

Communication and software

HART[®]
COMMUNICATION PROTOCOL

PROFI
PROCESS FIELD BUS
BUS

 **Fieldbus**
Foundation

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Communication and software

Communication

HART protocol

Overview

HART is a widely used communication standard for field devices. Specification of HART devices takes place through the HCF (HART Communication Foundation).

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

Benefits

- Service-proven analog measured value transmission
- Simultaneous digital communication with bidirectional data transmission
- Possibility of transmitting several measured variables from one field device (e.g. diagnosis, maintenance and process data)
- Connection to higher-level systems such as PROFIBUS DP
- Easy installation and startup

Use in conjunction with SIMATIC PDM

- Cross-vendor operation of all HART devices by means of standardized parameter records
- HART field devices that are described by HART DDL are integrated in SIMATIC PDM through the HCF catalog. HART DD (Device Description) is standardized in SIMATIC PDM, multi-vendor and very widely used. Other HART field devices are integrated in SIMATIC PDM through EDD (Electronic Device Description)
- Easy operation and startup of field devices, also in hard-to-reach locations
- Expanded diagnosis, evaluation and logging functions

Application

These devices can be connected in different ways:

- Using the distributed I/O system
 - SIMATIC ET 200M
 - SIMATIC ET 200iSP with the HART modules or with analog modules 4 to 20 mA and a HART handheld communicator
- Using a HART modem, with which a point-to-point connection is established between the PC or engineering station and the HART device
- Using HART multiplexers, which are contained in the HART server of the HCF

Integration

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

Measuring instruments for pressure

SITRANS P DS III
SITRANS P P300

Measuring instruments for temperature

SITRANS TF
SITRANS TH300
SITRANS TR300
SITRANS TW

Flowmeters

SITRANS F M MAGFLO 5000 HART
SITRANS F M MAGFLO 6000 19" / IP67 / I / I Ex d
SITRANS F M Transmag 2
SITRANS F C MASSFLO 6000 19" / IP67 / Ex d
SITRANS FUS060

Measuring instruments for level

Pointek CLS 500
SITRANS Probe LR
SITRANS Probe LU
SITRANS LR200
SITRANS LR250
SITRANS LR260
SITRANS LR300
SITRANS LR400
SITRANS LR460
SITRANS LC 500

Electropneumatic positioners

SIPART PS2

Power supply units and isolation amplifiers

SITRANS I

Selection and Ordering data

Order No.

HART modem

- With RS 232 connection ▶ **7MF4997-1DA**
D)
- With USB connection ▶ **7MF4997-1DB**
D)

▶ Available ex stock

D) Subject to export regulations AL:N, ECCN: EAR99H

Overview

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

PROFIBUS is today's most successful open field bus with a large installed base for a wide range of application. Standardization to IEC 61158 / EN 50170 provides you with future protection for your investment.

Benefits

- A uniform modular system from the sensor into 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 lines for joint energy supply and data transmission
- 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 cross-vendor)
- Fast and error-free installation
- Lower service costs thanks to simpler wiring and plant structure plus extensive diagnosis 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

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

The transmission technique of the PROFIBUS PA 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.

Using SIMATIC PDM (Process Device Manager), a uniform and cross-vendor tool for configuring, parameterizing, commissioning and diagnosis of intelligent process devices on the PROFIBUS, it is possible to configure a wide variety of process devices from different manufacturers using one uniform graphical user interface.

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

The uniform protocol of PROFIBUS DP and PROFIBUS PA enables the two networks to be interlinked, thus combining time-based performance with intrinsically safe transmission.

Function

PROFIBUS PA expands PROFIBUS DP with near-process components for the direct connection of actuators and sensors.

For PROFIBUS PA the RS 485 transmission technique was replaced by a different technique optimized for intrinsically safe application. Both techniques are internationally standardized in IEC 61158.

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

For PROFIBUS PA the data and energy supply for the field devices can be directed through a 2-wire line.

