25 CO Coupler wave / *instabus* 980B03

Use of the application program

Product family: Controller
Product type: Controller
Manufacturer: Siemens

Name: Coupler wave / *instabus* UP 140
Order no.: 5WG3 140-2_B_1

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1. Functional description

The Coupler wave / *instabus* UP 140 connects the GAMMA wave radio system to the GAMMA *instabus*. It is a special pushbutton wave available in the designs of the switch ranges DELTA profil, style and i-system.
The Coupler is plugged together with the corresponding switch range frame onto an *instabus* bus coupling unit UP 114 (must be ordered separately).

The transmission is bidirectional. Messages and commands which are received by radio are sent to the *instabus* and vice versa, i.e. received bus telegrams are forwarded by radio.
The pushbutton of the coupler enables optional operation by means of the *instabus* and via radio.

Note:

A flush-mounting bus coupling unit UP 114 (5WG1 114-2AB02), Version 2.1 (21R1) or higher must be used for the Coupler wave / *instabus* UP 140.

The programming of the Coupler UP 140 and the learn-in of the wave devices is carried out using the ETS3, Version 3.0c or higher.

In the application program a device database is included, containing a list and description of the wave devices. The device database version 16 of the application program 25 CO Coupler wave / *instabus* 980B03 contains the following devices:

- Pushbutton wave UP 210
  with Switch insert sys
- Pushbutton wave UP 210
  with Universal dimmer insert sys
- Pushbutton wave shutter UP 211
  with Shutter control insert sys
- Transmitter battery wave UP 110
- Transmitter 230 V wave UP 110
- Transmitter actuator 230 V wave UP 560
- Hand-held transmitter wave S 425
- Door/window contact wave AP 260
- Binary input wave AP 261
- Smoke detector module wave UNI M 255
- Socket outlet switch wave S 564
- Switch actuator wave GE 561/01
- Switch actuator wave GE 561/11
- Venetian blind actuator wave GE 520

When insert a Pushbutton wave UP 210, it is necessary to bear in mind the flush-mounting insert on which these will mounted when subsequently installed in a system.
This creates the relevant communication objects for the sensor and actuator functions "Switching", when using a Switch insert sys, as well as for "Switching and dimming" when using a Universal dimmer insert sys.

1.1 How configure

During the configuration, commissioning and learn-in of wave devices in the Coupler UP 140, it is necessary to follow a specific sequence as the ETS-configured group addresses are programmed into radio actuators.
Before learning in these devices, it is therefore necessary to link the used communication objects with group addresses.

How to configure the Coupler UP 140:

1. Select and insert the desired wave device in the parameter window.
2. Disable any channels not required.
3. Edit parameters and comments.
4. Link used communication objects with group addresses.
5. Load physical address in the flush mounting bus coupling unit and mount Coupler UP 140 on BCU. *)
   (To program the physical address is only required at the first commissioning of the bus coupling unit.)
6. Learn-in wave devices in the Coupler UP 140. The Coupler UP 140 must be plugged onto the bus coupling unit.
7. Load application program in the Coupler UP 140 (when you have completed the configuration and after learning in all wave devices in the coupler).
   To download the application program the coupler must be plugged onto the bus coupling unit.

*) The programming mode of the bus coupling unit to program the physical address can be activated in two ways.

1. Pressing the programming button on the bus coupling unit with unplugged Coupler UP 140.
2. Pressing the pushbutton of the Coupler UP 140, plugged onto the bus coupling unit, in center (top and bottom simultaneously) for at least 10 seconds. To deactivate the programming mode press the pushbutton briefly once again.

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Note:
If group addresses are subsequently supplemented for actuator channels, the respective wave device must be learned-in again in order to load the new addresses in the device.
Bidirectional wave devices, such as the Pushbutton wave and Pushbutton wave shutter and all wave actuators can only be assigned to one Coupler UP 140.

1.2 Coupler channels

There are a total of 50 channels available for communication between radio and *instabus*, each with a maximum of 8 communication objects.
The individual channels of the wave devices to be configured can be disabled or released by means of parameters. The objects of a disabled channel using parameterization are hidden and do not therefore use up memory space. The maximum number of wave devices to be configured in a Coupler UP 140 therefore depends on the number of channels used per device.
Objects that are not used within an active channel do not need to be assigned to a group address.
A sensor channel (sensor communication object) can only be assigned to one group address (the address to be sent to the bus).
Actuator communication objects can be assigned up to 10 group addresses. A wave device (actuator) can be controlled by up to 30 group addresses / wave devices.
The number of possible group addresses in the Coupler UP 140 is limited to 1023.

Note:
The communication objects of the Coupler UP 140 and the states of the wave devices cannot be read over the bus (changing the flags in the communication objects has no effect).

1.3 8-bit scene control

With 8-bit scene control, the saving and recalling of a scene is triggered by a telegram with an 8-bit value.
The highest bit (bit 7) specifies whether the scene is to be saved (=1) or recalled (=0). Bit 6 has no meaning at present. Bit 0 to bit 5 contain (binary coded) the number of the desired scene. Scenes are available with the numbers 1 to 64, whereby scene number 1 corresponds to the binary value "0".
The relevant states (switching state, dimming value, shutter position) are stored in the actuators that belong to this scene.

However, there is a limit to the number of scenes that can be stored in the actuators. It is usually far less than the maximum possible number of 64 scenes, which can be triggered by an 8-bit scene telegram.
In bus actuators, these scene memory locations are usually parameter-assigned to the scene numbers (1-64).

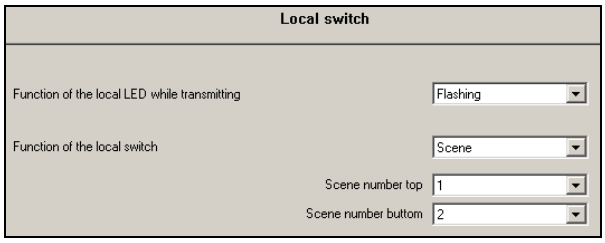
In radio actuators the number of available scene memory locations is limited to 16, whereby the scene numbers 1 to 16 (binary values 0 to 15) are non-adjustable.
The scene numbers are also assigned for the radio transmitters.
The Transmitters wave are able to address scenes 1 and 2 with sensor channel 1, and scenes 3 and 4 with sensor channel 2.
If set correctly, the Hand-held transmitter wave can operate all 16 scenes available in the radio actuators using the sensor channels A1 to A4, B1 to B3, and the central sensor channel.
The short actuation of a scene pushbutton (up to 3 seconds) recalls the scene with the respective number, a long actuation (>3 seconds) saves this scene.

2. Local pushbutton

The local pushbutton of the Coupler UP 140 can be used for an operator function for which the communication objects have been created in accordance with the parameter settings for "Switching", "Switching/Dimming", "Shutter/Slat" or "Scene". If this pushbutton is actuated, a telegram is sent to the bus using the assigned group address. A radio telegram is only sent if the communication object of the local pushbutton is linked over a group address to a communication object of a learned-in radio actuator.

