



DUNGS MPA 41xx V2.0

Parameterization and Configuration with VisionBox

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August 14, 2023

DUNGS®
Combustion Controls

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- 19 years experiences in electrical engineering and design of natural gas-fired heat treatment and combustion control systems
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Agenda

VisionBox Engineering-Tool

Where to get and how to install?

How to create an offline-configuration from the scratch?

How to save and reload a custom offline-configuration?

VisionBox Mini Interface-Adapter for online configuration

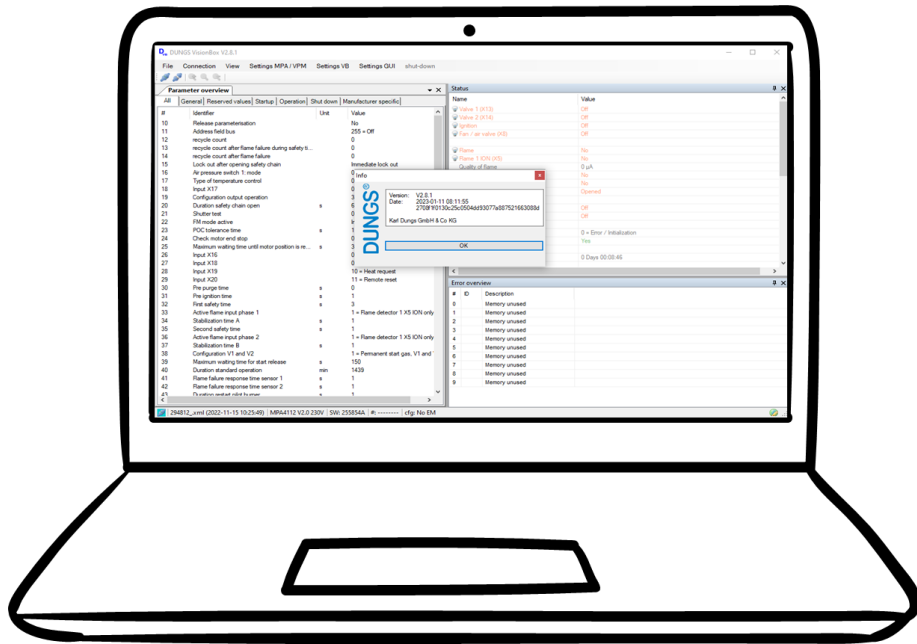
How to get connected for online configuration?

Access permissions for online configuration

How to do an online configuration?

How to release an online configuration?

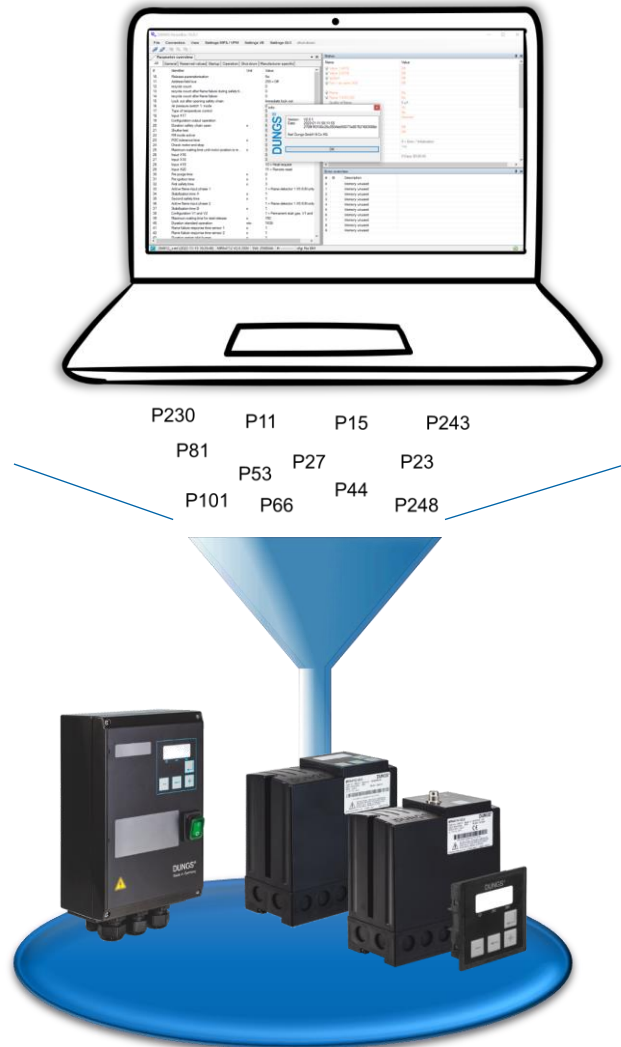
How to adopt a previous V1.x configuration in a V2.0 device?



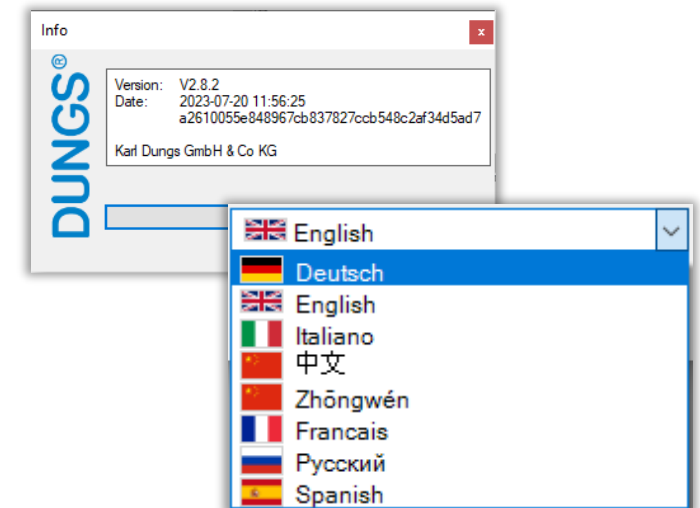
- Customer benefits
- Where to get and how to install?
- VisionBox Mini Interface-Adapter
- How to use VisionBox Engineering-Tool?
- How to create an offline-configuration from the scratch?
- How to save and reload a custom configuration?
- How to save a configuration how is the documentation done?

