CAR SYSTEM

FALLER

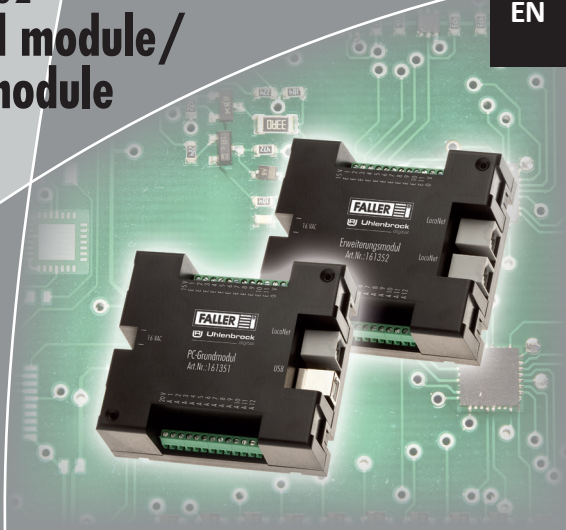
ajckids.com
planes trains automobiles

161351/161352
PC-Grundmodul/Erweiterungsmodul

DE

161351/161352
PC-standard module/ Expansion module

EN



Bedienungsanleitung
Instruction Manual

HO N

Contents

EN

1. FALLER Car System – It's going digital

Congratulations – You have found the right thing!

EN

With the control modules from FALLER digital series you are able right now to control all the functional elements present on your model installation via a digital control unit DCC or a personal computer.

The PC-standard module features 11 inputs and 12 outputs as well as a USB interface allowing to connect the module to a computer. It is also equipped with a LocoNet interface allowing to expand the system with as many other LocoNet modules as you want.

Each expansion module will add 11 inputs and 12 outputs to your system.

The »Car System 2« software allows to configure the modules easily via a personal computer.

Last but not least, the »Win-Digipet« demonstration version enclosed with every basic module suitable for personal computers will give you access to the automatic control of model installations via a personal computer.

Gebr. FALLER GmbH wishes you a lot of creative ideas and plenty of fun with your new acquisition!

2. Safety and responsibility

Proper use

This product is a scale modeling article aimed at ambitious modellers and collectors, and no toy. It is designed for use on a model installation. It may exclusively be operated together with the accessories and add-on devices recommended by FALLER. Basically, FALLER products are developed and designed for the hobby sector, not for permanent operation. This product is intended for use at average ambient temperature and relative humidity. Please operate the product only indoors, and avoid any atmospheric influences. Any other use will be considered not to be in conformity with the proper use or intended purpose. Gebr. FALLER GmbH will assume no responsibility for any damage or defect resulting from improper use or the non-observance of the directions given in the instruction manual or the accompanying safety recommendations.

Operating and storage conditions

- Observe the following operating conditions: 15–40 °C, up to 75 % relative humidity, do not allow the formation of dew.
- Observe the following storage conditions: 10–60° C, up to 85 % relative humidity, do not allow the formation of dew.

For your safety

- Carefully read through the instruction manual and the accompanying safety recommendations before use.
- Pay attention to the safety recommendations and warnings given in the instruction manual, in the accompanying safety recommendations or provided on the product.

- Always retain the instruction manual and the accompanying safety recommendations available near to the product itself.
- Hand over the product to third persons only together with the instruction manual and the accompanying safety recommendations.

Environmentally friendly disposal (WEEE)

Products that are labeled with the symbol of a crossed dustbin must not, at the end of their life span, be disposed of with common household waste, but must be handed over to a collecting point that recycles electrical and electronic equipment. The symbol on the product, in the instruction manual or on the packaging calls the user's attention to such obligation. All materials used are recyclable according to their marking. When allowing recycling, the reutilization of materials, or any other form of recycling used equipment, you will make a valuable contribution to the protection of our environment. Please enquire from your local authorities which disposal companies are relevant in your vicinity.

