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ACS410 PC software for microprocessor-based burner controls

Installation and Operating Instructions

For use with software version 4.0 release 2 or higher Date of issue: September 10, 2019

Smart Infrastructure

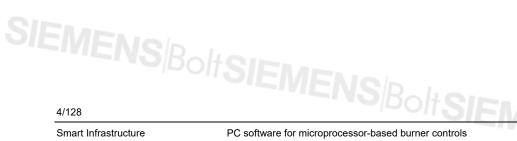
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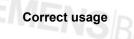


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SIEMENSBOIRS Safety guidelines	1 Тур	oograp	hical conventions	
Safety guidelines	These Installation and Operating Instructions contain notes which must be observed to ensure your personal safety and to protect the product and the connected equipment. Such notes are highlighted by a warning triangle:			
		Warning	Indicates that death, personal injury or substantial property damage can result if adequate precautions are not taken.	
Additional notes	The following sy	mbols are use	ed for notes and references:	
	Ċ	Note	Draws your attention to particularly important information on the product, product handling, or to a special part of the documentation.	
	\Rightarrow	Reference	Makes reference to additional information given in other pieces of technical documentation or chapters.	
Qualified personnel	for the respective Naturally, specia the OEM's or the	e user group. Il qualification è heating engi	as levels. These access levels define the scope of functions s are required for the different user groups. For example, it is ineer's responsibility to ensure that the settings made on the ice with the standards applying to the relevant plant.	



This software may only be used on the applications described in the technical documentation, and only in connection with devices or components from other manufacturers which have been approved or recommended by Siemens. SIEMENS Bolt SIEMEN

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SIEMENSBolt 2 E Introduction

Note

When using the ACS410, compliance with the technical documentation on the respective type of burner control (LMV2/LMV3 / LME1/LME2/LME4-standard / LME39 / LME6 / LME7/LME8 / LMO standard) is mandatory!

Suitable types of burner controls and relevant pieces of documentation:

Burner control	Data Sheet no.	Basic Documentation no.
LME1/LME2/LME4-standard	N7101	
LME39	N7106	P7106
LME6	N7104	
LME7	N7105	P7105
LME81		P7109
LMO-standard	N7130	
LMO39	N7154	P7154
LMV2		P7541
LMV3		P7546
Interface module	Data Sheet no.	Basic Documentation no.
OCI410	N7616	
OCI400	N7614	

The ACS410 is a convenient tool designed to visualize, save and transmit all data delivered by advanced microprocessor-based burner controls made by Siemens.

The ACS410 provides the following functions for burner controls with BCI interface (LMV2/LMV3 / LME39 / LME7/LME8) via OCI410, or for burner controls with UDS interface (LME39 / LMO-standard / LME-standard) via OCI400):

- Reading the settings and parameters, operating states and types of errors of burner controls
- Data logger (recording, triggering and presenting the data delivered by the burner controls)
- *Reporting* functions for printing the burner control settings for documentation purposes

Extra functions available when using burner controls with BC interface (LMV2/LMV3 / LME39 / LME7/LME8) via OCI410:

- Parameter settings ٠
- Backup/restore

All key data can be saved in files and retrieved later, even without having the burner control connected.

Operation of the program is primarily based on Windows standards and requires basic knowledge of the software used by this operating system.



Note

This document was issued on September 10, 2019, and covers ACS410 version 4.0 release 2 or higher.



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General

SIEMENS/BoltSISEM System requirements IEMENS BoltSIEMEN

Operating system:

- Windows ® XP min SP2
- Windows ® Windows 7
- Windows ® Windows 8.1
- Windows ® Windows 10 Build 1703

The system requirements are determined mainly by the choice of Microsoft operating system used!

Example: Minimum hardware requirements!

System	32 bit	64 bit
Processor	1 GHz (x86) or higher (Win8, with support for PAE, NX and SSE2)	1 GHz (x64) or higher (Win8, with support for PAE, NX and SSE2)
Main memory (RAM)	1 GB	2 GB
Hard disk memory	16 GB	20 GB
Graphics card	DirectX 9 graphics card with V	VDDM driver
Screen resolution	Minimum screen resolution 10	024 x 786.

Different, higher requirements may apply due to the choice of operating system or SIEMENS/BoltSIEMENS/BoltSIEMENS/BoltSIEMEN hardware used. More detailed information is available at www.microsoft.com.

SIEMENS/Bolt S.H Prerequisites for using ACS410

When using online help, you need Acrobat Reader. To make a download, go to Adobe's homepage at www.adobe.com

For connection of ACS410 with the burner control, the following additional components are required:

- In the case of communication via UDS interface (with optical data transmission): • OCI400
- In the case of communication via BCI (Burner Communication Interface): OCI410
- 25 MB free hard disk memory (for the data logger function, additional memory is required for saving data files)
- Free serial RS-232-COM interface, for operation with OCI400, a USB-RS-232 adapter • can be used on an existing USB-COM interface as an alternative
- Free USB 1.1 interface or higher, for operation with OCI410 •
- Input devices: Keyboard and mouse or touchpad
- Optional: CD-ROM drive for installing the ACS410 via CD
- Optional: Internet access, for sending e-mails from the ACS410 or downloading the • ACS410 via the Siemens Extranet

4 Safety notes

Warning!



The ACS410 is a convenient tool for use by qualified personnel, designed to commission and optimize combustion plant. Since the required actions and settings are safety-related, the user has a special obligation to exercise due care. Although specific technical measures have been taken to prevent incorrect entry of data and wrong parameter values, the user must check the correct function of the plant in a conventional way both during and after commissioning and - if required ensure manual shutdown.

Setting the correct system parameters 4.1

Warning!



It should be noted that the characteristics of the burner control are determined primarily by the parameter settings to be made, rather than by the type of unit. It is especially the OEM which is responsible for making certain that the basic unit's parameter settings are in compliance with the standards covering the respective application or type of plant. Responsibility for the parameter settings is assumed by the person who, in accordance with the access rights, makes or has made changes on the respective setting level. The detailed descriptions and safety notes given in the Basic Documentation on the system components must also be observed.

4.2 Setting the electronic fuel-air ratio control system (only with LMV2/LMV3)

Warning!

When setting the electronic fuel-air ratio control system, the user is required to make checks with the help of a flue gas analysis system. If necessary, the plant must be shut down manually. This applies to both modulating and multistage operation. In addition, the user must fully operate the parameterized plant without the ACS410, but using the AZL2, and to verify the correct settings. SIEMENS^{Bolt}SIEMENSB

SIEMENSBOILS 4.3 Changing the parameters or the plant's configuration

Warning!

The procedure (checking the savings) described in chapter *Parameters window* including checking of *Required* und *Actual* must be strictly observed. For that, the program offers special support. If there are deviations, the relevant notes must be observed. In addition, the user must verify the correct setting of all parameters with the help of the AZL2, without using the ACS410.

4.4 Shutdown function of LME / LMV2/LMV3 burner controls via ACS410

Warning!

To ensure shutdown of plant in case of emergency, direct-acting means (mains isolator for opening the safety loop) should be used. Reason: Execution of shutdown via the PC could be impaired by a faulty PC, for example, or a disrupted connection.

4.5 Place of installation

Warning!

The ACS410 is designed for use on site, that is, within viewing and hearing distance of the respective combustion plant. This means that remote control is not permitted.

4.6 ACS410 with Modbus (LMV2/LMV3 only)

Note!

If the ACS410 is started when Modbus mode is activated on a LMV2/LMV3, it is no longer possible to write data via Modbus! Modbus data points can only be read in this state.



Exception!

If data recording is activated with ACS410 (trending), individual pieces of data for the LMV2/LMV3 can be written via Modbus.

If the data recording is stopped or the window is exited, the write access for Modbus to the LMV2/LMV3 is also blocked.



Warning!

When the ACS410 is ended, the Modbus data of the overriding control system may have to be re-installed (e.g. target load).



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IS^{Bolt}SIEMEN Procurement of ACS410 6

For ordering the ACS410 software and updates plus the drivers for the BC interface module OCI410 (Burner Communication Interface), please contact your distributor or heating engineer.

7 Languages

The ACS410 is available in English and German. To select one of them, go to program menu item Settings (⇔ chapter Settings – languages).



The visual appearance of the relevant screen content is influenced by the settings of the Windows operating system.

In Windows, for example, the relevant settings can be found in **Settings** under **Personalization**.

Change the visuals and sounds on your computer

Click a theme to change the	desktop background, window o	color, sounds, and screen sa	ver all at once.			
My Themes (1)						
Nicht gespeichertes						
Design Aero Themes (6) ———						Get more themes online
Windows 7	Architecture	Characters	Landscapes	Nature	Scenes	
Basic and High Contrast	: Themes (6) ————					
Windows 7 Basic	Windows Classic	High Contrast #1	High Contrast #2	High Contrast Black	High Contrast White	

All screenshots in this documentation have been created using the standard Windows setting.



SIEMENSBOILS 9 Installing/deinstalling the ACS410



Note

To install the software, you need to have administrator rights on your PC.

Before installing the software package, all active applications that are not really required should be closed. Also take care that your virus scanner is not activated.

Load all installation files of the ACS410 and the associated subdirectories to a directory of your choice.

9.1 Installing the ACS410

To start installing the ACS410, select the *setup.exe* file from the directory selected by you for installing the files of the ACS410.

To start the installation, double-click the setup.exe file.

Name	Date modified 👻	Туре	Size
] bin	7/30/2015 8:43 AM	File folder	
🚏 setup.exe	7/12/2015 2:28 PM	Application	1,412 KB
acs410_InnoSetup.iss	6/19/2015 5:34 PM	ISS File	3 KB
🖻 eula.rtf	2/4/2015 2:22 PM	Rich Text Format	59 KB
😼 isetup-5.5.5-unicode.exe	2/4/2015 2:22 PM	Application	2,281 KB

Choose either German or English as the installation language!

Se Se	lect Se	etup Language 🔀	
1	P	Select the language to use during the installation:	Nelo
		English 🔽	SIEMEN
		OK Cancel	





Installing the ACS410 (cont'd)

Follow the installation instructions.



🚰 Setup - AC5410	
License Agreement Please read the following important information before continuing.	SIEMENS
Please read the following License Agreement. You must accept the terms of this agreement before continuing with the installation.	
END USER LICENSE	
AGREEMENT	
IMPORTANT- READ CAREFULLY: This End-User License Agreement ("EULA") is between You (either an individual, a legal entity or any	•
 I accept the agreement 	
○ I <u>d</u> o not accept the agreement	
< <u>B</u> ack <u>N</u> ext >	Cancel

Read the EULA carefully.

The agreement must be accepted before continuing with the installation. If you reject the agreement, the installation is canceled.

Click Next.>

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The setup will install the ACS410 in the following folder.

Select Destination Location		
Where should AC5410 be installed?		51
Setup will install ACS410 into	the following folder.	
To continue, click Next. If you would li	ke to select a different folder,	click Browse.
C:\Program Files\Siemens\ACS410		Browse
At least 25.9 MB of free disk space is r	equired.	

Click on Browse ... to select a different folder.

Click on Next > to continue.

PC software for microprocessor-based burner controls 9 Installing/deinstalling the ACS410

The setup will create the program links in the following start menu folder.

🚰 Setup - AC5410	
Select Start Menu Folder Where should Setup place the program's shortcuts?	SIEMENS
Setup will create the program's shortcuts in the following Start Menu fold	er.
To continue, click Next. If you would like to select a different folder, click Browse.	
ACS410 Browse.	
< <u>B</u> ack <u>N</u> ext >	Cancel

Click on Browse ... to select a different folder.

Click on Next > to continue.

Check the box next to **Create a desktop icon** if you would like to create a desktop icon. The setup will then create the icon during the installation of ACS410.

elect Additional Tasks Which additional tasks should be per	formed?	SI
Select the additional tasks you would then click Next.	d like Setup to perform while insta	alling ACS410,
Additional icons:		
🔽 Create a desktop icon		
	< Death Nave	> Can
	< <u>B</u> ack <u>N</u> ext	

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Smart Infrastructure

Click on Install to start the installation.

🕞 Setup - AC5410	<u> </u>
Ready to Install Setup is now ready to begin installing ACS410 on your computer.	SIEMENS
Click Install to continue with the installation, or click Back if you want to review or change any settings.	
Destination location: C:\Program Files\Siemens\ACS410	-
Start Menu folder: AC5410	
Additional tasks: Additional icons: Create a desktop icon	
	▼ }
< <u>B</u> ack	Cancel

The ACS410 is installed.

The device driver of OCI410 is then installed as part of the setup process.

📅 Setup - AC5410	
Installing Please wait while Setup installs ACS410 on your computer.	SIEMENS
Extracting files C:\Program Files\Siemens\ACS410\ 7435eM /20 R#R egisterOcx.bat	
	Cancel
SIEMENS Bolt SIEMEN CO	19/1





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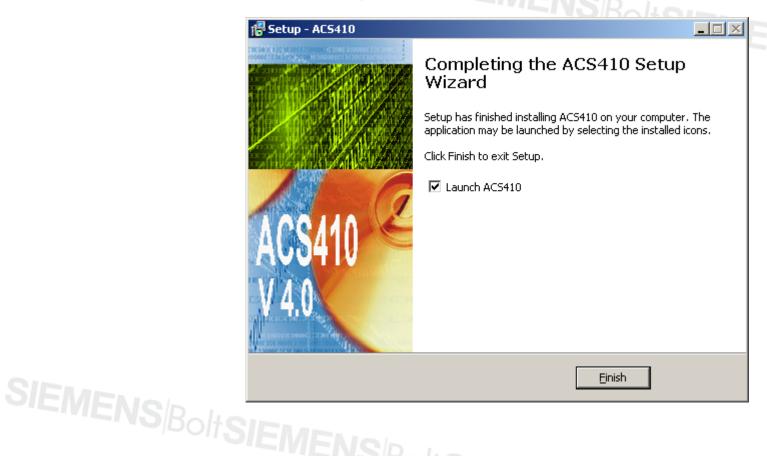
Click on Finish to end the installation successfully.

	Device Driver Installation Wi	zard		
		Completing the Device Driver Installation Wizard		
		The drivers were successfully in You can now connect your dev came with instructions, please n	ice to this computer. If your device	
		Driver Name ✔ Siemens AG OCI USB D ✔ Siemens AG OCI USB D	-	
SIEMENSBolks		< <u>B</u> ack	Finish Cancel	
	Note!			

Note!

Connect an OCI410 to the USB port on your computer.

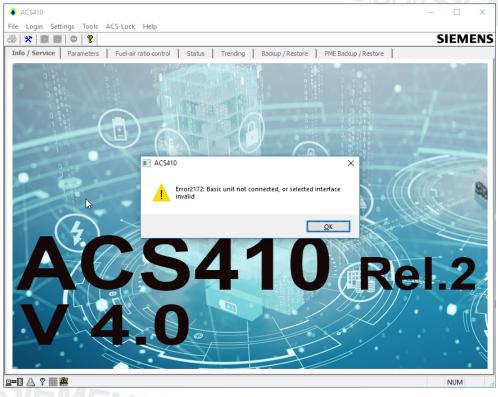
To start the ACS410, click on Finish.



SIEMENSBoltSIEMENIO

The ACS410 has been successfully installed.

First automatic program start after successful installation, without connected burner control.





If there is no burner control connected for the initial (automatic) program start, the following error message appears (in English):

ACS410	×O	
Error2172: Basic unit not conn invalid	ected, or selected interface	
	ОК	

Click on **OK**.

End the ACS410 application and connect a burner control to the OCI410.

Start the ACS410 application again.

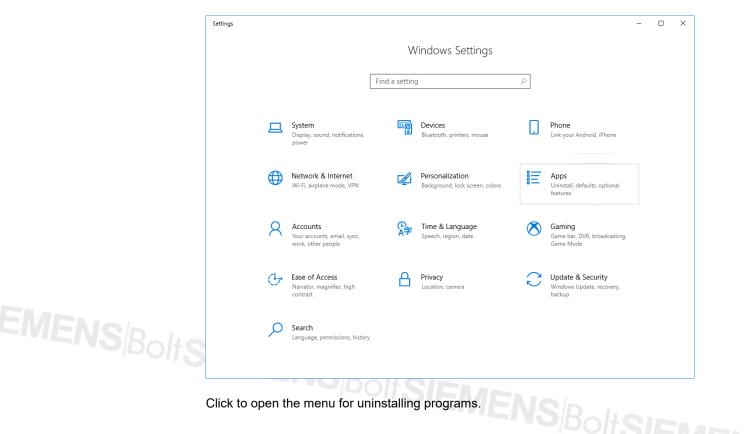


Smart Infrastructure

SIEMENSBOILS 9.2 Deinstalling the ACS410

This function deinstalls the ACS410, installs missing files, or corrects corrupted files, connections and registration entries.

From the Windows start menu, navigate to **Settings – System control** and select the **Apps** symbol.



Smart Infrastructure

PC software for microprocessor-based burner controls 9 Installing/deinstalling the ACS410 23/128

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← Settings		- 0	×	
ம் Home	Apps & features			VIEN
Find a setting	Installing apps			
Apps	Choose where you can get apps from. Installing only apps from the Store helps protect your PC and keep it running smoothly.			
E Apps & features	Allow apps from anywhere \checkmark			
I∋ Default apps				
щ_Offline maps	Apps & features			
Apps for websites	Manage optional features Manage app execution aliases			
□ Video playback	Search, sort, and filter by drive. If you would like to uninstall or			
	move an app, select it from the list.			
	Sort by: Name V Filter by: All drives V			
	ACS410 Version 4.0 49.9 MB 2/21/2019			
	Modify Uninstall			
				I.
The ACS410 Version 4.0 is	removed.			
	removed. BoltSIEMENSBO			



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SIEMENSBOILS 9.3 Files included in the scope of delivery

The following files are required and must be installed for running the ACS410:

ame	Date modified 👻	Туре	Size
📔 bin	7/30/2015 8:43 AM	File folder	
🖥 setup.exe	7/12/2015 2:28 PM	Application	1,412 KB
acs410_InnoSetup.iss	6/19/2015 5:34 PM	ISS File	3 KB
eula.rtf	2/4/2015 2:22 PM	Rich Text Format	59 KB
🖁 isetup-5.5.5-unicode.exe	2/4/2015 2:22 PM	Application	2,281 KB

Installation directory:

Contents of the bin folder:

Name	Date modified 👻	Туре	Size
길 data	7/30/2015 8:43 AM	File folder	
鷆 doc	7/30/2015 8:43 AM	File folder	
鷆 hlp	7/30/2015 8:43 AM	File folder	
퉬 LOG	7/30/2015 8:43 AM	File folder	
鷆 oci	7/30/2015 8:43 AM	File folder	
鷆 oem	7/30/2015 8:43 AM	File folder	
鷆 res	7/30/2015 8:43 AM	File folder	
🔹 acs.exe	7/17/2015 10:00 PM	Application	4,036 KB
S T√I20ENG.dll	2/4/2015 2:22 PM	Application extension	40 KB
S TVI20GER.dll	2/4/2015 2:22 PM	Application extension	40 KB
🚳 TrView20.ocx	2/4/2015 2:22 PM	ActiveX control	868 KB
ACS410_ReRegisterOcx.bat	2/4/2015 2:22 PM	Windows Batch File	1 KB
🚳 msxml6.dll	2/4/2015 2:22 PM	Application extension	2,443 KB
S msxml6r.dll	2/4/2015 2:22 PM	Application extension	2 KB



PC software for microprocessor-based burner controls 9 Installing/deinstalling the ACS410

SIEMENSBOILD Connecting to the plant

Ensure compliance with the relevant national safety regulations!

Warning!



- Before making any wiring changes in the connection area of a burner control • completely isolate the burner control from mains supply (all-polar disconnection)
- Ensure protection against electric shock hazard by providing adequate protection for the burner control's connection terminals



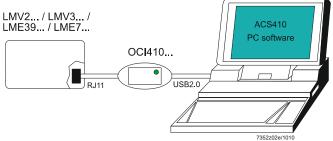


SIEMENSBOILS 10.1 Data exchange via the OCI410

Connect the OCI410 interface for BCI communication with LMV2/LMV3 or LME burner controls to the USB port of your PC (without any further extensions) as shown in the example below.

Authorization for making use of the respective functionality of the ACS410 is enabled by the different types of OCI410. The table below shows the different types of OCI410 with the relevant authorizations and the resulting functions in connection with the ACS410.

