

 	Service info	NetTerminalPlus/KalbManagerWIN/ Communication modul	
	Re:	Gateway	
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NetTerminalPlus/KalbManagerWIN and Förster-Gateway

1 Scope of delivery and functions

1.1 Scope of delivery

- Förster-gateway
- Plug-in power supply
- Network cable (1x Patch / 1x Cross-over)

2 Preliminaries

- > Check whether the PC onto which you intend to install NetTerminalPlus/KalbManagerWIN is equipped with a network card.
- > A network cable is required. If your PC supports the Auto-Link-Function you can use an ordinary as well as a cross-over-network cable.
- > Download the program NetTerminalPlus from the website <http://www.foerster-technik.de>.

Note	To ensure troublefree functioning, Förster-Technik recommends the operating systems as of Windows XP.
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Note	To install and configure NetTerminalPlus and KalbManagerWIN you need administrator rights .
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Service info

NetTerminalPlus/KalbManagerWIN/
Kommunikation modul

Re:

Gateway

Date

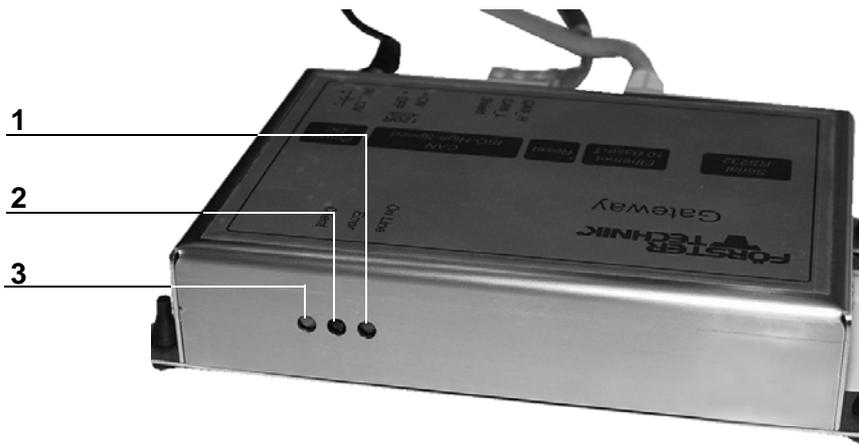
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3 The Förster-gateway



1 Green LED (Online)	5 Connection network cable
2 Red LED (Error)	6 Connection CAN-bus cable
3 Yellow LED (Client)	7 Terminating resistor
4 Serial connection	8 Network cable

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4 Connecting the Förster-Gateway to PC and automatic feeder

To operate NetTerminalPlus you have to

- connect the gateway to the PC and initialize it,
- install the software NetTerminalPlus/KalbManagerWIN onto your PC,
- connect the gateway to the automatic feeder.

4.1 Connecting the gateway to the automatic feeder

	<p>Danger due to live electrical components! Danger of death by electric shock!</p> <ul style="list-style-type: none"> • Before connecting the automatic feeder to the gateway, shut the power to the gateway off.
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1. Turn the main switch to switch the automatic feeder off and pull the mains plug.
2. Open the control box at the rear of the automatic feeder.
3. Pass the CAN-bus cable through the rubber guide rings into the control box. Put the end of the shield on the insulated cable and secure it to the upper cable clamp (1).

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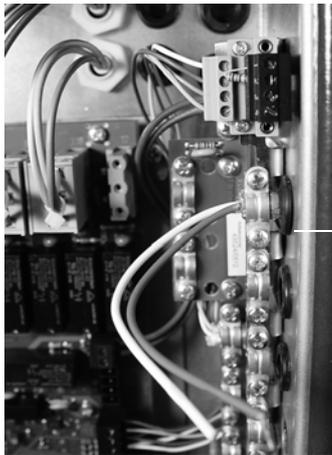
Gateway

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Topic

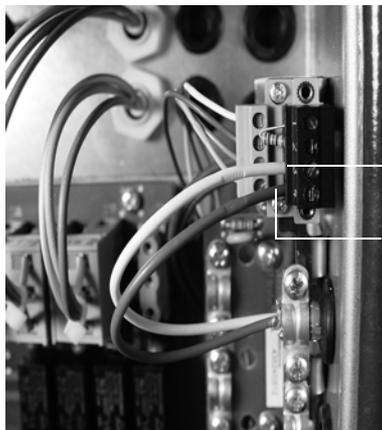
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1

1 Cable clamp for shield connection and pull relief

4. Above the connecting terminals is located a four-pole connector with threaded terminal end which is equipped with Bus-terminating-resistors (R120). Carefully remove the lower resistor (PIN 3 and 4).
5. Secure the bared end of the white cable in PIN 3 (= CAN High) and the one of the brown cable in PIN 4 (= CAN Low).



