM clients. For details about this, refer to "SIMATIC PDM 1 Client" under "Optional

Design (continued)

product components". For user management of the SIMATIC PDM clients, the SIMATIC Logon product is also required. It is possible to upgrade to another product version.

Note: For use of gateways and for PROFINET or Ethernet communication with field devices, SIMATIC PDM TAG licenses are charged according to the objects configured in the process device plant view (for details, see corresponding note under SIMATIC PDM Service V9.1).

SIMATIC PDM system-integrated product packages

SIMATIC PDM S7 V9.1

The SIMATIC PDM S7 product package designed for use in a SIMATIC S7 configuration environment is intended for setup of a local SIMATIC S7 engineering and service station. It requires the installation of STEP 7 V5.5+SP4. It includes:

- SIMATIC PDM Basic (incl. 4 SIMATIC PDM TAGs)
- SIMATIC PDM Extended
- SIMATIC PDM integration in STEP 7/PCS 7
- 100 SIMATIC PDM TAGs

SIMATIC PDM S7 can be expanded with the functional options SIMATIC PDM Routing, SIMATIC PDM Communication FOUNDATION Fieldbus, SIMATIC PDM Server, and SIMATIC PDM HART Server as well as with cumulative SIMATIC PDM TAGs (sets of 10, 100 or 1 000) (see "Optional product components"). SIMATIC PDM 1 Client licenses (sets of 1) can also be added in combination with the SIMATIC PDM Server option.

SIMATIC PDM PCS 7 V9.1

The SIMATIC PDM PCS 7 product package suitable for use in a SIMATIC PCS 7 configuration environment is intended for use in a central SIMATIC PCS 7 engineering and service station. It comprises:

- SIMATIC PDM Basic (incl. 4 SIMATIC PDM TAGs)
- SIMATIC PDM Extended
- SIMATIC PDM integration in STEP 7/PCS 7
- SIMATIC PDM Routing
- 100 SIMATIC PDM TAGs

SIMATIC PDM PCS 7 can be expanded with the functional options SIMATIC PDM Communication FOUNDATION Fieldbus and SIMATIC PDM Server as well as with cumulative SIMATIC PDM TAGs (sets of 10, 100 or 1000) (see "Optional product components"). SIMATIC PDM 1 Client licenses (sets of 1) can also be added in combination with the SIMATIC PDM Server option.

SIMATIC PDM PCS 7 Server V9.1

Instead of SIMATIC PDM PCS 7, the SIMATIC PDM PCS 7 Server product package expanded with the SIMATIC PDM Server option can also be used for a central SIMATIC PCS 7 engineering and service station. Field devices integrated using an Electronic Device Description (EDD) can then be assigned parameters on any client of the SIMATIC PCS 7 Maintenance Station as well as on local SIMATIC PDM clients. The following are components of SIMATIC PDM PCS 7 Server:

- SIMATIC PDM Basic (incl. 4 SIMATIC PDM TAGs)
- SIMATIC PDM Extended
- SIMATIC PDM integration in STEP 7/PCS 7
- SIMATIC PDM Routing
- SIMATIC PDM Server
- 100 SIMATIC PDM TAGs

SIMATIC PDM PCS 7 Server can be expanded with the functional option SIMATIC PDM Communication FOUNDATION Fieldbus as well as with cumulative sets of 10, 100 or 1 000 SIMATIC PDM TAGs and SIMATIC PDM 1-Client licenses (see "Optional product components"). The portals opened on these clients (SIMATIC PDM sessions) must also be licensed with the SIMATIC PDM 1-client licenses besides the SIMATIC PDM clients. For details about this, refer to "SIMATIC PDM 1 Client" under "Optional product components".

SIMATIC PDM PCS 7-FF V9.1

Instead of SIMATIC PDM PCS 7, the SIMATIC PDM PCS 7-FF product package expanded with the SIMATIC PDM Communication FOUNDATION Fieldbus option can also be used for a central SIMATIC PCS 7 engineering and service station. This additionally supports parameter assignment of field devices on FOUNDATION Fieldbus H1. Components of SIMATIC PDM PCS 7-FF are:

- SIMATIC PDM Basic (incl. 4 SIMATIC PDM TAGs)
- SIMATIC PDM Extended
- SIMATIC PDM integration in STEP 7/PCS 7
- SIMATIC PDM Routing
- SIMATIC PDM Communication FOUNDATION Fieldbus
- 100 SIMATIC PDM TAGs

Design (continued)

SIMATIC PDM PCS 7-FF V9.1 can be expanded with the functional option SIMATIC PDM Server as well as with cumulative sets of 10, 100 or 1 000 SIMATIC PDM TAGs (see "Optional product components"). SIMATIC PDM 1 Client licenses (sets of 1) can also be added in combination with the SIMATIC PDM Server option.

Optional product components

SIMATIC PDM Extended V9.1 option

The SIMATIC PDM Extended option enables you to unlock other system functions for SIMATIC PDM Basic and SIMATIC PDM, for example:

- Change log
- Calibration report
- Extended information in the Lifelist
- Export and import functions
- Print functions
- Document manager
- Comparison function
- Group operations
- Setting device IDs

This functionality is already integrated in the following product packages: SIMATIC PDM Stand alone Server, SIMATIC PDM S7, SIMATIC PDM PCS 7, SIMATIC PDM PCS 7 Server and SIMATIC PDM PCS 7-FF.

SIMATIC PDM Integration option in STEP 7/PCS 7 V9.1

This option is used for the integration of SIMATIC PDM in a SIMATIC S7 or SIMATIC PCS 7 configuration environment. SIMATIC PDM can then be started directly from the hardware configurator (HW Config) in STEP 7/SIMATIC PCS 7.

This functionality is already integrated in the product packages of category "SIMATIC PDM System-integrated" (SIMATIC PDM S7, SIMATIC PDM PCS 7, SIMATIC PDM PCS 7 Server, and SIMATIC PDM PCS 7-FF).