	Type of OCI410	Authorization
	OCI410.20	 IS (installer) Functionality is dependent on the type of device: Reading info/service data Reading parameters Reading and printing status data Recording and saving trending data Resetting the startup counter and the hours run and fuel meter Changing the preselected manual output
	OCI410.30	 SO (heating engineer) Functionality is dependent on the type of device (see IS): Changing parameters (SO level) In addition: Setting the ratio control curves of the LMV2/LMV3 Changing burner ID on the burner control Executing backup and restoring data in the burner control
	OCI410.31	 OEM (burner or boiler manufacturer) Only with LME39! Functionality is dependent on the type of device (see IS): In addition: Changing burner ID in the burner control Changing parameters (OEM level) Changing passwords on the burner control Executing backup and restoring data in the burner control
	OCI410.40	 OEM (burner or boiler manufacturer) Functionality is dependent on the type of device (see IS or SO): In addition: Changing parameters (OEM level) Changing passwords on the burner control
OCI410	LMV2 / LMV3 /	AC:5410

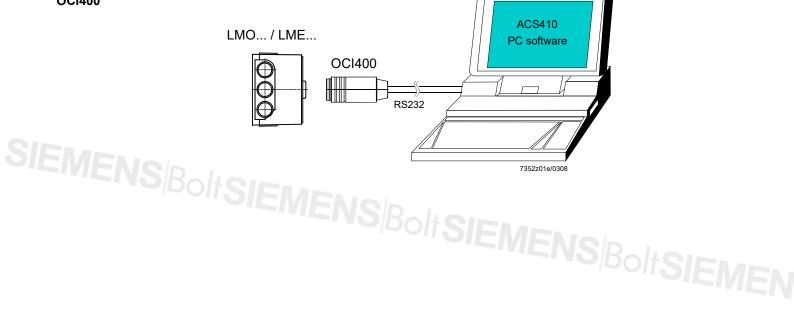


SIEMENSBOOD 10.2 Data exchange via the OCI400 (only with LME / LMO)

Connect the OCI400 interface for diagnostics via optical communication (UDS) with LMO or LME burner controls to the respective port of your PC (without any further extensions) as shown in the example below.

Type of OCI4x	Authorization
OC1400	IS (installer) Handling data from UDS-compatible devices (LMO1 / LMO2 / LMO4 / LME1 / LME2 / LME3 / LME4 / LME6), such as: - Reading and printing info/service data, parameters, status data (see SO) - Accepting and saving trending data
	ACS410

OCI400



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PC software for microprocessor-based burner controls 10 Connecting to the plant

SIEMENSBOILS 11 Starting the program

Connect the burner control to your PC via the OCI400 or OCI410 interface. To start the ACS410, click the ACS410 icon on the Desktop or select ACS410 from the Windows start menu under **Programs**.



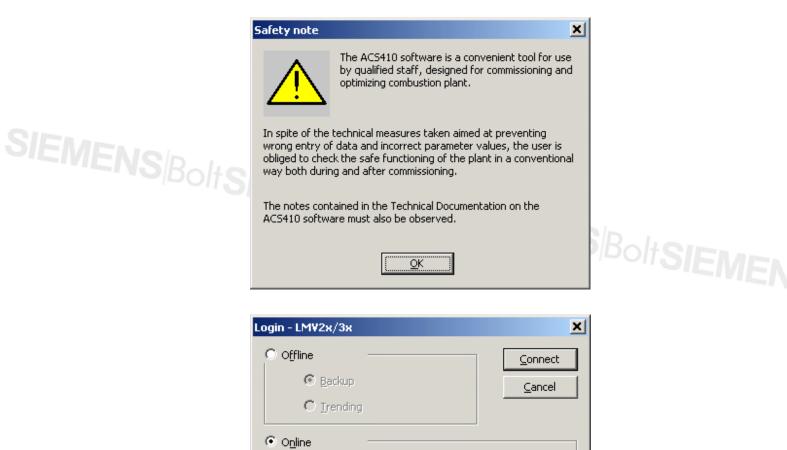
Note

ACS410 automatically identifies the COM port used. Selection of the COM port to which the OCI4xx interface is connected is required in rare cases only (\Rightarrow chapter Settings – General).

If the burner control is exchanged, the ACS410 must be closed and restarted.

11.1 Logging on to the burner control – online operation

First, the following message appears. Please read it carefully and confirm by clicking **OK**.



OEM

IS

SO OEM

User:

SIEMENS Bolt SIEMENS Bolt

Password:

Depending on the user level in accordance with the type of OCI410, select IS (installer), SO (heating engineer), or OEM (burner or boiler manufacturer).

#

🔲 Create backup

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Login - LMV2x/3x		×	
C Offline			Skalian
🖲 Backur		Cancel	D ^{IDOIT} SIEMEN
C Irendi	ng		
• O <u>n</u> line			
User:	15 🔽	Create backup	
Password:	#		

User IS (installer) requires no password. The available operations are limited (
chapter Connecting to the plant).



Users SO and OEM require specific passwords.



Note!

If you don't have the required password, or if you forgot it, contact the boiler, burner or burner control manufacturer!



Click this button to access the start menu with all available letters and numbers.



Click on the required numbers and letters to copy them to the password box. After entering the password, close the display by clicking **OK**.

Creating a backup file

Login - LMV2x/3	4	×
O Offline		Connect
🖲 Backu	p	Cancel
C Irend	ing	
Online		
User:	OEM 🔽	Create backup
Password:		#

When ticked, a file is created after logging on, where the parameters and the burner control's current operating state are saved. This file can be viewed in offline mode or restored as a restore file in online mode.



Note!

Prerequisite: Burner control must have a burner ID.

When clicking **Connect**, the ACS410 is connected to the relevant burner control.



Note!

If the connection attempt proves unsuccessful, the following messages may appear:

Message box when no OCI4xx interface was found at the selected COM port



Remedy: Select the COM port where the OCl4xx interface is connected (⇔ chapter *Settings – General*).

• Only customized OCI410 with customized burner controls may be used, or standard OCI410 with standard burner controls. Otherwise, the following message box appears:



Confirm by clicking **OK** and select the required combination of devices.

11.2 Offline operation without burner control

	Login			×	
$\left(\right)$	 Offline Backup Irendi 		<u>O</u> K <u>C</u> ancel		
	C O <u>n</u> line				
	User:	IS 💌	Create backup		
	Password:		#		

When starting the program offline, it is possible to view backup files and trending files without having a connection to the burner control. Using the trending and backup files, it is also possible to print a status report of the burner control at the time of recording.

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PC software for microprocessor-based burner controls 11 Starting the program

SIEMENSBOIS 11.2.1 Offline backup files

After selecting **Backup** from the log-on screen under **Offline** and confirming with **OK**, the **Backup** / **Restore** selection window opens (⇔ chapter *Backup*/restore).

	● ACS410							
E	ile Login <u>S</u> etting	-	S-L <u>o</u> ck <u>H</u> elp			SIEMENS		
	Info / Service Para	ameters Fuel-ai	r ratio control	Status Tr	ending Backup / Restore	PME Backup / Restore		
	Default directory:	C:\Programme\S	Siemens AG\ACS41	.0\Bkp\LMV2		Description:		
	Backup file:]	LMV Demo Settings 03.09.2010					
	Date	Basic unit	Burner ID	User level	Description			
	2010-09-23 17:26:12		1111	OEM	Test	[
	2010-09-03 09:45:12		1111	OEM	LMV Demo Settings 03.09.201	0		
	2010-09-02 16:16:03	LMV37.400A2	6789	OEM				
						[
						[
						Device no.		
						Burner type		
						BurnerSN		
						Backup Load Restore		
	•					Delete		
B	=🛛 🛆 🕈 🏼 🚜 C	offline burner cont	rol state			NUM .		

Here, a backup file can be selected. Column **Description** on the right displays the free text that was saved together with the file.

 Load Copies the parameter and status data to the Info / Service, Parameters and Ratio Control windows of the ACS410
 Delete Removes and deletes the selected file from the list



Note!

Restoring or backup of the saved data and settings in the burner control is only possible in online mode.

Parameters: Error history: Info # Code Diagnos Class Phase Startup counter Load Fut 167:Fuel volume resettable 37 h 1 201 4 4 100 107 0.00 % 0 162:Operating hours resettable 37 h 2 167 1 0 12 107 0.00 % 0 163:Operating hours resettable 107 4 136 1 3 60 105 P1 0 13:Burner identification 1111 6 7 3 3 62 100 31.50 % 0 107:Software variant 1 8 7 3 60 95 10.00 % 0 103:Identification no. 01017 12 22 0 3 60 93 10.00 % 0 103:Identification no. 01017 12 22 0 3 60 99 20.00 % 0 104:Presele)))	0.00 % 0		Phase					
167:Fuel volume resettable 0 ft? 1 201 4 4 10 107 0.00 % 0 162:Operating hours nesettable 37 h 2 167 1 0 12 107 0.00 % 0 163:Operating hours nesettable 107 4 136 1 3 60 105 P1 0 164:Number of startups resettable 107 4 136 1 3 60 105 P1 0 106:Total number of startups 107 5 2 4 0 42 103 90 0 107:Software version 0x0180 7 3 0 60 99 100.00 % 0 102:Identification date 07-07-05 9 7 3 60 93 10.00 % 0 102:Identification none. 65 10 22 0 3 60 91 20.00 % 0 104:Preseteted parameter set: Customer code 9 11 7 3 60 87 20.00 % 0 14:32:2		0.00 % 0		Phase			rror history:		Parameters:
164.Number of startups restable 107 4 166 1 3 60 105 P1 0 166.704 number of startups 107 5 2 4 0 42 103 P0 0 113.8urner identification 1111 6 7 3 3 62 100 31.50 % 0 107.50ftware version 0x0180 7 3 0 0 60 99 100.00 % 0 102.1dentification date 07-07-05 9 7 3 3 60 91 20.00 % 0 102.1dentification no. 35 10 22 0 3 60 91 20.00 % 0 104.Preselected parameter set: Ustromer code 9 11 7 3 60 87 20.00 % 0 143:Device address eBus 1 13 22 0 3 60 86 20.00 % 0 954:Intensity of fame 0% 16 22 0 3 60 86 20.00 % 0 945:Curre)	10,00 % 0		12	4 0	4	1 201 2 167	37 h	167:Fuel volume resettable [m³, l, ft³, gal] 162:Operating hours resettable
108:50thware variant 1 8 7 3 60 95 40,00 % 0 102:1dentification date 07-07-05 9 7 3 3 60 93 10,00 % 0 103:1dentification no. 35 10 22 0 3 60 91 20,00 % 0 104:Preselected parameter set: Customer code 9 11 7 3 3 60 90 54,50 % 0 104:Preselected parameter set: Version 0x0107 12 22 0 3 60 89 20,00 % 0 143:Device address eBus 1 13 22 0 3 60 87 20,00 % 0)	P0 0 31.50 % 0	105 103 100	60 42 62	3 0 3	1 4	4 136 5 2 5 7	107 107 1111	164:Number of startups resettable 166:Total number of startups 113:Burner identification
104-Preselected parameter set: Version 0x0107 12 22 0 3 60 69 2x,00% 0 105-Preselected parameter set: Version 0x0107 12 22 0 3 60 89 2x,00% 0 143:Device address eBus 1 13 22 0 3 60 87 2x,00% 0 Service 14 22 0 3 60 86 2x,00% 0 96-Current flow rate [m], j, f2, gal] 0.0 17 3 0 0 85 2x,00% 0 945:Current flow rate [m], j, f2, gal] 0.0 17 3 0 0 60 82 47,50% 0 945:Current flow rate [m], j, f2, gal] 0.00 18 3 0 0 60 82 47,50% 0 922:[0]fuel 0.00 ° 20 2 4 0 42 80 10.00% 0 922:[0]fuel 0.00 ° 21 167 1 0 12 79 0.00 % 0 922:[0)	40.00 % 0 10.00 % 0	95 93	60 60	3 3	3	3 7 9 7	1 07-07-05	108:Software variant 102:Identification date
Service 15 22 0 3 60 85 20.00 % 0 954:Intensity of flame 0 % 16 22 0 3 22 84 0.00 % 0 960:Current flow rate [m³,], fr3, gal] 0.0 17 3 0 0 24 83 0.00 % 0 945:Current flow fuel 18 3 0 0 60 82 47.50 % 0 945:Current flow % 19 3 0 0 60 81 20.00 % 0 922:[0]fuel 0.00 ° 21 167 1 0 12 79 0.00 % 0 922:[1]air 0.00 ° 21 167 1 0 12 79 0.00 % 0 936:Standardized speed 0.0 % 22 167 2 0 12 79 0.00 % 0 161:Number of faults 36 23 22 0 3 60 77 20.00 % 0 <th></th> <th>54.50 % 0 20.00 % 0 20.00 % 0</th> <th>90 89 87</th> <th>60 60 60</th> <th>3 3 3</th> <th>3 0 0</th> <th>11 7 12 22 13 22</th> <th>9 0x0107</th> <th>104:Preselected parameter set: Customer code 105:Preselected parameter set: Version</th>		54.50 % 0 20.00 % 0 20.00 % 0	90 89 87	60 60 60	3 3 3	3 0 0	11 7 12 22 13 22	9 0x0107	104:Preselected parameter set: Customer code 105:Preselected parameter set: Version
945:Current fuel fuel 0 18 3 0 0 60 82 47.50 % 0 121:Menual output % 19 3 0 0 60 81 20.00 % 0 922:[0]fuel 0.00 ° 20 2 4 0 42 80 10.00 % 0 922:[1]air 0.00 ° 21 167 1 0 12 79 0.00 % 0 926:52:1air 0.00 % 21 167 2 0 12 79 0.00 % 0 936:52:64:7 36 23 22 0 3 60 77 20.00 % 0 161:Number of faults 36 23 22 0 3 60 77 20.00 % 0))	20.00 % 0 0.00 % 0	85 84	60 22	3 3	0 0	15 22 16 22		954:Intensity of flame
922:[1]air 0.00 ° 21 167 1 0 12 79 0.00 % 0 936:5tandardized speed 0.0 % 22 167 2 0 12 79 0.00 % 0 161:Number of faults 36 22 20 3 60 77 20.00 % 0 24 3 1 0 10 75 0.00 % 0		47.50 % 0 20.00 % 0	82 81	60 60	0	0	18 3 19 3	fuel 0 % 0.00 °	945:Current fuel 121:Manual output 922:[0]fuel
)	0.00 % 0 0.00 % 0 20.00 % 0	79 77	12 60	0	0	22 167 23 22	0.0 %	936:Standardized speed
	Þ								
Here, the info, service and parameter data from the time of recording can be view	M li) NUM							🖳 🔝 🕈 🛄 🚝 Offline burner control stati



Smart Infrastructure

SIEMENSBOIS 11.2.2 Offline trending and report function

After selecting **Trending** from the log-on screen under **Offline** and confirming with **OK**, the selection window with the archived files opens.

i) Data files		×
Files:		
Date	Data file	Offline backup file
2007-04-17 09:58	.\tn\200702071054Trend	.\tn\200702071054Trend
2007-04-17 09:58	.\tn\200702071126Trend	.\tn\200702071126Trend
2007-04-17 09:58	.\tn\Demo LME39 Startup	.\tn\Demo LME39 Startup
2007-04-17 09:58	\tn\Demo LMV27 GAs Mo	.\tn\Demo LMV27 GAs Mo
2007-04-17 09:58 2007-04-10 14:00	.\tn\LMV27 Demo Startup .\tn\LME39100 auto Trig	.\tn\LMV27 Demo Startup .\tn\LME39100 auto Trig
2007-04-10 14.00	Additioned and any any and a second s	.tentenession actornig
nformation:		
Automat: LMV27.10	0A2 Burner ID: 123456	A lord
Hatomati Erivezziio	one Damor 10, 120100	<u>Load</u>
		Delete
41		
-		

When selecting a file, the **Information** window shows the type of burner control and the relevant burner ID.

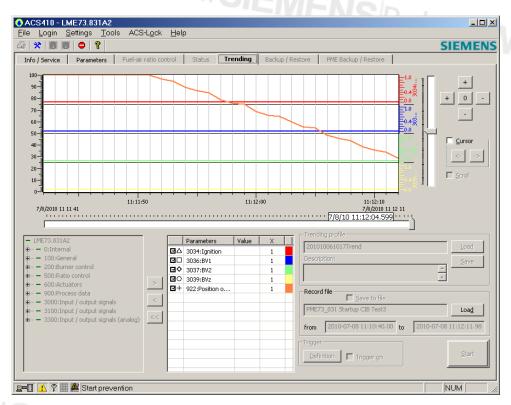
- Load	Copies the file to the graph of the Trending window
- Delete	Removes and cancels the selected file from the directory and the list

- Cancel Closes the display and the selection window



SIEMENSBOIL 11.2.2.1 Trending window offline

(⇒ chapter Data recording (trending))



Here, the trend recording can be checked and analyzed.



SIEMENSBOIS 11.2.3 Report function/printout (offline)

After selecting **Report** from the drop-down menu File, the following dialog box appears:

Report description	×	
	<u>o</u> k	
Product no.	Abort	
LMV27.100A2		
Description:		
Demo LMV27 Startup		

Here, a description of the report can be entered, which will then be printed out together with the report.

When clicking **OK**, the preview window for the *Print* function opens (⇔ chapter *File*).

Drucken			
	<u>N</u> ächste <u>V</u> orher	ige ∫ <u>Z</u>wei Seiten Vergrößern Ve	r <u>k</u> leinem <u>S</u> chließen
	AC \$4 10 20 10-10-06 10 : 21 : 57 Demo LMV 27 St	Unicad file preview 20 100903054454.uni artup	SIEMENS
	105:[0]Preselec 107:[0]Software 113:[0]Burner ic 121:[0]Manual (125:[0]Mains fre 126:[0]Display I 127:[0]Timeout 128:[0]Fuel net 129:[0]Fuel net 129:[0]Celete d 141:[0]Operatin 142:[0]Stepbac] 143:[0]Device a 144:[0]Transmi 145:[0]Device a 146:[0]Baud rat 147:[0]Parity for 148:[0]Derault I 161:[0]Number 162:[0]Operatin 163:[0]Operatin 165:[0]Fuel 0 - r 166:[0]Fuel 0 - r 166:[0]Fuel 0 - r	no. (ASN) tion date tion no. ted parameter set: Customer code ted parameter set: Version version lentification output rightness for menu operation er pulses per volumetric unit uel meter pulses per volumetric unit uel meter pulses per volumetric unit uel meter pulses per volumetric unit def set pulses per volumetric unit splay of error history SO g mode BACS <time communication<br="" event="" in="" of="" the="">ddress for Modbus e for Modbus bad if communication with BACS h</time>	0x0107 0x0180 1111 % 50 Hz 75 % 30 min 0.00 nit 0.00 off on breakdown 600 s 1 nd 09 30 s 1 9600 none

Example of preview window for the Print function

SIEMENS/BoltSiz **Program window**

After logging on to the burner control via the ACS410, the program window opens.

12.1 Menu bar

								3	IEME
Info / Service Parameters Fuel-air rati	o control Status	Tr	ending	Backup / Re	store	PME Back	up / Restore		
Parameters:		Erro	r history:						
Info		#	Code	Diagnos	Class	Phase	Startup counter	Load	Fuel
Info 167:Fuel volume resettable [m³, l, ft³, gal]	0 ft ³	#	Code 200	Diagnos	Class 0	Phase 12	Startup counter	Load 0.00 %	Fuel 0
	0 ft³ 37 h	#	Construction and	a manage and control	**************************************	of subshirts done	a characteristic the second	and sealth for the second	

12.1.1 File

Note!

 \bigcirc

Print preview and Print... can be selected only if you are logged on to the burner control (online operation).

Print view of the table(s) with the current data from the selected program Page view: view (Info / Service)

AC\$410 2010-10-06 10:25:00	Info/Service LMV27.100A2 -1111	SIEMENS
Parameters:	Name	Value
info		
167 Fuel volume resettable [m ^a , i, ft ^a , gal]		0 nº
162 Operating hours resettable		37 h
163 Operating hours when unit is life		50 h
164 Number of startups resettable		113
166 Total number of startups		113
113 Burner identification		1111
107 Software version		0x0180
108 Software variant		1
102 Identification date		07-07-05
103 Identification no.		35
104 Preselected parameter set. Customer code		9
105 Preselected parameter set. Version		0x0107
143 Device address eBus		1
Service		
954 Intensity of flame		36 %
[960 Current flow rate [mª, I, ft ^a , gal]		0.0
945 Current fuel		fuel 0
121:Manual output		%
922 (0)tuel		0.00 *
922 [1]ar		18.00 *
936 Standardized speed		0.0 %
161 Number of faults		37
		Page 1/2

Example of window showing the page view

	Print Next Page Prev Page One Page Zoom In Zoom Out Close	Prints the report on the selected printer Scrolls the display to the next page Scrolls the display to the previous page Shows one page of the report on the screen Enlarges the current view Reduces the current view Closes the preview window
SIEMENSBolter		
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The **Print** command opens the Windows menu for making the printer settings

t			
Printer			15IEM
Name:	Microsoft Office Document Imag	e Writer 💌 Properties	
Status:	Ready		
Туре:	Microsoft Office Document Image	Writer Driver	
Where:	Microsoft Document Imaging Wri	er Port:	
Comment:		Print to file	
Print range		Copies	
• All		Number of copies: 1 📑	
O Pages	from: 1 to:		
C Select		1 2 3 Collat	e
Help	1	OK Cancel	1
Thep			

Here, you can change the printer settings and output the current data from the selected program view.

