

the  
**Concept**  
2000Xp  
from  
**Conson**

„The road to better future-oriented electrical installation“

H. Cottyn

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## Lifeline of Conson

### 1980 Launch of the HMS 2000 system

The HMS-2000 system was built with relay and dimmer modules. Most of the modules had a module width of 4 units. The power dimmers had a larger size and were so robust that they are still active. The relay module DC22 had two outputs and controlled the load directly. Everything was directed by the immediate inputs which could create lighting scenes in a fairly simple manner. Slave and daylight dependent controls and remotes were already possible. Soon one made also use of a computer to control a larger operating system.

### 1995 Launch of the Concept 2000

The Concept 2000 was born and today it is still a great success in terms of simplicity and reliability. Unfortunately, it was difficult for Conson to keep on the production because different processors and components were no longer available. The structure of the Concept 2000 consisted of relay and dimmer modules, the „actors“ and „link“ modules that created the different scenes and modes. The modules could be directly controlled through their direct and indirect inputs from the local Conbus. A special feature was that all actors had LED-outputs. Few installers are able to forget the name of the CP24-relay module, as well as the name of the renowned CP31LR dimmer. So robust that the installers had forgotten that all these installation are running. Concept 2000 could be programmed with a bidirectional IR remote control and this in a fairly simple way. In 2004, an Internet Control was developed for the first time: the combination of the Concept 2000 with the Conlinx server offered enormous potential and this being almost the only one on the market. In 2006, the basis for a new Concept was outlined, which took its start in 2011. The new Concept had to answer all questions left.

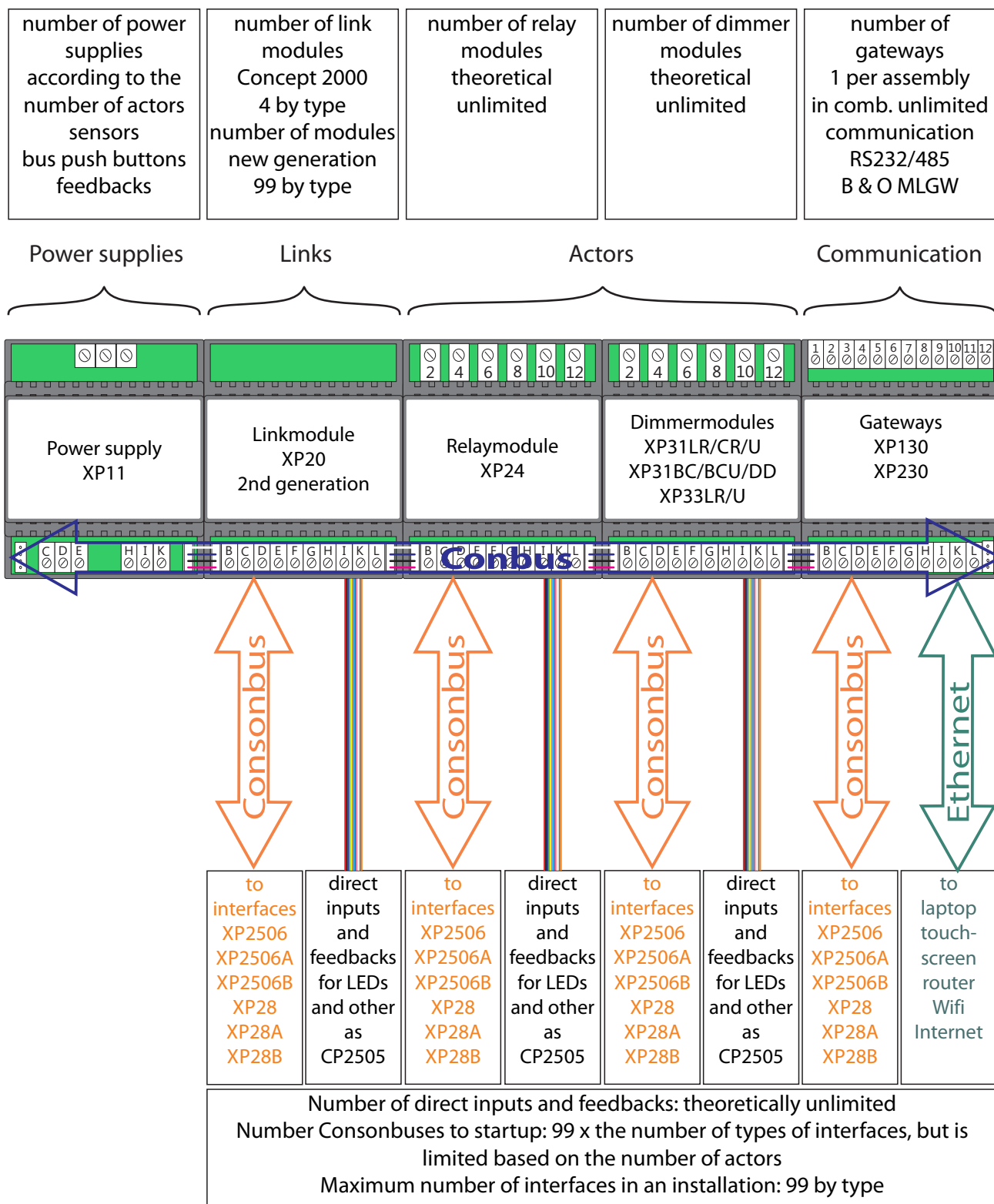
### 2011 Start of Concept 2000XP.

All modules of the Concept are programmable via an XP130 or XP230 gateway in conjunction with the ConTool software. The relay and dimmer modules are born as a CP-module. Once programmed to a XP-mode, the CP principle switches off. As in the Concept 2000, the modules have direct inputs and LED-outputs. In addition, the local bus is expanded to a four-pin connector. This was necessary to create the XP-modules. Next to this local bus (CONBUS) it is possible to connect to each actor an external bus, namely the Consonbus. The name is intentionally made longer as it involves a longer bus.

Several buses offer greater reliability and more opportunities in regarding to the construction. In one Concept 2000Xp-system, it is possible to use 99 of each type of interfaces. Interfaces like the XP2506 and versions A and B have five push-buttons and five LEDs, Sesame (the flashing of the LEDs when having been approached), and a temperature input. The A version serves standard infrared remote controls and version B serves the B&O-remote controls such as the Beo4. Thus, using these three types of interfaces,  $99 \times 3 = 267$  interfaces are possible. Counted otherwise, this means that there are 1335 push-buttons, 1335 LEDs and 267 temperature inputs. Taking the next type of interface, the XP28 which is also available in the execution type A and B, then one has returned to 267 interfaces. The XP28 is used to connect push-buttons from other manufacturers. The XP28 has 8 inputs, 8 outputs, an IR-input with 5VDC power supply, an temperature input and two programmable I/O's. Counted otherwise, by using the XP28 one can connect 2136 push-buttons and 2136 LEDs. Also another 267 temperature inputs and 534 programmable I/O's can be added. In addition to the types XP2506 and XP28, there are other and more types on the way. In any case, more than enough for a home or a building to operate in.

### Why choose XP Concept 2000?

- ✓ Conson has been active since 1980 with products that are backwards compatible, being the only one in the business.
- ✓ Affordable products that are suitable for several systems.
- ✓ The modules are pre-programmed and can be programmed with or without a computer.
- ✓ Switches and dims everything possible using only a small number of modules.
- ✓ Free choice of a push-buttons and wiring.
- ✓ Relay and dimmer modules have direct inputs and LED-outputs.
- ✓ Unlimited modes and scenes from the local or external bus.
- ✓ Practically, there are no limits to the number of used external buses.
- ✓ Internet control via smart phones, tablets and other.
- ✓ Easy to learn for beginning installers, no limits for specialists.
- ✓ An exclusive software "ConTool", the entire file is stored in the modules themselves.
- ✓ Available only in specialized wholesales.
- ✓ Starting with Conson products does not need investments, it only requires the will to learn.



The **Conbus** is the local bus which feeds the different modules, and which looks after the data flow of the concept 2000 and of the concept 2000XP. This bus is a short bus, hence the denomination Conbus.

The **Consonbus** is an external bus which ensures the power supply of the different interfaces and the mutual communication to the actors.

The Software Contool can be downloaded for free on Conson's website: [www.conson.com](http://www.conson.com). Go to E-services and make an account. When Conson has verified your account, the software and other tools will be available. The program has been built in Java and can function on several controlling platforms, such as Windows and Apple. After downloading and installing the program, one can start it up. At „Offline“- applications, it is possible to develop a complete project. At „Online“- applications, it is necessary to set the IP address of the computer to a different IP address than the one of the gateway XP130/XP230. This defaults to the address 192.168.1.17. Thus, set the IP address of the computer to 192.168.1.20, for example. „Online“ means that one wants to communicate with the electrical enclosure. Below, one can find the different steps to finish a project.

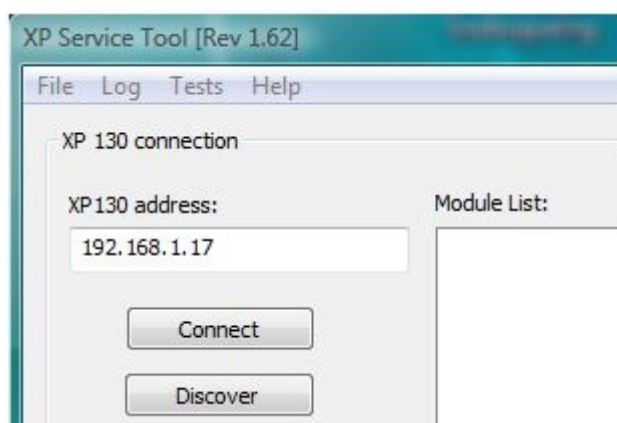
**Note:** the actors are the relays and dimmer modules, the sensors are bus push-buttons, like the interfaces XP2506 and XP28.

Select	To do	Remarks
Select Settings Automatic connection	After placing a check mark, the outputs of the different relays and dimmer modules are not to be immediately appointed.	If not automatic, each time after placing an actor a window goes open that allows to appoint these actor.
Select Add Use shared enclosures	A standard floorplan emerges with the question "Add your floorplan."	As long as there is no plan, it's impossible to continue in the program.
Select Design state Floorplans ...	The floorplans of the project are to be placed in advance in the directory Contool2000XP - FloorPlanImages.	It is of great importance the use of floorplans. The file-extensions of type jpeg, gif, jpg, png, bmp are admitted. A simply drawing on paper and a photo of it is also sufficient.
Select Sensors/actors Select Actors	Place the different circuits of actors on the floorplan. Relays, dimmers, motors and fans.	
Select Sensoren/actoren Sensoren	Place the different bus push-buttons XP2506 and interfaces XP28 on the floorplan.	The interfaces XP28 can never work alone. The necessary buttons that are attached to the XP28 should be placed in the proximity of them.
Select Programming state	Now the programming can be assigned to all actors and sensors.	In a later stage the programming will be loaded (upload) in the different modules.
Select on the floorplan A bus push-button or an push-button connected to an XP28	Specify the location of the push buttons . Specify the function of the various buttons. Do this for all interfaces.	As long as no location is specified by an interface, it is impossible to continue the programming.
Select in the right pane A push-button from a bus push-button or an push-button connected to an XP28	The selected push button will be purple colored.	This color change indicates that an actor can be selected.
Select on the floorplan A lamp or others	The actor window goes open. Appoint the actor (lamp or others) : for example, Living. Select the required action(s). Press OK. Do this for all the actors.	The choice of the different actions and the combination of multiple actions requires a certain knowledge. This is explained in the descriptions of the various modules.

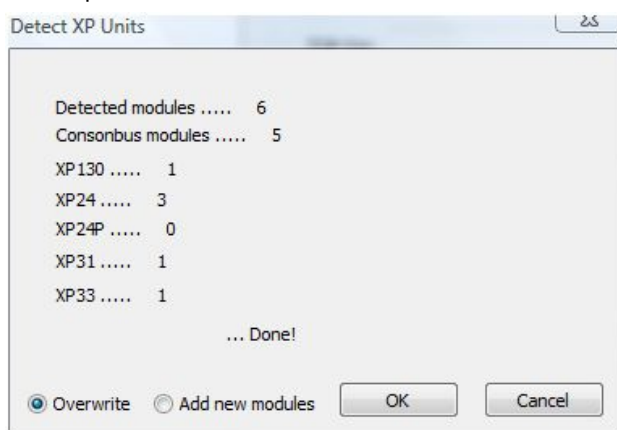
After having done all this, the file of the project partially finished. When the installation is complete, the programmed data can be sent to the various modules. This will only be possible if the serial number of all the modules have been communicated. Thus, the quickest method is to enter all the serial numbers of the actors into the enclosure, and also those of the sensors. Right click on a sensor, setup module and enter the number required in the corresponding box. Choose the tab „Files“ and save everything. Thereafter, choose below the tab „Files“ „Disconnect“. The opening screen of the ConTool is ready again. Remove the checkmark from „Offline mode“ and start again. Then go to the tab „Enclosure“ and choose in the right box the selection button „Upload“. The Upload window opens. Press „Ok“. After this, the installation has been programmed.

The software „XP Service Tool" is a kind of explorer about how the system is constructed. It may be used to check the operation of the modules and it realizes the update to a new firmware. The action list of a module can be retrieved in order to understand how Concept 2000XP is constructed. The XP Service Tool software can be downloaded from the website of Conson for free: [www.conson.com](http://www.conson.com). Go to E-Services and make a account. After Conson confirmed your account, software and other products will be available. The program installs itself under the directory „Program Files" – „Conson" – „XP Service Tool". It is necessary to adjust the IP address of your computer to a different IP address than the IP address of the gateway XP130/XP230. This defaults to the address 192.168.1.17. Thus, set the IP address of the computer to 192.168.1.20, for example.

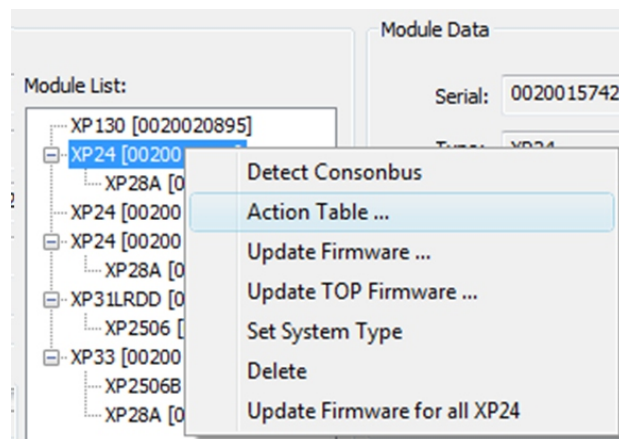
After starting the XP Service Tool, click the selection button „Connect". At the bottom, a horizontal box will be filled with green color. This means that the service tool is connected to the XP130/XP230. The name of the selection key changes from „Connect" to „Disconnect".



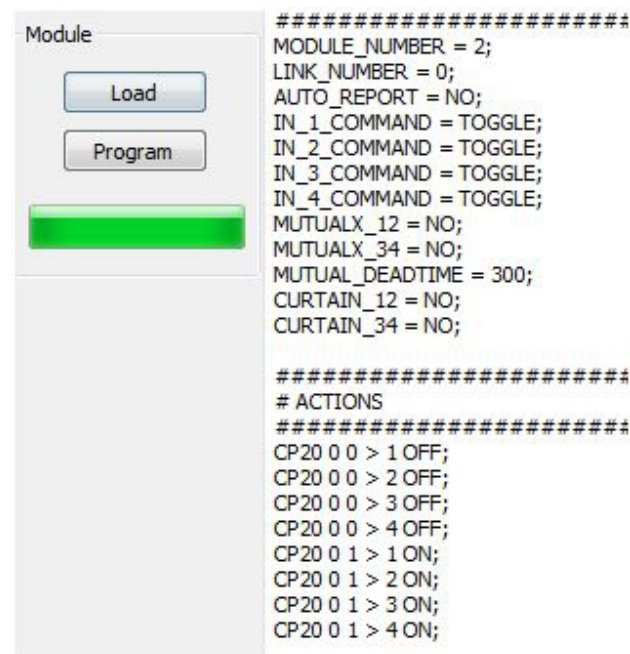
Next, click the selection button „Discover" and Detect XP Units window will appear. The program searches which modules are present. In the example below, there are six modules and 5 modules connected to the Consonbus. After „OK" has appeared in bold, press „OK".



After pressing „OK", all the modules that are located in the electrical enclosure will appear in the „Module List" box. On the top of the list, XP130/XP230 are mentioned and directly below the relay and dimmer modules are mentioned as well. Where a plus sign is stated, a Consonbus with this module is started. After clicking the plus sign, the structure of the connected interfaces on the Consonbus appear. For example: by right-clicking a module XP24, a down list will appear.



Select „Action Table ...". Press „Load" and the action table opens. For specialists, this is a must in order to understand the Concept 2000XP better. Changes can be made but only on the condition that one knows what he/she is doing. More information can be found in the directory of the Service tool: namely the file „XP service tool.chm".



Example for using a XP24 for two rollershutter motors. At „IN\_1\_COMMAND" write TOGGLE = 30 s. Identical for „IN\_2\_COMMAND" till „IN\_4\_COMMAND". Write „YES" instead of „NO" at „MUTUALX\_12" and at „MUTUALX\_34". See next page.



Delete all actions CP20 0 0> 1 OFF; etcetera. These actions are programmed for everything on and everything off. The zero after the CP20 means Link 1, the following zero channel 1. The numeral 1 represents a 2. Click the selection button. „Program“. When the loading is completed, XP24 can control two motors.

#### Example action table interface XP 28

```
#####  
MODULE_NUMBER = 0;  
LINK_NUMBER = 3;  
AUTO_REPORT = NO;  
SHORT_LONG = 00000000;  
GROUP_ON_OFF = 00000000;  
ALL_OFF_KEYS = 00000000;  
ALL_ON_KEYS = 00000000;  
KEY_ORIENTATION = (null);  
IR_GROUP = 0;  
LIGHT_MAKE = 1020;  
LIGHT_BREAK = 1020;  
LIGHT_DELAY = 0;  
TEMPERATURE_MAKE = 127;  
TEMPERATURE_BREAK = 127;  
TEMPERATURE_DELAY = 0;  
INVERT = 00000000;  
AND_MASK_1 = 00000001;  
AND_MASK_2 = 00000010;  
AND_MASK_3 = 00000100;  
AND_MASK_4 = 00001000;  
AND_MASK_5 = 00010000;  
AND_MASK_6 = 00100000;  
AND_MASK_7 = 01000000;  
AND_MASK_8 = 10000000;
```

The meaning of SHORT\_LONG = 00000000;

There is no single channel of the XP28 Link Number 3 which programmed as short / long. If it would be: SHORT\_LONG = 00000100; then it means that channel 3 is programmed as short / long.

The meanings of GROUP\_ON\_OFF = 00000000; INVERT = 00000000; are identical with the previous one. The

SHORT\_LONG = function 01000000; now means that channel 7 of the XP28 Link 3 is inverted.

The meanings of ALL\_OFF\_KEYS = 00000000; ALL\_ON\_KEYS = 00000000;

is that not one input from the XP28 a Link 3 will get an everything-on-button or an everything-off-button .

ALL\_OFF\_KEYS = 00000001;

ALL\_ON\_KEYS = 00000010;

Now, this means that the input 1 is an all-on, and that input 2 is an all-off.

The meaning of AND\_MASK\_1 = 00000001;

is that an AND-function doesn't exist for the channel 1.

AND\_MASK\_1 = 10000001;

Now, this means that there is an AND-function between the channels 1 and 8. Channel 1 will only be active when channel 8 will be closed.

