

TECH-TIPP: OTT NETDL AND PLUVIO², PLUVIO²L, PLUVIO²S



SETUP AND CONNECT PLUVIO² RAIN GAUGE WITH OTT NETDLDATA LOGGER

- Installation of OTT Pluvio² operating software
- Use operating software
- Guided accuracy test
- Connection to OTT netDL logger
- Configuration of OTT netDL logger

INSTALLATION OF PLUVIO² OPERATING SOFTWARE

There are two options to retrieve the software:

- A) Install the software using the included CD
- B) Download operating software from OTT Homepage at: <https://www.ott.com/resources/>



Download software from the OTT Homepage at www.ott.com:

If you are not registered at „myOTT“ yet, please sign up as requested at the website.

You receive a registration confirmation. Afterwards you get access to software, manuals and other documents.

myOTT

Enter your username and password here in order to log in on the website:

E-Mail

Password







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Products: OTT Pluvio² - Weighing Rain Gauge | Resource types: All types | [SHARE](#)

 <p>netDL Templates - Configuration - for OTT Data Logger Operating Program Templates for netDL Configuration shown in the OTT netDL configuration videos Download, 19.45 KB</p>	 <p>Operating instructions Precipitation Gauge OTT Pluvio² Download</p>	 <p>OTT netDL - Configuration - OTT Pluvio² via OTTSDI - Video EN Watch on Youtube</p>
 <p>OTT Pluvio² - USB interface driver - EN Version: V 2.12.00 Comments Download (login necessary)</p>	 <p>OTT Pluvio² / OTT Pluvio² S / OTT Pluvio² L - Operating program Version: V 1.08.7 Comments Release notes Download (login necessary)</p>	 <p>OTT Pluvio² – Firmware - EN Version: V 1.50.3 Comments Release notes Download (login necessary)</p>

PLUVIO² OPERATING SOFTWARE

■ Connection

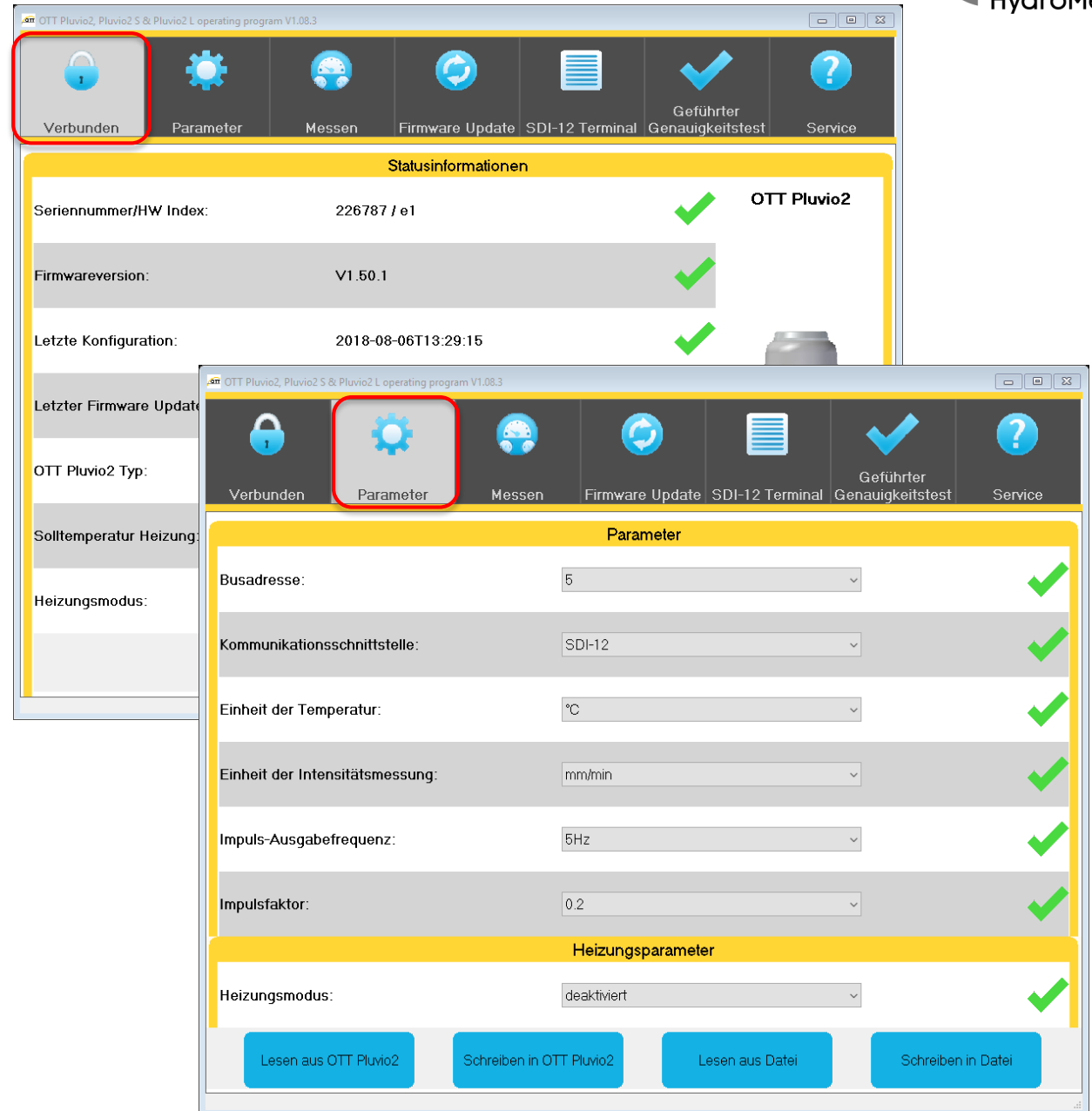
Overview on:

- Serial number
- Firmware version
- Other device info

■ Parameters

Settings for:

- Bus address
- Communication interface
- Unit of temperature / intensity measurement
- Impulse output frequency
- Impulse factor
- Heating mode



The screenshot displays the OTT Pluvio2 operating software interface. The top navigation bar includes icons for 'Verbunden' (Connected), 'Parameter', 'Messen' (Measure), 'Firmware Update', 'SDI-12 Terminal', 'Geführter Genauigkeitstest' (Guided Accuracy Test), and 'Service'. The 'Verbunden' icon is highlighted with a red box.

The main content area is divided into two sections:

- Statusinformationen (Status Information):** This section displays the following data:

Parameter	Value	Status
Seriennummer/HW Index:	226787 / e1	✓
Firmwareversion:	V1.50.1	✓
Letzte Konfiguration:	2018-08-06T13:29:15	✓
- Parameter (Parameters):** This section displays the following settings:

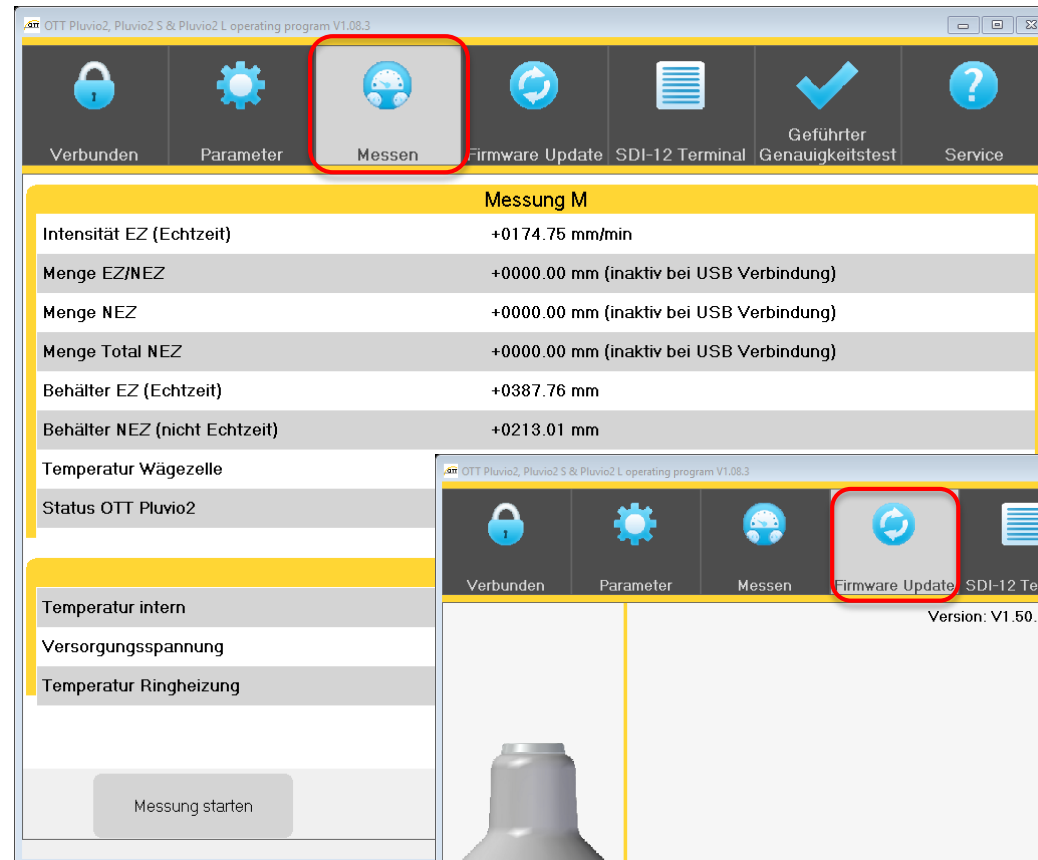
Parameter	Value	Status
Busadresse:	5	✓
Kommunikationsschnittstelle:	SDI-12	✓
Einheit der Temperatur:	°C	✓
Einheit der Intensitätsmessung:	mm/min	✓
Impuls-Ausgabefrequenz:	5Hz	✓
Impulsfaktor:	0.2	✓

Below the parameter settings, there is a section for 'Heizungsparameter' (Heating parameters) with a dropdown menu for 'Heizungsmodus' (Heating mode) set to 'deaktiviert' (deactivated). At the bottom of the interface, there are four buttons: 'Lesen aus OTT Pluvio2', 'Schreiben in OTT Pluvio2', 'Lesen aus Datei', and 'Schreiben in Datei'.