Integration

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

PROFIBUS PA

Measuring instruments for pressure

SITRANS P DS III PA

SITRANS P300

Measuring instruments for temperature

SITRANS TH400

Flowmeters

SITRANS F M MAGFLO 6000 19" / IP67 / I / I Ex d

SITRANS F M Transmag 2

SITRANS F C MASSFLO 6000 19" / IP67 / Ex d

SITRANS F C MASSFLO 6000 19" / IP67 / Ex d

SITRANS FUS060

Measuring instruments for level

Pointek CLS 200

Pointek CLS 300

SITRANS Probe LU

SITRANS LR200

SITRANS LR250

SITRANS LR300

SITRANS LR400

SITRANS LR460

Electropneumatic positioners

SIPART PS2

Acoustic sensor for pump monitoring

SITRANS DA400

PROFIBUS DP

Flowmeters

SITRANS F M MAGFLO 6000 19" / IP67 / I

SITRANS F C MASSFLO 6000 19" / IP67

SIFLOW FC070

Measuring instruments for level

SITRANS LUC500

HydroRanger 200

MultiRanger 100/200

SITRANS Probe LU 01, LU 02, LU 10

Acoustic sensor for pump monitoring

SITRANS DA400

Communication and software

Communication

FOUNDATION Fieldbus

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 field buses that the functional benefits of digital communication can be put to full use, e.g. better resolution of measured values, diagnosis 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 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 diagnosis 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 FF

SITRANS P DS III FF

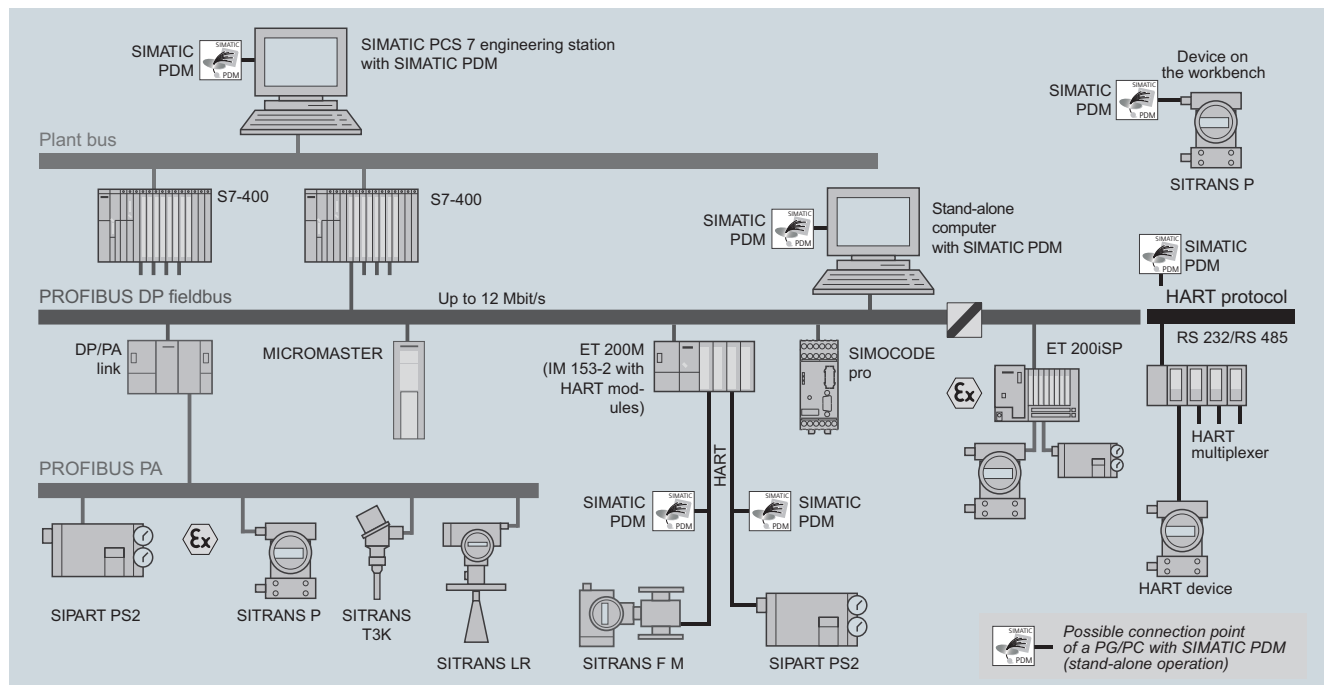
Measuring instruments for temperature

SITRANS TH400 FF

Electropneumatic positioners

SIPART PS2 FF

Overview



Configuration options with SIMATIC PDM

SIMATIC PDM (Process Device Manager) is a universal, vendor-independent tool for the configuration, parameterization, 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.