Module List:

- XP130 [0020020895]
- XP24 [0020015742]
- XP24 [0020015743]
- XP24 [0020015747]
- XP28A [0020015863]
- XP31LRDD [0020029043]
- XP2506 [0020029464]
- XP33 [0020015777]

Serial: 0020015777 Error Status: No error

Type: XP33 Light Levels: 0 40 60

SW: XP33\_V0.18.09N

TOP SW: XP33 0.25

Output State

1 ☒ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐

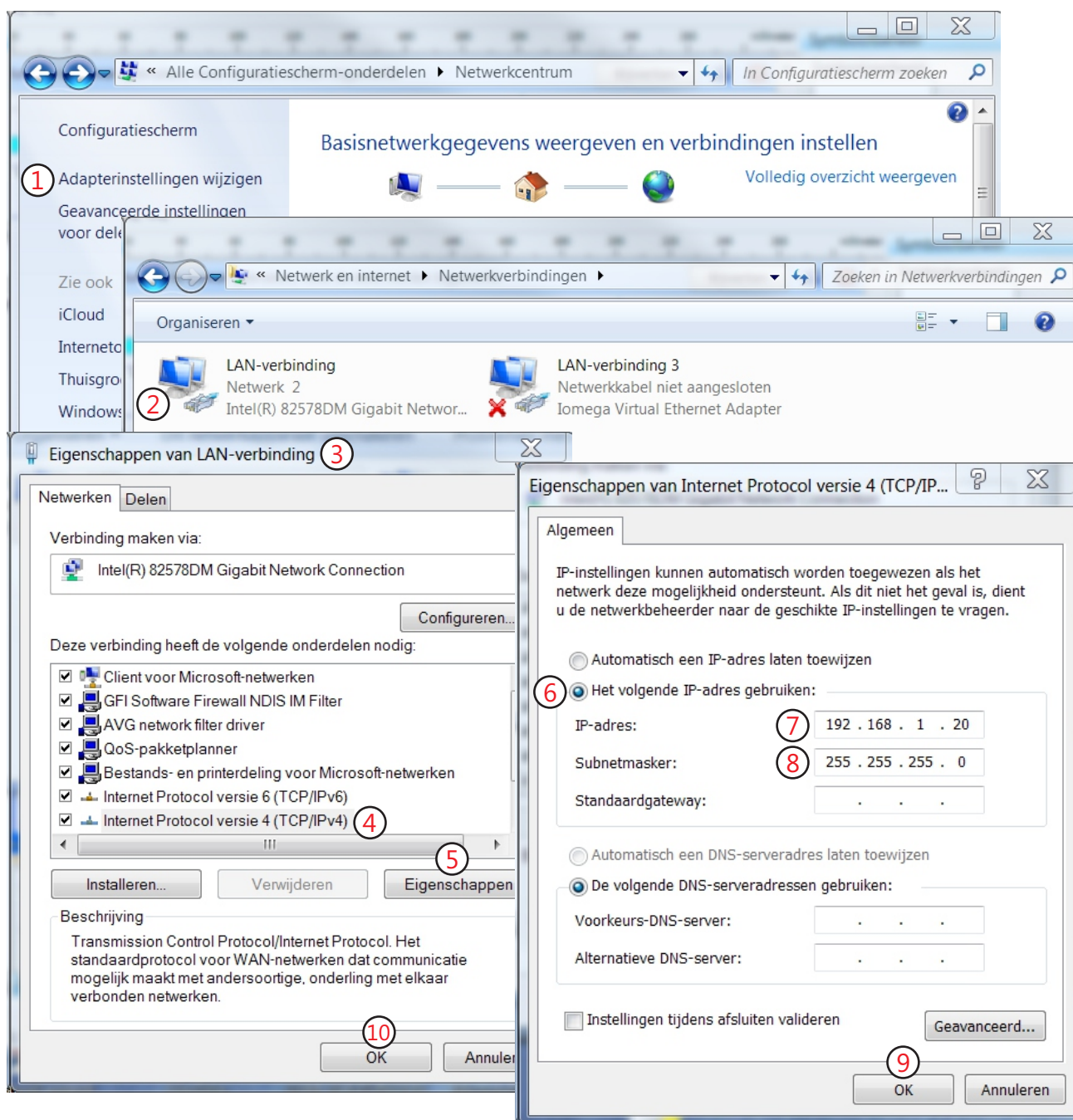
Some more useful information:

If in the „Module List“ an XP2506 is selected, then it will usually be joined by a check mark. When this mark is checked, then the central led of the bus-push-button will no longer be lit permanently. If in the „Module List“ a XP33LR or another type of dimmer is selected, and next, choosing „Light levels“ by right-clicking these types, then the light levels are being displayed. In our example, 0 40 60 of a XP33. If in the „Module List“ a XP24 is selected, then the relay can be controlled to on and off by adding a mark in the boxes 1 .. 4. And this is also possible at the push-buttons, and interfaces in order to test the workings of the LEDs

Note: The re-loading of the firmware ensures that the module is reprogrammed as if has left the factory, or at least as the latest firmware version.

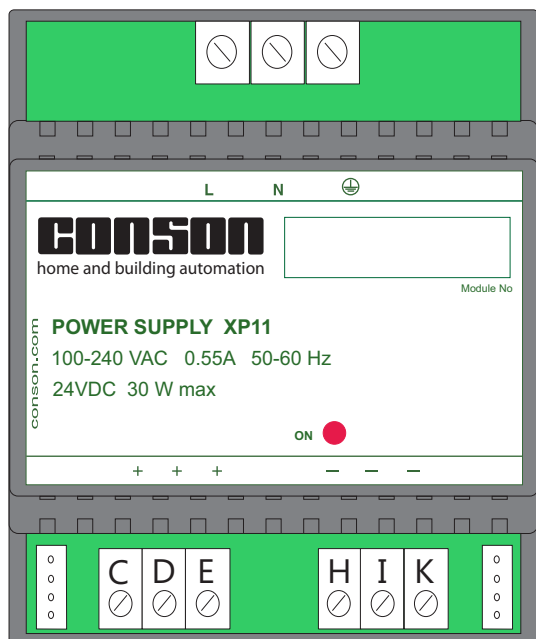
## Communication with XP130/XP230

In order to communicate with the gateway XP130/XP230, it is necessary to adjust the network settings of the laptop or of the desktop computer. The connection of the module XP130/XP230 to the computer is a connection from server to server and requires a cross-network cable. Following procedure to adjust the network settings: Go to the „Control Panel” - select „Network center” - select „Change adapter settings” (1) - select the LAN connection (2) with the right-mouse-button – the window „LAN-connection properties” (3) opens - select „Internet Protocol Version 4 (TCP/IPv4)” (4) and select „Properties” (5) – the „Properties of Internet Protocol Version 4 (TCP/IPv4)” opens - Select „Use the following IP address” (6) - enter: 192.168.1.20 (7) and then click on the first cell of „Subnet Mask” (8) – the numbers appear 255.255.255.0 - Now press „OK” (9) and the window closes - Press „OK” (10) and now the settings are saved. From now on, it is possible to communicate with the controller via the XP130 and XP230.



Another possibility is, by using a crossover network cable, to connect the gateway XP130/XP230 with a Wi-Fi device. It then provides the ability to walk freely with a wireless laptop in the building. As such, the various modes and scenes can be adapted via the „Programming ConTool” and can be controlled via „User's interface”. Simple and effective.





## Introduction

The XP11 is a 24 VDC stabilized and short-circuit power supply to the modules of CONCEPT 2000 XP. The power supply can deliver 30 VA which is enough to supply 10 pieces of XP24 relay-modules. In an installation, the number of power supplies is dependent on the number of system modules, the used electrical load of the led-outputs and other accessories.

## The technical specifications

### Power voltage

Input voltage 100-240 VAC 50-60Hz

Overvoltage protection 275 VAC

### Low voltage

Output voltage 24 VDC

Stabilized and short-circuit proof

Output power 30 W maximum

### Testing and EMC

Appearance according to EN55022

Immunity to IEC 61000

Security to EN 60950

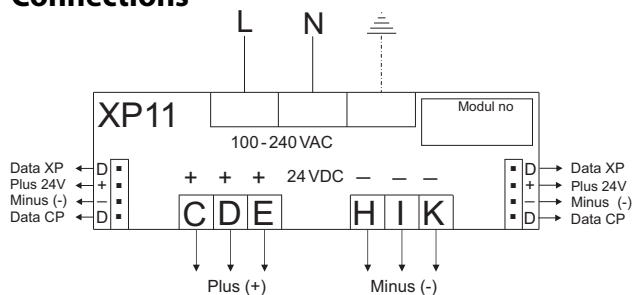
### Mechanical data

Mounting Din-rail DIN46277

Dimensions 85x70x72 mm

Weight 168 g

## Connections



**Note:** The installation must be equipped with an overvoltage protection Class I and Class II.

**Note:** If a power supply XP11 is used in old Concept 2000, then there are bus couplers to go from a 3-pin socket to a 4-pin socket and vice-versa.

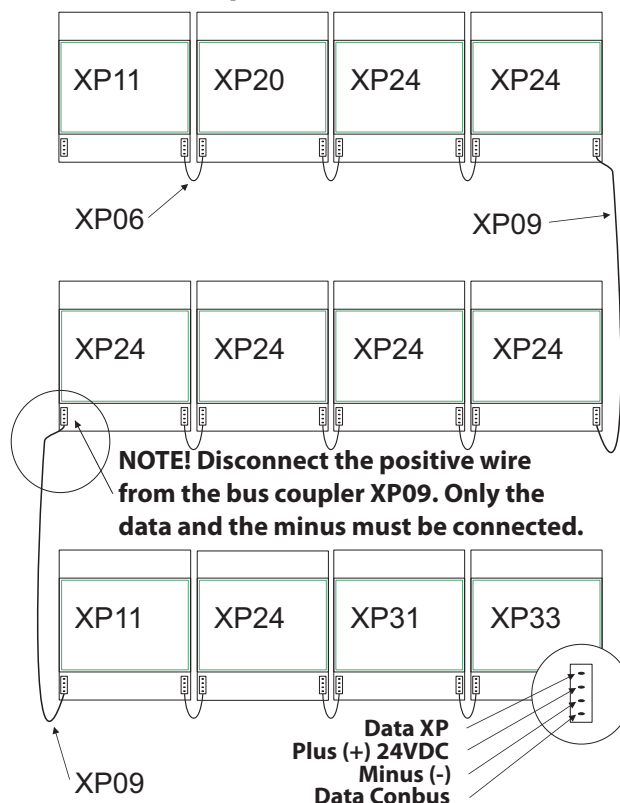
The references are as follows:

XP06CPV Horizontal bus coupler from 3 to 4-pole 3 cm

XP06CPH Horizontal bus coupler from 4 to 3-pole 3 cm

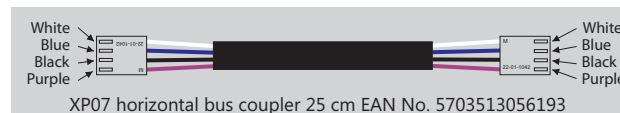
For a vertical bus coupler with a length of 25 cm length there are respectively the XP09CPV and the XP09CPH.

## The use of multiple power supplies and the vertical bus coupler XP09

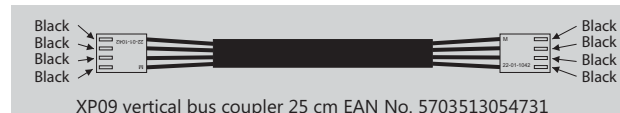


**Note:** The number of power supplies in a system is dependent on the number and the type of modules. Rule of thumb is 10 relay modules for one XP11. The software Contool determines automatically the number of power supplies.

## Bus couplers



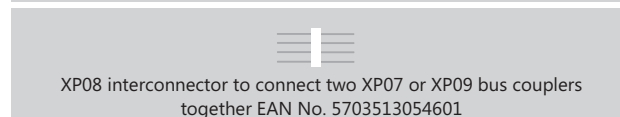
XP07 horizontal bus coupler 25 cm EAN No. 5703513056193



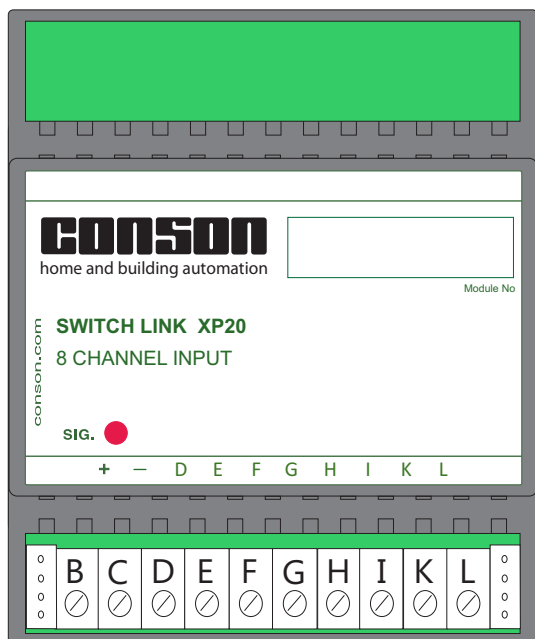
XP09 vertical bus coupler 25 cm EAN No. 5703513054731



XP06 horizontal bus coupler 3 cm EAN No. 5703513057329



XP08 interconnector to connect two XP07 or XP09 bus couplers together EAN No. 5703513054601



## Introduction

The Switch-Link XP20 is an input module with 8 channels. Potential-free push buttons, switches, sensors and others can be connected to these inputs. The XP20 is similar to the CP20 of the Concept 2000 system, but the difference is that the XP20 uses a bus-connector with 4 poles.

The Switch-Link modules in Concept 2000 XP are required to create modes such as all on, all off, group on/off and so on.

Upon activation of an input, the XP20 sends commands to the local bus. These commands are used by the relay- and/or dimmer-modules to execute the configured actions.

The XP20 cannot be programmed as a real XP-module, but its addressing and programming can be done as with the Concept 2000 system using the Conkey CP79 or the Conbeam XP78 with Contool software.

The inputs of the XP20 module can be changed in order to create special functions such as inverting, AND-functions, short/long and groups on/off. Each data-bus can contain four XP20 modules, which means that there are  $4 \times 8 = 32$  high level functions possible with four XP20 modules. An alternative for the XP20 module is the push button interface XP28, which can be programmed by using the Contool software.

Check the technical description of the XP28.

Note: The XP20 will be changed to an execution on the basis of a XP28, thus also programmable as an XP module.

## Technical specifications

### Low current

Voltage	24VDC
Power consumption	0,5W
8 inputs switched by the minus	
Input current all inputs	0,5 mA
Pulse time short press	between 20-300 msec
Pulse time long press min.	greater than 300 msec

### Mechanical data

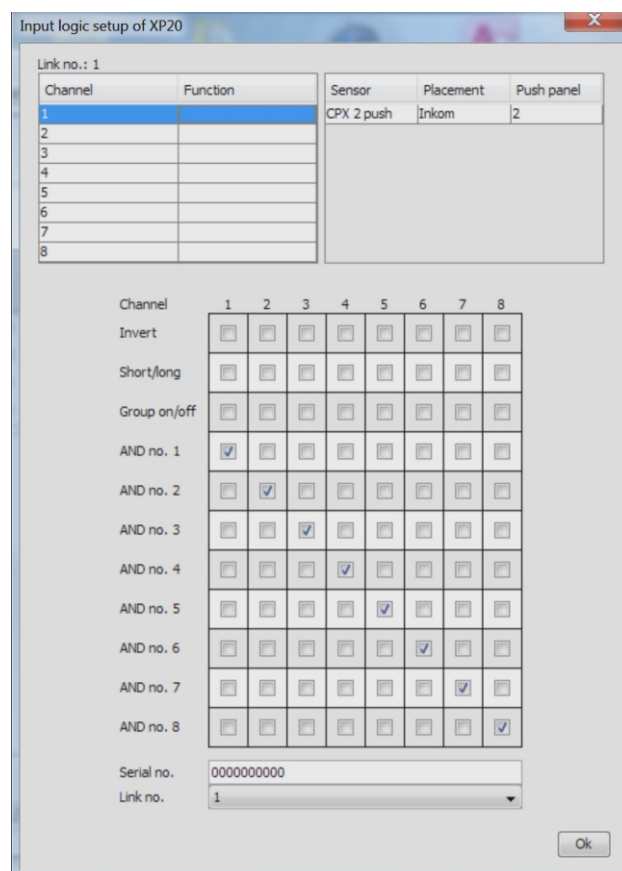
Montage Din rail symmetric	Din-rail DIN46277
Dimensions (HxWxD)	85x70x72 mm
Weight	85 g

## Programming special functions by using the Conkey CP79











To program special functions with the Conkey CP79, please check the technical sheet of the CP20 ([www.conson.com](http://www.conson.com)).

## Programming special functions by using the software Contool

The special functions are programmable using the input logic setup window of the module, select the tab „Fusebox“ to open it. All the project modules are graphically displayed. Just right-click with the mouse on the chosen XP20 module. The window of the input logic setup will open up. The efficiency of an input channel can be changed by checking the right checkbox.



### The different functions of the XP20 and commands which are sent to the Conbus (Similar for the interfaces XP2506 and XP28)

Input action	Explication	Programmed XP20 functions			Bus-command
		Invert	Grp on/off	Short/long	
	Close contact				START
	Open contact				STOP
	Close contact				STOP
	Open contact				START
	Close contact				Alternating START/STOP
	Open contact				-----
	Short impuls				START
	Long impuls				STOP
	Short impuls				STOP
	Long impuls				START

When closing or opening a contact which is connected to an input of an XP20 a command is sent to the Conbus. No permanent data is transmitted to the bus.

### Explanation and examples of the different functions in relation to the actions applied to the actors.

#### Inverting

When closing the contact on a non-inverted input, the action is immediately executed. For example:

##### Example 1

A magnet contact NC is available in a closet and is connected with input 7 of the XP20. In the window of "input logic setup of the XP20" check the checkbox number 7 on the line „Invert“.

The action of the actor that must turn on and off the light is „auxiliary relay“ (Help function) . When opening the closet, a start-command will be placed on the Conbus and the matching light will turn on. When closing the contact, the stop-command is placed on the Conbus and the light turns off.

##### Example 2

An actor controls the toilet light and the other one controls the ventilation. Whenever the toilet light turns on, it would be great to turn on the ventilation for x-time. The LED-output of the actor (XP24) that controls the light is connected to input 6 of the XP20. Input 6 is inverted. When turning on the toilet light, the LED-output of the actor (XP24) that controls the light is connected with input 6 of the XP20. Input 6 becomes inverted. When turning on the toilet light, the LED-output becomes low of the actor that controls the light. Whenever the toilet light turns off, its LED-output becomes high. This information sends a start-command channel 6 Switch-Link 1 to the bus and the ventilation starts for x-time.

Remark: This way of programming is somehow devious. Using the „Actor programming“ from Contool is much easier and without any feedback cabling.

### Example 3

The wish is to control the blinds up and down with one pushbutton. Install the number of motors on the floor plan and program the relays 1 and 3 of the XP24 modules with the action „On 30 sec“ using channel 4 of the XP20. Program the relays 2 and 4 of all XPs with the action „On 30 sec“ using channel 5 of the XP20. Connect the inputs 4 and 5. Program in the window of the „Input Logic of XP20“ the following: check the checkboxes 4 and 5 on the line „short/long“. Invert input 5. The relays 2 and 4 control the blinds down, and the relays 1 and 3 control the blinds up. In case of a short impulse of the pushbutton, a start-command is sent to the Conbus and all blinds go up. In case of a long impulse of the pushbutton, all blinds go down.