Note:
This is the only way to link the local pushbutton of the Coupler UP 140 with a radio actuator. The pushbutton actuation not only triggers a radio telegram, but also a bus telegram.

2.1 Parameter local pushbutton



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Parameters	Settings
Function of the local LED while transmitting	**Flashing** Off
Here you can set whether the LED integrated in the pushbutton of the coupler is to flash or stay permanently "Off" when a telegram is transmitted or the pushbutton is pressed.	
Function of the local switch	**Switching** Switching / Dimming Shutter Scene
This parameter lets you specify the function of the local pushbutton. According to the setting, the communication objects are created for the functions Switching, Switching/ Dimming, Shutter or Scene.	
Scene number top	**1** 2 ... 64
This parameter is only available for the scene function and specifies which scene (number 1-64) is recalled if the "top" of the local pushbutton is briefly pressed or saved if it is pressed for a longer period.	
Scene number bottom	**2** 1, 3 ... 64
This parameter is only available for the scene function and specifies which scene (number 1-64) is recalled if the "bottom" of the local pushbutton is briefly pressed or saved if it is pressed for a longer period.	

Note:
If the local pushbutton is used for scene control, please bear in mind that only the scene numbers 1 to 16 can be addressed in the radio actuators.

2.2 Objects local pushbutton

Communication object, Switching

Number	Name	Object Function	Length
1	Local switch	Switch, On / Off	1 bit

No.	Name	Function	Length
1	Local switch	Switch, On / Off	1 bit
Over this object, a "Switching On/Off" telegram (toggle function) is sent to the bus if the local pushbutton is pressed.			

Communication objects, Switching / Dimming

Number	Name	Object Function	Length
1	Local switch	Switch, On / Off	1 bit
2	Local switch	Dimming, Brighter / Darker	4 bit

No.	Name	Function	Length
1	Local switch	Switch, On / Off	1 bit
Over this object, a "Switching On/Off" telegram (toggle function) is sent to the bus if the local pushbutton is pressed briefly.			
2	Local switch	Dimming, Brighter / Darker	4 bit
Over this object, a "Dimming brighter" telegram is sent to the bus if the local pushbutton top is pressed for a longer period and a "Dimming darker" telegram is sent if the local pushbutton bottom is pressed.			

Communication objects, Shutter

Number	Name	Object Function	Length
1	Local switch	Shutter, Up / Down	1 bit
2	Local switch	Louvres, Open / Closed	1 bit

No.	Name	Function	Length
1	Local switch	Shutter, Up / Down	1 bit
Over this object, a "Shutter Up (0)" telegram is sent to the bus if the local pushbutton top is pressed for a longer period and a "Shutter Down (1)" telegram is sent if the local pushbutton bottom is pressed.			
2	Local switch	Louvres, Open / Closed	1 bit
Over this object, a "Louvre open (0)" telegram is sent to the bus if the local pushbutton top is pressed briefly and a "Louvre closed (1)" telegram is sent if the local pushbutton bottom is pressed.			

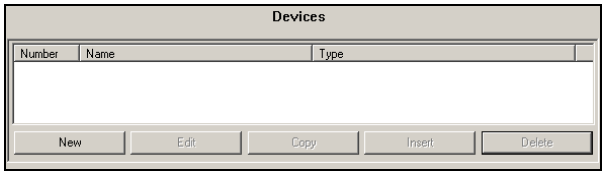
Communication object, Scene

Number	Name	Object Function	Length
1	Local switch	Scene, Number	1 Byte

No.	Name	Function	Length
1	Local switch	Scene, Number	1 Byte
Over this object, a telegram is sent to recall the selected scene number if the local pushbutton top or bottom is pressed briefly. If it is pressed for a longer period, a telegram is sent to the bus to save the respective scene.			

3. Device selection

The wave devices to be linked to the *instabus* over a Coupler UP 140, must be added and parameterized via the parameter window "Devices".



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Devices parameter window:

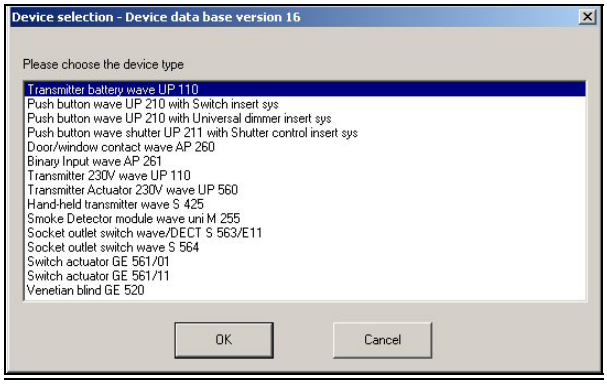
Number	Consecutive no. of the configured devices and note on learn-in state.
Name	Description of the inserted devices (maximum 24 characters).
Type	Selected device type.

Description of buttons:

New	Opens the dialog box for adding a new device.
Edit	Opens the dialog box to edit the selected device.
Copy	Copies the selected device to the Clipboard.
Insert	Pastes a copied device from the Clipboard.
Delete	Deletes the selected device.

3.1 Device insert

Use the "New" button to open the dialog box for Device selection and add the desired device.

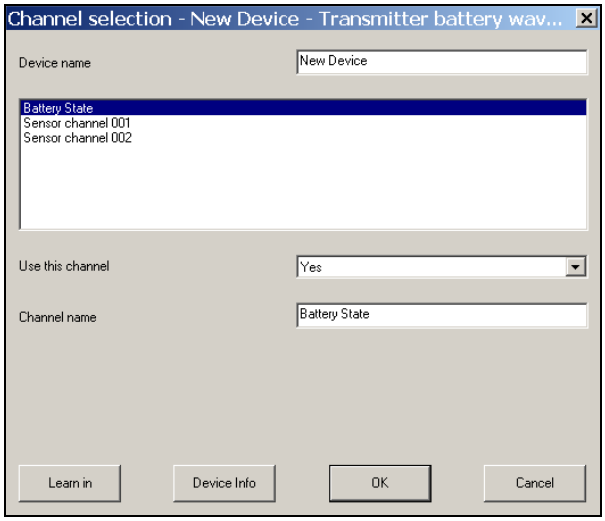


Note: The version of the installed device database is displayed in the header of the device selection box.

If newer devices are to be inserted and configured that are not listed in the database used, a current version can be loaded in the usual way over the appropriate Internet page.

3.2 Device edit

Click the "Edit" button to open the dialog box Channel selection of the selected device.



Channel selection parameter window:

Device name	Editing box for the description of the selected device (maximum 24 characters).
Channel - window	List of available channels of the device for selection and parameterization.
Use this channel	This parameter lets you set whether or not the selected channel is to be used. If it is set to "Yes", all the communication objects available for this channel are created and can be linked with group addresses in the object window. The setting "No" hides the objects of this channel.
Channel name	Editing box for the description of the selected channel (maximum 24 characters).