Using *one* software, SIMATIC PDM enables the processing of more than 1200 devices from Siemens and over 100 vendors worldwide on *one* homogeneous user interface. Parameters and functions for all supported devices are displayed in a consistent and uniform fashion independent of their communications interface.

From the viewpoint of device integration, SIMATIC PDM is the most powerful open device manager available in the world. Devices which previously were not supported can be easily integrated in SIMATIC PDM at any time by importing their device descriptions (EDD). This provides security for your investment and saves you investment costs, training expenses and consequential costs.

SIMATIC PDM is integrated in the asset management of SIMATIC PCS 7. The Process Device Manager provides wider information for all devices described by the Electronic Device Description (EDD), e.g. detailed diagnostics information (vendor information, information on fault diagnostics and troubleshooting, further documentation), modification logbook (audit trail), parameter information. It is possible to change directly to SIMATIC PDM from the diagnostics faceplates in the maintenance station.

Communication and software

SIMATIC PDM Process Device Manager

SIMATIC PDM

Design

Customer-oriented product structure

The SIMATIC PDM Process Device Manager can be used in a versatile manner in the context of Totally Integrated Automation (TIA). Use in the engineering system of SIMATIC PCS 7 is one possible application.

The customer-oriented products structure of SIMATIC PDM supports you in adaptation of the scope of functions and performance to your individual requirements. You can select the minimum configuration SIMATIC PDM Single Point, one of the application-specific, predefined product configurations SIMATIC PDM Service, SIMATIC PDM PCS 7 or SIMATIC PDM S7, or produce your desired configuration from the individual components offered (see table).

The selection depends on the application range and environment of use:

- System-integrated in a SIMATIC PCS 7/S7 configuration environment:
 - SIMATIC PDM PCS 7 (for integration in an engineering system for SIMATIC PCS 7)
 - SIMATIC PDM S7 (for integration in a SIMATIC S7 configuration environment)
- SIMATIC PDM stand-alone as service tool for operation on a mobile computer on the PROFIBUS or with direct connection to the device:
 - SIMATIC PDM Single Point (for processing of a single field device via a point-to-point coupling)
 - SIMATIC PDM Service (for enhanced servicing, including modification logbook and lifelist detailed diagnostics)

	SIMATIC PDM stand-alone			SIMATIC PDM system-integrated	
	Minimum configuration	Components for individual configuration	Predefined product configurations		
Product name	SIMATIC PDM Single Point	SIMATIC PDM Basic	SIMATIC PDM Service	SIMATIC PDM S7	SIMATIC PDM PCS 7
TAGs included in scope of delivery	1	4	128	128	128
TAG expansions	<i>Cannot be expanded</i>	TAG options - 128 TAGs - 512 TAGs - 1024 TAGs - 2048 TAGs and/or PowerPacks	PowerPacks - From 128 to 512 TAGs - From 512 to 1024 TAGs - From 1024 to 2048 TAGs - From 2048 to unlimited TAGs		
Option "Integration in STEP 7/PCS 7"		opt	opt	●	●
Option "Routing through S7-400"		opt	opt	opt	●
Option "Communication via standard HART multiplexer"		opt	opt	opt	opt

●: Components included in delivery of individual PDM configurations

opt: Can be ordered as options

Note: For definition of TAG, see page 9/7.

Minimum configuration SIMATIC PDM Single Point

This low-cost minimum configuration with handheld functionality is tailored to processing exactly *one* field device via a point-to-point coupling. All device functions are supported as defined in the device description. These functions include:

- Unlimited selection of devices / management of device catalog
- Communication via PROFIBUS DP/PA or HART modem
- Parameterization and diagnostics in accordance with the device description
- Exporting and importing of parameter data
- Device identification
- Lifelist

The following system functions of SIMATIC PDM Basic are not available with SIMATIC PDM Single Point:

- EDD-based diagnostics in the lifelist
- Project editing
- Storage function (only exporting and importing of parameter data)
- Recording functions
- Routing
- Communication with HART field devices via remote I/Os

The functions of SIMATIC PDM Single Point cannot be extended (e.g. to SIMATIC PDM Basic or with the routing option through S7-400), nor can it be expanded with TAG options or PowerPacks.