SIMATIC PDM Routing V9.1 option

If SIMATIC PDM is used on an engineering station, the SIMATIC PDM Routing option enables handling of every device in the field that can be configured per EDD throughout the plant and across different bus systems and remote I/Os. SIMATIC PDM Routing can be used in combination with SIMATIC PDM Integration in STEP 7/SIMATIC PCS 7.

Routing is already integrated in SIMATIC PDM PCS 7, SIMATIC PDM PCS 7 Server, and SIMATIC PDM PCS 7-FF. SIMATIC PDM Routing can be additionally installed as an option on a local SIMATIC S7 engineering and service station with SIMATIC PDM S7.

SIMATIC PDM Server V9.1 option

The server functionality can be activated in a local or central service station with this option. It enables parameter assignment of selected field devices on any client of the SIMATIC PCS 7 Maintenance Station as well as on local SIMATIC PDM clients. This functionality is already integrated in the SIMATIC PDM Stand alone Server and SIMATIC PDM PCS 7 Server. The SIMATIC PDM clients as well as the portals opened on these clients (SIMATIC PDM sessions) must be licensed with SIMATIC PDM 1 client licenses. For details about this, refer to "SIMATIC PDM 1 Client" under "Optional product components".

SIMATIC PDM Communication FOUNDATION Fieldbus V9.1 option

In a SIMATIC S7/PCS 7 configuration environment, using this option SIMATIC PDM can communicate with field devices on the FOUNDATION Fieldbus H1 via the FF link.

This functionality is already integrated in the SIMATIC PDM PCS 7-FF product package.

SIMATIC PDM HART Server V9.1 option

This option permits the use of HART multiplexers from various vendors in SIMATIC PDM. Furthermore, WirelessHART field devices can also be parameterized with SIMATIC PDM.

SIMATIC PDM TAGs (version-independent)

Depending on the project size, the SIMATIC PDM TAGs supplied with a product package (except SIMATIC PDM Single Point) can be cumulatively expanded with sets of 10, 100 or 1 000 SIMATIC PDM TAGs.

A SIMATIC PDM TAG corresponds to a SIMATIC PDM object that represents the individual field devices or field components within a project, e.g. measuring instruments, positioners, switching devices or remote I/Os. SIMATIC PDM TAGs are also relevant for diagnostics with the lifelist of SIMATIC PDM. In this case, TAGs are considered to be all recognized devices with diagnostics capability, whose detailed diagnostics is effected through the device description (EDD).

SIMATIC PDM 1 Client (version-independent)

SIMATIC PDM 1 Client is a cumulative single-client license for SIMATIC PDM configurations with SIMATIC PDM Server, for example SIMATIC PDM Stand alone Server or SIMATIC PDM PCS 7 Server. The license is used to activate registered SIMATIC PDM clients and SIMATIC PDM sessions (opened portals) on these clients.

Each "SIMATIC PDM 1 Client" license activates one SIMATIC PDM client with one SIMATIC PDM session. A SIMATIC PDM session is defined as one opened portal together with the parameter views of the field devices opened from the portal. Each additional simultaneously opened SIMATIC PDM session on this client requires its own "SIMATIC PDM 1 Client" license. For larger projects, up to 30 registered SIMATIC PDM Clients are possible.

Design (continued)

The "SIMATIC PDM 1 Client" license must be transferred to the computer with the SIMATIC PDM Server. The SIMATIC PDM Standalone Server product package comes with 2 "SIMATIC PDM 1 Client" licenses.

SIMATIC PDM Software Media Package V9.1

The current SIMATIC PDM installation software is offered without a license in the form of the SIMATIC PDM Software Media Package. Purchasing of corresponding software licenses is necessary to unlock the product-specific functionalities.

With SIMATIC PDM product packages, a SIMATIC PDM Software Media Package is supplied together with each ordering item when supplied via "Goods delivery" (not with optional product components). Further SIMATIC PDM Software Media Packages must be ordered separately as required.

The software of the SIMATIC PDM Media Package without a license can be used for demonstration purposes in demo mode. The SIMATIC PDM functionality is limited as follows in demo mode:

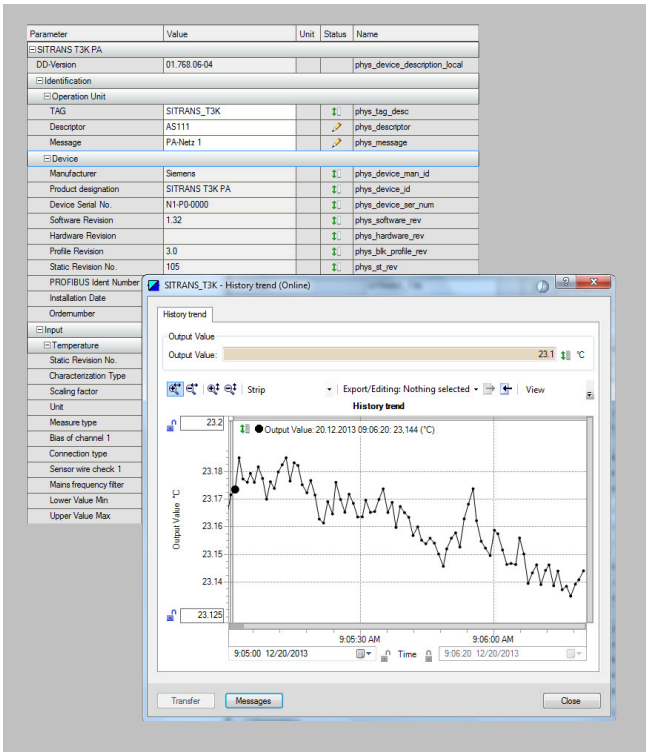
- Stand alone mode
- Storage functions disabled
- Export and import functions disabled
- Expanded functionality disabled
- Communication functions restricted

Information on ordering and delivery

Installation software for the SIMATIC PDM is provided in the form of a software media package. Software media packages and product-specific software licenses are separate packages, which are not merged into a single delivery unit for a goods delivery.

