VAL*care*™ Valve Diagnosis

for Positioners SRD991 / SRD960



The valve diagnostic software **VAL***care*[™] is available as Device Type Manager (DTM) for integration into control systems based on the Field Device Tool (FDT) technology such as the Foxboro IA Series System. It is designed to support methods for evaluation of the valve health, operation and configuration. The DTMs support the communication protocols HART, Profibus PA, FOUNDATION Fieldbus (FF) and FoxCom.

FEATURES

- Predictive Maintenance capabilities
- Intelligent Alarm Management
- Self-surveillance in accordance with NE107
- Service Management
- Histograms for Valve Position- and Response-History
- Data collected up to 60 months
- Data stored inside positioner memory
- Determination of Stem Friction to prevent leakage and stuck stem
- Histogram for Friction-History
- Partial Stroke Test function for ESD applications



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1 INTRODUCTION

The software available as Device Type Manager (DTM) for Field Device Tool (FDT) -compliant PC's or control systems is designed to provide the identical functionality for each Intelligent Positioner, independent of what communication protocol is used. All DTMs have the same look and feel and functionality. The following instruction shows details about the configuration, operation and diagnostics of the Intelligent Positioner.

Intelligent Positioner

The intelligent positioner is designed to operate pneumatic valve actuators. This includes versions with analog setpoint (4 to 20 mA) without communication or with superimposed HART signal; digital with FoxCom protocol, or fieldbus communication according to PROFIBUS-PA and FOUNDATION Fieldbus H1 based on IEC 1158-2 MBP acc. to FISCO. Before connecting electrical power and utilizing this program to communicate with and operate the positioner.

Before using the VAL*care*[™] software ensure that you have observed the following:

- All documentation such as the Product Specification Sheets (PSS) and the Master Instructions (MI) is thoroughly reviewed.
- The positioner is mounted on a valve / actuator per requirements of the MI.

2 WHAT IS FDT / DTM

The FDT/DTM concept specifies a "frame application" with a uniform platform for software tools and provides the particular advantage of a simple, standardized and common implementation and engineering environment to integrate field devices into any FDT compliant control system. It defines interfaces and mechanisms which provide a simple method of running a type of "printer driver" for field devices, the Device Type Manager (DTM). DTM describe the field device specific software component. **VAL***care*[™] is such a "driver" and supports the communication protocols HART, Profibus PA, FOUNDATION

Fieldbus and FoxCom. FDT supplements the DDL-technology and offers much more, a unified architecture for all devices in a plant. Benefit, the "driver" can be integrated into any FDT compliant control system.

3 CONTENTS OF VALCARE[™] SOFTWARE

The VALcare[™] -software package includes the following files:

PACTware with:

- PACTware Release 3.0
- ComDTM for the HART-Protocol (by Codewright)

srdinstall with:

- Device-DTM for SRD991 and SRD960 for HART, PROFIBUS, FOUNDATION F. and FoxCom

modeminstall with:

- ComDTM for the FoxCom- EDCom- and IRCom-Protocol

Hardware Requirements

A computer with Pentium II 200 MHz processor or better, XGA Graphics and a Microsoft compatible mouse or an equivalent pointing device is recommended. [1]

Disk space requirements:

PACTware.....100 MByte ComDTM.....40 MByte DeviceDTM.....55 MByte Main Memory.....45 MByte.

Software Requirements

PACTware runs under the operating systems Windows NT 4.0 as of Service Pack 4, Windows 2000 and Windows XP. To print device parameter values, a Microsoft Internet Explorer as of Release 4.0 must be installed.

About the software

PACTware (Process Automation Configuration Tool) is a program which allows to select communication-capable field devices of different manufacturers from a device catalog and combine them in projects.

In accordance with the **FDT** Specification 1.2 (Field Device Tool Specification) PACTware is used as a frame program for the **VAL***care*[™]- or any other **Device-DTM** (Device Type Manager). **VAL***care*[™] is a full version software for predictive maintenance, diagnosis, configuration and calibration.