Communication and software

SIMATIC PDM Process Device Manager

SIMATIC PDM

Predefined product configurations

SIMATIC PDM Service

This is a predefined product configuration especially for mobile use in servicing for projects with up to 128 TAGs. It offers service engineers all functions of SIMATIC PDM Basic, including modification logbook, calibration report and detailed diagnostics in the lifelist. SIMATIC PDM Service can be expanded by the functional options "Integration in STEP 7/PCS 7", "Routing through S7-400" and "Communication via standard HART multiplexer" as well as by SIMATIC PDM PowerPacks (see under TAG options/PowerPacks). The following program components are part of SIMATIC PDM Service:

- SIMATIC PDM Basic
- Option: 128 TAGs

SIMATIC PDM PCS 7

SIMATIC PDM PCS 7 is a predefined product configuration for integration into the engineering system (engineering tool set) and the maintenance station of SIMATIC PCS 7. The product version designed for projects with up to 128 TAGs allows the use of all functions of SIMATIC PDM Basic (including modification logbook, calibration report and detailed diagnostics in the lifelist). In addition, it contains the functionality for integration of the SIMATIC PDM into HW-Config as well as the routing from the central engineering system to the field devices. SIMATIC PDM PCS 7 can be expanded by the option "Communication via standard HART multiplexer" and by SIMATIC PDM PowerPacks (see under TAG options/PowerPacks). The following program components are part of SIMATIC PDM PCS 7:

- SIMATIC PDM Basic
- Option: 128 TAGs
- Option: Integration in STEP 7/SIMATIC PCS 7
- Option: Routing through S7-400

SIMATIC PDM S7

SIMATIC PDM S7 is a predefined product configuration tailored to the use of SIMATIC PDM in a SIMATIC S7 configuration environment. It offers all functions of SIMATIC PDM Basic (including modification logbook, calibration report and detailed diagnostics in the lifelist) as well as the functionality for integration of PDM into HW-Config. SIMATIC PDM S7 can be expanded by the functional options "Routing through S7-400" and "Communication via standard HART multiplexer" and by SIMATIC PDM PowerPacks (see under TAG options/PowerPacks). The following program components are part of SIMATIC PDM S7:

- SIMATIC PDM Basic
- Option: 128 TAGs
- Option: Integration in STEP 7/SIMATIC PCS 7

Components for individual configuration

SIMATIC PDM Basic

SIMATIC PDM Basic is the basic component for production of individual SIMATIC PDM configurations from single components. It contains all functions required for operation and parameterization of the devices, as well as enabling for the following communication modes:

- PROFIBUS DP/PA,
- HART communication (modem, RS 232 and PROFIBUS),
- Modbus,
- SIREC bus and
- SIPART DR.

Without TAG expansion, SIMATIC PDM Basic can manage projects with up to 4 TAGs, and can be used - with observation of the system requirements - for stand-alone operation on any computer (PC/notebook) with local connection to bus segments or with direct connection to the device.

SIMATIC PDM Basic can be expanded by functional options and TAG options/PowerPacks. Use of the following functions requires at least 128 TAGs:

- Modification logbook
- Calibration report
- Detailed diagnostics in the lifelist

SIMATIC PDM Basic is also available in the form of a rental license for 50 operating hours for low-cost processing of short-term projects.

SIMATIC PDM option: Integration in STEP 7/PCS 7

This option is required for use of SIMATIC PDM within a SIMATIC S7 or SIMATIC PCS 7 project with a local connection to the PROFIBUS. SIMATIC PDM can then be started directly from the hardware project (HW-Config).

SIMATIC PDM option: Routing through S7-400

This option is required additive to the option "Integration in STEP7/PCS 7" if SIMATIC PDM is to be used in a central engineering system for SIMATIC PCS 7/S7 with Ethernet bus connection to the automation systems for plant-wide configuration, parameterization, commissioning and diagnostics of field devices.

SIMATIC PDM option: Communication via standard HART multiplexer

This option permits SIMATIC PDM to use the HART OPC server for communication with HART field devices via HART multiplexers.

