

FarmOnline+ Datalink

Technical User Guide



Product and Documentation Changes

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The date of change appears from the front and back pages.

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1 Product description

FarmOnline+ Datalink is for data collection in various parts of the agricultural industry. It can be automatic collection from SKOV controllers, alarm units, sensors or the user's manual data input. The collected data is then made available to the digital service .

Depending on the type of input provider that can be farm computer, alarm unit or sensor, FarmOnline+Datalink must be installed either as controller gateway or as sensor gateway.

FarmOnline+ Datalink retrieves data from input sensors once every minute and sends the data to the cloud approximately every 15 minutes.

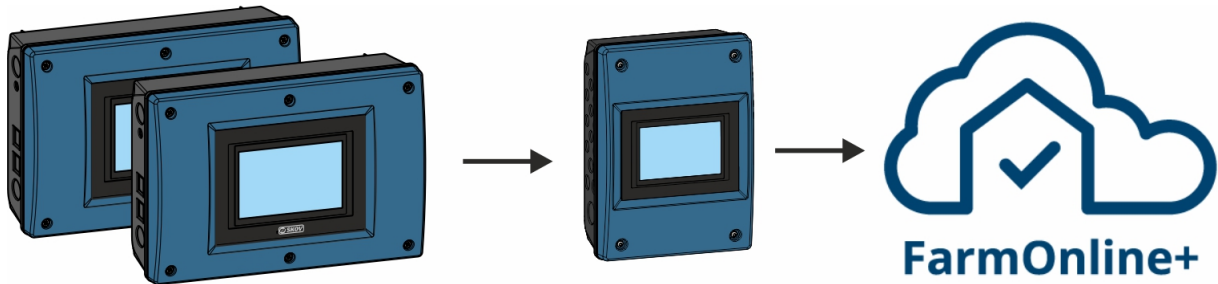


Figure 1: Example of FarmOnline+ Datalink as controller gateway.

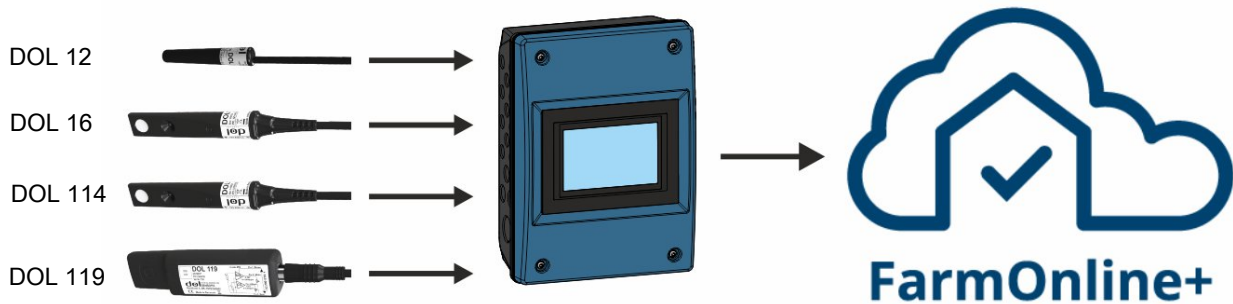


Figure 2: Example of FarmOnline+ Datalink as sensor gateway.

2 Product survey



131545 FarmOnline+ DataLink EU

131547 FarmOnline+ DataLink AP

131548 FarmOnline+ DataLink NF

131549 FarmOnline+ DataLink LA

The Datalink acts as a gateway to the SKOV controllers and alarm units or a sensor gateway for external equipment.

The device is supplied in 4 variants with modems for different geographical areas.

EU: Europe, the Middle East, and Africa

AP: Asia and the Pacific region

NF: North America

LA: Latin America

Order the correct version for your country. If necessary, see the link. 4G Modem country list.

It includes a suspension kit, modem with SIM card, external antenna, and 10-meter antenna cable.

Installation wiring cables are not included.

2.1 Accessories



134708 Cable ext. for cellular aerial - 10 m

Used where the external antenna is located more than 10 meters from the unit.



134703 M25 cable glands (30 pcs.)

Plastic gland and plastic nut for mounting in a controller or box.

Used when mounting cables in size $\varnothing 7-14\text{mm}$.

2.2 Accessories Sensor Gateway



140200 DOL 12 temperature sensor, 1.4 m cable

140210 DOL 12 temperature sensor, 5 m cable

The temperature sensor can be used both outside and inside.



140252 DOL 114 humidity and temperature sensor, 2 m cable

140253 DOL 114 humidity and temperature sensor, 5 m cable

The DOL 114 is a dual-purpose temperature and humidity sensor that can be used for monitoring the livestock house relative air humidity and temperature.

The DOL 114 is a high-quality sensor which is especially useful under particularly harsh conditions and in areas of high air humidity.

The DOL 114 comes with a protective cap.



140331 DOL 119 CO₂ sensor 5000/10000 PPM

Sensor for measuring the CO₂ content in the air. Supplied with a M12 plug and sealing plug as well as protection cap for DOL 119.



140266 DOL 16 light sensor 0-100/1000 LUX 0-10V M12 plug

140268 DOL 16 light sensor 0-100/1000 LUX 0-10V

Output 1: 0-100 lux. Output 2: 0-1000 lux.

140270 DOL 16 light sensor 0-50/1000 LUX 0-10V

Output 1: 0-50 lux. Output 2: 0-1000 lux.

The sensor is used for measuring light intensity.

Select the type of sensor that corresponds to the current brightness in the livestock house (measuring area).



140247 DOL 53 ammonia sensor

140236 DOL 53 dust filter (5 pcs)

DOL 53 measures the ammonia in the livestock house air.

Can be used for monitoring the ammonia level in the air.



130200 DOL 90, 1 IMP/1 liter

Nominal flow quantity = 1,500 liter/hour

Max. flow quantity = 2,500 liter/hour

Connection threads: 1/2"

**130207 DOL 90, 1 IMP/5 liter**

Nominal flow quantity = 2,500 liter/hour

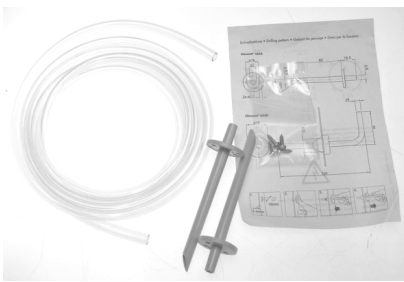
Max. flow quantity = 4,000 liter/hour

Connection threads: $\frac{3}{4}$ "

**140333 DOL 18 v2 elec. sub-pressure sensor 100 Pa**

Sensor for measuring the pressure level in the house.

DOL 18 hose set must be ordered separately.

**140235 DOL 18 hose set**

Hose set for DOL 18 electronic sub-pressure sensor.

Supplied with 2 m plastic hose, 2 static pressure tip with flange and screws.

**300085 Transparent plastic hose $\varnothing 7 \times 5$**

To be used if additional plastic hose is needed.

Ordered by the meter.

**437672 Extension nipple & 5/7 PVC tube set**

Extension nipples must be ordered if another hose type than 300085/140235 is used.

**380101 Bracket for DOL 16/104/114**

Mounting brackets are used if the sensor is to be mounted in an accurate position.



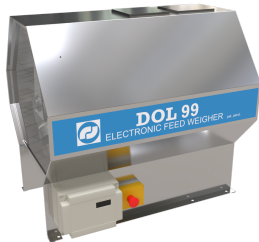
413232 House board

For mounting of climate sensors.



140269 Cable 2 m M12 plug incl. sealing plug

2 meter cable for DOL 119/DOL 16 with M12 plug and sealing plug.



130300 DOL 99A feed weigher

Stand-alone weigher with the possibility of connection to a controller. Dosing a component.



140317 iDOL 65 camera

The iDOL 65 camera calculates the weight of finishers and is part of the FarmOnline+ system for production monitoring. iDOL 65 uses a 3D camera to calculate the weight based on the size of the pig.

iDOL 65 is an integral component of FarmOnline+ ProGrow pig weighing system. Together with a FarmOnline+ Datalink, iDOL 65 transmits data to the cloud.

In a system with SKOV controllers, the Datalink can be set up as controller gateway, sending controller data to the cloud.

In a system without SKOV controllers, the Datalink can be set up as a sensor gateway, sending data from connected sensors.

Supplied with plastic glands, sealing plugs, split seals, and mounting bracket screws.

Requires:

FarmOnline+ Datalink

FarmOnline+ pig, Farm Management 12 months subscription

FarmOnline+ pig, iDOL 65 section 12 months subscription









FarmOnline+ Onboarding digital services

BlueControl pig software with production functionality (136781, 136782, 13783, or 136784).

3 Mounting guide

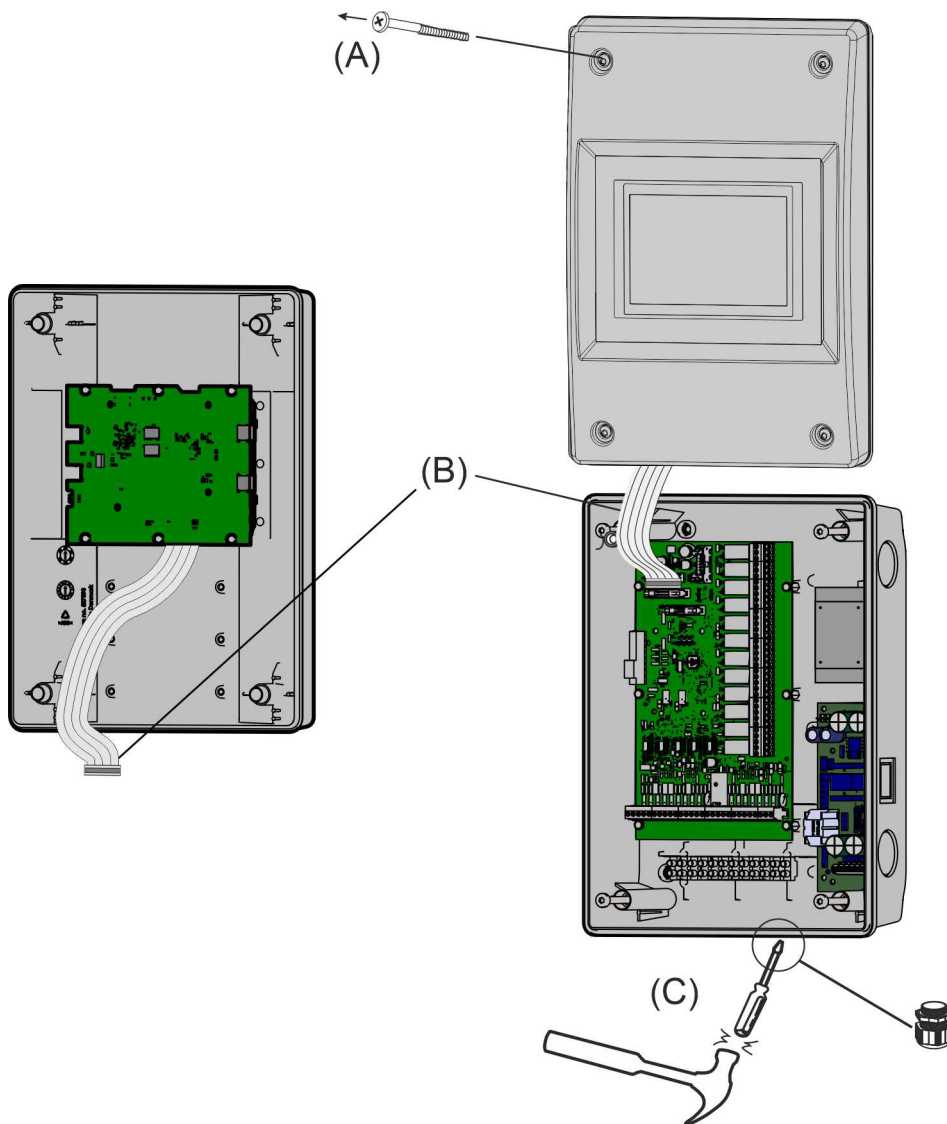
3.1 Recommended tools

Below is a list of the tools recommended for the installation.