The number of delivered software media packages can be determined by the number of ordered items. You can find more information under "Goods delivery" in the "Software Media and Logistics" section, "PCS 7 Software Packages" subsection in the ST PCS 7 catalog.

Function



SIMATIC PDM, parameter view and trend window

SIMATIC PDM core functions

- Creation of project-specific device libraries
- Adjustment and modification of device parameters
- Comparing (e.g. project and device data)
- Plausibility testing of data input
- Device identification and testing
- Device status indication (operating modes, interrupts, states)
- Simulation
- Diagnostics (standard, detailed)
- Export/import (parameter data, logs, documents)
- Management (e.g. networks and PCs)
- Commissioning functions, e.g. measuring circuit tests of device data
- Lifecycle management functions, e.g. for device replacement
- Global and device-specific modification logbook for user operations (audit trail)
- Device-specific calibration reports
- Graphic presentations of echo envelope curves, trend displays, valve diagnosis results etc.
- Presentation of incorporated manuals
- Document manager for integration of up to 10 multimedia files

Integration

Device integration

SIMATIC PDM supports all devices defined by the Electronic Device Description (EDD) and devices described by Field Device Integration Technology (FDI Technology V1.2). EDD is standardized to EN 50391 and IEC 61804. Internationally it is the most widely used standardized technology for device integration. At the same time, it is the guideline of the established organizations for

- PROFIBUS and PROFINET (PI – PROFIBUS & PROFINET International)
- HART (FCG: Field Communication Group)
- Foundation Fieldbus (FCG: Field Communication Group)

The devices are integrated directly in SIMATIC PDM through a company-specific EDD or through the libraries of the FCG. To achieve improved transparency, they can be managed in project-specific device libraries.

Field devices are described in the EDD or FDI device description packages in terms of functionality and construction using the Electronic Device Description Language (EDDL). Using this description, SIMATIC PDM automatically creates its user interfaces with the specific device data. By simply importing the manufacturer's device-specific device description packages, you can update existing devices and integrate further devices in SIMATIC PDM.

Technical support

If you wish to use devices which cannot be found in the SIMATIC PDM device description library, we would be pleased to help you integrate them.

Support Request

You can request support by service specialists at Technical Support by using a "Support Request" on the Internet:

Contacts in the Region

The Technical Support responsible for your Region can be found on the Internet at:

Selection and ordering data

SIMATIC PDM Stand alone product packages	
Minimum configuration	
SIMATIC PDM Single Point V9.1 including 1 TAG; product package for operation and configuration of one field device; communication via PROFIBUS DP/PA, HART (modem, RS 232, PROFIBUS/PROFINET), Modbus, Ethernet or PROFINET Additional functions or SIMATIC PDM TAGs are not possible 6 languages (English, German, French, Italian, Spanish, Chinese), software class A, runs on Windows 7 Ultimate 64-bit, Windows 10 Enterprise 2015 LTSB 64-bit, Windows Server 2012 R2 Standard 64-bit or Microsoft Windows Server 2016 Standard 64-bit (see SIMATIC PDM V9.1 Readme for latest information), floating license for 1 user Without SIMATIC PCS 7 Software Media Package	
• Goods delivery License key on USB flash drive and Certificate of License, bundle with 1 × SIMATIC PDM Software Media Package per order item	**6ES7658-3HA68-0YA5**
• Online delivery License key download and online Certificate of License combined with SIMATIC PDM Software Media Package (SIMATIC PDM and device library software download) : Email address required!	**6ES7658-3HA68-0YH5**
Basic configuration for individual product package as well as local service and parameter assignment stations	
SIMATIC PDM Basic V9.1 including 4 TAGs; product package for operation and configuration of field devices and components; communication via PROFIBUS DP/PA, HART (modem, RS 232, PROFIBUS/PROFINET), Modbus, Ethernet or PROFINET 6 languages (English, German, French, Italian, Spanish, Chinese), software class A, runs on Windows 7 Ultimate 64-bit, Windows 10 Enterprise 2015 LTSB 64-bit, Windows Server 2012 R2 Standard 64-bit or Microsoft Windows Server 2016 Standard 64-bit (see SIMATIC PDM V9.1 Readme for latest information), floating license for 1 user Without SIMATIC PCS 7 Software Media Package	
• Goods delivery License key on USB flash drive and Certificate of License, bundle with 1 × SIMATIC PDM Software Media Package per order item	**6ES7658-3AB68-0YA5**
• Online delivery License key download and online Certificate of License combined with SIMATIC PDM Software Media Package (SIMATIC PDM and device library software download) : Email address required!	**6ES7658-3AB68-0YH5**

Selection and ordering data (continued)

Configuration for local service and parameter assignment station	
SIMATIC PDM Service V9.1 Product package for service and measuring circuit tests on a local service station, with • SIMATIC PDM Basic incl. 4 TAGs • 50 TAGs 6 languages (English, German, French, Italian, Spanish, Chinese), software class A, runs on Windows 7 Ultimate 64-bit, Windows 10 Enterprise 2015 LTSB 64-bit, Windows Server 2012 R2 Standard 64-bit or Microsoft Windows Server 2016 Standard 64-bit (see SIMATIC PDM V9.1 Readme for latest information), floating license for 1 user Without SIMATIC PCS 7 Software Media Package	
• Goods delivery License key on USB flash drive and Certificate of License, bundle with 1 × SIMATIC PDM Software Media Package per order item	**6ES7658-3JD68-0YA5**
• Online delivery License key download and online Certificate of License combined with SIMATIC PDM Software Media Package (SIMATIC PDM and device library software download) : Email address required!	**6ES7658-3JD68-0YH5**
Configuration for central service and parameter assignment station	
SIMATIC PDM stand-alone server V9.1 Product package for service and device management in plant units, with - SIMATIC PDM Basic incl. 4 TAGs - SIMATIC PDM Extended - SIMATIC PDM Server - 2 × SIMATIC PDM 1 Client - 100 TAGs 6 languages (English, German, French, Italian, Spanish, Chinese), software class A, runs with Windows 7 Ultimate 64-bit, Windows 10 Enterprise 2015 LTSB 64-bit, Windows Server 2012 R2 Standard 64-bit or Microsoft Windows Server 2016 Standard 64-bit (see SIMATIC PDM V9.1 Readme for latest information), single license for 1 installation Without SIMATIC PCS 7 Software Media Package	
• Goods delivery License key on USB flash drive and Certificate of License, bundle with 1 × SIMATIC PDM Software Media Package per order item	**6ES7658-3TX68-0YA5**
• Online delivery License key download and online Certificate of License combined with SIMATIC PDM Software Media Package (SIMATIC PDM and device library software download) : Email address required!	**6ES7658-3TX68-0YH5**
SIMATIC PDM system-integrated product packages	

