

SIMATIC PDM (Process Device Manager) **SIEMENS**



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PDM is an EDD Interpreter (EDD = Electronic Device Description)

Each instrument has an EDD file that allows it to be configured using PDM

Device files are written in

Electronic **D**evice **D**escription **L**anguage

SIMATIC PDM – Installation/Commissioning.

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- Setting PA node addresses.
- Scanning DP/PA bus for node status, and confirming bus structure.
- Configuring instruments over the bus.
- Copy & Paste of parameter sets to identical devices.
- Mapping of volume and flow characteristics.
- Simulation.
- Forcing Setpoint commands (Positioners, Actuators).
- Setting PA device to "Profile Specific".
- Saving of parameters (XML/HTML) at project hand-over phase.





- Change-out of PA instruments (download of parameters).
- Validation of bus fault messages (drill-down).
- Calibration.
- Online functions e.g. display/trending of real-time values.
- Monitoring of “raw” measured value (not just o/p of function blocks).
- Comparison of parameter sets.
- Viewing of historical Min/Max data.
- Exporting data to Asset Management packages.
- Logging of changes, calibrations etc.

Status indication

→ Health monitor

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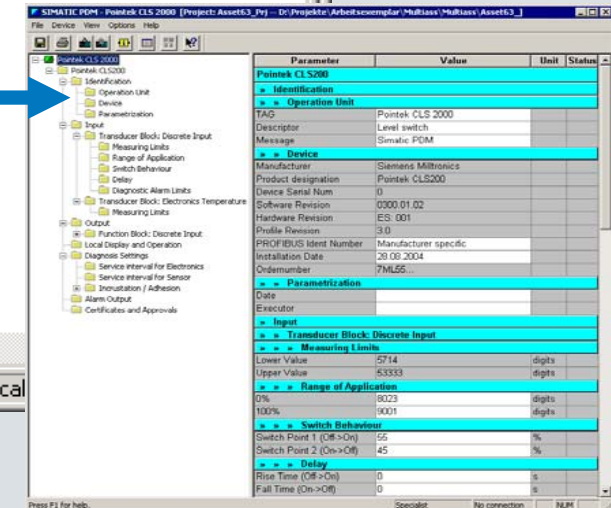
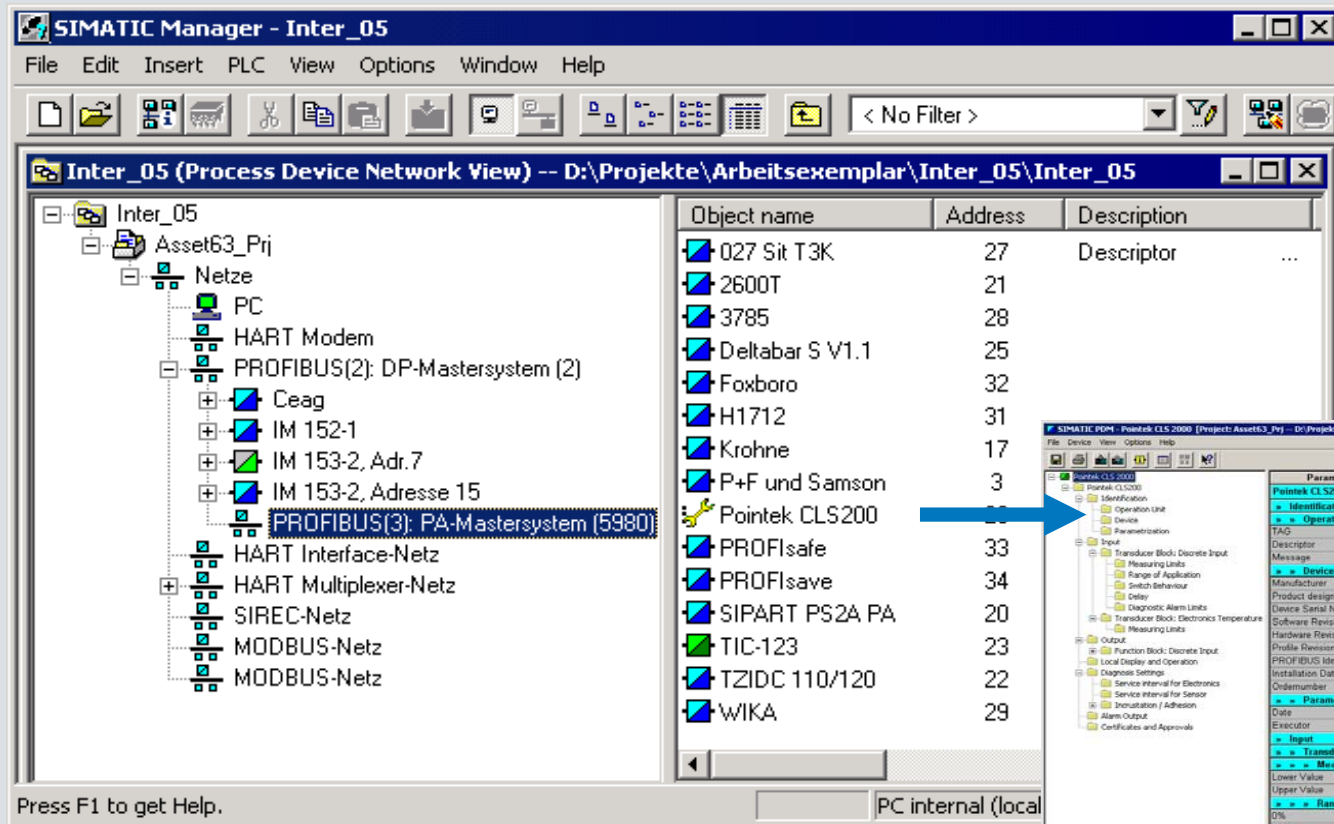
Icon	Meaning
	No device type from the device catalog has been assigned to the device, or it is not activated.
	A device type from the device catalog could be assigned to the device, but there has not yet been any communication with the device.
	Communication could not be established, was interrupted, or no communication with the device was possible by using the configured address.
	The device contacted is not the same as the configured device, or the device configuration is incorrect (see Secure Communication).
	A fault occurred in the device (e.g. HW temperature too high).
	Immediate maintenance required to prevent a possible device fault from occurring.
	Maintenance initial warning: maintenance should be scheduled.
	Maintenance initial warning: maintenance required to prevent a possible device fault from occurring.
	The communication was good. The device is in manual operation.
	The communication was good. The device is in simulated operation or is working with substitute values.
	The communication was good. The device is not in operation.
	The device is not functioning due to a configuration error in parameters or hardware components.