Report

Exit

Use this command to print a status report of the burner control in offline mode (overview of all relevant data)

Use this command to close the application

12.1.2 Logging on

Calling up the Login window:

Here, you can switch between program start online and offline, and between access levels, while the program is running.

Login - LM¥2x/3x		×
C Offline C Backup C Irrending		<u>C</u> onnect <u>C</u> ancel
• Online		
User: Password:	OEM IS SO OEM	Create backup

Program start offline

SIEMENS/BoltSIF

Program start online

To show burner control files that have been saved (backup files) or trend files (trending) and to print status reports (⇔ chapter *Offline operation without burner control*).

To log on to the burner control via the relevant online user level (requiring a password for SO or OEM), or to change to another logging on level (⇔ chapter *Logging on to the burner control*).

SIEMENSBOIL 12.1.3 Settings

Languages: The available languages can be selected

			O 1
9	iettings	×	SIEMEN
	Languages General OEM	Backup Log E-mail	
	Select a language:	State Constant State St	
		Deutsch (German)	
	Language file:	DATA\ACS_410_LNG.xls	

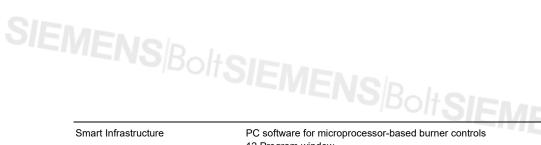
General:

COM ports: Available COM connections

- Period: Setting the rate of communication and the interval for refreshing data

CIP.					_
Settings				×	
Languages	General	OEM Backup Lo	og E-mail		
COM port	:	OCI410 Serial Poly(COM4)	~		MEN
Period:		OCI410 Serial Port (COM4) fast	~		
Period for	refreshing tre	ending / trigger data:	1000	[ms]	
Period for	refreshing sta	atus data:	1000	[ms]	
Period for	refreshing fu	el-air ratio control settings:	3000	[ms]	
			OK	Abort	

Languages	General	OEM	Backup	Log	E-mail			
COM port	:	OCI410 9	Serial Port (C	OM4)		\sim		
Period:		fast				\sim		
Period for	refreshing tre	fast default slow					[ms]	
Period for	refreshing sta	atus data:					[ms]	
Period for	refreshing fu	el-air ratio (control settin	gs:	3000		[ms]	
					ОК		Abort	



12 Program window

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CC1J7352en 10.09.2015 Start picture and program logo in ACS410 can be changed (only by OEM). ACS410 target directory per default is the OEM subfolder. This window can also be used to enter data paths and files other than those of the standard settings.

- Background picture: Start picture used in the main window. Format: 944 x 629 pixels as a Bitmap (.bmp)
- Print logo: Company logo used with printouts and print views. Format: 104 x 19 pixels as a Bitmap (.bmp)
- OEM logo: Company logo in the program windows. Format: 104 x 19 pixels as a Bitmap (.bmp)
- OEM web address

5	ettings	<u> </u>
	Languages General	OEM Backup Log E-mail
	Background picture:	.\OEM\Mask.bmp
	Print logo:	.\OEM\Print.bmp
	OEM logo:	.\OEM\Splash.bmp
	OEM web address:	http://www.siemens.com
	OEM WED address:	
		<u>Q</u> K <u>Cancel</u>



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The storage time for the backup files (files with parameters and the current operating state of the burner control) can be entered here

0 = no limitation of storage time $\geq 1 =$ storage time in months

The files are saved in subfolder *bkp* of the ACS410 directory as standard (\Rightarrow chapter *Files included in the scope of delivery*).

	Settings							×
	Languages	General	OEM	Backup	Log	E-mail		.
	File name ba	isis:		.\bkp\.bkp				
	Storage time	e (months):		0				
				,				
MENS Bolts						<u>о</u> к	<u>C</u> ancel	
	LIVIC	NS	Rai	0				

Backup:



The storage time for the log files can be entered here. Operations, actions and program messages exchanged between ACS410 and burner control during the time logging on took place are automatically saved in these files

0 = no limitation of storage time ≥1 = storage time in months

The files are saved in subfolder *bkp* of the ACS410 directory (⇔ chapter *Files included in* the scope of delivery).

Set	ettings	>
	Languages General OEM Backup Log E-mail	
	Path and file name of log file: .\LOG\Log.txt	
	Storage time (months): Logging level:	
	<u></u> Can	cel
	SIEVIENS	2



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PC software for microprocessor-based burner controls 12 Program window

E-mail settings for sending e-mails from the **Trigger** menu (\$\$ chapter Creating a trigger event)

- Name: Name or IP address of a provider's mail output server and online service which offers e-mail services, such as "mailto.t-online.de" (SMTP of T-Online)
- Port: Port used to provide the service (usually port 25). If e-mail services shall be provided via some other port, contact your system administrator or your e-mail provider
- To: Recipient's e-mail address (e.g. "first name.familyname@provider.com")
- Subject: Entry on the e-mail's subject line (e.g. recording of plant)
- Text: Free text for e-mail (e.g. alarm message of plant XY including recording of trigger event)

E-mail server Name:	Port:
mailto.t-online.de	25
To: Name @provider.com Subject: Triggering e-mail subject Text:	
Triggering e-mail body text	



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$\langle \mathcal{P} \rangle$

Note!

If changes were made to these text boxes (with the exception of language changes), the ACS410 must be closed and restarted, enabling the changes of the basic settings to be adopted when starting the program. The language can be changed while the program is running, without necessitating a restart of the ACS410.

Smart Infrastructure

SIEMENS Bolt 12.1.4 Extras

Change the password: Here, the OEM can change its own OEM password plus the subordinate SO password saved in the connected burner control

Note

The passwords of the OEM and SO are saved in the connected burner control! ACS410 only sends the passwords! Enabling of access from the ACS410 is controlled by the connected burner control.

If you don't have the required password, or if you forgot it, contact the boiler, burner or burner control manufacturer!

Change the password			×
OEM password:		#	<u>o</u> k
User	OEM 💌		Cancel
New password:	SO OEM	#	
Confirm password:		#	

- OEM password: Enter the current OEM password the burner control knows
- User: Select the user whose password you wish to change
- New password: Enter the new password you want to use
- Confirm password: Enter the new password a second time

When clicking #, you reach a start menu with all available letters and numbers. Confirm by clicking **OK**. The new password is then transmitted to the burner control.

During transmission, the following message appears:



Successful saving of the password is indicated.



Confirm by clicking **OK**.

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PC software for microprocessor-based burner controls 12 Program window

SIEMENSBOITS 12.1.5 Help

Help topics: Retrieval of ACS410 software documentation

About ACS410: Information about the software state of the ACS410

About AC	S410 Rel.2		\times
١	ACS410 Rel.2 Copyright (C) 2(ОК]

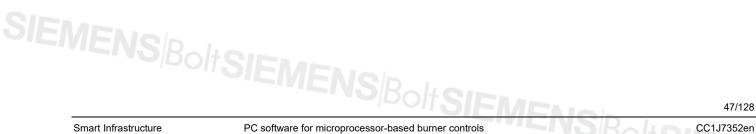
12.1.6 Locking the ACS410

Locking operation of the ACS410 and retrieving the Login window

Login - LMV2	7/37, LMV26/36	×
C Offline		
🖲 <u>B</u> acku	IP .	Abort
O Irena	ling	
© O <u>n</u> line		
User:	OEM 💌	Create backup
Password:		#

This menu item can be used to lock operation of the ACS410. Further accesses to the Program functions are possible only when logging on again.

10.09.2015



	LMV27.100A2 Settings Tools ACS-Lock Help	×
		SIEMENS
Interference	Fuel-air ratio control S	Ratus Trending Backup / Restore PME Backup / Restore
Parameters: Info		Error history: # Code Diagnos Class Phase Startup counter Load Fuel
167:Fuel volu	me resettable [m², l, ft², gal] 0 ft² g hours resettable 37 h	1 200 0 0 12 112 0.00% 0
163:Operatin	g hours when unit is life 60 h of startups resettable 113	2 2 4 0 42 112 P0 0 3 167 1 0 12 107 0.00% 0 4 2 4 0 42 105 10.00% 0
		Click this button to open the menu for the printer
	Print	settings
		settings
*	Settings	Click this button to open the menu for the settings
		If the house equival has leaded out (leaded to the stitute)
	Reset	If the burner control has locked out (lockout position),
_		you can start the reset sequence here
		\downarrow
		•
Or	nly one of the 2 functions	s is active, depending on the burner control's state!
		\uparrow
		When the burner control is in operation, you can start
	Locking	the locking sequence by clicking this button
	Locking the ACS410	When clicking this button, operation via the ACS410 is locked. Locking can be canceled only when logging of
—	Locking the AC3410	
		again
ENS/Boli ?	Help	When clicking this button, the PDF version of the
	Theip	documentation covering the ACS410 opens

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PC software for microprocessor-based burner controls 12 Program window

SIEMENSBOILS 12.2.1 Resetting via the PC tool

The following dialog box appears:

	ICNS Bolter
Reset Do you want to reset the basic unit?	× SIEMEN
Yes <u>C</u> ancel	
Confirm the action within 5 seconds	
5s Confir <u>m</u>	

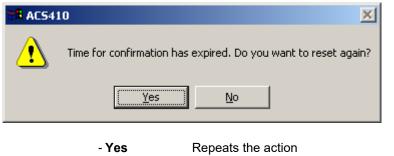
- Yes - Confirm - Cancel
- Starts the reset
- Confirm here within 5 seconds after clicking Yes
- Closes the dialog box

If the action was successful, another dialog box appears:



Confirm by clicking **OK**.

If resetting is not confirmed within 5 seconds, another dialog box appears:



- No
- Aborts the action and closes the dialog box

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12.2.2 Devices that cannot be reset

The Reset function might not be enabled, depending on the type of burner control!



 $\overline{\nabla}$

Note

Such devices can only be reset directly via the respective reset button on the burner control - after lockout.

The following message may appear:



Confirm the message by clicking **OK** and make a reset directly on the burner control.





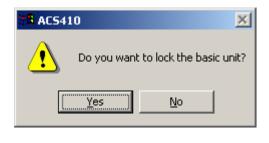
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SIEMENSBOIS 12.2.3 Locking via the PC tool



Click this button to bring the burner control into the lockout position

The following dialog box appears:



- No - Yes
- Closes the dialog box Starts lockout, followed by a message box



If the action was successful, another dialog box appears:

📲 ACS4	10	×
٩	Locking was succes	sful
	<u>OK</u>	

Confirm by clicking **OK**.

The following error message from the burner control appears:



Confirm by clicking **OK**.



Click this button to open the **Help topics** menu

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PC software for microprocessor-based burner controls 12 Program window

SIEMENSBOL 12.3 Status bar



₽⇔∎↓	Connection status	Indicates an	online connection to the burner control
14	Lockout position	Indicates wh position	en the burner control is in the lockout
?	Send password	Indicates wh	nen a password is sent
) 💥	Trend recording	Indicates wh window	nen graphs are plotted in the Trending
r 🔛	Trigger handling	Indicates wh window is ac	nen trigger handling in the Trending ctive
 ₽ ⇔∎ (∆	🖞 🎆 🌺 Normal mode	Status	Indicates the burner control's current operating state
 	System errorfree	Errorfree	If an error occurred, the error message appears on the message line together with the respective diagnostics





Smart Infrastructure

PC software for microprocessor-based burner controls 12 Program window



SIEMENSBOILS 13 Working with the ACS410

Info / Service window 13.1

The Info / Service window gives an overview of the burner control's operating states. The data are cyclically refreshed. Data in the process of refreshing appear blue.

nfo / Service Parameters Fuel-air ra	tio control Status	Tr	ending	Backup / Re	store	PME Back	up / Restore		
Parameters:		Erro	r history:						
Info		#	Code	Diagnos	Class	Phase	Startup counter	Load	Eucl
167:Fuel volume resettable [m², l, ft², gal]	O ft?	1	200	0	0	12	112	0.00 %	0
162:Operating hours resettable	37 h	2	2	4	0	42	112	P0	0
163:Operating hours when unit is life	60 h	3		/stem errorfre		12	107	0.00 %	0
164:Number of startups resettable	113	4	2	4	U	42	106	10.00 %	0
166:Total number of startups	113	5	136	1	3	60	105	P1	0
113:Burner identification	1111	6	2	4	0	42	103	P0	0
107:Software version	0x0180	7	7	3	3	62	100	31.50 %	0
108:Software variant	1	8	3	0	0	60	99	100.00 %	0
102:Identification date	07-07-05	9	7	3	3	60	95	40.00 %	0
103:Identification no.	35	10	7	3	3	60	93	10.00 %	0
104:Preselected parameter set: Customer code	9	11	22	0	3	60	91	20.00 %	0
105:Preselected parameter set: Version	0×0107	12	7	3	3	60	90	54.50 %	0
143:Device address eBus	1	13	22	0	3	60	89	20.00 %	0
		14	22	0	3	60	87	20.00 %	0
Service		15	22	0	3	60	86	20.00 %	0
954:Intensity of flame	37 %	16	22	0	3	60	85	20.00 %	0
960:Current flow rate [m ² , l, ft ² , gal]	0.0 fuel 0	17	22	0	3	22	84	0.00 %	0
945:Current fuel		18	3	0	0	24	83	0.00 %	0
121:Manual output 922:[0]fuel	% 0.00 *	19	3	0	0	60	82	47.50 %	0
922:[U]ruei 922:[1]air	0.00 °	20	3	0	0	60	81	20.00 %	0
922:[1]ar 936:Standardized speed	0.0 %	21	2	4	0	42	80	10.00 %	0
161:Number of Faults	37	22	167	1	0	12	79	0.00 %	0
151:Number of raults	37	23	167	2	0	12	79	0.00 %	0
		24	22	0	3	60	77	20.00 %	0
		25	3	1	0	10	75	0.00 %	0
						а			

Additional information about the error history or the diagnostic code is displayed by moving the scroll bar (a).

Brief explanations of the causes of error are displayed when moving the cursor over the respective Code (b) (under Error history). For more detailed information about the meaning of error codes, refer to the Technical Documentation on the respective type of burner control.

							_
						S	IEME
TI	rending	Backup / Re	store	PME Back	kup / Restore		
200	w bictoru						
	or history: Code	b) Diagnos	Class	Phase	Startup counter	Load	Fuel
#	2.5		Class 0	Phase	Startup counter	Load 0.00 %	Fuel
#	Code						
#	Code 200 2	Diagnos 0 4	0	12	112	0.00 %	0
# L 2 3	Code 200 2	Diagnos	0	12 42	112 112	0.00 % P0	0
Errc # 1 2 3 4 5	Code 200 2 167 Sv	Diagnos 0 4	0	12 42 12	112 112 107	0.00 % P0 0.00 %	0 0 0

The current operating state of the device is displayed on the first line (b).

More detailed information about the cause of error is displayed by moving the pointer to the Diagnostics column.

SIEMENSBOIL 13.2 Parameters window

	● ACS410 - LMV27.100A2 File Login Settings Tools ACS-Lock <u>H</u> r	elp		_	
	😂 🛠 調 💆 🗢 💡			SIEMENS	
	Info / Service Parameters Fuel-air ratio control Parameters:	Status Trending Backup / Restore	PME Backup / Restore	b	
	225:Gas: Prepurge time	Parameters	Current value	Entry +	
	= 226:Gas: Preignition time	201:Burner operating mode	Lo 2-stage	Lo 2-stage	
	 226/36: Selfv time 1 (TSAL) 229/36: Selfv time 1 (TSAL) 229/36: Time to respond to pressu 230/36: Interval 1 231/36: Selfv time 2 (TSA2) 233/36: Interval 2 233/36: Afterburn time 234/36: PS max/POC input 240/36: PS max/POC input 241/36: Execution valve proving 241/36: Valve proving resource test 244/36: Valve proving pressure test 246/36: Valve proving time 265/30: Prepurging 271/30: Safety time 1 (TSAL) 269/30: Time to respond to pressure 271/30: Safety time 2 (TSA2) 272/30: Interval 1 271/30: Safety time 2 (TSA2) 272/30: Interval 2 273/30: Afterburn time 200/Repetition limt loss of flame 201/30: Time of igntion 201/30: Time of igntion 	2018kuner operating mode 107:5oftwer version 113:8umer identification 225:Gas: Prepurge time	Lo 2-stage 0x0180 1111 20 s	itili 20 s c c d e Eeset Sove Refeesh	
ļ.		,	-	NUM	
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PC software for microprocessor-based burner controls 13 Working with the ACS410

13.2.1 Parameter changes (general)

All parameters displayed blue are editable. Parameters in black cannot be changed. You are authorized to change parameters, depending on your user level (\Rightarrow chapter *Connecting to the plant*). Only certain parameters are displayed or can be changed, depending on the user level.

Select the required parameter from the list on the left. Move it to the table on the right by highlighting and double-clicking or by clicking the arrow button > (a). If you want to remove parameters from the table on the right, select them from the table. Then, use the arrow button < (a) for individual parameters, or << (a) for all parameters.

Highlight the individual entry cells in the table on the right under **Parameters** and change the value by moving the slider on the right (c) or by clicking the + (b) or – button (d).

First, the changed parameter is displayed, highlighted in blue.

Note!

Value changes are accelerated by keeping the + / - button or the > / < / << arrow button depressed.

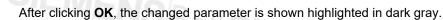
ACS410 - LMV27.100A2				
File Login Settings Tools ACS-Lock He	elp			
😂 🗙 🔳 🔁 🗢 💡			SI	EMENS
Info / Service Parameters Fuel-air ratio control	Status Trending Backup / Restore PM	1E Backup / Restore		
Parameters:	List:			
225:Gas: Prepurge time	Parameters	Current value	Entry	+
- 226:Gas: Preignition time	201:Burner operating mode	Lo 2-stage	Lo 2-stage	
— — 227:Gas: Safety time 1 (TSA1)	107:Software version	0×0180		
- 229:Gas: Time to respond to pressui	113:Burner identification	1111	1111	-~
- 230:Gas: Interval 1	225:Gas: Prepurge time	20 s	20 s	
- 231:Gas: Safety time 2 (TSA2)				
- 232:Gas: Interval 2				
- 233:Gas: Afterburn time				
- 234:Gas: Postpurge time				
 237:Gas: P5 max/POC input 				
 240:Repetition limit loss of flame 				
- 241 Carl Everytion value proving				

Click **Save** (e) to highlight in yellow the changes in the entry cell; then, the following dialog box appears:

i)Changed paramete	rs		×
Parameters	Curre	Entry	ОК
225:Gas: Prepurge	20 s	21 s	
			Cancel

- OK - Cancel Sends the change value to the burner control Aborts the entry and closes the dialog box





* 🔝 👼 🗢 😵			SIEMEN
o / Service Parameters Fuel-air ratio contr	ol Status Trending Backup / Restore	PME Backup / Restore	
ameters:	List:	f	
225:Gas: Prepurge time	Parameters	Current value	Entry +
226:Gas: Preignition time	201:Burner operating mode	Lo 2 stope	Lo 2-stage 99999999
227:Gas: Safety time 1 (TSA1)	107:Software version	0x0180	
- 229:Gas: Time to respond to pressur	113:Burner identification	1111	1111
- 230:Gas: Interval 1	225:Gas: Prepurge time	21 s	21 s
= 231:Gas: Safety time 2 (TSA2)			
232:Gas: Interval 2			
 233:Gas: Afterburn time 			
234:Gas: Postpurge time			
= 237:Gas: P5 max/POC input			
240:Repetition limit loss of flame			
- 241:Gas: Execution valve proving			
- 242:Gas: Valve proving evacuation			
= 243:Gas: Valve proving test atm >			
244:Gas: Valve proving filling			
245:Gas: Valve proving pressure tes			
- 246:Gas: Walting time gas shortage			
= 261:Oil: Active detector of flame ev <*			
262:OII: Prepurging	-		
265:0I: Prepurge time			
- 266:01: Prejarition time			- 1
= 267:Oil: Safety time 1 (TSA1)			
269:01: Time to respond to pressure			
270:OI: Interval 1			· · · ·
270:01: Interval 1 271:01: Safety time 2 (TSA2)			
= 271:01: Sarety time 2 (15A2)			
272:01: Interval 2			Reset
273:OI: Afterburn time 274:OI: Postpurge time			- Cicses
274:OII: Postpurge time 280:Repetition limit loss of flame			Save
			2376
- 281:OI: Time oil ignition - 500:Ratio control - 1			Refresh
			Regresh

Checking the memory

After sending the parameters, the ACS410 automatically retrieves data from the burner control. If the action is successful, the ACS410 ensures that the text box will be highlighted in green. In addition, the user must make a visual comparison of **Current value** and **Entry**. Since the relevant values are highlighted in green, the values to be verified are easy to identify.