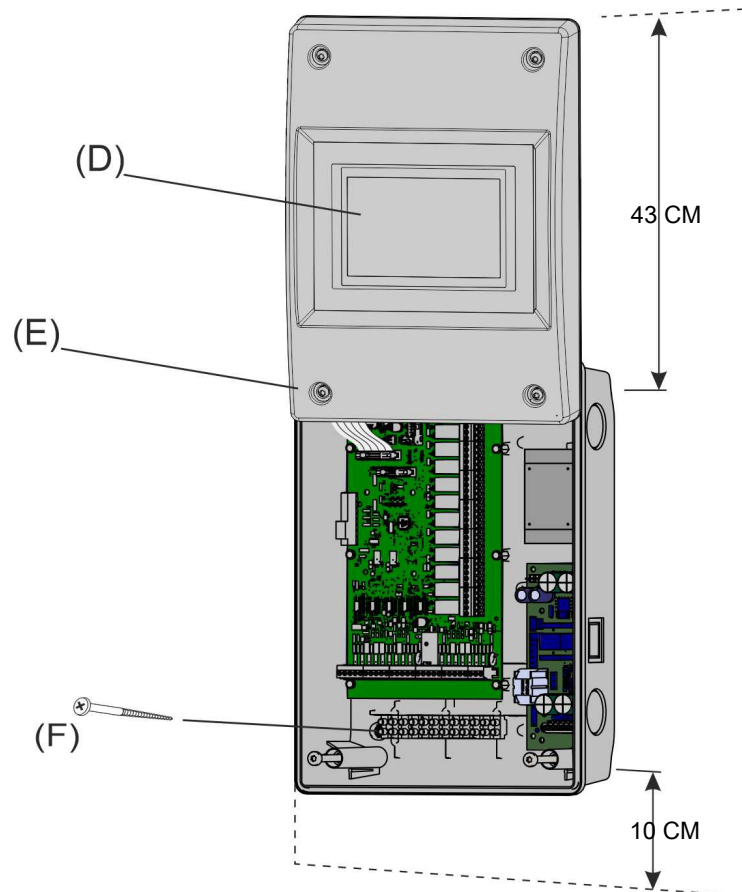
Item	Description
	Crosshead screwdriver
	Screwdriver straight slot (2 pcs.)
	Hammer
	Tape measure
	Drill kit
	Cordless drill
	Spirit level
	PC with internet connection

3.2 Mounting on the wall

The must be installed in a place where it is not exposed to frost or direct sunlight.



1. Loosen the screws **(A)** that hold the front panel in place.
2. Lift out the front panel.
3. Be careful not to pull the flat cable **(B)**, which may damage the connector.
4. Knock out the required number of knock-out pieces **(C)** at the bottom of the cabinet.
5. Remember to use M25 cable glands to obtain a tight cable connection.



1. Position the display (D) at eye level for daily use.
2. Remember free space:
 - above the cabinet (43 cm), so the front panel can be placed on top of the cabinet base (E) during servicing.
 - below the cabinet (10 cm) to enable room for cable connections.
3. Mount with the included $\varnothing 5\text{mm}$ screws (F).

4 Installation guide

Cables must be connected to the controller, sensors, power supply, and Ethernet network.

4.1 Electrical connection

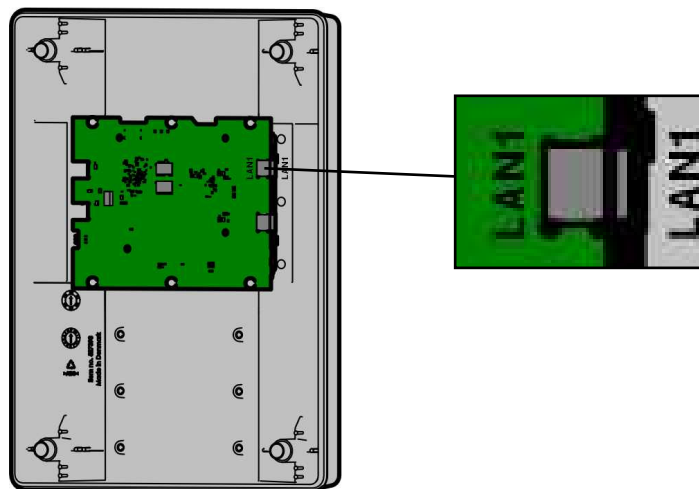


Installation, servicing, and troubleshooting of all electrical equipment must be carried out by qualified personnel in compliance with the applicable national and international standard EN 60204-1 and any other EU standards that are applicable in Europe.

The installation of a power supply isolator is required for each motor and power supply to facilitate voltage-free work on the electrical equipment. The power supply isolator is not included.

4.2 Connecting a wired network

The FarmOnline+ Datalink Internet connection must be set up via a wired LAN connection.



Run an Ethernet cable through the M25 cable gland and connect it to the **LAN1** network connector, located on the CPU module in the cabinet.

4.2.1 Setting up Firewall in closed networks

The Datalink shall be able to communicate with the following endpoints (outbound Communication).

If not all of these endpoints are open, you cannot expect the datalink to work properly.

Description	DNS	Port	Protocol
FarmOnline+ Edge	edge.farmonline.cloud	8883	TCP
FarmOnline+ Connection	connection-api.farmonline.cloud	443	TCP
FarmOnline+ OTA	hawkbit.farmonline.cloud	443	TCP
FarmOnline+ Remote Access	remote.farmonline.cloud	22	TCP
Time Server	*	123	UDP
Conn Test	bigdutchman.com and google.com	80	TCP
DNS	** Gateway IP configured in LAN1 settings	53	TCP/UDP

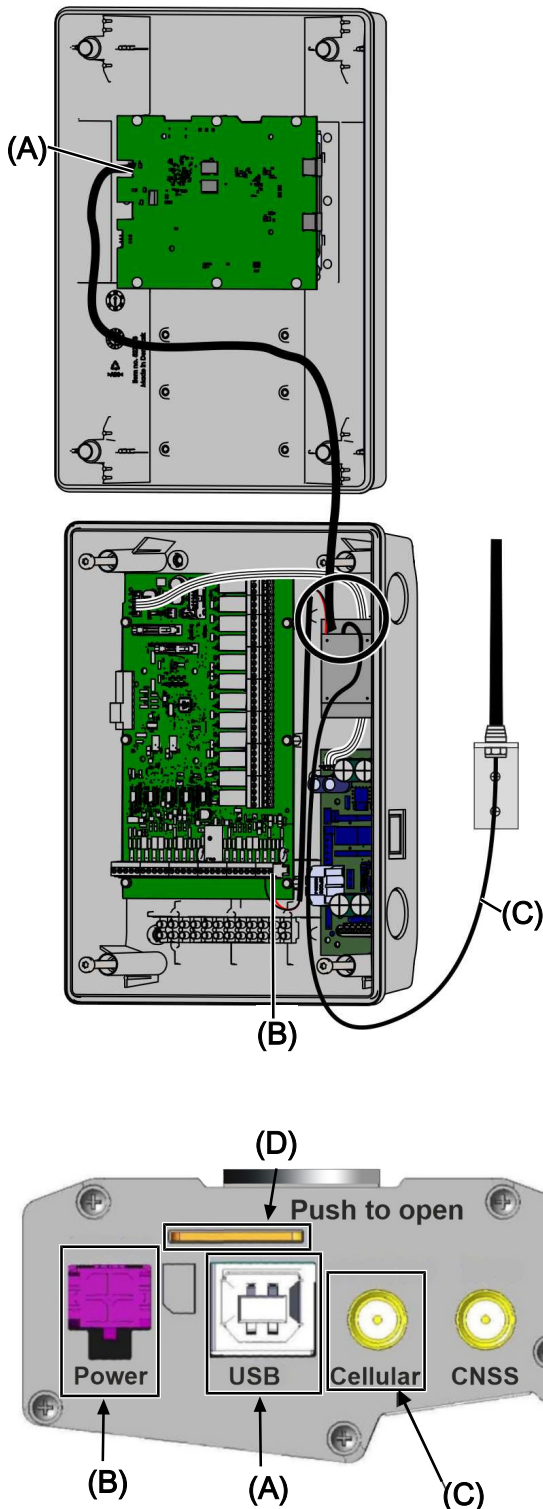
*URLs are wildcards

Endpoints will typically be open, but if not, they must be opened manually.

4.3 Connecting an external antenna for a mobile network

The Internet connection can be set up wirelessly via a mobile network as a backup.

It is essential that all requirements and specifications are followed to ensure optimum conditions for the quality and stability of the connection.



Top of the 4G modem

When mounting, it should be ensured that:

- The antenna is mounted in the open as high up as possible.
- Metal objects placed at the same height as the antenna should not be within a range of 1 meter.
- The antenna is fixed.
- The cable is attached correctly.
- The cable is bent as little as possible (not less than a radius of 25mm).
- The cable is not flattened or somehow damaged.

Be aware that metal roof surfaces can reduce the signal of the antenna. Trees, silos, exhaust units, etc., also degrade the signal strength.

Connect the cable to the antenna in the cellular socket in the 4G modem.

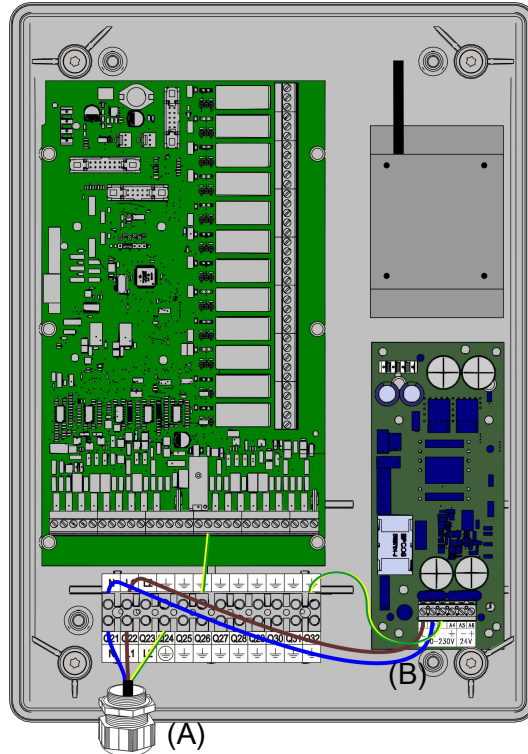
A. Cable from 4G modem (USB) to CPU (USB1).

B. The wire to 24 V DC.

C. Cable from the antenna.

D. SD card for 4G modem.

4.4 Connection of power supply



1. Run the power cable through a cable gland (A). Make sure that it fits tightly by means of a sealing ring.
2. Connect the wires to the 230 V power supply input L-N-PE (B).

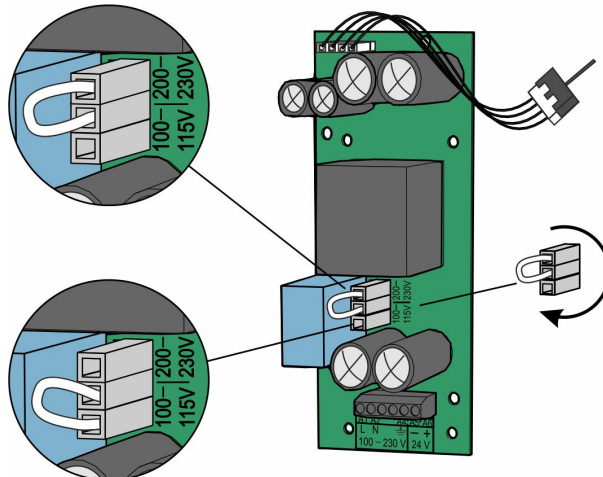
4.4.1 Setting the supply voltage on the power supply



Before you connect supply voltage, it is important to set the voltage in the power supply so that it corresponds to the voltage level in the local house.