TAG options/PowerPacks

A TAG corresponds to a SIMATIC PDM object, which represents individual field devices or components within a project, e.g. measuring instruments, positioners, switching devices or remote I/Os. 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).

In contrast to PowerPacks, TAG options are only suitable for product configurations on the basis of individual components. Using the SIMATIC PDM TAG options, the basic software SIMATIC PDM Basic can be expanded from 4 TAGs to 128, 512, 1024 or 2048 TAGs, and with the help of an additive PowerPack also to unlimited TAGs.

The number of available TAGs can be subsequently increased for all SIMATIC PDM product configurations by means of the SIMATIC PDM PowerPacks. PowerPacks are available for expansion to 512, 1024, 2048 and unlimited TAGs.

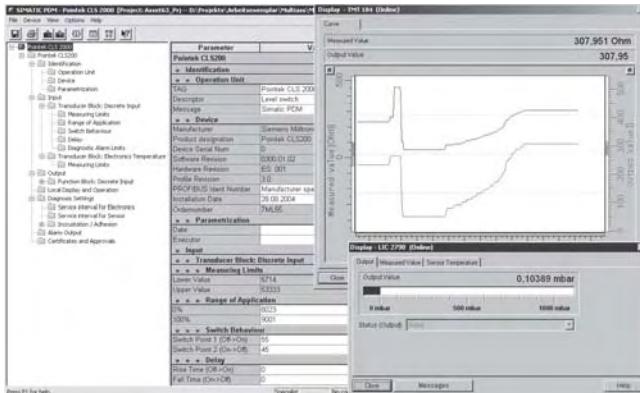
Demonstration software

A demonstration version of SIMATIC PDM is also available. Online communication and storage functions are not available with this version.

Communication and software SIMATIC PDM Process Device Manager

SIMATIC PDM

Function



Parameter view of SIMATIC PDM with trend curve and online display

Core functions

- 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 with operating modes, alarms and states
- Simulation
- Diagnostics (standard, detailed)
- Management (e.g. networks and PCs)
- Export/import (parameter data, reports)
- Commissioning functions, e.g. measuring circuit tests of device data
- Device replacement (lifecycle management)
- 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

Support of system management

SIMATIC PDM supports the operative system management in particular through:

- Uniform presentation and operation of devices
- 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
- Graded user privileges including password protection

Address / TAG	Device status	Device type	Manufacturer	Software	Device family	OSD file	Information
10: S12 SIMATIC 300	Good	SIEMENS	SIEMENS	---	Switching DE	SI11KPD-G...	---
11: S12 SIMATIC 300	Good	SIEMENS	SIEMENS	4407-01-002	PA-V2.00	SP180M6.gsd	1 FB - 1 FB
12: S12 SIMATIC 300	Good	SIEMENS	SIEMENS	1.10	PA-V3.00	SI20M06.gsd	1 FB - 1 FB
13: S12 SIMATIC 300	Watchdog active	ES-PA	BOHNER/EMER	1.0 11880	PA-V2.00	SI40054.gsd	1 FB - 1 FB
14: S12 SIMATIC 300	Watchdog active	DE-TAMAP	ENGRUSS + MAGL	1.1	PA-V2.00	SI1_VSM...	1 FB - 1 FB
15: S12 SIMATIC 300	Watchdog active	WDA	WDA	Version 1.8	PA-V2.00	SI40052.gsd	1 FB - 1 FB
16: S12 SIMATIC 300	Watchdog active	SIEMENS	Siemens	---	PA-V3.00	SI118076-G...	1 FB - 1 FB
17: S12 SIMATIC 300	Watchdog active	SIEMENS	SIEMENS	3001.01.07	PA-V3.00	SI20M04...	1 FB - 2 FB
18: S12 SIMATIC 300	Good	SIEMENS	SIEMENS	03.02.01-20	PA-V3.01	SI20M04-G...	1 FB - 1 FB
19: S12 SIMATIC 300	Good	SIEMENS	SIEMENS	0301.02.01-C	PA-V3.01	SI20M04...	1 FB - 2 FB
20: S12 SIMATIC 300	Good	SIEMENS	---	---	---	---	---
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97: S12 SIMATIC 300	Good	SIEMENS	---	---	---	---	---
98: S12 SIMATIC 300	Good	SIEMENS	---	---	---	---	---
99: S12 SIMATIC 300	Good	SIEMENS	---	---	---	---	---
100: S12 SIMATIC 300	Good	SIEMENS	---	---	---	---	---

PDM lifelist with status and diagnostics display

Graphical user interface

The GUI of SIMATIC PDM satisfies the requirements of the directives VDI/VDE GMA 2187 and IEC 65/349/CD. Even complex devices with several hundred parameters can thus 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.