1

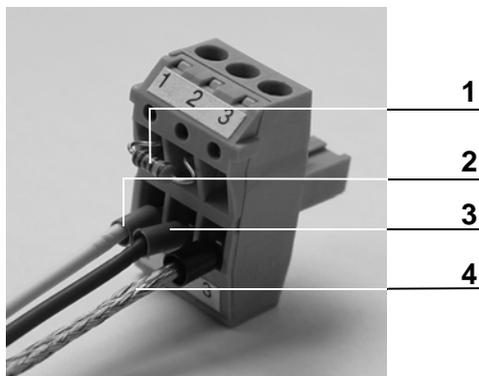
2

1 PIN 3

2 PIN 4

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- On the other end of the CAN-bus-cable is located a plug-in screw terminal with double screw terminal used to establish connection to the gateway. Insert the connecting wires of the resistor into the available pins above the white and the brown cable and screw them tight.



1	Resistor
2	PIN 1/white cable (= CAN High)
3	PIN 2/brown cable (= CAN Low)
4	PIN 3/shield

- Plug in the plug into the gateway.

4.2 Connecting the gateway via the automatic feeder-menu

- Connect the gateway to the mains.
- In the **Setup** of the Automatic feeder, select **Communication > Gateway**. You can configure all relevant parameters here.
- MAC address:** You can see the MAC address of your gateway here. Your gateway is uniquely designated via the MAC address. This address cannot be changed.

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4. **IP address:** You can see the IP address of your gateway here and, if need be, change it.
5. **Subnet mask:** You can see the subnet mask of your gateway here and, if need be, change it.
6. **IP assignment:** If the value here is **automatically** set, then your gateway will try to procure its IP address from a DHCP server in your network. If you select the **manual** value here, then you have to set the IP address of your gateway yourself.
7. **DHCP status** (only in connection with automatic IP assignment): This line gives you information about the internal status when procuring drawing the automatically assigned IP address. There are five statuses that can occur: **OK**, **waiting**, **off**, **on** and **unknown (=n/a)**.
8. **Factory settings:** If you call up this item and confirm the security query which then appears, the values of your gateway for the IP address, the subnet mask and the manual or automatic procurement of the IP address will be reset back to the factory settings.

Note	Be sure that your gateway has been updated with the newest version of the gateway software. Gateway versions 3.02 and below do not support the setting of IP addresses via the feeder setup.
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Note	Be sure that there is only one gateway in your CAN bus. The use of more than one gateway in a CAN line is not supported.
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4.3 Connecting the gateway to the PC and initializing it

1. Connect the gateway to the mains.
2. Connect the PC to the gateway via the network cable. If a connection between PC and gateway has been established - this may last some seconds - the green LED will start flashing.
3. If your PC is not operational yet, switch it on. To carry out the following settings, **administrator rights** are required.
4. In the Windows menu, select **Start > System control > Network and release centre**. You will receive an overview of your network connections.
5. Right-click on the respective connection and select **Properties**. A list opens with elements which will be used by this connection.
6. Scroll to the item **Internet protocol 4 (TCP/IPv4)** and click on this item with the left mouse button. Afterwards, click on **Properties**.

This display may vary, depending on the operating system. The three most common variants are described in the following:

- **Variant 1 - PC is not integrated in the network** (see 4.3.1 Variant 1 - PC is not networked, page 8).
- **Variant 2 - PC is integrated in the network with DHCP server** (see 4.3.2 Variant 2 - PC is networked with DHCP-server, page 13).

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- **Variant 3 - PC is integrated in the network** (see 4.3.3 Variant 3 - The PC is networked, page 14).