1. Set the voltage in the power supply.
2. Connect the supply voltage.

200-230 V Leave the plug in (factory setting)



100-115 V Move the plug to 100-115 V

5 Setup

To complete the setup, some information is required and a certain order must be followed.

1. **SKOV Global Service:** Creates a company in FarmOnline+.
2. **SKOV Global Service:** Creates Admin user profile in MySKOV. Sends an email to the service engineer with a link to create an account.

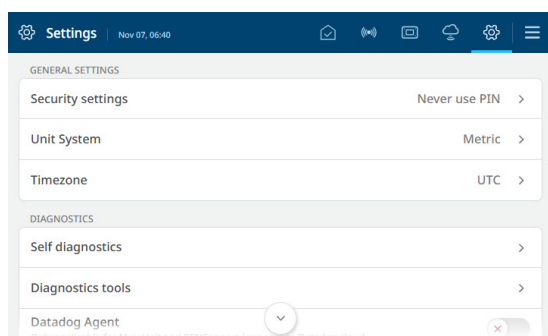
The service engineer must receive the email before the visit to complete the installation.


3. Service engineer: Performs the installation as described in this manual. See section Controller and sensor gateway settings [▶ 17] and forward.
4. Service engineer: Reports the completion of the installation to SKOV Global Service by email (service@skov.dk).
5. **SKOV Global Service:** Activates the subscription and sends a welcome email to the end users.
6. **SKOV Global Service:** Removes the *service engineer's* Admin access.

5.1 Controller and sensor gateway settings

The page settings allows you to set the time and select a device view to suit the geographical location of the device.

In addition, there is access to resetting the device and to the legal terms of its use, and information about the software.



Press  to open the page.

General settings

Security settings

The FarmOnline+ Datalink can be protected against unauthorized operation using a PIN code.

Never use PIN. Operation without code protection.

Configuration changes with PIN. It is only necessary to enter a code when changing settings.

Always use PIN. Only operation after entering code.

Unit system

Select unit system (Metric, US Units, British).

Time zone

Select the time zone setup (local time).

Diagnostics

Self diagnostics

Perform a test of the system. See the section Trouble shooting instructions [▶ 41].

Diagnostics tools

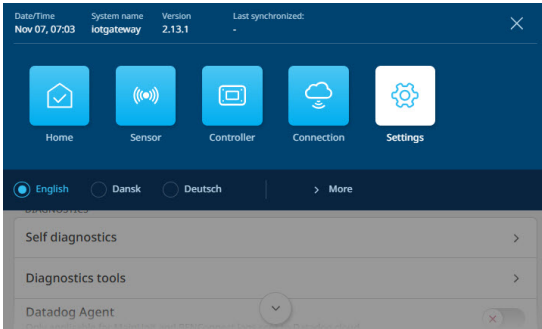
Various tools and diagnostics. See the section Trouble shooting instructions [▶ 41].

Datadog Agent

Enable the Datadog agent to monitor log files sent to the Datadog cloud.

Feature preferences	
Default startup screen	Select a default startup screen for the Datalink. Batch Sensor Controller (Batch and Sensor can only be selected if Feature preferences include a Sensor Gateway).
Feature preferences	Select the feature preference for which the Datalink is installed. The selected preference appears at the top of the Datalink. Controller Gateway Sensor Gateway
Batch	
Batch history	Display of batch history. Only when using Datalink as Sensor Gateway.
Sensor settings	
SiloCheck AIR	Not used.
EasyCheck	Not used.
System - Advanced	
Status	Display of current system status and a system log of operations. The system log can be exported by saving it to a USB memory stick. It may be necessary to retrieve data from the device and send it to the service department for troubleshooting.
Reset	Perform a full or partial reset of the device (input setup and setting up Internet connection and Cloud).
Restart	Restart datalink.
Software update	Manual software update. Should only be used when contacting the service department.
Legal terms	
Terms and conditions	Display of the terms and conditions for using the device.
Privacy policies	Display of the privacy policy for using the device.
About	
Software version	Display of system info.
System name	
Build time	
Installation time	

5.2 Selection of language



Press the  Menu button.

A dot indicates the selected language.

Press **More** if the desired language is not displayed.

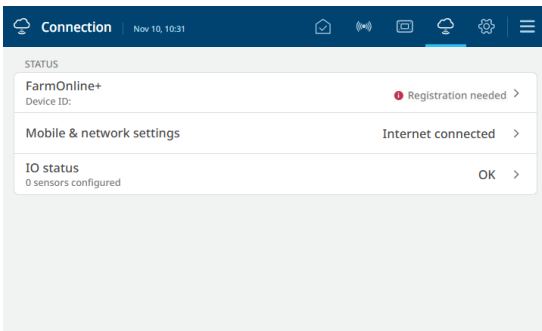
Select the language from the list. Press **Save**.

Note that names of functions (such as 24-hour clocks, water meters, and programs that the user can name) do not follow the selected language.

The factory setting for the names is English.

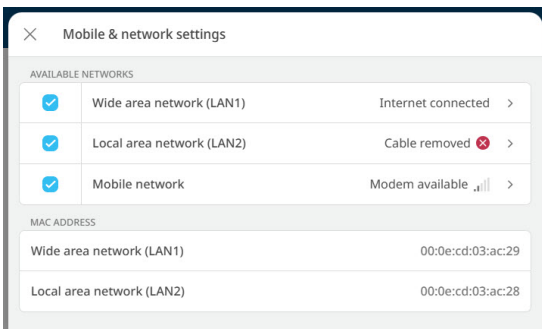
5.3 Creation of Internet connection to datalink

See section Connecting a wired network [▶ 14] and Connecting an external antenna for a mobile network [▶ 15] for cable connection.



Press .

The page displays the current status and gives access to setting up the Internet connection.



Press **Mobile and network settings** to set up available networks.

Available networks

Wide area network (LAN1)

Select the network setup mode (**DHCP** or **Static**).

We recommend using **Static**. When selecting **Static**, the **Netmask** and **Gateway IP address** must be set manually.

DHCP is the default setting. This does not require any more settings. The system automatically selects **IP address**, **Netmask** and **Gateway IP address**.

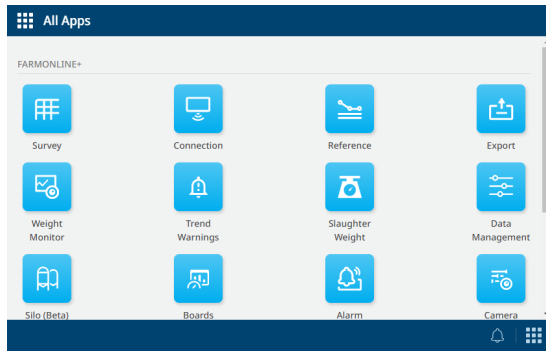
Local area network (LAN2)

There is no cable connection to the LAN2.

Mobile network

Display of cellular network status.

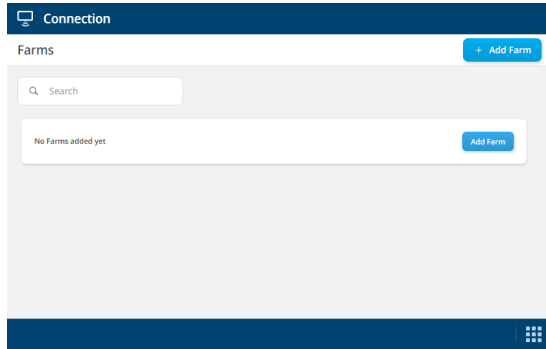
5.4 Creating the datalink unit in FarmOnline+



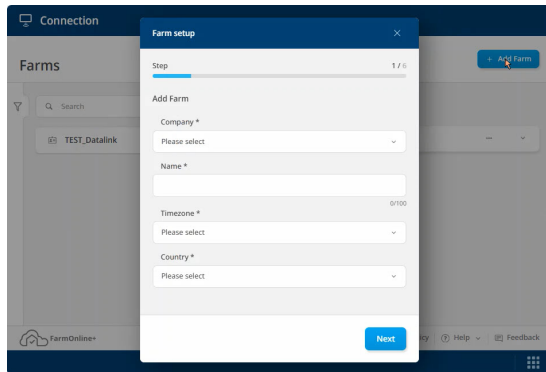
Open an Internet browser on a PC and open MySKOV by entering my.skov.com.

Log in with the provided user profile (Admin).

Click  (Connection).



Click **Add Farm** and follow the setup wizard.



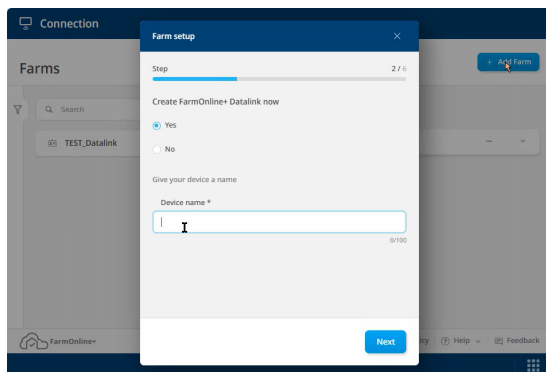
Select **Company** from the list. (Important, select the correct company).

Enter **Name**. (Name of the farm, which may have been agreed with the customer).

Select **Time zone**. (The search function can be used).

Select **Country**. (The search function can be used).

Click **Next**.



Select **Yes** to create a Datalink to the farm.

Enter **Name** of the Datalink, so that the device can be recognized in FarmOnline+. E.g., farm name - Datalink.

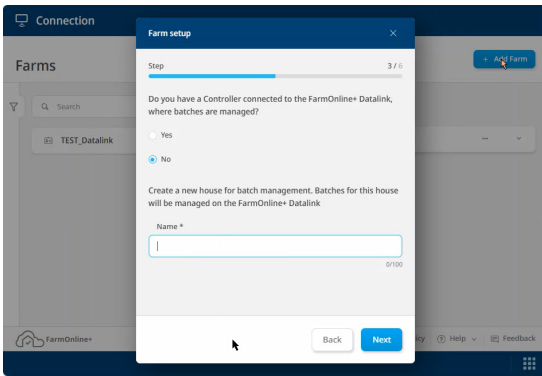
Click **Next**.

Select **No** to create a farm without a Datalink. (FarmOnline+ Datalink must be created later).

Click **Finish**.

For later creation of FarmOnline+ Datalink. Open **Connection** in MySKOV.

Click **Add device** on the front page or in the submenu.

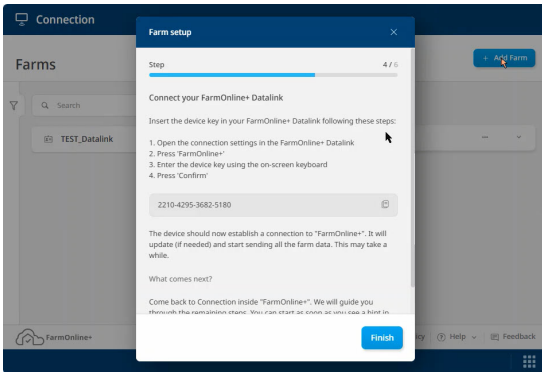


Select **Yes** to create the Datalink as a Controller Gateway for the farm. The controller manages batches.

Select **No** to create the Datalink as a Sensor Gateway. The Datalink manages batches.

Enter **Name** of the house where the Datalink is created.