Several views are available to users to help them with their tasks:

- Hardware project view
- Process device network view (preferably for stand-alone application)
- Process device plant view as TAG-related view, also with display of diagnostics information
- Parameter view for parameterizing the field devices
- Lifelist view for commissioning and service

Communication

SIMATIC PDM supports several communication protocols and components for communicating with devices that have the following interfaces:

- PROFIBUS DP/PA interface
- HART interface
- Modbus interface
- Special interface from Siemens

Further communication protocols on request.

Routing

From the central engineering system of the SIMATIC PCS 7 process control system, you can navigate with SIMATIC PDM through the various bus systems and remote I/Os down to the connected devices. By means of this routing functionality, every device in the plant which can be parameterized per EDD can be processed. The following processing functions are available:

- Read diagnostics information from the device
- Modify device settings
- Adjust and calibrate devices
- Monitor process values
- Create simulation values
- Reparameterize devices.

Communication and software

SIMATIC PDM Process Device Manager

SIMATIC PDM

Integration

Device Integration

SIMATIC PDM supports all devices described by EDD (Electronic Device Description). 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 directive of the established organizations for PROFIBUS (PNO: PROFIBUS International) and HART (HCF: HART Communication Foundation).

The devices are directly integrated in SIMATIC PDM through their EDD or the current HCF catalog. In the EDD the device is described in terms of its functions and construction using the Electronic Device Description Language (EDDL) specified by PNO. Using this description, SIMATIC PDM automatically creates its user interface with the specific device data.

The current device catalog of SIMATIC PDM covers more than 1200 devices from over 100 manufacturers world-wide. In addition, devices from all manufacturers can be integrated in SIMATIC PDM by simply importing their EDDs. It is thus possible to keep the device range up to date at all times and to add to the number of manufacturers and devices supported by SIMATIC PDM. To permit improved transparency, SIMATIC PDM also allows the creation of project-specific device catalogs. If devices are to be used which cannot be found in the SIMATIC PDM device catalog, we will be glad to help you integrate them.

Contact addresses

Siemens AG, Industry Automation and Drive Technologies, Service Support

Europe

Phone: +49 180 50 50 222
 Fax: +49 180 50 50 223
 E-mail: FPlease fill in a Support Request on the Internet (see below for address)

Asia/Pacific

Phone: +86 1064 719 990
 Fax: +86 1064 747 474
 E-mail: adsupport.asia@siemens.com

America

Phone: +1 423 262 2522
 Fax: +1 423 262 2200
 E-mail: techsupport.sea@siemens.com

Support Request

Additional information is available in the Internet under:



<http://www.siemens.com/automation/support-request>

Technical specifications

Requirements for stand-alone operation

Hardware	<ul style="list-style-type: none"> • PG/PC/notebook with processor corresponding to operating system requirements • Main memory 256 MB or more • Vacant hard disk 210 MB or more
Operating systems (alternative)	<ul style="list-style-type: none"> • Microsoft Windows 2000 Professional SP1 or higher • Microsoft Windows XP Professional SP1/SP2
Further software components	STEP 7 V5.1 or higher with ServicePack 6 or higher, order separately
<ul style="list-style-type: none"> • SIMATIC PDM integrated in STEP 7 	

Selection and ordering data for SIMATIC PCS 7 applications

Selection and Ordering Data

Order No.