- Please observe the local regulations regarding waste disposal.
- Please observe the WEEE Directive in the version currently applicable.
- Before removing batteries, rechargeable or not, disconnect the product from the power supply.
- Remove any batteries, rechargeable or not, that may be present in a product before scrapping it.

Advice pursuant to the BattG (German Regulations regarding Batteries)

Batteries, rechargeable or not, must not be disposed of with household waste, and consumers are under a legal obligation to return them after use to a municipal collecting point or to the local trade. Used batteries contain pollutants that may be harmful to you or the environment if they are not stored or disposed of properly. Batteries also contain precious raw materials such as, for instance, iron, zinc, manganese or nickel that can be recycled. After use, consumers may return batteries free of charge either to us or in their nearest vicinity (e.g. in local shops or at municipal collecting points). On doing so, any return by end users at selling points is limited to the usual quantities and to such used batteries that the distributor carries or has carried in stock as new batteries. The symbol of a crossed dustbin means that batteries, rechargeable or not, must not be disposed of with household waste.

- Please dispose of all types of batteries at the public collecting points that are responsible for such service and are appointed by your authorities.

3. General view of product

Articles supplied

- PC-standard module (only in article no. 161351)
- Expansion module (only in article no. 161352)
- CD-ROM (only in article no. 161351)
- Instruction manual

EN

Components of the PC-standard module

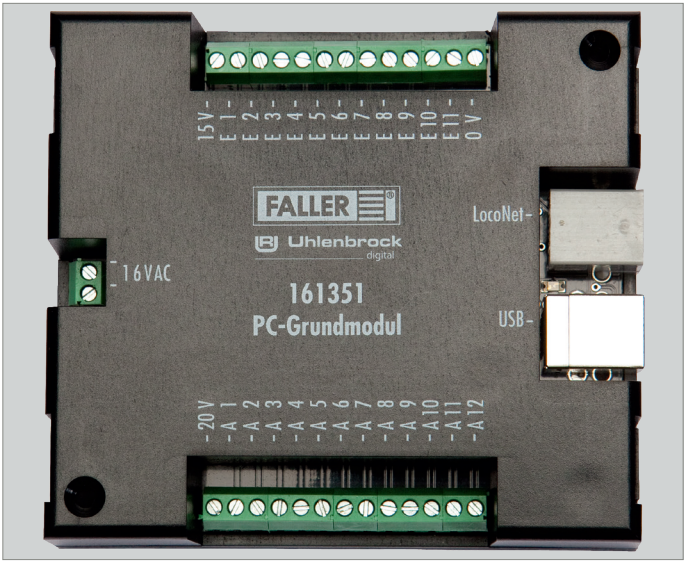


Fig. 1: PC-standard module

Ports	Description
»16 VAC«	Port for supply voltage (16 V alternating voltage)
»USB«	USB computer port
»LocoNet«	LocoNet interface
»E 1 - E 11«	11 inputs
»0 V«	0 V for inputs
»A 1 - A 12«	12 outputs
»15 V«	15 V for outputs
»20 V«	20 V for outputs