PLUVIO² OPERATING SOFTWARE

■ Measure

- Starts a new measurement and issues the values of the individual encoders.
- Some values cannot be displayed when the USB connection is active.



Messung M	
Intensität EZ (Echtzeit)	+0174.75 mm/min
Menge EZ/NEZ	+0000.00 mm (inaktiv bei USB Verbindung)
Menge NEZ	+0000.00 mm (inaktiv bei USB Verbindung)
Menge Total NEZ	+0000.00 mm (inaktiv bei USB Verbindung)
Behälter EZ (Echtzeit)	+0387.76 mm
Behälter NEZ (nicht Echtzeit)	+0213.01 mm

Temperatur Wägezelle

Status OTT Pluvio2

Temperatur intern

Versorgungsspannung

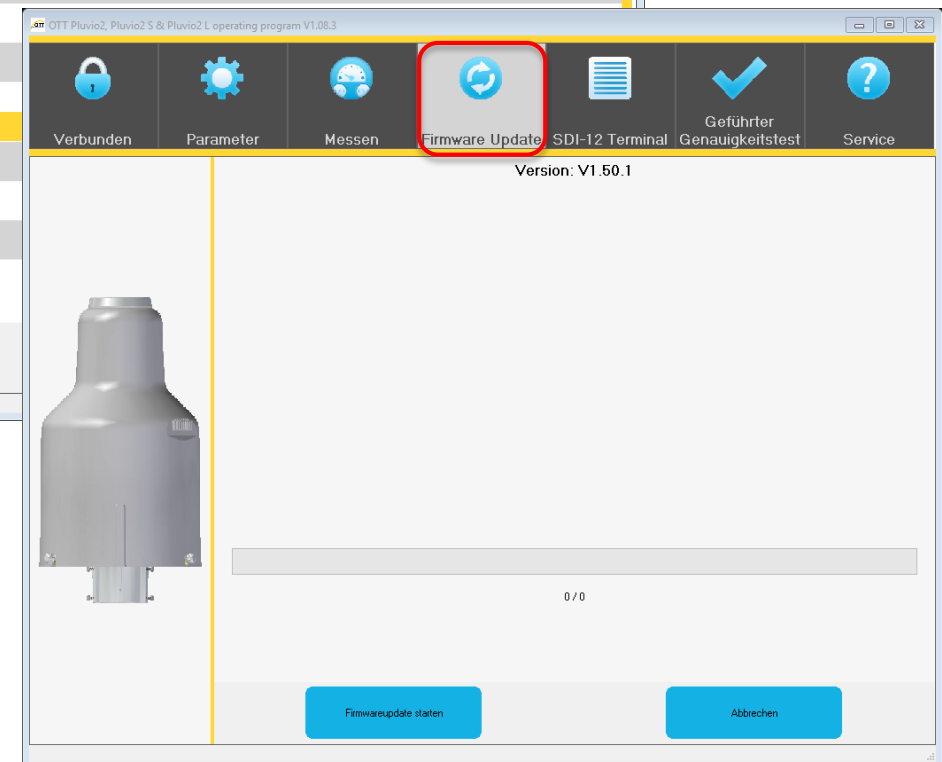
Temperatur Ringheizung

Messung starten

■ Firmware Update

- Installing a new firmware version

Please make sure that you select the correct firmware for the appropriate Pluvio version!



Version: V1.50.1

0 / 0

Firmwareupdate starten

Abbrechen

PLUVIO² OPERATING SOFTWARE

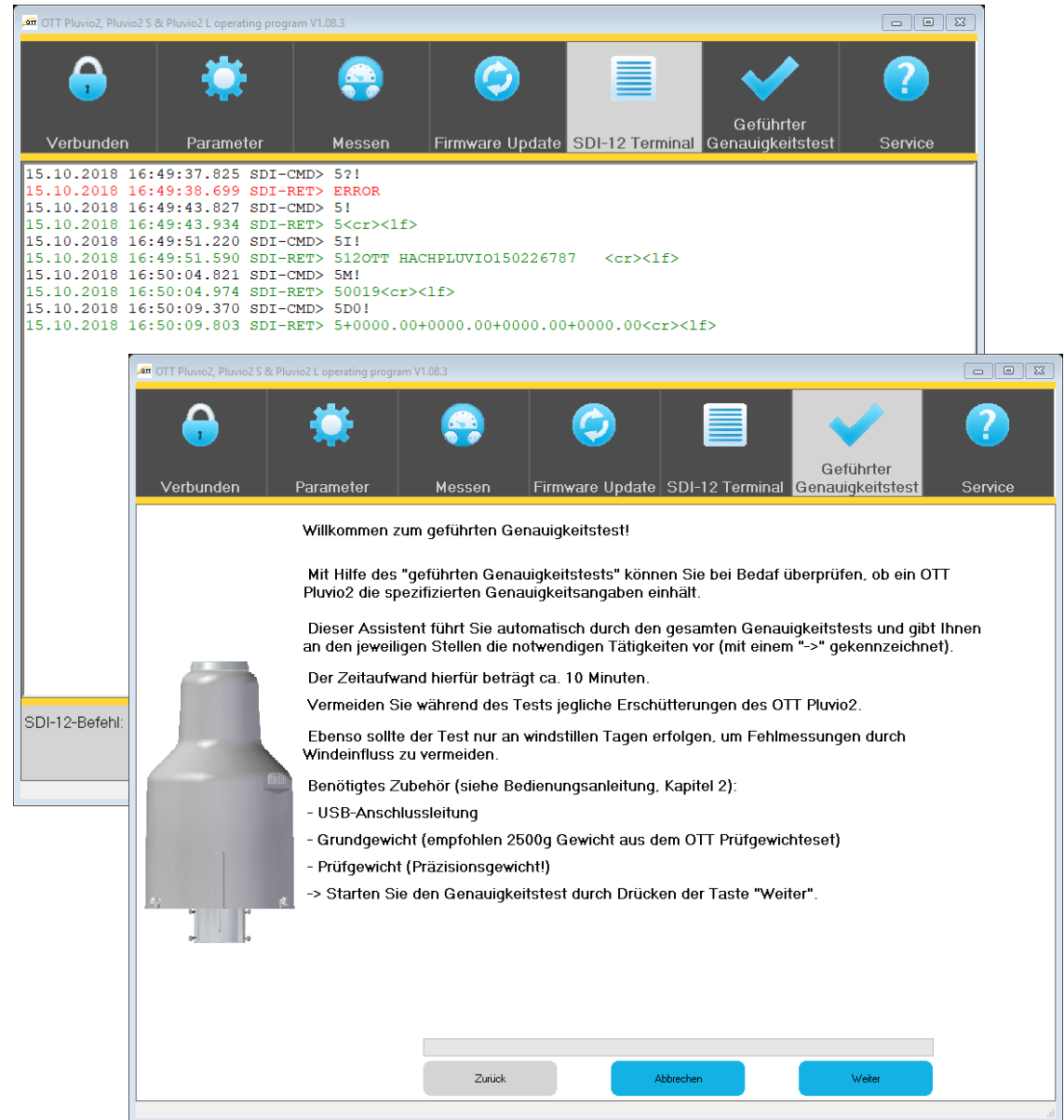
■ SDI-12 terminal

- Input option for SDI commands

A list of the most important commands can be found in the OTT Pluvio² user manual.

■ Guided accuracy test

- Step-by-step execution of an accuracy test



The screenshot displays two windows of the OTT Pluvio2 operating software. The top window shows the 'SDI-12 Terminal' interface with a terminal log of commands and responses. The bottom window shows the 'Geführter Genauigkeitstest' (Guided Accuracy Test) interface with instructions and a list of required equipment.

SDI-12 Terminal Log:

```
15.10.2018 16:49:37.825 SDI-CMD> 5?!  
15.10.2018 16:49:38.699 SDI-RET> ERROR  
15.10.2018 16:49:43.827 SDI-CMD> 5!  
15.10.2018 16:49:43.934 SDI-RET> 5<cr><lf>  
15.10.2018 16:49:51.220 SDI-CMD> 5!  
15.10.2018 16:49:51.590 SDI-RET> 512OTT HACHPLUVIO150226787 <cr><lf>  
15.10.2018 16:50:04.821 SDI-CMD> 5M!  
15.10.2018 16:50:04.974 SDI-RET> 50019<cr><lf>  
15.10.2018 16:50:09.370 SDI-CMD> 5D0!  
15.10.2018 16:50:09.803 SDI-RET> 5+0000.00+0000.00+0000.00+0000.00<cr><lf>
```

Guided Accuracy Test Instructions:

Willkommen zum geführten Genauigkeitstest!

Mit Hilfe des "geführten Genauigkeitstests" können Sie bei Bedarf überprüfen, ob ein OTT Pluvio2 die spezifizierten Genauigkeitsangaben einhält.

Dieser Assistent führt Sie automatisch durch den gesamten Genauigkeitstests und gibt Ihnen an den jeweiligen Stellen die notwendigen Tätigkeiten vor (mit einem "->" gekennzeichnet).

Der Zeitaufwand hierfür beträgt ca. 10 Minuten.

Vermeiden Sie während des Tests jegliche Erschütterungen des OTT Pluvio2.

Ebenso sollte der Test nur an windstillen Tagen erfolgen, um Fehlmessungen durch Windeinfluss zu vermeiden.