Description of buttons:

Learn-in	Starts the learn-in of the selected wave device in the Coupler UP 140.
Device info	Shows information on the selected device.
OK	Closes the window for the channel selection and saves the settings.
Cancel	Closes the channel selection without saving.

4. Adjustable sensors

An additional parameter is available for the sensor channels of the following devices for the selection of the operator functions:

- Transmitter battery wave UP 110
- Transmitter 230 V wave UP 110
- Transmitter Actuator 230 V wave UP 560
- Hand-held transmitter wave S 425

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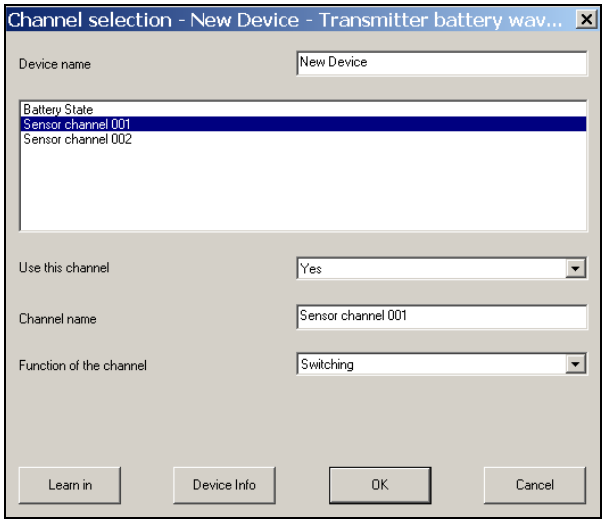
According to the parameter setting, the communication objects of the sensor channels are created for the functions Switching, Switching/Dimming, Shutter or Scene.

Note:
When linking over radio, always ensure that the sensor function of the radio transmitter matches the selected parameter setting.

The Transmitter Actuator 230 V wave UP 560 is a combination of sensor and actuator, both of which can be operated independently of each other.
The first time the pushbutton is plugged on the Transmitter Actuator, it is functionally linked. For independent operation of the sensor channel and actuator channel, this internal link must be deleted using a learn-in procedure on the device. However, if you want the Transmitter Actuator to be internally linked to the plugged pushbutton, you need to set the respective sensor channel to the Switching or Switching/Dimming function (see the operating instructions for the device).

4.1 Parameter adjustable sensors



Parameters	Settings
Function of the channel	**Switching** Switching / Dimming Shutter Scene
This parameter lets you set the function of the selected sensor channel and create the communication objects for the functions Switching, Switching/Dimming, Shutter or Scene.	

4.2 Objects adjustable sensors

Communication objects, Switching

Number	Name	Object Function	Length
...	....	....	....
20	New Device.Sensor channel 001	Switch, On / Off	1 bit
...	....	....	....

No.	Name	Function	Length
20	New Device, Sensor channel 001	Switch, On / Off	1 bit
Over this object, a "Switching On" telegram is sent to the bus if the radio-linked pushbutton top is pressed and “Switching Off” if the pushbutton bottom is pressed.			

Communication objects, Switching / Dimming

Number	Name	Object Function	Length
...	....	....	....
20	New Device.Sensor channel 001	Switch, On / Off	1 bit
21	New Device.Sensor channel 001	Dimming, Brighter / Darker	4 bit
...	....	....	....

No.	Name	Function	Length
20	New Device, Sensor channel 001	Switch, On / Off	1 bit
Over this object, a "Switching On" telegram is sent to the bus if the radio-linked pushbutton top is pressed briefly and “Switching Off” if bottom is pressed.			
21	New Device, Sensor channel 001	Dimming, Brighter / Darker	4 bit
Over this object, a "Dimming Brighter" telegram is sent to the bus if the radio-linked pushbutton top is pressed for a longer period and "Dimming Darker" if bottom is pressed.			

Communication objects, Shutter

Number	Name	Object Function	Length
...	....	....	....
20	New Device.Sensor channel 001	Shutter, Up / Down	1 bit
21	New Device.Sensor channel 001	Louvres, Open / Closed	1 bit
...	....	....	....

No.	Name	Function	Length
20	New Device, Sensor channel 001	Shutter, Up / Down	1 bit
Over this object, a "Shutter Up (0)" telegram is sent to the bus if the radio-linked pushbutton top is pressed for a longer period and "Shutter Down (1)" if bottom is pressed.			
21	New Device, Sensor channel 001	Louvres, Open / Closed	1 bit
Over this object, a "Louvre Open (0)" telegram is sent to the bus if the radio-linked pushbutton top is pressed briefly and "Louvre Closed (1)" if bottom is pressed.			

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Communication object, Scene

Number	Name	Object Function	Length
...	....	....	....
20	New Device.Sensor channel 001	Scene, Number	1 Byte
...	....	....	....

No.	Name	Function	Length
20	New Device, Sensor channel 001	Scene, Number	1 Byte
Over this object, a telegram is sent to recall the selected scene number if the radio-linked pushbutton is pressed briefly. If it is pressed for a longer period, a telegram is sent to the bus to save the respective scene.			

5. Signaling sensors

The communication objects for the following signaling sensors are determined by the device type and cannot therefore be changed through parameter assignment:

- Door/window contact wave AP 260
- Binary input wave AP 261
- Smoke detector module wave UNI M 255

5.1 Objects signaling sensors

Communication object, Door/window contact

Number	Name	Object Function	Length
...	....	....	....
20	New Device.Sensor channel	Door / Window, Open / Close	1 bit

No.	Name	Function	Length
20	New Device, Sensor channel	Door / Window, Open / Close	1 bit
Over this object, a "Switching On/Off" telegram is sent to the bus if the radio-linked door/window contact is actuated.			

Communication object, Binary input

Number	Name	Object Function	Length
...	....	....	....
20	New Device.Sensor channel	Binary input, On / Off	1 bit

No.	Name	Function	Length
20	New Device, Sensor channel	Binary input, On / Off	1 bit
Over this object, a "Switching On/Off" telegram is sent to the bus if the radio-linked binary input is actuated.			

Communication objects, Smoke detector module

Number	Name	Object Function	Length
...	....	....	....
20	New Device.Smoke detector channel	Alarm horn, On / Off	1 bit
30	New Device.Sensor channel	Binary input, On / Off	1 bit

No.	Name	Function	Length
20	New Device, Smoke detector channel	Alarm horn, On / Off	1 bit
Over this object, a "Switching ON" telegram is sent to the bus if the radio-linked smoke detector is triggered and a "Switching OFF" telegram is sent when the alarm is reset. The "ON telegram" is cyclically repeated approx. every 8 seconds for as long as the smoke alarm is active.			
30	New Device, Sensor channel	Binary input, On / Off	1 bit
Over this object, a "Switching ON" telegram is sent to the bus if the radio-linked smoke detector is triggered. The "ON telegram" is cyclically repeated approx. every 8 seconds for as long as the smoke alarm is active. A "Switching OFF" telegram is not sent when the alarm is reset.			