Components of the Expansion module

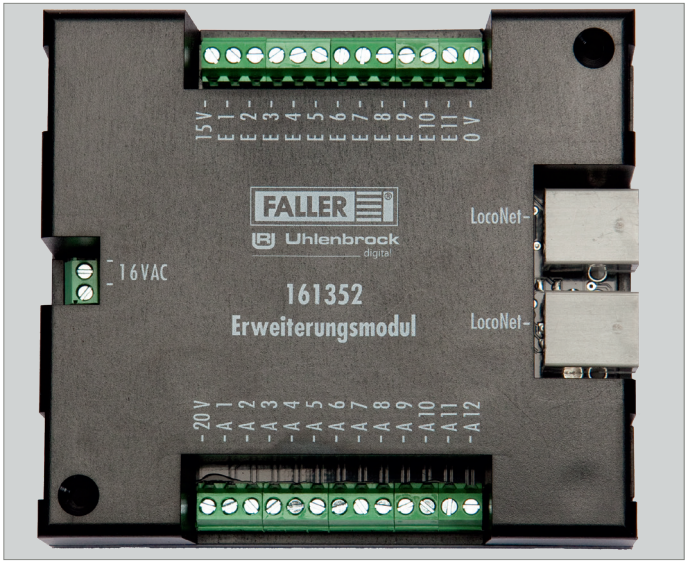


Fig. 2: Expansion module

Ports	Description
»16 VAC«	Port for supply voltage (16 V alternating voltage)
»LocoNet«	LocoNet interface
»E 1 - E 11«	11 inputs
»0 V«	0 V for inputs
»A 1 - A 12«	12 outputs
»15 V«	15 V for outputs
»20 V«	20 V for outputs

EN

4. Connecting basic and expansion modules

Connecting the supply voltage

The modules are powered by 16 V alternating current.

EN

TIP

The required alternating current can be generated using FALLER's 50 VA, 50 to 60 Hz transformer bearing the article number 180641, for instance.

Fig. 3: Connecting side

- Connect the modules to 16 V alternating current, see Fig. 3.

Connecting checkback contacts

The inputs of the modules must all be potential-free.

TIP

You may connect here any push buttons, sensors, switching tracks or the potential-free outputs of switching decoders. For checkback signals coming from the road use FALLER sensors, article number 161773.

NOTICE

Never connect to the inputs of the modules any live components such as, for instance, the outputs of points decoders. This might destroy the modules.

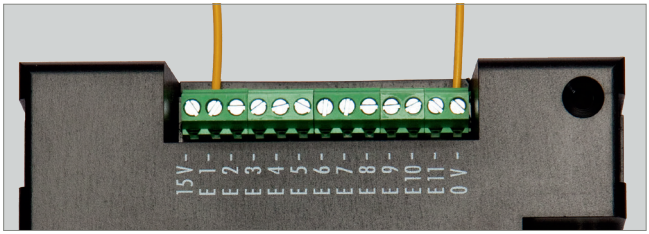


Fig. 4: Checkback contacts

- Connect one end of the sensor to the ground (0 V) and the other end to the required input (E1 - E11), see Fig. 4.

TIP

Do you want to find out more about the subject? Quench your thirst for knowledge on our homepage – **www.faller.de**. You will find there interesting background information and a lot of creative suggestions for all areas of model making.

Connecting functional elements

The outputs of the modules allow to control various consuming devices. Such devices may be on the one hand the functional elements of FALLER Car System (branch-off junction, parking space and stop point) or other consuming devices such as LEDs or lamps.

EN

ADVICES:

- When connecting LEDs, always make sure that you use the right protective resistors. Such resistors can be determined using the »Car System 2« software via menu point *Allgemein >> Vorwiderstandsrechner [General >> Protective resistor calculator]*.
- Connect parking spaces and stop points to 20 V. On the contrary, connect branch-off junctions and lighting fittings to 15 V.
- When connecting a stop point, make sure you observe the polarity. If a vehicle should stop in such a place, the north pole of its coil must show upwards. To test that it is so, hold the steering slider of a vehicle above the middle of the stop point when it is switched on. If the steering slider is repelled, the north pole shows upwards and the polarity is correct. On the contrary, if a vehicle of FALLER digital series should switch over to its second driving speed in that place, it's the south pole that has to show upwards.

TIP

For further information regarding the connection of consuming devices, please refer to the instruction manual of the relevant device.