Via **ComDTM** (Communication DTM) a communication with the field devices using protocols like e.g. the HART, PROFIBUS, FOUNDATION F. or FoxCom protocol is established. [1]

VAL*care*[™] includes Communication- and Device-DTMs:

	HART	PROFIBUS-PA	FOUNDATION F.	FoxCom / EDCom / IRCom
Communication-DTM	\checkmark	1)	²)	√ ³)
Device DTM				
SRD991	\checkmark	\checkmark	\checkmark	\checkmark
SRD960	\checkmark	\checkmark	\checkmark	\checkmark

¹) Communication driver distributed by softing

²) Communication driver included in FBM

³) Communication driver included in modeminstall.exe

Required Modems and Interfaces

HART	HART-Modem (Serial or USB)
PROFIBUS-PA	PROFICard by Softing
FOUNDATION F.	ATFBus by National Instruments
FoxCom	PC10-Modem
EDCOM	EDC82- / EDC83-Modem
IRCOM	IR-Modem (Serial or USB)

How to order

The CD-Rom for the **VAL***care*[™] Software-package can be ordered under the No.: **EW 556 932 011**.



4 INSTALLATION

The following files are available on the VAL*care*[™] CD-Rom.

Context framework pactware 3.0 ModemInstall.exe Read Me.txt SrdInstall.exe

If PACTware 3.0 is not yet installed, continue here

4.1 Installation of .net extension

First the **.net extension** needs to be installed if your system is based on Windows NT 4.0 as of Service Pack 4, Windows 2000 or Windows XP.

4.2 Installation of PACTware

After that continue installation of **PACTware** is started by executing **setup.exe**. After selecting the installation language and confirming the license agreement either the complete or the user-defined setup must be chosen.

4	Wählen Sie die Sprache dieser Installation aus der unten aufgeführten Auswahl aus.					
	Englisch (USA)	~				
	OK Abbrechen					

The user-defined setup allows to specify a target directory for PACTware and to exclude some components from the installation.

InstallShield Wizard	
	Preparing to Install PACT ware 3.0 Setup is preparing the InstallShield Wizard, which will guide you through the program setup process. Please wait. Configuring Windows Installer
	Cancel

1

The setup wizard will guide you though the installation.



If PACTware 3.0 is already installed, continue here

4.3 Installation of Comm-DTM

The installation of the **FoxCom-, EDCom- and IRCom-Device-DTM** is started by executing **modeminstall.exe**. After confirming the license agreement either the complete or the user-defined setup must be chosen.

The setup wizard will guide you though the installation.

4.4 Installation of SRD-DTM

The installation of the **SRD Device-DTM** is started by executing **srdinstall.exe**. After confirming the license agreement either the complete or the user-defined setup must be chosen.

We recommend using the "Complete" setup.

🔂 Foxboro	Eckardt Positioner DTM V2 - InstallS	hield Wizard		
Installing The prog	Foxboro Eckardt Positioner DTM ¥2 ram features you selected are being installed.			
P	Please wait while the InstallShield Wizard insta DTM V2. This may take several minutes.	alls Foxboro Eckardt	Positioner	
	Status:	😼 Foxboro Eck	ardt Positioner D	TM V2 - InstallShield Wizard 🛛 🛛 🔀
	Generating script operations for action:	Setup Type Choose the se	tup type that best sui	ts your needs.
		Please select a	a setup type.	
		⊙ Complete	All program features space.)	will be installed. (Requires the most disk
InstallShield –	< Back	Custom	Choose which progr. will be installed. Rec	am features you want installed and where they ommended for advanced users.
		InstallShield ———		< Back Next > Cancel

After selecting the setup type, the Foxboro DTM install shield will open.

After completeion of the setup, the install shield will close automatically.



STARTING PACTWARE

To start PACTware, execute the PACTware 3.0 icon on your desktop.



5

The **PACTware Login** window will open.

To initially access the software you need to enter the User and the default Password.

Default settings: User Administrator Password **manager**

User Administration

To change the password, go to

Extras \rightarrow User Administration \rightarrow

change password

The Password Administrator will open



Password Administrator

We recommend not to use a password, by entering a blank in each window and then confirm with OK.