VisionBox Engineering-Tool

Customer benefits



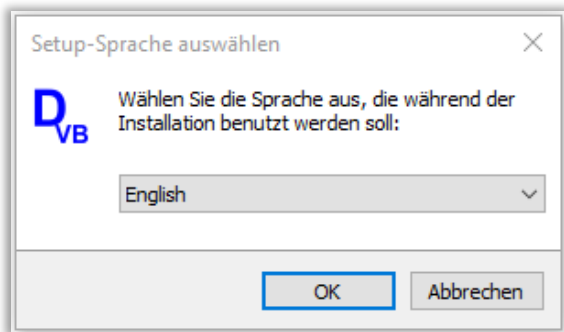
- Vision Box engineering tool to create and change the configuration/parameterization of an MPA and VPM
- VisionBox is designed to visualize, archive and document the device parameters
- Offline configuration without hardware linked to the computer
- For service and maintenance purposes
- To gain more detailed information's about the status, the fault conditions and the root causes
- Valid Version is VisionBox V2.8.2
- Available in 8 different languages
- The usage is free of charge
- VisionBox engineering tool is backward compatible



- Go to www.dungs.com
- Select *Global Service* → *Downloads*
- Scroll down to *Software Tools* and download the ZIP-File *SetupVisionBox_CompleteInstallation.zip*
- Extract the ZIP-File and start installation with doubleclick on *SetupVisionBox_V2.8.1_CompleteInstallation.exe*

Note: You must have administrator rights for installation

- Select an installation language (German or English)



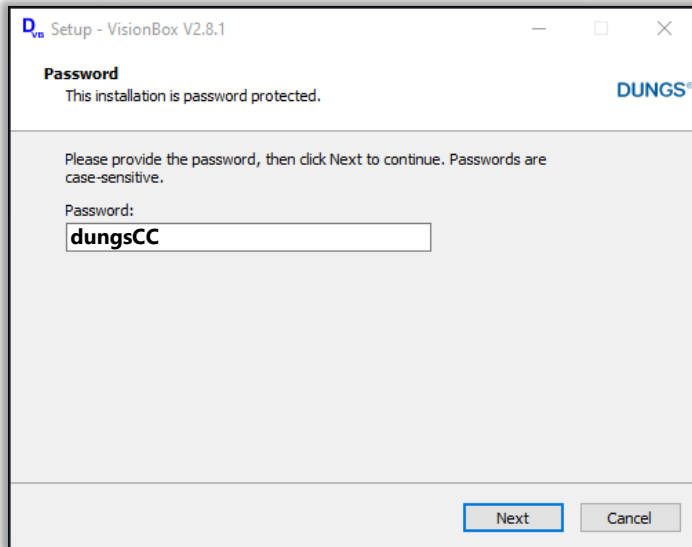
Note:

Once you have started VisionBox you can choose between all languages

VisionBox Engineering-Tool

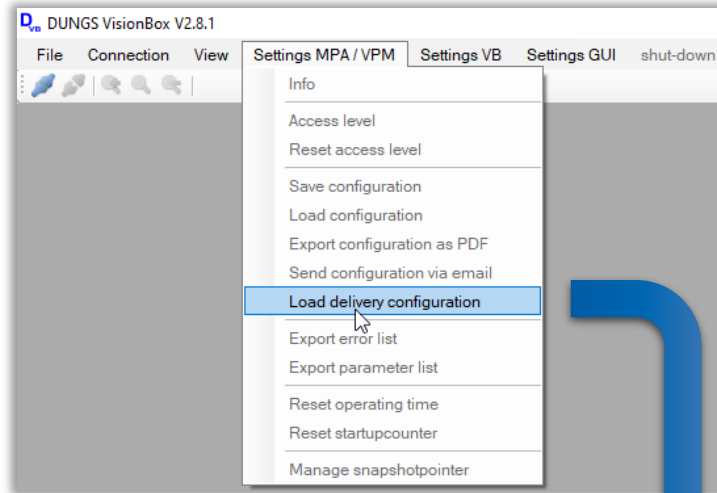
Where to get and how to install?

- The next dialog asks for a password to allow the installation.
- Enter ***dungsCC*** to continue the installation
- Follow the instructions to complete the installation

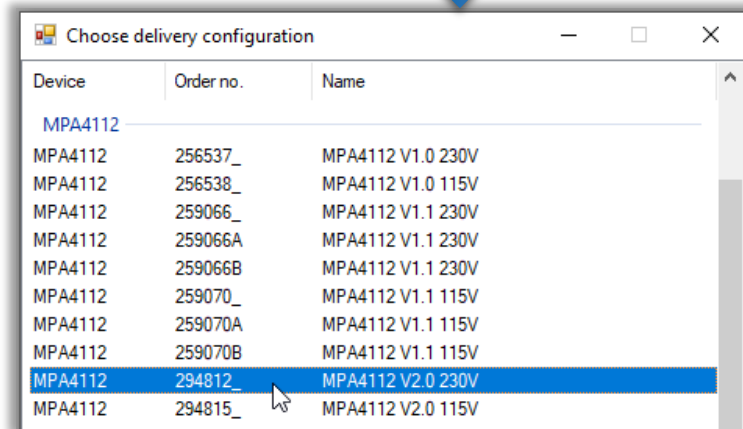


VisionBox Engineering-Tool

How to create an offline-configuration from the scratch?