#### Short/long

The short/long-command responds differently depending on the action that has to be performed. Most actions that actors can perform are started by a short impulse. When the corresponding channel of the XP20 is inverted, it is a long impulse that performs the action. Only by using the action „Auxiliary relay“ (Help function), the short/long-function will do a start- and stop-command. This means that all actors (relay- and dimming modules) that are programmed with the action „Auxiliary relay“ (Help function) in relation to the input channel of the XP20 and to the short/long-function, will start with a short command and stop their actions with a long command. Some examples follow below.

##### Example 4

Situation: Hall-light, wall-light in the living room, dimmable lighting fixture in the seating area, kitchen-light. Desired mode: pushbutton in the entrance hall; with a short push, all these lights will turn on, and these lights will turn off with a long push. After a short push, the hall-light must stay on for 10 minutes. The light in seating area must be on and dimmed for 65%.

Solution:

Channel 5 of the XP20 short/long.

Action hall-light „Auxiliary relay“ and „On 10 minutes“

Action wall-light „Auxiliary relay“

Action dimmable lighting fixture „Auxiliary relay“ and light level 65%

Action kitchen-light „Auxiliary relay“

##### Example 5

Situation: The outdoor lights have 4 circuits. Each circuit can be controlled individually.

Desired mode: With one pushbutton, when pressed long, all outdoor-lights go on for 60 minutes and when pressed shortly the lights will turn off. This mode can also be used in stressful situations. When one is panicking, he/she has the intension to press the button for a long time. Whenever a potential-free contact of an alarm installation is switched simultaneously, the alarm will turn on the outdoor lights for one hour.

Solution:

Channel 6 of the XP20 short/long and invert.

Actions of the 4 actors of outdoor-lights „On 60 minutes“.

**Example 6**

Situation: Child room has one dimmed light-point. Desired mode: short/short/long. With a short impulse, light turns on, and another short impulse it turns off. With a long impulse the light goes on for 5 minutes.

Solution:

Program in the XP20 channel 6 short/long and invert.

Connect channel 6 with channel 5.

Program the actor of the light-point of the child room as follows:

„Impulse“ via channel 5 of the XP20

„On 5 minutes“ through channel 6 of the XP20

Previous mentioned solution can also work using a different way in case the pushbutton is connected with the direct input of the XP24. Make a connection between the direct input of the XP24 and input 6 of the XP20. Then one only needs the following programming: „On 5 minutes“ via channel 6 of the XP20.

**Groups on/off**

Groups on/off is interesting when light-circuits need to be turned on and off using one pushbutton. The usual action assigned to a group of actors is „Auxiliary Relay“ (Help function). Without the function „Groups on/off“, the light-circuits will turn on when closing the pushbuttons and they will turn off when the pushbuttons are opened. The fact that the function „Groups on/off“ will be assigned to the alternate close/close of a pushbutton indicates that the lights will respectively go on and off. The action „Auxiliary relay“ can be followed by an action „Set light level to e.g. 75%“ and an action with timer for example „On for 10 minutes“.

**Example 7**

On the floor of an office, there are 4 rows of dimmed light-circuits with outside glazing. It can be controlled with Dali using 4 pieces of XP31DD. At the beginning of the floor, there are 5 pushbuttons with LED-feedback (e.g.: pushbutton or CP2505 or other). The center button is connected to e.g. input 7 of an XP20. The others are connected to the direct inputs of the four XP31DD with their LED-feedback via the outputs of the modules.

Programming goes as follows:

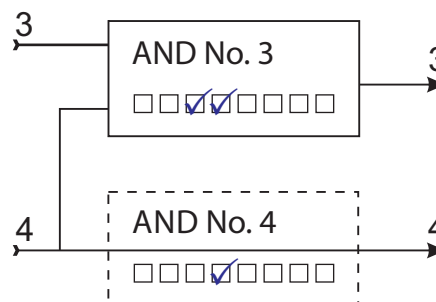
„Auxiliary relay“ for all four XP31DD

Additional: Set light level to x-%

For light-circuit 1 the most close to the glass to 50%. For the light circuits 2, 3 and change it to 70%, 80% and 90%. The result is a similar light-distribution over the complete surface of the whole floor. When changing the light levels using the direct inputs of the XP31DD's, they will turn back to the original light level as mentioned above. By adding the action „Automatic light level“ the whole system will be better in energy saving. See the description of the XP31xx dimmers.

**AND-functions**

An AND-function works when a specific input-channel of the XP20 sends a command on the bus when there is compliance with a specific condition. This condition can be that one or more channels must be active before the AND-channel can put data on the bus.

**Schematic**

The schematic representations symbolizes two rows of checkboxes for the input- channels 3 and 4 of the XP20 as mentioned in the set-up window of the input logics of the XP20. It's the input-channel 3 that must be 'AND' with respect to input-channel 4. Thus, channel 4 must be active in order to place the command of channel 3 on the bus. When, for example, a dusk switch is connected to input 4, it can work freely. It is important to never use this type of sensor and to 'AND' it with another channel. Reason is that a twilight-switch can be used to turn on the stair-lights when it's getting dark by placing a movement sensor that turns on the lights outside for x-time.

**Example 8**

Following situation: 3 pushbuttons in the hall, hall-light, outside lights and night-lights, sensor is a twilight-switch CP75S (channel 8). Potential free contact of the alarm center to channel 6.

Desired modes: pushbuttons „All on“ (channel 1) and „Welcome home“ (channels 3 and 4 connected in similar ways). With the „All off“-pushbutton, the command will only be active if the alarm is armed. Night lights „on/off“ by the setup of twilight-switch CP75S.

Programming of the actors goes as follows:

In the actor-window from the night-lights delete the action „Turn on“, as well as the checkmark in the checkbox of the „Member of all off“.

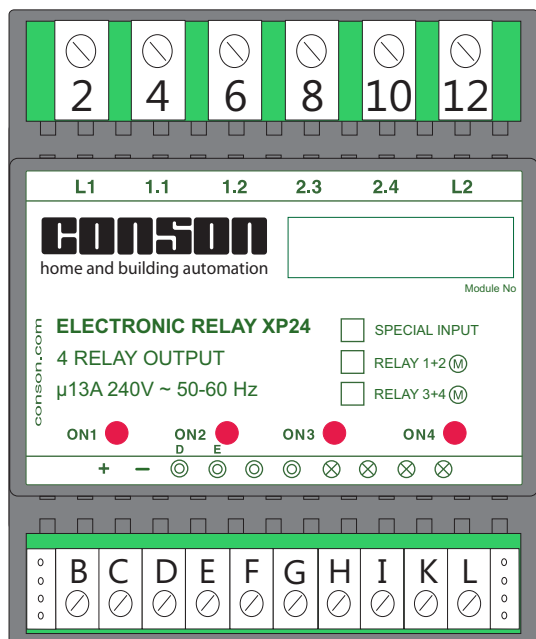
Action-actor night-lights „Auxiliary relay“ via trough channel 8.

Action-actors that want to do something in modes starting with „Turn on“ using channel 3 of the XP20.

Action-actors that have to be on with the mode „Welcome home“ when it's getting dark put „Turn on“ through channel 4.

Programming the AND-function:

AND No. 1 ☒ ☐ ☐ ☐ ☐ ☐ ☐ ☐  
 AND No. 4 ☐ ☐ ☐ ☒ ☐ ☐ ☐ ☒



## Introduction

The XP24 is a programmable relay module with four outputs of 13A and two by two supplied by the common inputs L1 and L2. The module has four direct inputs to directly control the 4 relays. Each input controls its corresponding relay. The inputs are programmed by default as pulse-inputs (telerruptor). When programming the module, other functions will be available such as an auxiliary-relay or a time-set. Furthermore, it is possible to program 2 relays to the action "Lock mutually" and in combination with a timer function. It's surprisingly interesting to use it for controlling curtain motors, projection screens and other. The actions slave-/pulse-/relay when using the local bus can be executed with a timer function.

## Technical data

### High power

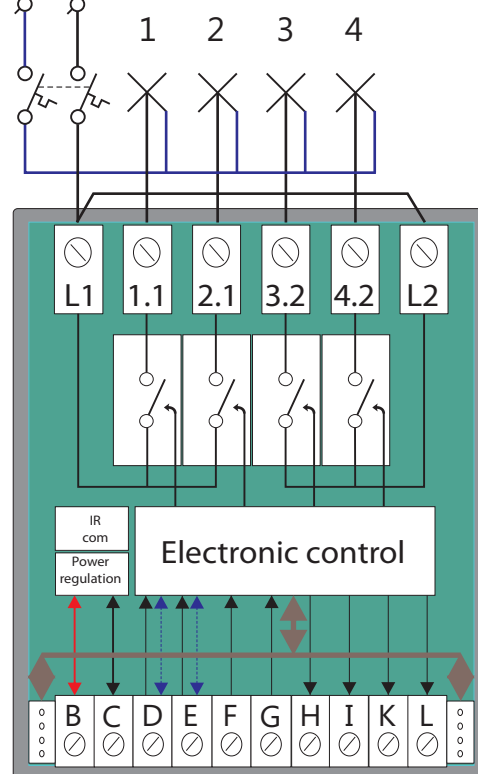
Relay data	
Max load at 277 VAC/24 VDC	16A
In application 240 VAC/24VDC	13 A
Operate time	15 ms
Release time	15 ms
Dielectric between coil and contacts	4000 VAC
Dielectric between open contacts	1000 VAC
Maximum rating at the powerinputs L1 and L2	
Resistive $\cos \varphi 1,0$	2 x 2300 VA
Inductive $\cos \varphi 0,5$	2 x 1150 VA
Maximum value fuse	2 x 16 A

### Low power

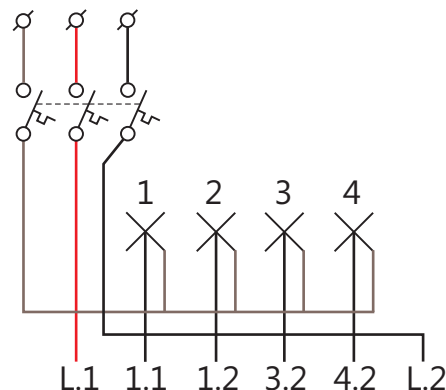
Consumption in the idle	0,2 W
Consumption all relays on	2,4 W
Voltage at the inputs D en E (no load)	13,6 VDC
Voltage at the inputs F en G	5,0 VDC
Minimum responstime	40 ms
Minimumscurrent at the inputs	0,5 mA
Maximum loss resistance control line	1 KΩ
Maximum charge Led-outputs	75 mA

## Output connections

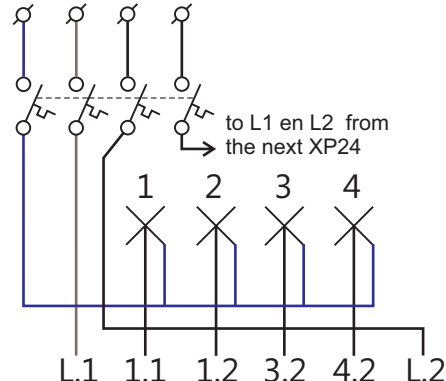
### Bipolar example



### Tripolar example

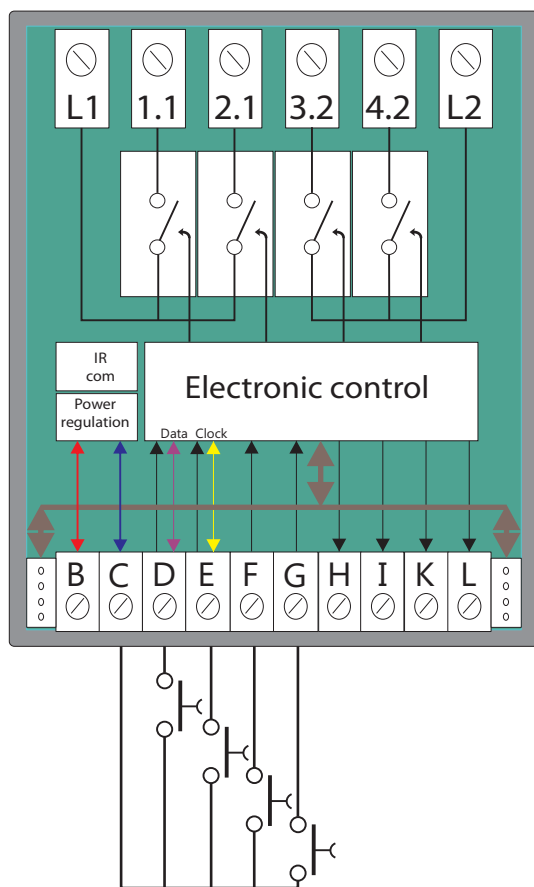


### Fourpolar example





## Input connections



An XP24 module leaves the factory as a CP24 module. In case it used as a CP24, please check the technical information for a CP24. In case the XP24 is programmed via the gateway XP130 and the Contool software, it will become a real XP24 with all its possibilities.

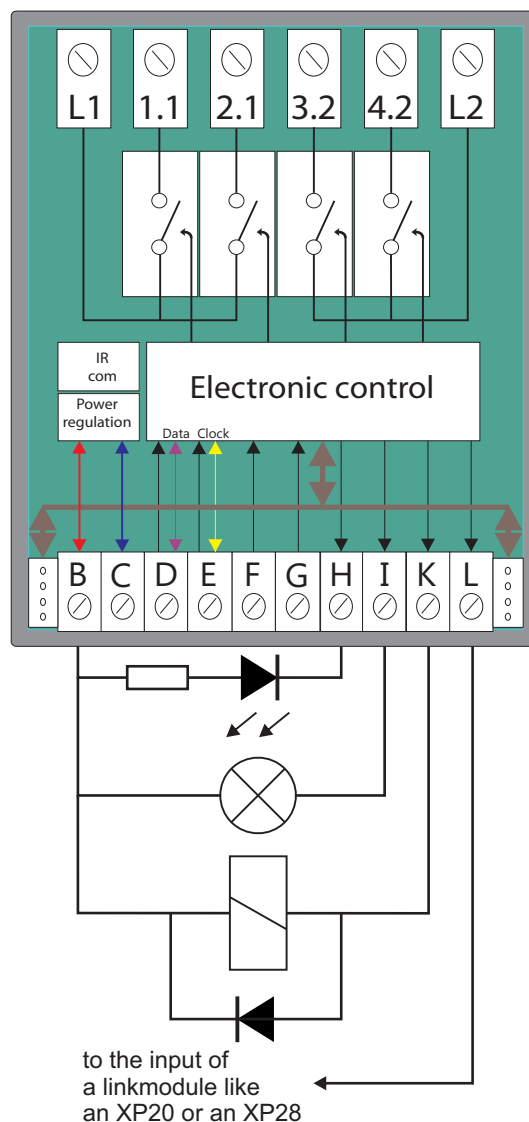
Resetting to the factory settings without using the software can be done by connecting MINUS with the 4 inputs (CDEFG). Make a power-up: the left led goes slightly on, freezes for an amount of time and ends the process by flickering two times.

The inputs of the XP24 are standard impulse-inputs like electromechanical switches. Activating an input with a pushbutton always works with respect to the minus. The minimal input-current is 0,5 mA. This results in a maximum loss resistance of the control line <1 KΩ.

The inputs can be programmed to other functions using the Contool software. Each input can be programmed to a staircase-time-lighting. This is interesting when the light-circuit doesn't use direct controls. Both inputs 1 and 2 as well as inputs 3 and 4 can be mutually locked.

This interlocking is implemented till the relay outputs. In that way, the motors for sunshades and other can be controlled. See: explanation "motor controls".

## Led-outputs connections



The Conson relay and dimmer modules have since 1980 LED-outputs. This is interesting for several appliances. The LED outputs H, I, K and L can support maximally 75 mA.

**Connecting a LED to a LED output:**

The used dropping resistor depends on the used type of LED. Following formula to calculate the dropping resistor:  $24V - 2,2V/10 = 2,18 K\Omega$ . The 10 stands for the value 10 mA according to the LED-type. The pushbuttons of the Conson type CP2505 use a 3 mA type.

**Connecting a signalization lamp to a LED output:**

The use of filament lamps is not recommended because of their high consumption. Usually, the type is a 30 mA so it becomes difficult to use more than two.

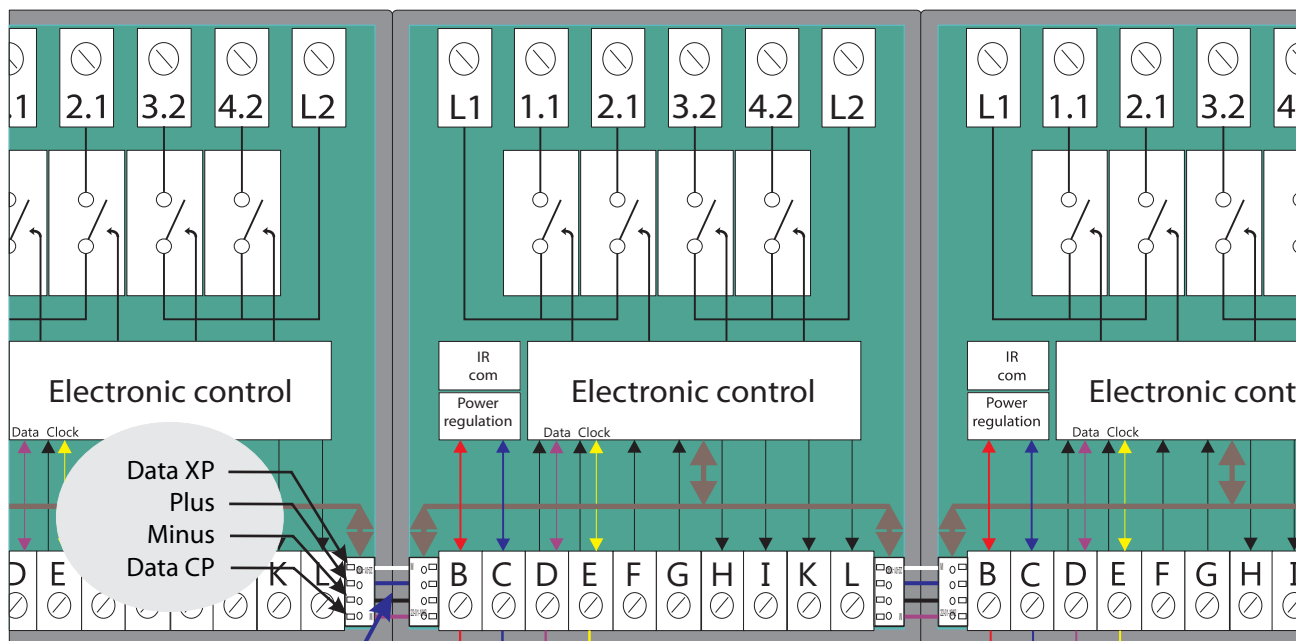
**Connecting a relay to a LED output:**

A relay connected to a LED output can be used to control another actor. Don't forget the blocking diode. Most of the time the used types of relays have inside a blocking diode.

**A LED output used for a feedback signal:**

An LED output can serve to supply an information to an XP20 or an XP28 to perform an action followed by an action.

Communication between the modules mutually and the sensors such as the BUS push buttons and the XP28 interfaces.