Benötigtes Zubehör (siehe Bedienungsanleitung, Kapitel 2):

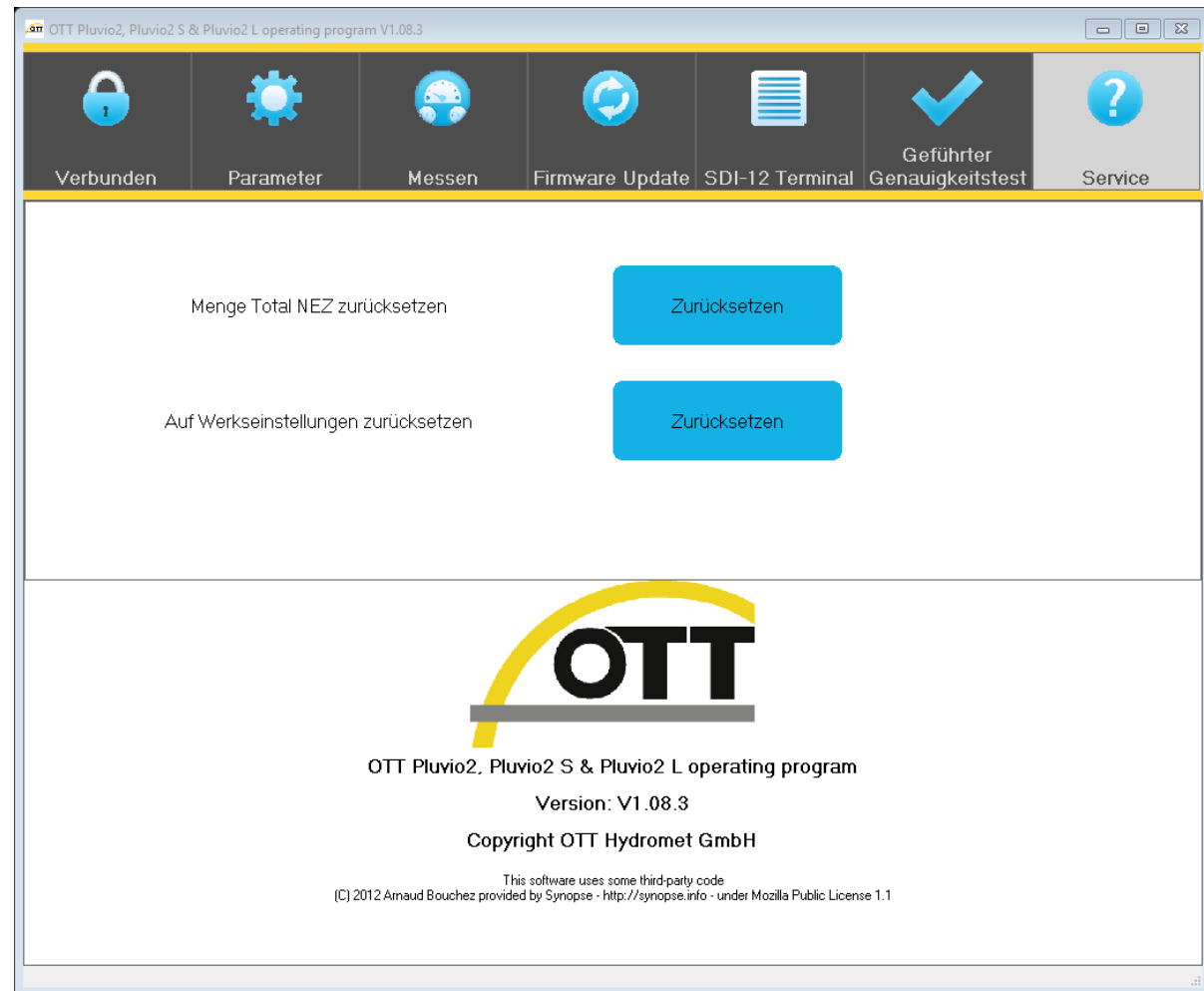
- USB-Anschlussleitung
- Grundgewicht (empfohlen 2500g Gewicht aus dem OTT Prüfgewichteset)
- Prüfgewicht (Präzisionsgewicht!)

-> Starten Sie den Genauigkeitstest durch Drücken der Taste "Weiter".

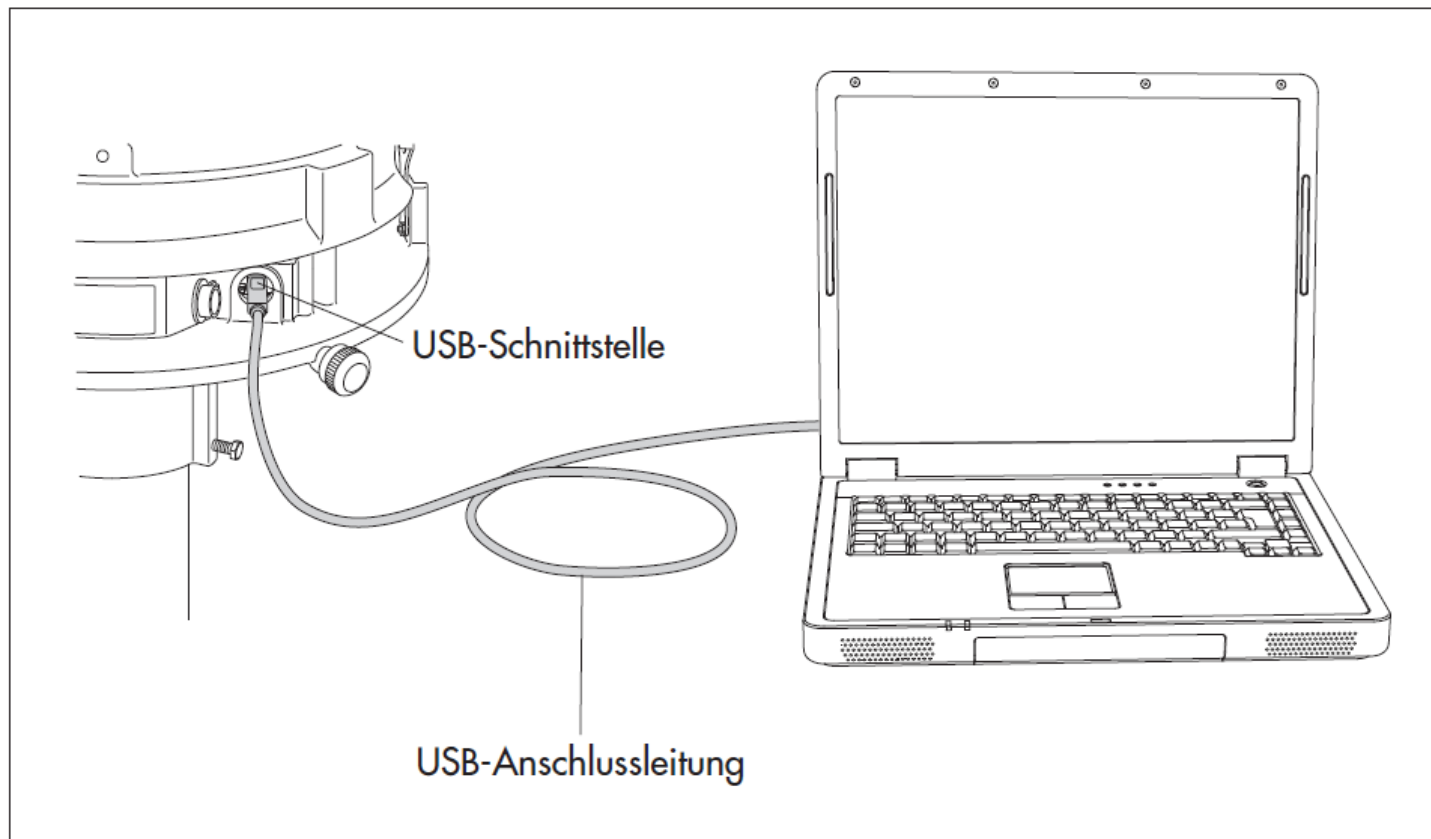
PLUVIO² OPERATING SOFTWARE

■ Service

- Reset „amount total NEZ“
- Reset Pluvio² to factory settings
- Info about software version