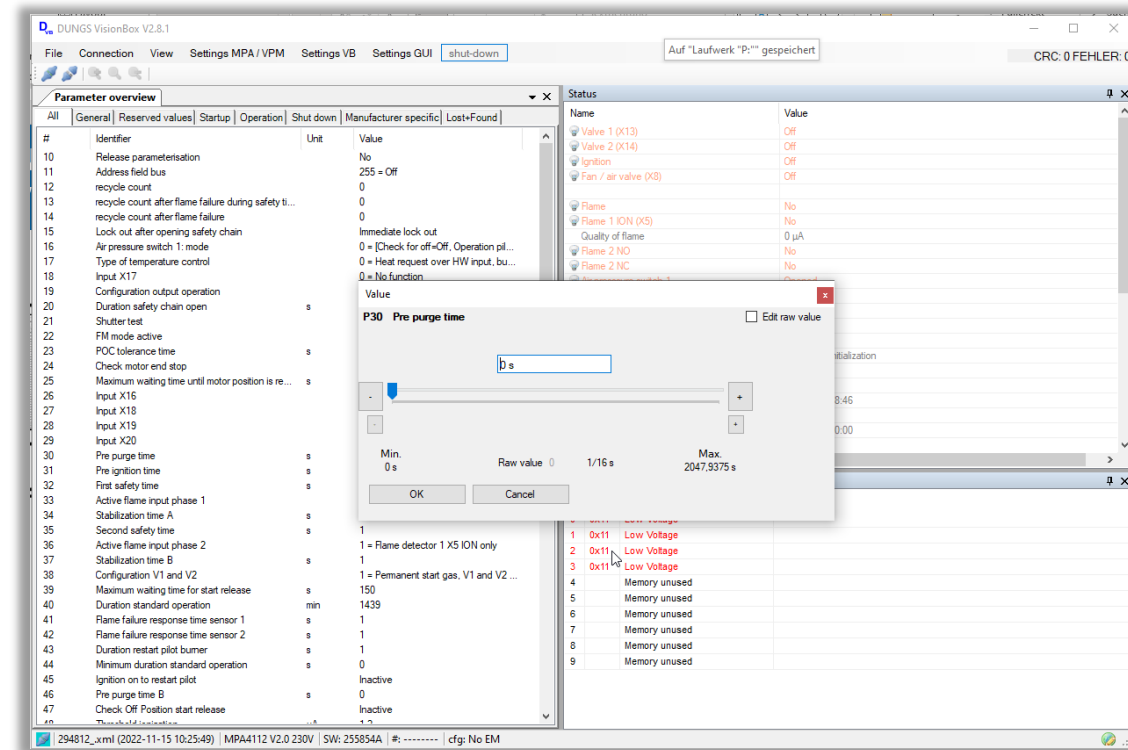
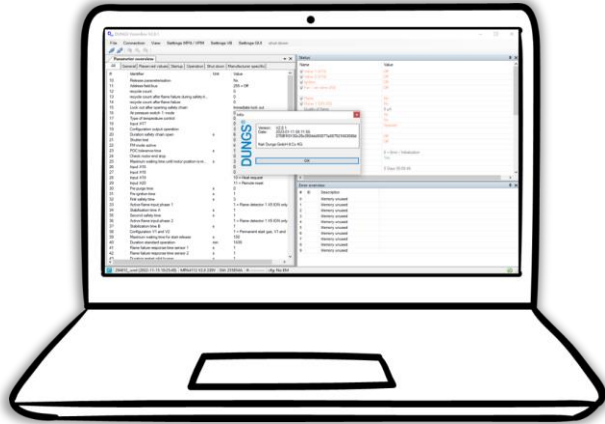
- An offline configuration is performed when there is no MPA connected to the VisionBox Engineering-Tool
- Open VisionBox and go to *Settings MPA / VPM* → *Load delivery configuration*
- Choose the basic version that you like to use
- Finally choose an extension module, if need