The short 4-wired local bus connects the modules mutually = **Conbus**

Plus (+) 24VDC  
Minus (-)  
Data  
Clock

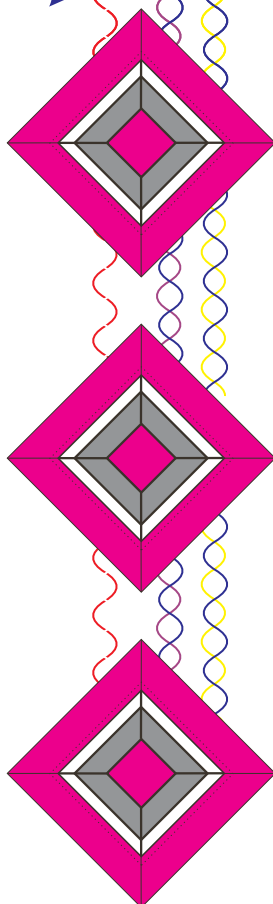
The 4-wired external bus is a longer bus = **Consonbus**.

From any actor, a new bus can be started up. This is a special feature of Concept 2000XP.

The number of sensors (Bus-pushbuttons like X P2506 or bus-interfaces XP28) is limited to 99 of each type per bus that is started-up (XP2506, XP2506A, XP2506B, XP28, XP28A and XP28B). This is really enough for all types of installations.

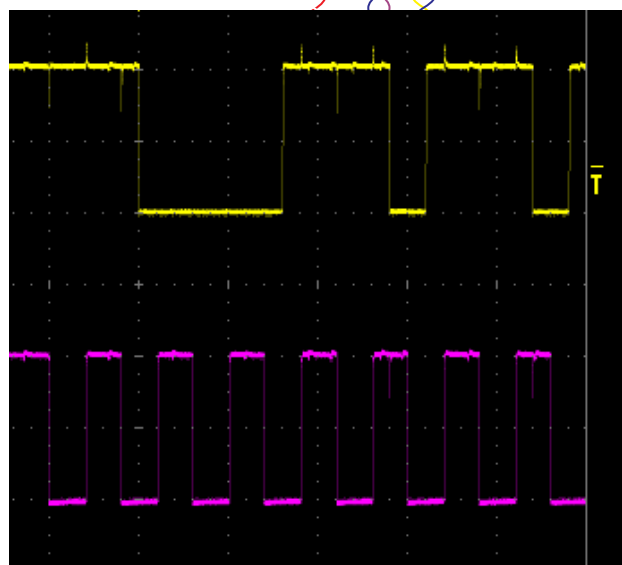
#### Remark!

The choice of the type of cable and its length depends on the influence of the data- and clock-signal with respect to each other (inducing). Data and clock can never be a part of the same pair! The diagram on the right shows the influence of the clock with respect to the data and vice-versa.

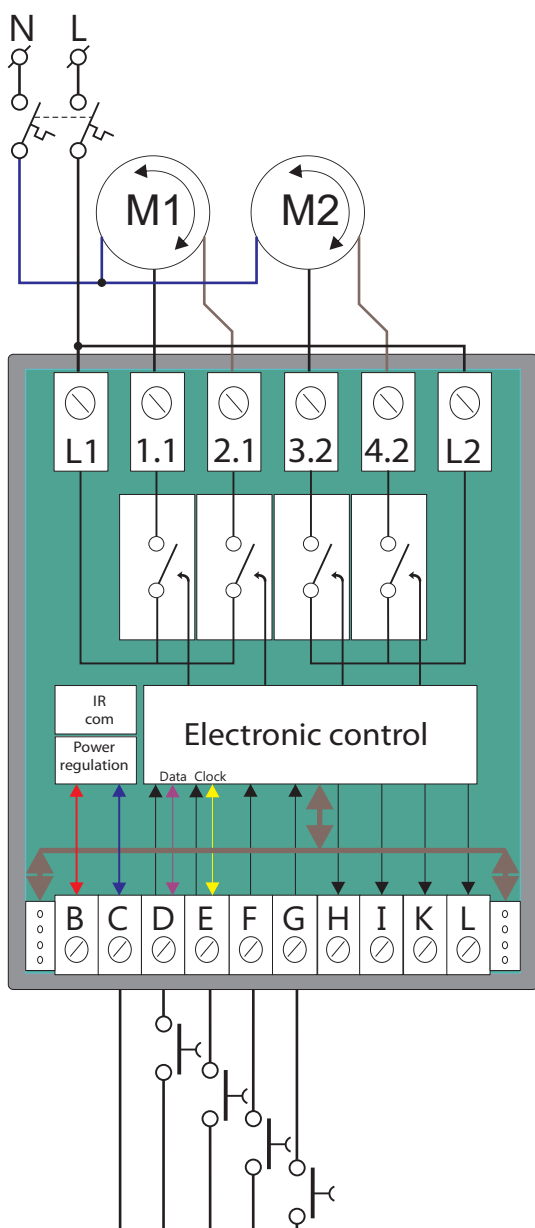


XP28

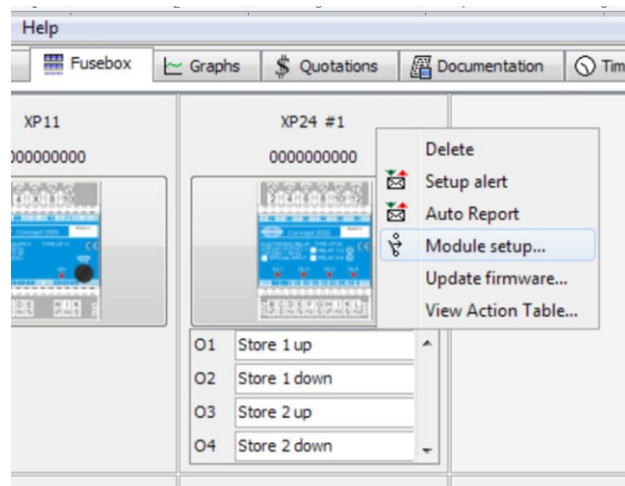
8 inputs  
8 outputs  
2 I/O



## Controlling motors



Programming other actions to the direct inputs of an XP24 and programming the direct inputs for controlling motors using the software Contool.



Place 2 motors on the floor plan. The Contool software adds automatically an XP24. Select the tab "Fusebox". Right click on the XP24 module (right in the top corner) and an action window will open. Select „Module set-up“. The window „XP24 module programming“ appears (see image below). Relay 1, 2, 3 and 4 are mutually blocked. Change the duration-time depending on the type of rollers, shutters or blinds, e.g. 30 seconds.

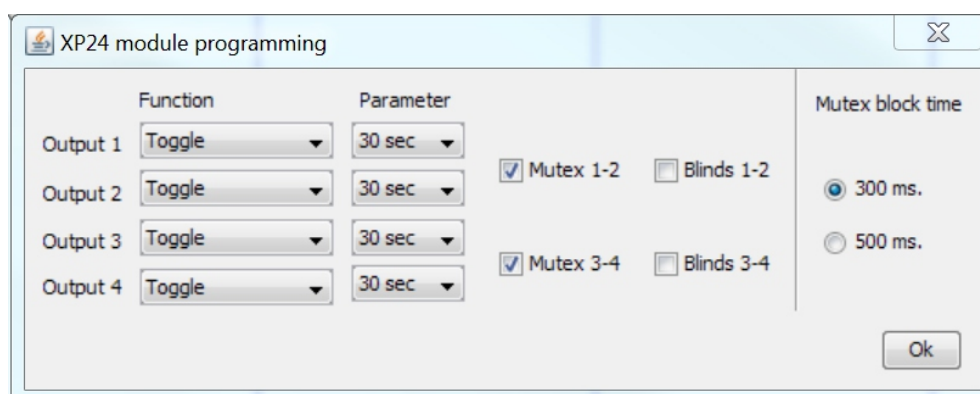
**Important remarks:**

In case the motors have an electronic cross limit switch, change the blocking time to 500ms.

In case the blinds have slats, use „Blinds 1-2 (3-4)“.

The explained work method to program the direct inputs for motor controlling is also the same according to the other action to control the direct inputs of an XP24 relay module. It is possible to assign an action „On 5 minutes“ to input 3 and not an impulse action, so a Pir-detector can be connected to the direct input.

**When using the Consonbus at D and E, do not change the actions of the direct inputs 1 and 2!**



## Programming of XP24 in Concept 2000 Xp

Start the Contool software and add a floor plan. Choose tab „Design“, then tab „Sensors/actors“ and put both an actor-lamp On/Off, a sensor XP28A and a double pushbutton on the floor plan.

Select the tab „Programming“, select the double pushbutton on the floor plan, and on the right you see a separate window. Give a location, e.g. living room. Select the left button on the double pushbutton and write its behavior in the corresponding box: e.g. on/off.

Below the pushbutton-panel window you find the programming method, please select the XP28 sensor. Select the assigned module of „Not assigned“ to XP28AL1 and choose channel 1. Click on the lamp that can be found on the floor plan. The window „Functions for actor XP24 on/off“ appears. Change the actor-name into „Living room“.

Choose in the drop-down menu the action „Impulse“ and click on „Add“. Click OK to close.

Channel 1 becomes red and this means that this channel has been used. Thus, the lamp is controlled by channel 1 of link 1 of the Concept 2000 XP (not same link 1 of the Concept 2000 system). Go the main tab „Fusebox“. Click „Upload“. The data will be sent to the XP24 module.

Click again on the main tab „Floorplan“ and select the right window „User interface“. Click on the left button of the pushbutton and the light goes on, clicking again will turn it off.

In case you click on the arrow direction right of the right window, it will disappear. When you click the pushbutton on the floor plan it will become bigger and can be controlled with the mice cursor or touch screen.

Click on „Design“ and choose the tab „Detect XP sensors“. Below, a window appears with a list. Drag the XP28A from the list to the XP28A on the floor plan. A window appears asking whether the serial number of the XP28A should be copied or not. Click OK.

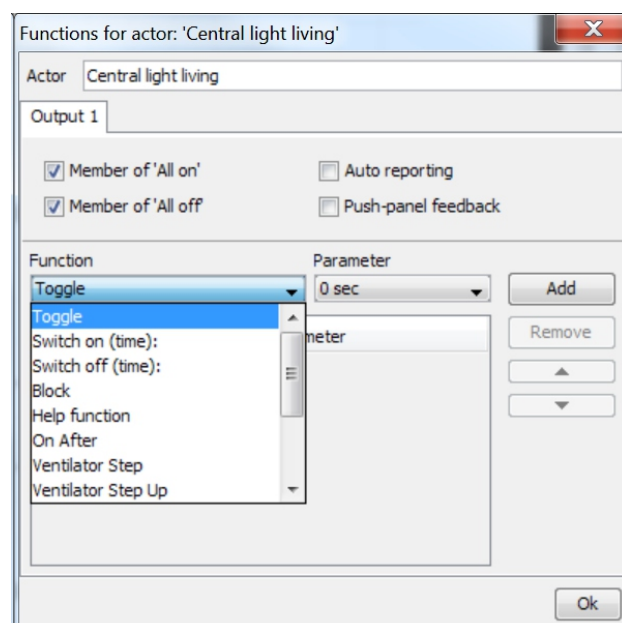
Go to the main tab „Fusebox“ and click on „Upload“.

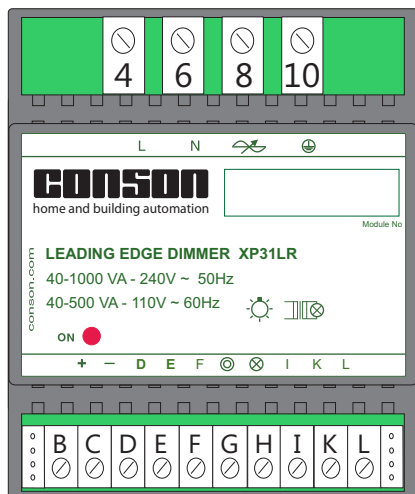
Connect both pushbuttons with input 1 and 2 of the XP28A and test the functions.

These previously mentioned methods of programming are the same for all actors and sensors of the Concept 2000 Xp

## The different actions of the XP24

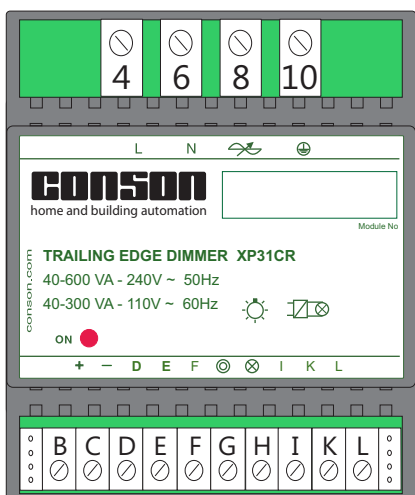
<b>Impulse</b>	When pressing and pressing again the actor goes „on and off“.
<b>Impulse + x-time</b>	When pressing and pressing again the actor goes „on and off“. When „on“ there is a duration time of x-time.
<b>On</b>	On means that the actor goes on.
<b>On + x-time</b>	On + x-time means that the actor goes on for a duration of x-time.
<b>Off</b>	Off means that the actor goes off.
<b>Off + x-time</b>	Off + x-time means that the actor goes off after a duration of x-time.
<b>Block</b>	Blocking means when blocking is assigned to a particular actor by a specific channel, that as long as this channel is active, the actuator cannot be operated. Thus locking certain buttons on alarm as an example.
<b>Help fonction</b>	Auxiliary relay means when pressing a pushbutton (or door contact) that the actor comes on and when unloading the actor goes out.
<b>Help relay + next line x-time</b>	See description XP20.
<b>On after x-time</b>	On after x-time means that actor goes on after x-time.
<b>Ventilation step by step</b>	To control in ventilation systems.
<b>Random timer</b>	Description in a next edition



**XP31LR: Dimmer 40-1000VA ohms inductive**

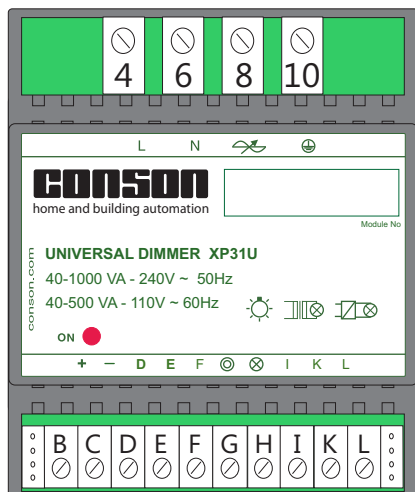
EAN-Nr.:5703513058845

The dimmer module XP31LR is an intelligent programmable dimmer to dim the ohms and inductive loads with a power of 40-1000 VA. The XP31LR regulates logarithmically and has a built-in soft-start, thermal security and reporting of an interruption of the neutral conductor. the dimmer has a direct impulse input. When using the data-bus, up to 99 programmed functions are performed for the realization of modes and this by using dimming actions by percent, up and down, time and fade functions and daylight management.

**XP31CR: Dimmer 40-600 VA ohms capacitive**

EAN-Nr.:5703513055288

The dimmer module XP31CR is an intelligent programmable dimmer to dim resistive and capacitive loads with a power of 40 - 600 VA. The XP31CR regulates logarithmically and has a built-in soft-start, thermal protection and reporting of neutral interruption. The dimmer has a direct impulse input. When using the data-bus, up to 99 programmed functions are performed for the realization of modes and this by using dimming actions by percent, up and down, time and fade functions and daylight management.

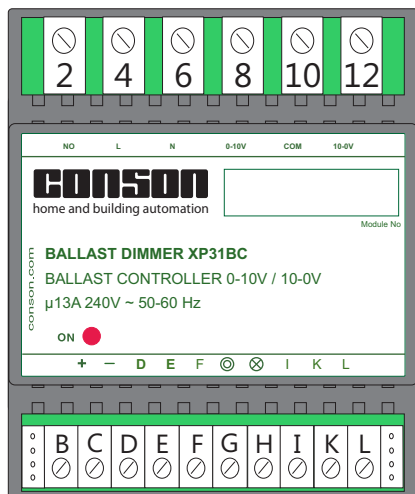
**XP31U: Universele dimmer 40-1000VA resistive inductive capacitive**

EAN-Nr.:5703513057749

(If not available, replaceable by XP31LR)

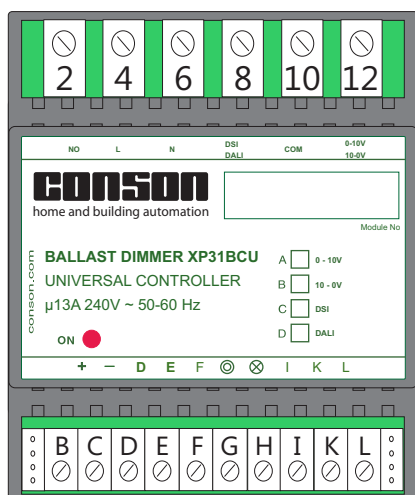
The dimmer module XP31U is an intelligent programmable universal dimmer to dim resistive, inductive and capacitive loads with a capacity of 40-1000 VA. The XP31U regulates logarithmically and has a built-in soft-start, thermal protection and mention of an interruption of the neutral conductor. The dimmer has a direct impulse input. When using the data-bus, up to 99 programmed functions are performed for the realization of modes, and this by using dimming action by percent, up and down, time and fade functions and daylight management.



**XP31BC: Ballast dimmer 0-10V/10-0V**

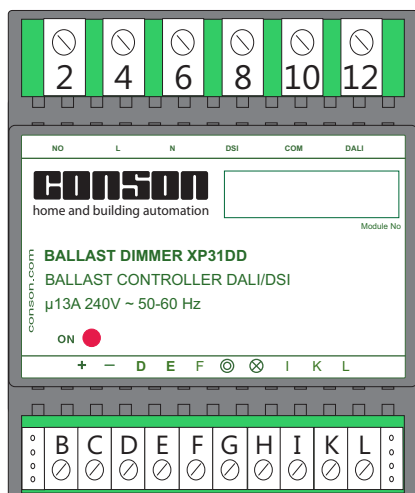
EAN-Nr.:5703513055240

The dimmer XP31BC module is an intelligent programmable dimmer to dim HF-ballasts for fluorescent and PL lamps and others with a 0-10V/10-0V control signal. A relay 13A is provided in order to switch the power supply of the ballasts. The dimmer controls XP31BC regulates logarithmically and has a built-in soft-start. The dimmer has a direct pulse input. Upon the commissioning of the data-bus, up to 99 programmed functions are performed for the realization of the modes and this includes the dimming actions by percent, up and down, time and fade functions and daylight management.

**XP31BCU: Universal ballast dimmer 0-10V/10-0V Dali/DSI**

EAN-Nr.:5703513055257

The dimmer XP 31 BCU module is an intelligent, universal and programmable dimmer to dim HF ballasts for fluorescent and PL lamps and others with various signals such as 0-10V/10-0V/Dali and DSI (Digital Addressable Lighting Interface) or DSI (Digital Serial Interface – a non-addressable digital control). A relay 13A is provided for switching the power supply of the ballast. The dimmer XP31BCU regulates logarithmically and has a built-in soft-start. The dimmer has a direct impulse input. Upon the commissioning of the data-bus, up to 99 programmed functions are performed for the realization of modes, and this includes dimming actions by percent, up and down, time and fade functions and daylight management. Through the ConTool software one can program the type of control signal. The XP31BCU is the ideal ballast-dimmer when one does not know in advance what type of ballast it will be.

**XP31DD: Ballast dimmer Dali en DSI**

EAN-Nr.:5703513055387

The dimmer XP31DD module is an intelligent programmable dimmer to dim HF ballasts for fluorescent and PL lamps and others with this Dali (Digital Addressable Lighting Interface) or DSI (Digital Serial Interface - a non-addressable digital control). A relay of 13A is provided for switching the power supply of the ballast. The dimmer XP31DD regulates logarithmically and has a built-in soft-start. Upon the commissioning of the data-bus, up to 99 programmed functions are performed for the realization of modes, and this includes dimming actions by percent, up and down, time and fade functions and daylight management. Through the ConTool software one can program the type of control signal.