Warning!

If the changed parameter is highlighted in red, copying to the burner control was not successful. If this error message occurs while a parameter is changed, the change on the burner control was most probably not made. For this reason, the correct setting on the burner control must be verified (repeat the action with the ACS410 or use the AZL2).



Warning!

This visual check by the user is mandatory!

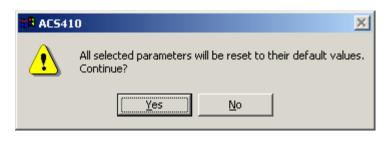
Click **Refresh** (e) to reload the data; this is especially required when refreshing process data.

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SIEMENSBOIS 13.2.2 Resetting parameters

By clicking **Reset** (e), individual parameters, such as fuel volume, number of startups, number of operating hours, or operating mode, can be reset to **0**, or to their default values.

After clicking Reset (e), the following dialog box appears:



- Yes - No Copies **0** or the default value to the text box Aborts the entry and closes the dialog box

13.2.2.1 Deleting curves (only with LMV2/LMV3)

To delete the set curve parameters in the LMV2/LMV3, proceed as follows:

• From the list in the **Parameters** window on the left under directory 200: Burner control, select

parameter 201: Operating mode of burner ... in the case of a dual-fuel unit Parameter 301: ... for fuel 1.

Highlight it and double-click, or use the arrow button > (a) to copy it to the table on the right

- Click Reset (e)
- Click Save (e)
- ⇒ In case parameter 201: Operating mode of burner ... is reset, all curvepoints that were previously set, plus the previously selected fuel train, will be reset



13.2.2.2 Changing the burner ID

A double click or use of arrow button > transfers the parameter for burner ID to the editing window on the right. Burner ID may be highlighted and can now be changed. The change is made with arrow button + or -. A new entry window opens where the new burner ID can be entered. If a burner ID has not yet been entered, the dialog box shows a numerical value or text. This represents the default setting. Once the burner ID is entered, the default setting cannot be entered anymore.

Numerical value or text for factory setting:

- LMV2/LMV3: 2147483648
- LME39: burnErID
- LME7/LME8: ----

Example:

Change para	ameter value		×
123456			
	OK	Cance	

Here, a maximum of 8 digits for the burner's ID can be entered.



- OK - Cancel Copies the number to the text box Aborts the entry and closes the dialog box

Then, click **Save** to permanently file the burner's ID in the burner control.



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SIEMENSBOIS 13.3 Ratio control settings (only with LMV2/LMV3)

The steps to be taken for the initial settings of the LMV2/LMV3 follow the operation of the AZL2 and are primarily determined by the type of LMV2/LMV3.



Note

For fuel-air ratio control, compliance with the Basic Documentation on the respective type of LMV2/LMV3 is mandatory!

With the initial ratio control settings, or after curvepoints of ratio control have been reached, the preselection of output on the LMV2/LMV3 is only possible via the ACS410. A preselection of load on the LMV2/LMV3 via contact, analog input or BACS is not possible anymore.

Readjustment of load via contact, analog input or BACS is released on the LMV2/LMV3 only after the ratio control settings have been made.

When making the initial settings of an LMV2/LMV3, start by selecting the fuel train (a). Then, click **Save** to adopt the fuel train and retrieve the mask for setting the curvepoints.

OACS410 - LMV27.100A2 File Login Settings Tools ACS-Lock Help	
	SIEMENS
Info / Service Parameters Fuel-air ratio control Status Trending Backup / Restore PME Backup / Restore	
# Drive Seve Discard Calc++ Calc++ Calc-+ Calc-+ Current state	NUM

If previously set curvepoints shall be deleted, follow the procedure described in chapter Resetting parameters - Deleting curves.

SIEMENSBOI 13.3.1 Modulating operation

O ACS/	10 - LMV27.100A2	
	gin <u>S</u> ettings <u>T</u> ools ACS-L <u>o</u> ck <u>H</u> elp	
		SIEMENS
Info / Se	rvice Parameters Fuel-air ratio control Status Trending Backup / Restore PME Backup / Restore	
	Legend	MEN
Point	Air Fuel + Drive Air Fuel	
P0 P1	Save 8-	
P2 P3	Discerd	
P4	8	
P5 P6		
P7 P8	Calc + S	
P9		
	_ Calc R-	
	current fuel: 0 - Burner on 8	
	Air: 0.00 C Program stop	
	Fuel: 32.00 °	
	Result:	
	Load: 0.00 %	
	Flame intensity: 0%	
	State: Presetting Load limit	
	Phase: Standby Min: Max: Q=	
	P0 P1 P2 P3 P4 P5	P6 P7 P8 P9
	P0 P1 P2 P3 P4 P5 Point	P6 P7 P8 P9
	🝸 🎆 🌌 Start prevention - no curves defined and other start preventions	
	Figure And Start prevention - no curves defined and other start preventions	NUM J

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SIEMENS^{Bolt}SIEMENS^{Bolt}SIEME PC software for microprocessor-based burner controls 13 Working with the ACS410

13.3.1.1 Activating the VSD (optional)	
	SIE
Info / Service Parameters Fuel-air ratio control Status Trending Backup / Restore PME Backup / Restore	
Point Air Fuel - Drive Air Fuel - Fuel	
P3 Discard 8	
P5 P6 P7	
P7 P8 P9	
Gale- R	
Current state	
Current fuel: 1	
Fuel: 0.00 °	
<u></u> tandardization	
Load: 0.00 %	
Flame intensity: 0 % G mod 💌	
State: Presetting	

When ticking Activation of VSD in connection with LMV2/LMV3, the control of VSDs is switched on. Then, the following window opens:

AC5410	
SIEMENS	Please wait Activation of VSD



CC1J7352en 10.09.2015

olt**SIEMEN**

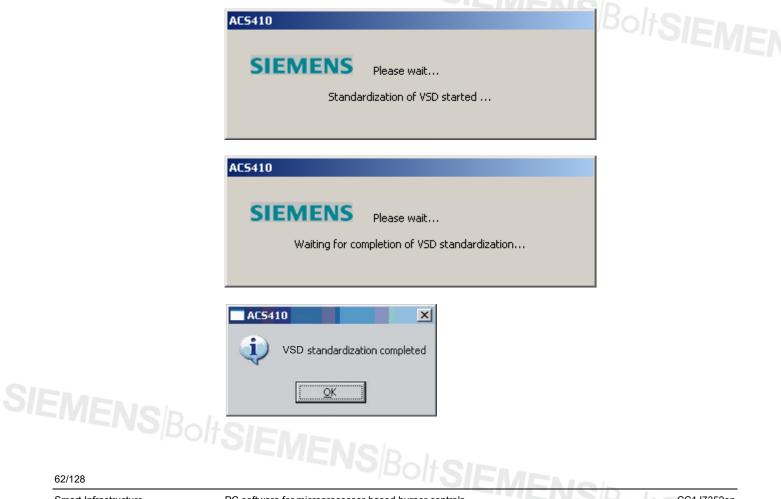
SIEMENS/BoltS After activation of the VSD, column VSD appears.

33 🔤 🖉						CIERAENI
	<u>]</u>		1	1	1	SIEMEN
o / Service	Parameters Fuel	-air ratio control	Status Trending	g Backup / Restore	PME Backup / Restore	
				Legend		
oint	Air Fuel	+	Drive	Air	Fuel	
)			Save	ê a		
			Eque	23		
1			Discard	3		
				8-1		
				1		
				8		
}			Calc +			
)						
		-]	Calc -	2		
lurrent state						
Curr	rent fuel: 0	-	Burner on	8-		
	Air: 0.00 °	Erog		0		
		- Activ	ation of VED	50 11 11 11 11 11 11 11 11 11 11 11 11 11		
	Air: 0.00 ° Fuel: 32.00 °		ation of VED	- The second sec		
		- Activ b	ation of VCD Itandardization	40 50 111111111111		
	Fuel: 32.00 °	- Activ b	ation of VED	- The second sec		
		Activ b	ation of VFD Istandardization esult:	- The second sec		
Elame i	Fuel: 32.00 °	Fuel tra	ation nEVED standardization esult:	40		
Flame ii	Fuel: 32.00 °	Activ b	ation of VFD Istandardization esult:	30 111111111111111111111111111111111111		
	Fuel: 32.00 ° Load: 0.00 %	Fuel tra	ation of VCC standardization esult: n:	40		
State:	Fuel: 32.00 °	Fuel gra	etion of VT-	20 30 40 инициициициициицииции		
State:	Fuel: 32.00 ° Load: 0.00 %	Fuel tra	ation of VCC standardization esult: n:	30 31 410 410 410		
State:	Fuel: 32.00 °	Fuel gra	etion of VT-	20 30 40 инициициициициицииции		
State:	Fuel: 32.00 °	Fuel gra	etion of VT-	20 30 40 инициициициициицииции		

If Activation of VSD is selected, standardization of the VSD is required.

To start the process, click Standardization (b).

If valid standardization is already available, you can start by entering the curvepoints.



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PC software for microprocessor-based burner controls 13 Working with the ACS410

If speed standardization has failed, an error message appears!



Click **OK** to confirm.

A numerical value providing more detailed information for cause of the error in the standardization (value <0) appears in box **Activation of VSD** under **Result**.

Reference!

⇔

The Basic Documentation covering the respective type of LMV2/LMV3 must be observed!

Rectify the error and restart standardizing the VSD.

Note!

After successful standardization, new standardization of the VSD in the mask for the ratio control settings is not possible. This can only be done via the parameter settings (parameter 641).

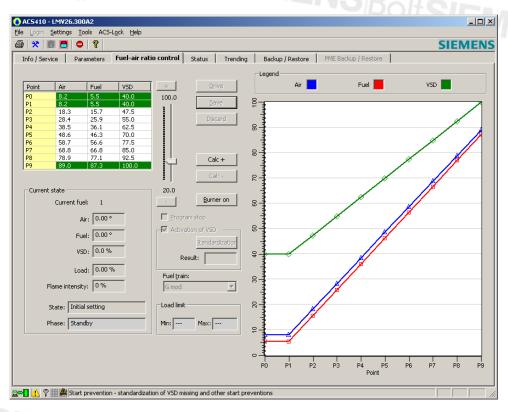
Procedure:

- Go to the mask for the parameters
- Select parameter 641
- Set the parameter to 1 and save it

After storage, new standardization is started.

Click *Refresh* to check the result of the standardization (0 = standardization was successful, negative values = error during standardization)

The result appears in the **Result** box:



After standardization, the curvepoints can be set.





Meaning of curvepoints

Table Function curvepoints:

Setting point	Function
P0	Curvepoint Ignition load
P1	Curvepoint Low-fire
P2 – P8	Curvepoint Ratio control
P9	Curvepoint High-fire

Initial settings

Select Fuel train (f) and the required mode, then click Save (c).

The example given below shows the steps to be followed when making the initial settings for fuel train mode *G mod*.

➡ Reference!

The Basic Documentation covering the respective type of LMV2/LMV3 must be observed!

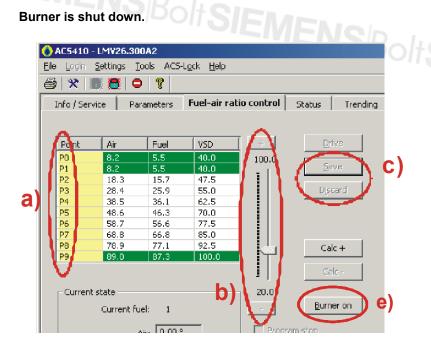




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SIEMENSBOILS 13.3.1.2 Cold settings

Burner is shut down.



Select curvepoints P0 (ignition load), P9 (high-fire load) and P1 (a) from the table. Highlight the air, fuel or VSD cell (only if VSD operation is activated) and change the values with the scroll bar on the right, or the + and - buttons (b), or the arrow keys of your keyboard according to (b). After a setting or change, every curvepoint must be copied to the LMV2/LMV3 by clicking **Save** (c). By clicking **Discard** (c), the changes made last can be canceled prior to saving.

Enter curvepoint P1 (the ACS410 proposes the value of P0). Save curvepoint P1. Now, curvepoints P2...P8 are automatically calculated.

It is then possible to recalculate curvepoints manually in order to linearize the ratio control curve from the selected point, in the + or – direction.



Note!

When making the calculation, the curvepoints of all actuators and of the VSD - if installed - are recalculated.

Select curvepoint P4, for example.

Calc – (d)	Curvepoints between P4 and P1 are recalculated
Calc + (d)	Curvepoints between P4 and P9 are recalculated

When selecting a curvepoint from the table on the left (a), the graph displays a crosshair for that particular curvepoint in the respective color:

- Blue = air
- Red = fuel
- Green = VSD



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SIEMENS/BoltS When clicking Calc + or Calc – (d), the following dialog box appears:

8 AC5410	×	
All curves will be rea	alculated. Continue?	
Yes	No	
- Yes		on of the curve and copies it to the ne curvepoints are read in again and the hed
- No		and closes the dialog box

On completion of the cold settings and after a heat request from the boiler controller to the burner, the burner can be put into operation by clicking Burner on (e).



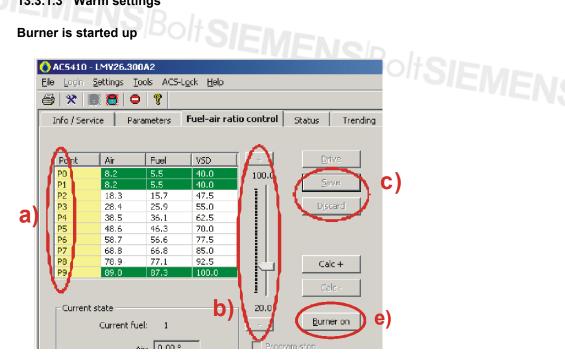


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PC software for microprocessor-based burner controls 13 Working with the ACS410

SIEMENSBOILS 13.3.1.3 Warm settings

Burner is started up



From the table on the left (a), select curvepoint P0 (ignition load) and then curvepoint P9 (high-fire). Highlight the air, fuel or VSD cell (only when the VSD is working) and change the value as required using the slider on the right, or the + and - buttons (b), or the arrow keys of your keyboard. After a setting or change, every curvepoint must be copied to the LMV2/LMV3 by clicking **Save** (c) – or by clicking **Discard** (c), the changes made last are canceled prior to saving.

With **Burner on** (e) and the boiler controller's heat request to the burner, the curve's further parameterization is started: S^{Bolt}SIEMEN

The following dialog box appears:



The LMV2/LMV3 travels to the ignition position. To ensure the LMV2/LMV3 stops at the ignition position, the ACS410 automatically sets a program stop.

When making the initial settings, the LMV2/LMV3 sets a program stop per default, which is indicated by the following dialog box:



Confirm and close by clicking OK.

PC software for microprocessor-based burner controls 13 Working with the ACS410



0.0 - Burner off Program stop Activation of VSD standardization Result: Fuel train:

The LMV2/LMV3 proceeds.

Program stop is deleted.

AC5410	
SIEMENS	Please wait
De	elete program stop

Entries made for P0 are automatically copied to P1, if nothing else is entered here.

AC5410	Ballon
SIEMENS Please wait	POILZIEMEN
Operating position reached. Copy point P0 to P1	

Save the curvepoints by clicking Save (c)

Then, the LMV2/LMV3 performs a linear calculation of the curvepoints between P1 and P9.

AC5410	
SIEMENS	Please wait
c	alculation started

The data are copied to the LMV2/LMV3. Then, the curvepoints are read in again and the display is refreshed. After that, it is also possible in this case to recalculate the curvepoints via **Calc +** or **Calc –** (e) to linearize the ratio control curve from the selected point, in the + or – direction.

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PC software for microprocessor-based burner controls 13 Working with the ACS410



Driving to and changing curvepoints From the table on the left (a), select the curvepoint to be approached by highlighting it with the mouse. When clicking **Drive** (c), the LMV2/LMV3 starts approaching the curvepoint. It is now possible to check or optimize the setting point. The values of a curvepoint can be changed in the table on the left (a). When clicking **Drive** (c), the system travels to the changed curvepoint. When clicking **Cancel** (c), the changes are canceled and the system returns to the initial curvepoint. By clicking **Save** (c), the changed values are transferred to the LMV2/LMV3 for permanent use.

 ∇

Note!

Note!

The impact of curvepoint changes on the combustion process must be checked on the burner!

Repeat the process with all curvepoints until all settings are correct.



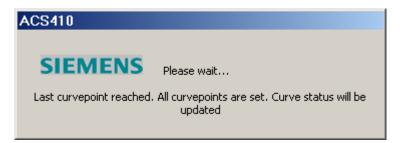
The ACS410 highlights in yellow the curvepoints which have not yet been approached.



13.3.1.4 Completing the initial settings

To complete the curve settings, all curvepoints from **P1** to **P9** must be approached and verified. Then, a message appears relating to the minimum and maximum output value settings. This message window concludes the initial ratio control settings.

After all curvepoints **P1...P9** have been approached and verified in initial setting mode, the following message appears:



Then, the minimum/maximum load can be matched to the specific application. In the process, the possible modulation range is restricted.

The following message appears:

ACS410			
į	Are the min. and	max. load setting:	s correct?
	Yes	<u>N</u> o	

When clicking **Yes**, the initial settings are completed. Minimum and maximum load are not limited and the ratio control curve from **P1** to **P9** is completely traversed.

The following message appears:



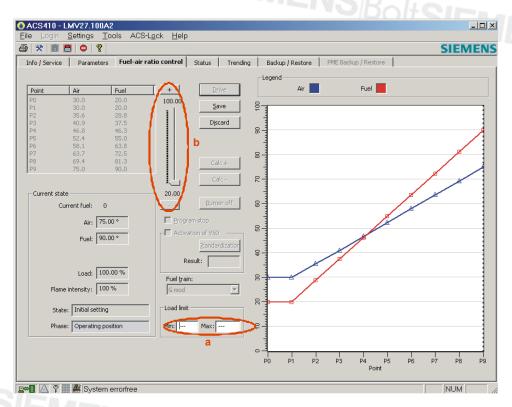
The LMV2/LMV3 changes from the initial settings to automatic operation.



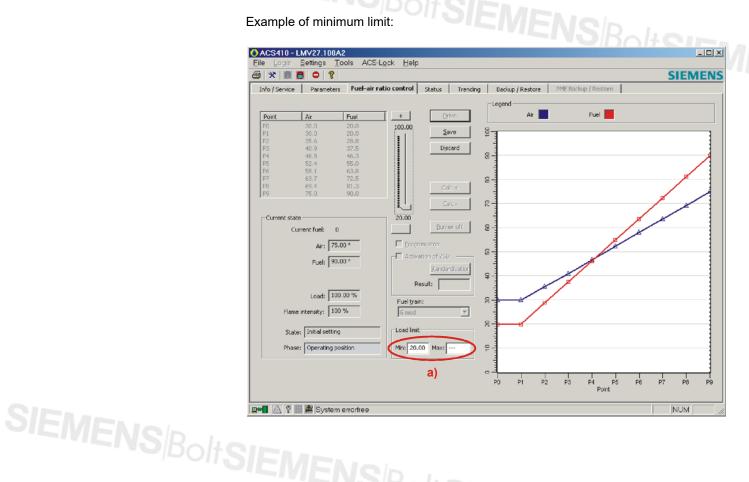
PC software for microprocessor-based burner controls 13 Working with the ACS410

The minimum/maximum load can be limited by clicking **No**.

In the ratio control box **Load limit** (a), select **Min:** or **Max:**, depending on the required limitation.



Use the slider (b) to select the required value.



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PC software for microprocessor-based burner controls 13 Working with the ACS410

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OACS410 - LMV27.100A2 Eile Login Settings Tools ACS-Lock Help	_0
SIEM	EN
Info / Service Parameters Fuel-air ratio control Status Trending Backup / Restore PME Backup / Restore	
Point Air Fuel P1 30.0 20.0 P2 30.0 20.0 P3 30.0 20.0 P3 30.0 20.0 P3 46.3 46.3 P5 52.4 55.0 P6 53.7 72.5 P3 69.4 01.3 P3 69.4 01.3 P4 46.8 46.3 Current state 0 0 Current state 0 0 Current state 0 0 Load: 100.00 % Program 6.00 Flame intensty: 100 % Program 6.00 Result: Program 6.00 Program 6.00 Phase: Operating position 0 Phase: Operating position 0	
a) •	1 P9
👷 🖬 🖄 🕈 🎆 🌋 System errorfree	

Click Save to adopt the values.