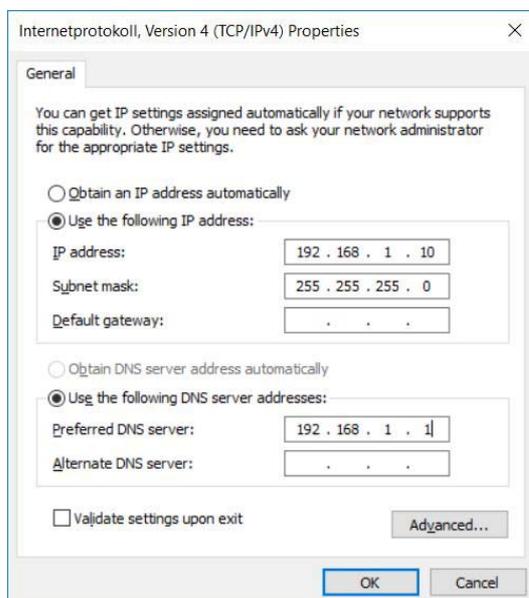
4.3.1 Variant 1 - PC is not networked

Your PC is not networked. The field **Obtain an IP address automatically** is activated as a standard.

1. Activate **Use following IP address** and enter 192.168.1.10 in **IP address**. 255.255.255.0 must be listed in the **subnet mask**.

Note	The first three number blocks define the fixed address rang and must match the displayed IP address of the Automatic feeder. The last number must NOT match that of the Automatic feeder.
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Note	Set the IP address of the Automatic feeder in Setup > Communication > Gateway . In the IP assignment line, ensure that [manual] is selected.
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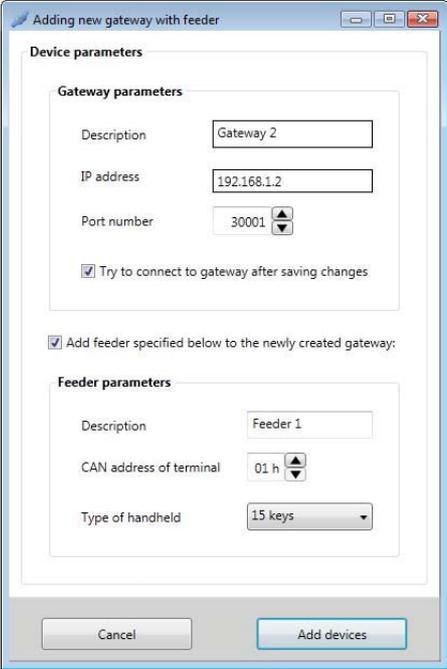
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2. Confirm with **OK** and close all windows.
3. Install the NetTerminalPlus/KalbManagerWIN software.
Start the Setup and follow the instructions on the screen.

4.3.1.1 NetTerminalPlus

1. Start the programme.
2. Follow the instructions on the screen.
3. Enter the data of the Automatic feeder.

Note	<p>Set the IP address of the Automatic feeder in Setup > Communication > Gateway.</p> <p>The CAN address of the hand-held can be seen in Setup > Terminal > Address.</p>
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Adding new gateway with feeder

Device parameters

Gateway parameters

Description: Gateway 2

IP address: 192.168.1.2

Port number: 30001

Try to connect to gateway after saving changes

Add feeder specified below to the newly created gateway:

Feeder parameters

Description: Feeder 1

CAN address of terminal: 01 h

Type of handheld: 15 keys

Cancel Add devices

4. Click on **Add devices** to add the Automatic feeder. The device is now correctly installed and registered.

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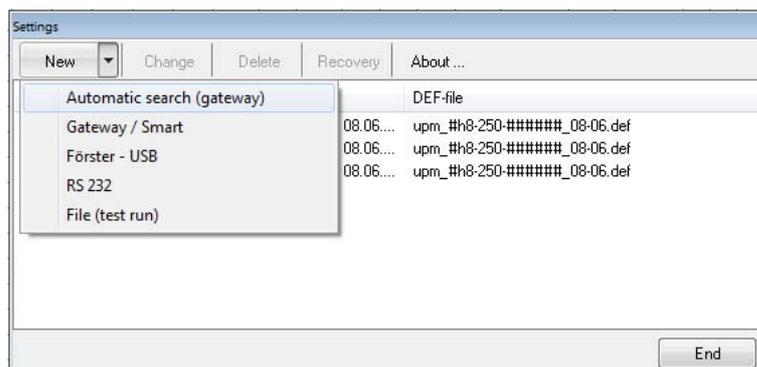
- To register additional devices, right-click in the NetTerminalPlus programme on **Location** and then select **Add Gateway**.