## Main features

The dimmers XP31 have a microprocessor for progressive steering. Special features inter alia, soft-start, adjustable fade-in and fade-off times, thermal security, logarithmic arrangement, potentiometer-control, analog daylight-dependent control, slave control, security against neutral-break and a minimum and maximum setting without adjustment-potentiometers.

### Softstart and fade-in en fade-uit

When switching on the dimmer, the output voltage goes from zero to the last used or desired level and this according to a certain amount of time defined in the firmware of the module. This working method prevents brutal interference on the mains when switched on and extends the life of the lamp. In addition, a timely limitation is ensured by a short-circuit during the breakage of the filament. The fade-in and fade-off times can be accessed via the bus and this with actions ranging from 5 seconds to 2 hours.

### Thermal protection

This limits the temperature inside the module. The level of limitation is dependent on the type of dimmer. If this temperature is exceeded, the dimmer sends an SOS signal. Because of the SOS signal, the LED-dimmer flashes in rhythm of 3 x short and 3 x long. This signal is also present at the output of the LED-dimmer module. During the SOS signal, the output level is adjusted downwards. The reset is done by activating the impulse input of the dimmer for 20 seconds, or by removing the power supply voltage 24 VDC. This protocol can be different according to type of dimmer.

### Protection against short-circuit

The dimmer of the CR and U are short-circuit proof. The power of these dimmers is controlled by the power mosfet-transistors. These are fast enough to switch the output switch.

### Logarithmic control

The dimmers have a logarithmic regulation which ensures that, when being operated, an ergonomic feeling arises between the operation and the determination of the light variation.

### Protection against neutral-break

A disconnected or interrupted neutral is indicated by the LED on the dimmer. This light flashes rhythmically, followed by a long pause. In this mode, the dimmer will not work. These security includes inter alia the following advantages: it must connect properly so that the filter network is functioning (interference suppression to the mains and vice versa) and it protects the component against overstrain (e.g. 380V instead of 230V). A neutral-break from the base means that there is a high tension in certain light grids on the load and thus cannot simply be transferred to the load. More so, Conson has deliberately opted for sustainable control components that can withstand 1000V.

### Power loss of a dimmer

The choice and quality of the components contribute to a minimal power loss of 1% to the load. Thus 10W for XP31LR with a full load of 1000VA, 6W for XP31CR with a full load of 600VA and 10W for XP31U with a full load of 1000VA. This loss of power must always be taken into account. This generates heat dissipation in the enclosure and can be removed through natural ventilation.

### Important remark:

Always insert the dimmers at the bottom of the enclosure. Thus, this cannot be heated by other components.

### Potentiometer control

All dimmers type XP31 have a potentiometer input. This input is also a 1-10 VDC input. Between 0.75 and 10 VDC dimmer regulates itself from minimum to maximum and at 0.5 VDC it turns off.

### Automatic daylight-dependent level

All dimmers type XP31 have a daylight level and cooperation with a light sensor. Thus, it is possible to obtain a constant light-level at the workplace. This function can also be reversed. This is useful for example, to extend the day at bird farms or for the enlightening of advertising panels.

### Slave function

More dimmers of the type XP31 can be connected in parallel to the control level. Useful in banquet rooms with movable walls. When all the walls are pulled back, all buttons work similarly. Can also be used to control three-phase dimmable loads.

### Minimum and maximum level

Het minimum en maximum niveau is instelbaar via de rechtstreekse ingang of via de software ConTool. Het minimum instellen is bijzonder nuttig wanneer de lichtbron verdoken zit in zijn armatuur (men ziet de gloeidraad of andere niet, b.v. uplighters).

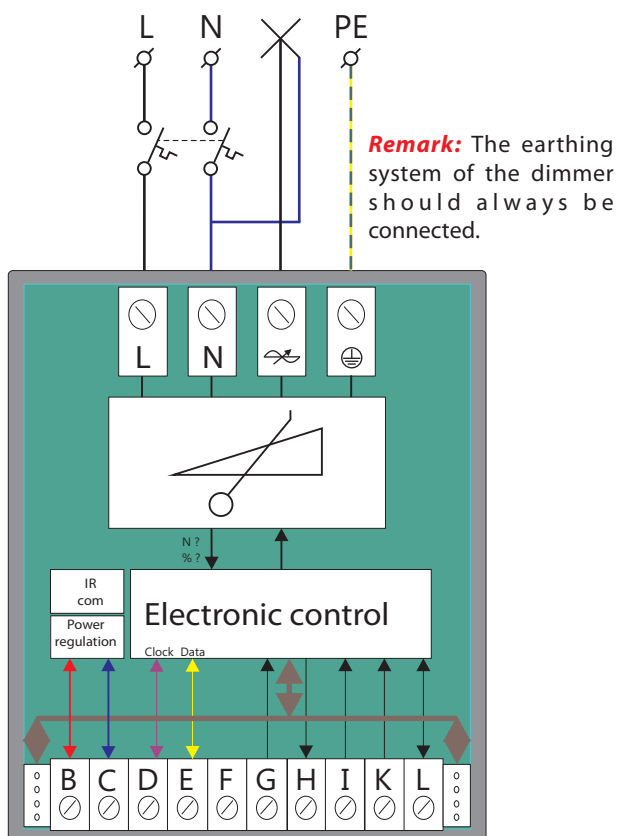
The minimum and maximum level is adjustable via the direct input or via the ConTool software. Setting the minimum is particularly useful when the light source is hidden in its armature (one cannot see the filament or others, e.g. uplighters). May also be useful for the minimum speed of fans. Through the ConTool software, one can decide that the first dimmer is directed towards the maximum, such that the engine get to its speed. The maximum is useful in terms of energy savings. The difference between 95% and 100%, is hardly visible.

## Connections high power of the XP31LR/CR/U/BC/BCU/DD

### Connecting the control line of the XP31BC/BCU/DD

#### Example with a XP31LR

Power-regulation



#### Important information:

The dimmer XP31BCU is a universal ballast controller. This type of ballast controller is particularly useful when it is not known in advance which load will be operated.

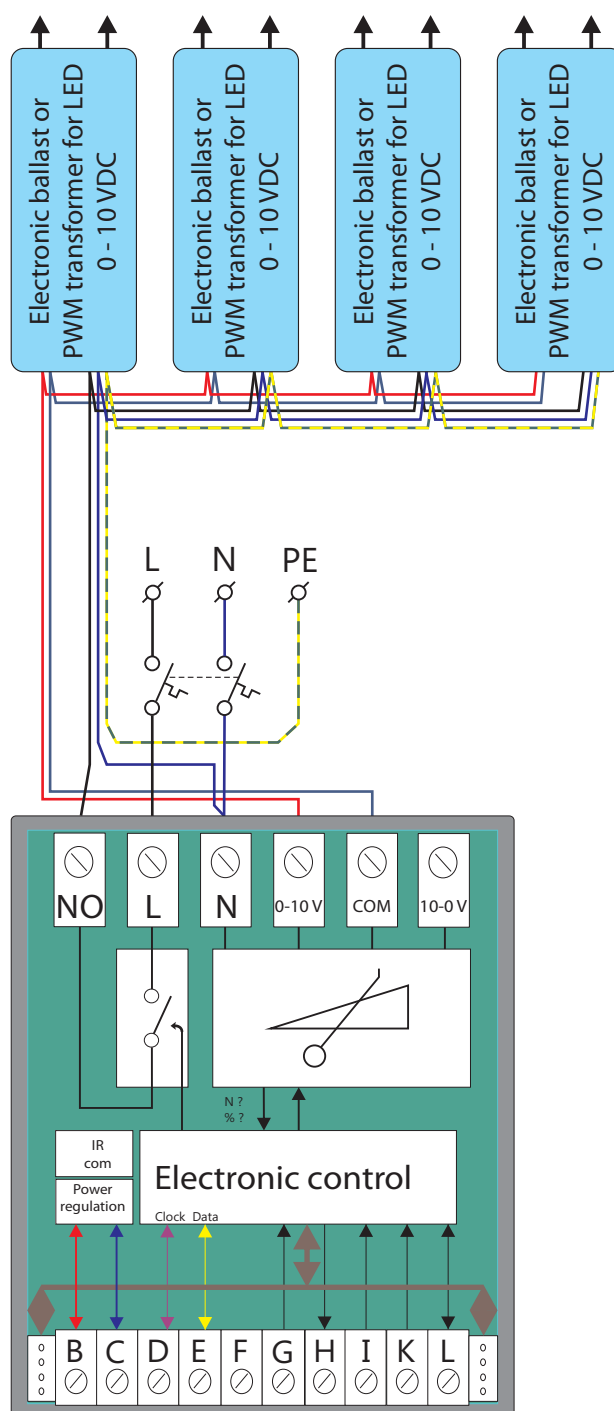
Through the ConTool software, the following modes of output signals are selectable: analog 0-10 V or 10-0 VDC or digital Dali or DSI.

**Be careful:** the analog outputs are located between terminals 5 and 6, the digital outputs between terminals 5 and 4. The terminal 5 is the common or the minus.

#### Example with a XP31BC

0-10VDC regulation

Outputs of the ballasts or others to various lamps such as fluorescent tubes, halogen lamps, LEDs.



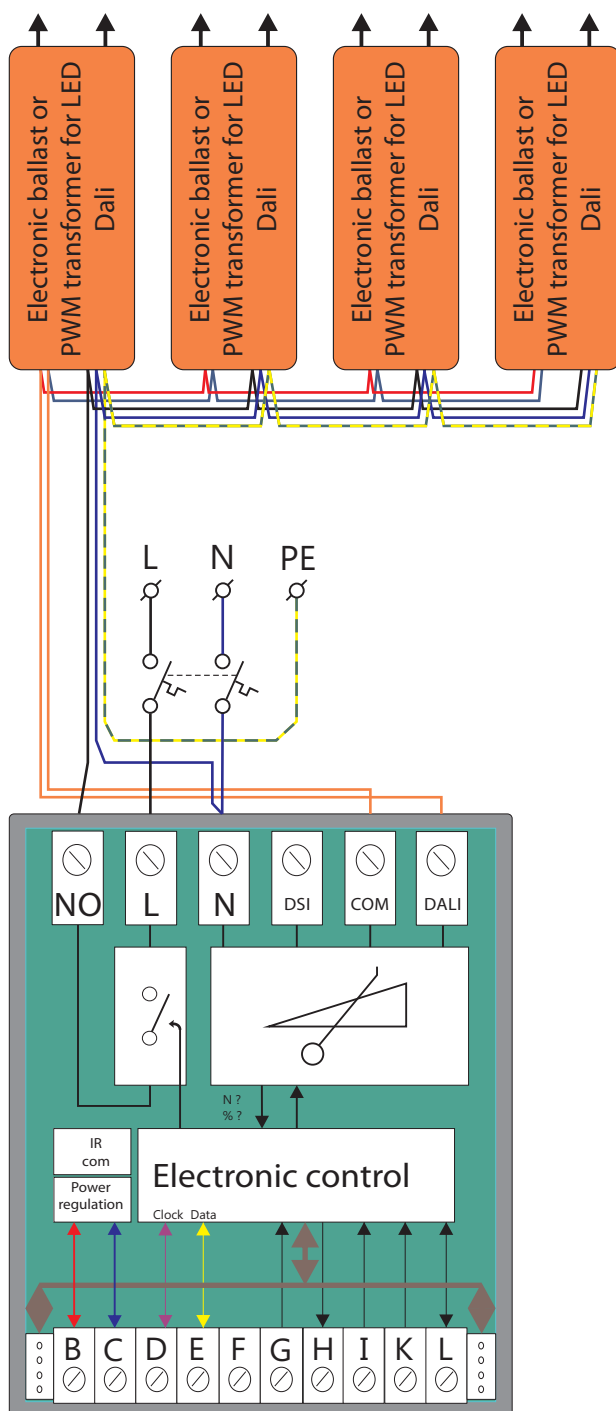
## Connections high power side of the XP31LR/CR/U/BC/BCU/DD

### Connecting the control line of the XP31BC/BCU/DD

#### Example with a XP31DD

##### Dali regulation

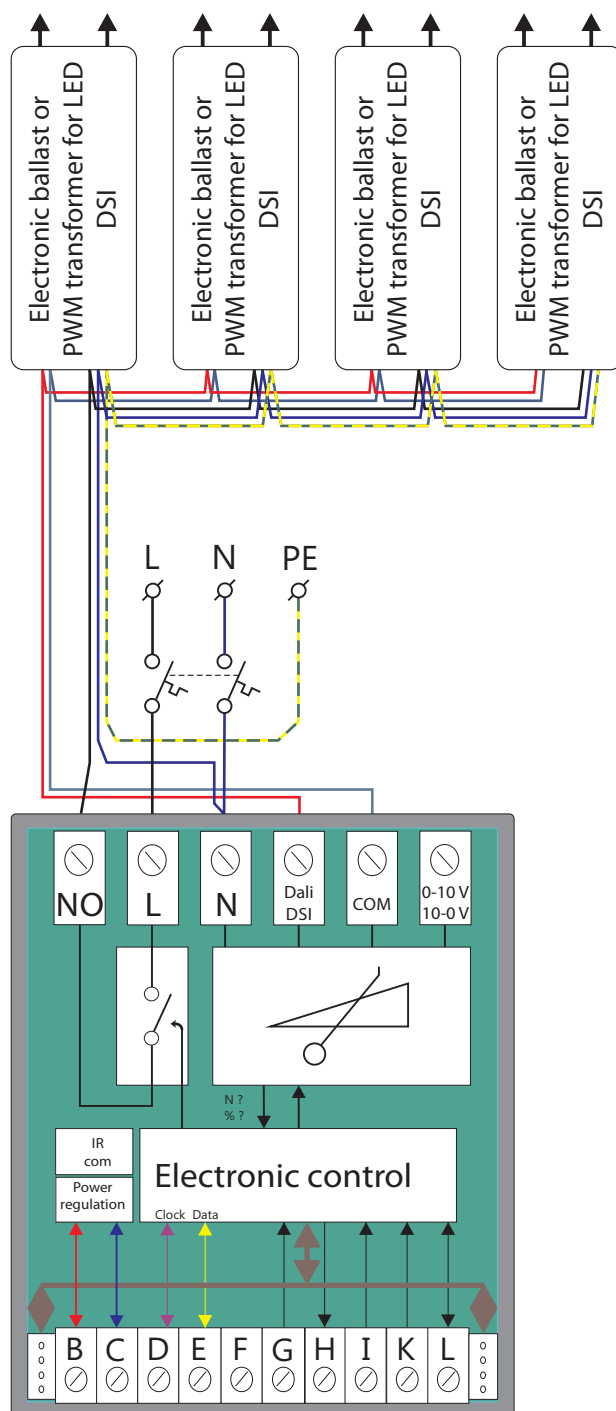
Outputs of the ballasts or others to various lamps such as fluorescent tubes, halogen lamps, LEDs.



#### Example with a XP31BCU

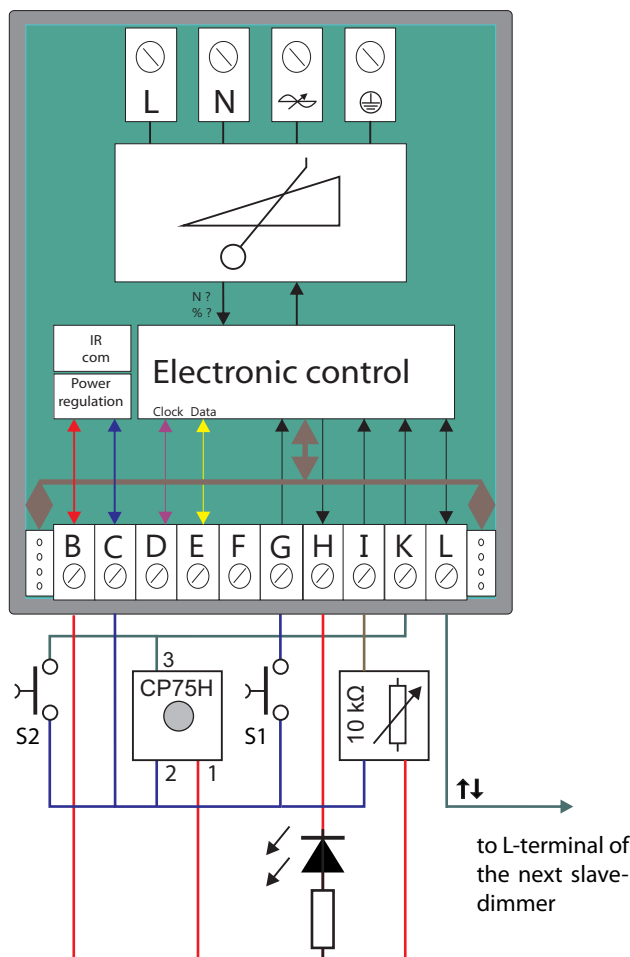
##### DSI regulation

Outputs of the ballasts or others to various lamps such as fluorescent tubes, halogen lamps, LEDs.



## Low power connections of dimmers XP31LR/CR/U/BC/BCU/DD

### Control via the direct inputs



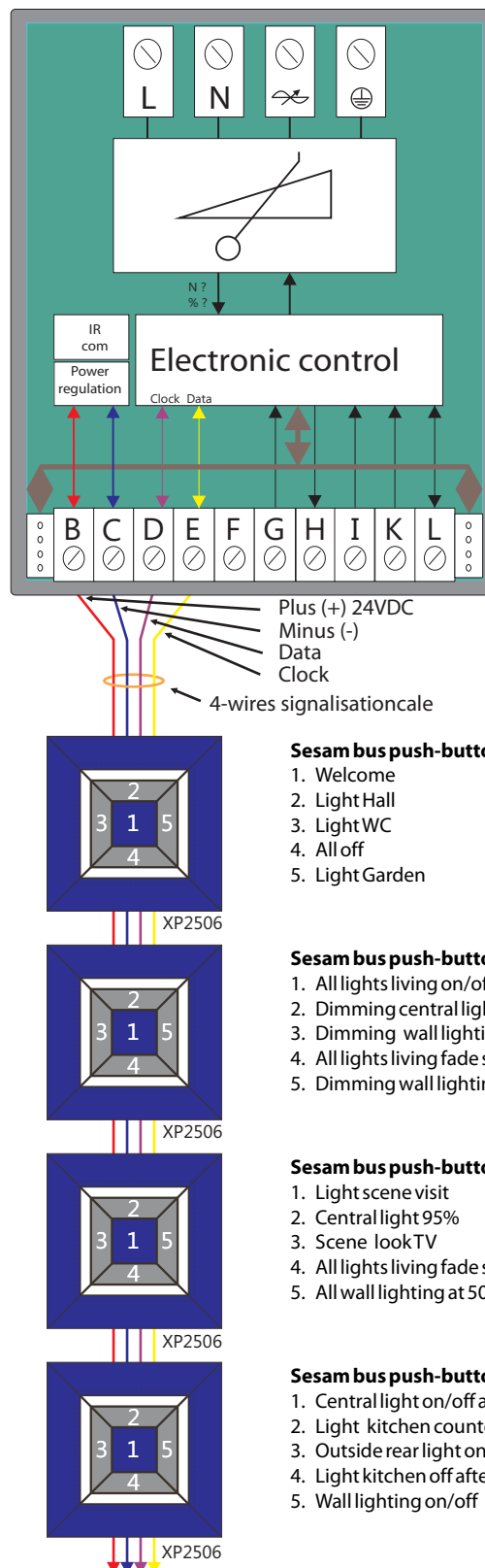
S1 push-button dimming and on / off  
S2 push-button automatic daylight level on / off

**Note:** The potentiometer-input (terminal I) is also a 1 -10 VDC input. Between 0.75 V and 10 V control from minimum to maximum at 0.5V dimmer off.