PLUVIO² TO PC/LAPTOP



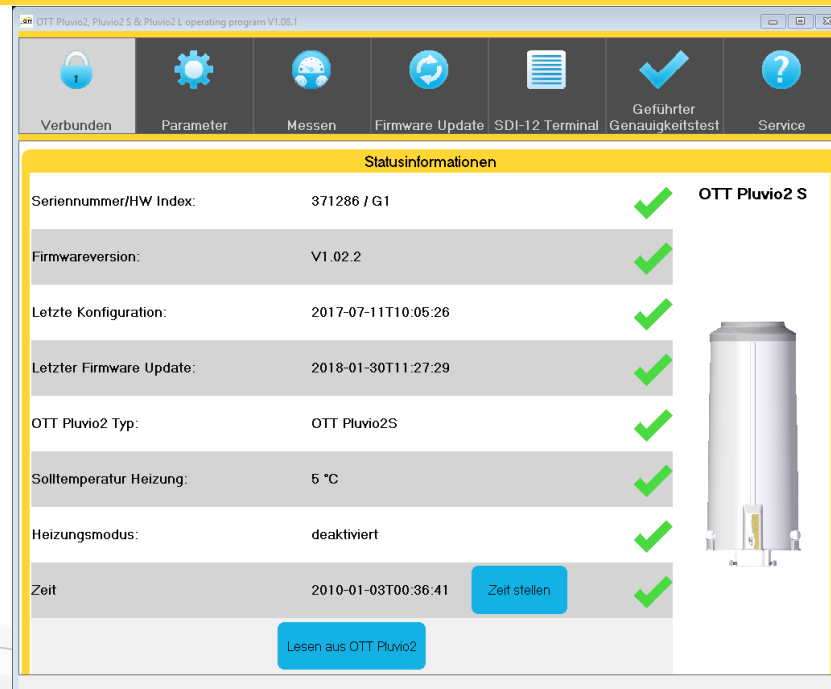
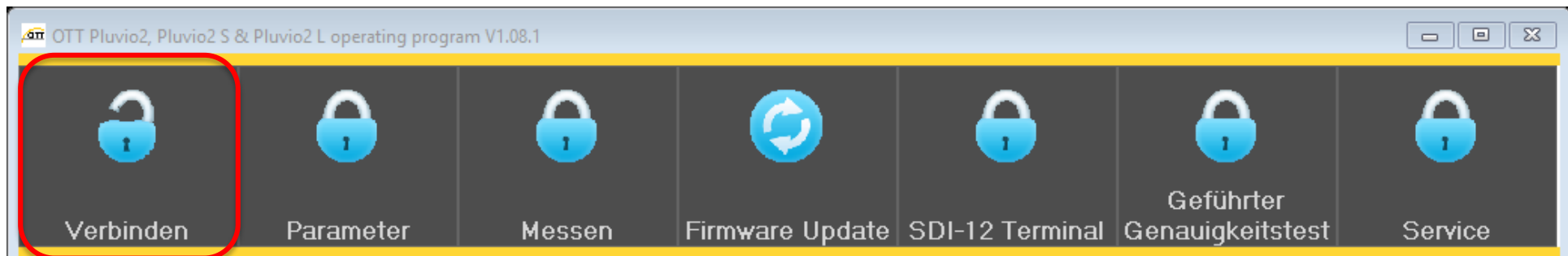
- Setup USB connection between Pluvio² and PC/Laptop aufbauen
- Pluvio² is now powered through the USB interface.

SETUP PLUVIO² FOR SDI-12

Start operating software “Pluvio²Param”



- Choose “connect” at the home screen

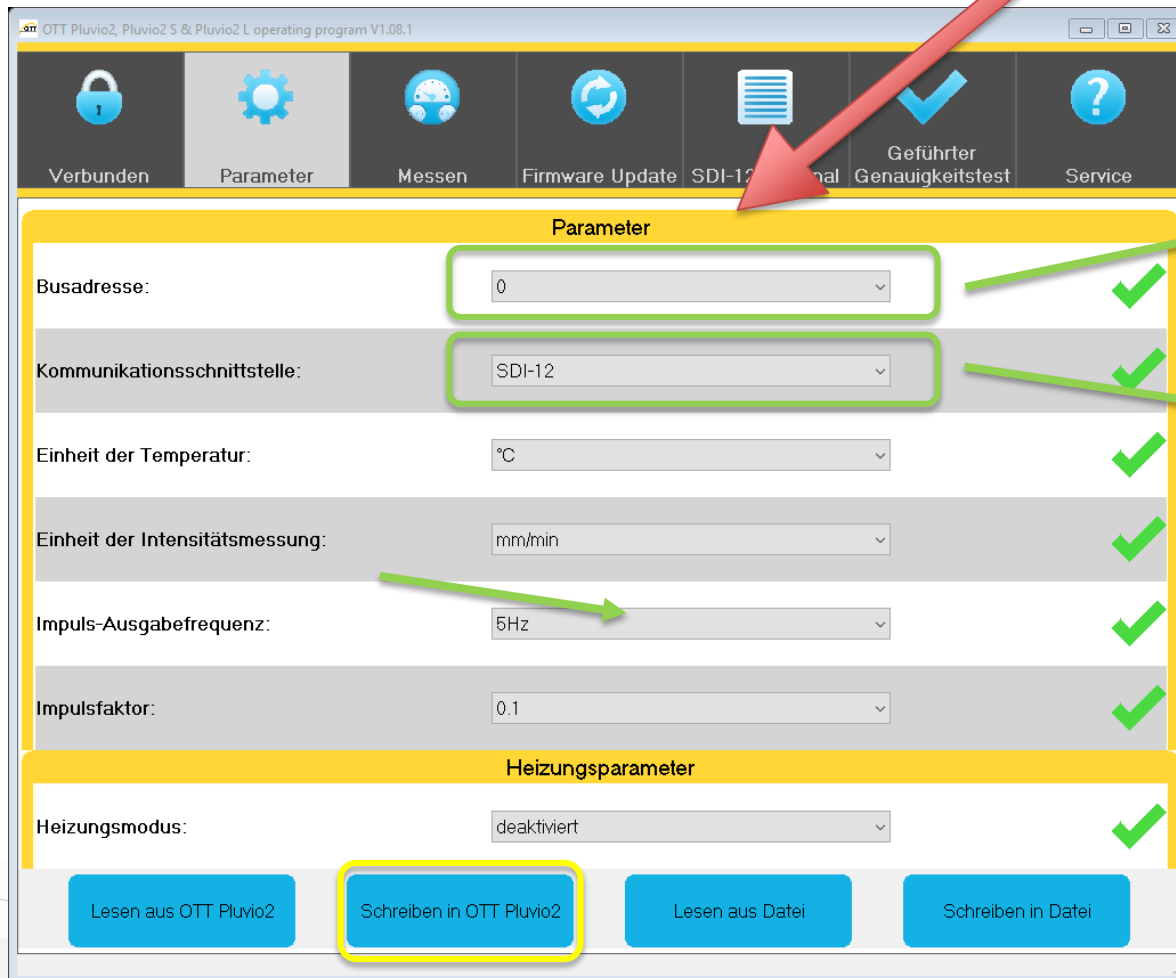
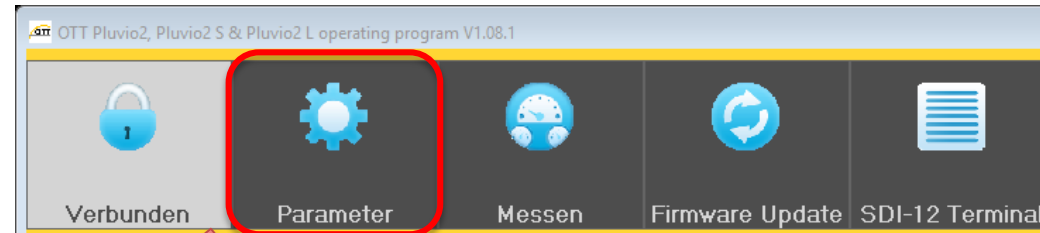


The status info of the connected Pluvio² appear.

Moreover, the already mentioned menu items can be chosen now.

SETUP PLUVIO² FOR SDI-12

- Choose “parameter”



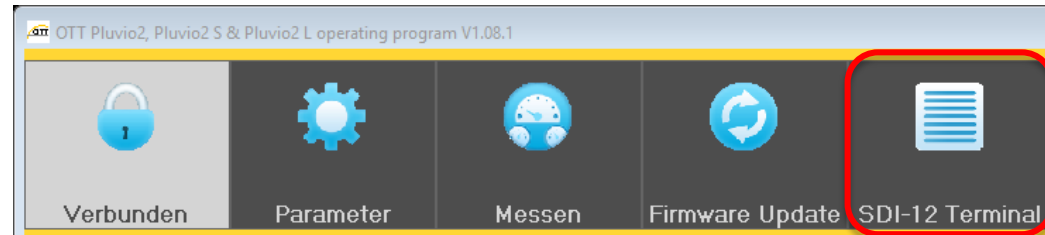
- The default bus address is 0
- If several sensors are connected to a bus, different addresses must be assigned for each sensor.

- The communication interface is set to SDI-12 at the factory.
- A conversion to RS485 is necessary, e.g. for long cable lengths.

Install the parameters in the Pluvio

SETUP PLUVIO² FOR SDI-12

- Choose "SDI-12 Terminal"