Note:
The "Name" field displays the descriptions, which can be edited by selecting the respective channel in the channel selection dialog.

6. Battery status

The following battery-operated devices have an additional communication object that can be used to transmit the battery status:

- Transmitter battery wave UP 110
- Hand-held transmitter wave S 425
- Door/window contact wave AP 260
- Binary input wave AP 261
- Smoke detector module wave UNI M 255

6.1 Object battery status

Number	Name	Object Function	Length
...	....	....	....
10	New Device.Battery State	Battery status	1 bit

No.	Name	Function	Length
10	New Device, Battery status	Battery status	1 bit
Over this object, a telegram with the battery status of the wave device is transmitted once every 24 hours. A "0" indicates a weak battery and a "1" indicates that the battery status is "Good".			

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7. Pushbutton wave

The function of the Pushbutton wave UP 210 is determined by the flush-mounting insert it is mounted on.
If it is mounted on a Switch insert sys, the function "Switching" is available to the pushbutton sensor. If the Pushbutton wave is mounted on a Universal dimmer insert sys, the functions "Switching and Dimming" are available. According to the used flush-mounting insert also the functions of a switching actuator or dimming actuator are available.
The communication objects are determined according to the device type and are created when the respective device is inserted.

Note:
The Pushbutton wave is functionally linked to the flush-mounting insert on which it is mounted. This means that when the pushbutton is actuated, it also operates the underlying Switch insert sys or Universal dimmer insert sys (please also refer to the operating instructions for the Pushbutton wave).

7.1 Objects sensor channel

Communication object, Sensor channel, Pushbutton wave "Switching"

Number	Name	Object Function	Length
...	....	....	....
10	New Device.Sensor channel	Switch, On / Off	1 bit
...	....	....	....

No.	Name	Function	Length
10	New Device, Sensor channel	Switch, On / Off	1 bit
Over this object, a "Switching On/Off" telegram (toggle function) is sent to the bus if the radio-linked Pushbutton wave is pressed.			

Communication objects, Sensor channel, Pushbutton wave "Switching/Dimming"

Number	Name	Object Function	Length
...	....	....	....
10	New Device.Sensor channel	Switch, On / Off	1 bit
11	New Device.Sensor channel	Dimming, Brighter / Darker	4 bit
...	....	....	....

No.	Name	Function	Length
10	New Device, Sensor channel	Switch, On / Off	1 bit
Over this object, a "Switching On/Off" telegram (toggle function) is sent to the bus if the radio-linked Pushbutton wave is pressed briefly.			
11	New Device, Sensor channel	Dimming, Brighter / Darker	4 bit
Over this object, a "Dimming Brighter" telegram is sent to the bus if the radio-linked pushbutton wave top is pressed for a longer period and a "Dimming Darker" telegram is sent if bottom is pressed.			

7.2 Objects actuator channel

Communication objects, Actuator channel, Pushbutton wave "Switching"

Number	Name	Object Function	Length
...	....	....	....
20	New Device.Aktuator channel	Switch, On / Off	1 bit
21	New Device.Aktuator channel	Timer	1 bit
22	New Device.Aktuator channel	Forced	2 bit
23	New Device.Aktuator channel	Scene, Number	1 Byte
24	New Device.Aktuator channel	Switch, Status	1 bit

No.	Name	Function	Length
20	New Device, Actuator channel	Switch, On/Off	1 bit
When receiving a bus telegram on this object, the switching command is forwarded over radio to the linked Pushbutton wave and the switch actuator is switched either on or off.			
21	New Device, Actuator channel	Timer	1 bit
An On telegram to this object switches on the radio-linked switch actuator (Pushbutton wave with Switch insert sys) for approx. 5 minutes. The On period is stored in the Pushbutton wave. If an Off telegram is sent, the actuator is immediately switched off.			
22	New Device, Actuator channel	Forced	2 bit
When receiving a bus telegram on this object, the command is forwarded over radio to the linked Pushbutton wave and switches the switch actuator forced controlled either on or off.			
23	New Device, Actuator channel	Scene, Number	1 Byte
When receiving a bus telegram on this object, the addressed scene of the radio-linked switch actuator (Pushbutton wave with Switch insert sys) is saved or recalled.			
24	New Device, Actuator channel	Switch, Status	1 bit
If the switch actuator (Pushbutton wave with Switch insert sys) changes its state, the switching status received over radio is sent to the bus over the group address in this object.			

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Communication objects, Actuator channel Pushbutton wave "Switching/Dimming"

Number	Name	Object Function	Length
...	....	....	....
20	New Device.Aktuator channel	Switch, On / Off	1 bit
21	New Device.Aktuator channel	Dimming, Brighter / Darker	4 bit
22	New Device.Aktuator channel	Value, Set in %	1 Byte
23	New Device.Aktuator channel	Timer	1 bit
24	New Device.Aktuator channel	Forced	2 bit
25	New Device.Aktuator channel	Scene, Number	1 Byte
26	New Device.Aktuator channel	Switch, Status	1 bit
27	New Device.Aktuator channel	Value, Status	1 Byte

No.	Name	Function	Length
20	New Device, Actuator channel	Switch, On / Off	1 bit
When receiving a bus telegram on this object, the switching command is forwarded over radio to the linked Pushbutton wave and the dimming actuator is switched either on or off.			
21	New Device, Actuator channel	Dimming, Brighter / Darker	4 bit
When receiving a bus telegram on this object, the dimming command is forwarded over radio to the linked Pushbutton wave and the dimming actuator is dimmed either brighter or darker.			
22	New Device, Actuator channel	Value, Set in %	1 Byte
A bus telegram on this object sets the radio-linked dimming actuator to the respective brightness value between 0 and 100 %.			
23	New Device, Actuator channel	Timer	1 bit
An On telegram on this object switches on the radio-linked dimming actuator for approx. 5 minutes. The On period is stored in the Pushbutton wave. If an Off telegram is sent, the actuator is immediately switched off.			
24	New Device, Actuator channel	Forced	2 bit
When receiving a bus telegram on this object, the command is forwarded over radio to the linked Pushbutton wave and switches the dimming actuator forced controlled either on or off.			
25	New Device, Actuator channel	Scene, Number	1 Byte
When receiving a bus telegram on this object, the addressed scene of the radio-linked dimming actuator is saved or recalled.			
26	New Device, Actuator channel	Switch, Status	1 bit
If the dimming actuator changes its switching state (On/Off), the switching status received over radio is sent to the bus over the group address in this object.			
27	New Device, Actuator channel	Value, Status	1 Byte
If the dimming actuator changes its dimming value (0-100 %), the brightness value received over radio is sent to the bus over the group address in this object.			