VisionBox Engineering-Tool

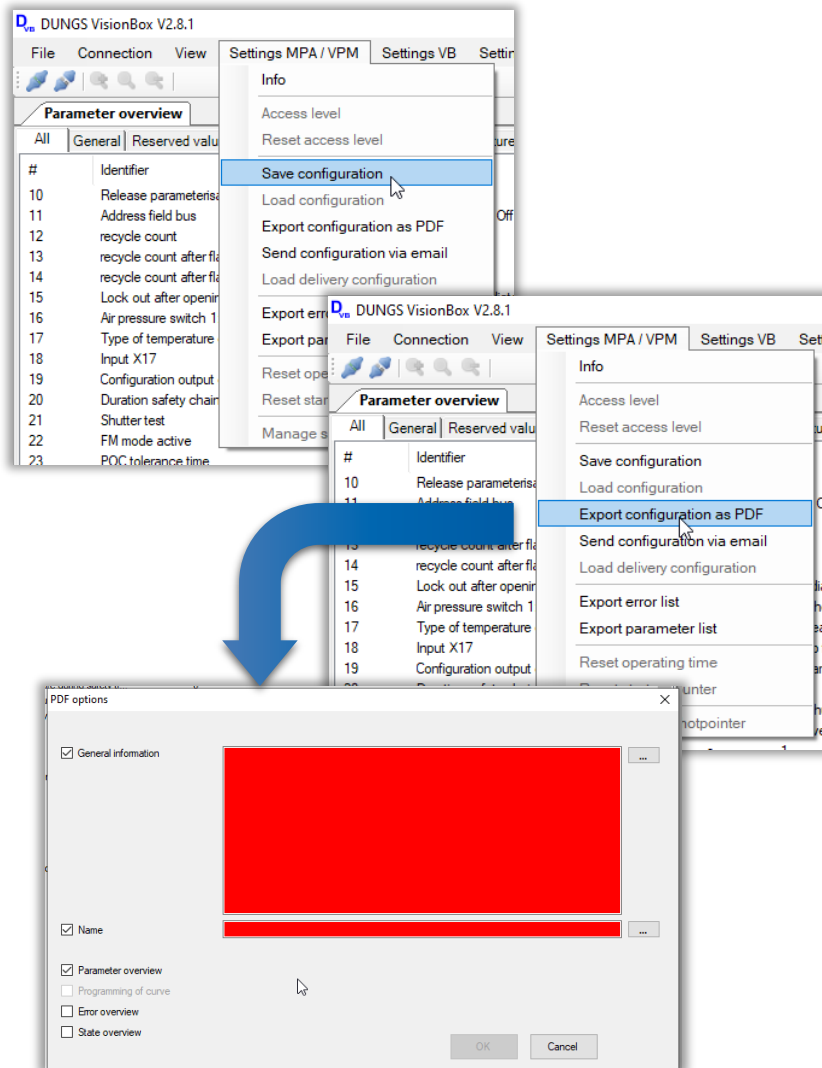
How to create an offline-configuration from the scratch?

- With double-click on the different parameters in the parameter overview window you can change parameter settings

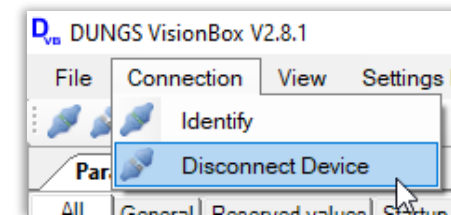


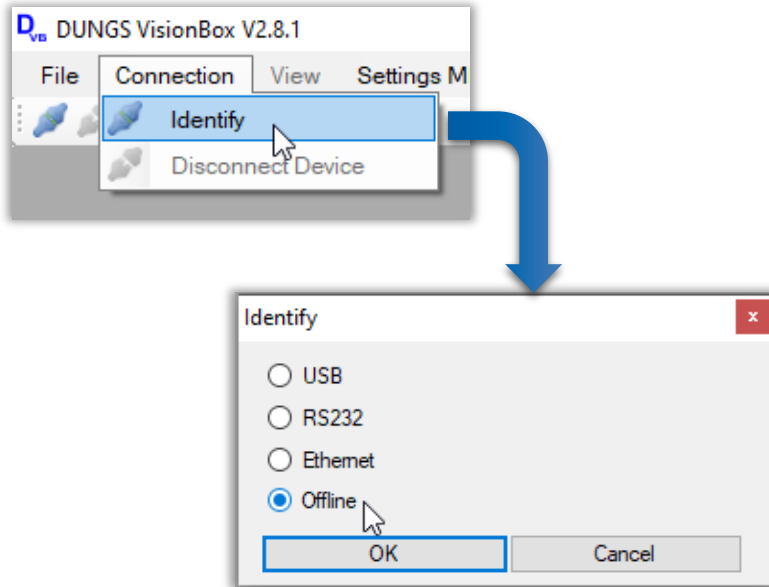
VisionBox Engineering-Tool

How to save and reload a custom offline-configuration?



- Once the configuration is complete it needs to be saved
- Therefore, click on **Settings MPA / VPM** → **Save configuration**
- The configuration file will be saved as an xml file
- With click on **Settings MPA / VPM** → **Export configuration as PDF** there is also an option to save the custom configuration as a PDF file for documentation purposes
- Clicking on **Connection** → **Disconnect device** closes the configuration windows