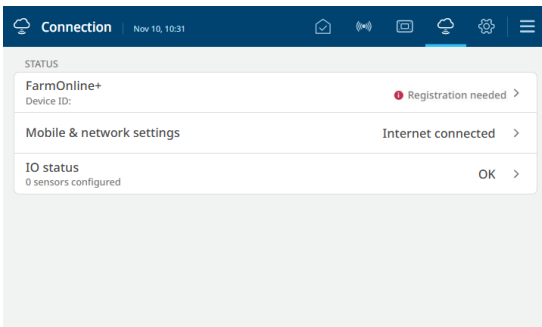
Click **Next**.



The Datalink is now created in FarmOnline+. The system generates a unique device key.

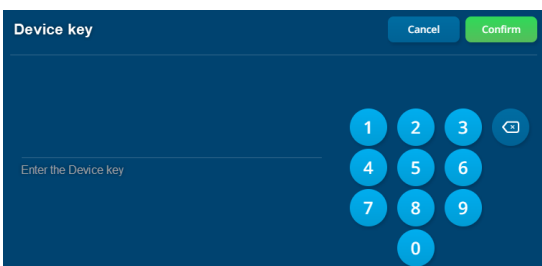
Note down the device key and enter it in the Datalink.

5.5 Entering device key in datalink



Press  the datalink.

Open the menu item **FarmOnline+**.



Enter the device key.

Continue the installation as Gateway for controller and alarm unit [▶ 22].

Continue the installation as Sensor gateway [▶ 29].

6 Gateway for controller and alarm unit

6.1 Connection as gateway for controller and alarm unit

FarmOnline+ Datalink can have up to 25 controllers (software version 7.6 or newer) and alarm units (software 4.10 or newer) connected.

When a controller or alarm unit is offline for some time, data will be sent to the cloud when the controller is online again.

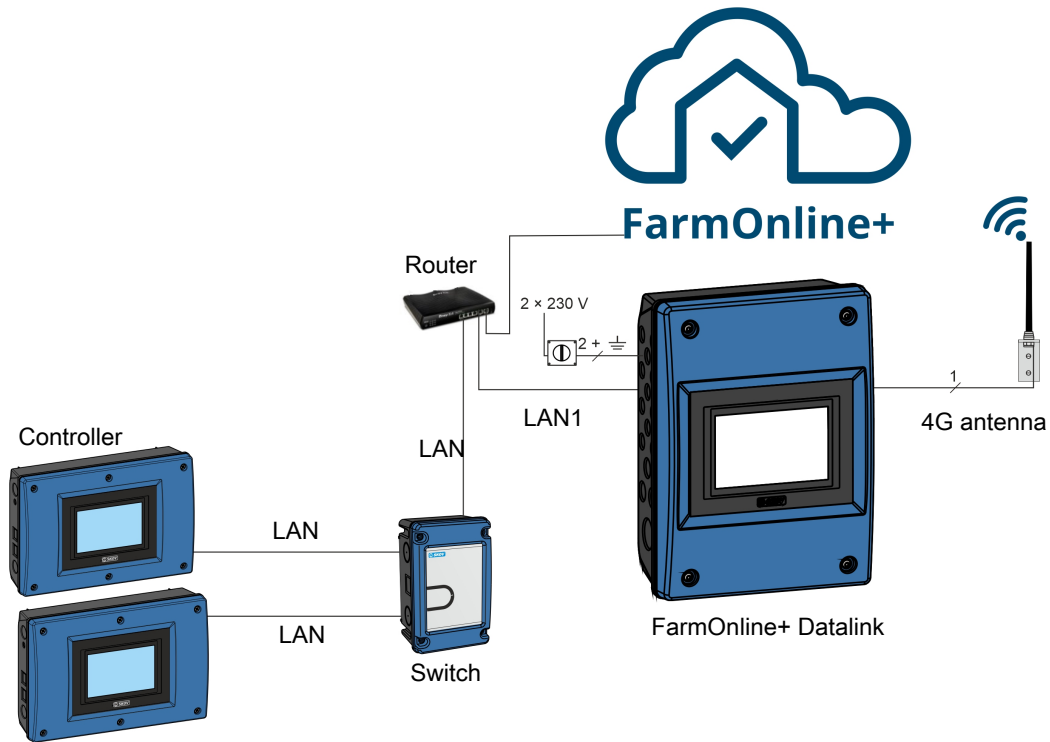
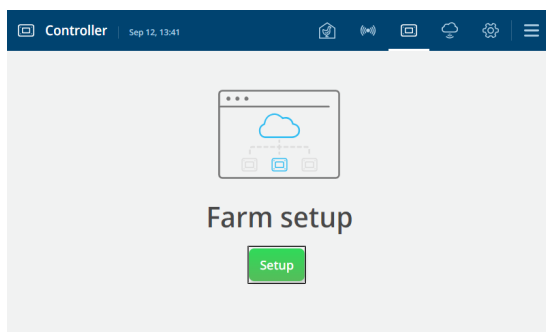



Figure 3: Cable plan when connected as controller gateway

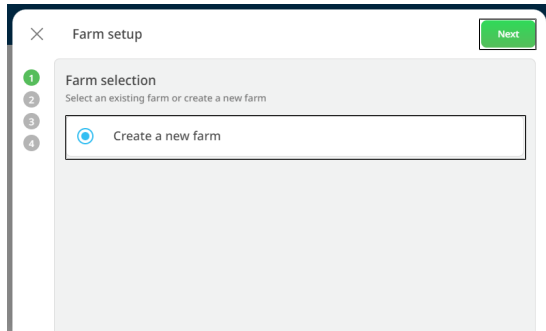
6.2 Setting up the datalink as a controller gateway



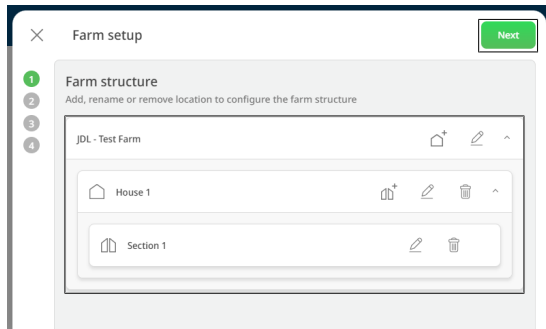
Press  to open the controller setup page.


Press **Setup**.


6.2.1 Creation of farm structure controller gateway





Select **Create a new farm**.
Press **Next**.



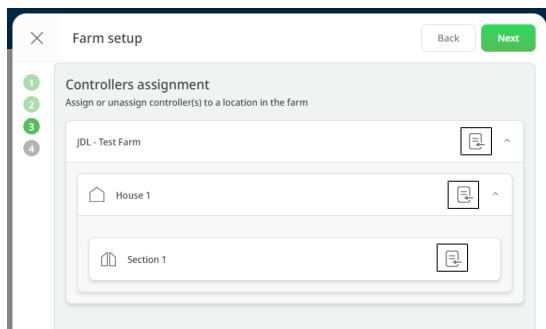
press  to add house.


Press  to add a section to the house.
(Section can be used, for example, when a house has two sections or when two-house controllers are used)

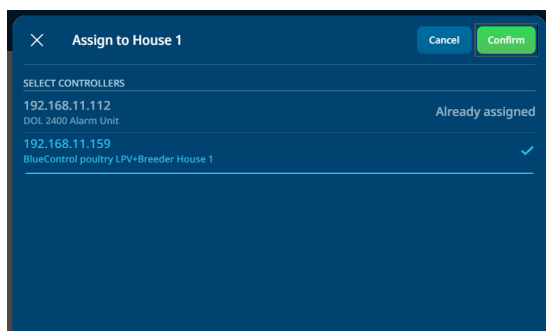
Press  to edit the name of the house or section.

Press  to delete the added house or section.

Press **Next** when the farm structure is finished.

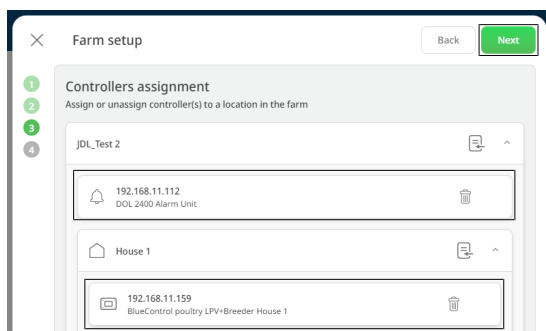


Press  to assign a controller or alarm unit to the farm, the individual house or section in the farm structure.




Select which controller or alarm unit to add to the farm structure. If a device has already been added, this is displayed.

Press **Confirm**.

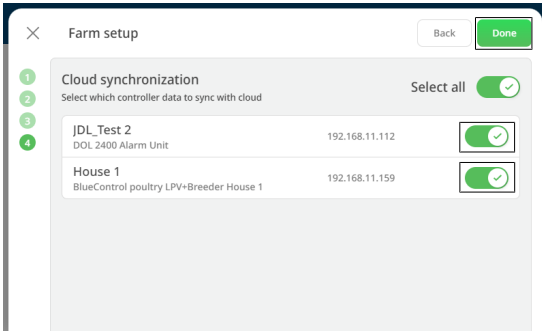


The farm structure is now displayed with controller and alarm unit.

See through the farm structure.

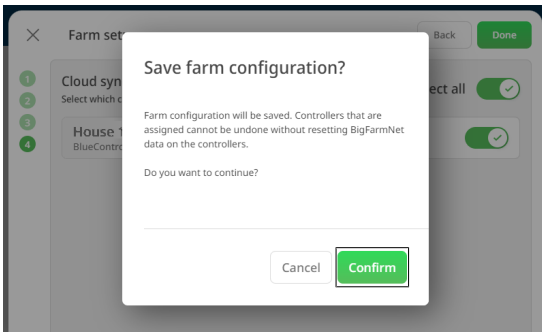
If an incorrect controller or alarm unit has been added, remove it by pressing  and then adding the correct one.

Press **Next**.

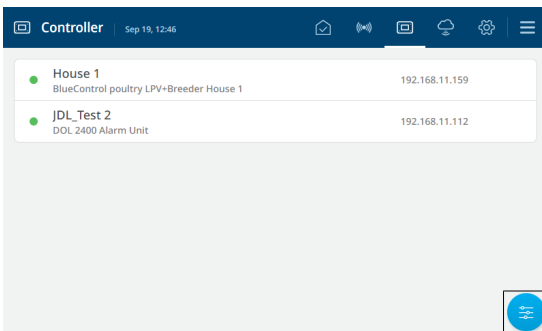


Select one or all controllers to synchronize data with FarmOnline+ and to be accessed via remote access.

Press **Done**.

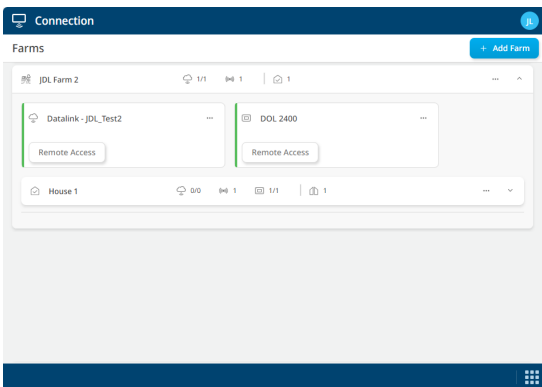


Press **Confirm** to save the configuration.



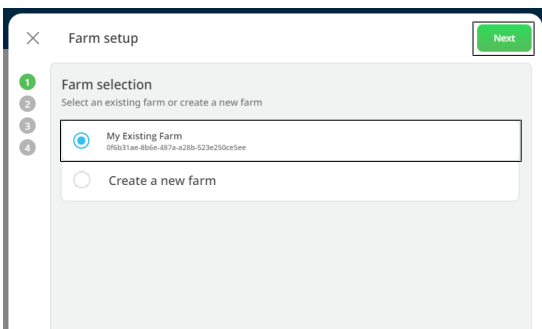
In the datalink, the page **Controller** shows the added controllers.

Press  | **Farm setup** to access and change the farm structure.