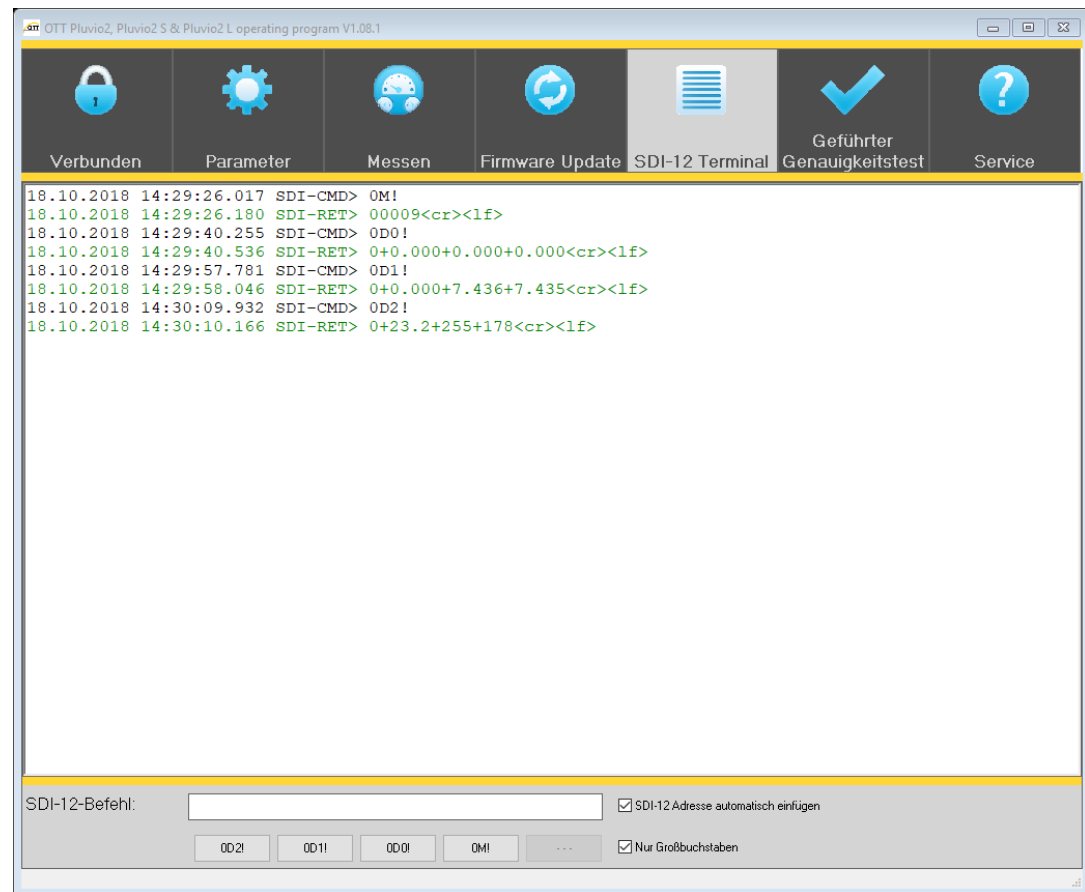


SDI-12 Address

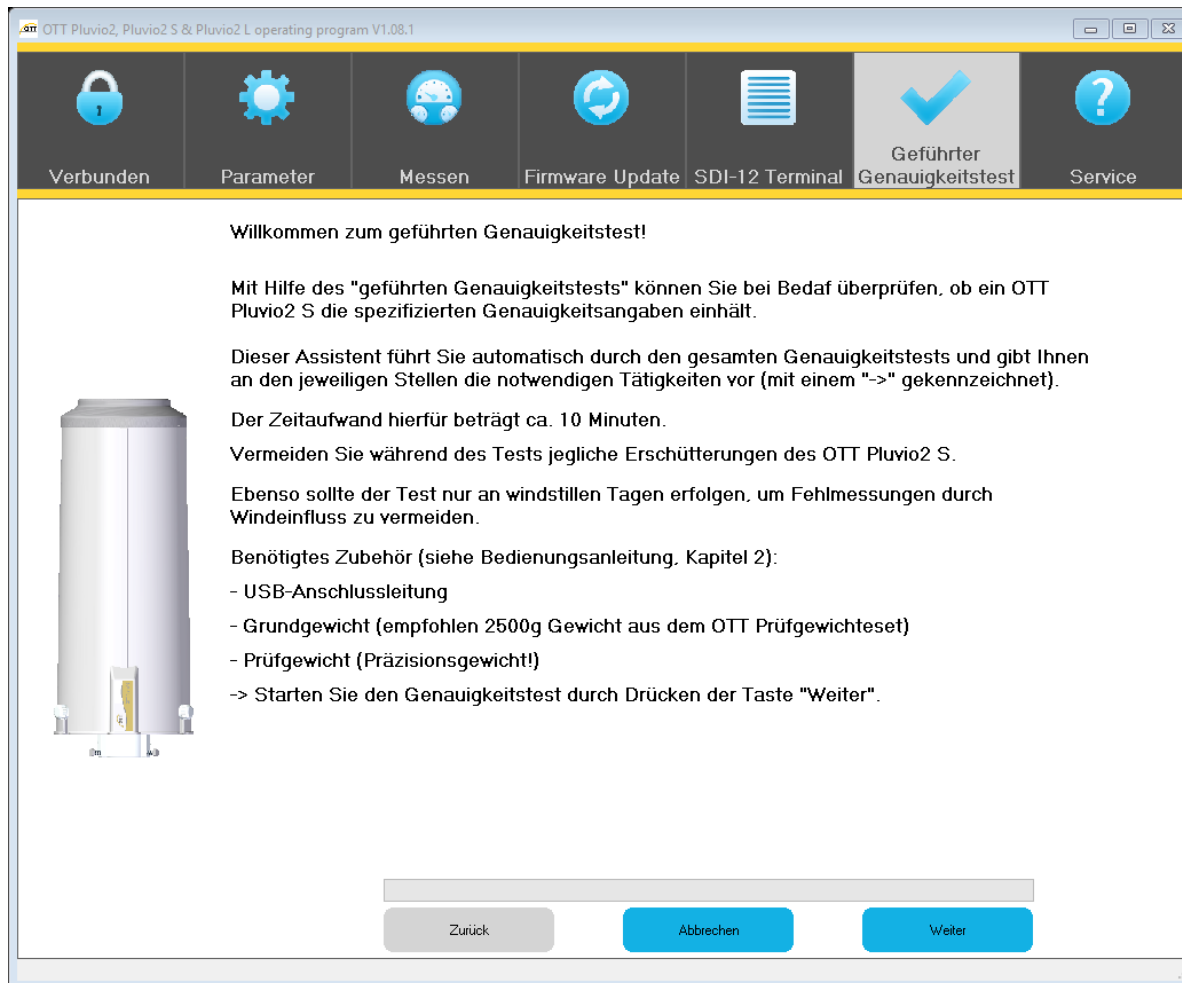
- Can also be changed with SDI-12 command **0A2!** from **0** to **2** (or any other number or letter; it's case sensitive).

SDI-12 number of parameters

- With the **0M!** command, 9 values can be queried (3 with **0M1!**). The "Concurrent Mode" (**0C!**) makes it possible to perform a simultaneous measurement with several sensors on one bus line.
- With **aD0!** ... **aD2!** The measured values can be displayed.
- Each command **aM!** or **aC!** resets the measured values "Quantity EZ-NEZ" and "Quantity NEZ" accumulated in the Pluvio to zero!



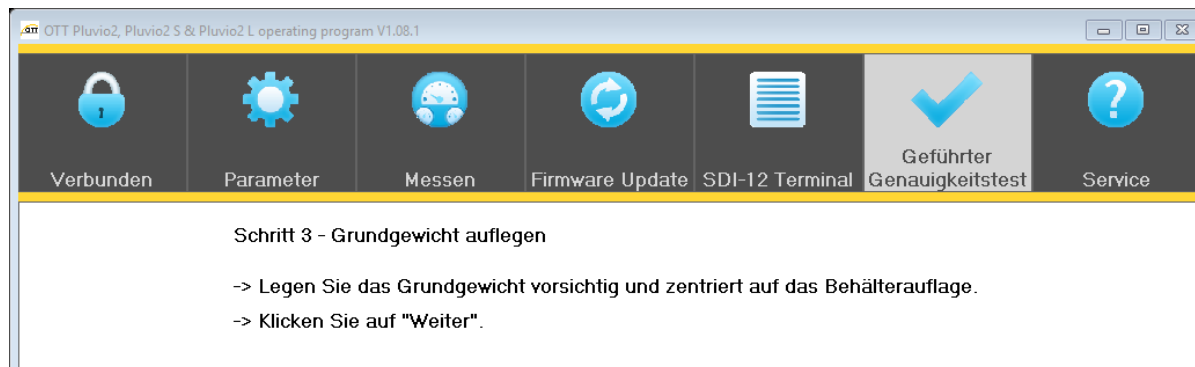
GUIDED ACCURACY TEST



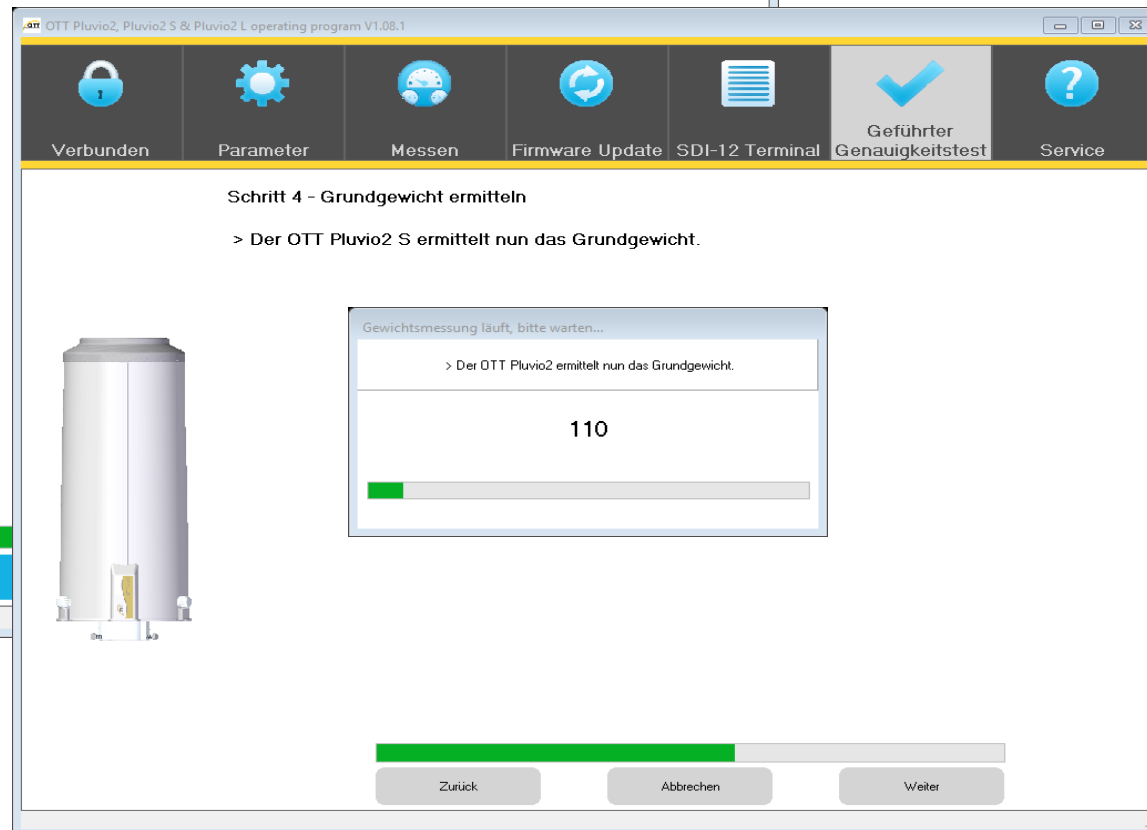
Summary:

- Read status information
- Place the basic weight on the container support
- Pluvio² determines the weight
- Place the test weight on the balance and enter the weight value
- Pluvio² determines the weight increase
- Evaluation of the test
- Save for measuring point documentation

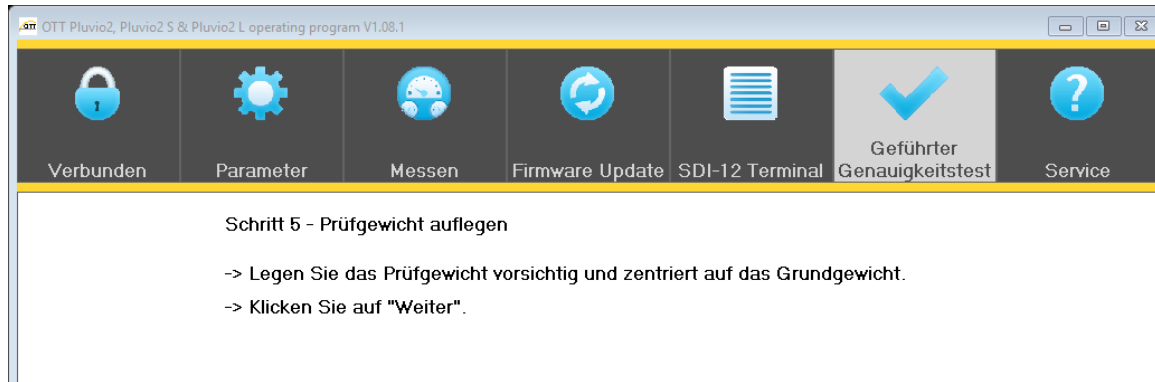
GUIDED ACCURACY TEST



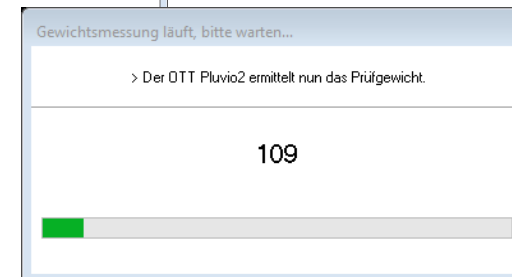
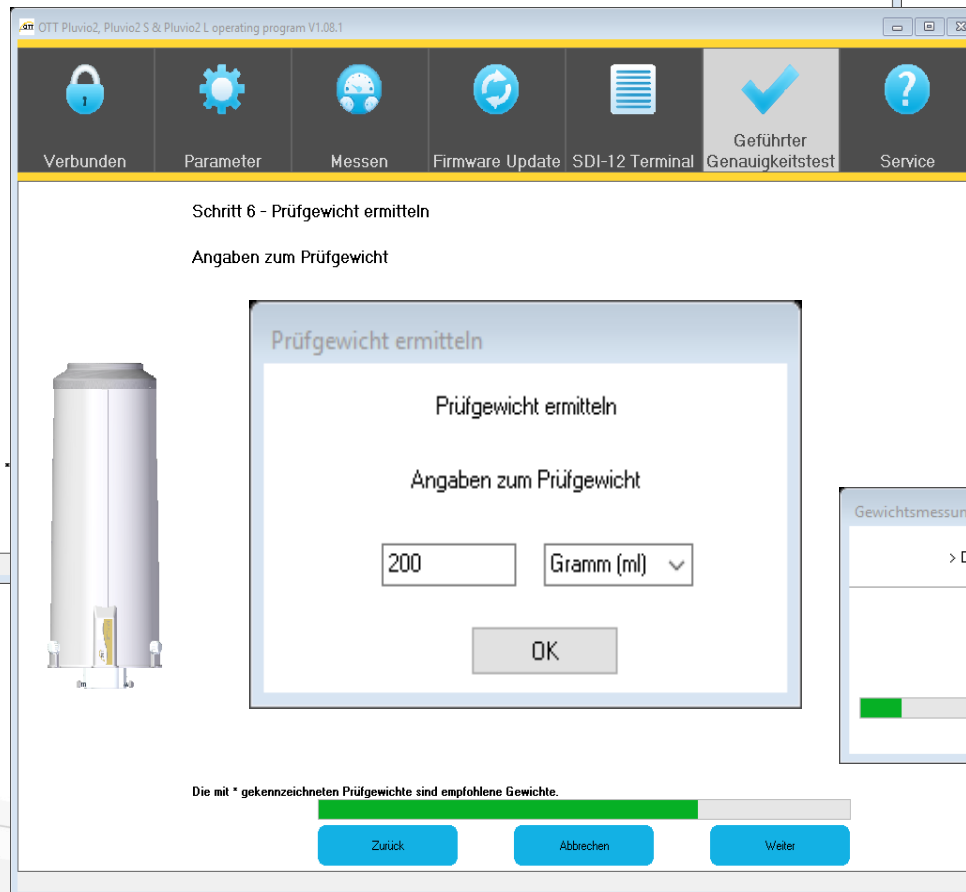
- Place the basic weight (recommended 2500 g) on the container support in step 3.
- In step 4, the Pluvio² determines the weight that has just been inserted.



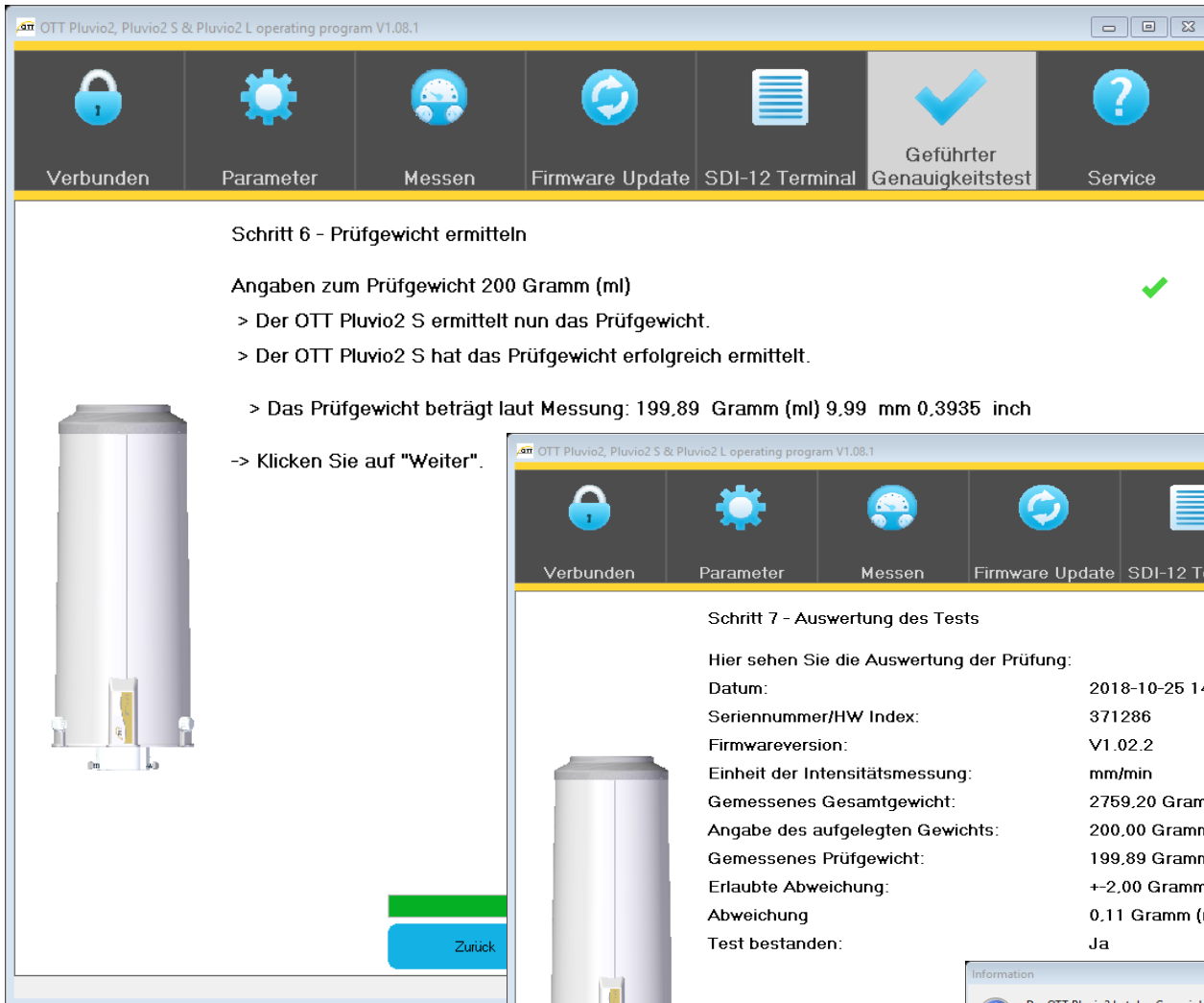
GUIDED ACCURACY TEST



- Apply the test weight in step 5 and enter the weight value in step 6. This is then determined by the Pluvio².