### Setting minimum and maximum

By connecting the push-button S1 to the direct impulse input of the dimmer, it is possible to set the minimum and maximum light level. Following method: Keep pressing the push-button S1 when dimming downwards to the zero-level. Continue pressing the pushbutton until the dimmer naturally goes to a 100% light level (about 20 s). Then, while dimming, set the maximum light level. When the maximum level is set, give a short impulse and the light goes out. Press the button again and set the minimum light level. Then, again, give a short impulse, the light goes out. Again, give an impulse, the light goes on in its set minimum. After 10 seconds the light goes out, the dimmer has its minimum and maximum stored.

### Control by the Consonbus



#### Sesam bus push-button in Hall

1. Welcome
2. Light Hall
3. Light WC
4. All off
5. Light Garden

#### Sesam bus push-button 1 in Living

1. All lights living on/off
2. Dimming central light
3. Dimming wall lighting left side
4. All lights living fade slowly out
5. Dimming wall lighting right side

#### Sesam bus push-button 2 in Living

1. Light scene visit
2. Central light 95%
3. Scene look TV
4. All lights living fade slowly out
5. All wall lighting at 50%

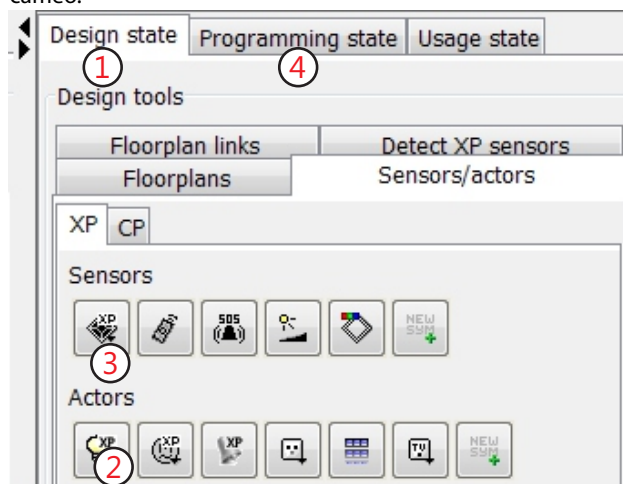
#### Sesam bus push-button in Kitchen

1. Central light on/off and at 50%
2. Light kitchen countertops on/off
3. Outside rear light on/off
4. Light kitchen off after 15 sec
5. Wall lighting on/off

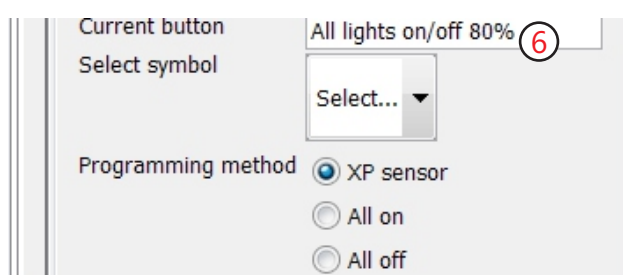
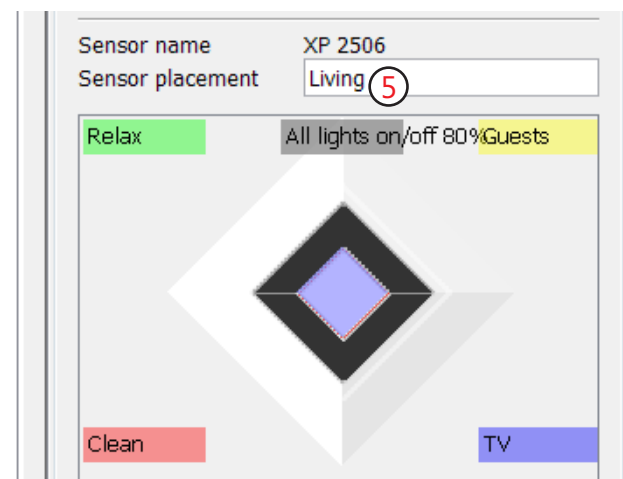


### Programming XP31 in the Concept 2000 Xp

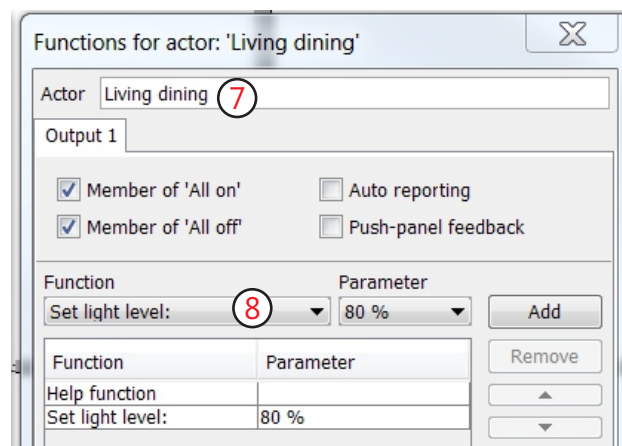
Open ConTool software - add a floor plan - choose tab "Design state" - choose tab "Sensors/actors" (1) - Place the following components on the floor plan: select at the symbol "Lamp" (2) an actor XP31LR for the dining area and an actor XP31LR for the sitting area - select at the symbol "push-buttons" (3) a sesame push-button XP2506. Select the "Programming state"-tab (4) - select the XP2506 on the floor plan - it will appear in the right cameo.



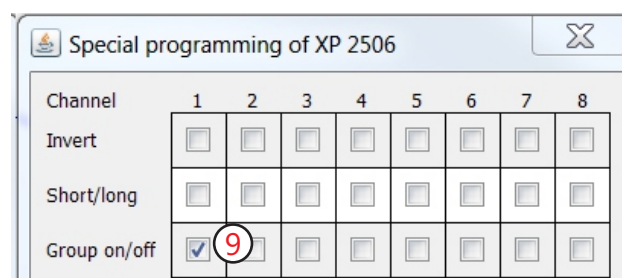
Specify a location for example, living room (5). Select the center push-button (it changes color from white to purple = active key) and write its function in the corresponding box: e.g. living room lights on / off 80% (6). At the bottom of the push-button panel, the programming method shows up automatically for the XP2506 sensor.



Click on the lamp of the dining area located on the floor plan. The "Functions for actor" "Circuit XP31LR" window opens. Change the actor-name (7) into the name "Dining area". Choose within the drop down menu (8) the action "Auxiliary relay" (Help function) and click "Add". Then choose the action "Adjust light level" and select 80% and click "Add". Click "OK" to exit. Click on the lamp of the living saloon located on the floor plan. The "Functions for actor" "Circuit XP31LR" window opens. Change the actor-name into the name "Sitting area". Add the actions similar to the light of the dining area and press OK.



Select on the floor plan the sesame push-button XP2506, right click and select "Module setup". The "Special programming XP2506" window opens. Place a check marker for channel 1 (9) on the line "Group on/off". Go to the front tab "Control box" and click "Upload". The data are sent to the two dimmers XP31LR.



Click again on the front tab "Floor Plan" and select in the right cameo "User's interface". Click in the floor plan on the XP2506. The center button is activated to operate and the lights go on at a light level of 80%, press again and the lights go out. Now only the sesame push-button needs to be activated. This can be done in different ways. Either by directly filling in the serial number into the "Special programming XP2506" window, or via "Design" - tab "Insert XP sensors" - drag XP2506 from the list to the XP2506 on the floor plan and allow the serial number to copy.

The above method of programming is reflexive for all actors and sensors of the Concept 2000 Xp

## The various actions

<b>Impulse</b>	When pressing and pressing again, the actor goes on/off.
<b>Impuls + x-time</b>	When pressing and pressing again, the actor goes on/off. By non-pressing again the actor goes out after x-time.
<b>On</b>	On means actor on.
<b>On + x-time</b>	On with a x-time means actor on for x-time.
<b>Off</b>	Off means actor off.
<b>Uit + x-tijd</b>	Off with a x-time means actor off after x-time.
<b>Block</b>	Blocking means when a certain actor is blocked by a specific channel of a link, that as long as this channel is active, the actor cannot be operated. Thus, for example, locking certain push-buttons on alarm.
<b>Auxiliary relay</b>	Auxiliary relay means when pressing a push-button (or door contact) that the actor goes on and goes off when unloading the actor.
<b>Auxiliary relay + next line x-time</b>	See groups on/off description XP20.
<b>On after + next line for x-time</b>	On after x-time means actor on for x-time.
<b>Light up/down</b>	Sending the light level upwards with a certain %. Sending the light level downwards.
<b>Light level up (%) down (%)</b>	Sending the light level upwards with a certain %. Sending the light level downwards with a certain %.
<b>Set light level at x - %</b>	Set the light level on a certain percentage.
<b>Set fade-time</b>	Set fade-time in x-time (from 0.5 sec until 120 min).
<b>Set controle method</b>	Choice between potentiometer, daylight-dependent or invert daylight-dependent.
<b>On after</b>	Start after x-time (from 0.5 sec until 120 min).
<b>Random timer</b>	Will be discussed in a later edition.

## Programming special functions

### To Fade

It is possible to regulate the light level to slowly to move up or down over time, this to a certain percentage or completely off. Next working method: Choose a push-button that has to perform the function. Click on the circle of light that it must perform. The actor window opens. Select the action "Adjust light level": (1) choose parameter e.g. 95% (2) and click "Add" (3). Then select "Set fade time" and choose the parameter 10 min, resulting in (4), click on "Add" (3) and close with "OK" (5).

Functions for actor: 'Living saloon'

Actor: Living saloon

Output 1

☒ Member of 'All on' ☐ Auto reporting

☒ Member of 'All off' ☐ Push-panel feedback

Function: Toggle (1) Parameter: 0 sec (3)

Add (3)

Function	Parameter
Set light level:	95 % (2)
Set fade time:	10 min (4)

Remove

OK (5)

To fade downwards, take another push-button, and perform the same routine, but then to a level of light that is smaller, for example, 20% (6). To fade downwards and then completely off, add an action line Off (time): 10 min (7). **Remark:** The fade-time is the time to go from 0% to 100%. When the dimmer is set at 50% and one asks to go up to 100%, dimmer at 50% to 100% and asks to go, then the duration of the fade-time only is one half.

Functions for actor: 'Living saloon'

Actor: Living saloon

Output 1

☒ Member of 'All on' ☐ Auto reporting

☒ Member of 'All off' ☐ Push-panel feedback

Function: Switch off (time): (7) Parameter: 10 min (7)

Add (7)

Function	Parameter
Set light level:	20 % (6)
Set fade time:	10 min
Switch off (time):	10 min (7)

Remove

OK (7)

## The different actions

### Daylight depended light control

Will be discussed in a later edition.

## Technical data

### XP31 LR/CR/U/BC/BCU/DD

#### High power

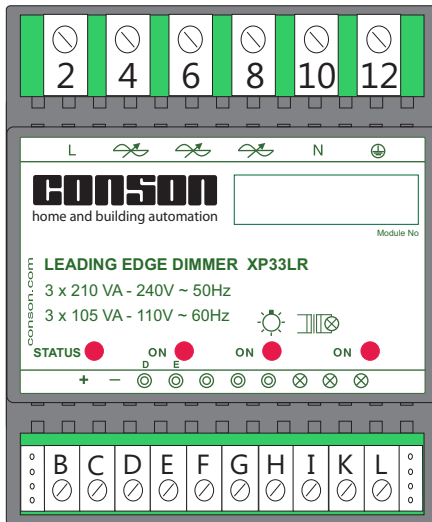
Power supply	110/230VAC 50/60Hz
Minimum and maximum load	
XP31LR	40 - 1000VA
XP31CR	0 - 600VA
XP31U	40 - 1000VA
Own loss	< 1%
Rise time (soft start)	500 ms
Off time	750 ms
Fuse that has to be used	upto 10 A

#### Low power

Current decrease at rest at 24VDC	10,8 mA
Consumption at rest at 24VDC	0,026 W
Input current of all inputs	0,5 mA
Impulse time all inputs	between 50-300 msec

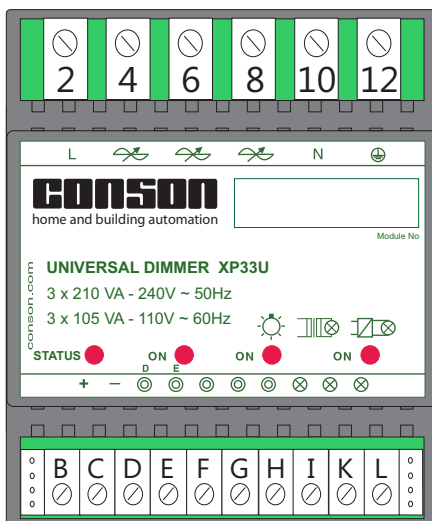
#### Mechanical data

Montage	Din-rail DIN46277
Measurements	85x70x72 mm

**XP33LR: Three-channel dimmer 3x240 VA ohms inductive**

EAN-Nr.:5703513058982

XP33LR is a 3-channel dimmer for dimming resistive and inductive charges. The XP33LR regulates logarithmically and has a built-in soft-start, thermal protection and reporting of neutral interruption. The total power of the three channels is 640 VA. One channel can take 500 VA, and the rest is has to be distributed to the other two dimmers. The XP33LR owns 5 immediate impulse inputs, three in order to dim of the three channels, one to dim all three together and on/off, and one to select from four preset scenes. At commissioning of the data-bus, up to 99 programmed functions are performed for the realization of modes, and this by using dimming actions by percent, up and down, time and fade functions.

**XP33U: Three-channel dimmer 3 x 210 VA ohms inductive capacitive**

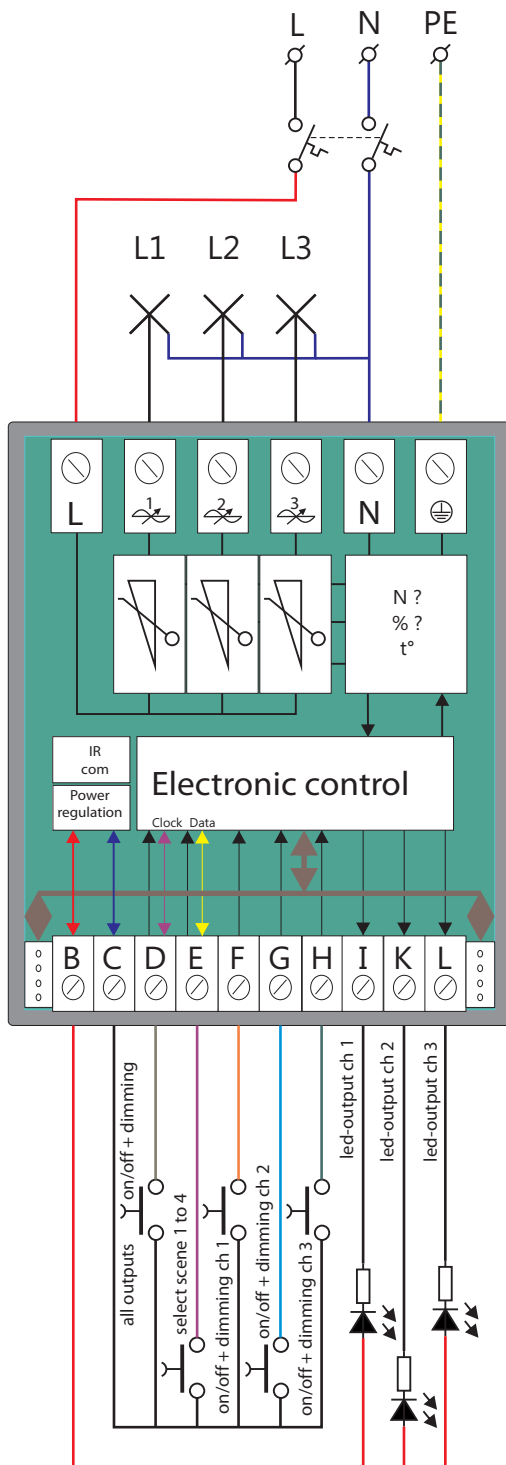
EAN-Nr.:5703513057749

(If not available to replace XP33LR)

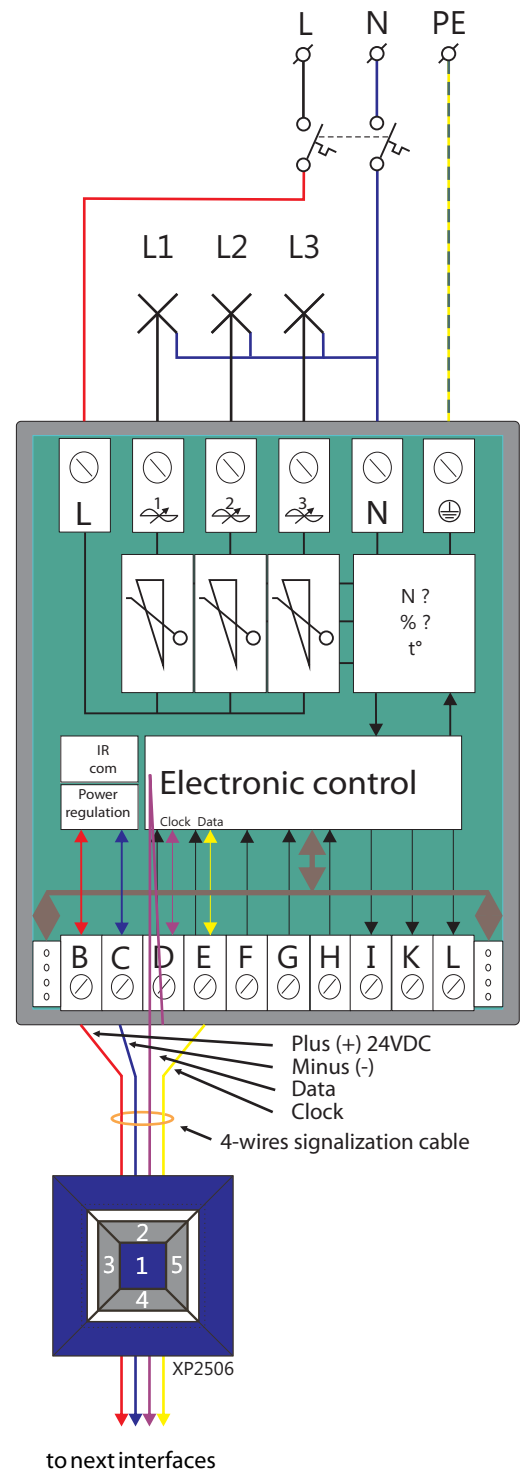
XP33U is a universal 3-channel dimmer for control of resistive, inductive and capacitive loads and short-circuits. The XP33U regulates logarithmically and has a built-in soft-start, thermal protection and reporting of neutral interruption. Each of the three channels can control a load of up to 210VA. The XP33U owns 5 immediate impulse inputs, three for dimming the three channels, one for dimming all three together and one to choose from one of four preset scenes. At commissioning of the data-bus, up to 99 programmed functions are performed for the realization of modes, and this by using dimming actions by percent, up and down, time and fade functions.