The following message appears again:

Dolt Sic	
ACS410	
Are the min. and max. load settings correct?	
Yes No	

Click No if you want to change the minimum/maximum load again; click Yes to conclude the initial settings.

The following message appears:

ACS410	
SIEMENS	Please wait
Curve state d	hanging to automatic operation

The LMV2/LMV3 changes from the initial settings to automatic operation. The initial settings are thus concluded. SIEMENS^{Bolt}SIEMENSBo

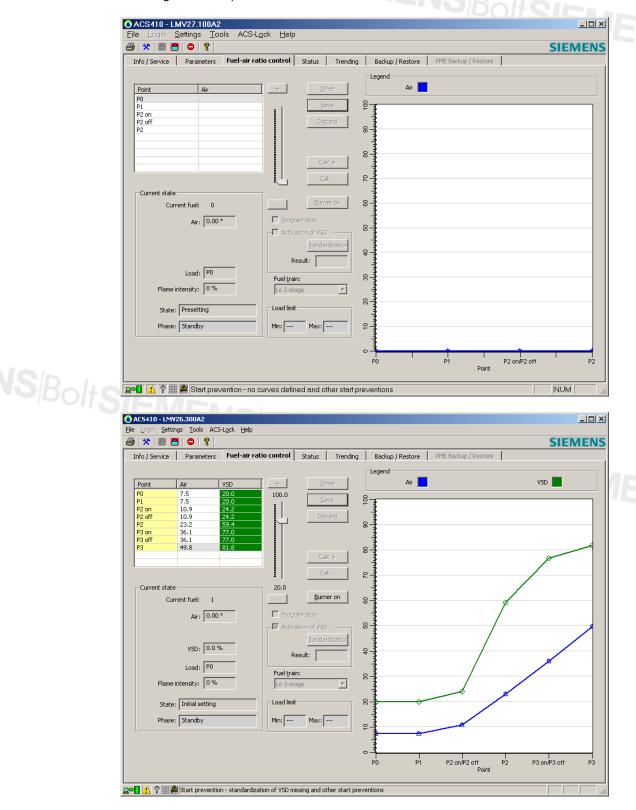
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SIEMENSBOILS 13.3.2 Multistage operation

If a multistage fuel train was parameterized, the respective load points are displayed (see following illustration).



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SIEMENS^{Bolt}SIEMENSBoltS PC software for microprocessor-based burner controls 13 Working with the ACS410

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13.3.2.1 Activation of VSD (optional)

ACS410 - LMV27.100A2	
ile <u>L</u> ogin <u>S</u> ettings <u>T</u> ools ACS-L <u>o</u> ck <u>H</u> elp	SIEMENS
Info / Service Parameters Fuel-air ratio control Status	Trending Backup / Restore PME Backup / Restore
Point Air + Dr	ive Air
P0 P1	
	card a
P2	
Ca	
Current state	eron 8
	eron 8-
Air: 0.00 • Program stop	8
	rdization 9
Load: P0	
Flame intensity: 0%	
State: Presetting	
Phase: Standby Min: Max: -	
	© 1 1 1 1 1 P0 P1 P2 on/P2 off P2 Point
🖛 🔥 🖗 🛲 Start prevention - no curves defined and of	

When ticking **Activation of VSD** in connection with LMV2/LMV3, the control of VSDs is permitted. If you selected **Activation of VSD**, there will be no valid standardization of the VSD. Standardization can be started by clicking **Standardization**. After ticking **Activation of VSD**, the following window opens:

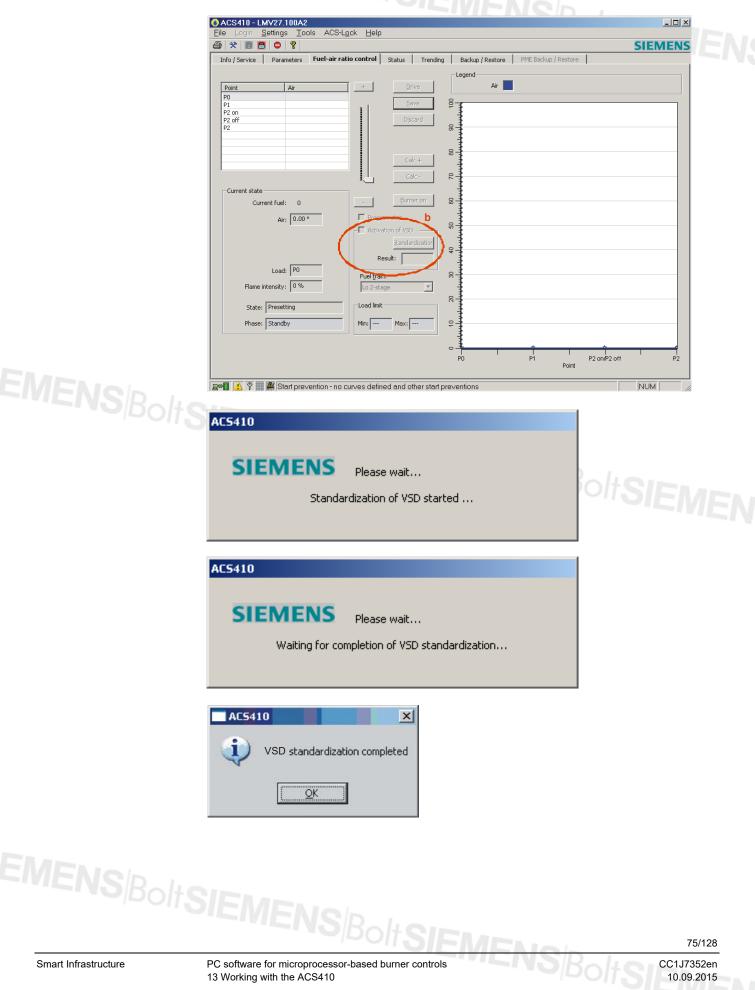
AC5410		D
SIEMENS	Please wait Activation of VSD	^{Bolt} SIEME



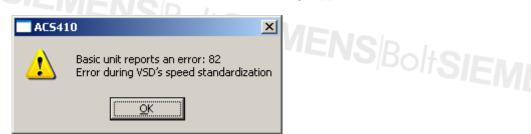
Smart Infrastructure

To start the process, click **Standardization** (b).

If valid standardization is already available, you can start by entering the curvepoints.



If speed standardization has failed, an error message appears.



Click **OK** to confirm.

A numerical value delivering more detailed information appears in box **Activation of VSD** (b) under **Result**.

Reference!

⇔

The Basic Documentation covering the respective type of LMV2/LMV3 must be observed!

Rectify the error and restart standardizing the VSD.

Note!

After successful standardization, new standardization of the VSD in the mask for the ratio control settings is not possible. This can only be done via the parameter settings (parameter 641).

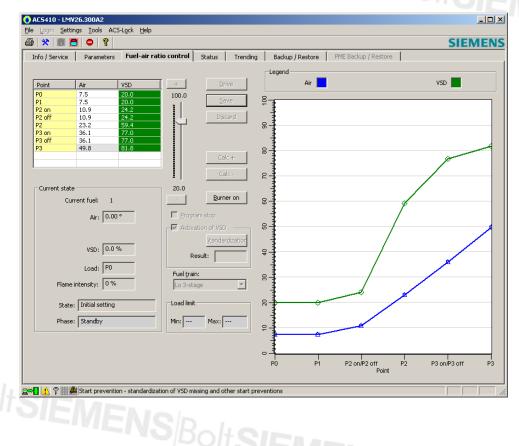
Procedure:

- Go to the mask for the parameters
- Select parameter 641
- Set the parameter to 1 and save it

After storage, new standardization is started.

Click **Refresh** to check the result of the standardization
 (0 = standardization was successful, negative values = error during standardization)

The result appears in the Result box.

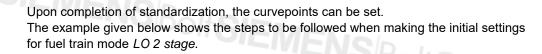


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PC software for microprocessor-based burner controls 13 Working with the ACS410



⇒ Reference!

The Basic Documentation covering the respective type of LMV2/LMV3 must be observed!

Select the type of Fuel train (f) and the required mode, then click Save (c).

Table Function curvepoints

Setting point	Function
P0	Curvepoint Ignition load position
P1	Curvepoint Low-fire
P2 on	Curvepoint Switch-on point for fuel valve V2
P2	Curvepoint Operating point stage 2
P3 on	Curvepoint Switch-on point for fuel valve V3 (only in 3-stage mode)
P3	Curvepoint Operating point stage 3 (only in 3-stage mode)
P2 off	Curvepoint Switch-off point for fuel valve V2
P3 off	Curvepoint Switch-off point for fuel valve V3 (only in 3-stage mode)

13.3.2.2 Cold settings

Burner is shut down

🜔 AC5410 - LMV26.300A2		^{Bolt} SIEM
File Login Settings Tools ACS-Lock	< <u>H</u> elp	
😂 😤 📑 🖪 🗢 🛛 🔋		
Info / Service Parameters Fu	el-air ratio control Status Tre	ndir
Point Air VSD P0 - - P1 - - P2 onf - - P2 off - - P3 on - - P3 - -	b) + Drive Save Discard Calc + Calc -	c)
Current state Current fuel: 1	- Burner on	1
Air: 0.00 °	Program stop	
	Activation of VSD	

In multistage operation, the curvepoints are set using point **P0** as the starting point. After saving the changed curvepoint, ACS410 proposes a value to be used as the next curvepoint.

Note!

In this operating mode, curvepoints cannot be recalculated via **Calc +** or **Calc –** (d), which means that the buttons cannot be clicked here.

On completion of the cold settings and after a heat request from the boiler controller to the burner, the burner can be put into operation by clicking **Burner on** (e).



SIEMENSBOIS 13.3.2.3 Warm settings

Burner is started up	MENcip
O ACS410 - LMV26.300A2 Eile Login Settings Tools ACS-Lock Help Image: Setting Seting Setting Setting Setting Setting Seting Setting Setting Settin	INSIE!
Point Air VSD P0 P1 P2 P2 onf P2 P3 on D) P3 off P3 P3 D Current state Current fuel:	+ Drive Save Discard Calc + Calc - Burner on
Air: 0.00 °	Program stop Activation of VSD

Enter the minimum setting point P0 (ignition load) in the table on the left (a). Highlight the respective setting point and change the value as required using the scroll bar on the right, or the + or - button (b), or the arrow keys of your keyboard. After every setting or change, the setting point must be copied to the burner control by clicking Save (c). When clicking Discard (c), the changes made last are deleted before saving. When clicking Burner on (e) and with the heat request from the boiler controller to the burner, further curve parameter settings are started.

The following dialog box appears:



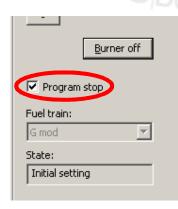
The LMV2/LMV3 travels to the ignition position. To make certain it stops there, the ACS410 automatically sets a program stop.



Confirm and close by clicking OK.

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The LMV2/LMV3 proceeds. Program stop is canceled.

AC5410	
SIEMENS	Please wait
De	elete program stop



The values of **P0...P2** (P3) are automatically copied, proposed, and can be changed. Check the curvepoints, change them if required, and click **Save** (c). All setting points are selected in the order given in table *Function curvepoints* for multistage operation.

Driving to the curvepoints

In the table (a), highlight the curvepoint to be approached. When clicking **Drive** (c), the LMV2/LMV3 starts driving to the curvepoint. Here, it is possible to check the setting point or to optimize it by making readjustments. The values of a curvepoint can be changed in the table on the left (a). When clicking **Drive** (c), the system travels to the changed curvepoint. When clicking **Discard** (c), the changes are canceled and the system returns to the initial curvepoint. Click **Save** (c) if you wish the LMV2/LMV3 to adopt the changed values.



When making the initial settings and during commissioning, every curvepoint must be approached to check and optimize the combustion values.

Repeat this process with all curvepoints until all settings are correct.



Note!

Note!

The ACS410 highlights in yellow the curvepoints which have not yet been approached.



13.3.2.4 Concluding the initial settings for multistage operation

$\langle \gamma \rangle$

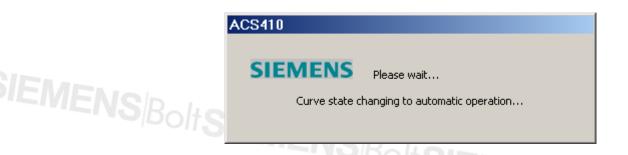
Note

Switch-off points **P2off/P3off** cannot be approached in a stationary manner. For the change to automatic operation, these switch-off points must be approached from above: - P2off: P2 \rightarrow P1 - P3off: P3 \rightarrow P2

After all curvepoints **P1...P2** (2-stage) or **P1...P3** (3-stage) have been approached and checked in initial setting mode, the following message appears:



Then, the following message appears:



The LMV2/LMV3 changes from the initial settings to automatic operation. This means that the initial settings are completed.



SIEMENSBOL 13.4 Status window of burner control

Example of LME

* 🖪 🗖 🗢 🕴				SIEMENS
fo / Service Parameters Fuel-air ratio (control Status Trending Back.	/ Restore PME Backup /	Restore	
Process data	Inputs		Outputs	
Current Output / stage	% Mains volta	je 236.6 V	Fan motor	1 🍓
Position of actuators	% Flame inte	sity 01 %	Ignition	o 🕘 🛛
Fan speed	U/min Flame sign	01 0 🎱	SBV	1 🕹
Fan speed (standardized)	% Flame inte	sity 02 1.2 %	BV1	o 🕘 📗
Phase	driving to prepur Flame sign	02 0 🥘	BV2	o 🕘 📗
	Reset	o 🕙	BVz	o 🕘 📗
	Remote re	et 0 🎱	Alarm	o 🥘 📗
	LP	1 🏓		
	GP (gas fir	g) 1 🏓		
	Thermosta	/co 1 🏓		

The **Status** window shows the current state of the available inputs and outputs plus operating data.

The displayed values are cyclically refreshed.

The refreshment rate (interval) is adjustable (⇔ chapter Settings – General).



SIEMENSBOILS 13.5 Data recording (trending)

$\langle \mathcal{P} \rangle$

Note!

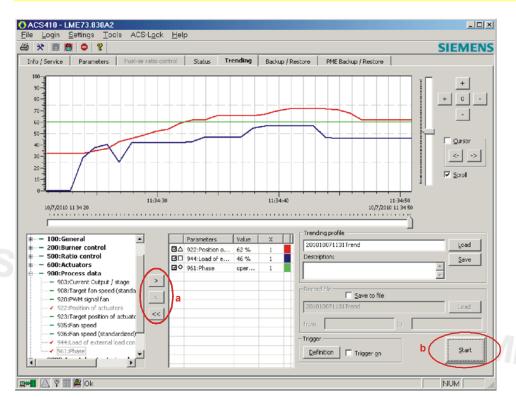
Note!

During data recording (trending), data are acquired at an average sampling rate of 1 second. The capacity of the PC system may delay the sampling of signals.

During data recording, it is possible to plot the current process data over time (e.g. states of inputs and outputs, actuator positions, program phases, etc.) of the connected burner controls and to save the data in a file.

$\langle \mathcal{P} \rangle$

Trending can also be performed over longer periods of time on the plant itself.



Note!

The (data) recordings saved in a file for a period of time exceeding 24 hours are subdivided into several recording files. One file per day is created.

Note!

If the ACS410 is started when Modbus mode is activated on a LMV2/LMV3, it is no longer possible to write data via Modbus!

Modbus data points can only be read in this state.

Exception!

If data recording is activated with ACS410 (trending), individual pieces of data for the LMV2/LMV3 can be written via Modbus.

If the data recording is stopped or the window is exited, the write access for Modbus to the LMV2/LMV3 is also blocked.



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Warning!

When the ACS410 is ended, the Modbus data of the overriding control system may SIEMENS^{Bolt}SIEMENSBo have to be re-installed (e.g. target load).

13.5.1.1 Parameter selection LME39 / LME7/LME8

In the case of LME39 / LME7/LME8, the display of certain I/Os varies, due to the different program structures in use. In principle, for the display of these I/Os, an extended range of parameter numbers applies. The following table shows the parameters used with the LME39 / LME7/LME8 models.

Complete list of available parameters (the parameters displayed depend on the type of device):

Parameter no.	Input/output
3001	Flame signal 01
3002	Flame signal 02
3007	Flame signal 01
3008	Flame signal 02
3033	Fan motor
3034	Ignition
3035	Safety fuel valve SBV
3036	Fuel valve BV1
3037	Fuel valve BV2
3038	Alarm
3039	Ignition fuel valve ZBV
3040	Oil preheater OVW
3041	Fuel valve BV3
3042	Pump
3043	AUX
3044	Test
3082	Safety loop
3083	Air damper position <i>Closed</i>
3084	Flue gas supervision
3085	Enable signal for oil preheater (firing on oil)
3086	Air damper actuator opening
3087	Flue gas damper opening
3088	Reset
3089	Remote reset
3090	Air pressure switch LP
3091	Gas pressure switch GP (firing on gas)
3092	Thermostat/controller (R/T)
3093	Load controller 2nd stage
3094	Fuel oil 0/gas 1
3095	Actuator cam position Close
3096	Actuator cam position KL
3097	Actuator cam position ZL
3098	Actuator cam position BV
3099	Actuator cam position NL
3133	Alarm
3301	Flame signal 01 (analog)
3302	Flame signal 02 (analog)
3303	Mains voltage
3304	Oil preheater temperature
3307	Flame intensity 01 (analog)
3308	Flame intensity 02 (analog)

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	11:34:30				11:34:40
10/7/2010 11 34 20					
- 100:General	1		Parameters	Value	x
– 200:Burner control	-	IN/	922:Position o	62 %	1
– 500:Ratio control	1		944:Load of e	46 %	1
- 600:Actuators			961:Phase	oper	1
– 900:Process data					
— 903:Current Output / stage					
— 908:Target fan speed (standa					
— 920:PWM signal fan					
922:Position of actuators	<<				
 923:Target position of actuate 935:Fan speed 					
 933.1 all speed 936:Fan speed (standardized) 					
944:Load of external load con					
961:Phase					
]				

Example: Trending window for LME39.100

Presentation of digital I/Os in the trending picture.

_ 🗆 × SIEMENS :kup / Restore 0.48 0 -1.0 2 -0.4 m E0.0 ⊆ursor 0.40 <-11:36:30 10/8/2010 11 36 33

The digital I/Os are arranged above one another in the form of graphs. Each channel is assigned a specific scale in a different color.

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13.5.2 Selecting the parameters (general)

922:Incremental p 🔺

🖌 922:[0]fuel

/ 922:[1]air

935:Absolute speed

936:Standardized spe

942:Active load sourc

947:Result of cont

950:Required relay st

954:Intensity of flame

960:Actual flow rate [

🖌 961:Phase

From the list on the left, select the required parameters that shall be displayed or recorded. Highlight and copy them to the table on the right by double-clicking or by using the arrow button > (a). If you want to remove certain parameters from the table on the right, use arrow button < (a) for individual parameters, or << (a) for all parameters. A maximum of 9 parameters can be selected.

When ticked \square in the table on the right, the selected parameters appear in the graph, or will be hidden.

Parameters

954:Intensity of ...

☑△ 961:Phase

922:[0]fuel

922:[1]air

In the table on the right, select box **X** at the parameter to be changed. A pull-down menu opens, showing the available choices for the presentation multiplier of the parameter.

Value

36.90

44.90

100

1

0.1

10

100

1000

60

Changing the presentation scale

Changing graph colors

From the table on the right, select the color at the parameter to be changed.

>

<

<<

Color ? X Basic colors: Custom colors: Define Custom Colors >> OK Cancel

You can select any color.

Starting the graph

Click **Start** (b) to plot the graph. All parameters selected from the table on the right will be shown.

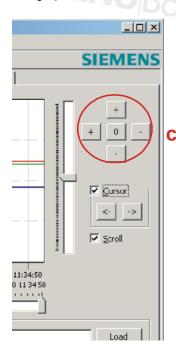
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PC software for microprocessor-based burner controls 13 Working with the ACS410

Displaying the graph

The graph's scale can be changed.



Click the + (top) or - (bottom) button to increase or decrease the scale of the y-axis. Use the + (left) or – (right) button to increase or decrease the scale of the x-axis. Click the 0button to return to the initial scale.