GUIDED ACCURACY TEST



OTT Pluvio2, Pluvio2 S & Pluvio2 L operating program V1.08.1


Verbunden Parameter Messen Firmware Update SDI-12 Terminal **Geführter Genauigkeitstest** Service

Schritt 6 - Prüfgewicht ermitteln

Angaben zum Prüfgewicht 200 Gramm (ml) ✓

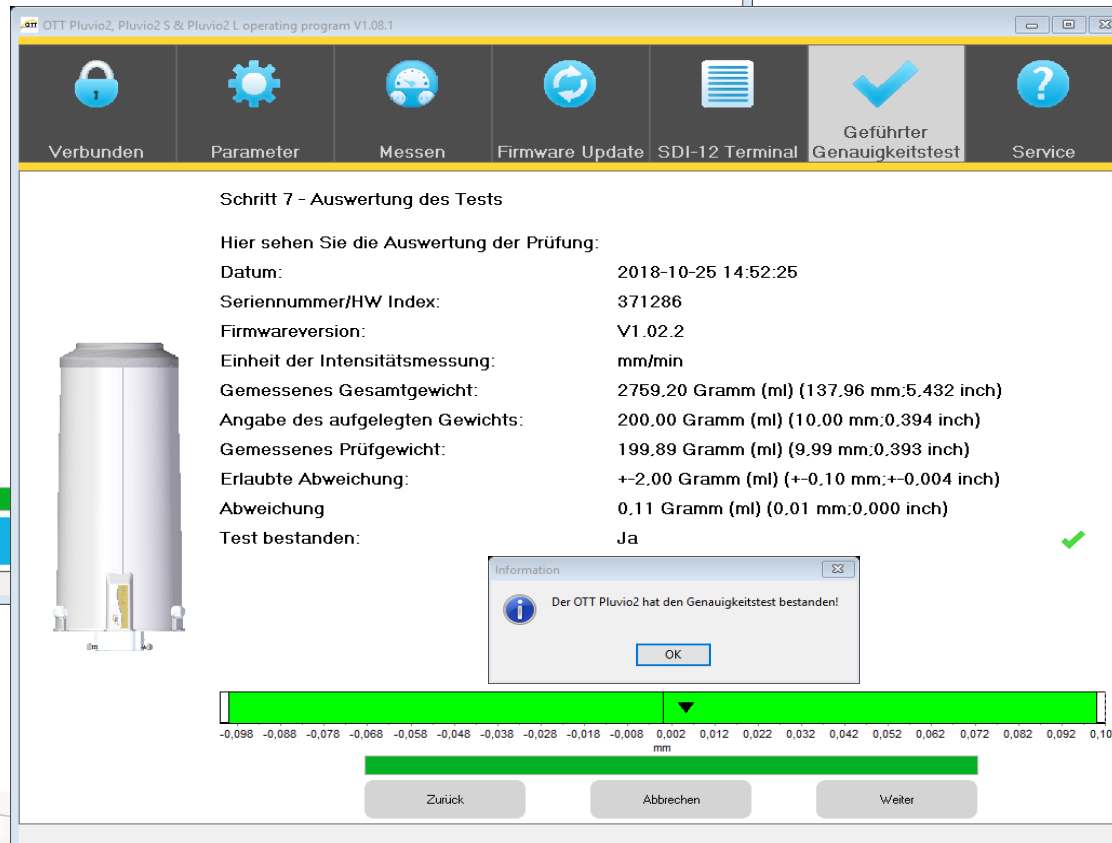
- > Der OTT Pluvio2 S ermittelt nun das Prüfgewicht.
- > Der OTT Pluvio2 S hat das Prüfgewicht erfolgreich ermittelt.
- > Das Prüfgewicht beträgt laut Messung: 199.89 Gramm (ml) 9.99 mm 0.3935 inch

-> Klicken Sie auf "Weiter".



Zurück

- In the last step you can see the evaluation of the test. Save the created measurement documentation file in the appropriate folder.




OTT Pluvio2, Pluvio2 S & Pluvio2 L operating program V1.08.1

Verbunden Parameter Messen Firmware Update SDI-12 Terminal **Geführter Genauigkeitstest** Service

Schritt 7 - Auswertung des Tests

Hier sehen Sie die Auswertung der Prüfung:

Datum:	2018-10-25 14:52:25
Seriennummer/HW Index:	371286
Firmwareversion:	V1.02.2
Einheit der Intensitätsmessung:	mm/min
Gemessenes Gesamtgewicht:	2759.20 Gramm (ml) (137.96 mm;5.432 inch)
Angabe des aufgelegten Gewichts:	200.00 Gramm (ml) (10.00 mm;0.394 inch)
Gemessenes Prüfgewicht:	199.89 Gramm (ml) (9.99 mm;0.393 inch)
Erlaubte Abweichung:	+2.00 Gramm (ml) (+0.10 mm;+0.004 inch)
Abweichung:	0.11 Gramm (ml) (0.01 mm;0.000 inch)
Test bestanden:	Ja ✓



Information
Der OTT Pluvio2 hat den Genauigkeitstest bestanden!
OK

-0.098 -0.088 -0.078 -0.068 -0.058 -0.048 -0.038 -0.028 -0.018 -0.008 0.002 0.012 0.022 0.032 0.042 0.052 0.062 0.072 0.082 0.092 0.102
mm

Zurück Abbrechen Weiter

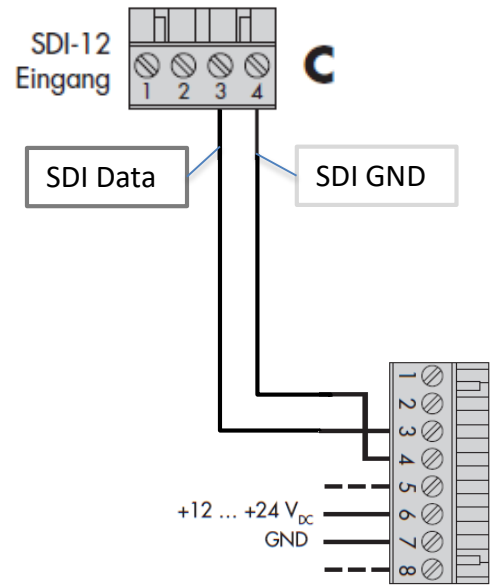
CONNECT PLUVIO² TO NETDL VIA SDI-12

OTT netDL



Connection of Pluvio²S and Pluvio²L identical

For connection during operation with heating, please see instructions!



OR



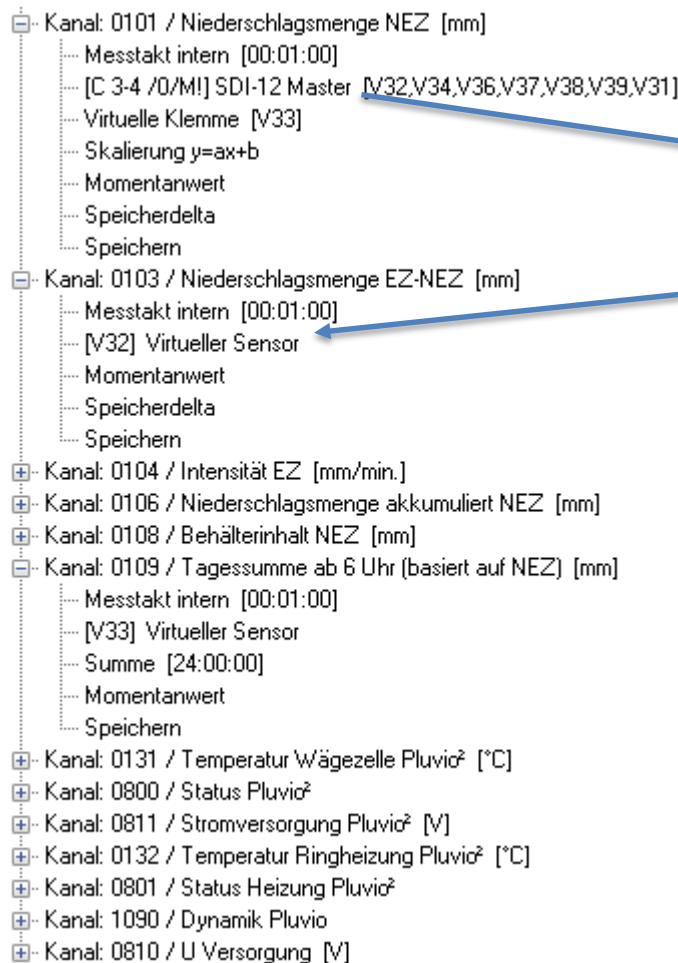
OTT Pluvio² S

OTT Pluvio² L

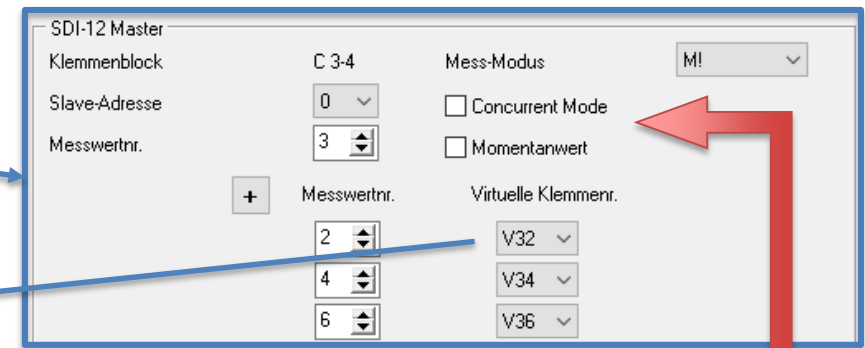
CONNECT PLUVIO² TO NETDL VIA SDI-12

OTT netDL Configuration

- Drag and drop the **template** for OTT Pluvio² S or L from the "Saved Templates" window into the configuration window.
- If necessary, adapt the slave address (bus address of the sensor) in the master channel.
- All other parameters are stored simultaneously in virtual **terminals** (V02, ...) and transmitted to the appropriate channel via the corresponding virtual **sensor** (V02, ...).