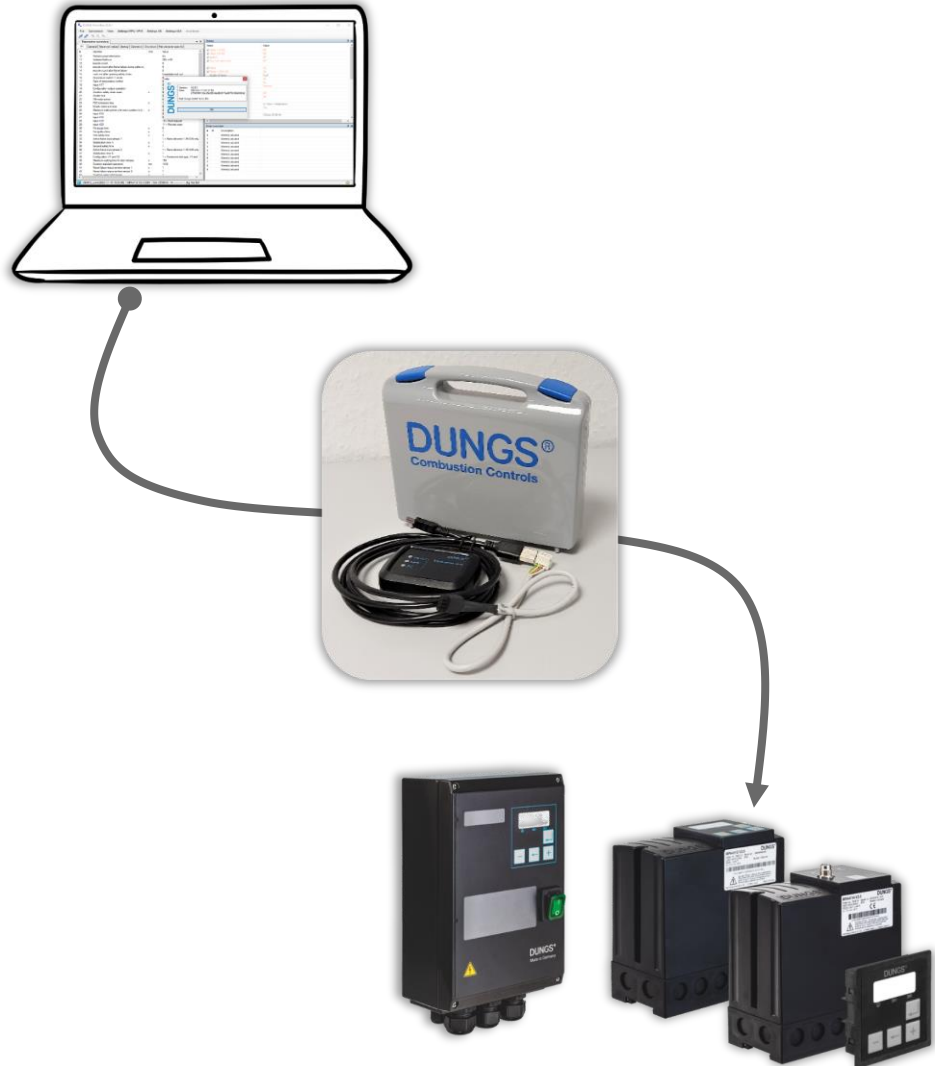




- To open a custom configuration, click on *Connection* → *Identify*
- Select *Offline* in the dialog window *Identify*
- In the File Explorer window, select the custom configuration you want

VisionBox Engineering-Tool

VisionBox Mini Interface-Adapter for online configuration



- USB interface cable to link the MPA41xx or VPM to the computer
 - VisionBox Mini Interface-Adapter: Material# 266290
- Only one version of interface cable to get linked to
 - MPA411x (plastic housing)
 - MPA4122 (metal housing)
 - VPM

MPA 411x

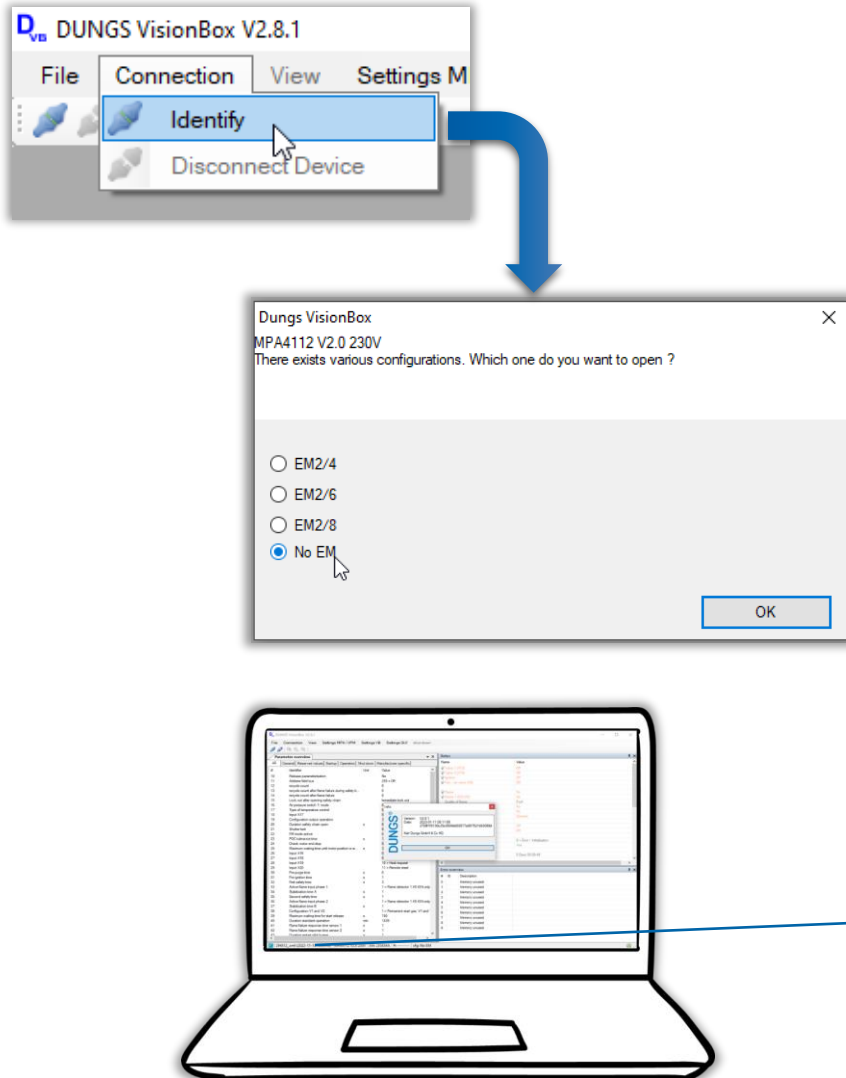


MPA 4122

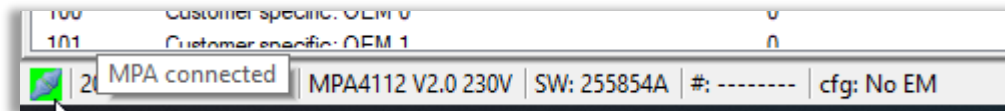


VisionBox Engineering-Tool

How to get connected for online configuration?