Note:
The "Name" field displays the descriptions, which can be edited by selecting the respective channel in the channel selection dialog.

8. Pushbutton wave shutter

The Pushbutton wave shutter UP 211 is mounted on a Shutter control insert sys and has the functions "Shutter Up/Down", and "Louvres Open/Closed".
The communication objects are determined according to the device type and are created when the respective device is inserted.

Note:
The Pushbutton wave shutter is functionally linked to the flush-mounting insert on which it is mounted. This means that when the pushbutton is actuated, it also operates the underlying shutter control insert sys (please also refer to the operating instructions for the Pushbutton wave shutter).

8.1 Objects sensor channel

Communication objects, Sensor channel, Pushbutton wave shutter

Nummer	Name	Funktion	Länge
...	....	....	....
10	New Device.Sensor channel	Shutter, Up / Down	1 bit
11	New Device.Sensor channel	Louvres, Open / Closed	1 bit
...	....	....	....

No.	Name	Function	Length
10	New Device, Sensor channel	Shutter, Up / Down	1 bit
Over this object, a "Shutter Up (0) " telegram is sent to the bus if the radio-linked pushbutton top is pressed for a longer period and a "Shutter Down (1)" telegram is sent if the pushbutton bottom is pressed.			
11	New Device, Sensor channel	Louvres, Open / Closed	1 bit
Over this object, a "Louvre Open (0)" telegram is sent to the bus if the radio-linked pushbutton top is pressed briefly and a "Louvre Closed (1)" telegram is sent if the pushbutton bottom is pressed.			

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8.2 Objects actuator channel

Communication objects, Actuator channel, Pushbutton wave shutter

Number	Name	Object Function	Length
...	....	....	....
20	New Device.Aktuator channel	Shutter, Up / Down	1 bit
21	New Device.Aktuator channel	Louvres, Open / Closed	1 bit
22	New Device.Aktuator channel	Forced	2 bit
23	New Device.Aktuator channel	Safety, Wind	1 bit
24	New Device.Aktuator channel	Safety, Rain	1 bit
25	New Device.Aktuator channel	Scene, Number	1 Byte
26	New Device.Aktuator channel	Shutter, Up / Down, Status	1 bit
27	New Device.Aktuator channel	Door / Window, Open / Close	1 bit

No.	Name	Function	Length
20	New Device, Actuator channel	Shutter, Up / Down	1 bit
When receiving a bus telegram on this object, the shutter Up/Down command is forwarded over radio to the linked Pushbutton wave shutter and the shutter actuator is switched accordingly to move either up or down.			
21	New Device, Actuator channel	Louvres, Open / Closed	1 bit
When receiving a bus telegram on this object, the slat Open/ Closed command is forwarded over radio to the linked Pushbutton wave shutter and the respective slat adjustment step is carried out by the shutter actuator.			
22	New Device, Actuator channel	Forced	2 bit
When receiving a bus telegram on this object, the command is forwarded over radio to the linked Pushbutton wave shutter and switches the shutter actuator forced controlled to move either up or down.			
23	New Device, Actuator channel	Safety, Wind	1 bit
An On telegram on this object switches the radio-linked shutter actuator to the safety position "UP" and locks it in this position until this command is canceled by an Off telegram.			
24	New Device, Actuator channel	Safety, Rain	1 bit
An On telegram on this object switches the radio-linked shutter actuator to the safety position "UP" and locks it in this position until this command is canceled by an Off telegram.			
25	New Device, Actuator channel	Scene, Number	1 Byte
When receiving a bus telegram on this object, the addressed scene of the radio-linked shutter actuator is saved or recalled.			
26	New Device, Actuator channel	Shutter, Up / Down, Status	1 bit
If the shutter actuator moves up or down, the radio received status of the shutter is sent to the bus over the group address in this object.			
27	New Device, Actuator channel	Door / Window, Open / Closed	1 bit
When receiving a bus telegram on this object, the command is forwarded over radio to the linked Pushbutton wave shutter and the shutter actuator is switched off.			

Note:
The "Name" field displays the descriptions, which can be edited by selecting the respective channel in the channel selection dialog.

9. Switch actuators

- Transmitter actuator 230 V wave UP 560
- Socket outlet switch wave S 564
- Switch actuator wave GE 561/01
- Switch actuator wave GE 561/11

The Transmitter actuator 230 V wave UP 560 is a combination of sensor and actuator, both of which can be operated independently of each other. The pushbutton to be mounted, and therefore one of the possible sensor channels, does not have to be linked to the actuator channel (see the operating instructions for the device).

9.1 Objects switch actuators

Communication objects, Socket outlet switch and Actuator channel Transmitter actuator

Number	Name	Object Function	Length
...	....	....	....
10	New Device.Aktuator channel	Switch, On / Off	1 bit
11	New Device.Aktuator channel	Timer	1 bit
12	New Device.Aktuator channel	Forced	2 bit
13	New Device.Aktuator channel	Scene, Number	1 Byte
14	New Device.Aktuator channel	Switch, Status	1 bit

No.	Name	Function	Length
10	New Device, Actuator channel	Switch, On / Off	1 bit
When receiving a bus telegram on this object, the switching command is forwarded over radio to the linked actuator and the switch actuator is switched either on or off.			
11	New Device, Actuator channel	Timer	1 bit
An On telegram to this object switches on the radio-linked switch actuator for approx. 5 minutes. The On period is stored in the actuator. If an Off telegram is sent, the actuator is immediately switched off.			
12	New Device, Actuator channel	Forced	2 bit

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No.	Name	Function	Length
When receiving a bus telegram on this object, the command is forwarded over radio to the linked actuator and switches the switch actuator forced controlled either on or off.			
13	New Device, Actuator channel	Scene, Number	1 Byte
When receiving a bus telegram on this object, the addressed scene of the radio-linked actuator is saved or recalled.			
14	New Device, Actuator channel	Switch, Status	1 bit
If the switch actuator changes its state, the switching status received over radio is sent to the bus over the group address in this object.			