## Connections of the XP33

**Connections high power of the XP33**  
**Connections low power: control via direct inputs and LED outputs**



**Connections high power of the XP33**  
**Connections low power: Control via the Consonbus**





## General characteristics of the XP33-dimmers

Dimmers XP33 have a microprocessor for progressive regulation. Special features inter alia, soft-start, adjustable fade-in and fade-off times, thermal security, logarithmic arrangement, potentiometer-control, analog daylight-dependent control, slave control, security against neutral-break and a minimum and maximum setting without adjustment-potentiometers.

### Softstart and fade-in and fade-out

When switching on the dimmer, the output voltage goes from zero to the last used or desired level and this according to a certain amount of time defined in the software of the module. This working method prevents brutal interference on the mains when switched on and extends the life of the lamp. In addition, a timely limitation is ensured by a short-circuit during the breakage of the filament. The fade-in and fade-off times can be accessed via the bus and this with actions ranging from 5 seconds to 2 hours.

### Thermal protection

This limits the temperature inside the module. The level of limitation is dependent on the type of dimmer. If this temperature is exceeded, the dimmer sends an SOS signal. Because of the SOS signal, the LED-dimmer flashes in rhythm of 3 x short and 3 x long. This signal is also present at the output of the LED-dimmer module. During the SOS signal, the output level is adjusted downwards. The reset is done by activating the impulse input of the dimmer for 20 seconds, or by removing the power supply voltage 24 VDC. This protocol can be different according to type of dimmer.

### Protection against short-circuit

The dimmer of the CR and U are short-circuit proof. The power of these dimmers is controlled by the power mosfet-transistors. These are fast enough to switch off their load.

### Logarithmic control

The dimmers have a logarithmic regulation which ensures that, when being operated, an ergonomic feeling arises between the operation and the determination of the light variation.

### Protection against neutral-break

A disconnected or interrupted neutral is indicated by the LED on the dimmer. This light flashes rhythmically, followed by a long pause. In this mode, the dimmer will not work. These security includes inter alia the following advantages: it must connect properly so that the filter network is functioning (interference suppression to the mains and vice versa) and it protects the component against overstrain (e.g. 380V instead of 230V).

A neutral-break from the base means that there is a high tension in certain light grids on the load and thus cannot simply be transferred to the load. More so, Conson has deliberately opted for sustainable control components that can withstand 1000V.

### Power loss of a dimmer

The choice and quality of the components contribute to a minimal power loss of 1% to the load. Thus, the power loss depends on the load used. The larger the load, the higher the power loss. With LED lighting, this is negligible in practice. However, the power loss of a dimmer must always be taken into account. It develops heat inside the electrical enclosure and can be discharged by natural ventilation.

### Important remark:

Always insert the dimmers at the bottom of the enclosure. Thus, this cannot be heated by other components.

### Minimum and maximum level

The minimum and maximum level is adjustable via the direct input or via the ConTool software. Setting the minimum is particularly useful when the light source is hidden in its armature (one cannot see the filament or others, e.g. up-lighters).

May also be useful for the minimum speed of fans. Through the ConTool software, one can decide that the first dimmer is directed towards the maximum, such that the engine get to its speed.

The maximum is useful in terms of energy savings. The difference between 95% and 100%, is hardly visible.

### Scene control

The purpose of the XP33 dimmer is to use this dimmer in one and the same room where 3 elements are installed. It is easier to program four different scenes (modes) in advance and ensure that they can be recalled in a fairly simple way. Thus, the user does not always have to push several buttons. Scenes such as watching TV, cleaning the room, reading a book, dining, etc.. If one needs only 2 points of light in a room, one can isolate the third output of the other two outputs. How to proceed is described below.

## Programming the dimmers XP33 via ConTool

Start the ConTool program and create a new project. As an example, we take the project „Villa Seascapè“. The entered names are fictitious, but serve as a guide through the example. Place a checkmark in the „Off line“(1) and then press „OK“(2).

The ConTool-program starts with a blank worksheet. Before continuing, it is necessary to add a floor plan. In our example, by means of the Windows Explorer, a floor plan was copied to the „Floor Plan Images“ directory. This directory is located in the root directory of the ContoolXP.

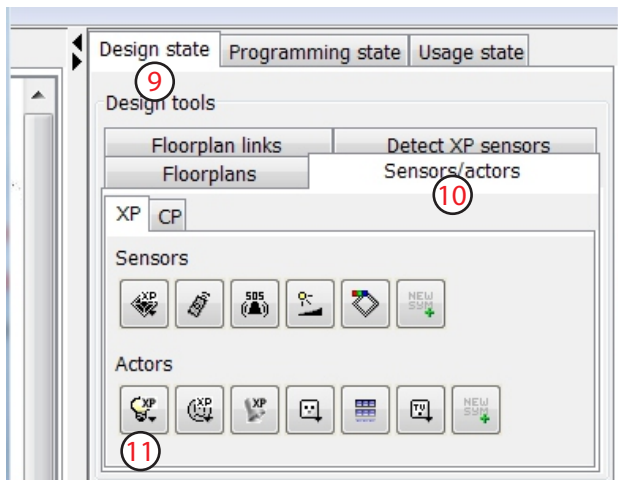
Remark: The file extension may be one of the following: jpeg, gif, jpg, or bmp. The most CAD-programs can perform this conversion. A drawing on paper may also be used by simply photographing and copying the drawing beneath the above directory.

In the right pane, click on „Add“(3) and a standard floor plan appears on the worksheet. If the floor plan is charged, then proceed as follows: Choose the button „...“(4). A window „Open“(5) appears. Select the desired floor plan. Press „Open“(6).

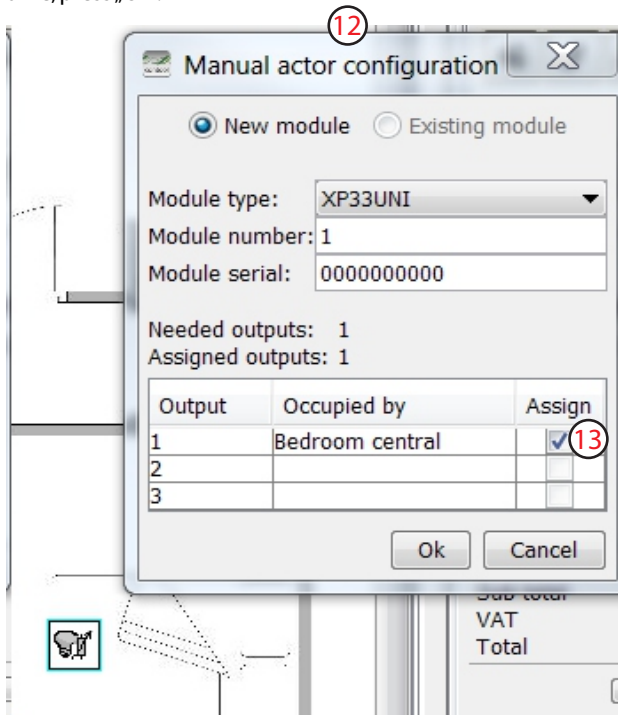
After pressing „Open“(6), a window with the message „Select Import Size of Image“ appears again. The size of the floor plan can be customized. The most simple choice is „Stretch to fit (hidden right panel)“. Press „Ok“(7). The floor plan appears and this at full screen width. With the arrows (8) on the left at the height of the right panel one can change the screen content and the size. Only the floor plan or only the right panel, or both. Clicking on the arrows or dragging the left side of the right panel.

## Programming the dimmers XP33 via ConTool

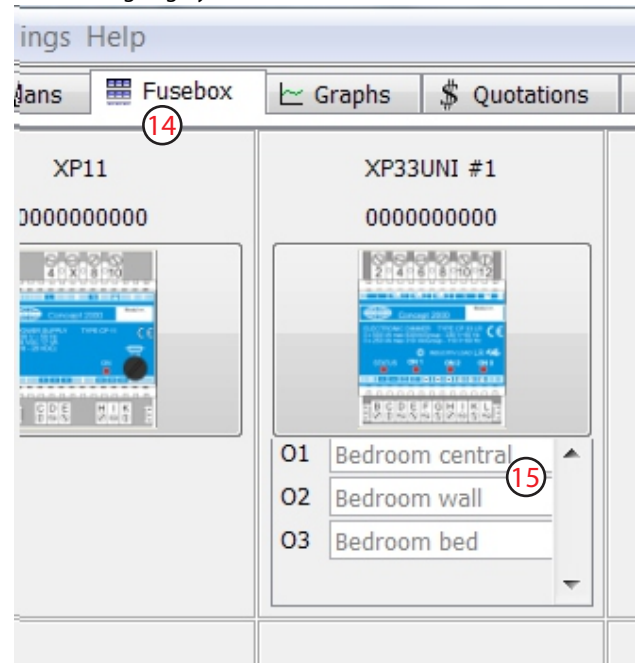
At the top left of the tab select „Settings“ and a drop menu appears – add a check mark at „Automatic connection“. Go to the „Design state“ (9) tab - select the tab „Sensors/actors“ (10) – click the selection button „Actors lamp Xp“ (11) - a drop down menu opens, select „XP33 lamp“ - now drag this lamp to the floor plan, click on the place where it should be located. Do this three times, see below. As long as the mouse pointer can be seen on the floor plan, it is to place a lamp. Once the pointer is outside the worksheet, the working stops. By using the mouse, an item can always be moved.



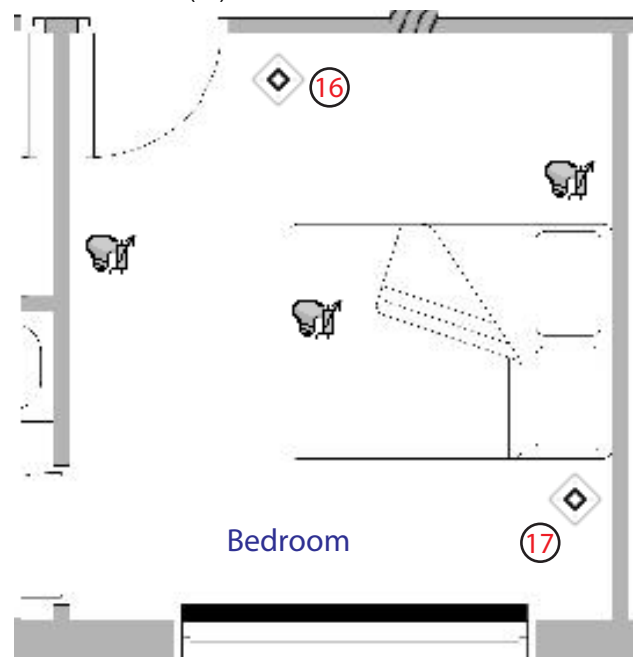
Due to the fact that in „Settings“ the program is not set to „Automatic connection“ a window (12) always is opened after placing a circle of light. Place a checkmark next to the first output of the XP33 (13) and give it a name, e.g. Central SLK 1. Do the same for the wall light and the light above the bed. Each time, press „Ok“.



At the top, select the tab „Fusebox“ (14). A XP33-module appears. The outputs (15) report their location. These are written in light-gray.



Return to „Floorplans“ – „Design state“ – „Sensors/actors“ - click on the selection key pushbuttons Xp - choose a Bus-pushbutton XP2506 and drag it to the floor plan and place it at the door entrance (16) of the bedroom 1. Insert also a XP2506 at the left of the bed (17).



**Remark:** It is useful to save the project from time to time. Select the tab „File“ and „Save“.

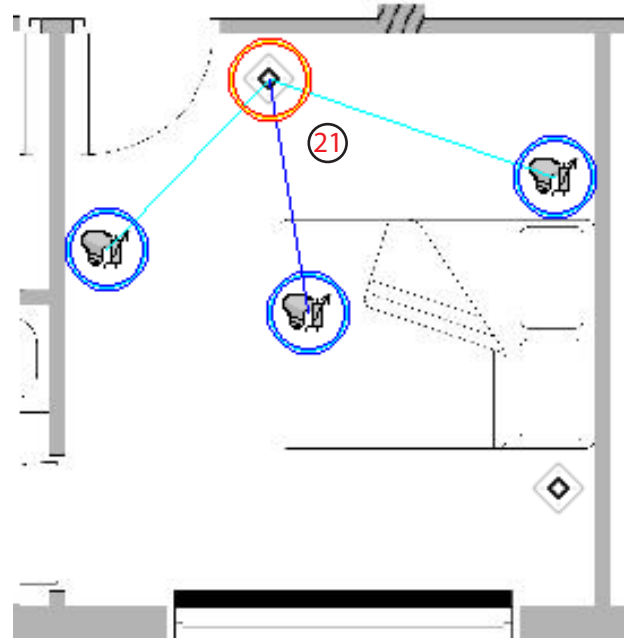
## Programming the dimmers XP33 via ConTool

Go to „Programming state” and select the bus-pushbutton at the door entrance of SLK 1. The following window appears.

Enter the location (18) „Bedroom door” and select the middle button of the XP2506. As long as no location is specified, one cannot continue the procedure. A warning screen will appear. By clicking on the middle button, it takes on a purple color. The default name is „GO”(19), but it can be replaced by „Welcome to the bedroom”. When this button is activated, it means that one can address an actor. Select the lamp „Central SLK2” and the actor XP33-window opens. Choose the „Scene 1”(20) function and press „Ok”.

On the floor plan (21) is graphically shown that there is a relationship between the center pushbutton and three light circles in the bedroom.

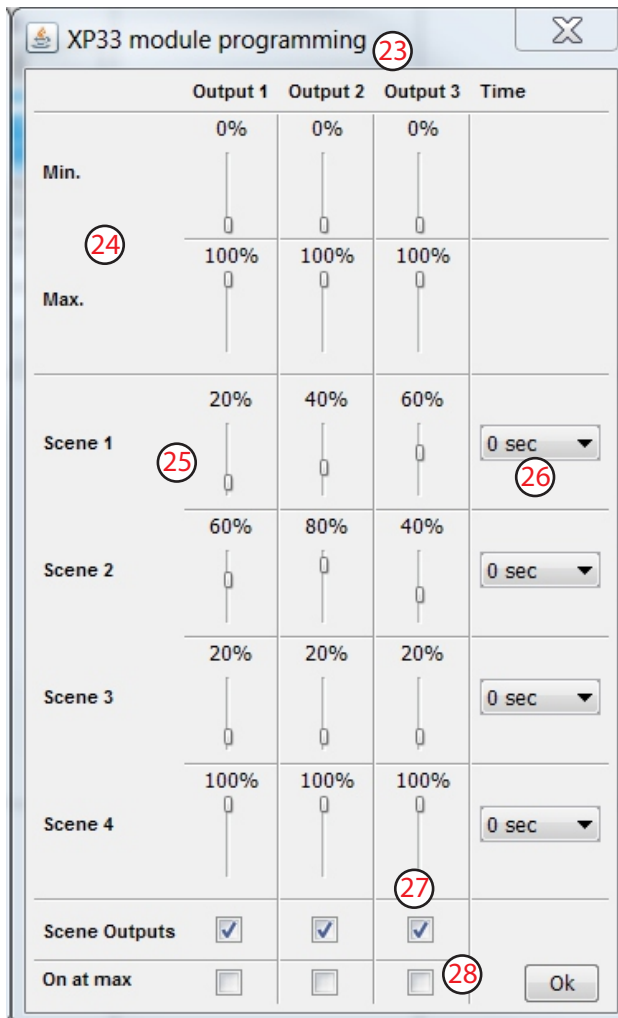
Press the top left button and name it „All 100%”. When this button is activated, it means that one can address an actor. Select the circle of light „Bedroom wall” and the actor XP33-window opens. Choose the „Scene 2”(22) function and press „Ok”.



And one can go on for the other pushbuttons. With the push button right below, one can simply turn off all the lights by granting, one by one, the action „Off” to the three circles of light. Hereafter follows how various scenes are set.

## Programming the dimmers XP33 via ConTool

Go to the tab „Fusebox” and right click on the XP33 - a menu appears - select „Setup Module” - The „XP33 module programming”(23) opens.



The different scenes (25) from 1 to 4 can be set with the sliders of the three outputs. In our example of the bedroom, scene 1 was assigned to the middle button. Adjust the sliders so in accordance with the result that gives the best impression when entering the bedroom.

With the establishment of the fade time-scene (26) one obtains a soothing effect to go from one scene to another. This can be useful in a bedroom when one awakens or goes to bed simply by choosing a low-light-level scene while the action „Off after X-time” is ascribed to all three outputs, possibly with different durations. The check-boxes (27) of the outputs have to isolate one or two outputs of the various scenes. The check-boxes (28) can ensure that a certain output starts at the maximum and not at the last memorized light level.

## Technical data

### XP33LR/U

#### High current

Power supply	110/230VAC 50/60Hz
Minimum and maximum load	
XP33LR	Total maximum of the three outputs: 640 VA
XP33U	Maximum of one output: 500VA – rest has to be distributed 3 x 200 VA
Own loss per output	< 1%
Rise time (soft start)	500 ms
Off time	750 ms
Fuse that has to be used	maximum 10 A

#### Low current

Current decrease at rest at 24VDC	10,8 mA
Consumption at rest at 24VDC	0,026 W
Input current of all inputs	0,5 mA
Impulse time all inputs	tss 50-300 msec

#### Mechanical data

Montage	Din-rail DIN46277
Measurements	85x70x72 mm

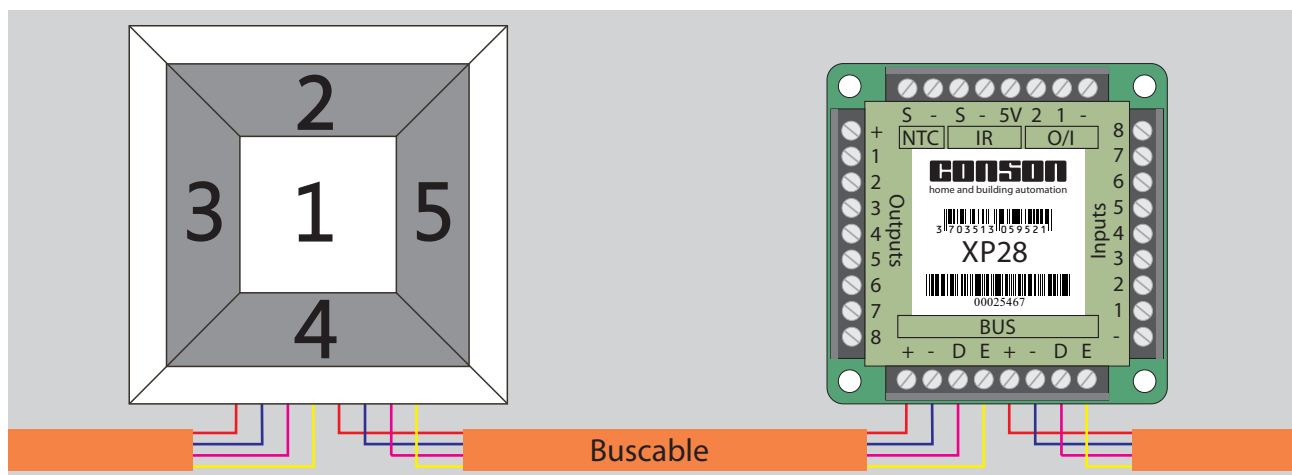


## Bus-pushbuttons XP2506

- XP2506** 5703513056223  
Bus-pushbutton with five buttons, five LEDs and input NTC, Sesame-function
- XP2506A** 5703503056353  
Bus-pushbutton with five buttons, five LEDs and input NTC, Sesame-function but with IR-eye for remote control 38kHz
- XP2506B** 5703503056483  
Bus-pushbuttons with five buttons, five LEDs and input NTC, Sesame-function but with IR-eye for remote control 455kHz (for example, Beo4 remote control)

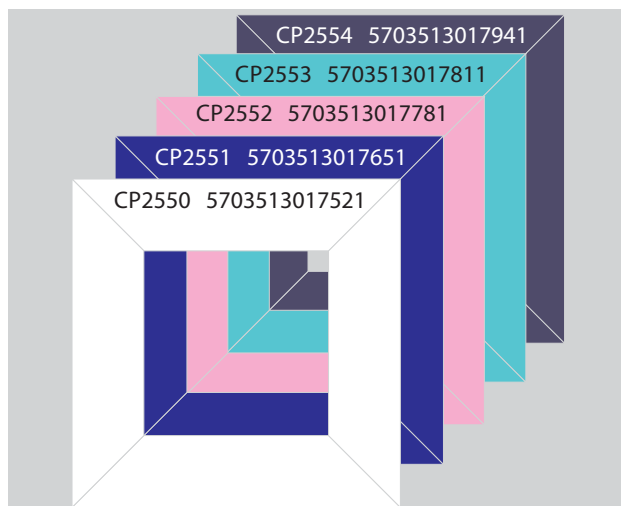
## Interfaces for bus-pushbuttons XP28

- XP28** 5703513059521  
Interface with 8 inputs for pushbuttons and other 8 outputs to drive LEDs and other NTC for temperature measuring two I/O's
- XP28A** 5703503059781  
same characteristics as the XP28 but for reception infra-red remote controls 38kHz
- XP28B** 5703503059781  
same characteristics as the XP28 but for reception infra-red remote controls 455kHz (Beo4)



The bus-pushbuttons have two 4-pin connectors. In the Concept 2000XP, one has the freedom to start multiple buses from the electrical enclosure. There can be a bus for the ground floor, one for the first floor, one for the attic rooms, one for the closed porch, etcetera. The use of multiple buses has a great advantage in terms of operational reliability. One bus cannot disturb the other and there is a better power distribution when using LED-feedback or other.