Icon	Meaning
	The device is functioning, but one or more parameters are invalid. Instead of the invalid parameters substitute values are being used.
	The parameters set for the device do not match the parameters in the project. Please read and heed the message texts..
	At least one process value has overshoot or undershot a process interrupt limit.
	At least one process value has overshoot or undershot a process warning limit.
	At least one process value has overshoot or undershot a process tolerance limit.
	The communication and the device status were good. There are no messages.
	The communication was good. The device does not support a diagnostic check.

Process Device Network View

➔ For stand alone projects

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- Represents real networks
- Structure can be imported from the Lifelist



the power of One

Process Device Plant View

→ Quick access by TAG

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SIMATIC Manager - [S7-315-2DP NEW (Process Device Plant View) -- C:\Program Files\Siemens\Step7\s7proj\S7-315-2]

File Edit Insert PLC View Options Window Help

< No Filter >

Object name	Description	Message	Device status	Communication	Last communication	Text 1	Text 2
4 bar			Good	Failed	27/11/2006 12:29:21		
FIT-333	MAG1100 FOOD ...	Milk	Good	Good	17/10/2006 10:55:58		
PIT-202			Configuration changed; Good	Good	27/11/2006 11:53:12		
S12_TT2	Descriptor	Message	Device in test mode; Configuration changed	Good	15/11/2006 11:30:54		
SITRANS PROBE LU 12m			Not validated	Not validated	---		

Press F1 to get Help.

CP5511(PROFIBUS) 203771 Bytes



Diagnostic status at last communication

Overview of all configured SIMATIC PDM objects with:

- Object name (TAG)
- Communication status
- Diagnostic status
- Communication method
- When was the last processing
- Free text 1
- Free text 2
- Free text 3



Integrated in STEP7

→ Centralised data

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Hardware Configuration Details:

- Rack 1: CPU 315-2 DP
- Rack 2: DP
- PROFIBUS(1): DP master system (1)
- PROFIBUS(2): PA master system (5980)
- Slaves: (7) PIT-202, (8) S12-TT, (9) 4 bar, (10) SITRA, (11) FIT-333

FIT-333 Parameter Table:

Slot	Order Number / Designation	I Address	Q Address	Comment
1	148 AI (Volumeflow)	276...280		
2	193 TOTAL_SET_TOT, MODE_TOT	281...285	256...257	
3	0 EMPTY_MODULE			

Press F1 to get Help.

PROFIBUS-DP slaves for SIMATIC S7, M7, and C7 (distributed rack)

- Simatic PDM launched directly from hardware project view in Simatic S7 and Simatic PCS 7

Asset Management in DCS

→ Simatic PCS 7 Maintenance station

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Reactor

Diagnosis

Symbolism

SIEMENS PCS7

OHIO

Cost reduction with PROFIBUS

OB Diagnostic Function

SIMATIC_400(1)(1)Y@3/MICROMASTER_4

Ident

Components

maintenance alarm

TAG

Description

Message

Device Type

Order Number

Serial Number

Install date

MICROMASTER 440

Simatic PCS 7 MS

SIEMENS AG

6SE6440-2UC11-2AAx

28.08.05

Data via Simatic PDM

SIMATIC PDM - MICROMASTER 440 [Project: Asset63_Prj -- D:\Projekte\Arbeitsexemplar..._1\Asset63_1]

File Device View Options Help

MICROMASTER 440

- Identification
 - Operating unit
 - Device
- Dataset Display
- Display
- Quick commissioning (DDS 1 - CDS 1)
- Standard
- Motor
 - Motor data
- Encoder
- Encode monitoring
- Operating mode
- Command/setpoint source
- Main parameters

Parameter	Value
MICROMASTER 440	
» Identification	
» » Operating unit	
TAG	MICROMASTER 440
Tag location	Simatic PCS 7 MS
Installation date	28.08.05
Description	Simatic PCS 7 MS
Signature	
» » Device	
Manufacturer	SIEMENS AG
Order number (MLFB)	6SE6440-2UC11-2AAx
Input Voltage & Frequency	1/3AC200-240V +10% -10% 47-63Hz
CT Power	0,12 kW
VT Power	0,12 kW
Internal Filter	no
	A
	MICROMASTER 440

Specialist

No connection

NUM

PROFIBUS - PROFINET
user conference 2010
Celebrating 20 Years
of PROFIBUS



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Access points

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