Hatchery Fry Feeder

MANUAL

Product type

Product name:	SENECT® Hatchery Fry Feeder
Type:	BFA-01-LS
Art.-Nr.:	3302
Producer:	SENECT GmbH & Co. KG An 44 – No. 11 76829 Landau / Germany

<u>Important note:</u>

Please read this manual carefully and store it so that you can use it later. Read the warning and safety notes attentive.

More information and latest software releases or documents can be downloaded from:

www.senect.de

Further information, application descriptions and answers to frequently asked questions can be also found on the SENECT Forum:

http://forum.senect.de

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Used symbols and wording

⚠	**DANGER!** Warning of life threatening dangers. **WARNING!** Warning of possible life threatening and / or severe irreversible injuries. **ATTENTION!** Warning of possible medium or slight injury.
❗	**ATTENTION!** Follow the notes to avoid damage of equipment.
ⓘ	**NOTE!** Further information for the use of the device.
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General Security Notes

The SENECT Hatchery Fry Feeder is an electronic fish feeder.

Since it is an electric product the common prerequisites for a safe instrument usage must be fulfilled. Ensure that all cables are installed safely so that no obstacles for persons are built and all. Mount all cables and electric devices protected against direct environmental impacts like overheating by direct sunlight and water. The Hatchery Fry Feeder uses max. 24 V DC supply voltage which is therefore not of danger for persons.

The operating temperature of the device must be between 0°C and +40°C.

The device is designed to be operated by professional users. It can be also operated by children over the age of 8 years and persons with limited physical, sensorial or cognitive ability, if they are supervised, trained in the operation of the device, able to operate the device safely and if they understand potential risks resulting from the operation. It is for children or persons with limited physical, sensorial or cognitive ability not allowed to perform any maintenance works.

> **Warning:** Do never touch the feeding hole on the bottom of the feeder during operation! Deactivate the feeder always before doing maintenance works.

Please store this manual. We suggest the storage a copy of the manual in the vicinity of the device.

Technical and optical changes of this manual are subject to alterations.

> **Warning:** Before doing any maintenance work switch off all electric devices or unplug the mains plug.

Intented use

The SENECT Hatchery Fry Feeder is designed to feed small portions of fine-grained fish feed automatized. To control the feeder, a SENECT control unit (e.g. SENECT|ONE or AQUACULTURE|CONTROL) is required.

Getting started

Scope of delivery

- 1 x Hatchery Fry Feeder incl. actuator-cable
- 1 x Manual

Note

Please check directly after delivery, that the package is not destroyed or damaged or was opened before. Please check also, that all parts as listed above are included. If anything is missing or broken, please contact us as soon as possible within 14 days. Unfortunately, we cannot accept later information of damage, which happened during the transport.

Installation and start-up

1. Mount the feeder over the tank, in which the feed should fall. Special holding systems are offered by SENECT.

Please keep in mind that the distance between the feeder and the water level should be large enough, so that water splashed by fish movement e.g. during feeding does not reach the feeder.

2. Connect the cable to the feeder and to your SENECT control unit at one of the green marked actuator outputs **OUT**.

3. Fill the feeder with small grained feed.

4. Select the desired functions in the menu of your control unit.

Depending on the actual software version, the menu can be different. You can find the latest manuals under **www.senect.de**.

Setting the feeder settings

To switch the feeder on, follow the next steps:

1. Activate the output port with the function „Feeder"

Select in the **Menu / Output ports** the plug, where the feeder is connected and select as function „**Feeder**".

2. Set the timespan of feeding

Set in the „Operating time" submenu the start and stopptime. This time window defines the time, when the feeder can be generally active, e.g. from 7 am to 8 pm.

3. Set the feeding mode

In the submenu „**Time-controlled**" the actual feeding times and durations have to be set. There you can choose between the **timer table**, where you have to enter specific times, e.g. 7 am, 10 am and 3 pm or the **interval mode**, where you set a duration and interval period, e.g. every hour for 10 s.

- o **Timer Table**

In the timer table, you can define specific times when the output should be activated.

Choose "+ New Entry" to create a new activation time. Enter therefore the starting time and duration and press OK to save this entry.

By pressing ➜, you can delete entries from the list.

      o **Interval**

With the interval function, you can define time intervals on which the output should be activated. Enter here the **duration** of each event, e.g. always switch on for 5 minutes and the **interval** between the events, e.g. every 2 hours.