Selection and ordering data (continued)

Configuration for local SIMATIC S7 engineering and service station	
SIMATIC PDM S7 V9.1 Product package for use in a SIMATIC S7 configuration environment, with - SIMATIC PDM Basic incl. 4 TAGs - SIMATIC PDM Extended - SIMATIC PDM Integration in STEP 7/PCS 7 - 100 TAGs 6 languages (English, German, French, Italian, Spanish, Chinese), software class A, runs on Windows 7 Ultimate 64-bit, Windows 10 Enterprise 2015 LTSB 64-bit, Windows Server 2012 R2 Standard 64-bit or Microsoft Windows Server 2016 Standard 64-bit (see SIMATIC PDM V9.1 Readme for latest information), floating license for 1 user Without SIMATIC PCS 7 Software Media Package	
• Goods delivery License key on USB flash drive and Certificate of License, bundle with 1 × SIMATIC PDM Software Media Package per order item	**6ES7658-3KD68-0YA5**
• Online delivery License key download and online Certificate of License combined with SIMATIC PDM Software Media Package (SIMATIC PDM and device library software download) : Email address required!	**6ES7658-3KD68-0YH5**
Configuration for central SIMATIC PCS 7 engineering and service stations	
SIMATIC PDM PCS 7 V9.1 Product package for use in a SIMATIC PCS 7 configuration environment 6 languages (English, German, French, Italian, Spanish, Chinese), software class A, runs with Windows 7 Ultimate 64-bit, Windows 10 Enterprise 2015 LTSB 64-bit, Windows Server 2012 R2 Standard 64-bit or Microsoft Windows Server 2016 Standard 64-bit (see SIMATIC PDM V9.1 Readme for latest information) Floating license for 1 user, with - SIMATIC PDM Basic incl. 4 TAGs - SIMATIC PDM Extended - SIMATIC PDM Integration in STEP 7/PCS 7 - SIMATIC PDM Routing - 100 TAGs Without SIMATIC PCS 7 Software Media Package	
• Goods delivery License key on USB flash drive and Certificate of License, bundle with 1 × SIMATIC PDM Software Media Package per order item	**6ES7658-3LD68-0YA5**
• Online delivery License key download and online Certificate of License combined with SIMATIC PDM Software Media Package (SIMATIC PDM and device library software download) : Email address required!	**6ES7658-3LD68-0YH5**

Selection and ordering data (continued)

SIMATIC PDM PCS 7-FF V9.1 Product package for use in a SIMATIC PCS 7 configuration environment, including FOUNDATION Fieldbus H1 communication 6 languages (English, German, French, Italian, Spanish, Chinese), software class A, runs with Windows 7 Ultimate 64-bit, Windows 10 Enterprise 2015 LTSB 64-bit, Windows Server 2012 R2 Standard 64-bit or Microsoft Windows Server 2016 Standard 64-bit (see SIMATIC PDM V9.1 Readme for latest information) Floating license for 1 user, with - SIMATIC PDM Basic incl. 4 TAGs - SIMATIC PDM Extended - SIMATIC PDM Integration in STEP 7/PCS 7 - SIMATIC PDM Routing - SIMATIC PDM Communication FOUNDATION Fieldbus - 100 TAGs Without SIMATIC PCS 7 Software Media Package	
• Goods delivery License key on USB flash drive and Certificate of License, bundle with 1 × SIMATIC PDM Software Media Package per order item	**6ES7658-3MD68-0YA5**
• Online delivery License key download and online Certificate of License combined with SIMATIC PDM Software Media Package (SIMATIC PDM and device library software download) : Email address required!	**6ES7658-3MD68-0YH5**
SIMATIC PDM PCS 7 Server V9.1 Product package for use in a SIMATIC PCS 7 configuration environment, including server functionality 6 languages (English, German, French, Italian, Spanish, Chinese), software class A, runs with Windows 7 Ultimate 64-bit, Windows 10 Enterprise 2015 LTSB 64-bit, Windows Server 2012 R2 Standard 64-bit or Microsoft Windows Server 2016 Standard 64-bit (see SIMATIC PDM V9.1 Readme for latest information) Single license for 1 installation, with - SIMATIC PDM Basic incl. 4 TAGs - SIMATIC PDM Extended - SIMATIC PDM Integration in STEP 7/PCS 7 - SIMATIC PDM Routing - SIMATIC PDM Server - 100 TAGs Without SIMATIC PCS 7 Software Media Package	
• Goods delivery License key on USB flash drive and Certificate of License, bundle with 1 × SIMATIC PDM Software Media Package per order item	**6ES7658-3TD68-0YA5**
• Online delivery License key download and online Certificate of License combined with SIMATIC PDM Software Media Package (SIMATIC PDM and device library software download) : Email address required!	**6ES7658-3TD68-0YH5**

Selection and ordering data (continued)