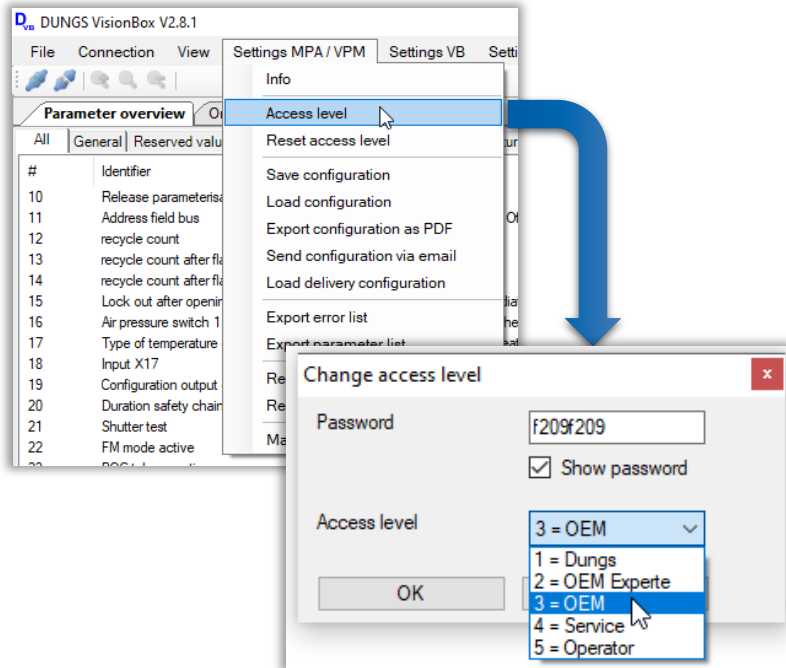


- For an online configuration, the computer needs to be linked via the VisionBox interface to an MPA
- Click on *Connection* → *Identify* to start the online configuration
- In the next dialog window select the equipped extension module or *No EM*
- Click *OK* to read the valid configuration from the connected device
- The different windows are showing the valid parameter overview, device status and Error overview
- The status bar in the lower left corner provides information about the online connection and the connected device.

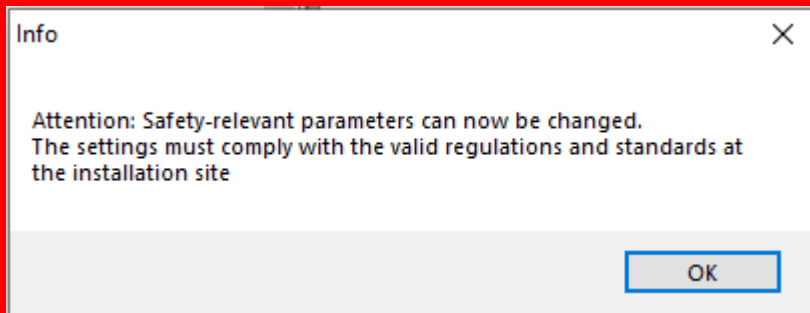


VisionBox Engineering-Tool

Access permissions for online configuration



- Changing parameters in the connected device is only possible with OEM access level permission!
- Click on *Settings MPA / VPM* → *Access level* and select *3=OEM* in the pulldown menu
- Enter the OEM Access level password **f209f209¹⁾** for MPA41xx V2.0 and press OK
- VisionBox asks you to confirm the OEM access level by pressing the Enter button on the front of the connected MPA
- **Please take care about the attention note in the info-dialog!**

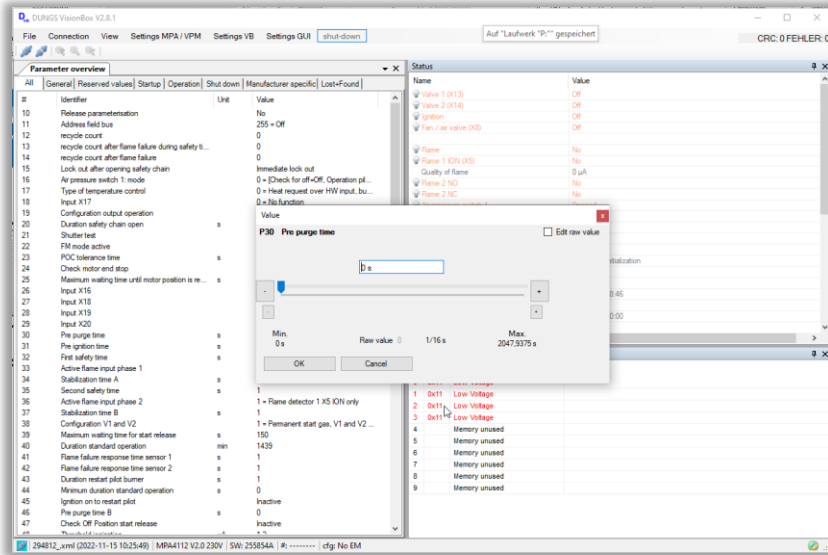


1) **Note:**

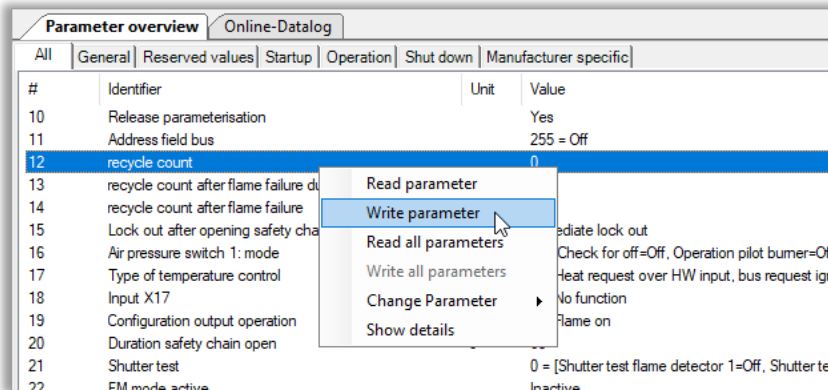
If a configuration created from a previous version (V1.x) is saved in an MPA 41xx V2.0, the password of the access level changes to the previous one!