This enables each operator to access the above PACTware Login by just confirming with OK, without entering any password.

Maintenance Change password Planning engineer Change password Administrator Change password OK Cancel

Passwo	ord Administrat	or	
*	Password Confirm password		
		OK	Cancel

After initial installation of the Comm-DTM and SRD-DTM we recommend to "**Update the device catalog**" first, before opening a project.

Execute the button for the Device catalog.

PA	CTwa	re										
File	<u>E</u> dit	<u>Vi</u> ew	Pro	oject	<u>D</u> evic	e	E <u>x</u> tras	Wind	w	<u>H</u> elp		
	2	Ø	5		K. 195		1	E		~		
Project	ST PC								д >	Device	catalog	

Then execute the button for "Update device catalog".

🖶 Device catalog			
Ten CodeWrights GmbH	CodeWrights GmbH		
🗈 🛲 Foxboro	Device	Protocol	Vendor
🗈 🛲 FOXBORO-ECKARDT 🧾	HART Communication		CodeWrights GmbH
E C Inverse			
See Invensys			
Vender Type Group Protocol]		
1 Show all devices	<		>
		Update device cataloc	Add Add
Γ	PACTu	vare™	

The following window will appear and scroll through all device drivers (foxfdt...), to ensure that the drivers are updated.



After the update a project can be opened.

6 OPENING A PROJECT

1. Start PACTware





2. Add a communication driver to the HOST PC

3. Add an device-DTM to the communication-DTM



3a Selecting the port / channel

After adding the communication driver you need to address a *PORT* or channel.

If you are running **PACTware** e.g. on a PC the PORTs are respective to your COM-Ports. In this case the standard Serial Port might be COM1 = PORT1.

If you are running PACTware e.g. on the Foxboro I/A[™] Series System in connection with a FBM215 for 8 HART outputs, you will see each individual channel of the FBM.

The displayed example represents the 8 channels (CHAN1...8) of a Field Bus Module (FBM) connected to a Control Processor (CP).

After browsing the channels of the individual FBM you will be able to assign a field device to each I/O.

	FBM ECB	M2CP01_E			
	Lucoport F			MOCDOL F	
CHANTEUB	M2CPUI_E		CHAN5 ECB	M2CF01_E	M2CP01_ECB:M21805_2
CHAN2 ECB	M2CP01_E		CHAN6 ECB	M2CP01_E	M2CP01_ECB:M21805_4
	,			M2CP01 F	M2CP01_ECB:M21805_5
CHAN3 ECB	M2CP01_E		CHAN7 ECB	Inser or_e	- 🖾 M2CP01_ECB:M21805_6
CHAN4 ECB	M2CP01_E		CHAN8 ECB	M2CP01_E	M2CP01_ECB:M21805_7
					M2CP01_ECB:M21805_8
	Brows	e	Close		

🚺 Chann	el selecti	on	
Channel	Туре		
1	PORT1		
2	PORT2		
3	PORT3		
4	PORT4		
			1
		OK	Cancel

4. Connect the device

PACIWATE		
jle <u>E</u> dit <u>V</u> iew <u>P</u> roject <u>D</u> evice E <u>x</u> tras <u>W</u>	<u>'i</u> ndow <u>H</u> elp	
🗅 🝃 🗊 🍯 📑 🐂 🐂 🐂		
oject	4 ×	
HOST PC		
COM1>HART Communication		
[1 CONTICUTES SEDART AS (HARL)	Connect	
	Disconnect	
	Load from device	
	Store to device	
	Parameter	
	Measured value	
	Simulation	
	<u>Di</u> agnostics	
	Print	
	Additional functions	۲
	Add device	
	Delete device	
	Properties <0 PTIC2222 SPD991 V2 (H	ADT)

The "drivers" are succesfully connected when the line turns bold and a pound sign "#" is added to each line.