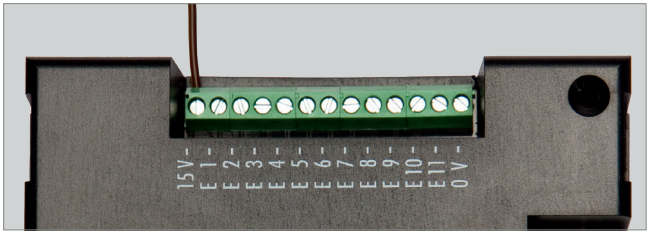


Fig. 5: Screw terminal 15 V

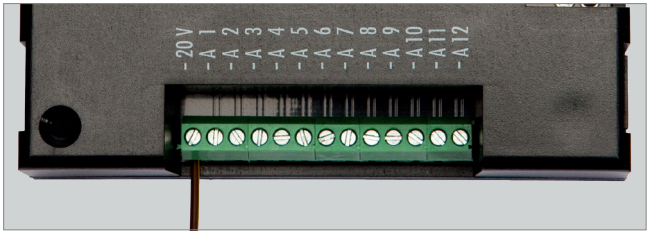


Fig. 6: Screw terminal 20 V

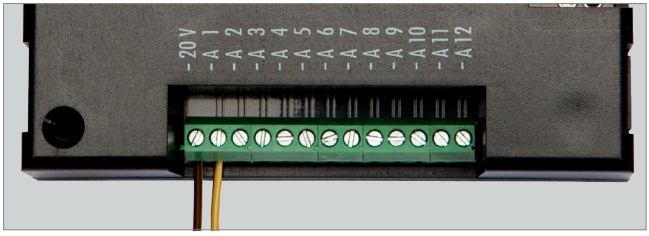


Fig. 7: Screw terminal output (A1 - A12). For instance 20 V.

- Connect one of the connection cables of the consuming device to the voltage intended for that purpose (15 V or 20 V), see Fig. 5 and Fig. 6.
- Connect the other end of the consuming device to the required output, see Fig. 7.

EN

Building up a connection with a computer

The PC-standard module features a USB interface allowing it to be connected with a personal computer by means of a commercially available printer connection cable (USB-A to USB-B, not supplied).

NOTICE

Prior to connecting the module to the computer, a driver has to be installed from the enclosed CD, otherwise the operating system might feature faulty settings. This would result in the software not identifying the module correctly and thus not being able to control it either!

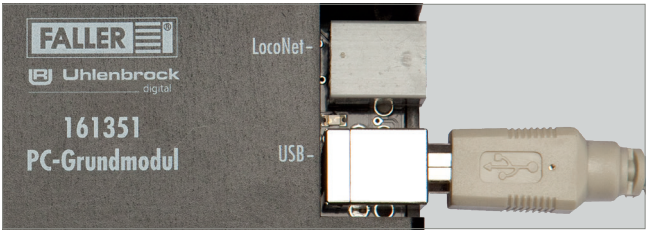


Fig. 8: Socket on the module

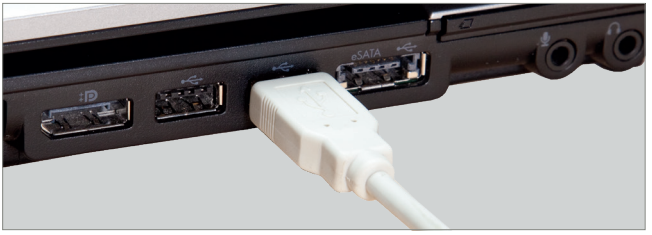


Fig. 9: Socket on the personal computer

- Make sure you have installed the right driver.
- Connect the USB cable to the USB-B socket of the PC-standard module, see Fig. 8.
- Connect the USB cable to the USB-A socket of your computer, see Fig. 9.

The hardware identification will now automatically assign the right driver to the device.

TIP

You will find further information on the installation of drivers in Chapter 5 »Driver and software installation«.

Connecting additional LocoNet modules

Both the PC-standard module and the expansion module feature LocoNet sockets. These sockets are provided to connect additional LocoNet modules to any module already existing.

ADVICES:

- The order in which the modules are connected is independent of their subsequent numbering.
- ▶ Make sure you connect all modules one after the other.
- Modules by FALLER and modules from other suppliers may be combined with each another.
- The expansion module may also be directly connected to any LocoNet capable digital control unit DCC (e.g. Uhlenbrock Intellibox II) and be operated via such control unit.