Transfer of the precipitation quantity NEZ to channel 0109 to determine the daily total



- Deactivate the option „current value“, otherwise the precipitation values aren't saved during the retrieval of the current values on the netDL display
- In case the Pluvio² is the only sensor in the bus, it's recommended to deactivate the „concurrent mode“ in the channels 101 and 811.

Attention: The SDI-12 interface of the OTT Pluvio² does not work if the sensor is connected to the PC via USB!

CONNECT PLUVIO² TO NETDL VIA SDI-12

- + Kanal: 0101 / Niederschlagsmenge NEZ [mm]
- + Kanal: 0103 / Niederschlagsmenge EZ-NEZ [mm]
- + Kanal: 0104 / Intensität EZ [mm/min.]
- + Kanal: 0106 / Niederschlagsmenge akkumuliert NEZ [mm]
- + Kanal: 0108 / Behälterinhalt NEZ [mm]
- + Kanal: 0109 / Tagessumme ab 6 Uhr (basiert auf NEZ) [mm]
- + Kanal: 0131 / Temperatur Wägezelle Pluvio² [°C]
- Kanal: 0800 / Status Pluvio²
 - ... Messtakt intern [00:01:00]
 - ... [V39] Virtueller Sensor
 - ... Speicherdelta
 - ... Speichern
- + Kanal: 0811 / Stromversorgung Pluvio² [V]
- + Kanal: 0132 / Temperatur Ringheizung Pluvio² [°C]
- + Kanal: 0801 / Status Heizung Pluvio²
- + Kanal: 1090 / Dynamik Pluvio
- + Kanal: 0810 / U Versorgung [V]

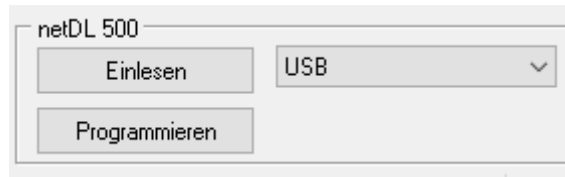
```
<wert9> - Status
pbbbb
+0 = Niederschlagssensor arbeitet
ordnungsgemäß
+1 = W: Behälterfüllstand ≥ 80 %
+2 = W: USB-Schnittstelle ist/war
angeschlossen
+4 = W: Neustart (durch Spannungsausfall)
+8 = W: Neustart (durch Firmware)
+16 = W: Gewichtsveränderung unzulässig
+32 = W: Versorgungsspannung < 7 V
+64 = A: Gewichtsmessung instabil
+128 = A: Gewichtsmessung fehlerhaft
+256 = A: Gewicht kleiner Minimum
+512 = A: Gewicht größer Maximum
+1024 = A: Gerätekalibrierung fehlt
```

W = Warnung; A = Alarm.
Gibt der OTT Pluvio² S andere, als hier aufgeführte Werte aus, sind gleichzeitig mehrere Ereignisse aufgetreten. Die einzelnen Werte werden in diesem Fall addiert. Beispiel:
„+34“ → Summe aus Warnung „+2“ und „+32“.
Die ausgegebenen Statusinformationen werden – vorausgesetzt die Ursache ist beseitigt – mit dem nächsten Aufruf des Kommandos **aM!** zurückgesetzt.

If you are using a Pluvio² without ring heater, delete channels 0132 and 0801 by highlighting them and then pressing the "Del" key on your keyboard.

- When the tank level reaches 80%, the value of channel "0800 / Status Pluvio²" will change (from 0 to 1).
- A full collection bucket affects the accuracy of the measurements. Therefore, please empty the container in a timely manner.

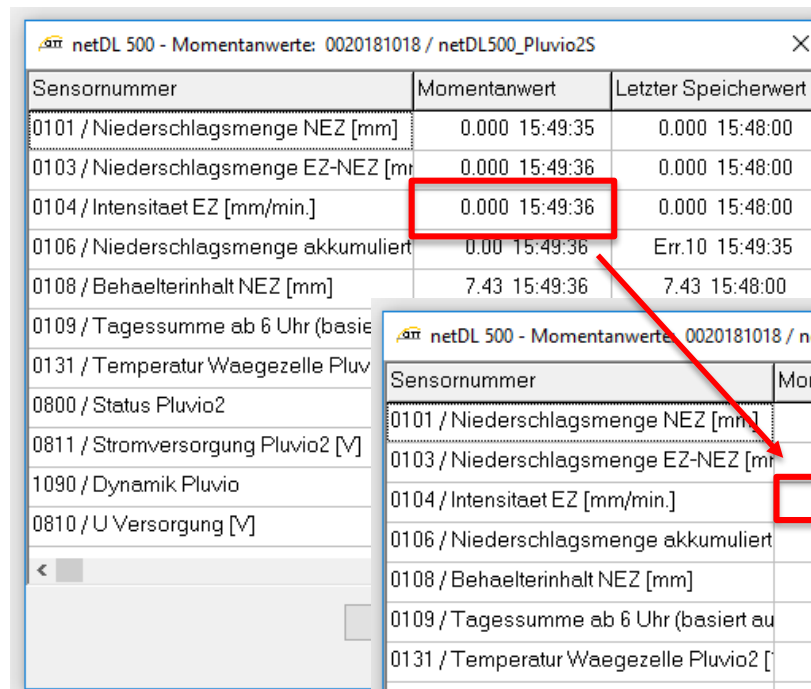
CONNECT PLUVIO² TO NETDL VIA SDI-12



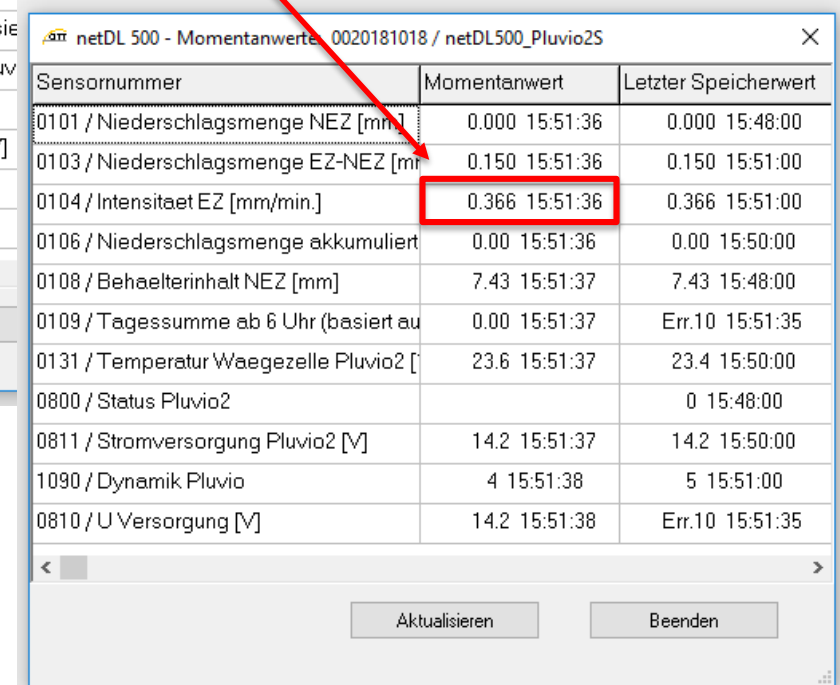
Implement the configuration in the OTT netDL

Now perform a short test by using the current values function in the operating program:

- At the beginning, zero values for the intensity EZ should be displayed.
- Now take a 1€ coin and put it carefully into the collecting container of the Pluvio².
- After updating the measured values (after one minute), corresponding precipitation values should be displayed.



Sensornummer	Momentanwert	Letzter Speicherwert
0101 / Niederschlagsmenge NEZ [mm]	0.000 15:49:35	0.000 15:48:00
0103 / Niederschlagsmenge EZ-NEZ [mm]	0.000 15:49:36	0.000 15:48:00
0104 / Intensitaet EZ [mm/min.]	0.000 15:49:36	0.000 15:48:00
0106 / Niederschlagsmenge akkumuliert	0.00 15:49:36	Err.10 15:49:35
0108 / Behaelterinhalt NEZ [mm]	7.43 15:49:36	7.43 15:48:00
0109 / Tagessumme ab 6 Uhr (basie		
0131 / Temperatur Waegezelle Pluv		
0800 / Status Pluvio2		
0811 / Stromversorgung Pluvio2 [V]		
1090 / Dynamik Pluvio		
0810 / U Versorgung [V]		



Sensornummer	Momentanwert	Letzter Speicherwert
0101 / Niederschlagsmenge NEZ [mm]	0.000 15:51:36	0.000 15:48:00
0103 / Niederschlagsmenge EZ-NEZ [mm]	0.150 15:51:36	0.150 15:51:00
0104 / Intensitaet EZ [mm/min.]	0.366 15:51:36	0.366 15:51:00
0106 / Niederschlagsmenge akkumuliert	0.00 15:51:36	0.00 15:50:00
0108 / Behaelterinhalt NEZ [mm]	7.43 15:51:37	7.43 15:48:00
0109 / Tagessumme ab 6 Uhr (basiert au	0.00 15:51:37	Err.10 15:51:35
0131 / Temperatur Waegezelle Pluvio2 [23.6 15:51:37	23.4 15:50:00
0800 / Status Pluvio2		0 15:48:00
0811 / Stromversorgung Pluvio2 [V]	14.2 15:51:37	14.2 15:50:00
1090 / Dynamik Pluvio	4 15:51:38	5 15:51:00
0810 / U Versorgung [V]	14.2 15:51:38	Err.10 15:51:35

**IF YOU NEED FURTHER INFORMATION, PLEASE
CONTACT HYDRO SERVICE TEAM.**

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