📑 PACTware <u>File Edit View Project Device Extras Window Help</u> D 🛩 🗊 🛎 🔚 🐂 🐂 🐂 📜 🖹 🖷 Project **₽**× 📑 HOST PC Connect Disconnect Load from device Store to device Parameter Measured value ٠ Simulation **Diagnostics** ٠ Print ۶ Additional functions ۲ Add device Delete device Properties <0,PTIC???>SRD991 V2 (HART)

5. Load data from device

6. A progress bar indicates that the data is loaded from the device

Upload	
PACT ware action	active. One moment please.
• () 75%	
	PACT <i>ware</i> [™]

7. The Project is now active



7 MENU STRUCTURE

7.1 Communication-DTM for HART, FoxCom and PROFIBUS and FOUNDATION Fieldbus

Connect	
Disconnect Load from device	
Store to device Parameter	
Mesured value	
Simulation	
Diagnostics	
Display channels	
Channels <	
Print	
Additional functions	Compare offline
	Compare online
	Set value
	Scan List
	Save As Template
	Load From
	Audit Trail
	DTM Documentation
	Parameter List
	Save As Write device data to file
Add device	
Delete device	
Properties	

7.2 SRD-DTM for HART, FoxCom and PROFIBUS...

7.2.1 SRD-DTM before 01.07.2005

Connect		
Disconnect		
Load from device		
Store to device		
Parameter		
Mesured value	Trend Viewer	
	Measurement	
Simulation		
Diagnostics	Status List (NE107)	
	Status Detail	
Print 🕨	Configuration	
	Simulation	
Additional functions	Compare offline	
	Compare online	
	Set value	Angle
		Temp
		Pos Feedback
		Output 1 Press
		Air Supply
		Restore Factory
		Analog
	Scan List	-
	Reset Counters	
	Reset Status	
	Write Protect	
	Reset Valve Diagnosis	
	Change Mode	
	Reset device	
	Endpoints	
	Autostart	
	PC20 Import	
	Save As Template	
	Load From	
	Audit Trail	
	DTM Documentation	
	Parameter List	
	Save As Write device data to file	
Add device Delete device		

7.2.2 SRD-DTM from 01.07.2005

Connect		
Disconnect		
Load from device		
Store to device		
Parameter		
Mesured value	Trend Viewer	
	Measurement	
Simulation		
Diagnostics	Status List (NE107)	
-	Status Detail	
Print	Configuration	
	Simulation	
Additional functions	Compare offline	
	Compare online	
	Set value	Anale
	000 1000	Temp
		Pos Feedback
		Output 1 Press
		Air Supply
		Restore Factory
		Analog
	Management	 Reset Counters
	Management	Go Offline
		Peset Status
		Write Protect
		Poset Valve Diagnosis
		Boost Davias
		Change Device Type
	A seast Management	Change Device Type
	Asset Management	
		Autostart
		mm
	PC20 Import	
	Save As Template	
	DTM Documentation	
	Drivi Documentation	
	Save As	
Add device	write device data to file	
Delete device		
Fioperlies		

7.2.3 SRD-DTM from 02.09.2005

Connect		
Disconnect Load from device		
Store to device Parameter		
Mesured value	 Trend Viewer 	
	Measurement	
Simulation		
Diagnostics	 Status List (NE107) 	
	Status Detail	
Print	 Configuration 	
	Simulation	
Additional functions	 Compare offline 	
	Compare online	
	Set value	► Angle
		Temp
		Language Download
		Pos Feedback
		Output 1 Press
		Output 2 Press
		Air Supply
		Restore Factory
		Change Device Type
		Restore Valve Specific Parameter
		Analog
	Management	Reset Counters
		Go Offline
		Reset Status
		While Protect
		Go Onlino
		Restart Device
	Audit Trail	Restart Device
	Endpoints	
	Autostart	
	Set Setpoint	
	PC20 Import	ununu
	Save As Template	
	Load From File	
	DTM Documentation	
	Parameter List	
	Save As File	
	Write device data to file	
Add device	-	
Delete device Properties		