Optional product components for SIMATIC PDM	
SIMATIC PDM Extended V9.1 For enabling additional system functions 6 languages (English, German, French, Italian, Spanish, Chinese), software class A, runs on Windows 7 Ultimate 64-bit, Windows 10 Enterprise 2015 LTSB 64-bit, Windows Server 2012 R2 Standard 64-bit or Microsoft Windows Server 2016 Standard 64-bit (see SIMATIC PDM V9.1 Readme for latest information), floating license for 1 user Without SIMATIC PCS 7/SIMATIC PDM Software Media Package	
• Goods delivery License key on USB flash drive and Certificate of License	6ES7658-3NX68-2YB5
• Online delivery (without SIMATIC PCS 7/SIMATIC PDM Software Media Package) License key download and online Certificate of License : Email address required!	6ES7658-3NX68-2YH5
SIMATIC PDM Integration in STEP 7/SIMATIC PCS 7 V9.1 For integration in a SIMATIC S7/SIMATIC PCS 7 configuration environment 6 languages (English, German, French, Italian, Spanish, Chinese), software class A, runs on Windows 7 Ultimate 64-bit, Windows 10 Enterprise 2015 LTSB 64-bit, Windows Server 2012 R2 Standard 64-bit or Microsoft Windows Server 2016 Standard 64-bit (see SIMATIC PDM V9.1 Readme for latest information), floating license for 1 user Without SIMATIC PCS 7/SIMATIC PDM Software Media Package	
• Goods delivery License key on USB flash drive and Certificate of License	6ES7658-3BX68-2YB5
• Online delivery License key download and online Certificate of License : Email address required!	6ES7658-3BX68-2YH5
SIMATIC PDM Routing V9.1 For plant-wide navigation to field devices 6 languages (English, German, French, Italian, Spanish, Chinese), software class A, runs on Windows 7 Ultimate 64-bit, Windows 10 Enterprise 2015 LTSB 64-bit, Windows Server 2012 R2 Standard 64-bit or Microsoft Windows Server 2016 Standard 64-bit (see SIMATIC PDM V9.1 Readme for latest information), floating license for 1 user Without SIMATIC PCS 7/SIMATIC PDM Software Media Package	
• Goods delivery License key on USB flash drive and Certificate of License	6ES7658-3CX68-2YB5
• Online delivery License key download, online Certificate of License : Email address required!	6ES7658-3CX68-2YH5

Selection and ordering data (continued)

SIMATIC PDM Server V9.1 For activating the server functionality 6 languages (English, German, French, Italian, Spanish, Chinese), software class A, runs with Windows 7 Ultimate 64-bit, Windows 10 Enterprise 2015 LTSB 64-bit, Windows Server 2012 R2 Standard 64-bit or Microsoft Windows Server 2016 Standard 64-bit (see SIMATIC PDM V9.1 Readme for latest information), single license for 1 installation Without SIMATIC PCS 7/SIMATIC PDM Software Media Package	
• Goods delivery License key on USB flash drive, Certificate of License	6ES7658-3TX68-2YB5
• Online delivery License key download and online Certificate of License : Email address required!	6ES7658-3TX68-2YH5
SIMATIC PDM Communication FOUNDATION Fieldbus V9.1 For communication with field devices on FOUNDATION Fieldbus H1 6 languages (English, German, French, Italian, Spanish, Chinese), software class A, runs on Windows 7 Ultimate 64-bit, Windows 10 Enterprise 2015 LTSB 64-bit, Windows Server 2012 R2 Standard 64-bit or Microsoft Windows Server 2016 Standard 64-bit (see SIMATIC PDM V9.1 Readme for latest information), floating license for 1 user Without SIMATIC PCS 7/SIMATIC PDM Software Media Package	
• Goods delivery License key on USB flash drive and Certificate of License	6ES7658-3QX68-2YB5
• Online delivery License key download and online Certificate of License : Email address required!	6ES7658-3QX68-2YH5
SIMATIC PDM HART Server V9.1 For using HART multiplexers as well as for configuration of WirelessHART field devices 6 languages (English, German, French, Italian, Spanish, Chinese), software class A, runs on Windows 7 Ultimate 64-bit, Windows 10 Enterprise 2015 LTSB 64-bit, Windows Server 2012 R2 Standard 64-bit or Microsoft Windows Server 2016 Standard 64-bit (see SIMATIC PDM V9.1 Readme for latest information), floating license for 1 user Without SIMATIC PCS 7/SIMATIC PDM Software Media Package	
• Goods delivery License key on USB flash drive and Certificate of License	6ES7658-3EX68-2YB5
• Online delivery License key download and online Certificate of License : Email address required!	6ES7658-3EX68-2YH5

Selection and ordering data (continued)

SIMATIC PDM 1 Client Cumulative client license for SIMATIC PDM configurations with SIMATIC PDM Server, software class A, single license for 1 installation	
• Goods delivery License key on USB flash drive and Certificate of License	**6ES7658-3UA00-2YB5**
• Online delivery License key download and online Certificate of License : Email address required!	**6ES7658-3UA00-2YH5**
SIMATIC PDM TAGs TAG licenses for expanding the available TAG volume, cumulative, software class A, floating license for 1 user	
• Goods delivery License key on USB flash drive and Certificate of License	
- 10 TAGs	**6ES7658-3XC00-2YB5**
- 100 TAGs	**6ES7658-3XD00-2YB5**
- 1 000 TAGs	**6ES7658-3XE00-2YB5**
• Online delivery License key download and online Certificate of License : Email address required!	
- 10 TAGs	**6ES7658-3XC00-2YH5**
- 100 TAGs	**6ES7658-3XD00-2YH5**
- 1 000 TAGs	**6ES7658-3XE00-2YH5**
SIMATIC PDM Software Media Package	
SIMATIC PDM Software Media Package V9.1 Installation software without license, 6 languages (English, German, French, Italian, Spanish, Chinese), software class A, runs on Windows 7 Ultimate 64-bit, Windows 10 Enterprise 2015 LTSB 64-bit, Windows Server 2012 R2 Standard 64-bit or Microsoft Windows Server 2016 Standard 64-bit (see SIMATIC PDM V9.1 Readme for latest information) Without SIMATIC PCS 7 Software Media Package Note: Can only be used in conjunction with a valid license or in demo mode!	
• Goods delivery SIMATIC PDM and device library software on DVD	**6ES7658-3GX68-0YT8**
• Online delivery SIMATIC PDM and device library software download : Email address required!	**6ES7658-3GX68-0YG8**