VisionBox Engineering-Tool

How to do an online configuration?



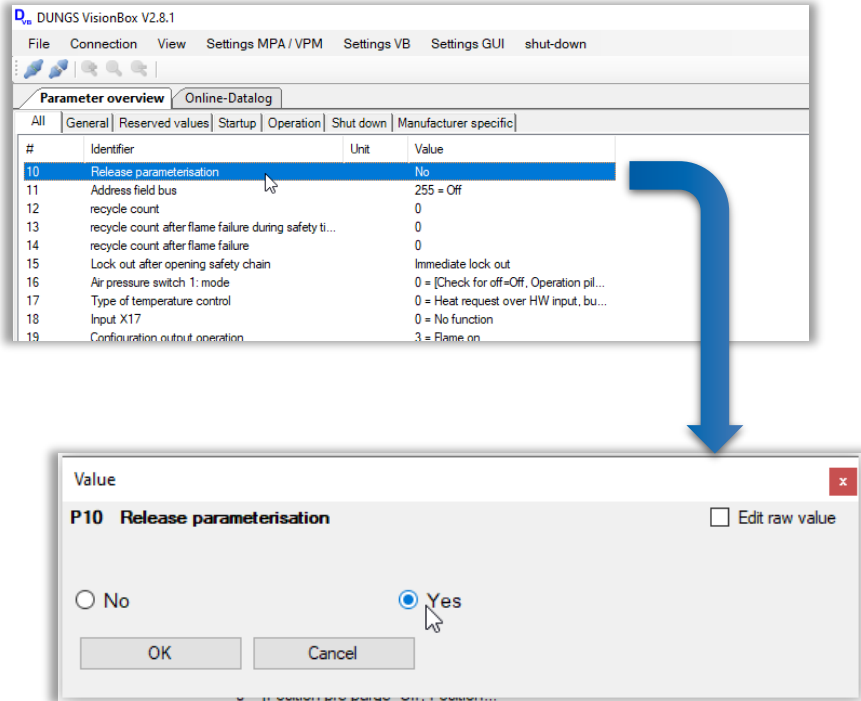
- With double-click on the different parameters in the parameter overview window you can change parameter settings
- In online configuration mode parameters are changed directly in the connected device



- Right-clicking in the parameter window opens a dialog box that allows you to read or write specific or all parameters from/to the device

VisionBox Engineering-Tool

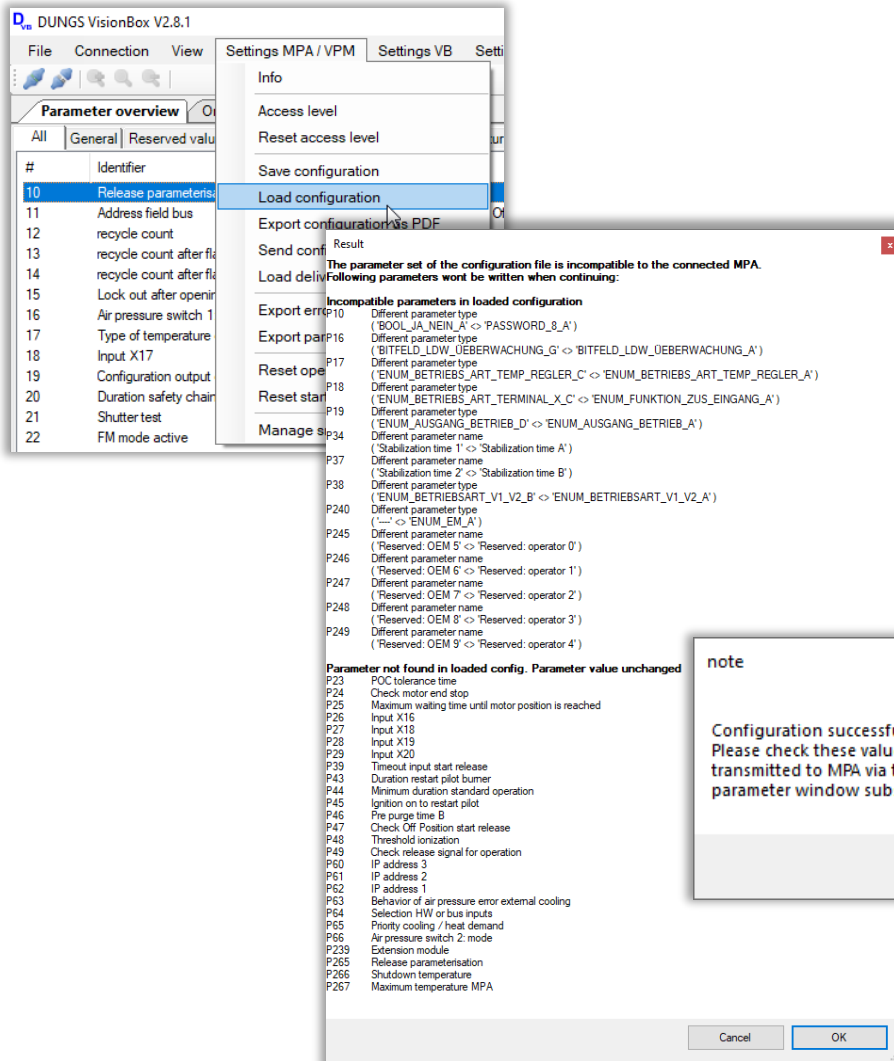
How to release an online configuration?