7.2.4 SRD-DTM from 17.10.2005

Connect		
Disconnect		
Load from device		
Store to device		
Parameter		
Mesured value	 Trend Viewer 	
	Measurement	
Simulation		
Diagnostics	 Status List (NE107) 	
	Status Detail	
Print	 Configuration 	
	Simulation	
Additional functions	 Compare offline 	
	Compare online	
	Adjust set value	
	Management	► Go Offline
	-	Go Online
		Go Local
		Reset Counters
		Reset Status
		Reset Valve Diagnosis Calibrate Current Loop
		Calibrate Angle
		CalibrateTemperature
		Calibrate Air Supply Pressure
		Calibrate Output 1 Pressure
		Calibrate Output 2 Pressure
		Calibrate Position Feedback
		Restore Factory
		Restore Valve Specific Parameter
		Language Download
		Change Device Type
		Restart Device
		Write Protect
	Audit Trail	
	Autostart	
	Set Setpoint	
	DTM Documentation	
	Save As File	
	Parameter List	
	Load From File	
	Save As Template	
	PC20 Import	
	Write device data to file	

Delete device Properties

Connect Disconnect Load from device Store to device Parameter ► Configuration ► FF Parameter **Configure Device** Parameter Mesured value Trend Viewer Measurement Simulation Diagnostics ► Status List (NE107) Status Detail Print Configuration Simulation Additional functions Compare offline Compare online Set value Angle Temp Language Download Pos Feedback Output 1 Press Output 2 Press Air Supply **Restore Factory** Change Device Type Restore Valve Specific Parameter Analog Management **Reset Counters** Go Offline **Reset Status** Write Protect **Reset Valve Diagnosis** Go Local Go Online **Restart Device** Audit Trail Endpoints Autostart Set Setpoint PC20 Import Save As Template Load From File... **DTM Documentation** Parameter List Save As File... Write device data to file

7.3 SRD-DTM for FOUNDATION Fieldbus from 02.09.2005

Add device

QG EVE0501 V-(en)

VALcare™ 21

7.4	Parameter	Options Maintenance Partial Stroke Pressure Bin. In Friction LCD Identifier Parameters Configuration Characterization Travel Alarms Tuning
	Alarms	
	Position Alarms	Message I: Inconcert Instrument: Driver
	Fosition Alarnis High High	Message 2: MESSAGE 2 ECEP: ECEP-NR
	High	Message 3: MESSAGE 3 Serial Number
	ligh	Actuator: ACT SERIAL NUM
		Calibration: MESSAGE 5 Valve: VALVE SER NUM
	Alarm deadband	Maintenance: MESSAGE 4
		Fab. Number: 50/019795
		HW Rev: 0
		me
	Temperature units °C	
	Temperature	Save Save and Download Cancel
	Travel sum	
	Characterization	
	Linear	
	Equal-percentage	
	Invers-equal-percentage	
	Custom / Custom curve values	
	Configuration	
	Valve Type	
	Actuator Type	
	Valve stem movement	
	lin	ear left-mounted
	lin	ear right-mounted
	rot	tary ccw
	rot	tary cw
	Spring type	
	clo	DSes
	ор	iens
	Amplifier type	
	sir	ıgle
	do	uble
	sp	lool
	Control action	
	dir	rect
	rev	verse
	Setpoint source	
	Split range (for analog)	
	Power Up function	
	Fail safe	
	Friction	
	Upper Limit	
	Lower limit	
	Spring Range	
	Ur _	nt
	Ra	ange

QG EVE0501 V-(en)

Cont'd Parameter

Serial number

Inden	tifier			
	Device			
	Serial number			
	Firmware			
	Last calibration			
	Tag-			
		number		
		name		
		date		
LCD				
	Text orientation			
	Text language			
Maint	enance			
	History Interval		History 1 thru 4	
	Service Interval			
Optio	ns			
	LCD			
	Pressure sensors			
	Pos Transmitter			
			Direct / Reverse	
			Alarm Output Logic	Namur
				Binary
			Position Alarm	Output High
				Output Low
	BinOut 1 / 2			
			Logic of Output	Namur
				Binary
			Position Alarm	Output High
				Output Low
			Output Signal Active for	HiHiAlarm
				HiAlarm
				LoAlarm
				LoLoAlarm
	Binln 1 / 2			
			Logic of Input	Goto 0%
				Goto 100%
				Set Status for input 1
				Set Status for input 2
				Configure Text
_	Potentiometer			
Parar	neter			
	Information			
	Messages			
	Modelcode			