Communication objects, switch actuators GE

Number	Name	Object Function	Length
...	....	....	....
10	New Device.Aktuator channel A	Switch, On / Off	1 bit
11	New Device.Aktuator channel A	Timer	1 bit
12	New Device.Aktuator channel A	Forced	2 bit
13	New Device.Aktuator channel A	Scene, Number	1 Byte
14	New Device.Aktuator channel A	Switch, Status	1 bit
20	New Device.Aktuator channel B	Switch, On / Off	1 bit
21	New Device.Aktuator channel B	Timer	1 bit
22	New Device.Aktuator channel B	Forced	2 bit
23	New Device.Aktuator channel B	Scene, Number	1 Byte
24	New Device.Aktuator channel B	Switch, Status	1 bit

No.	Name	Function	Length
10	New Device, Actuator channel A	Switch, On / Off	1 bit
20	New Device, Actuator channel B	Switch, On / Off	1 bit
When receiving a bus telegram on one of these objects, the switching command is forwarded over radio to the linked actuator and the corresponding channel is switched either on or off.			
11	New Device, Actuator channel A	Timer	1 bit
21	New Device, Actuator channel B	Timer	1 bit
An On telegram on one of these objects switches on the corresponding channel of the radio-linked actuator for approx. 5 minutes. The On period is stored in the actuator. If an Off telegram is sent, the actuator is immediately switched off.			
12	New Device, Actuator channel A	Forced	2 bit
22	New Device, Actuator channel B	Forced	2 bit
When receiving a bus telegram on one of these objects, the command is forwarded over radio to the linked actuator and switches the corresponding channel forced controlled either on or off.			
13	New Device, Actuator channel A	Scene, Number	1 Byte

No.	Name	Function	Length
23	New Device, Actuator channel B	Scene, Number	1 Byte
When receiving a bus telegram on one of these objects, the addressed scene of the corresponding actuator channel is saved or recalled.			
14	New Device, Actuator channel A	Switch, Status	1 bit
24	New Device, Actuator channel B	Switch, Status	1 bit
If a channel of the switch actuator changes its state, the switching status of this channel received over radio is sent to the bus over the group address in the corresponding object.			

Note:
At the Pushbutton wave with Switch insert sys or Universal dimmer insert sys, the Transmitter actuator wave and the Switch actuators wave GE a time function can be activated at the device (see the operating instructions for the respective device).
This time function has the highest priority at the switch actuators GE. The appropriate channel always switches off after the time adjusted, even a command "forced controlled ON" is received.

10. Venetian blind actuators

- Venetian blind actuator wave GE 520

10.1 Objects venetian blind actuator

Communication objects, Venetian blind actuator GE

Number	Name	Object Function	Length
...	....	....	....
10	New Device.Aktuator channel	Shutter, Up / Down	1 bit
11	New Device.Aktuator channel	Louvres, Open / Closed	1 bit
12	New Device.Aktuator channel	Forced	2 bit
13	New Device.Aktuator channel	Safety, Wind	1 bit
14	New Device.Aktuator channel	Safety, Rain	1 bit
15	New Device.Aktuator channel	Scene, Number	1 Byte
16	New Device.Aktuator channel	Shutter, Up / Down, Status	1 bit
17	New Device.Aktuator channel	Door / Window, Open / Close	1 bit

No.	Name	Function	Length
10	New Device, Actuator channel	Shutter, Up / Down	1 bit
When receiving a bus telegram on this object, the shutter Up/Down command is forwarded over radio to the linked actuator and the venetian blind actuator is switched accordingly to move either up or down.			
11	New Device, Actuator channel	Louvres, Open / Closed	1 bit

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No.	Name	Function	Length
When receiving a bus telegram on this object, the slat Open/ Closed command is forwarded over radio to the linked actuator and the respective slat adjustment step is carried out by the venetian blind actuator.			
12	New Device, Actuator channel	Forced	2 bit
When receiving a bus telegram on this object, the command is forwarded over radio to the linked actuator and switches the venetian blind actuator forced controlled to move either up or down.			
13	New Device, Actuator channel	Safety, Wind	1 bit
An On telegram on this object switches the radio-linked venetian blind actuator to the safety position "UP" and locks it in this position until this command is canceled by an Off telegram.			
14	New Device, Actuator channel	Safety, Rain	1 bit
An On telegram on this object switches the radio-linked venetian blind actuator to the safety position "UP" and locks it in this position until this command is canceled by an Off telegram.			
15	New Device, Actuator channel	Scene, Number	1 Byte
When receiving a bus telegram on this object, the addressed scene of the radio-linked venetian blind actuator is saved or recalled.			
16	New Device, Actuator channel	Shutter, Up / Down, Status	1 bit
If the venetian blind actuator moves up or down, the radio received status of the venetian blind is sent to the bus over the group address in this object.			
17	New Device, Actuator channel	Door / Window, Open / Closed	1 bit
When receiving a bus telegram on this object, the command is forwarded over radio to the linked actuator and the venetian blind actuator is switched off.			

Note:
The "Name" field displays the descriptions, which can be edited by selecting the respective channel in the channel selection dialog.

11. Learn-in wave devices

During the learn-in of bidirectional wave devices, the Coupler wave / *instabus* UP 140 writes the group addresses configured in the ETS into the devices.

This applies to the radio actuators that are controlled by the bus over various actuator functions, such as switching, dimming, shutter operations or scenes:

- Actuator channel of the Pushbutton wave
- Actuator channel of the Pushbutton wave shutter
- Actuator channel of the Transmitter actuator
- Socket outlet switch wave
- Switch actuator wave GE

This does not apply to all the radio sensors and the sensor channels of the bidirectional wave devices:

- Transmitter battery wave
- Transmitter 230V wave
- Hand-held transmitter wave
- Door/window contact wave
- Binary input wave
- Smoke detector module wave UNI
- Sensor channel of the Pushbutton wave
- Sensor channel of the Pushbutton wave shutter
- Sensor channels of Transmitter actuator

The status object of an actuator channel is also not affected as this sends its status information like a radio sensor and does not receive commands.

It is therefore necessary to link all active actuator communication objects with group addresses prior to learn-in. Objects that are not used within an active actuator channel do not need to be assigned to a group address.

However, if subsequently using this unused function and subsequent configuration in the ETS, the respective wave devices must be learned in again. This also applies if an additional group address is added to an actuator function that has been used.

We also recommend assigning group addresses to the active sensor channels prior to learn-in. This can be carried out prior to commissioning and during configuration and makes the system more easily manageable.

When learning in adjustable sensor channels, please bear in mind that the radio sensor must be taught the function that it has been parameter-assigned. For example, if sensor channel 1 (left rocker) of a Transmitter battery has been parameterized as a shutter pushbutton, this channel must also be learned-in with the shutter function.

In the case of unidirectional sensors, such as the Hand-held transmitter or the Transmitter battery we recommend that each channel is learned-in individually. This allows you to check whether the configured function matches the sensor function set in the radio sensor.

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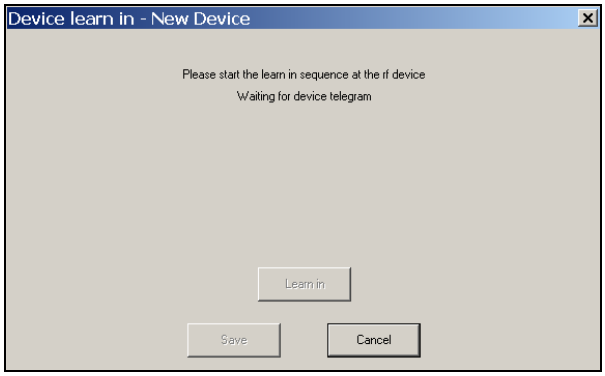
In the case of bidirectional devices all available channels (sensor and actuator channels) are always learned-in in a single learn-in procedure. However, it is important to check that the sensor channels are set correctly.