When ticking I the check box at Cursor (e), a vertical double line appears for the cursor's position plus a pop-up window in the graphic display. This pop-up window shows the exact values of the selected parameters. Using the mouse or the <- -> buttons, the cursor's position in the display range can be changed in the horizontal direction. In addition, the values are displayed in a pop-up window appearing at the cursor's location.

When ticking I the check box at **Scroll** (f), the display runs with current data of the burner control's over the time axis. If the tick is removed, the current display is stopped. If ticked again, the display continues from the respective point. The data for the display are temporarily buffered in the background.

The pointer at the bottom (g) can be used to shift the view position in the direction of x or y. SIEMENS/BoltSIEMENS/Bo

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13.5.3 Recording data 13.5.3.1 Trending profile

The trending profile is used to file the settings (parameter selection) that shall be shown on the trending display.





The selected parameters can be saved in the form of a profile file. The trending profile proposes a file name (format of file name: JJJJMMTThhmmss*Trend* (year = 4 digits, month and day = 2 digits each, hour minute second = 2 digits each, followed by *Trend*). This file name can be randomly selected or can also be overwritten. In text box **Description**, any free text can be entered, which will then be saved together with the trending profile. By clicking **Save** (h), the profile is saved under the entered file name with extension *.ptd. Saving in the ACS410 program file takes place in subfolder *tn*.

BAC541	0 🗶
⚠	Writing was successful
[<u>ok</u>

Confirm by clicking OK.



Use the Load button (i) to open the selection window of the saved trending profiles.

🚺 Data files		×
Files:		
Date	Data file	
2007-07-16 11:32	\tn\LMV37400 Startup for Docu	ı.ptd
2007-04-17 09:58	.\tn\Demo LME39100 IOs.ptd	
2007-04-17 09:58	.\tn\LMV27 Startup Trend.ptd	
2007-04-10 13:11	.\tn\LME39100 IOs.ptd	
Information:		
961:Phase	^	Load
922:[0]fuel	_	
922:[1]air		
954:Intensity of flame		Delete
Description:	-	
1		Cancel

The mouse can be used to select a profile. The **Information** window displays the parameters of the trending profile.

- Load
 Delete
- Copies the profile to the trend settings
- Removes the selected profile from the list and deletes it
- Cancel
- Closes the display and the selection window

13.5.3.2 Data file

The data file is used to file the process data of the selected parameters. In text box **Record to file** (i), it is possible to save curve data. When ticking \square the check box at **Record to file** (i), a file with the curve data is created. A file name will be proposed (format of file name: YYYYMMDDssmmTrend). This file name can be randomly selected or can also be overwritten. When clicking **Start** (b), the recording process is started. Clicking a second time stops the recording process and saves the file.

Filing location: In ACS410 program subfolder *tn*. A recording consists of 3 partial files.

File names:

*.unl – parameter settings of active parameter configuration *.dtd – data file DeviceASN.unt (e.g. 3LMV37.400A2 0x171.unt)

To open the selection window with the archived files, click Load (i).

		Offline backup file
2007-07-16 11:35	.\tn\LMV37400 Startup T	\tn\LMV37400 Startup T
2007-04-17 09:58	.\tn\200702071054Trend	.\tn\200702071054Trend
2007-04-17 09:58	.\tn\200702071126Trend	.\tn\200702071126Trend
2007-04-17 09:58	.\tn\Demo LME39 Startup	.\tn\Demo LME39 Startup
2007-04-17 09:58	.\tn\Demo LMV27 GAs Mo	.\tn\Demo LMV27 GAs Mo
2007-04-17 09:58	.\tn\LMV27 Demo Startup	.\tn\LMV27 Demo Startup
2007-04-10 14:00	.\tn\LME39100 auto Trig	.\tn\LME39100 auto Trig.
nformation:		
	0A2 Burner ID: 9999	Load
Automat: LMV37.40		
Automat: LMV37.40		

When selecting a data file, all required partial files are loaded, and the **Information** window shows the type of burner control and the associated burner ID.

- Load
- Delete Removes
- Cancel
- Copies the file to the graph (offline operation)
- Removes the selected file from the list and deletes it Closes the display and the selection window

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13.5.4 C	reating a trigger event		
11:35:50	11:36:00 11:36:10 7/16/2007 11 36 19 Trending profile LMV37400 Startup for Docu Description: LMV37400 Startup, Phase, Flamesignal, Actuator position Record file Record file Record to file LMV37400 Startup Trend 200702121107 from to Trigger Definition Trigger on	✓ Scroll Zoom Load Save ✓ Load Start	SIEMEN
			11.

When clicking Definition (k), you reach the Trigger window. There, you can select one or several interconnected parameters for a trigger event, which triggers data recording and/or SIEMENS Bolts an e-mail message.

Trigger				×
Trigger profile 200707161146Trigg Description: Load Save	Record file 200707161146Trigg Activate after: 0 Number of events: 1 Default Test		events pre: 20 [5] ter: 10 [5]	
	Send e-mail: &// Prameters 922:[0]fuel & 922:[1]air	Event > >	Value 37.90 46.20	+ 150.00
				ок

From the list on the left, select the required parameters that shall lead to a trigger event. Highlight the parameters and copy them to the table on the right by double-clicking, or by using the arrow button > (a). If you wish to remove selected parameters from the table on the right, use arrow button < (a) for individual parameters, and << (a) for all parameters. A maximum of 20 parameters can be selected.

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Using & / I (b), you can select several trigger events and connect them with logic AND or logic OR.

		8/	Parameters
			922:[0]fuel
to		8 💌	922:[1]air
	>		

くア

Note!

The individual trigger events must always be connected with AND (both criteria must be satisfied) or with OR (one of the 2 criteria must be satisfied). Note that the AND operation is given priority over OR.

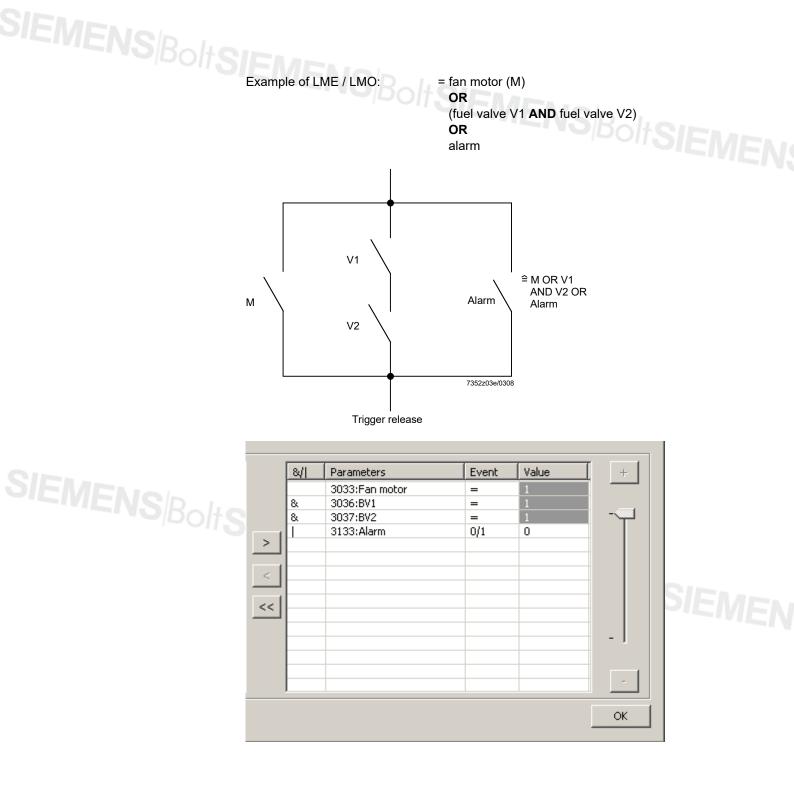
8/	922:[0]fuel	Event Value + 2	255
& &	922:[1]air 961:Phase	46.20 > ● 60 C = ●	
: -		 < 60 < 1/0 0/1 	
			0

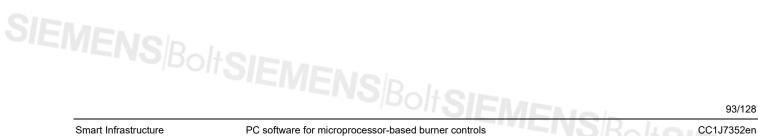
Using **Event** (c), various events can be defined:

- Greater than >, smaller than <, or equal to = value
- Level change digital value, rising ramp 0/1, falling ramp 1/0
- Bit masking for parameter query

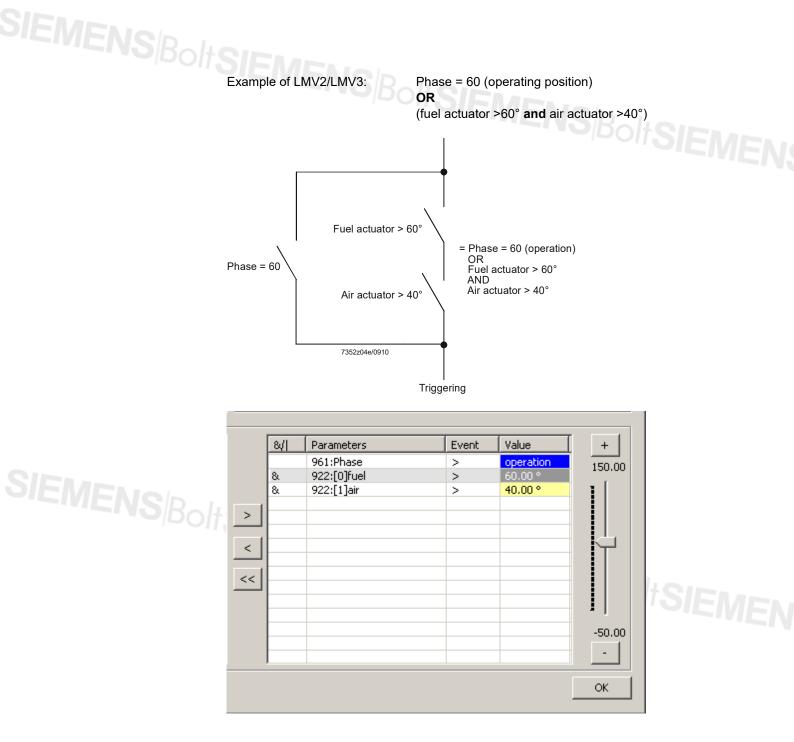
The **Value** (d) can be changed here. Using the scroll bar, or the **+** and **–** buttons on the right, the value can be set to **0...255**, or **0** or **1** (digital values).







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Record file 201010071440Trigg Activate after: Number of events: Defoult Test Send e-mail:
Save Activate after: 0 Trigger events Image: Number of events: 1 before: 20 [s] after: 10 [s] Image: Default Test [s] Image: Send e-mail: [s] [s]
Number of events: 1 before: 20 [s] after: 10 [s] Default Test Send e-mail: 8// Parameters Value
after: 10 [s] Default Test Send e-mail: &// Parameters Automatic Value
after: 10 [5] Default Test Send e-mail:
Default Test Send e-mail: &// Parameters Value
Send e-mail: [8/] Parameters [9/] Parameters
047/0]Centrat consist
947:[0]Contact sensing > 171 8. 947:[1]Contact sensing > 0
C 1/0 d
<<

With the help of & or !, the state of a single or of several bits of a process or parameter value can be evaluated. & is the query for logic 1, ! the query for logic 0.

Example of parameter 947 (LMV2/LMV3)

The states of various inputs of the burner control are read in as logic 0/1 information in the form of words having a width of 8 bit.

	In th	ning! his case of the l nection of 2 or c 1.								_
Selecting one bit			Bit 7	Bit 6	Bit 5	Bit 4	Bit 3	Bit 2	Bit 1	Bit 0
-	Mas	king value	128	64	32	16	8	4	2	1
	colu The	t can be selecte mn. trigger shall be vives an input siç	released	d when th		-				
Example	&	Parameter			E	/ent				Value
		947:[0] Contac	ct sensin	g	&					64
Selecting several bits		eral bits can be ition of the respe		•	-	he value	column	the valu	e obtain	ed from the
Example		trigger shall be pressure switch			•	•		i (heat re	equest C	<i>)n</i>) and bit 3
Settings in the trigger	&	Parameter			E	/ent				Value
menu		947:[0]contact	request		!					40
VENS Bolts		value (d) can b t, the value can	0		0				– buttor	ns on the

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SIEMENSBOIL 13.5.4.2 Saving trigger actions

Trigger	NBALL O	g		×
Trigger profile 200707161146Trigg		Record file		
Description:	Load Save	Activate after:	0 Trigger events	
LMV37.400 Phase 60		Number of events:	1 before: 20	[5]
	h		after: 10	[5]
		Default	Test	
		🔲 Send e-mail:		
🖻 – 900:Process data		&/ Parameters	Event Value	+

Trigger profile (e) offers you the choice of saving the trigger events in a file. The system proposes a file name (format of file name: YYYYMMDDssmmTrend). This file name can be randomly selected or can also be overwritten. Filing location is ACS410 program subfolder tn, file name with extension *.ptg. Click Save (h) to save the settings. In addition, Description (f) offers you a text box where you can enter any text which shall be saved together with your trigger settings. This text will make it easier to identify and administer the recordings at a later stage.

The Load button (h) opens the selection window to the saved trigger settings.

i)Data files			×	
Files:				
Date	Data file			
2010-10-07 11:40	.\tn\2010100711	.31Trigg.ptg		
2010-09-03 11:10	.\tn\2010090311	.08Trigg.ptg	- II.	
			— II.	
			- ľ	
			- 1	
			- 1	
			- 1	
			- II.	
nformation:				
3033:Fan motor = 1				
& 3036:BV1 = 1				
& 3037:BV2 = 1 3133:Alarm 0/1 0			1	
,			te	
. 1				
4		<u>Abo</u>	inc inc	

A trigger file can be selected with the mouse. The **Information** window shows the trigger SIEMENS Bolts settings and the associated description text.

- Load Delete Cancel Copies the settings to the Trigger window Removes the selected file from the list and deletes it Closes the display and the selection window



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CC1J7352en 10.09.2019 **Record file** (g) offers you the choice of saving the related graphs and of parameterizing various responses to the selected trigger event.

							Rahan
						>	apolt SIEN
g i		file 7161146Trigg vate after:	0	Trigger	events	m	
k <	🔽 Num	ber of events:	1	bef	ore: 20	[5]	
	Senc	Default I e-mail:	Test	af	ter: 10		
	8/	Parameters		Event	Value	+	
		961:Phase		>	60	255	
	-					r	

The system proposes a file name (format of file name: YYYYMMDDssmmTrigg). This name can be overwritten by any other name.

The graphs of the parameters selected from the **Trending** window are recorded in this file.

In text box **Activate after** (i), you can enter the number of trigger events upon completion of which the selected event shall be triggered.

When ticking \square the check box at **Number of events** (k), you can state whether a single or multiple recording shall be started based on the following trigger events. It is also possible here to enter the recording time **before:** or **after:** (m) the trigger event.



Sending e-mails								
Sending e-mails	"OIE	:IV	IENo	<u>ь</u>				×
		Record 20070 Act Nun		0 1 Test		events ore: 20 iter: 10	(S) (S)	
		8/ 8. 8.	Parameters 961:Phase 922:[0]fuel 922:[1]air		Event = > >	Value 60 0.00 0.00		+

Prerequisites for Send e-mail (n):

- E-mail settings are made (⇔ chapter Settings General)
- Internet access via a data network, analog modem, GSM, ISDN or DSL modem • and a provider which supports E-mail functions must be installed on your PC. For support, contact your system administrator
- Check box ☑ at Send e-mail (n) ticked

Note!

Also note that use of this function leads to further connection costs. Check your modem settings (e.g. disconnection during idle operation). Due to the complex transmission path of e-mail messages via the Internet, it is not possible to make certain that e-mail messages forwarded by the ACS410 will actually reach the recipient.

Enter the recipient's e-mail address in the text box to the right of Send e-mail (n). Test (n) enables you to check your e-mail connections and to send test e-mail messages.

rigger profile	Rec	ord file				
200707161146Trigg	200	707161146Trigg				
Description:		ctivate after:	0	Trigger	events	
MV37,400 Phase 60	🗐 🗌 🗹 N	umber of events:	1	bef	ore: 20	[s]
				af	ter: 10	[5]
			T 1			[-]
		Default	Test			
	- 🗌 🗖 S	end e-mail:				
			, 			
					1	
– 900:Process data	8/1			Event	Value	
B – 903:Current load		961:Phase		>	60	255
= - 922:Incremental position of actuato						I
— 922:[0]fuel — 922:[1]air						
— 922:[1]air	>					
— 922:[1]air — 935:Absolute speed						
— 922:[1]air	>					
922:[1]air 935:Absolute speed 936:Standardized speed						
 922:[1]air 935:Absolute speed 936:Standardized speed 942:Active load source 						
- 922:[1]air - 935:Absolute speed 936:Standardized speed - 942:Active load source - 942:Result of contact sensing						
 922:[1]air 935:Absolute speed 936:Standardized speed 942:Active load source 947:Result of contact sensing 950:Required relay state 950:Required relay state 954:Intensity of flame 						
 922:[1]air 935:Absolute speed 936:Standardized speed 942:Active load source 947:Result of contact sensing 950:Required relay state 						

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Confirm the entries made in the Trigger window by clicking OK (a).



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SIEMENSBOIS 13.5.5 Triggering

 \Rightarrow You reach the **Trending** window again.

	7:00 7/16/2007 13 57 8		IEMEN
X 1 1 1 1 1 1 1 1	Trending profile 200707161354Trend Description: Record file	<u>Zoom</u> Load Save	
	Startup LME39 for Docu200707161354Trend from to Trigger		

Tick \square the check box at **Trigger on** (b).

After opening the Trending window, the next trigger event starts recording data.

On completion of the preset periods of time (in the case of several trigger events on completion of the last event), the respective file is saved.

Section 1	10	×
⚠	Writing was succes	ssful
[<u>OK</u>	

Confirm by clicking OK.

Filing location is ACS410 program subfolder tn.

A trigger data file consists of 3 partial files:

File names:

- *.ptg configuration of trigger settings in binary format
- *.dtg contains the trending data after the trigger event
- *.unl contains the parameter settings of the current parameter configuration DeviceASN.unt (e.g. 3LMV37.400A2 0x171.unt)

13.6 Backup/restore

Here, it is possible to set up a backup file of the connected burner control. This means that the burner control's parameters and settings are saved in files.

· ·		ir ratio control			ME Backup / Restore		
efault directory:	C:\Programme\	Siemens AG\ACS4	1018KD1TWAS		LMV Demo Settings (03.09.2010	
ackup file: Date	Basic unit	Burner ID	User level	Description	-т I - Г		
2010-09-23 17:26:12		1111	OEM	Test	-4		
2010-09-03 09:45:12		1111	OEM	LMV Demo Settings 03.09.2010			
2010-09-02 16:16:03		6789	OEM	Ern bonio socangs corosizozo			
					Device no.		
					Device no.		
					1		
					Burner type		
					BurnerSN		
					Damerow		
					,		
					Backup	Load	Res
4			1		F		De

When clicking **Backup**, the window for entering free description text opens. Click **Delete** if you wish to delete a selected backup file.

Prerequisite for backup is setting the burner's ID via parameter 113.



SIEMENS/BoltSIEMENS/B

13.6.1.1	Selecting t	he backu	p direct	tory			
🚯 ACS410 - LN	4E73 830A2	line a	1.000				
	Settings <u>T</u> ools A	CS-L <u>o</u> ck <u>H</u> elp					
- 							SIEMENS
Info / Service	Parameters Fuel-	air ratio control	Status Tr	ending Backup / Restore	PME B	ackup / Restore	
Default directory:	C:\Programme	Note: Siemens AG\ACS41	LO\Bkp\LMV2			Description:	
Backup file:						LMV Demo Settings 0:	3.09.2010
Date	Basic unit	Burner ID	User level	Description			
	26:12 LMV37.400A2	1111	OEM	Test			
	45:12 LMV27.100A2 L6:03 LMV37.400A2	1111 6789	OEM OEM	LMV Demo Settings 03.09.201	.0		

Click to select the directory where the backup files shall be archived.

To make the entry, Windows Explorer is opened.

Browse For Folder	<u>? ×</u>
Select directory for data files	
ACS410 ACS410 Bkp MEZ LMV2 Data Doc Hlp Log New Folder	
CI	•
Make New Folder OK	Cancel

When clicking Make New Folder, you can create a directory for saving backup files. By selecting an existing directory and confirming with **OK**, the new directory is opened and the available data files appear in the Backup / Restore window for further handling.

