
FDB-22 ... 3D Filament consumption counter



TECHNICAL SPECIFICATION

- Power: 5 VDC (Adapter 110-220 VAC to 5 VDC)
- For filament 1.75 mm in diameter
- Measurement of consumption in meters
- Minimum displayed value: 0.001 m (1 mm)
- Wi-Fi connection
- Cloud database online
- Configuration using your internet browser
- UPC: 697333921920
- EAN: 0697333921920

APPLICATION

- Upgrade 3D printers with Filament cloud database
- Automatic consumption for the selected filament written directly every minute in the cloud database and shown locally on the display
- Very easy to mount it directly on a 3D printer (optimized for Ender 3)
- Cloud database interface available online
- One year support and free database online
- Easy filament management in the cloud database (add, remove, modify) via interface



Configuration page:

Device: FDB-22 - Serial: <input type="text"/> - MAC Address: <input type="text"/>
Connect to: <input type="text"/> <input type="button" value="v"/> Password: <input type="text"/> <input type="button" value="Submit"/>

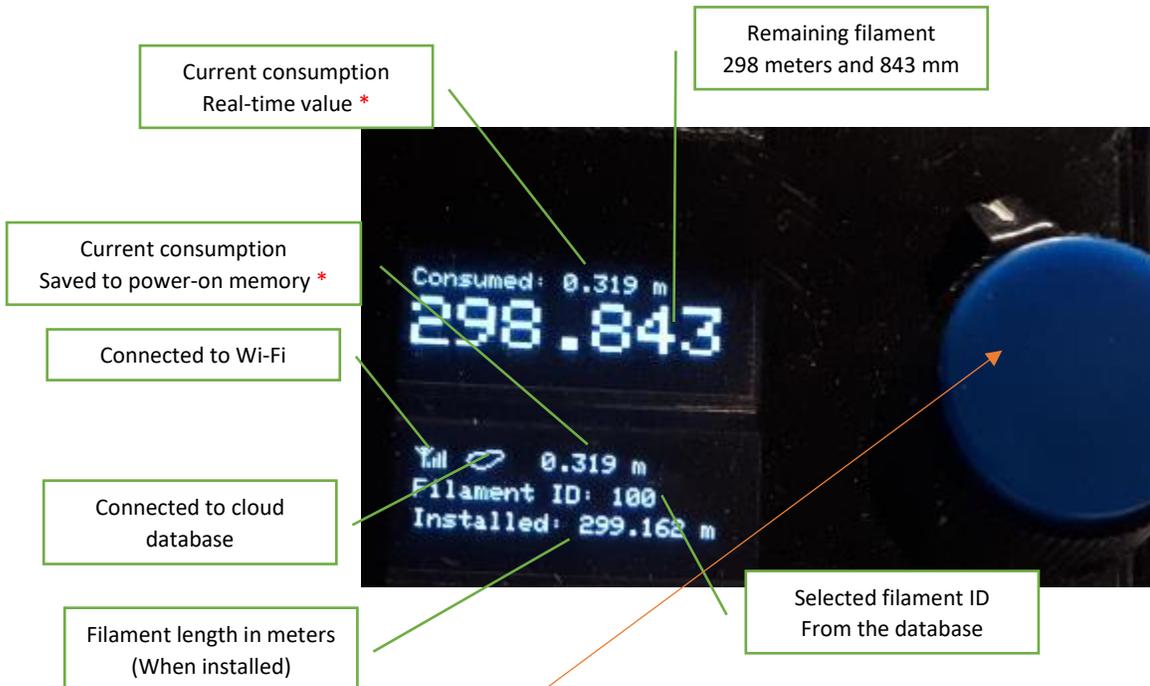
Wi-Fi: i2LW_F0B4_5 **connected**
AP mode is off

Direction of subtraction: CCW CW

Coefficient of the pulley:

The pulley coefficient is calculated for the original part. In any case (example: upgraded pulley, etc.) you can change this value here.
A trick to calculate the new value:
Mark the beginning and end of one length on the filament (for example 1000 mm (1m)) and install the filament on the pulley.
Reset the counter. Pull one side with your hand until you reach the marked end. Consumption should be: 1,000
If 1,050 is shown for example, you have 50mm more than is realistic. You can use the following formula to calculate the new coefficient:
 $100/1000 * 1050 = 105$ (%)
 $0.000653259 / 100 * 105 = 0.0006852195$ (new coefficient)
The coefficient has a maximum of 9 decimals, so you need to round the value to 9 decimals: 0.000685219 or 0.000685220

What is shown on the display of counter?



To change the filament, press this button once and turn it clockwise or counterclockwise to find the desired ID.

Confirm by pressing the button again. (The same as for the 3D printer)

If you want to keep the same filament but reset the consumption, select the same ID and confirm by pressing the button a second time.

“*” Before changing the filament ID and if you are using the cloud database, make sure that the real-time consumption value is equal to the value stored in the power-on memory. The real-time value is also stored in the cloud database every minute if it is different from the value at power-up.