If this type of device is already installed in a system, and if the sensor channels are already linked to other radio actuators, the functions should be set correctly. Otherwise, the learn-in sequence must also be started for each sensor channel and the correct setting made for the sensor function.

Note:
The learn-in of the radio devices in the Coupler wave / *instabus* UP 140 is carried out over the ETS. For this reason, the coupler must be connected to the *instabus* and the physical address must be programmed in the bus coupling unit UP 114.

11.1 Start learn-in: coupler

In the Channel selection window, start the "learn-in" for the respective wave device (over the "Devices" parameter window and by double-clicking the desired device, or selecting and "Edit").



The coupler waits for the learn-in sequence of the wave device.

11.2 Start learn-in: wave device

The learn-in must now be started at the wave device to be linked to the coupler (see "Linking over radio" in the operating instructions for the device).

Once a unidirectional device has been successfully learned-in, the following message appears:

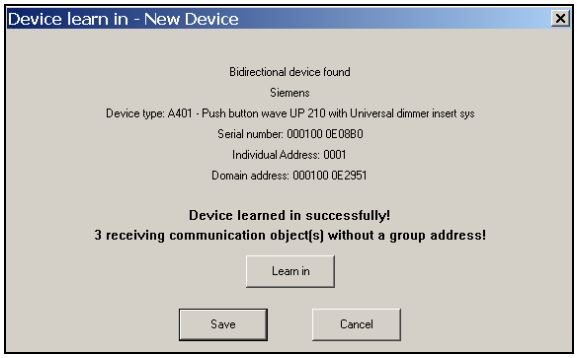
Device:	Unidirectional device
Manufacturer:	Siemens
Device type:	Hand-held transmitter wave S 425
Serial no.:	Serial number of the device
Channel no.:	Number and name of the learned-in channel
Channel type:	Learned-in function (Switching / Dimming)
Indication that the device has been successfully learned-in.	
Indication whether a further channel is to be checked by restarting the learn-in of the device.	

If a further channel is to be checked, you can restart the learn-in at the coupler over this window. The learn-in procedure must then be started at the wave device for the desired channel and its respective sensor function.

Clicking "Save" closes the window and saves all data.

Note:
If the learn-in is canceled, it can take some time to a reaction in the ETS.

Once a bidirectional device has been successfully learned-in, the following message appears:



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Device:	Bidirectional device
Manufacturer:	Siemens
Device type:	Pushbutton wave UP 210 with Universal dimmer insert sys
Serial no.:	Serial number of the device
Individual address:	Physical address with which the coupler addresses this device (automatically assigned by the ETS)
Domain address:	Domain address of the coupler (usually the serial number)
Indication that the device has been successfully learned-in.	
Indication that not all the communication objects of an actuator channel have been assigned a group address.	

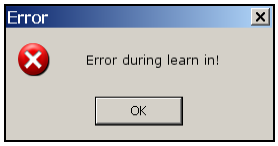
Note:
Objects that are not in use do not need to be assigned to an address. However, if this actuator channel is to control with this objects the addresses should be linked and the learn-in sequence for the device restarted.

11.3 Possible error messages

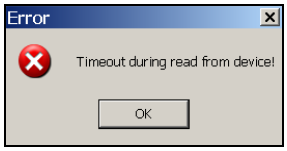
When learn-in the wave devices in the coupler, the following error messages may appear:

If the coupler cannot be addressed over the ETS, this error message appears.

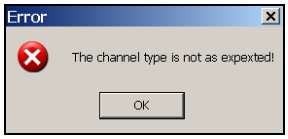
During learn-in, the coupler must be connected to the *instabus* and the physical address must already be programmed.



or

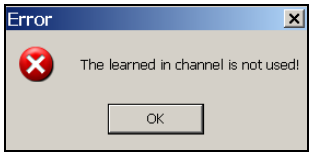


If there are radio communication problems during learn-in, one of this error messages may appear. The learn-in process must then be repeated.



In the case of adjustable sensor channels, it is necessary to ensure that the parameterized sensor function (Switching, Switching/Dimming, Shutter, Scene) matches the function set at the wave device during learn-in. If this is not the case, this error message appears.

In the "Device learn-in" window, information is displayed on the various channel types (e.g. Configured channel type: Switching/Dimming. Learned-in channel type: Switching).



Channels of a wave device that are not in use can be blocked using the parameters. If an attempt is subsequently made to learn in a blocked channel, this message appears.

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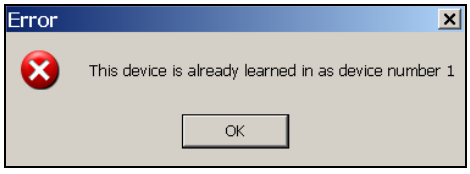
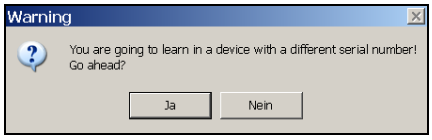
or

If the configured device type does not match that of the learned-in wave device, one of this error messages appears.

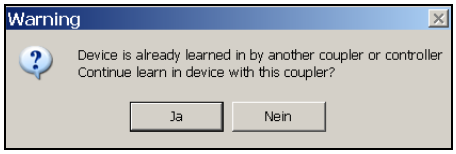
In the "Device learn-in" window, information is displayed on the various device types (e.g. configured device: Pushbutton wave UP 210 with Universal dimmer insert sys. Learned-in device: Transmitter actuator 230 V wave UP 560).



If an attempt is made to learn-in a device that has already been learned in under a different device number, this message appears (e.g. Pushbutton wave with Universal dimmer insert sys is configured and learned-in with device number 1). If a new Pushbutton wave with Universal dimmer insert sys is created and tries to learn-in the already learned in device again under the new device number, this error message is displayed.



If a new learn-in sequence is started and a wave device is learned in that is different to the one already learned in under this device number, this message appears. If you click "Yes" to continue, the previously learned-in device is replaced by the new device.



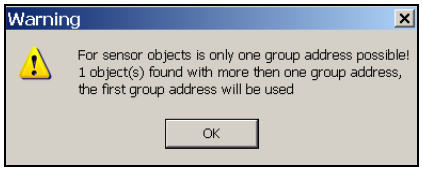
Bidirectional devices can only be learned in at one coupler or controller as they address the devices over their domain addresses (serial number of the coupler). This domain address is loaded to the bidirectional device during learn-in.
If this device has already been learned in with another coupler, the following warning appears, as once the device has been learned in again, it can no longer be addressed by the previous coupler.

12. Programming coupler

Once all the wave devices have been configured, assigned with group addresses and learned in, the application must be loaded into the coupler.