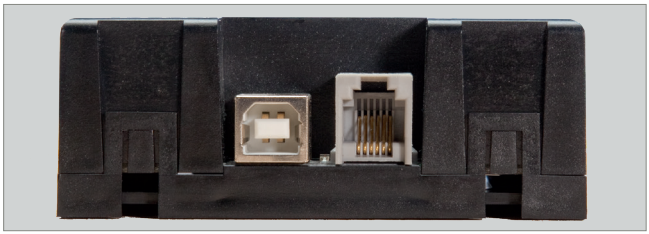


Fig. 10: LocoNet socket on basic module

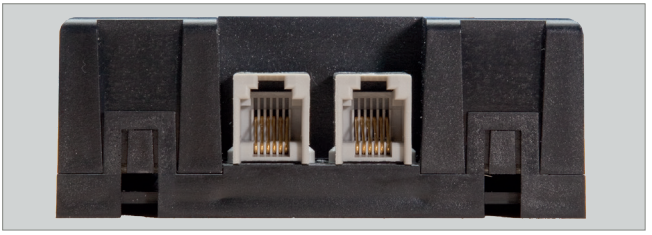


Fig. 11: LocoNet socket on expansion module

- Connect the LocoNet cable (not supplied) to one of the LocoNet ports of the first module, see Fig. 10.
- Next, connect the LocoNet cable to one of the LocoNet ports of the second module, see Fig. 11.

EN

TIP

You will find LocoNet cables (e.g. by Uhlenbrock) in well assorted specialized model-making shops.

TIP

Direct line to FALLER's customer service department:

Phone + 49 (0) 77 23 / 651-106

E-mail kundendienst@faller.de

5. Driver and software installation

System requirements

- PC with operating system Windows 2000 or more recent
- Free USB interface
- 30 MB free hard-disk storage capacity

EN

Installing software

NOTICE

Prior to connecting the module to the computer, the driver has to be installed from the enclosed CD, otherwise the operating system might feature faulty settings. This would result in the software not identifying the module correctly and thus not being able to control it either!

- ▶ Insert the CD-ROM into the drive. The installation procedure will start automatically.
- ▶ Begin with the installation of the driver.
- ▶ Select the relevant options you require in the menu displayed.
- ▶ Follow the instructions given during the installation.

ADVICE:

- ▶ If the installation program does not automatically start on your computer, open the CD-ROM drive in the file manager or in Windows Explorer and start the application »CDRUN.EXE« by clicking twice on the file name.

6. »Car System 2« software

»Car System 2« software is a program that helps you install your modules. That software allows you to assign easily module numbers, digital addresses and checkback numbers by means of its graphical user interface.

EN

NOTICE

When starting the software for the first time, only the PC-standard module should be connected to the computer as that software identifies any additional module as being new and assigns serial numbers to the modules. Should previously several modules be connected already, that automatism might result in contradictory data being stored.

- Disconnect any existing LocoNet connections.
- Make sure the basic module is supplied with the right voltage.
- Connect the USB socket of the module to the computer.
- Start the software.

ADVICE:

- As a rule the PC-standard module and the interfaces used are automatically identified. Should such procedure not function properly, change the COM port in the selection proposed. Should the window to be used to change the port not automatically open, you can open it under menu point *Allgemein >> Optionen [General >> Options]*.

The application window

Fig. 12: The application window

- At the top of the application window you will find the menu bar featuring the menus File, General, View and Monitor.
- Below you will find the buttons »Programmierung ein«, »Programmierung aus«, »Modul auslesen« und »Modul speichern«. [»Programming on«, »Programming off«, »Select module« and »Save module«].
- On the left-hand side of the application window you can see the modules already detected along with the corresponding numbers.
- On the right-hand side there is an help window in which important information on each procedure is displayed.

Adding modules

- If the software has been properly installed and the basic module is properly connected to the computer, that basic module will be displayed in the first place at the top of the list of modules. All other new modules will automatically be detected.

▶ With the software in operation, connect an additional module.

▶ Acknowledge the enquiry with *OK*.

EN

- As soon as a new module has been detected, it will appear in the synopsis on the left.