Cont'd Parameter

Partial Stroke

Activation Start Manual / Automatic Time Interval Setpoint change Max. wait time for setpoint change

Pressure

	Air supply	units	
		scaling	
	Output pressure	units	
		scaling	
	Lower alarm limit		
Travel			
	Response Time	T63-time	
	Cutoff	low / high	
	Travel Limits	low / high	
	Travel position limits	mm / inch / degree	

Tuning

P-gain I-time Travel time limits / stroke-time Control gap

7.5 Diagnosis Detail

Overview before 02.09.2005

Temp High Temp Low Invalid Configuration Travel Sum Limit Cycle Count Limit Input Loop Trim Feedback Trim No Autostart done Position High High Alarm Position High Alarm Position Low Alarm Position Low Low Alarm Control Difference Out of Limit (OOL) Air Supply Pressure Alarm **Output Pressure Alarm** Overview from 02.09.2005 Service Management Process Hardware Calibartion larms Friction

Alarms

Position High High Alarm Position High Alarm Position Low Alarm Position Low Low Alarm

Process

Temp High Temp Low Maximum Temperature Minimum Temperature Power Supply Low Power Supply High Air Supply Pressure Alarm Output Pressure Alarm Partial Stroke Testing Satus

Not Done Running OK Restricted Error

QG EVE0501 V-(en)



Hardware

RAM Error **EEPROM Error** ROM Error AD Converter Error Actuator Out of Range (OOR) Control Difference Out of Limit (OOL) Current Loop I/P Module Potentiometer Option Board Calibration Autostart done Invalid Configuration Input Current Calibration Feedback Calibration **Position Alarms** High High Alarm High Alarm Low Alarm Low Low Alarm Service Management Status of Service Interval Actual Time in Operation Time Since Last Service Cycle Counter Travel Sum Service Reminder Limit Cycle Count Limit Full Stroke Limit **Position History** Graph **Response History** Graph Friction Measured Value Maximum Value Minimum Value Average High Friction Alarm Status Low Friction Alarm Status Upper Alarm Limit Lower Alarm Limit Average Reference Reference Time-stamp

Friction History

Graph

8 **PROFIBUS CONFIGURATIONS**

8.1 Comm-DTM

We recommend using the communication DTM for Profibus distributed by softing. This driver is not included in the modeminstall.exe or the srdinstall.exe.

The driver can be downloaded and updated from: <u>http://www.softing.com</u>, but requires a USB-dongle that has to be purchased from Softing directly. In addition an interface (PROFIcard by softing) to connect the PC or workstation to a Profibus DP segment coupler is required.

We recommend to use the following PACTware DPV1 parameters for setting up the Edit View Project Device Extras Window Help File Comm-DTM. D 🛩 🖉 🖉 🔚 🐂 🐂 📜 🖺 🖷 Settings: , 当 HOST PC <0,PROFIdtm>PROFIdtm DP\ Connect The settings can be found under Disconned Parameter for the Comm-DTM Load from device Store to device (<0, PROFIdtm>PROFIdtm DPV1). Parameter Misc 🔰 <0 ,PROFIdtm >PROFIdtm DPV1 Parameter Baud Rate: Board 93.75 kBits/s Node Highest Station Address: 126 Board Name Station Address: 0 -Max. retry Limit: 1 Gap Update Factor: 10 Misc Baud Rate: 93.75kBit/s -Highest Station Address: 126 Timing 4000 Slot Time: 10 Max. Retry Limit: 1 Gap Update Factor: Quiet Time: 0 Target Rotation Time: 85000 Timing Setup Time: 250 4000 0 Slot Time: Quiet Time: Min. Station delay: 450 Max. Station delay: 1000 Target Rotation Time: 85000 250 Setup Time: 450 1000 Min. Station Delay: Max Station Delay

Defaults

Profibus Control panel

The Profibus Control panel can be found under Start \rightarrow Control Panel \rightarrow PROFIBUS.