Update the browser page with FarmOnline+. In the **Connection** page, the farm structure and the added controllers are displayed.

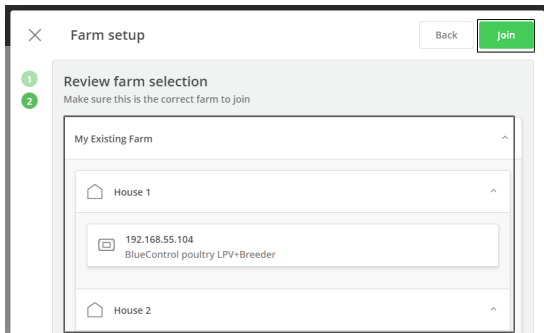
6.2.2 Adjusting the existing farm structure for the controller gateway



If the Datalink exists on the same network, such as a FarmOnline Explorer setup, the menu displays the existing farm.

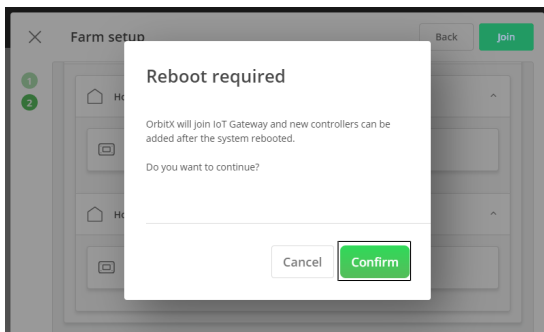
Select **Existing farm**.

Press **Next**.



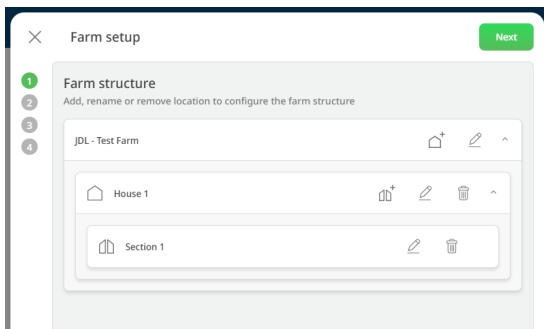
Review the farm structure to ensure it is the correct one and that it is set up correctly.

Press **Join**.



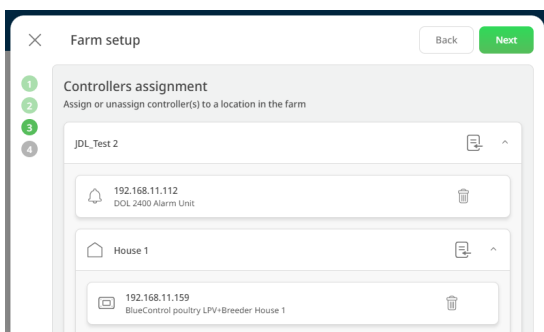
Press **Confirm**.

The datalink restarts to connect to the selected farm structure.



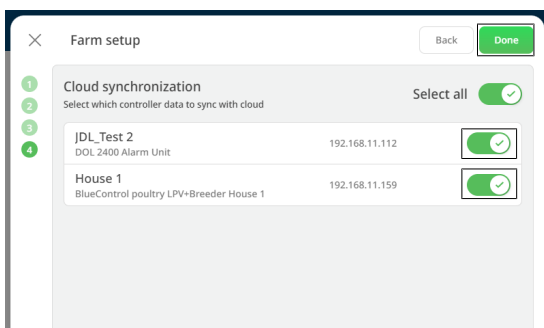
Ensure that the naming and structure are as desired.

Press **Next**.



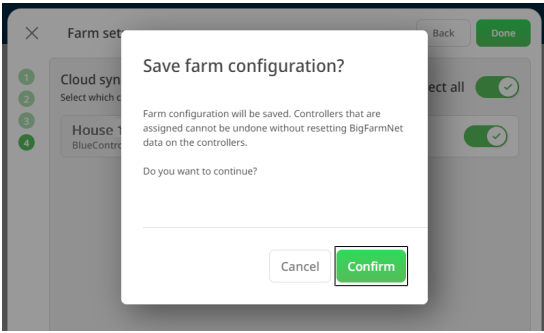
Check that controllers and alarm units have been added to the desired locations in the farm structure.

Press **Next**.



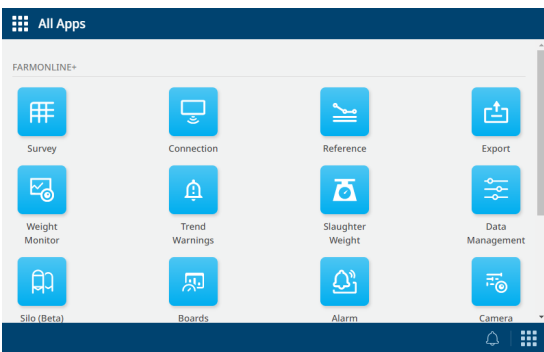
Select which controller to synchronize data with FarmOnline+ and to be accessed via remote access.

Press **Done**.



Press **Confirm** to save the configuration.

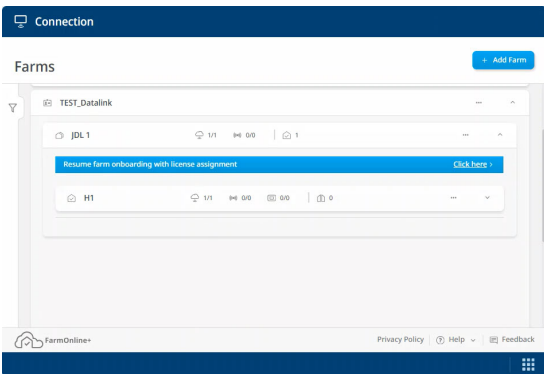
6.3 License assignment in FarmOnline+



Open an Internet browser on a PC and open MySKOV by entering my.skov.com.

Log in with a user profile.

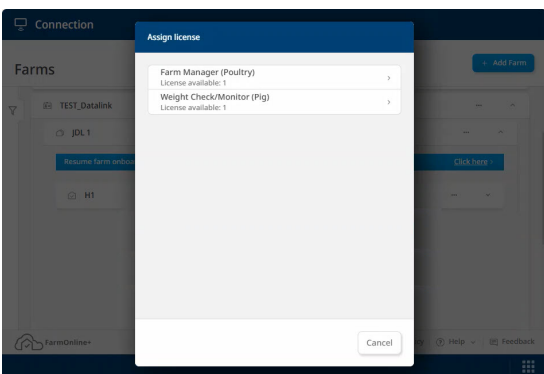
Click  (**Connection**)



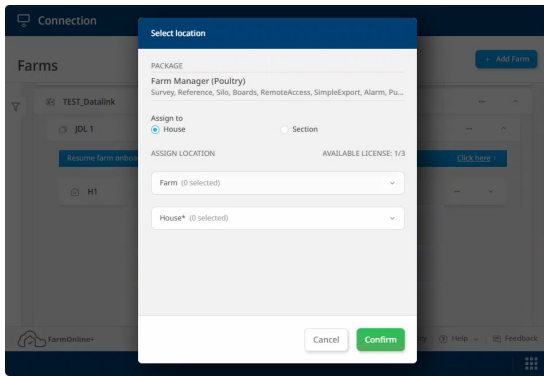
If a company has licenses that can be assigned to a farm, this is indicated with a blue banner.

To resume the license assignment setup.

Click the blue banner.



Select the license to use.

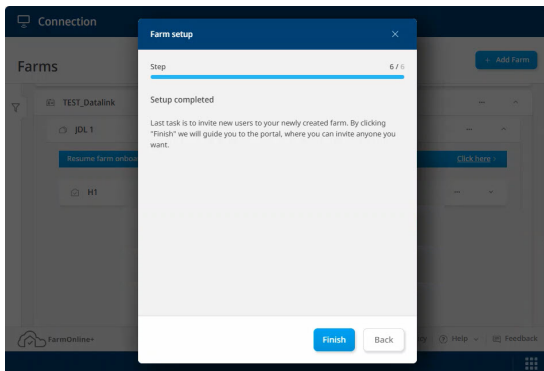


Assign a location for the license.

Select **Farm**.

Select **house**.

Click **Confirm**.



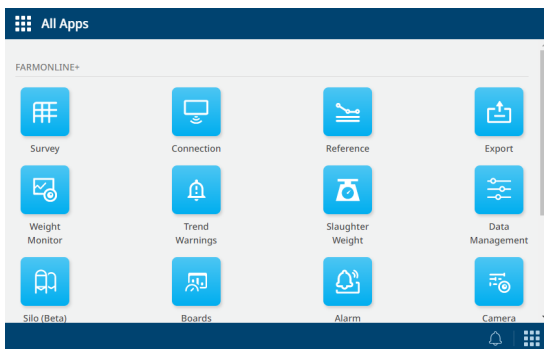
The setup of FarmOnline+ Datalink is now complete.

Click **Finish**.

6.4 User Guide Controller Gateway

6.4.1 Remote access via FarmOnline+

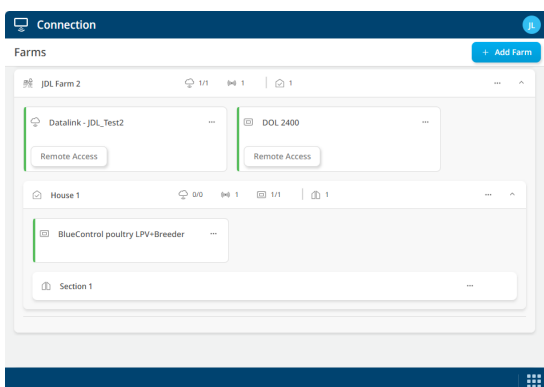
The **Remote Access** function allows users to connect to the individual controller and adjust settings without being physically present in the livestock house.



Open an Internet browser on a PC and open MySKOV by entering my.skov.com.

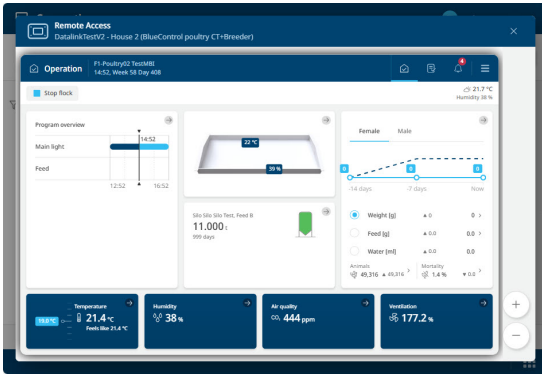
Log in with a user profile.

Click  (**Connection**)



Under **Farm**, the Datalink (controller gateway) is visible.

Under the individual houses, controllers are visible.



Click **Remote access**.

The controller screen image appears.

You can make changes to settings, view status, or perform batch start/stop on the controller.

7 Sensor gateway

7.1 Connection as a sensor gateway

can have up to 11 sensors of the following types connected.

Sensor	Limit value (gives direct data transmission)
DOL 114 (humidity)	1%
DOL 114 (temperature)	0.5 °C
DOL 12 (temperature)	0.5 °C
DOL 16 (light intensity)	
DOL 18 (pressure)	
DOL 119 (CO ₂)	20 ppm
DOL 53 (NH ₃)	1 ppm
DOL 99A (feed counter)	0.1 t
DOL 90 (water meter) (max. 6 pulses per second)	0.1 m ³

It collects data from the sensor once every minute.

It sends data at least once every 5 minutes. However, a value is sent immediately if the difference to the last reading is greater than the limit value as shown in the table above.