Technical specifications

SIMATIC PDM V9.1	
Hardware	• PG/PC/notebook with processor corresponding to operating system requirements
Operating system (alternatives)	• Windows 7 Professional/Ultimate/Enterprise SP1 32-bit/64-bit • Windows 10 Enterprise 2015 LTSB 64-bit • Windows Server 2012 R2 SP1 Standard Edition, 64-bit • Microsoft Windows Server 2016 Standard 64-bit
Integration in STEP 7/PCS 7	• SIMATIC PCS 7 V8.0+SP2/V8.1/V8.2 (without Communication FOUNDATION Fieldbus) • SIMATIC PCS 7 V9.0 • STEP 7 V5.5+SP4/V5.6
SIMATIC PDM Client	• Microsoft Internet Explorer 10 or 11 • Google Chrome

More information

Update/Upgrade

Existing installations based on SIMATIC PDM V6.x or V8.x/V9.0 (including SP in each case) can be upgraded straight to V9.1 with upgrade packages.

Projects with SIMATIC PDM V7.0 can only be upgraded to version 9.1 by first upgrading to version 8.0. Two upgrade packages are offered for SIMATIC PDM V8.x/V9.0:

- SIMATIC PDM Upgrade Package Basic[1)] (with/without SIMATIC PDM HART Server option in each case) for configurations based on:
  - SIMATIC PDM Basic
  - SIMATIC PDM Service
  - SIMATIC PDM S7
  - SIMATIC PDM PCS 7
- SIMATIC PDM Upgrade Package Complete[1)] for configurations based on:
  - SIMATIC PDM PCS 7 Server
  - SIMATIC PDM PCS 7-FF

[1)] Optional product components for SIMATIC PDM such as PDM Extended, PDM Integration in STEP 7/PCS 7, PDM Routing, PDM Server and PDM Communication FOUNDATION Fieldbus are each included in a product package listed in the SIMATIC PDM Upgrade Package Basic or SIMATIC PDM Upgrade Package Complete and are implicitly authorized to be updated via the corresponding license. The SIMATIC PDM Upgrade Package Complete is required for use of the product components PDM Server or PDM Communication FOUNDATION Fieldbus.

For more information, see the section "Update/upgrade packages", "Updates/upgrades asynchronous to the PCS 7 version" - "Upgrades SIMATIC PDM".

Overview

SITRANS DTM provides an easy way for Field Device Tool (FDT)/ Device Type Manager (DTM) users to parameterize Siemens Instruments using international standards.

Benefits

- Same look and feel for all Siemens field instruments
- Support for Quick start wizards and other dialog boxes
- Quick overview using table and tree views
- Online and offline configuration
- Conformity to IEC profiles for HART and PROFIBUS

Application

Electronic Device Description (EDD) is a proven way to describe the behavior and functionality of field instruments and other automation components.

For many years, EDD-based tools such as SIMATIC PDM from Siemens or handheld communicator have been used successfully in the process industry. Some years ago, an additional technology called FDT / DTM with the same approach was introduced to the market. To support the FDT DTM Technology for Siemens devices, the software SITRANS DTM has been developed which combines both technologies, EDD and FDT.

SITRANS DTM uses EDDs as the device description and provides the DTM interface to allow the integration of our field instruments into FDT-frame applications.

The following field instruments are currently available in SITRANS DTM:

- SITRANS TH300 HART
- SITRANS TH400 PA
- SITRANS P300 HART
- SITRANS P DSIII HART
- SITRANS P F M MAGFLO MAG6000 DP/PA
- SITRANS F C MASSFLO MASS6000 PA/PA
- SITRANS PROBE LU HART 6 m, 12 m
- SITRANS LR200 HART, PA
- SITRANS LR250 HART, PA
- SITRANS LR260 HART, PA
- SITRANS LR560 HART, PA
- SIPART PS2 HART, PA

Additionally, the SIPART PS2 FF has a DTM.

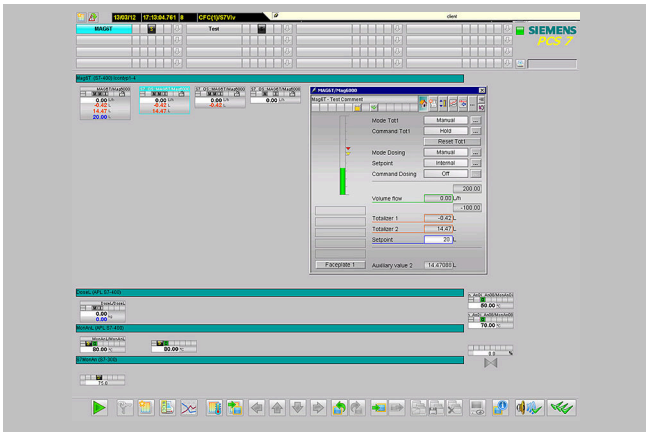
Technical specifications

SITRANS DTM	
Current Version	3.1
Compatible with PACTware versions	3.6, 4.0, 4.1
Compatible with Windows	XP, 7
Certified by FDT group	Yes

Free DTM software can be downloaded here:

- SITRANS DTM V3.1: https://support.industry.siemens.com/cs/document/53754140/software%3A-sitrans-dtm-v3-1?dti=0&lc=de-WW
- SITRANS DTM V4.1: https://support.industry.siemens.com/cs/document/109484287/sitrans-dtm-v4-1?dti=0&lc=de-WW

Overview



The SITRANS Library for SIMATIC PCS 7 extends the standard functionality of the SIMATIC PCS 7 process control system concentrated in the SIMATIC PCS 7 Advanced Process Library (APL) with technological blocks and faceplates for device-specific functions of the SITRANS field devices.

Benefits

The SITRANS Library allows you to easily operate all device functions, such as dosing, totalizer, min/max pointer, path diagnostic, alarm diagnostics, zero point adjustment (ZPA), etc. In addition, process related diagnostic information is also provided.