Ensure that you see a green \checkmark in front of the Node. If you do not see other than that, such as a red $\stackrel{\checkmark}{}$, the PROFIcard is not active. Contact softing for assistance.

PROFIBUS Control Pane	l		
PROFIBUS PROFIboard-ISA PROFI104 PROFIboard-PCI PROFIboard-PCI PROFIcard / PROFIca FG series / PROFIgate	PROFIBUS Item Hardware Driver PnP Hardware Driver Protocol Driver Application Program Interface	Data 5.26.1.00.release (Build 12 5.26.1.00.release (Build 43 5.26.1.00.release (Build 52 5.26.1.00.release (Build 52	Add Remove: Edit.,
Scan Nodes	C	Cancel Apply	

Close

8.2 SRD-DTM

Connect the SRD-DTM for Profibus as shown below and described under "Opening a Project".

PA	CTwa	re						
<u>Fi</u> le	<u>E</u> dit	<u>V</u> iew	<u>P</u> roject	<u>D</u> evice	E <u>x</u> tras	<u>Wi</u> ndow	<u>H</u> elp	
	2	;	5	%	, 1		5	
Project	:						$ \Psi \times$	
⊒ но ⊡-⊅	ST PC <0,PR	:OFIdtm; *] <50,T	>PROFIdtm ag Number:	DPV1 >SRD991 \	/2 (PBDPV	1)		

After selecting the device driver from the device catalog, a window will automatically open to edit the bus address fort his specific unit. The default slave address is 126.

The following addresses are reserved for the Master or default: 0, 1 and 126.

ዾ <0 ,PROFIdtm >PROFIdtm 🔳 🗖 🔯
Please enter a station address for the added child device.
Station Address: 126
OK Cancel

After selecting the bus address, each line will show the address for the Master and Slave first. See the following example:

<0, PROFIdtm>PROFIdtm DPV1 <50, Tag Number> SRD991 V2 (PBDPV1) (0: Node 0) (50: Bus Address)

8.3 Data Screen

For Profibus devices an additional Data Screen may be opened to display additional Profibus specific parameters. For viewing the Profibus Data select **View – Profibus Data**. This function opens a modeless dialog. The displayed information is updated approximately once every two seconds.

Fields	Description
Readback	The actual position of the actuator/valve within the travel span in units of PV-SCALE.
Position D	The current position of the acutator/valve (discrete). Possible values are: NOT INITIALIZED (before an autostart has been performed), CLOSED, OPENED and INTERMEDIATE.
FB-Mode	Actual Mode of the Function Block.
SP	Setpoint SP in units of PV-SCALE. This setpoint is used as desired value, when the function block is in Mode AUTO and the status of SP is ok (e.g. Good (Non Cascade) = 0x80).
RCAS_IN	Setpoint RCAS_IN in units of PV-SCALE. This setpoint is normally transmitted by a DCS-System. This setpoint is used as desired value, when the function block is in Mode RCAS and the status of RCAS_IN is ok (e.g. Good (Cascade) = 0xC0).
RCAS_OUT	Setpoint RCAS_OUT in units of PV-SCALE with status, which is used as input for the function block algorithm. Depending on the mode of the function block contains the setpoint SP or RCAS_IN. RCAS_OUT is offered for the DCS- System or other function blocks.
OUT	Output Setpoint of the function block in units of OUT-SCALE with status. It is valid, when the function block is in mode AUTO or RCAS. In mode MAN, this value can be specified by the operator/engineer.

8.4 **Profibus Function Block Page**

For the detailed configuration of the Profibus Function Block parameters the Profibus Function Block Page is used.

Fields	Entries
Target Mode	Contains the desired mode of the function block.
PV-SCALE:	Conversion of a process value in the defined engineering units to a normalized value in percent as the input value of the function block. It contains the high and low scale values, engineering units code, and number of digits to the right of the decimal point. As default, PV-PSCALE is configured to percent, meaning that the Variables SP, Readback, RCAS_IN und RCAS_OUT, which are depending on PV-SCALE, are displayed in the range 0-100%.
OUT-SCALE:	Conversion of the normalized Output Signal (in percent) of the function block to the OUT parameter in the defined engineering units. It contains the high and low scale values, engineering units code, and number of digits to the right of the decimal point. As default, OUT-SCALE is configured to percent, meaning that the Variable OUT is displayed in the range 0-100%.
Simulation	Allows definition of a value and a status. When Simulation is enabled, this value and status is given in Readback instead of the real position of the actuator/valve. This set of parameters is intended only for commissioning and maintenance reasons.