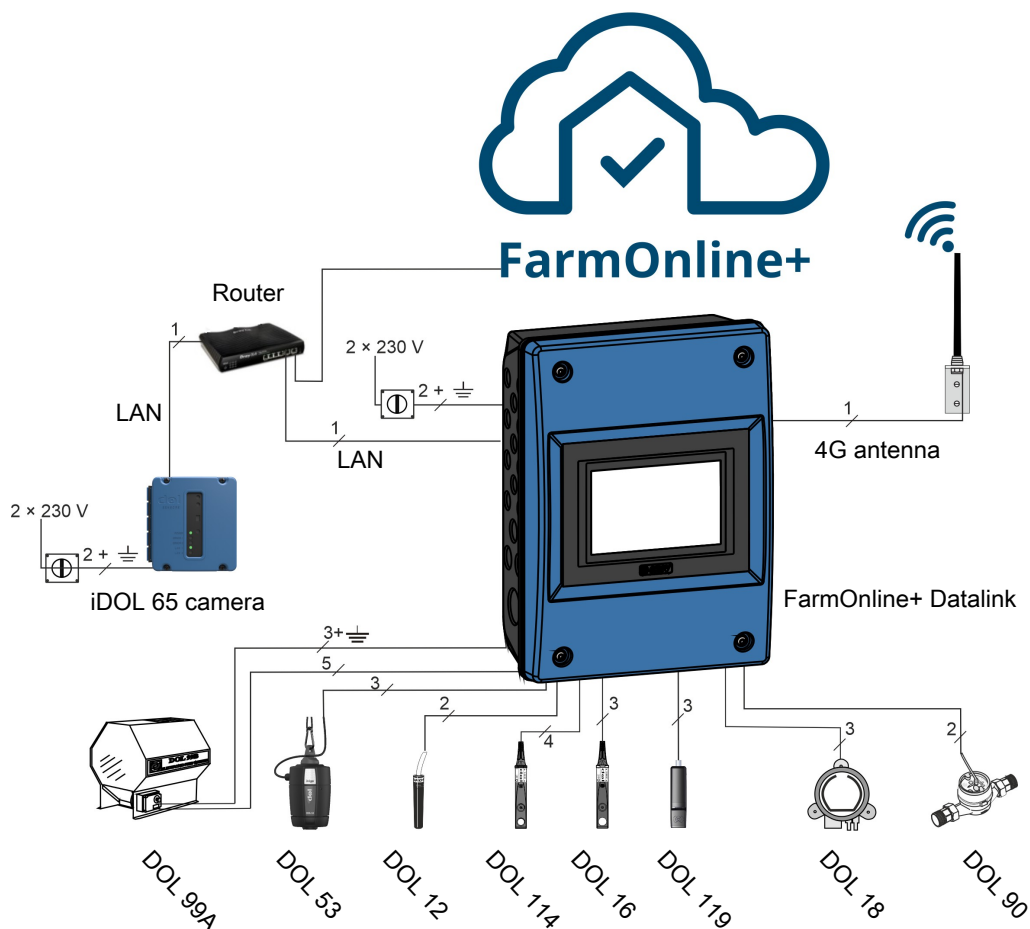


Figure 4: Cable plan when connected as sensor gateway

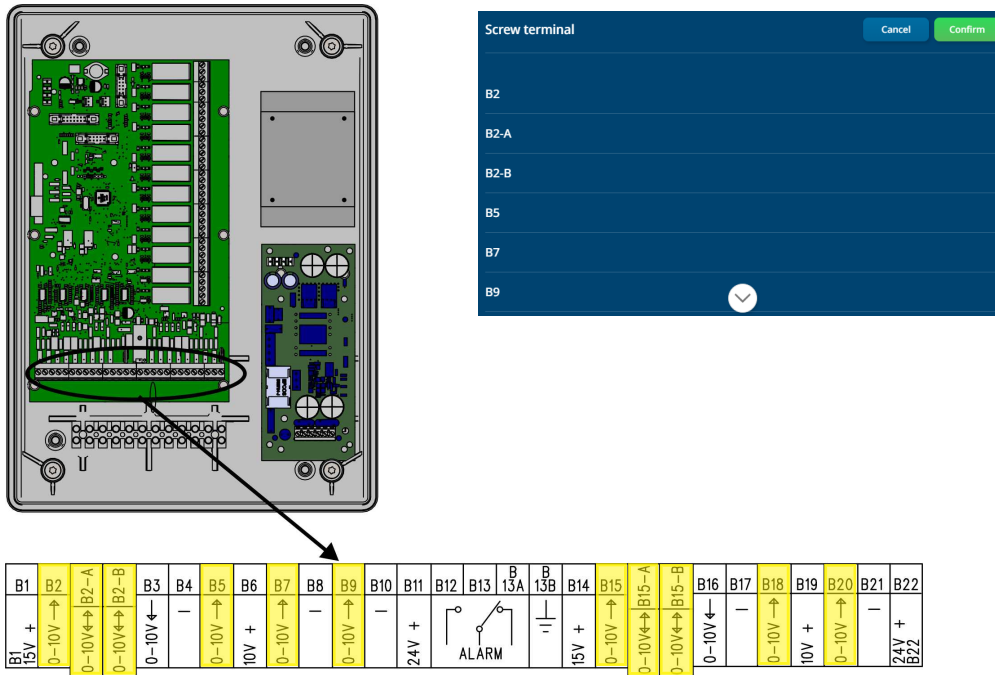


Figure 5: Connections for main I/O, all 0-10V inputs are marked with yellow.

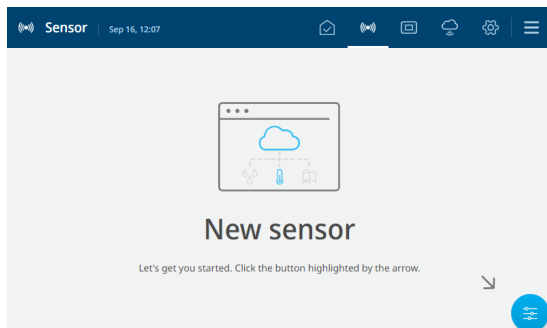
Note that the DOL 12 temperature sensor can only be connected B5, B7, B9, B18 or B20. We recommend using the same 24V supply (B11) for the water meter and feed counter. See also the documentation that comes with the sensors for connection. Note which input each sensor gets as it is used later.

Cable dimensions for 24 VDC depending on cable length

Cross section	Cable length
1.5 mm ²	0-200 m
2.5 mm ²	201-330 m
4.0 mm ²	331-530 m

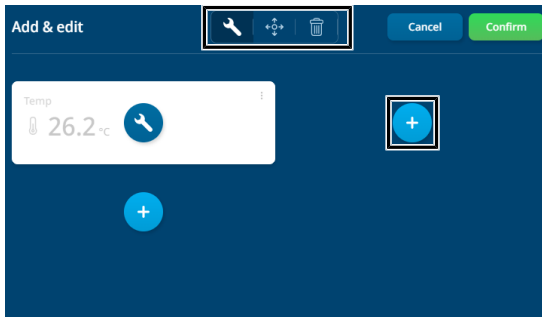
Table 1: Cable dimensions for DOL 119, DOL 114, DOL 16, DOL 53, DOL 18 and DOL 12 (24V DC)


7.2 Setting up the datalink as a sensor gateway





Press to open the sensor setup page.

Press

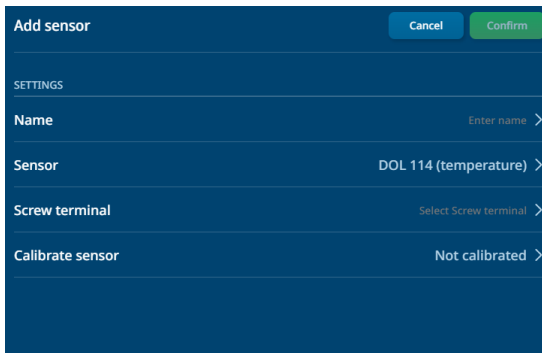


Press  to add new sensors.

Press  to edit sensors.

Press  to change the order of sensors.

Press  to delete sensors.



Select the name, type of sensor, and to which terminal it is connected.

It is crucial to select the correct terminal.




Feed counter and water meter

Set a value per pulse for the feed counter and water meter under **Calibrate sensor**.

✕ Configured IO status

Channel	Description	Raw values	Values
B5	DOL 114 (humidity) Humidity	3,800 mV	38 %
B2-A	DOL 114 (temperature) Temp	6,558.0 mV	25.6 °C

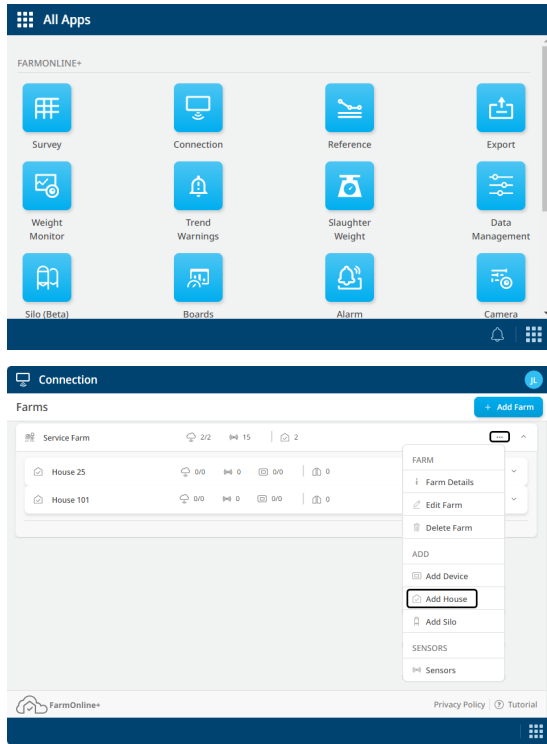
I/O status

Press  and select the menu **I/O status**.

The menu shows the current status and gives an overview of the connected sensors with a display of where they are connected and their current values.

The overview can be used when troubleshooting the sensors.


7.2.1 Creation of farm structure for sensor gateway



Open an Internet browser on a PC and open MySKOV by entering my.skov.com.

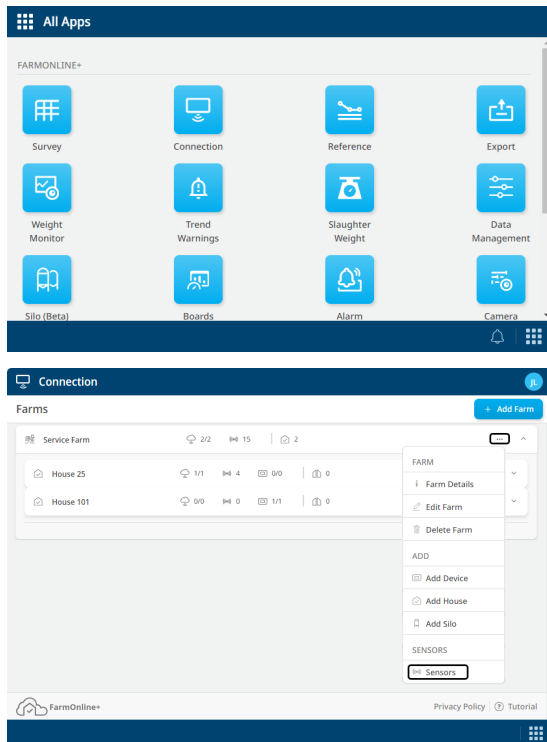
Log in with a user profile.

Click  (Connection)

Under Farm click  and click **Add House**.

Enter name.

7.2.2 Adding sensor locations in FarmOnline+










Open an Internet browser on a PC and open MySKOV by entering my.skov.com.

Log in with a user profile.

Click  (Connection)

Under Farm click  and click **Sensors**.

Name	Sensor type	Parameter type	Location	FarmOnline+ Datalink	Actions
Dol 12	DOL 12 (temperature)			Sensor Gateway	
114 temp	DOL 114 (temperature)			Sensor Gateway	
Temp 2	DOL 12 (temperature)			Sensor Gateway	
114 humidity	DOL 114 (humidity)	Humidity	House 2	Sensor Gateway	
CO2 level	DOL 19 (CO2)			Sensor Gateway	
114 Temp	DOL 114 (temperature)			Security Datalink	
DOL 12	DOL 12 (temperature)			Security Datalink	

All sensors connected to the farm are displayed here.