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Setting up backup and selecting archiving

ackup description	×	1
File name:	<u>o</u> k	
C:\Programme\Siemens AG\ACS410\Bkp\LME7\2010100		SIENA-
Product no.	<u>A</u> bort	PIEME
LME73.830A2		
Description:		
Device no.		
Burner type		
BurnerSN		

Dialog box **Description** can be used to enter free text. Boxes **Device no.**, **Burner type** and **BurnerSN** can be used to enter customer-specific burner description to be saved together with the backup file. To start the backup process, click **OK**.

Click to open the Save As window.

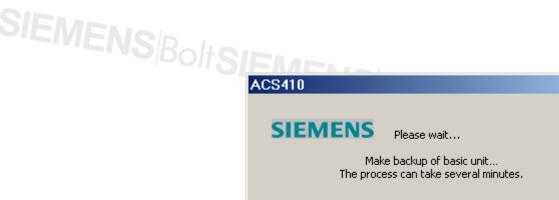
Save As					<u>? ×</u>	
Savejn:	C LMV2		•	+ 🗈 💣 🎟	•	'n
My Recent Documents Desktop My Documents My Computer	🖬 LMV2 Test.bkp					
My Network Places	File <u>n</u> ame:	20101007150915.bkp		•	Save	
	Save as <u>t</u> ype:	ACS410 Backup Files (*.bkp)	•	Cancel	

Here, a new storage directory can be set up or selected. At the same time, the name proposed for the backup file can be adopted or overwritten. To start the backup process, click **Save**.

This input is saved together with the backup file. To start the process, click **Save**.

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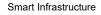
Note!

Creation of a backup may take several minutes, depending on the type of burner control and the selected rate of communication.

The following status message appears.



Confirm by clicking OK. SIEMENSBOITSIEMENSBOITSIEMENSBOITSIEMENS



SIEMENSBOI 13.6.2 Restore

The **Restore** button is used to write the stored parameters and settings back to the burner control. Prerequisite is that the burner control is in online operation. Before the restore process is started, a compatibility check is made.

From the Backup / Restore window, select the required restore file.

Click Restore to open the following window:

📲 ACS41	IO 🔀
⚠	Shall the restore data be written to the basic unit?
	<u>Y</u> es <u>N</u> o

- YesStarts the restore process- NoAborts the restore process

When starting the restore process, the following message appears:

	AC5410	
	SIEMENS	Please wait
		Restore data
:	Successful execution of	the restore process is reported:
	38 ACS410	XI



Confirm by clicking the **OK** button.



Warning!

If the LMV2/LMV3 uses fan motor control, the fan speed must be standardized again after the restore process.



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Incompatible parameter sets

The current software version of the burner control and the version used for making the backup are incompatible.

The software version used for making the backup can be read out from the LMV2/LMV3 data set (parameter 107). For that purpose, the backup file must be opened in offline mode.

With the LMV2/LMV3, the following combinations are possible:

Target version of the burner control	Condition for successful backup
V01.30	Backup data set version V01.20 or V01.30
V01.37 V01.38	Backup data set version V01.20 to V01.38
Up V01.40 to V01.70	Backup data set version V01.40 or higher
V01.80	Backup data set version V01.30 or higher
V03.00	Backup data set version V03.00 or higher
V03.40	Backup data set version V03.40 or higher
V03.70	Backup data set version V03.70 or higher

Different types of devices

- It is not possible to copy a parameter set to another type of burner control (other product no. (ASN))
- In the case of LME7/LME8 with software version 2.0 or higher (see type field),
 data can be restored on burner control as supplied

Burner ID

The burner ID of the data set to be restored must accord with the burner ID of the burner control.

If any of the above-mentioned restrictions applies, the respective error message appears. After confirmation of the messages by clicking **OK**, the restore process is aborted.

13.6.3 Copying a parameter set

Using backup/restore, the parameter set can be copied to some other unit. This may become necessary when a data set shall be copied to a non-parameterized unit.



Warning!

If the ACS410 is not used, all parameter settings are to be verified via an AZL2, and safe functioning of the plant is to be checked!

If compatibility is ensured, data can be restored on a non-parameterized burner control as supplied. Burner control as supplied applies if the burner's ID (parameter 113) is invalid,

LME39: **burnEr ID** LME7/LME8:----LMV2/LMV3: **2147483647** or --- on the **Parameters** menu

The restore process also copies the burner ID of the data set to the burner control.



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SIEMENS/BoltSI4 PME backup/restore

Note

This function is for use with LME7/LME8 only. It cannot be activated with any other type of burner control.

Status base unit: UPE With turknown (instamped) PPE Image: Status base unit: ASN matching the PME program module the successful restore process. ASN of the current configuration Product no. (ASN) of basic unit: Current PME software version of the burn control Image: Status base unit: Current PME software version of the burn control Ident. No. of stamped PME: Unique PME ID of the PME program mode descriptions for the respective process cale entered in the log file Warning!	🎒 🗙 🔒 📷 🖨	5	air ratio cont	trol Statu	is Trending	Backup / F	Restore PME	Backup / Re	store		SIEMI
Product no. (ASN) of basic unit: 01.00 Hetery file: (Volg20100003131247.pmh) Lat action: Image: Control (Control (Contro) (Contro) (Control (Control (Control (Control (Contro	Status basic unit: LME with unknown (unstamped) PME								<u>R</u> estore		
software version basic unit: 01.00 tetery file: 000000331247,pmh teter memory file: 000000000000000000000000000000000000	Product po (0SN) of bac	Deschuet as (ASD) of basic units								Backup	
Ident. no. of stamped PME: 00071609		e anier	104673.4	030M2							OEM backup
Description: Heavy file: Used point of the product no. Image: Software version basic unit: ASN matching the PME program module the successful restore process. ASN of th current configuration Software version basic unit: Current PME software version of the burr control Ident. No. of stamped PME: Unique PME ID of the PME program mode the successful restore process cale in the log file	Software version basic un	nit:	01.00								
Image:	Ident. no. of stamped PM	1E:	090716	09							
Image: Section of the section of th	Description:										
Image: Section of the section of th											
Image: Section of the section of th											
Image: Section of the section of th											
Att. Date Result Product no. New OEM Pr Ident. n U Description Image: Image	History file: .\LOG\201	.00903131247.pm	nh						•		
Product no. (ASN) of basic unit: ASN matching the PME program module the successful restore process. ASN of th current configuration Software version basic unit: Current PME software version of the burr control Ident. No. of stamped PME: Unique PME ID of the PME program mode the successful restore process can be control Description: Here, free text or customer-specific burned descriptions for the respective process can be control		Result	(Product no.	Product no	Ident. n	New OEM Pr	Ident. n	U	Descriptio	n
Product no. (ASN) of basic unit:ASN matching the PME program module the successful restore process. ASN of th current configurationSoftware version basic unit:Current PME software version of the burr controlIdent. No. of stamped PME:Unique PME ID of the PME program mod description:Description:Here, free text or customer-specific burned descriptions for the respective process cal entered in the log file		Tropale		Troduction	Troduction					bootipito	
Product no. (ASN) of basic unit:ASN matching the PME program module the successful restore process. ASN of th current configurationSoftware version basic unit:Current PME software version of the burr controlIdent. No. of stamped PME:Unique PME ID of the PME program mod description:Description:Here, free text or customer-specific burned descriptions for the respective process cal entered in the log file											
Product no. (ASN) of basic unit:ASN matching the PME program module the successful restore process. ASN of th current configurationSoftware version basic unit:Current PME software version of the burr controlIdent. No. of stamped PME:Unique PME ID of the PME program mod description:Description:Here, free text or customer-specific burned descriptions for the respective process cal entered in the log file											
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Description: Here, free text or customer-specific burned descriptions for the respective process care entered in the log file	Software versi		, unit.		~	ontrol					
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descriptions for the respective process ca entered in the log file							PME ID	of the	PM	E pro	gram moo
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-	ldent. No. of s				U H	nique ere, fre	ee text c	or custo	ome	er-spe	cific burne
Warning	ldent. No. of s				U H d	nique ere, fre escript	ee text c ions for	or custo the res	ome	er-spe	cific burne
	ldent. No. of s				U H d	nique ere, fre escript	ee text c ions for	or custo the res	ome	er-spe	cific burne

shutdown! If there is a request for heat after backup, the burner is started up. After the restore process, the burner control must be reset and the settings checked!

State of basic unit:

Shows the respective state between LME7/LME8 and PME program module

The restore, backup and OEM backup process can be performed, depending on the burner control's state.

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Explanation of text

PC software for microprocessor-based burner controls 14 PME backup/restore

Pos	Sible status messages	ENSBoltSIEN	
	Status message	Meaning	Action
	LME requires no PME module	LME7/LME8 with internal program sequence. Use of PME program module not possible	Do not use a PME program module
	LME functions according to the user program for the current PME module	PME program has already been restored on the LME7/LME8. LME7/LME8 and PME program module can be used	Restore and backup possible
	LME functions according to the user program for the current OEM PME module	OEM PME program has already been restored on the LME7/LME8. LME7/LME8 and PME program module can be used	Restore/backup/OEM backup possible
	LME with unknown PME module	PME program has not yet been restored on the LME7/LME8. LME7/LME8 does not start operation	Start restore process! Reset LME7/LME8 and check settings and combustion process
	LME with configuration as supplied, with unknown OEM PME module. An OEM PME restore process has still not been initiated for the LME.	The OEM PME program has not yet been loaded to the LME7/LME8. LME7/LME8 does not start operation.	Start restore process! Reset LME7/LME8 and check settings and combustion process
	LME with unknown OEM PME module	OEM PME program has not yet been restored on the LME7/LME8. LME7/LME8 does not start operation!	Start restore process! Reset LME7/LME8 and check settings and combustion process
	LME with OEM PME module, configuration as supplied	OEM PME program module is plugged in. OEM PME program module still without program!	Start OEM backup process! Assign specific OEM PME product type (ASN)! Mark PME program module as specified by the OEM. Finally, start new PME restore process
	LME with configuration as supplied, with OEM PME module, with configuration as supplied	Neither LME7/LME8 nor OEM PME program module have an operable program	Restore/backup/OEM backup not possible. OEM PME program module must be set or LME7/LME8 must be checked beforehand
	LME requires no PME module, PME module is plugged in	LME7/LME8 with internal program sequence. Use of PME program module not possible	Remove PME program module
	LME with missing PME module	LME7/LME8 without program	Plug in PME program module
	Restore process was successfully completed	PME restore process was successfully completed	Reset LME7/LME8 and check settings and combustion process
	Restore process was aborted. Product no. (ASN) incompatible	PME restore process aborted. LME7/LME8 does not start operation	Check product no. (ASN) of LME7/LME8 and of PME program module. Only matching PME program module can be used.
			➡ Reference! The Basic Documentation covering the respective type of LME7/LME8 must be observed!
	Restore process was aborted. Version incompatible	PME restore process was aborted. Software version incompatible. LME7/LME8 does not start operation	Check product no. (ASN) of LME7/LME8 and of PME program module. Only matching PME program module can be used.
	IENSBoltSIEN		➡ Reference! The Basic Documentation covering the respective type of LME7/LME8 must be observed!



Status message	Meaning	Action
Restore process was aborted	PME restore process was aborted	Repeat PME restore process
Backup process was successfully completed	PME backup process was successfully completed	"-NOBOItSIEM
Backup process was aborted	PME backup process was aborted	Repeat PME backup process
OEM backup process was successfully completed	OEM PME backup process was successfully completed	Mark PME program module as specified by OEM
OEM backup process was aborted. Product no. (ASN) incompatible	OEM PME backup process was aborted. Product no. (ASN) incompatible	Check product no. (ASN) of LME7/LME8 and of PME program module. Only matching PME program module can be used. ⇒ Reference! The Basic Documentation covering the respective type of LME7/LME8 must be observed!
OEM backup process was aborted	OEM PME backup process was aborted	Repeat OEM PME backup process

All actions (restore/backup/OEM backup) plus entries and results are archived in the respective log file.

Click _____ to change the file archiving directory.

History file: .\LOG\20100903131247.pmh • ... Windows Explorer opens. ? × Open Look in: 🗀 Log 🖛 🗈 💣 🎟 -• 4 My Recent Documents Desktop My Documents

> 20101007151310.pmh • <u>O</u>pen My Network Places File <u>n</u>ame: Files of type: ACS410 Action History Files (*.pmh) • Cancel

Here, a new file archiving directory can be set up or selected. The name proposed for the log file can be adopted or overwritten.

omputer

SIEMENSBOILS 14.1 PME program module restore process

During the restore process, the program sequence with all settings is transferred from the PME program module to the internal storage of the LME7/LME8.

To start the restore process, click Restore.

Info / Ser	🔁 🔳 🗢 💡	rs Eucl-a	ir ratio contri	ol Status		Backup / F	estore PME	Backup / Re	store	1	SIEN
Status ba				1	tamped) OEM-PM						<u>R</u> estore
											Backup
Product n	o. (ASN) of basic ur	it:	LME73.83	30A2							Contractor
Software	version basic unit:		01.00								OEM backup
Ident, no	of stamped PME:		09071609	9							
Descriptio	n:									_	
			I								
			I								
			<u> </u>								
		00101047	I								
History file	,	03131247.pm	jih						•		
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Last action	ns: Date	Result	P				LME71.971		U		
Last action	ns: Date	Result	P				LME71.971		U		
Last action	ns: Date	Result	P				LME71.971		U		
Last action	ns: Date	Result	P				LME71.971		U		
Last action	ns: Date	Result	P				LME71.971		U		
Last action	ns: Date	Result	P				LME71.971		U		
Last action	ns: Date	Result OEM backu OEM backu	p abor L p abor L	ME73.830	PME73.630A2 PME73.630A2		LME71.971		U		NUM



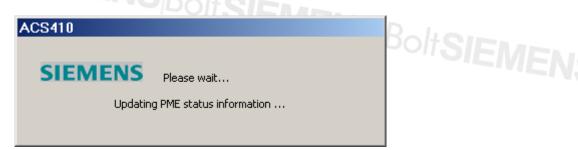
The following message appears:

ACS410	
SIEMENS	Please wait
<u>R</u> es	tore action was started

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Then, the following message appears:



A new initialization with the LME7/LME8 is made.

ACS410	
SIEMENS	Please wait
	Reading data

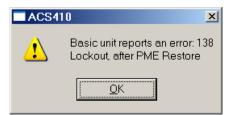
Then, upon successful completion of the restore process, the following **Login** box might appear, depending on the password:

SIEMENOID	Login - LME7	8	X
SIEMENS/Bolt;	C Offline © Backup C Trendir		<u>C</u> onnect <u>A</u> bort
	 Online User: Password: 	OEM 🔽	Create backup

Here, new logging on to the LME7/LME8 is required.

Upon successful completion of the restore process, the LME7/LME8 is locked.

The following message appears:



Confirm by clicking **OK**; then, reset the LME7/LME8 for another function.



Note

After the restore process, the LME7/LME8 is locked (Loc138); the LME7/LME8 must be reset and the settings must be checked.

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Smart Infrastructure



SIEMENSBOILS 14.2 PME program module backup process



A box opens. Click Yes to confirm.

The following message appears:

ACS410	
SIEMENS	Please wait
Bac	kup action was started

Then, the following message appears:

ACS410	
SIEMENS Updatine	Please wait g PME status information

The result is shown on the status line and in window Last actions:. Actions highlighted in red were not successful and must be repeated, if required.

Act	Date	Result	Product no.	Product no	Ident. n	New OEM Pr	Ident. n	U	Description
kOE	2010-10-07 14:2		LME73.830	PME73.830A2	0907160	LME71.971	1008030	0	
кОЕ	2010-10-07 14:2	OEM backup abor	LME73.830	PME73.830A2	0907160	LME71.971	1008030	0	

SIEMENS Bolts

SIEMENSBOIL 14.3 PME program module OEM backup

The OEM backup function is for use with LME7/LME8 only!

Warning!

On the basis of existing program sequences, this function allows the OEM at its own responsibility to create time and setting variants and to store program sequences on special OEM PME program modules. Approval, release and identification of the PME program modules are the responsibility of the OEM or of the person that creates such PME program modules.

Note

Prerequisite is the use of an OEM PME program module. The LME7/LME8 is in the safety shutdown position and reports error **Err PrC**. A program sequence is started only upon completion of an OEM backup. The OEM PME program module comes with no program sequence but allows the user to adopt or store a program sequence filed in the LME7/LME8. This function is intended for exclusive use by the OEM.

To start the OEM backup process, click Copy.

Define OEM produc	t no. (ASN)	×
OEM PM ASN:	LME73.8 XX A2	
PM: Iden-Nr. PM	10080300	
	Copy <u>C</u> ancel	

In this box, an OEM-specific product no. (ASN) in the value range 70...99 must be assigned.

To do this, click on the little white box and assign the respective number.

Define OEM prod	uct no. (ASN) 🛛 🗵	1
OEM PM ASN:	LME73.8 71 A2	
PM: Iden-Nr. PM	10080300	
	Copy <u>C</u> ancel	

To start the OEM PME... backup process, click Copy.



The following message appears:

ACS410	oltsieve.
SIEMENS Please wait	OIEWE
OEM backup action was started	

Then, the following message appears:

ACS410	
SIEMENS	Please wait
Updating	g PME status information

Upon successful completion, Status basic unit: shows the message OEM backup successfully completed.

O ACS410 - LME73.871A2 Image: Constraint of the second secon
Info / Service Parameters Fuel-air ratio control Status Trending Backup / Restore Status basic unit: OEM backup successfully completed Restore Product no. (ASN) of basic unit: LME73.871A2 Beckup
Status basic unit: OEM backup successfully completed Restore Product no. (ASN) of basic unit: LME73.871A2 Beckup OPIM backup OPIM backup
Product no. (ASN) of basic unit: LME73.871A2 Beckup OEM backup.
Product no. (ASN) of basic unit: LME73.871A2
Ident. no. of stamped PME: 10100800

After a short time, the message displayed after **Status basic unit**: changes to **LME with unknown (unstamped) OEM-PME.**

ACS410 - LME73.830A2		
<u>File Login Settings</u> <u>T</u> ools ACS-	L <u>o</u> ck <u>H</u> elp	
😂 🛠 🔂 🏢 🗢 🤶		SIEMENS
Info / Service Parameters Fuel-air r	atio control Status Trending Backup / Restore PME	Backup / Restore
Status basic unit:	LME with unknown (unstamped) OEM-PME	Restore
Product no. (ASN) of basic unit:	LME73.830A2	Backup
Software version basic unit:	01.00	QEM backup
Ident. no. of stamped PME:	09071609	

To operate the LME7/LME8, a PME restore is required. (⇒ chapter *PME program module restore*).

SIEMENSBOIL 15 UDS operation

Close the OCI400 communication interface as described in chapter *Connecting to the plant*.

In UDS mode, the UDS-compatible small burner control types LMO and LME can forward info/service, parameter, status, trending and backup/restore data, which can then be displayed via the ACS410.

In addition, it is possible to create a backup of the burner control parameters, to make burner control settings in the **Backup / Restore** window, and to plot a graph in the **Trending** window, either manually or via automatic trigger.



Note!

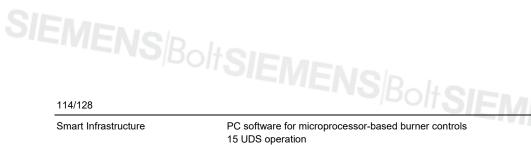
In principle, operation is the same as that described in chapter Working with the ACS410.

Exception:

It is not possible to change burner control parameters in the **Parameters** window, or to make a restore in the **Backup / Restore** window.

Prot. Next Page Prov Page Zoom Dut Close	ACS410 print preview			
Prime for algen elin ASN ASN Christian for algen elin ASN Christian for algen elin Christian for algen elin Chris	Print Next Page Prey Page	<u>One Page</u> Zoom In Zoom Out	<u>C</u> lose	
G.G. (C) inclusing the after control in or G.G. (C) inclusing the after control in or G.G. (C) inclusing the after control in OS 2124 G.G. (C) inclusion of the Inclusion of OS 2124 G.G. (C) inclusion of the Inclusion of OS 2124 G.G. (C) inclusion of Inclus		- SIEMENS		SIEMENS
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Example: Report offline backup



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SIEMENS/BoltSIEMENS/BoltSIEMENS/BoltSIEMEN; List of the most important error messages 16

Error messages Error... 16.1

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Note

The list only shows the most important error messages. Other error messages may appear as well!