SIMATIC PDM PCS 7 V6.0

Complete package for integration into the engineering toolset of the SIMATIC PCS 7 engineering system

6 languages (German, English, French, Italian, Spanish, Chinese), executes with Windows XP Professional

Floating license for 1 user, with

- SIMATIC PDM Basic
- Option "Integration in STEP 7/PCS 7"
- Option "Routing through S7-400"
- Option "128 TAGs"

Type of delivery:

License key disk, emergency key disk, certificate of license, terms and conditions; 2 CDs with SIMATIC PDM V6.0 and device library as well as supplementary DVD with Microsoft ServicePacks and tools

6ES7 658-3LX06-0YA5

PowerPacks

SIMATIC PDM PowerPack

for expanding the TAGs of SIMATIC PDM PCS 7 V6.0

6 languages (German, English, French, Italian, Spanish, Chinese), executes with Windows XP Professional

Floating license for 1 user

Type of delivery:

License key disk, certificate of license, terms and conditions

- From 128 TAGs to 512 TAGs
- From 512 TAGs to 1024 TAGs
- From 1024 TAGs to 2048 TAGs
- From 2048 TAGs to unlimited TAGs

6ES7 658-3XB06-2YD5

6ES7 658-3XC06-2YD5

6ES7 658-3XD06-2YD5

6ES7 658-3XH06-2YD5

Communication and software

SIMATIC PDM Process Device Manager

SIMATIC PDM

Selection and Ordering Data Order No.

Demonstration software

SIMATIC PDM Demo V6.0

without online communication and storage functionality

6 languages (German, English, French, Italian, Spanish, Chinese), executes with Windows XP Professional

Type of delivery:
2 CDs with SIMATIC PDM V6.0 and device library as well as supplementary DVD with Microsoft ServicePacks and tools

6ES7 658-3GX06-0YC8

SIMATIC PDM Upgrade/Update Service

SIMATIC PDM Upgrade from V5.x to V6.0

for all product versions and combinations

6 languages (German, English, French, Italian, Spanish, Chinese), executes with Windows XP Professional, floating license for 1 user

Type of delivery:
License key disk, emergency key disk, certificate of license, terms and conditions; 2 CDs with SIMATIC PDM V6.0 and device library as well as supplementary DVD with Microsoft ServicePacks and tools

6ES7 651-5CX06-0YE5

SIMATIC PDM Software Update Service

Subscription for 1 year with automatic extension

Requirement: current software version

6ES7 658-3XX00-0YL8

SIMATIC PDM belongs to the SIMATIC products which can be used both in the context of SIMATIC PCS 7 and in the extended context of Totally Integrated Automation (TIA). Depending on the field of application, SIMATIC PDM is used in various product versions with different functionalities, ordering data and type of delivery. To provide a better overview and to avoid faulty ordering, the special selection and ordering data for SIMATIC PCS 7 are listed separately.

Selection and ordering data for TIA applications

Selection and Ordering Data Order No.

Minimum configuration SIMATIC PDM Single Point

SIMATIC PDM Single Point V6.0

for operation and parameterization of one field device; communication via PROFIBUS DP/PA or HART modem, including 1 TAG,

cannot be expanded with respect to functions or with TAG option/PowerPack

6 languages (German, English, French, Spanish, Italian, Chinese), executes with Windows 2000 Professional or Windows XP Professional

Floating license for 1 user

Type of delivery:
License key disk, certificate of license, terms and conditions; 2 CDs with SIMATIC PDM V6.0 and device library

6ES7 658-3HX06-0YA5

Selection and Ordering Data Order No.

Predefined SIMATIC PDM V6.0 product configurations for special applications

SIMATIC PDM Service V6.0

Complete package for stand-alone users for servicing, with

- SIMATIC PDM Basic V6.0
- Option "128 TAGs"

6 languages (German, English, French, Italian, Spanish, Chinese), executes with Windows 2000 Professional or Windows XP Professional, floating license for 1 user

Type of delivery:
License key disk, emergency key disk, certificate of license, terms and conditions;
2 CDs with SIMATIC PDM V6.0 and device library as well as supplementary DVD with Microsoft ServicePacks and tools

6ES7 658-3JX06-0YA5

SIMATIC PDM S7 V6.0

Complete package for use in a SIMATIC S7 configuration environment, with

- SIMATIC PDM Basic V6.0
- Option "Integration in STEP 7/PCS 7"
- Option "128 TAGs"

6 languages (German, English, French, Italian, Spanish, Chinese), executes with Windows 2000 Professional or Windows XP Professional, floating license for 1 user