Click  (**Assign sensor**) for each one of them.

Assign sensor Humidity

Sensor name
Humidity

Assigned parameter type
Please select one

Silo House

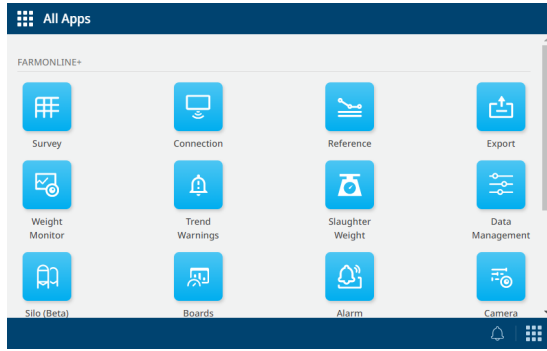
Assigned location
Please select one

Sensor ID
7f24ab44-814c-5dc8-acb8-8717e05d6305

Assign a parameter type and location for all sensors.

*Data from sensors is only visible in the FarmOnline+ applications when sensors are added to the location and on the house/section of **Connection**.

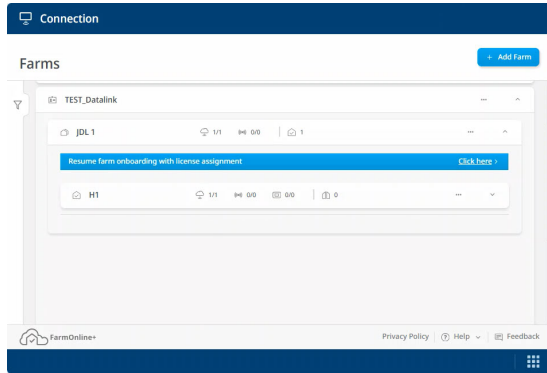
7.3 License assignment in FarmOnline+



Open an Internet browser on a PC and open MySKOV by entering my.skov.com.

Log in with a user profile.

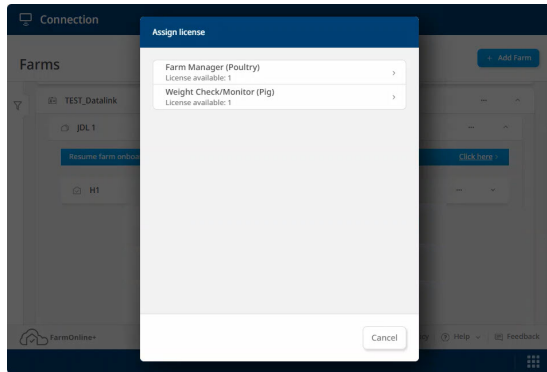
Click  (**Connection**)



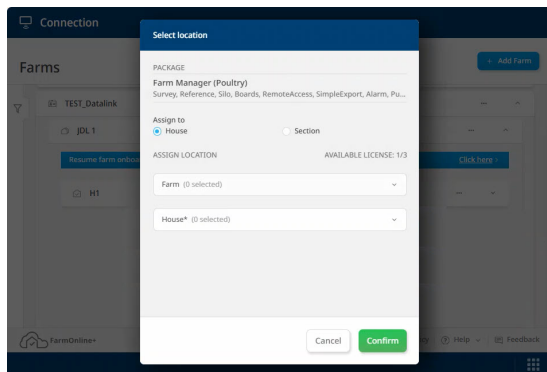
If a company has licenses that can be assigned to a farm, this is indicated with a blue banner.

To resume the license assignment setup.

Click the blue banner.



Select the license to use.

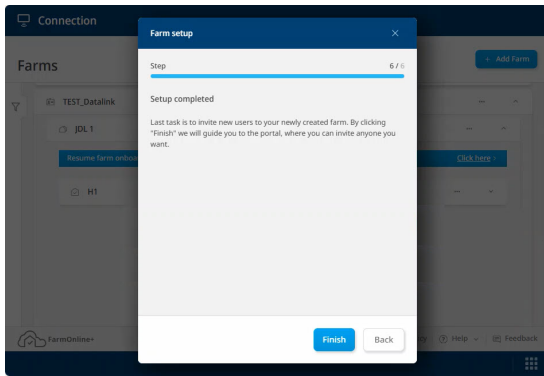


Assign a location for the license.

Select **Farm**.

Select **house**.

Click **Confirm**.

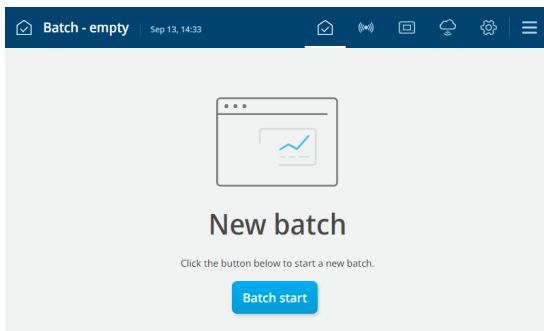


The setup of FarmOnline+ Datalink is now complete.
Click **Finish**.

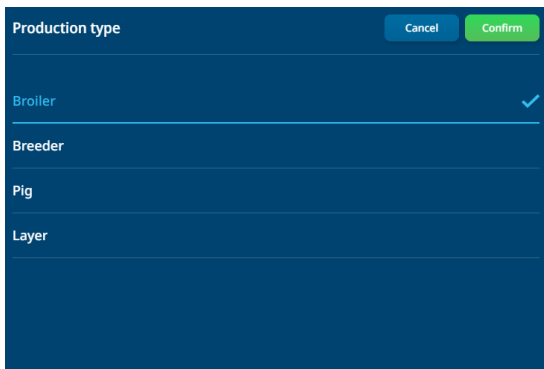
7.4 User guide sensor gateway

7.4.1 Batch

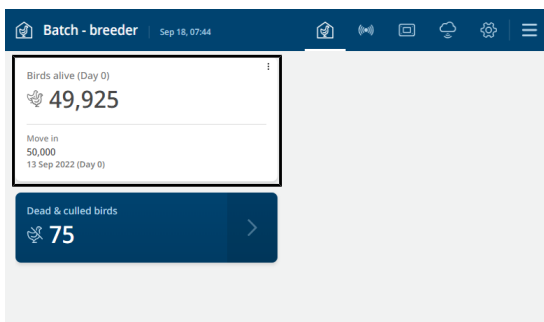
The **Batch** page allows you to start and stop a batch and to see and register the number of animals in the house.



Press  to open the page.
Press **Batch start**.

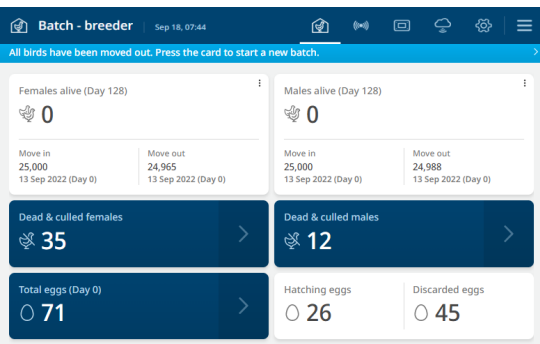
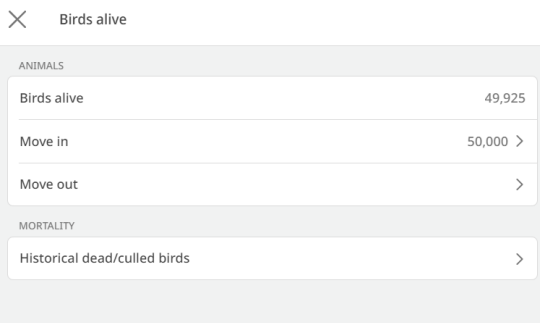


Then, select production form (broiler, breeder, pig or layer), stocking date, and number of animals.

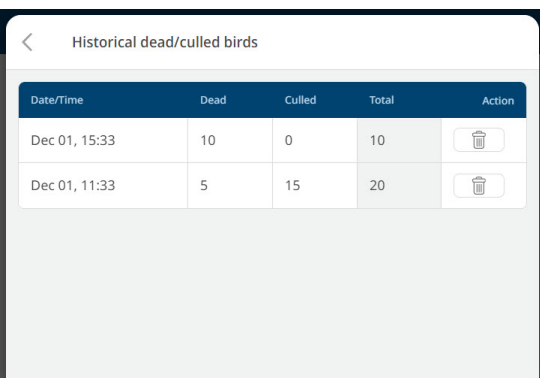
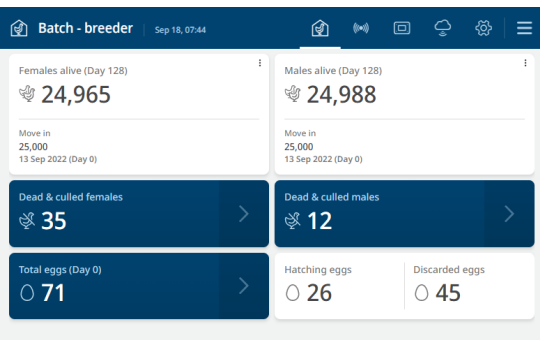


Animals alive

Changing the information about the Move in process later by pressing the card is possible.



Mortality



Move out

It is possible to depopulate some or all of the animals. Be aware that the batch ends when all animals are depopulated.

Press **Move out**. Tap **Add activity**.

Then, choose the date of depopulation and the number of animals.

Batch stop

Batch stop is performed by entering the remaining number of animals under (**Move out**).

The page's historical data (the completed batch) disappears when the next batch is started.

Batch start

Touch the blue bar to confirm the creation of a new batch.

Registration

It is possible to register in the two categories:

- Dead
- Culled animals

When animals are entered in the menu **Mortality**, the number is automatically deducted from the number of animals alive in the house.

Enter the time and number of animals.

Eggs in total (only at breeder and layer)

It is possible to register the number of eggs in two categories:

- Hatched
- Discarded

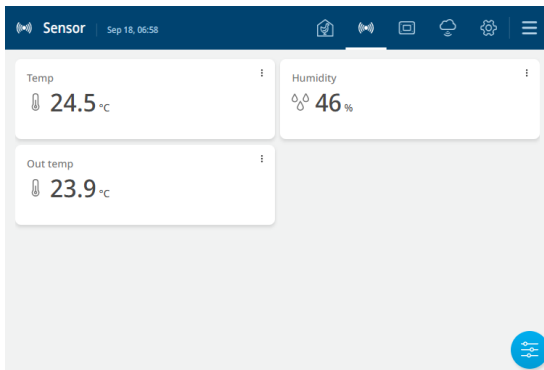
History


Registrations of dead and culled animals are listed.

Correcting the registrations and deleting the individual registration if it has been made incorrectly is possible.

7.4.2 Sensor

The **Sensor** page allows you to view recordings from the connected sensors.



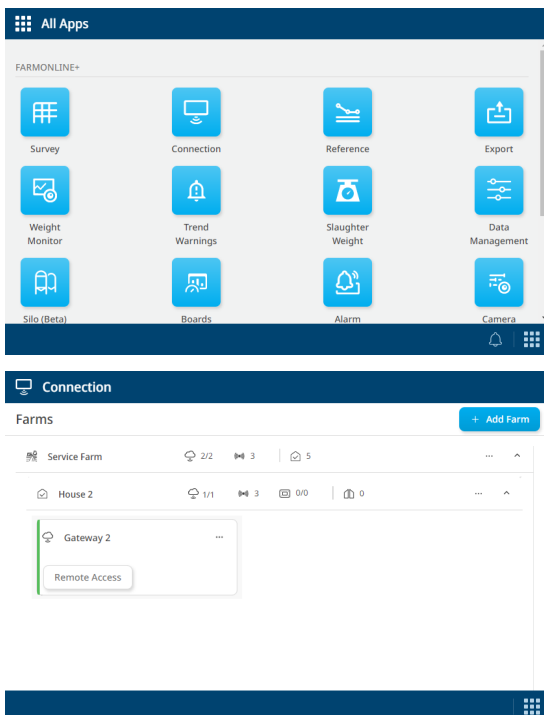
Press  to open the overview page of the connected sensors.