9 FOUNDATION FIELDBUS CONFIGURATIONS

Configuration of FF-specific parameters.

jonnect <u>Vi</u> sconnect				
oad from device tore to device				
ameter	•	<u>C</u> onfiguration	•	FF Parameter
asured value	•			Configure Device
imulation				

9.1 Listing of FF parameter

nformation SM NM	Diags 9	ecurity		Notes Help
		D	evice Identification	
\$_Device		ECKARDT.SRD991_V2.100101		
\$_Manufacturer		385884	\$_Device Type	2401
5_Device Revision		100101	* Device Tag	SRD991-82/140892
* Device Address		32	* Device ID	385884240182/140892
raphics Edit	Delete Ad	d		
C Edit	Delete Ad	> d		
t Edit	Delete Ad	> 1		
nks <u>Edit</u>	Delete Ad	2		
t Edit	Delete Ad	2		
ks Edit	Delete Ad	2		
rks Edt	Delete	2		

ormati	on SM NM Diags	Security			notes Help	-
	Parameter Name	Value		Units	Help String	
-1	Address Assignment		NULLES OF			
1 ,	Device Tag	SRD991-82/140892	8		Device Tag	
2 *	Device Address	32	8		Device Address	
3 *	Device ID	385884240182/140892			Device ID	
4 \$	_ Operational Powerup	False	8		Operational Powerup	
-2	SM Agent					
1 \$	_ SM Support	f8 38 00 00			SM Support	
2 \$	_T1	480000	8	1./32 m	This is the preset value of the SM step timer in 1/32 of a millisecond	
3 \$	_T2	2880000	8	1/32 m	This is the preset value of the SM set address sequence timer in 1/32 of a milliseco	
4 \$	_T3	1440000	8	1/32 m	This is the preset value of the SM set address wait timer in 1/32 of a millisecond	
-3	Sync and Scheduling					
1 \$	_ Current Time	10.05.2005 11:05:44			Current Time	
2 \$	Local Time Diff	60		1/32 m	Local Time Diff	
3 \$	Clock Sync Interval	21	8	1/32 m	Clock Sync Interval	
4 \$	_ Time Last Received	10.05.2005 11:05:32			Time Last Received	
5 \$	Primary Time Publisher	50			Primary Time Publisher	
6 \$	TP Address	16			TP Address	
7 \$	Macrocycle Duration	0	8	1/32 m	Macrocycle Duration	
-4	VFD List					
1 \$	VFD Count	2			Number of VFDs in the Device	
2 \$	_Vfd[1].Ref	1			VFD Reference	
3 \$	_Vfd[1].Tag	MB			VFD Tag	
4 \$	_Vfd[2].Ref	4660			VFD Reference	
5 \$	_Vfd[2].Tag	FB Application			VFD Tag	
-5	FB Schedule					
1 \$	Version Number	0			Schedule Version Number	
2 \$	Schedule Count	16			Number of objects in the schedule	
3 \$	_FBSched[1].TimeOffset	-1			Block Time Offset	
4 \$	_FBSched[1].FbObjectIndex	0			Block OD Index	
5 \$	_FBSched[1].VfdRef	0			VFD reference that holds the block	
6 \$	_FBSched[2].TimeOffset	-1			Block Time Offset	
7 \$	_FBSched[2].FbObjectIndex	0			Block OD Index	
8 \$	_FBSched[2].VfdRef	0			VFD reference that holds the block	
9 \$	_FBSched[3].TimeOffset	-1			Black Time Offset	
10 \$	_FBSched[3].FbObjectIndex	0			Block OD Index	
11 \$	_FBSched[3].VfdRef	0			VFD reference that holds the block	

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