4.3.1.2 KalbManagerWIN

- Start the programme.
- Click in the **Calf feeder** menu bar and select **CF: Register/Cancel**.



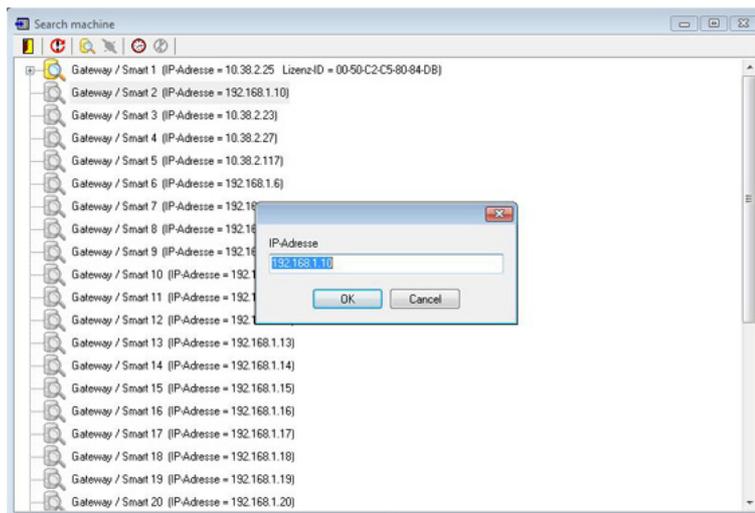
- Click on **New** and select **Automatic search (Gateway)**.



- Select a Gateway or smart from the list.
- You can apply the preset **IP address** or enter a new one instead. This must however match the one that is displayed

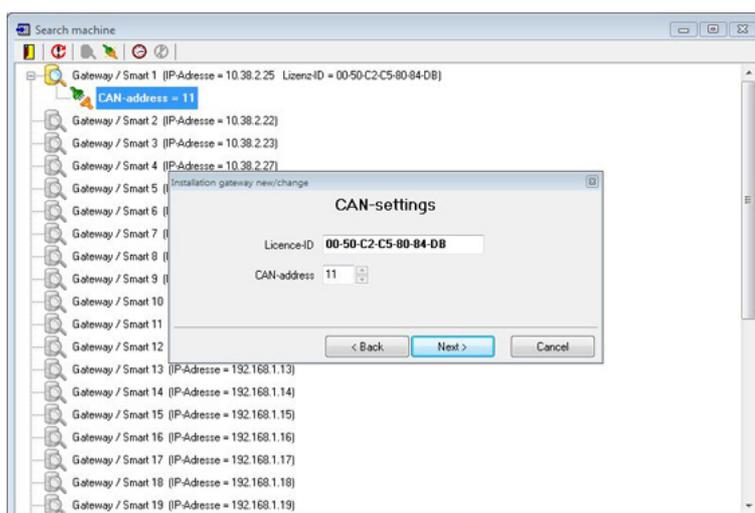
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in **Setup > Communication > Gateway** (see 4.3.2 Variant 2 - PC is networked with DHCP-server see page 13).



6. Click on **OK**.

7. The **Licence ID** is comprised of the MAC address, which is made up of twelve characters (number-letter combination) plus a checksum.



Note	To see the licence ID, the Automatic feeder must be switched on.
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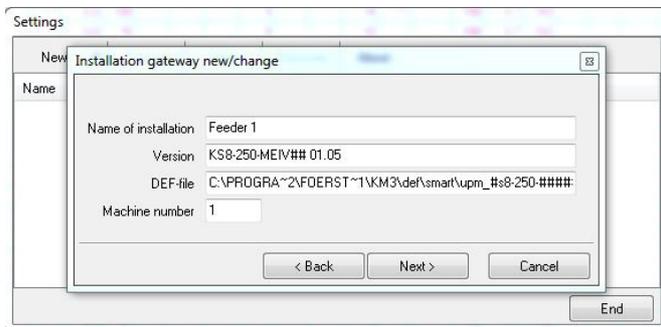
September 2016