### Kaders voor de XP2506



The application of the bus-pushbuttons XP2506 offers many benefits in terms of wiring and possibilities. The combination pushbutton and its frame has a modern look. Where it does not fit in the interior, a different type can be simply chosen.

There are plenty of manufacturers of pushbuttons on the market such as Niko, CJC Systems, BTicino, Legrand, Simon, Berker, Gira, etcetera, and, commissioned by an architect, it is possible that one of those types is assigned.

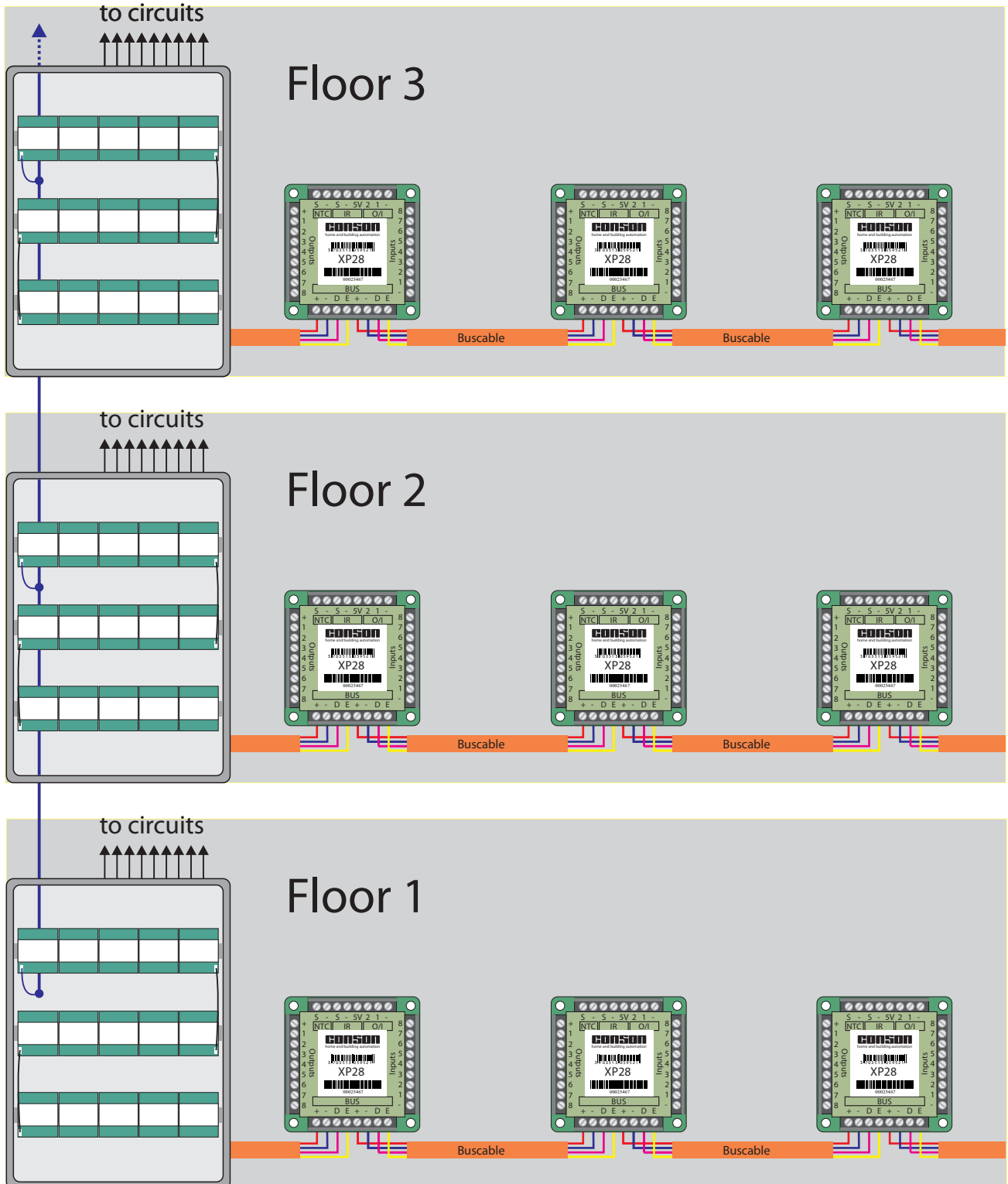
The solution is then the use of the XP28 interface. Conson is essentially about what happens in the electrical enclosure.

Whether the choice is a single or multiple pushbutton-panel with or without LEDs, the XP28 interface provides the solution. The XP28 can, for example, control four pushbuttons in the entrance hall, one at the door of the toilet and three in the garage. It suffices to place only one interface in the wall box of the entrance hall and to wire the other locations from this interface.



## Example of the application of the Concept 2000XP in a building

Imagine the following situation: There are several floors in a building that should be operated in their entirety. On each floor there is a switch, but each has its own power supply and various relay- and dimmer-modules. In the electrical enclosure of level 1 is a gateway XP130 or a gateway XP230. In the Contool-software, different floor plans can be brought in. Each floor allows to be programmed and controlled. The communication between the different electrical enclosures happens through the Conbus (local bus) of each enclosure in order to connect with each other. This can be done with e.g. UTP cable. Connect only the minus, the data and the data-XP. At long distances, it is necessary to close both data-busses with two resistors of 4.7kOhm to the plus.



### Example of programming IR 38 kHz

The interfaces of type A can be used to control an installation via an IR remote control 38 kHz. The coding of this standard infra-red signal originates from an industrial standard developed by Siemens. In total, there are 512 codes (IR-commands). Conson has divided these codes into 16 groups of 32 channels. Group 1 corresponds to the IR-links 1, 2, 3 and 4. Being the channels 1 to 8, 9 to 16, 17 to 24 and 25 to 32. The programming CP79 operation of the old Concept 2000 can send out these 32 channels. There are several providers on the market that have these codes, including a Logitech touch-screen remote control or remote controls with the learn-function-code. A special remote control is the Siemens IR-64K STC6120. It has the ability to set the different groups and the channel range from via coding jumpers. For example: Group 2 and codes 40-47. See table below. The remote control with this code will thus react with the A-interface programmed with the selection circuit 2 and the allocated channels 9 till 16. If, for example the 8-channel remote control is used, up to 64 controllers can be used in a system (512 divided by 8).

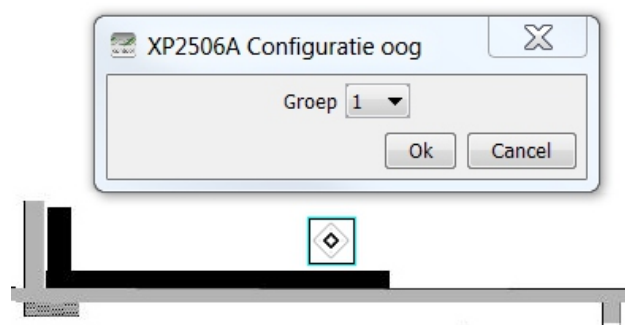
Table Group 1 for an 8-channel remote control

Toets Nr	1	2	3	4	5	6	7	8
Code	0	1	2	3	4	5	6	7
Kanalen	1	2	3	4	5	6	7	8
Code	8	9	10	11	12	13	14	15
Kanalen	9	10	11	12	13	14	15	16
Code	16	17	18	19	20	21	22	23
Kanalen	17	18	19	20	21	22	23	24
Code	24	25	26	27	28	29	30	31
Kanalen	25	26	27	28	29	30	31	32

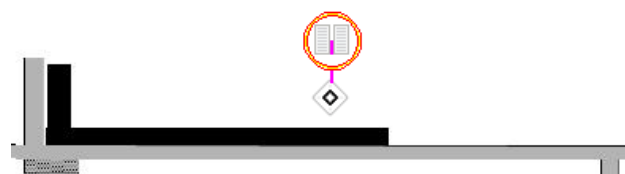
Table Group 2 for an 8-channel remote control

Toets Nr	1	2	3	4	5	6	7	8
Code	32	33	34	35	36	37	38	39
Kanalen	1	2	3	4	5	6	7	8
Code	40	41	42	43	44	45	46	47
Kanalen	9	10	11	12	13	14	15	16
Code	48	49	50	51	52	53	54	55
Kanalen	17	18	19	20	21	22	23	24
Code	56	57	58	59	60	61	62	63
Kanalen	25	26	27	28	29	30	31	32

When placing an XP28A interface or an XP2506A pushbutton-panel on the floor plan, a window "XP2506A Configuratie IR-eye" appears. The group is set default to group 1. Changing this group is only necessary when multiple remote controls are used. For special applications, a change is required.



After pressing OK the window disappears. Place the programming-control CP79 on the floor plan. Go to "Programming" and click on the control. You will be asked to select an IR-eye the floor plan. Thereupon, a connection between the control and the IR-eye appears and in the right window the list of the 32 control-channels opens.



The rest of the programming is the same as explained earlier and has each time the following steps:

Enter the location of the control and the various functions of the keys used.

If e.g. button 8 (Channel 8) "Mode Entrance hall light on".

When selecting, this turns purple.

Click on the light from the entrance hall and the window "Functions for actor: Entrance hall" opens.

Select "On" and click on "Add" and next on OK. Repeat for the other channels.

1	Zithoek mode TV
2	Zithoek mode bezoek
3	Eethoek lichten 95%
4	Eethoek lichten 20%
5	Buitenverlichting aan
6	Buitenverlichting uit
7	Keukenlicht aan/uit
8	Inkomhall licht aan
9	CP 79 - 9
10	CP 79 - 10
11	CP 79 - 11
12	CP 79 - 12
13	CP 79 - 13
14	CP 79 - 14
15	CP 79 - 15
16	CP 79 - 16
17	CP 79 - 17
18	CP 79 - 18
19	CP 79 - 19
20	CP 79 - 20
21	CP 79 - 21
22	CP 79 - 22
23	CP 79 - 23
24	CP 79 - 24
25	CP 79 - 25
26	CP 79 - 26
27	CP 79 - 27
28	CP 79 - 28
29	CP 79 - 29
30	CP 79 - 30
31	CP 79 - 31
32	CP 79 - 32

### Example of programming IR 455 kHz

The interfaces of type B can be used to operate an installation via an IR remote control type Beo4 of Bang & Olufsen.

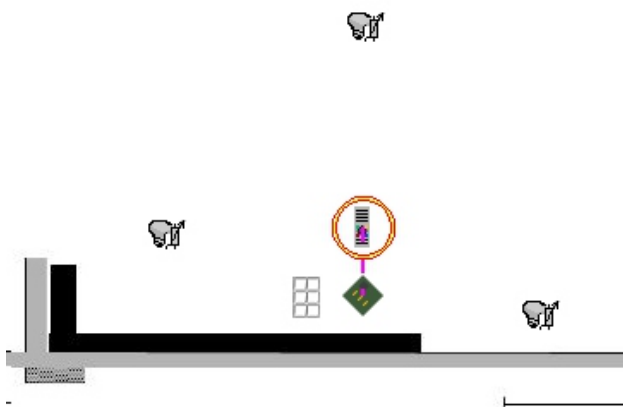
In the Concept 2000XP was thought off a wider and easier supply of control options.

The orders were divided into 5 groups. In a group, an order consists of a number combined with an action-button. The action-buttons are the pushbuttons with the single and double arrows (wind, rewind and step up and step down) and the Go-pushbutton.

In each group there are 12 numbers, of which each number can be combined with an action-button. This means that there are  $12 \times 5 = 60$  orders possible for each group. For group 0, five orders are added by the symbol keys green, yellow, blue, red and stop, that behave like a normal five-piece pushbutton-panel. A total of  $60 \times 5 + 5 = 305$  commands can thus be performed with a Beo4-control.

Group	Available keys
0	Symbol keys groen - geel - blauw - rood - Stop  Keys 0 - 11 in combination with actions keys wind - rewind - step up - step down - Go
12	Keys 12 tot 23 in combination with actions keys
24	Keys 24 tot 35 in combination with actions keys
36	Keys 36 tot 47 in combination with actions keys
48	Keys 48 tot 59 in combination with actions keys

Start the Contool software and upload a ground plan. Go to the tab "Design" and place a triple dimmer XP33LR on the floor plan, an interface XP28B, a 6-way pushbutton-panel and a Beo4 remote control.



When placing the interface XP28B the window „Configuration of the IR-eye“ appeared and the default installation “Group 0” was mentioned. Usually one group is sufficient. In a larger house, for example, one can select a group for the living room, a group for the bedroom, a group for outside, etcetera.

Select the „Program“-tab and click on the Beo4 remote control on the floor plan. The control is circled in red and in the window on the right appears the question „Select an IR-eye on the floor plan“.

Click on the XP28B-interface and a connection between the control and the interface will appear. An image of the keypad of a Beo4 appears at the same time.

Select the green symbol-key. This turns purple. Click on one of the lights controlled by the XP33LR. The actor window opens and now add the action „Select Scene 1“.

Do the same for the yellow, blue and red key, but for the scenes 2, 3 and 4 respectively. Select the button „Stop“ and click on a light. Add the action „Off“, optionally with time. In this way, the symbol-keys were commissioned.

Next steps include a numeric key in combination with an action.

Select key 1. This turns blue. Then, select the step up key. This turns brown.

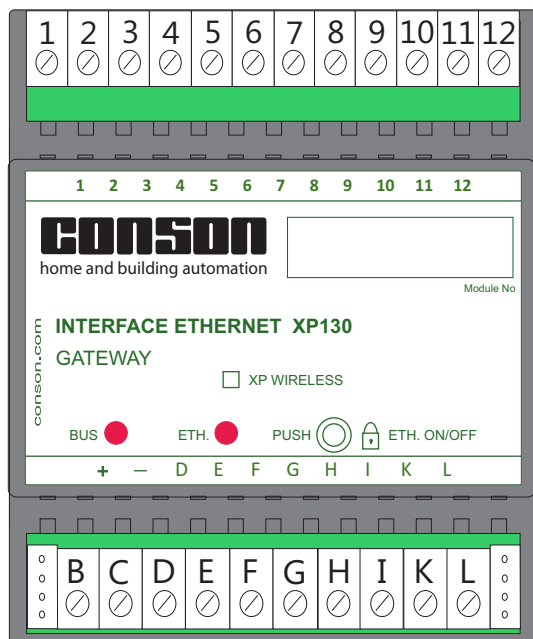
Select the lamp of the output 1 of the XP33LR. The actor window opens.

Add the action „Light level up“ and press OK. Select again key 1 and next the step down key.

Click again on the lamp of which the output 1 is one of the XP33LR.

The actor window opens again and add the action „Light level down“ and press OK. Repeat the process for the numbers 2 and 3 but respectively for the outputs 2 and 3 of the XP33LR. This allows the user to dim and to switch off the 3 elements of XP33LR separately using the stop-key or the user can call up the different scenes and adjust them by using the keypad.





XP130 EAN-Nr: 5703513055967

XP230 EAN-Nr: 570351

## Introduction

The gateway XP130 is used for programming an installation, that is constructed with the Concept 2000 Xp and this by means of the Contool software. Once the installation is programmed, it can be controlled and watched via a local network or the internet.

The structure of the XP130 is derived from the gateway CP485 of the Concept 2000 in combination with a TCP-connection. Thus, the system obtains an IP-address. By default, this address is 192.168.1.17. The IP-address can be changed through a browser. When changing the address, it is necessary to write it down in the file. When the data is lost, the IP-address can be traced using the „DeviceInstaller“-program of Lantronics. See the file „XP service tool.chm“ in the directory of the XP Service Tool.

The connection of the XP130 with the modules happens via a 4-pin bus-cable that delivers the power supply 24 VDC and that connects the two data lines. The modules of the Concept 2000XP possess one pin more than the modules of the old Concept 2000. This pin primarily serves to program the modules and to communicate with the modules to exchange information with the interfaces that are connected to the Consonbusses (See earlier description: Topography of the concept 2000XP).

The lower pin serves to send the data derived from the linking modules of the old Concept 2000 to the actors. In the new concept, the lower pin serves the clock-signal from the local bus.

To the clamps BCDE, a Consonbus can be started. This can only be done if the XP130 remains in the electrical enclosure. Regardless of where a Consonbus is connected, it may always be moved to another actor even after the programming.

## Internal structure and communication

The clamps at the bottom are the entries that were used in the Conlinx-system to recognize the associated LED-outputs or other of the Concept 2000. Ditto for the clamps 1, 2, 3 and 4 at the top. The clamps 5 till 8 are the temperature-inputs and the analog I/O. The characteristics of these may depend on the settings of the module. In the Concept 2000 Xp the above-mentioned clamps are unused.

The terminals 9 till 12 form an RS485 serial bus. This can be used to connect to the MLGW bus from Bang & Olufsen, via an RS485 to RS232 converter. By using the TCP interface, the system is coupled to the outside world. If this is coupled with a WiFi-device, it is possible to program and to control the system wirelessly. Modes and scenes can then be changed easily when one is in a given space.

When it is programmed over the internet, it is impossible to update the firmware of different modules. This was blocked for security reasons. The release is only possible by a human hand. Hence, the pushbutton is located in front of the module.

For an installer, servers and HTML-pages are not his field of knowledge. To rely on an IT-specialist was the only solution. To simplify everything, Conson has decided to take a different path, namely the one of the Apps. Thus, the XP230 was developed. The XP230 gateway is a combination of a XP130 with a server in which the data of the project will be saved. Thus, an installation can be controlled via a smartphone or other, and equipment does not have to be present.

Simply connect the XP230 to the router of the home or the building and the job is done. The XP230 and Apps are still in a testing phase. Thus, the XP130 will only be used in the future for programming an installation and others, and the XP230 when it should stay in the installation.