4. Calibrate your feeder

In case you want to feed by weight, you can calibrate the feeder. Select in the **feeder** submenu the item **Calibration**. Catch the feed which comes out of the feeder for 5 and 10 s and weight it. Type in the weight respectively.

5. Select additional functions

Under the submenu „feeder" you can select further functions. More information can be found in the menu description below:

▪ **Feeder Menu**

The submenu „Feeder" allows you to use many specially designed **feeder functions** to better control your feeder, also in relation to environmental parameters. Please consider that for some of the extra functions, the feeder must be calibrated. This menu item will be displayed dynamically, when the corresponding extra functions are selected.

As **feeder functions** can be selected:

1. Daily feed amount
2. Daily increase
3. Low O2 protection
4. Air pressure
5. Temp. Protection
6. Temp. Correction
7. Alarm = No feeding
8. Light stimulation

Depending on the selected **feeder functions** the displayed dynamic submenu can be:

Daily feed amount

When the feeder is calibrated, you can set here the total amount of feed (weight). Then, the feeder will automatically set the duration of the feed events (times must be selected in the time-controlled feeder menu) so, that the defined weight of feed is fed per day. In case you want to change the feed amount depending on the temperature (temperature correction), please note that daily feed amount corresponds to the temperature of 16°C.

For example, select **Plug 1 / Function**: **Feeder** and under **Plug 1 / Time-controlled / Mode: Interval**. Set the interval period to 1 h and the daily feed amount to 100 g. Now, the control unit calculates, how long the feeder must be activated in each interval. If you set the duration manually, you can see the feed amount per event below the duration time.

Daily increase

Since fish grow with time and need therefore more feed per day, the feed control can automatically increase the daily amount of feed. Insert here the increase rate in %.

Environ. based feed.

Under this menu item, several environmental parameter based functions are included:

- **Low O$_2$ Protection:** In case the oxygen concentration is too low, ongoing feeding can deteriorate conditions. Therefore, the user can use this function to cancel the feeding, if the oxygen concentration is below a threshold. Enter in this menu item the concentration of oxygen below which the feeding is cancelled. Note, that it is necessary that a SENECT oxygen sensor O2S needs to be connected and that this sensor is selected under "plug".

- **Air pressure**: Since the barometric pressure can have an effect on feeding, you can select here under which

barometric pressure (measured by the SENECT|ONE internally) the feeding should be cancelled.

- **Min. / Max. Temperature**: You can also set limits in the temperature, above which (min. temperature) or below which (max. temperature) feeding is allowed.

- **Temperature correction**: To feed more efficiently, the daily amount of feed can be adjusted by the sensor temperature. You can enter here directly the values of the data sheets of the feed producer in **%** or **kg feed per 100 kg fish biomass**. These values are used to automatically correct the daily feed amount (which refers to 16°C) according to the measured temperature.

- **Light stimulation:** Some fish feeders from SENECT are equipped with LEDs to attract the fish to the location of the feeder prior to the feeding. You can select in this menu item, how long before the feeding (**turn on time**) and how long after feeding (**turn off time**) the LEDs should be switched on. Additionally, start-up and end ramps can be defined by the **start-up duration** to enable a soft light start.

- **Calibration**: The calibration of the feeder is a necessary step to use all feed-weight related functions. Catch therefore the feed which comes out of the feeder for 5

and 10 s and weight it. Type in the weight respectively. Now, you can use the function "Daily feed amount" and when you adjust the duration of the feeding, you can see directly the feed weight which corresponds to the duration.

The function "feeder" creates a dynamic submenu where additional features (Time-control – which are here the feeding times, Output signal, etc.) like previously described can be set.

**Hint:** If you want to increase the oxygen level prior to feeding, select the output port of the sensor-control (oxygen dosing valve, etc.) and select the additional function „Time-controlled". Use the mode „Output coupling" with the oxygen dosing plug and set the „turn on time".