Topic

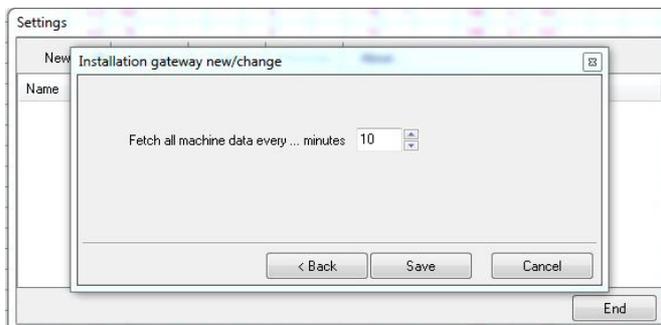
New installation



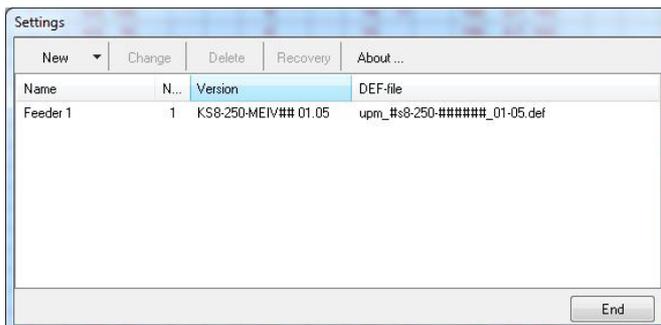
8. In **CAN address**, select the CAN bus address of the Automatic feeder. In the default settings, the Automatic feeder has 11 as its Can bus address.
9. Assign a name to the connection to the device and click on **Continue**.



10. Set the time interval at which the **machine data** are to be transferred to KalbManagerWIN and click on **Save**.



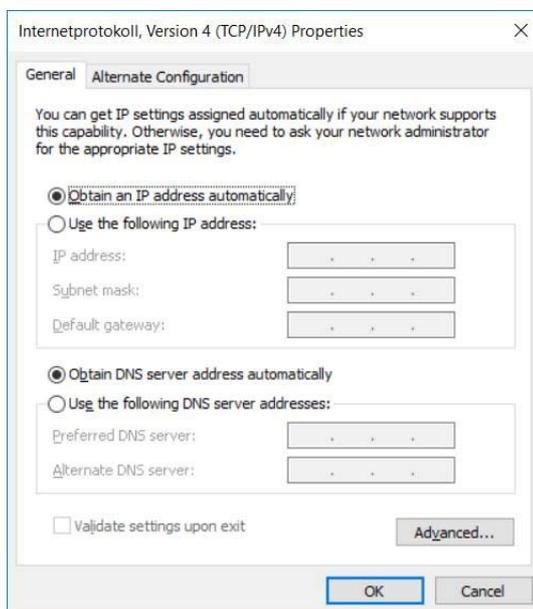
11. The data of the Automatic feeder will be displayed in the following window.



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4.3.2 Variant 2 - PC is networked with DHCP-server

Your PC is integrated in a network with DHCP server (e.g. a DSL router). The **Retrieve IP address automatically** field is activated in the display.



Your computer automatically obtains an IP address from your DHCP server. In order to set up communication between computer, DHCP server and Automatic feeder, these must be in the same address range. The IP of the Automatic feeder can be adjusted to match the address range of your DHCP server.

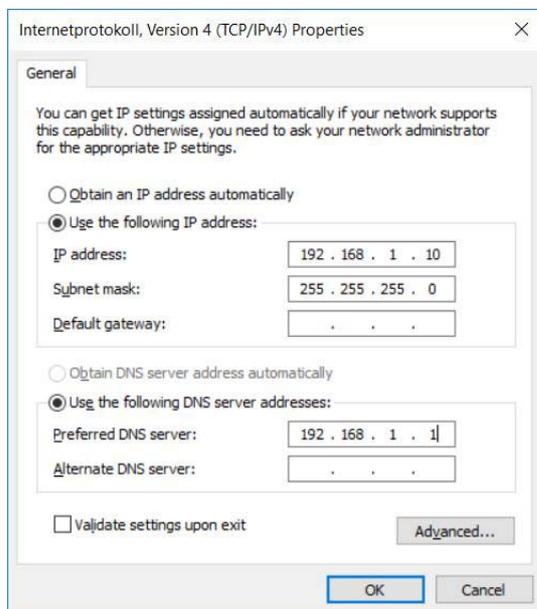
1. Confirm all entries with **OK** and **close all windows**.
2. In the **Setup** of the Automatic feeder **Communication > IP assignment**, select the value [automatically].
3. Make a note of the **IP address** from **Setup > Communication > Gateway**.
4. Confirm with **OK** and close all windows.