- Once parameters have been changed the device responds with error message F60
- The parameter change needs to be released!
- Double-click on parameter *P10=Release parameterization*
- Select *Yes* in the popup window and click on *OK*
- All parameter changes will be released, and the online configuration in the connected device can be completed
- The custom configuration can be saved as described before

VisionBox Engineering-Tool

How to adopt a previous V1.x configuration in a V2.0 device?



- Click on *Settings MPA / VPM* → *Load configuration* to open a former V1.x configuration in the online configuration
- A pop-up window informs about differences/ changes that needs to be taken care of
 - Parameters whose variation/content has been changed
 - Parameters that didn't exist before

Parameter overview Online-Datalog

All General Reserved values Startup Operation Shut down Manufacturer specific Nicht verknüpft

#	Identifier	Unit	Value
10	Release parameterisation		No
11	Address field bus		255 = Off
12	recycle count		One of the limits changed: can not be saved automatically
13	recycle count after flame failure during safety time		0

Parameter overview Online-Datalog

All General Reserved values Startup Operation Shut down Manufacturer specific Nicht verknüpft

#	Identifier	Unit	Value
10	Release parameterisation		No
11	Address field bus		255 = Off
12	recycle count		
13	recycle count after flame failure during safety time		
14	recycle count after flame failure during safety time		

2023-10-12; MPA Customer Training in Paris (Webansicht)

Parameter overview Online-Datalog

All General Reserved values Startup Operation Shut down Manufacturer specific Nicht verknüpft

#	Identifier	Unit	Value
16	Air pressure switch 1: mode		0 = [Check for off=Off, Operation pilot burner=Off, Operation main burner=Off, ...
17	Type of temperature control		The parameter is defined differently in the loaded configuration. Parameter value unchanged
18	Input X17		0 = No function

Parameter overview Online-Datalog

All General Reserved values Startup Operation Shut down Manufacturer specific Nicht verknüpft

#	Identifier	Unit	Value
25	Maximum waiting time until motor position is reached	s	30
26	Input X16		Parameter not found in loaded config. Parameter value unchanged
27	Input X18		0 = No function

VisionBox Engineering-Tool

How to adopt a previous V1.x configuration in a V2.0 device?

Parameter overview			
Online-Datalog			
All	General	Reserved values	Startup
Operation	Shut down	Manufacturer specific	Lost+Found
#	Identifier	Unit	Value
10	Release parameterisation	No	
11	Address field bus	255 = Off	
12	recycle count	5	
13	recycle count after flame failure during safety time	0	
14	recycle count after flame failure	0	
15	Lock out after opening safety chain	Immediate lock out	
16	Air pressure switch 1: mode	0 = [Check for off=Off, Operation pilot burner=Off, Operation main burner=Off, Startup=Off, Post purge=...	
17	Type of temperature control	0 = Heat request over HW input, bus request ignored	
18	Input X17	0 = No function	
19	Configuration output operation	3 = Flame on	
20	Duration safety chain open	s	60
21	Shutter test	0 = [Shutter test flame detector 1=Off, Shutter test flame detector 2=Off]	
22	FM mode active	Inactive	
23	POC tolerance time	s	1
24	Check motor end stop	0 = [Position pre purge=Off, Position ignition=Off, Position post purge=Off]	
25	Maximum waiting time until motor position is reached	s	30
26	Input X16	0 = No function	
27	Input X18	0 = No function	
28	Input X19	10 = Heat request	
29	Input X20	11 = Remote reset	
30	Pre purge time	s	2
31	Pre ignition time	s	1
32	First safety time	s	1
33	Active flame input phase 1	1 = Flame detector 1 XS ION only	
34	Stabilization time 1	s	1
35	Second safety time	s	1
36	Active flame input phase 2	1 = Flame detector 1 XS ION only	
37	Stabilization time 2	s	1
38	Configuration V1 and V2	1 = Permanent start gas, V1 and V2 on	
39	Timeout input start release	s	150
40	Duration standard operation	min	1439
41	Flame failure response time sensor 1	s	1
42	Flame failure response time sensor 2	s	1
43	Duration restart pilot burner	s	1
44	Minimum duration standard operation	s	0
45	Ignition on to restart pilot	Inactive	
46	Pre purge time B	s	0
47	Check Off Position start release	Inactive	
48	Threshold ionization	µA	1.2
49	Check release signal for operation	Active	
50	Extraneous light	s	5
51	Post purge time	s	5
52	Reraising delay	s	5
60	IP address 3		192
61	IP address 2		168
62	IP address 1		0
63	Behavior of air pressure error external cooling	0 = No reaction	
64	Selection HW or bus inputs	0 = [Main burner on=HW input / input function off, V2 staged on=HW input / input function off, Purging...	
65	Priority cooling / heat demand	0 = [Cooling request with XS will override heat request=No]	
66	Air pressure switch 2: mode	0 = [Check for off=Off, Operation pilot burner=Off, Operation main burner=Off, Startup=Off, Post purge=...	
100	Customer specific: OEM 0		0
101	Customer specific: OEM 1		0

2023-08-14 09:25:02 | MPA4112 V2.0 230V | SW: 255854A | #: - - - - - | cfg: No EM

- Color-coded parameters must be observed
- Part of the new parameters are those for the flexible function assignment to digital inputs
- Finally, the changed parameters have to be released as described before
- When using a V1.x device without any custom-specific changes to the default settings the equivalent V2.0 version mostly should usually fit without major changes

Apply what you have learned and put it into practice

Do you have any questions?

Thank you very much!





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