Press the desired sensor to view measurements for the last 24 hours, week, or month.

7.4.3 Remote access via FarmOnline+

The **Remote access** function also allows users to connect to the sensor gateway and adjust settings without being physically present in the livestock house.

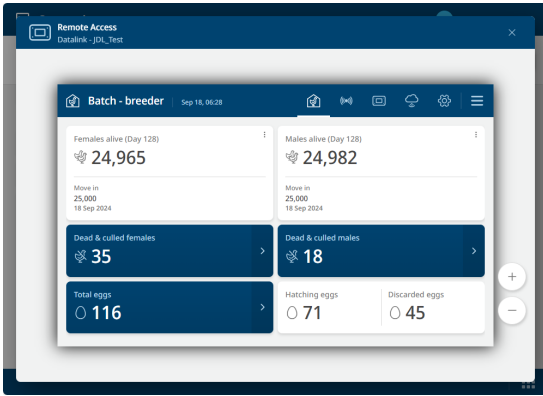


Open an Internet browser on a PC and open MySKOV by entering my.skov.com.

Log in with a user profile.

Click  (**Connection**).

The Datalink (sensor gateway) is visible under **Farm** and under each house.



Click **Remote access**.

The data link screen appears.

You can make changes to settings, view status, or perform batch start/stop on the datalink.

8 Start-up test

Perform startup tests before using FarmOnline+ Datalink.

Check all of the following items in the specified order.

Start-up test	✓
Mounting	
Check the datalink for visible damage.	
Check that there is sufficient free space in relation to the datalink. See the section Mounting on the wall [▶ 12].	
Electrical	
Check that there is access to the supply isolator.	
Check that the power supply isolator works.	
Check that grounding has the same potential as the installation earth and that the contact resistance complies with local and international directives and regulations.	
Check the 24 V DC voltage level and 0 V potential.	
Check that the screwed connections are tightened and fit tightly.	
Check external antenna wiring. See the section Connecting an external antenna for a mobile network [▶ 15].	
Check that the Internet connection is working. See the section Creation of Internet connection to datalink [▶ 19].	
Setup	
Check that the farm structure in FarmOnline+ is made as desired.	
Check that code protection is set up as desired. See the section Controller and sensor gateway settings [▶ 17].	
Check that Remote access to controller/alarm unit via FarmOnline+ is working.	
Sensor Gateway	
Check that the connected sensors are displayed and respond to changes.	
Remarks	
Date and signature	

9 Maintenance

The device requires no maintenance to function correctly.

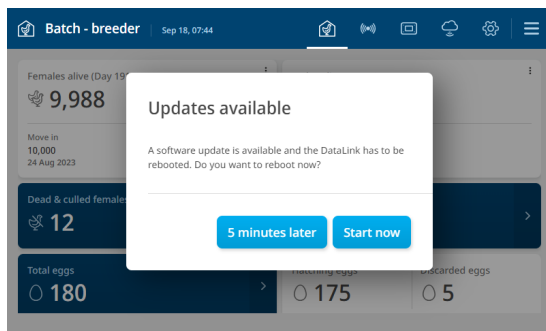
Note that the service life is extended if it stays connected all the time, as this keeps it dry and free from condensation.

9.1 Software update

The device is regularly updated by SKOV via the built-in modem or local network to ensure the best possible user-friendliness and security. It is called Over-The-Air updates (OTA).

Go to the **About** page to see the current software version.

With OTA updates:



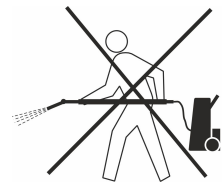
- You get simple and reliable updates to your device without the need for on-site visits or the involvement of a technician - and this:

- saves time
- improves the biosecurity
- reduces costs

- We ensure that your device always provides the best services.
 - We can do our utmost to address any security risks and protect against hacker attacks quickly.

Function is always on and does not incur any additional costs.

9.2 Cleaning



Clean the product with a cloth that has been wrung out almost dry in water and avoid using:

- high-pressure cleaner
- solvents
- corrosive/caustic agents

9.3 Recycling/Disposal



The label indicates that the product must not be disposed of as general refuse disposal and must be treated as electronic waste.

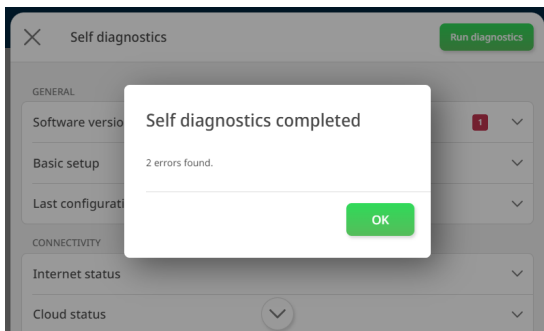


The label indicates that the product is suitable for recycling.

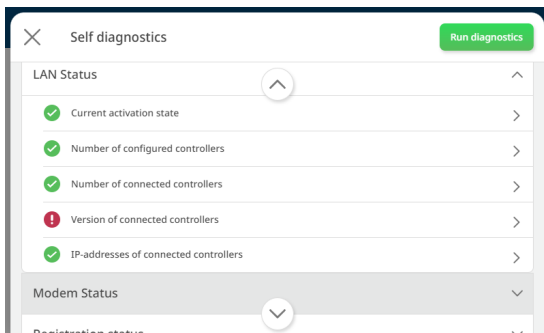
It must be possible for customers to deliver the products to local collection sites/recycling stations in accordance with local instructions. The recycling station will then arrange for further transport to a certified plant for reuse, recovery and recycling.

10 Trouble shooting instructions

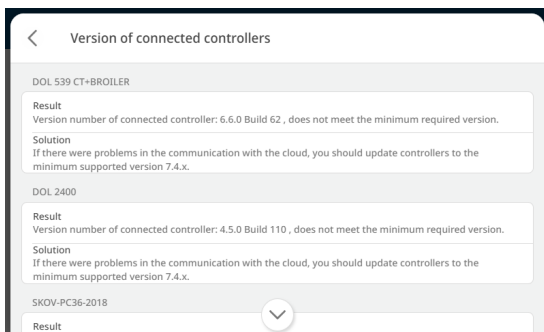
10.1 Self diagnostics



The function Self diagnostics allows you to run a test on the system.



When the test is complete, and there are errors on the system, possible solutions are provided to correct the error.



Example.

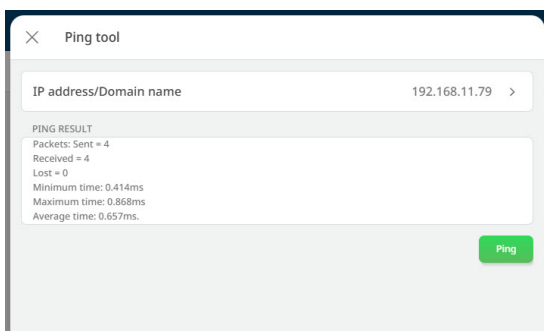
Problem: Cloud communication problem.

Reason: The associated controller does not have the required software version.

Solution: Update controller to minimum version 7.6.x or later.

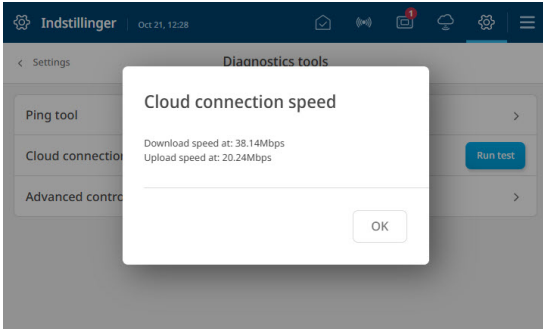
10.2 Diagnostics tools

10.2.1 Ping tool



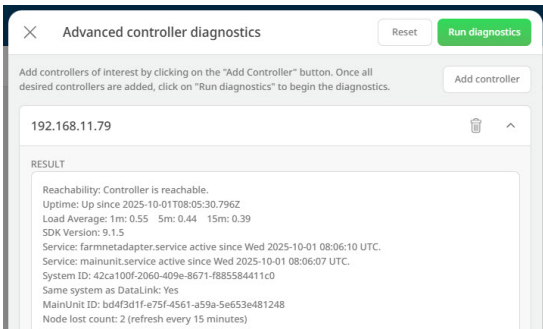
Ping is used to test the network connection between two devices. It helps determine whether a specific IP address or host is available, and measures the response time between query and response.

10.2.2 Cloud connection speed



It is possible to test the speed of the cloud connection. The function displays the speed of data transfer between the Datalink and the cloud service.

10.2.3 Advanced controller diagnostics



Advanced controller diagnostics are used to identify and analyze technical errors or malfunctions in the house's automated systems.

10.3 Mobile app

Fault symptom	Error	Solution
Does not receive notifications on mobile app.	Notification is not allowed on the mobile phone for the FarmOnline+ app.	On your mobile phone, verify that notifications are allowed for FO+app (Settings menu).
	The mobile does not have GSM coverage.	Check your mobile's Wi-Fi and cellular network settings. Check with mobile service provider for coverage in the area.
	Farm internet connection or LAN network is down.	Check ...
Receives notification of the same alarm several times	Not a fault. Mobile app receives alarms from the alarm unit and from the controller.	

11 Technical data

Electrical		
Rated voltage	V AC	115, 200 and 230/240
Operating voltage	V AC	103.5-264
Frequency	Hz	50/60
Output	W	75
Max. current consumption	A	0.7
Main module		
Inputs		11 x 0-10 V DC
Outputs/power supply		2 x 15 V DC power supply +/- 10 % max. 40 mA in total.
		2 x motor supply 24 V DC +/- 20 % max. 0.4 A (in total for the entire device).
		2 x supply for winch motor potentiometer 10 V DC max. 40 mA in total.
		2 x 0-10 V DC. Output impedance 100 Ohm.
Relays		12 x NO/NC potential free. Max. voltage/current at (resistive load) 250 V AC / 5 A AC. Max. voltage/current at (inductive load) 250 V AC / 2 A AC CosPhi 0.8.
		1 x alarm relay NC, max. 24 V 2 A, min. 12 V 10 mA (resistive load).
Phone modem		
Frequency range	MHz	699-960, 1710-2620
Signal level	dBm	Minimum (minus) -95
Minimum download/upload connection	Mbps	0.5
Mechanical		
Cable knock-out punches		7 ø25.5 mm for M25 cable gland 2 ø40 mm in each side for the socket
Network		
Network interface		2 x 10/100 BASE+TX RJ 45
USB		2 x USB 2.0 A type
Minimum Internet connection	Mbps	1
Internet connection using Remote access	Mbps	3
Recommended internet connection	Mbps	100
Minimum data speed	Mbps	100 (full-duplex)
LAN cable		Minimum CAT5e
Max. LAN cable length	m	100
Environment		
Temperature, operation	°C	-10 to +45
Temperature, storage	°C	-25 to +60
Ambient humidity, operation	% RH	0-80
Protection class	IP	54 (splashproof) It is assumed that the base surface is level, i.e. ≤ 1.5 mm height difference, and the front panel screws are tightened to a minimum of 1.5 Nm.

Electrical		
Controller requirements		
Software version		7.6 or newer
Alarm units requirements		
Software version		4.10 or newer
Shipment		
Dimension HxWxD	mm	381x280x150
Dimensions when packed HxWxD	mm	425x555x195
Weight	g	5300

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