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5. Install the NetTerminalPlus/KalbManagerWIN software (see **4.3.1 Variant 1 - PC is not networked** see page **8**).

4.3.3 Variant 3 - The PC is networked

Your computer is connected to a network. The **Use following IP address** field is activated.



1. Made a note of the displayed IP address.
2. In the **Setup** of the Automatic feeder **Communication > IP assignment**, select the value [**manual**].
3. In the **Gateway** line, enter the **IP address**.

Note	<p>The first three number blocks define the fixed address rang and must match the displayed IP address of the PC.</p> <p>The last number must NOT match that of the PC.</p>
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4. Install the NetTerminal/KalbManagerWIN software (see **4.3.1 Variant 1 - PC is not networked** see page **8**).

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4.4 Connecting further automatic feeders

- NetTerminalPlus can control up to eight automatic feeders via the gateway.
- KalbManagerWIN can communicate with up to 32 gateways thus being able to control up to 96 of automatic feeders.

To do so, the automatic feeders must be interlinked via the CAN-bus (see the wiring diagram of the automatic feeder).

4.4.1 Connecting feeder 1 to feeder 2

The following pages are intended to explain how to connect feeder 1, which is already linked with the gateway via the CAN-bus, to feeder 2 and feeder 2 to further automatic feeders.

The following two variants are available:

Variante 1: Feeder 2 terminates the CAN-bus (last link). This variant is representative for all those automatic feeders terminating the CAN-bus.

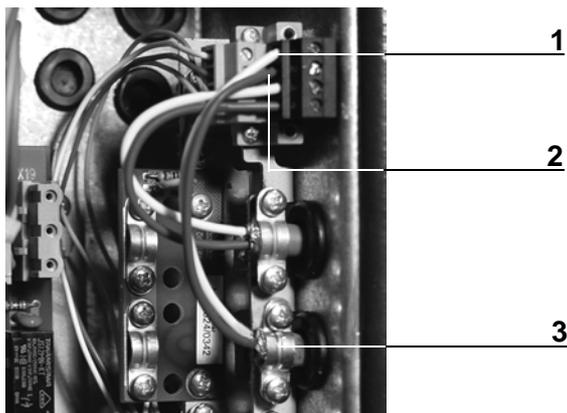
Variante 2: Feeder 2 is interlinked with further feeders/nodes (interlink). This variant is representative for all those automatic feeders which are interlinked with further feeders/nodes.

	<p>Danger due to live electrical components! Danger of death by electric shock!</p> <ul style="list-style-type: none"> • Before connecting the automatic feeders via the CAN-bus, shut the power to the automatic feeders off. To do so, pull the mains plug.
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4.4.1.1 Variant 1: Feeder 2 terminates the CAN-bus

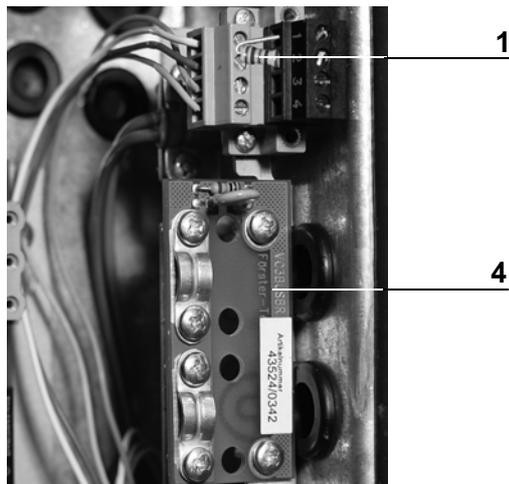
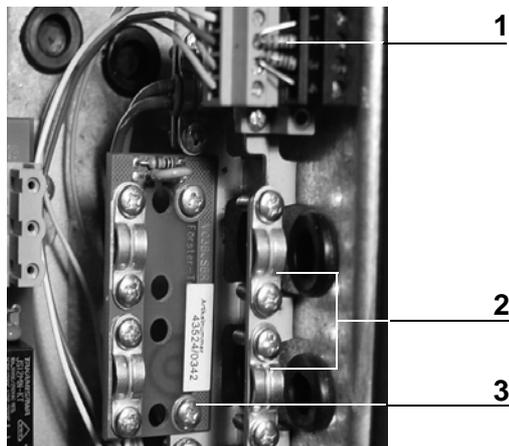
1. Pass the CAN-bus cable through the rubber guide rings into the control box of the first automatic feeder. Put the end of the shield on the insulated cable and secure it to the second cable clamp from the top.
2. Carefully remove the resistor from PIN 1 and 2 and secure the bared end of the white cable to PIN 1 (= CAN High), the one of the brown cable to PIN 2 (= CAN Low).