Error code	Display	Meaning	Recommended measure
Error2141	AbeCom initialization has failed!	Communication between burner control and ACS410 is disturbed	Check wiring between burner control and OCI410 interface. Restart the ACS410. Check interface settings of the ACS410 (⇔ chapter <i>Settings</i>)
Error2142	AbeCom-ReqData() has failed!	Communication between burner control and ACS410 is disturbed	Check wiring between burner control and OCI410 interface. Restart the ACS410. Check interface settings of the ACS410 (⇔ chapter <i>Settings</i>)
Error2143	AbeCom: Order number discrepancy!	Communication between burner control and ACS410 is disturbed	Check wiring between burner control and OCI410 interface. Restart the ACS410. Check interface settings of the ACS410 (⇔ chapter <i>Settings</i>)
Error2144	AbeCom error!	Communication between burner control and ACS410 is disturbed	Check wiring between burner control and OCI410 interface. Restart the ACS410. Check interface settings of the ACS410 (⇔ chapter <i>Settings</i>)
Error2145	AbeCom-SendData() has failed!	Communication between burner control and ACS410 is disturbed	Check wiring between burner control and OCI410 interface. Restart the ACS410. Check interface settings of the ACS410 (⇔ chapter <i>Settings</i>)
Error2146	AbeCom: Time has elapsed – no communication with the basic unit	Communication between ACS410 and burner control was cut for more than the timeout period	Check wiring between burner control and OCI410 interface. Restart the ACS410. Check interface settings of the ACS410 (⇔ chapter <i>Settings</i>)
Error2147	Size of long page is ZERO!	Data set is faulty	Contact the supplier of the ACS410
Error2148	UDS: GetParamValue has failed!	UDS reading error	Check to see if the OCI400 is correctly attached to the burner control – check wiring between OCI400 and ACS410
Error2149	UDS: GetParamTree has failed!	UDS reading error	Check to see if the OCI400 is correctly attached to the burner control – check wiring between OCI400 and ACS410
Error2165	Backup not possible. Burner ID is invalid	Thus far, no value has been entered for parameter <i>Burner identification</i>	On the Parameters menu, enter a correct value for parameter <i>Burner ID</i>



ENS^{Bolt}SIEMEN PC Software for microprocessor-based Burner Controls 16 List of the most important error messages



Error messages Error... (cont'd)

Error code	Display	Meaning	Recommended measure
Error2166	Restore not possible. Burner ID of burner control and that of backup file is different	If burner ID of the burner control and that of the backup file are different, execution of the restore process is not possible	Is the selected restore data set the correct one? On the Parameters menu, check the value given for <i>Burner ID</i>
Error2167	Restore not possible. Software version of burner control and that of backup file is different	The burner control's software version and the required software version saved in the backup file are incompatible	Use the restore file compatible with the burner control. Refer to the ACS410 compatibility table in chapter <i>Backup/restore</i>
Error2168	Data corrupted! (Wrong CRC)	Backup file is faulty	Create a new backup file
Error2172	Basic unit is not connected or selected interface is invalid	ACS410 cannot receive data from the burner control	Check wiring between burner control and OCI410 interface. Restart the ACS410. Check interface settings of the ACS410 (⇔ chapter <i>Settings</i>)
Error2173	User is not authorized to access this function		Log on to the correct user level
Error2174	Communication with the basic unit has been cut!	SBoltSIEMEN	Log on again to the login dialog
Error2175	No basic unit connected to the OCI	ACS410 cannot receive data from the burner control	Check wiring between burner control and OCI410 interface. Restart the ACS410. Check interface settings of the ACS410 (⇔ chapter <i>Settings</i>)
Error2184	Curvepoint could not be read!	Read access to one or several points of the ratio control curve has failed	Repeat process
Error2185	Curvepoint could not be read!	Read access to one or several points of the ratio control curve has failed	Repeat process
Error2186	Required function cannot be started, data access currently disabled!		Repeat process
Error2187	Burner ID could not be read!	Parameter <i>Burner identification</i> could not be read	If the error occurred on the Parameters menu, repeat the read access by clicking Refresh . Restart the ACS410
Error2204	File cannot be read. This file contains parameters the logged on user is not authorized to access	The user currently logged on is not authorized to access the parameters saved in the file	Log on to the correct user level
Error2207	SMTP server not specified!	In Settings \rightarrow E-mail, line E-mail server – name, no server for sending e-mails is specified	Complete the settings required for e-mails. For more information, contact your provider
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Error moccode	es <i>Error…</i> (cont´d)	IS ^{Bolt} SIEMENS ^{Bolt} SIEN	
Error code	Display	Meaning	Recommended measure
Error2208	E-mail subject not entered!	No text has been entered on the <i>Subject</i> line of mask <i>Settings</i> \rightarrow <i>E-mail</i>	Complete the settings required for e-mails (Subject)
Error2209	E-mail address not entered!	In mask Settings \rightarrow E-mail no e-mail address has been entered on the To: line	Complete the settings required for e-mails or the Trigger menu (under Trending \rightarrow Trigger \rightarrow Definition button)
Error2210	Connection to SMTP server has failed:	Connection to the server for sending e-mails could not be established	Check the connection to your e-mail server and the settings made in <i>Settings</i> \rightarrow <i>E-mail</i> , line <i>E-mail server</i> – <i>name</i> . Compare the settings made with the information given by your provider
Error2211	SMTP message could not be sent:	E-mail could not be sent	Check the connection to your e-mail server and the settings made in Settings \rightarrow <i>E-mail</i> , line <i>E-mail server – name</i> . Compare the settings made with the information given by your provider
Error2212	Trigger list is empty! Trigger cannot be started!	The Trigger menu does not contain a trigger event. Trigger cannot be activated without this entry	Create at least one trigger event in the Trigger window
Error2213	Driving to undefined point not permitted!	Ratio control curve contains one or several undefined curvepoints	Set the ratio control parameters or copy a valid parameter backup to the burner control
Error2214	Unload file (UNL) does not exist	Backup of a parameter set consists of 2 files: *.unl = backup data, and *.bkp = information on backup. File *.unl has not been found	Create a new backup
Error2216	Software version check has failed	burner control not compatible with ACS410	burner control does not support connection of PC tool
Error2217	Product no. (ASN) check has failed	Backup data set and connected burner control have different product nos. (ASN)	Use data set with the same product no. (ASN) as the connected burner control. For product no. of data set, refer to backup/restore in column Basic unit of the data set list
Error2218	Standardization of VSD has failed	Error occurred when standardizing the speed of the VSD	For cause of the error, refer to the display of results in the ratio settings. Clear text diagnostics is offered by the error history on the Info/Service page. On startup, the pointer translates the diagnostic code to clear text
Error2220	Backup not possible. Burner ID invalid	burner control still without valid burner ID	Enter burner ID



PC Software for microprocessor-based Burner Controls ENS Bolt SIEMEN 16 List of the most important error messages

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Error messages Error... (cont'd)

Error code	Display	Meaning	Recommended measure
Error2222	Backup/restore has failed	Error occurred during backup or restore process	Check cable connection. Check to see if burner control operates correctly (e.g. power supply). Repeat the process. Restart the ACS410
Error2223	PME action was not started	Execution of required action was not possible at this point in time	Restart the required action
Error2224	PME restore has failed	Action could not be fully completed	Restart the required action
Error2225	PME backup has failed	Action could not be fully completed	Restart the required action
Error2226	PME OEM backup has failed	Action could not be fully completed	Restart the required action
Error2227	General PME error + supplementary error text	Error occurred during the action	Restart the required action
Error2228	Restore not possible. No compatibility	PME program module and burner control do not match. Product no. (ASN), software version are not compatible	Use a matching PME program module
Error2300	During recalculation of the ratio control curves, the type of fuel was changed. The curve changes cannot unambiguously be assigned to one type of fuel. For this reason, the ratio control curves of both types of fuel must be checked and possibly set again	During the time the curves were recalculated $(Calc + / -)$, the type of fuel was changed. For safety reasons, the ratio control curves of both types of fuel are set invalid, depending on the point in time fuel changeover took place (the set positions are maintained)	Important! The ratio control curves of both types of fuel must be checked and possibly set again. During the time the ratio control curves are set, the type of fuel should not be changed.
Error2301	You are not authorized to change the initial parameter settings	The initial parameter settings have a higher access right for writing	Log on again with a higher user access right

PC Software for microprocessor-based Burner Controls 16 List of the most important error messages

ENS Bolt SIEMEN

16.2 Error messages in alphabetical order

SIEMEN	S ^{Bolt} SIEMENSBoltSIEMENSBo al order	
16.2 Error messages in alphabetic	al order	It SIEMEN
Error message	Meaning	Recommended measure
AbeCom: Order number discrepancy!	Communication between burner control and ACS410 is disturbed	Check wiring between burner control and OCI410 interface. Restart the ACS410. Check interface settings of the ACS410 (⇔ chapter <i>Settings</i>)
AbeCom: Time has elapsed – no communication with the basic unit	Communication between ACS410 and burner control was cut for more than the timeout period	Check wiring between burner control and OCI410 interface. Restart the ACS410. Check interface settings of the ACS410 (⇔ chapter <i>Settings</i>)
AbeCom error!	Communication between burner control and ACS410 is disturbed	Check wiring between burner control and OCI410 interface. Restart the ACS410. Check interface settings of the ACS410 (⇔ chapter <i>Settings</i>)
AbeCom initialization has failed!	Communication between burner control and ACS410 is disturbed	Check wiring between burner control and OCI410 interface. Restart the ACS410. Check interface settings of the ACS410 (⇔ chapter <i>Settings</i>)
AbeCom-ReqData() has failed!	Communication between burner control and ACS410 is disturbed	Check wiring between burner control and OCI410 interface. Restart the ACS410. Check interface settings of the ACS410 (⇔ chapter <i>Settings</i>)
AbeCom-SendData() has failed!	Communication between burner control and ACS410 is disturbed	Check wiring between burner control and OCI410 interface. Restart the ACS410. Check interface settings of the ACS410 (⇔ chapter <i>Settings</i>)
ACS version not correct. Use a current version of this program	ACS410 version used is incompatible with the burner control	Update of ACS410 required. Contact the supplier of the ACS410
Backup not permitted for the logged on user	Backup on the current user level not possible	Log in on the correct user level
Backup not possible. Burner ID is invalid	Thus far, no value has been entered for parameter <i>Burner identification</i>	On the Parameters menu, enter a correct value for parameter <i>Burner identification</i>
Backup not possible. Burner ID invalid	burner control still without valid burner ID	Enter burner ID
Backup/restore has failed	Error occurred during backup or restore process	Check cable connection. Check to see if burner control operates correctly (e.g. power supply). Repeat the process. Restart the ACS410

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PC Software for microprocessor-based Burner Controls ENS^{Bolt}SIEMEN 16 List of the most important error messages

SIEMEN	SBOITSIEME	
Error messages in alphabetical order (cont´d)	S ^{Bolt} SIEMENS BoltSIEMENS Bo	It SIEMEN
Error message	Meaning	Recommended measure
Basic unit not connected	ACS410 cannot receive data from the burner control	Check wiring between burner control and OCI410 interface. Restart the ACS410. Check interface settings of the ACS410 (⇔ chapter <i>Settings</i>)
Basic unit is not connected or selected interface is invalid	ACS410 cannot receive data from the burner control	Check wiring between burner control and OCI410 interface. Restart the ACS410. Check interface settings of the ACS410 (⇔ chapter <i>Settings</i>)
Burner ID could not be read!	Parameter Burner identification could not be read	If the error occurred on the Parameters menu, repeat the read access by clicking Refresh . Restart the ACS410
Burner ID invalid. Valid value required	Thus far, no value has been entered for parameter <i>Burner identification</i>	On the Parameters menu, enter a correct value for parameter <i>Burner identification</i>
Communication with the basic unit has been cut!		Log on again to the login dialog
Connection to SMTP server has failed:	Connection to the server for sending e-mails could not be established	Check the connection to your e-mail server and the settings made in Settings → E-mail, line E-mail server – name. Compare the settings made with the information given by your provider
Curvepoint could not be read!	Read access to one or several points of the ratio control curve has failed	Repeat the process
Data corrupted! (Wrong CRC)	Backup file is faulty	Create a new backup file
Driving to undefined point not permitted!	Ratio control curve contains one or several undefined curvepoints	Set the ratio control parameters or copy a valid parameter backup to the burner control
During recalculation of the ratio control curves, the type of fuel was changed. The curve changes cannot unambiguously be assigned to one type of fuel. For this reason, the ratio control curves of both types of fuel must be checked and possibly set again	During the time the curves were recalculated (Calc + / -), the type of fuel was changed. For safety reasons, the ratio control curves of both types of fuel are set invalid, depending on the point in time fuel changeover took place (the set positions are maintained)	Important! The ratio control curves of both types of fuel must be checked and possibly newly set. During the time the ratio control curves are set, the type of fuel should
E-mail address not entered!	In mask Settings \rightarrow E-mail no e-mail address has been entered on the To: line	Complete the settings required for e-mails or the Trigger menu (under Trending \rightarrow Trigger \rightarrow Definition button)
E-mail subject not entered!	No text has been entered on the <i>Subject</i> line of mask Settings \rightarrow <i>E</i> -mail	Complete the settings required for e-mails (Subject)



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Error messages in alphabetical order (cont´d)		
Error message	Meaning	Recommended measure
Error when accessing data!	Error occurred during data handling by the ACS410	If this error message appears while changing a parameter, the change is not necessarily made on the burner control. For this reason, check the correct setting on the burner control (repeat the process with the help of the ACS410 or connect the AZL2). If this error message is displayed repeatedly, reinstall the ACS410
File cannot be read. This file contains parameters the logged on user is not authorized to access	The user currently logged on is not authorized to access the parameters saved in the file	Log on to the correct user level
General PME error + supplementary error text	Error occurred during the action	Restart the required action
Hard disk is full. Logging and trending cannot be saved		Provide additional storage space on the hard disk
Language file faulty	File for ACS410 display text is faulty. ACS410 cannot be started.	Reinstall the program or contact the supplier of the ACS410
Language file faulty. Contact the ACS410 supplier	File for ACS410 display text is faulty. ACS410 cannot be started.	Reinstall the program or contact the supplier of the ACS410
No authorization for this parameter	Change of parameter on the current user level not possible	Log in on the correct user level
No basic unit connected to the OCI	ACS410 cannot receive data from the burner control	Check wiring between burner control and OCI410 interface. Restart the ACS410. Check interface settings of the ACS410 (⇔ chapter <i>Settings</i>)
No basic unit found. Check the connection and try again	ACS410 cannot receive data from the burner control	Check wiring between burner control and OCI410 interface. Restart the ACS410. Check interface settings of the ACS410 (⇔ chapter <i>Settings</i>)
OCI not enabled	Use of a wrong type of OCI410 or technical component problem	Replace the OCI410. Always use approved types of OCI410 as per type summary in chapter <i>Data exchange via</i> OCI410
OCI not found! Check the OCI410	ACS410 cannot receive data from the OCI410	Check wiring between burner control and OCI410 interface. Restart the ACS410. Check interface settings of the ACS410 (⇔ chapter <i>Settings</i>)
PME action was not started	Execution of required action was not possible at this point in time	Restart the required action
PME backup has failed	Action could not be fully completed	Restart the required action

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SIEMEN	Rin I	
Error messages in alphabetical order (cont´d)	B ^{Bolt} SIEMENS BoltSIEMENS Bo	
Error message	Meaning	Recommended measure
PME OEM backup has failed	Action could not be fully completed	Restart the required action
PME restore has failed	Action could not be fully completed	Restart the required action
Product no. (ASN) check has failed	Backup data set and connected burner control have different product nos. (ASN)	Use data set with the same product no. (ASN) as the connected burner control. For product no. of data set, refer to backup/restore in column <i>Basic unit</i> of the data set list
Required function cannot be started, data access currently disabled!		Repeat the process
Required position could not be approached!	Error occurred during operation of actuators	Repeat the process
Resetting cannot be started. Another operation requires exclusive access to the device	Before a reset can be made, a started function must be executed first	Repeat the reset process
Resetting sequence not fully completed	Execution of reset was not possible	Repeat the reset process
Restore not possible. Burner ID of burner control and that of backup file is different	If burner ID of the burner control and that of the backup file are different, execution of the restore process is not possible	Is the selected restore data set the correct one? On the Parameters menu, check the value given for Burner ID
Restore not possible. Software version of burner control and that of backup file is different	The burner control's software version and the required software version saved in the backup file are incompatible	Use the restore file compatible with the burner control. Refer to the ACS410 compatibility table in chapter Backup/restore
Restore not possible. No compatibility	PME program module and burner control do not match. Product no. (ASN), software version are not compatible	Use a matching PME program module
Serial interface (e.g. COM1) cannot be initialized. Check cable connection or port number and try again	Serial interface cannot be initialized	Check wiring between burner control and OCI410 interface. Restart the ACS410. Check interface settings of the ACS410 (⇔ chapter <i>Settings</i>)
Size of long page is ZERO!	Data set is faulty	Contact the supplier of the ACS410
SMTP message could not be sent:	E-mail could not be sent	Check the connection to your e-mail server and the settings made in Settings \rightarrow E-mail, line E-mail server – name. Compare the settings made with the information given by your provider
SMTP server not specified!	In Settings \rightarrow E-mail, line E-mail server – name, no server for sending e-mails is specified	Complete the settings required for e-mails. For more information, contact your provider
Software version check has failed	Burner control not compatible with ACS410	Burner control does not support connection of PC tool



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PC Software for microprocessor-based Burner Controls

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Error messages in alphabetical order (cont´d)		
Error message	Meaning	Recommended measure
Standardization of VSD has failed	Error occurred when standardizing the speed of the VSD	For cause of the error, refer to the display of results in the ratio settings. Clear text diagnostics is offered by the error history on the Info/Service page. On startup, the pointer translates the diagnostic code to clear text
Trigger could not be started. Number of selected parameters is limited to a total of:	Total number of trigger events is limited to 9 trigger points	Reduce to a maximum of 9 trigger points
Trigger list is empty! Trigger cannot be started!	The Trigger menu does not contain a trigger event. Trigger cannot be activated without this entry	Create at least one trigger event in the Trigger window
UDS: GetParamTree has failed!	UDS reading error	Check to see if the OCI400 is correctly attached to the burner control – check wiring between OCI400 and ACS410
UDS: GetParamValue has failed!	UDS reading error	Check to see if the OCI400 is correctly attached to the burner control – check wiring between OCI400 and ACS410
Unload file (UNL) does not exist	Backup of a parameter set consists of 2 files: *.unl = backup data, and *.bkp = information on backup. File *.unl has not been found	Create a new backup
UnLockSeq delivers undefined output	Execution of reset was not possible	Repeat the resetting process
User is not authorized to access this function		Log on to the correct user level
Version of basic unit is not suited for use with this ACS410 version	ACS410 version used is incompatible with the burner control	Use an older ACS410 version. If functionality of the new ACS410 version is required, replace the burner control
You are not authorized to change the initial parameter settings	The initial parameter settings have a higher access right for writing	Log on again with a higher user access right



Note!

If, during the use of ACS410, the display shows errors not contained in the above lists, please contact your supplier.



PC Software for microprocessor-based Burner Controls

SEMENSBOILS 17 Legend of symbols

	6	Print: Click this button to open the menu for making the printer settings	
	*	Settings: Click this button to open the menu for making the settings	
		Lock: When the burner control is in operation, you can click this switch to start the locking sequence	
	8	Unlock: If the burner control has locked out (lockout position), you can click this switch to start the resetting sequence	
	•	Locking the ACS410: Click this button to lock operation via the ACS410. Locking can only be canceled by logging on again	
	8	Help: Click this button to open menu Help topics for operating the ACS410 and documentation	
	₽⇔∎	Status: Indicating an online connection to the burner control	
	14	Error message: Indicating that the burner control has locked out	
	. P	Periodic password: Indicating that the password is sent	
	, 📉	Plotting in the Trending window	
	2 I	Indicating active trigger handling in the Trending window	
	Normal mode	Indicating the burner control's current operating state	

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SIEMENSBOILS 18 Glossary

ASN	Device type
BCI	Burner Communication Interface
DFÜ	Data exchange via the telephone line (Internet) over longer distances
DSL	Digital Subscriber Line
FA	Burner control, equivalent to basic unit
GSM	Global System for Mobile Communications
ISDN	Integrated Services Digital Network
LAN	Local Area Network
LME	Microprocessor-based burner controls from Siemens for gas burners of small capacity
LMO	Advanced microprocessor-based burner controls from Siemens for oil burners
LMV2 LMV3	Microprocessor-based burner controls from Siemens for gas or oil burners of small to high capacity
MAPI	M essaging A pplication P rogramming Interface (defined interface used to send e-mails from any Windows software)
OCI400	Optoelectronic interface module for communication with all types of LMO and LMG from Siemens
OCI410	Interface used between ACS410 and burner control
PME	Program module for LME7/LME8
Trending	Program section used for the display and recording of activities performed by burner controls
UDS	Unidirectional interface)
USB	Universal Serial Bus
VSD	Variable Speed Drive

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