Type of delivery:
License key disk, emergency key disk, certificate of license, terms and conditions;
2 CDs with SIMATIC PDM V6.0 and device library as well as supplementary DVD with Microsoft ServicePacks and tools

6ES7 658-3KX06-0YA5

Components for individual configuration

SIMATIC PDM Basic V6.0

for operation and parameterization of field devices and components, communication via PROFIBUS DP/PA, HART (modem, RS 232, PROFIBUS) and Modbus, including 4 TAGs

6 languages (German, English, French, Spanish, Italian, Chinese), executes with Windows 2000 Professional or Windows XP Professional

Type of delivery:
License key disk, emergency key disk, certificate of license, terms and conditions;
2 CDs with SIMATIC PDM V6.0 and device library

- Floating license for 1 user
- Rental license for 50 hours

6ES7 658-3AX06-0YA5

6ES7 658-3AX06-0YA6

Communication and software

SIMATIC PDM Process Device Manager

SIMATIC PDM

Selection and Ordering Data	Order No.	Selection and Ordering Data	Order No.
Integration in STEP 7 / SIMATIC PCS 7 Only required if integration of SIMATIC PDM into HW-Config is to be used 6 languages (German, English, French, Spanish, Italian, Chinese), executes with Windows 2000 Professional or Windows XP Professional Type of delivery: License key disk, emergency key disk, certificate of license, terms and conditions • Floating license for 1 user	6ES7 658-3BX06-2YB5	SIMATIC PDM PowerPack for subsequent TAG expansion of all SIMATIC PDM V6.0 product configurations 6 languages (German, English, French, Spanish, Italian, Chinese), executes with Windows 2000 Professional or Windows XP Professional Floating license for 1 user Type of delivery: License key disk, certificate of license, terms and conditions • From 128 TAGs to 512 TAGs • From 512 TAGs to 1024 TAGs • From 1024 TAGs to 2048 TAGs • From 2048 TAGs to unlimited TAGs	6ES7 658-3XB06-2YD5 6ES7 658-3XC06-2YD5 6ES7 658-3XD06-2YD5 6ES7 658-3XH06-2YD5
Routing through S7-400 6 languages (German, English, French, Spanish, Italian, Chinese), executes with Windows 2000 Professional or Windows XP Professional Type of delivery: License key disk, emergency key disk, certificate of license, terms and conditions • Floating license for 1 user	6ES7 658-3CX06-2YB5	Demonstration software SIMATIC PDM Demo V6.0 without online communication and storage functionality 6 languages (German, English, French, Spanish, Italian, Chinese), executes with Windows 2000 Professional or Windows XP Professional Type of delivery: 2 CDs with SIMATIC PDM V6.0 and device library	6ES7 658-3GX06-0YC8
Communication via standard HART multiplexer 6 languages (German, English, French, Spanish, Italian, Chinese), executes with Windows 2000 Professional or Windows XP Professional Type of delivery: License key disk, emergency key disk, certificate of license, terms and conditions • Floating license for 1 user	6ES7 658-3EX06-2YB5	SIMATIC PDM Upgrade/Update Service SIMATIC PDM Upgrade from V5.x to V6.0 for all product versions and combinations 6 languages (German, English, French, Italian, Spanish, Chinese), executes with Windows 2000 Professional or Windows XP Professional, floating license for 1 user Type of delivery: License key disk, emergency key disk, certificate of license, terms and conditions; 2 CDs with SIMATIC PDM V6.0 and device library	6ES7 651-5CX06-0YE5
TAG options / PowerPacks SIMATIC PDM TAG option for TAG expansion, additive to SIMATIC PDM Basic V6.0 6 languages (German, English, French, Spanish, Italian, Chinese), executes with Windows 2000 Professional or Windows XP Professional Floating license for 1 user Type of delivery: License key disk, certificate of license, terms and conditions • Up to 128 TAGs • Up to 512 TAGs • Up to 1024 TAGs • Up to 2048 TAGs	6ES7 658-3XA06-2YB5 6ES7 658-3XB06-2YB5 6ES7 658-3XC06-2YB5 6ES7 658-3XD06-2YB5	SIMATIC PDM Software Update Service Subscription for 1 year with automatic extension Requirement: current software version	6ES7 658-3XX00-0YL8

Communication and software