1	PIN 1/white cable (= CAN High)
2	PIN 2/brown cable (= CAN Low)
3	Cable clamp for shield connection and pull relief

3. In the control box of **feeder 2** carefully remove the resistor (R120) from PIN 3 and PIN 4.
4. Remove both cable clamps underneath the plug-in screw terminal and secure the filter board at this spot.

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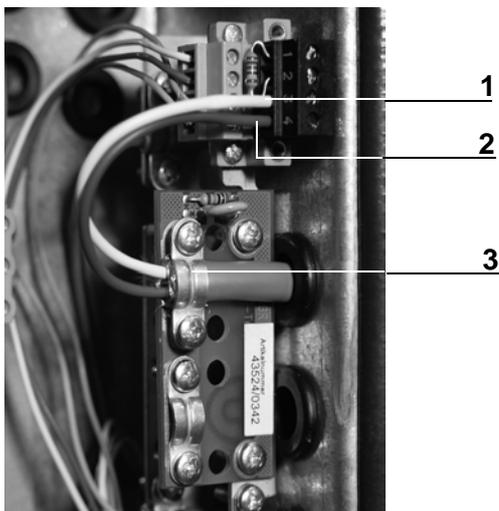


1	Bus-terminating resistor (R120)
2	Cable clamps
3	Filter board (parked)
4	Filter board (mounted)

5. Pass the CAN-bus cable connecting feeder 1 to feeder 2 through the rubber guide rings into the control box. Put the shield end onto the insulated cable and secure it underneath the top cable clamp of the filter board.

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6. Secure the bared end of the white cable to PIN 3 (= CAN High) and the one of the brown cable to PIN 4 (= CAN Low).



1	PIN 3/white cable (= CAN High)
2	PIN 4/brown cable (= CAN Low)
3	Cable clamp on filter board

4.4.1.2 Variant 2: Feeder 2 is interlinked with further feeders

If you wish to connect further feeders, proceed as described in the previous chapters. The only difference is that basically as of the second feeder the shield of the CAN-bus-cables must be secured to the filter board.

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5 Rectifying faults

Fault	Reason	Remedy
NetTerminalPlus/ KalbManagerWIN have no access to the data of the automatic feeder.	<ul style="list-style-type: none"> Network cable, mains cable or USB-cable are not or not duly inserted. 	<ul style="list-style-type: none"> Insert the cable
	<ul style="list-style-type: none"> At present, the electronics does not work properly. 	<ul style="list-style-type: none"> Pull the mains plug and reinsert it immediately afterwards. Carry out Reset (the default IP-address is automatically set). Proceed as follows: <ol style="list-style-type: none"> Pull the mains plug from the gateway. Keep the Reset-button pressed by means of a pointed object and reinsert the mains plug. Wait until the green LED at the front of the gateway continuously glows. Release the Reset-button. The default IP-address is reset.
		5. For the variants 2 and 3: Reinitialize the gateway. Proceed as described above.
The three LEDs on the gateway are glowing although the gateway and the PC are connected via the network cable.	Wrong network cable; network card not installed	Replace the network cable; install the network card
Variant 2: the DOS-mode shows Reply timed out .	No connection could be established between the gateway and the network card.	Repeat all steps once again and check them for defects. If necessary, shut the power to the gateway off for a short time.

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