Maintenance and cleaning

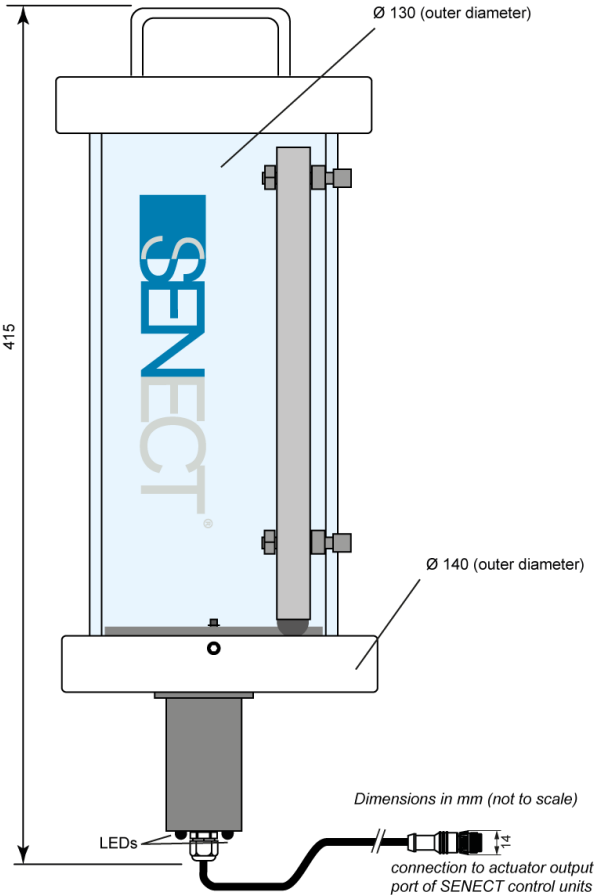Control the feeder daily with respect to feed particles sticking to the feeder and remove them.

Cleaning of the feeder inside can be done by removing the three grub screws on the side. After removing them, the tranparent housing part can be removed and the inside part can be cleaned. Please take care not to lose the stainless

steel sphere, which closes the feeding hole when the feeder is inactive.

Technical data

Dimensions:	Ø130 / 140 x 415 mm
Material:	PVC, PP, Stainless steel V2A
Volume:	App. 2 l
Feed grain size:	Up to 2 mm
Cable length:	5 m
Voltage:	24 V DC
Power consumption:	Typ. << 10 W
Temperature range:	0° to +40°C
Ingress protection:	IP 54

Technical sketch

Ø 130 (outer diameter)

415

Ø 140 (outer diameter)

Dimensions in mm (not to scale)

LEDs

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connection to actuator output
port of SENECT control units

Pin	Assignment	Signal
1	LED+	0 – 20 mA
2	Not connected	
3	LED-	GND for 0-20 mA
4	Motor+	+24 V DC
5	Motor-	GND for 24 V DC

Plug Hatchery-Fry-Feeder (controller-side):

Plug
View from front (pin-side)
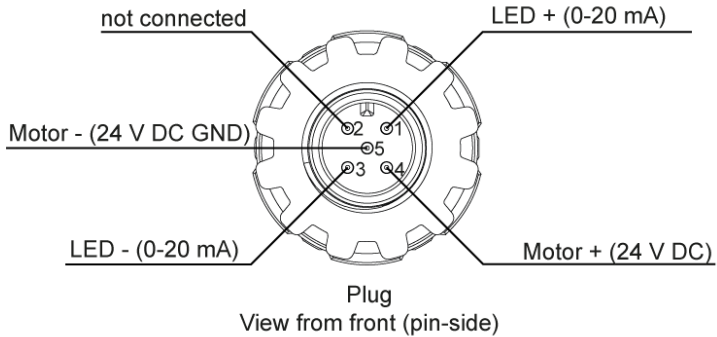
The correspondig receptable plug for connecting the SENECT hatchery fry feeder to third party systems can be ordered under the article no. 3441 (Actuator plug female).

Information about the correct disposal

Your device is well packed at delivery. Please dispose the packaging material accordingly to the regulations in your country.

Do not throw the product in the casual litter bin. Make sure you are informed about the local disposal regulations and dispose your product accordingly. Alternatively, you can also send the product back to the producer.

The SENECT GmbH & Co. KG is member of the Stiftung Elektro-Altgeräte Register and the products are registered (WEEE-Reg.-Nr.: DE37193510).

Guarantee

Please check at delivery of your device, that all parts are delivered completely and that they function correctly. In case of any claims, contact us immediately per email or phone (info@senect.de or +49-6341 - 95 95 210). Please describe your claim as detailed as possible so that we can provide a solution as fast as possible. The product has a guarantee of 1 year and a warranty of 2 years. Furthermore, the § 377 HBG (German law) is valid.