The SITRANS Library is based on the modern design of the Advanced Process Library (APL). Together with the APL, the SITRANS Library enables you to create harmonic overall solutions with a consistent look & feel and optimum use of the functions of the SITRANS field devices in many industries.

It helps accelerate the engineering process, reduces the time-to-market, and simplifies process control.

Note:

SITRANS Library V13 will support PCS 7 9.1 SP1 or higher.

Application

The SITRANS Library is best used in combination with SIMATIC PCS 7 and SITRANS field devices.

A current list of SITRANS field devices and the supported SIMATIC PCS 7 versions is available at
http://new.siemens.com/sitranslibrarypcs7devices

The SITRANS Library can be used for all core sectors of the process industry. These are:

- Chemical industry
- Pharmaceutical industry
- Water and wastewater
- Glass and solar
- Oil & gas
- Food and beverage industry
- Minerals and mining

Design

The product structure is geared toward the operational environment in the SIMATIC PCS 7 process control system. Consequently, SITRANS Library is offered in the form of an engineering component:

- SITRANS Library users can use the library with their supported PCS 7 version. No additional licenses are required for Engineering or OS runtime.

The SITRANS Library product component enables you to perform configuration work on a SIMATIC PCS 7 engineering station.

The SITRANS Library product component allows you to run blocks from a library on an automation system.

When using function blocks from SITRANS Library in SIMATIC PC 7 automation systems, please note that SIMATIC PCS 7 AS Runtime POs are also booked.

Function

SITRANS Library for SIMATIC PCS 7

Sublibrary for the functional expansion of the SIMATIC PCS 7 Advanced Process Library with:

- Function blocks and faceplates for SITRANS field devices with S7-400 and S7 -410 systems.

The function blocks are configured in CFC.

Operator control and monitoring from a panel is configured with the panel interface blocks for the SITRANS F M MAG 6000 DP. Taking operating rights and hierarchical operating concepts (multi-control room operation) into consideration, the technological function can then be operated from both an operator station and a Touch Panel.

For detailed information on which field devices, which systems and system versions are supported as well as on the free download, see:

http://new.siemens.com/sitranslibrarypcs7devices

Selection and ordering data

Selection and ordering data	Article No.
SITRANS Library Block library for SIMATIC PCS 7 as of V13.0 with function blocks and faceplates as well as electronic documentation. The following operating systems are supported by SIMATIC PCS 7 V9.1 SP1: • Windows 10 Enterprise LTSC 2019 • Windows Server 2019 Standard Edition • Windows Server 2019 Datacenter Edition Engineering license for one customer plant Type of delivery: free download	**7MP2990-0AA00**

Overview

Today, distributed automation solutions based on open field buses are state-of-the-art in large areas of the process engineering industry. It is only with fieldbuses that the functional benefits of digital communication can be put to full use, e.g. better resolution of measured values, diagnostics options and remote parameterization.

Like PROFIBUS PA, the FF bus (FOUNDATION Fieldbus) is an open field bus with a large installed base for a wide range of application. Standardization according to IEC 61158 / EN 50170 provides you with future protection for your investment.

Benefits

- A uniform modular system from the sensor to the connection to the control level enables new plant concepts
- Problem-free exchangeability of field devices, including from different manufacturers, that comply with the standard profile
- Networking of transmitters, valves, actuators, etc.
- Implementation of intrinsically safe applications through use of the field bus in hazardous areas
- Easy installation of 2-wire cables for joint energy supply and data transfer
- Reduced cabling costs through savings of material and installation time
- Reduced configuration costs through central, simple engineering of the field devices, also cross-vendor
- Fast and error-free installation
- Lower service costs thanks to simpler wiring and plant structure plus extensive diagnostics options
- Greatly reduced commissioning costs through simplified loop check
- Scaling/digitizing of the measured values in the field device already, hence no rescaling necessary in SIMATIC PCS 7

Application

The transfer technology of the FOUNDATION Fieldbus is tailored to the needs of the process industry. Interoperability between field devices from different manufacturers and remote parameterization of the field devices during operation are guaranteed by the standardized communication services.

FOUNDATION Fieldbus can just as readily be used in standard environments as in hazardous areas. For use in hazardous areas, FOUNDATION Fieldbus and all connected devices have to be designed with type of explosion protection Ex [i].

Function

FOUNDATION Fieldbus enables the direct connection of actuators and sensors.

FOUNDATION Fieldbus is based on a transfer optimized for intrinsically safe application. The transfer technology is internationally standardized in IEC 61158.

For FOUNDATION Fieldbus the data and energy supply for the field devices can be directed through a 2-wire cable.

FOUNDATION Fieldbus enables device-to-device communication ("control in the field").

Integration

Siemens field devices for process automation which are listed in this catalog and can be controlled using Foundation Fieldbus:

Measuring instruments for pressure

SITRANS P300

SITRANS P DS III

SITRANS P410

Measuring instruments for temperature

SITRANS TH400

Electropneumatic positioners

SIPART PS2

Flow meters

SITRANS F M MAG 6000

SITRANS F M MAG 6000 I / I Ex

SITRANS F C MASS 6000

Level meters

SITRANS LR250

Overview

HART is a widely used communication standard for field devices. HART devices are specified by the FieldComm Group.

The HART standard expands the analog 4 to 20 mA signal to modulated, industry-tested, digital signal transmission.