Removing modules

- Only the last module in the list can be removed! Thus, should you want to remove for instance the fourth module of a total of five, you will have to remove first module 5 and then, module 4.
- ▶ Start the »Car System 2« software.
- ▶ Select menu point *Allgemein >> Modul Werkseinstellungen [General >> Module Default settings].*
- ▶ Now disconnect the connection cable of the module concerned.

Settings

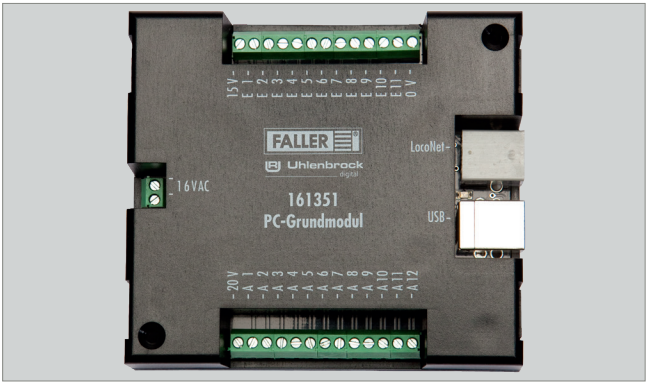


Fig. 13: Module in the application window

- In the central section of the application window there is a picture of the computer module.
- On the left you can see the port used for power supply with 16 V alternating current.
- On the right you can see the sockets used for the connection to the computer as well as a LocoNet socket to connect one or several expansion modules.
- At the top there are the inputs (E1 - E11) to which sensors, push buttons or other potential-free switches can be connected.

- At the bottom there are the ports for the outputs (A1 - A12) to which stop points, parking spaces or branch-off junctions can be connected.
- By using the suitable protective resistors, light signals can also be connected to these outputs.

▶ Click on the inputs E1 - E11 or the outputs A1 - A12 in order to go to the relevant settings.

NOTICE

Depending on the functional element you want to use, one of its wire will have to be connected to the output (A1 - A12) and its other wire to 15 V **or** 20 V:

- Stop point: 20 V
- Parking space: 20 V
- Branch-off junction: 15 V
- Light signal: 15 V with protective resistor!

▶ Sensors or push buttons have to be connected with one wire leading to one input (E1 - E11) and the other wire to 0 V.

EN

Configuring inputs

By clicking on the inputs shown in the picture of the selected module, you go to the relevant settings to be performed.

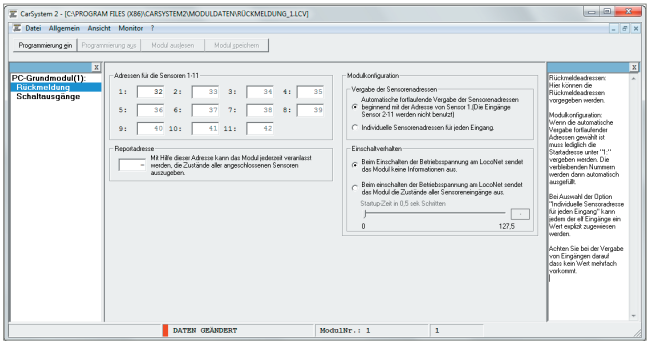


Fig. 14: Configuring inputs

Here the required checkback addresses can be specified.

Module configuration:

- Once you have selected the automatic allocation of consecutive addresses, you merely have to allocate the first address under »1«. The remaining numbers will then be filled in automatically.
- Selecting the option »Individuelle Sensoradresse für jeden Eingang« [»Individual sensor address for each input«] makes it possible to assign an explicit value to each one of the eleven inputs.

▶ When assigning inputs, make sure that no value is used several times.

Configuring outputs

By clicking on the outputs shown in the picture of the selected module, you go to the relevant settings to be performed.