Note:
The application program is not loaded into the bus coupling unit 114, but into the coupler wave/*instabus* UP 140. Therefore the coupler wave/*instabus* must be plugged onto the bus coupling unit during programming.

Sensor channels can only be assigned to one group address. If several addresses are entered in a sensor communication object, the following message appears when programming the coupler:

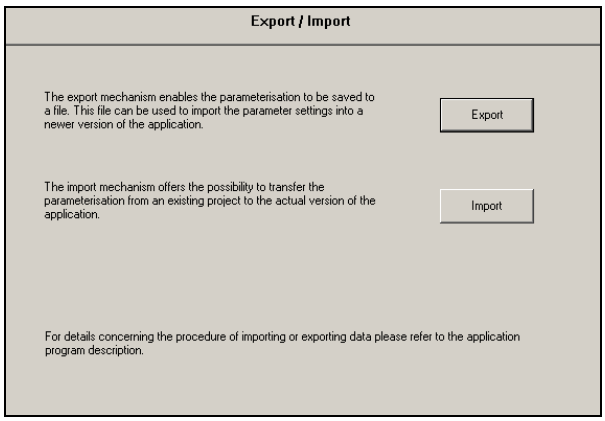


13. Export / Import

The export and import functions let you use the configuration of a coupler for another project, another coupler, or even for the same coupler if the application program is subsequently updated.

The export creates a file that can be saved under the file name in any folder.
During import, all the saved configuration data are loaded to the current coupler project. To do this, create a new coupler and import the file.

The previously created wave devices, parameter settings and the comments in the fields "Device name" and "Channel name", are now available in the newly created coupler and there is no need to reconfigure it.



When using exported coupler project data, and when exchanging/replacing a coupler, please note the following special features:
Bidirectional devices are addressed over the domain address of the coupler. This domain address is set by the ETS when the coupler is accessed for the first time. The serial number of the device is used for this.
This serial number is permanently stored in the device and cannot be changed.
By contrast, the domain address can be changed.
If a coupler is replaced, it has a different serial number and therefore a different domain address.
This results in all bidirectional wave devices that are loaded with the domain addresses of the previous coupler having to be learned in again.
This can be avoided by using the domain address of the replaced device for the new coupler.

This option can be implemented by clicking "Synchronize" in the "Coupler check" dialog.
However, you should be aware that there are then two couplers that have the same domain address.

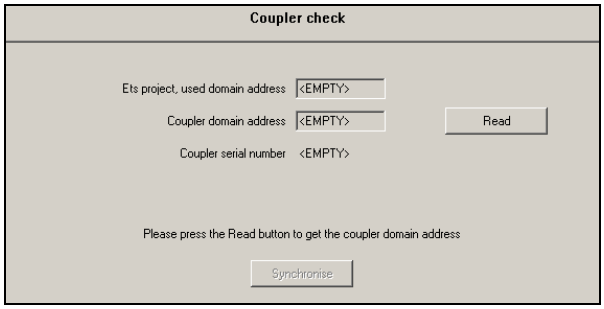
Note:
These two couplers must not be used in the same system and must also not be operated within radio range of each other. Because they have identical domain addresses they will also address the devices that have been learned-in in the other coupler.

Using the domain address of a previously used coupler is only useful when the respective coupler can no longer be used (e.g. due to failure).

When a project is created and a coupler is accessed for the first time, the serial number is automatically set as the domain address. This ensures that a unique domain address is used.

14. Checking coupler

In the parameter window "Coupler check", the serial number of the coupler, the domain address of the coupler, and the domain address used in this ETS configuration is displayed.



If the coupler has been newly created, all three fields are empty.

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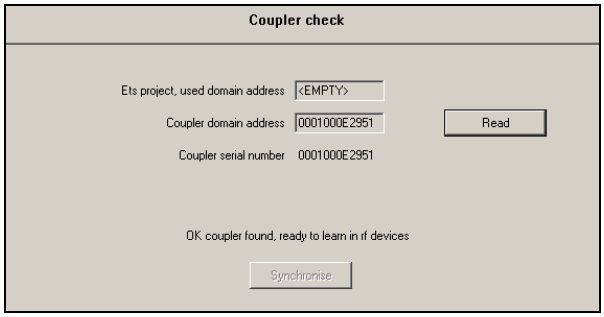
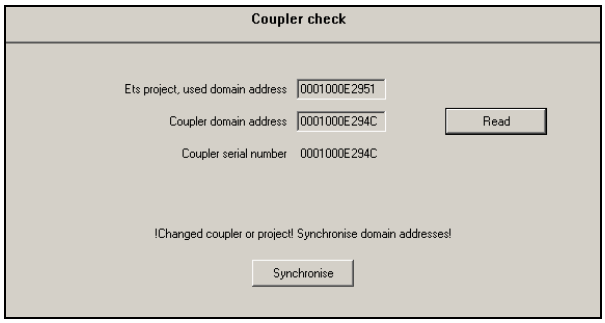


Click "Read" to read out the serial number of the coupler and its domain address.

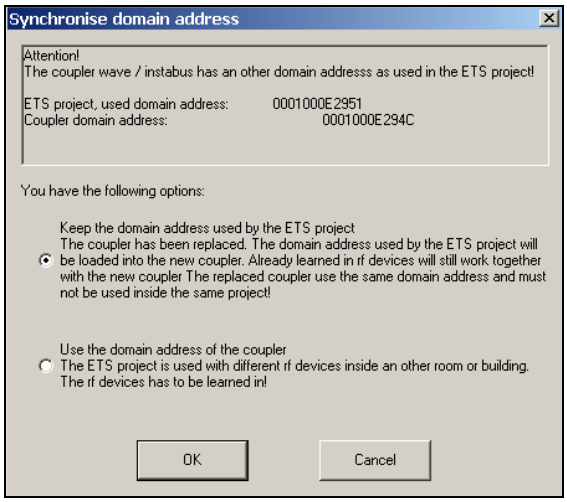
When a wave device is learned-in in a coupler for the first time, its domain address is taken over in the ETS configuration.

If the ETS configuration has not yet been assigned a domain address, or if it is identical with the domain address of the coupler, the "Synchronize" function cannot be selected.
This is only necessary if the domain addresses do not match and can only occur when accessing a coupler that is different to the one just programmed (e.g. when the coupler hardware is replaced or another coupler project is imported).

14.1 Synchronization



There are two different methods that can be used during "Synchronization".



1. Keep the domain address used in the ETS configuration.

   In this case, the domain address of the coupler is not set to its own serial number, but to the one used in the ETS configuration (to the serial number of the previously used coupler).

   This should be selected if the coupler hardware has been replaced and you want to avoid having to learn-in the wave devices in the coupler again.

Note:
The previously used coupler must not be used in this system and or within radio range as both couplers have the same domain address.

2. Use the domain address of the coupler.

   In this case the domain address that is in the coupler is used for the ETS configuration.
   This should be selected for an imported project in order to use the domain address of the coupler used in the ETS.