FILAMENT INVENTORY DATABASE


Filament inventory [My Account](#) [Log out](#)

Filament ID	Filament Type	Color	Brand	Manufacturer Part	Seller	Price	Date Of Purchase	Nozzle	Full kg	Full m	Bed temperature min	Bed temperature max	Printing Temperature min	Printing Temperature max
1	PLA	White C	PolyLite Polymaker	PM70527	Amazon.ca	33.46	2022-02-05	0.40	1.00	335.00	25	60	190	210
2	TPU	White	Reprapper		Amazon.ca	40.23	2022-02-05	0.40	1.00	340.00	0	0	190	210
3	ABS	White	Ouverture		Amazon.ca	32.18	2022-01-29	0.40	1.00	400.00	80	100	245	260
4	TPE	Black	Filaments.ca		Filaments.ca	39.57	2021-11-24	0.40	0.50	243.00	80	90	220	240
5	PLA	Dark Green	Filaments.ca		Filaments.ca	17.95	2021-07-10	0.40	1.00	335.00	0	0	195	215
6	PETG	White	Duramic		Amazon.ca	24.14	2021-09-13	0.40	1.00	338.00	0	0	230	250
7	PLA	Dark Blue	Filaments.ca		Filaments.ca	17.95	2021-07-10	0.40	1.00	335.00	0	0	195	215
8	PI A	Grey	Filaments.ca		Filaments.ca	17.95	2021-07-10	0.40	1.00	335.00	0	0	195	215

Manufacturer data				User data			
Filament ID	<input type="text" value="1"/>	Nozzle	<input type="text" value="0.40"/>	Printer Model	<input type="text" value="Ender 3"/>		
Filament Type	<input type="text" value="PLA"/>	Full coil (in kg)	<input type="text" value="1.00"/>	Print Temperature °C	<input type="text" value="195"/>		
Color	<input type="text" value="White C"/>	Full coil (in meters) ***	<input type="text" value="335.00"/>	Bed Temperature °C	<input type="text" value="55"/>		
Brand	<input type="text" value="PolyLite Polymaker"/>	Bed temperature min °C	<input type="text" value="25"/>	Print Speed (mm/s)	<input type="text" value="60"/>		
Manufacturer Part	<input type="text" value="PM70527"/>	Bed temperature max °C	<input type="text" value="60"/>	Quality rating	★★★★☆		
Seller	<input type="text" value="Amazon.ca"/>	Printing Temperature min °C	<input type="text" value="190"/>	Comment	<input type="text" value="good"/>		
Price	<input type="text" value="33.46"/>	Printing Temperature max °C	<input type="text" value="230"/>	Filament Current length (m)	<input type="text" value="279.827"/>		
Date Of Purchase	<input type="text" value="2022-02-05"/>	Fan (On/Off)	<input type="text" value="ON"/>	Current consumption	<input type="text" value="0.417"/>		
Gauge	<input type="text" value="1.75"/>	Printing speed min (mm/s)	<input type="text" value="40"/>	Consumed	<input type="text" value=""/>		
		Printing speed max (mm/s)	<input type="text" value="60"/>		<input type="text" value=""/>		

The online filament database allows you to save from 50 filaments (free account) to an unlimited number of filaments (corporate account). You can share some data with other users, such as filament type, brand, seller, price, quality rating, etc. This can help you find and choose a good filament for future purchases.

You can change any value at any time. When the consumption meter is connected, the "filament current length" field is automatically decreased/written every minute if the printer is running.

The database is also available without equipment.

You can try it for free for a certain period of time.

The free database is available for 50 entries (filaments) but, when the filament is consumed - by clicking on the "Consumed" button you can close it and free an entry.

Data hosting costs us. Likewise, the number of processes has a price for us.

So, we need to limit free accounts without buying a device for a certain amount of time.

You can always remove this time limit if you make a donation.

LOGIN

LOGIN to Filament database

Email	Password
<input style="width: 90%;" type="text" value="Email"/>	<input style="width: 90%;" type="password" value="Password"/>
<input type="button" value="Login"/>	
<p>You do not have an account? Click on: Create account</p>	

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To connect to the Filament database, go to: <https://fdb-22.opcnet.com/>

Enter your email address and the password you chose when you opened your account.

Your credentials will be stored locally on your device used to log in. You will not be prompted to enter your password until you click "Logout" or clear your browser's cache.

Please contact the helpdesk if you have forgotten your password - we will reset it.

If you are logging in for the first time and do not have an account, click on the "Create an account" link.

Filament database - New Account	
Database only	<input type="checkbox"/> I want to use the database only without equipment (counters) (you can add it later)
Counter serial#	<input type="text" value="FDB-22 Serial number"/>
Your Name or Company name	<input type="text" value="Full name"/>
Location	<input type="text" value="Printer name/number"/>
Country	<input type="text" value="Country"/>
Your Email	<input type="text" value="Email"/>
Choose Password	<input type="text" value="Password"/>
Retype Password	<input type="text" value="Retype Password"/>
<input type="button" value="Create account"/>	
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In general, you will need the serial number of the device you purchased.
The serial number is located on the back of the device.



If you don't have the serial number of the device or if you want to use the database only without buying a counter, check the "I want to use the database only" box. This will allow you to create an account without a serial number.
Make sure you have entered your email address correctly in order to use the database.