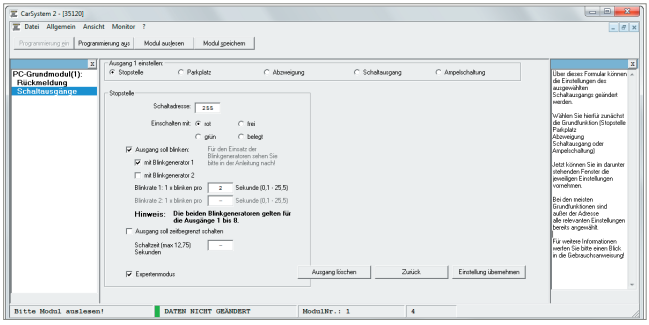


Fig. 15: Configuring outputs

The table displayed shows a summary of the current configuration of the selected module.

▶ Should you have made some settings that are not shown in that table, simply switch on the programming procedure using the button »Programmierung ein« [»Programming on«] at the top and click on the option »Modul auslesen« [»Selecting module«].

By means of the buttons marked »Einstellen« [»Setting«] you directly go to the configuration of the relevant output.

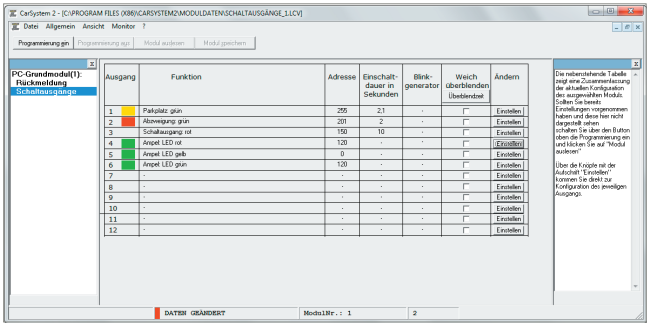


Fig. 16: Settings of the switching output

That form will allow you to change the settings of the selected switching output.

- ▶ To this end, first select the basic function (stop point, parking space, branch-off junction, switching output or traffic light operation).
- ▶ Next, make the relevant settings in the window you find below.
- ▪ Normally most functions appear in grey and are assigned standard values. If you want to change those settings, you have to activate the »Expertenmodus« [»Expert mode«].

Stop point, parking space, branch-off junction, switching output

Switching address
The switching address is the address in your digital system with which a function has to be triggered. Here you may enter both coil item addresses and checkback addresses.

The option buttons that follow allow you to specify in which condition (coil item: red or green, checkback contact: occupied or unoccupied) the action has to be performed.

Flashing generator
Outputs are also able to generate a flashing. To this end, simply indicate which outputs should flash and at which frequency this will have to occur.

EN

Time limit
To prevent a permanent load from damaging the functional elements that are connected, you can here preselect a short period of time (maximum 12.75 sec). If that field is not filled in, the connection will remain switched on until a change occurs in the condition of the digital address.

Traffic light operation

The modules feature a specific logical circuit allowing them to reproduce properly intersections and pedestrian stop-go lights. Such procedure requires only one digital address that will control up to four outputs. The first three outputs will form the light signal for the traffic light, whereas the fourth output is required for the corresponding stop point.

- First, select whether you want to connect a traffic light with or without stop point.

EN

Switching address
The switching address is the address in your digital system with which a function has to be triggered. Here you may enter both coil item addresses and checkback addresses.

Outputs
That list displays the connection numbers present on your module (A1 to A12).

7. Technical data and symbols

Power supply

Designation	Value
Supply voltage	16 V alternating current
Frequency range	50/60 Hz
Power consumption	3.2 W

Tab. 1: Power supply

Symbols

Symbol	Meaning
	Product is subject to the European WEEE Directive
CE	CE conformity label
RoHS	CE Conformity incl. RoHS directive
EMC tested	CE Conformity incl. EMC directive
H0	1:87/H0/16.5 mm track gauge
N	1:160/N/9 mm track gauge
▶	Action
■	Note

Tab. 2: Symbols

EN

Gebr. FALLER GmbH
Kreuzstraße 9
78148 Gütenbach

Telefon +49 (0) 77 23 / 651-0
Telefax +49 (0) 77 23 / 651-123

www.faller.de
info@faller.de