Benefits

- Tried-and-tested analog measured value transmission
- Simultaneous digital communication with bidirectional data transfer
- Possibility to transfer multiple measured variables from a field device (e.g. diagnostics, maintenance and process information)
- Connection to higher-level systems such as PROFIBUS DP.
- Easy installation and commissioning

Benefits in connection with SIMATIC PDM

- Manufacturer-neutral operation of all HART devices through standardized parameter sets
- HART field devices described by HART DLL are integrated in SIMATIC PDM via the Fieldcomm catalog. HART-DD (Device Description) in SIMATIC PDM standardized, manufacturer-neutral and very widely used. Additional field devices are integrated in SIMATIC PDM via EDD (Electronic Device Description)
- Simple operation and commissioning of field devices, even in usage locations that are difficult to access
- Advanced diagnostics, evaluating and logging functions

Application

Devices can be connected in different ways:

- Through the distributed I/O
  - SIMATIC ET 200M, ET 200SP
  - SIMATIC ET 200iSP with the HART modules

  or with analog modules 4 to 20 mA and HART Handheld Communicator,
- via a HART modem with which a point-to-point connection between the PC or Engineering System and the HART device can be established
- via HART multiplexers which are contained in the HART server of the HCF.

Integration

Siemens field devices listed in this catalog for process automation that can be controlled with HART:

Measuring instruments for pressure
SITRANS P300
SITRANS P310
SITRANS P320
SITRANS P DS III
SITRANS P410
SITRANS P420
SITRANS P500

Measuring instruments for temperature
SITRANS TF
SITRANS TH300
SITRANS TH320
SITRANS TH420
SITRANS TR300
SITRANS TR320
SITRANS TR420
SITRANS TW

Flow meters
SITRANS F M MAG 5000
SITRANS F M MAG 6000 19" / IP67
SITRANS F M MAG 6000 I / I Ex
SITRANS F M TRANSMAG 2
SITRANS F C MASS 6000 19" / IP67 / Ex d
SITRANS F C FCT030
SITRANS F S FST030
SITRANS FUS060
SITRANS FX300
SITRANS FX330

Level meters
SITRANS Probe LR
SITRANS Probe LU
SITRANS LUT400
SITRANS Probe LU240
SITRANS LR200
SITRANS LR250
SITRANS LR260
SITRANS LR460
SITRANS LR560
SITRANS LG 240 / LG 250 / LG 260 / LG270

Electropneumatic positioners
SIPART PS2

Power supply units and isolation amplifiers
SITRANS I

Overview

Today, distributed automation solutions based on open fieldbuses are standard in many areas of the manufacturing industry and in process engineering. It is only with fieldbuses that the functional benefits of digital communication can be put to full use, e.g. better resolution of measured values, diagnostics options and remote parameterization.

Today, PROFIBUS is the most successful open fieldbus with a large installed base for a wide range of applications. Standardization according to IEC 61158 / EN 50170 provides you with future protection for your investment.

Benefits

- Fully modular system, from the sensor through to the control level, permits new plant concepts
- Problem-free exchangeability of field devices, including from different manufacturers, that comply with the standard profile
- Networking of transmitters, valves, actuators, etc.
- Implementation of intrinsically safe applications through use of the field bus in hazardous areas
- Easy installation of 2-wire cables for joint power supply and data transfer
- Reduced cabling costs through savings of material and installation time
- Reduced configuration costs through central, simple engineering of the field devices (PROFIBUS PA and HART with SIMATIC PDM, also with multi-vendor support)
- Fast and error-free installation
- Lower service costs thanks to simpler wiring and plant structure plus extensive diagnostics options
- Greatly reduced commissioning costs through simplified loop check
- Scaling/digitizing of the measured value in the field device already, hence no rescaling necessary in SIMATIC PCS 7

Application

PROFIBUS is suitable for fast communication with distributed I/O (PROFIBUS DP) in production automation as well as for communication tasks in process automation (PROFIBUS PA). It is the first fieldbus system that meets the demands of both areas with identical communication services.

The transfer technology of PROFIBUS PA is tailored to the requirements of the process industry. The standardized communications services guarantee interoperability between multi-vendor field devices and remote configuration of the field devices during operation.

With SIMATIC PDM (Process Device Manager), a universal tool that is not manufacturer-specific and is used for configuring, parameterizing, commissioning and diagnosing intelligent process devices on PROFIBUS, a variety of process devices of different manufacturers can be configured using a uniform graphic user interface.

PROFIBUS PA can be used both in standard environments and in hazardous areas. For use in hazardous areas, PROFIBUS PA and all connected devices have to be designed with type of protection Ex [i].

The uniform protocol of PROFIBUS DP and PROFIBUS PA enables the linking of both networks and thus the combination of timing performance and intrinsically safe transmission technology.

Function

PROFIBUS PA expands PROFIBUS DP with process-level components for direct connection of actuators and sensors. With PROFIBUS PA, the RS 485 transmission method is replaced by a different transmission method optimized for intrinsically safe applications. Both methods are standardized internationally in IEC 61158.

PROFIBUS PA uses the same communication protocol as PROFIBUS DP; communication services and frames are identical.

With PROFIBUS PA, the information and energy supply for supplying the field devices can be conducted via a 2-wire cable.

Integration

Siemens field devices for process automation listed in this catalog that can be controlled with PROFIBUS:

PROFIBUS PA

Measuring instruments for pressure
SITRANS P300
SITRANS P DS III
SITRANS P410

Measuring instruments for temperature
SITRANS TH400

Flow meters
SITRANS F M MAG 6000 19" / IP67
SITRANS F M MAG 6000 I / I Ex
SITRANS F M TRANSMAG 2
SITRANS F C MASS 6000 19" / IP67 / Ex d
SITRANS FUS060

Level meters
Pointek CLS 200
Pointek CLS 300
SITRANS Probe LU
SITRANS LR200
SITRANS LR250
SITRANS LR260
SITRANS LR460
SITRANS LR560

Electropneumatic positioners
SIPART PS2

Acoustic sensors for pump monitoring
SITRANS DA400

PROFIBUS DP

Measuring instruments for temperature
SITRANS TO500

Flow meters
SITRANS F M MAG 6000 19" / IP67
SITRANS F M MAG 6000 I
SITRANS F C MASS 6000 19" / IP67
SIFLOW FC070 (via ET 200M)

Level meters
HydroRanger 200
MultiRanger 100/200
SITRANS LU 01, LU 02, LU 10

Acoustic sensors for pump monitoring
SITRANS DA400