

ApisProtect

ApisProtect Monitor 3.0 User Manual

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Product

ApisProtect Monitor Version 3.0.

Product Description

The ApisProtect Monitor is a battery powered device and is fitted to the inside outer cover of a honey bee hive.

Depending on the model purchased it monitors temperature, humidity, carbon dioxide, air pressure, sound and acceleration.

These are reported via LoRa or cellular communications to the cloud where the data is analysed against aggregate data by machine learning algorithms.

The condition of each colony and suggested actions for improved colony health are then delivered via an application.



Figure 1.1: Parts of the ApisProtect monitor



Intended Use

The ApisProtect Monitor is intended to monitor and report honey bee (*Apis mellifera*) hive health from inside the bee hive. It provides suggestions to help with problems such as swarming, overheating, freezing, queen problems, starvation, disease and pests.

Please note that the ApisProtect Monitor is not designed for exposure to the elements nor to be submerged fully in water.

Recommendations for use

Please install the device(s) as per the installation instructions provided in the box.

With each monitor are 5 hive labels. These are to be used to label the roof and each of the boxes of the same hive being monitored by that monitor.

Each label has the monitor number and a coloured shape to help match specific hive parts to the monitor attached to the roof. These labels are used to help maintain consistent monitoring of the same honey bee colony, which ensures valid predictions for that hive. They will also help the beekeeper to identify a hive that has been alerted as requiring investigation through the ApisProtect Alerts.

For accurate predictions, a colony should be monitored for a minimum of two weeks.



Technical Information

Manufacturer:



ApisProtect Limited

Address: The Rubicon Centre, Bishopstown, Co. Cork, Ireland, T12 Y275

Company Number: 598759

Website: www.apisprotect.com

Contact: support@apisprotect.com

Manufactured in Ireland by Gentian Services Limited for ApisProtect Limited.

Accessories:

- Replacement Batteries
- Replacement Battery Cover
- Replacement Insert

Warnings











- ! Do not transfer the ApisProtect Monitor between hives as this may result in the unintended transfer of pathogens and pests.
- ! If the ApisProtect Monitor is used in a manner not specified by ApisProtect then the protection provided by the device may be impaired.
- ! Please do not attempt to modify the device in any way or use accessories not specified by ApisProtect. Any attempt to do so will invalidate the warranty and may compromise the safety of the device.



! Please dispose of batteries in accordance with national local regulation.



Explanation of Symbols

The following markings and symbols may appear on the ApisProtect Monitor device or in the manual:

	Please Read and follow the instructions in the manual.
	Warning, Caution and Precaution to note. Important.
	CE Mark
	Federal Communications Commission
	Manufactured By
	Temperature Range
	Humidity Range
	WEEE: Waste Electronic and Electrical Equipment. Dispose of in accordance with national current regulation



ApisMonitor Device Ratings

	If the ApisProtect Monitor is used in a manner not specified by ApisProtect then the protection provided by the device may be impaired.
	WEEE: Waste Electronic and Electrical Equipment. Dispose of in accordance with national current regulation.

Size: 181.5 mm x 76 mm x 15 mm (7 ²/₁₀'' x 3'' x ⁶/₁₀'')

Weight: 145 g (5 oz) (including batteries)



Altitude: Up to 2,000 m (6560 ft)

Input: Nominal 3.0 V supplied by 4xAAA, Min 1.7V, Max 3.2 V



Batteries: 4x AAA recommended Type Procell AAA (L03) PC2400
Alkaline-Manganese Dioxide Battery nominal Voltage 1.5V



Environmental

Operating Range		
	Temperature:	-20°C to +55°C (0F to +130F)
	Humidity:	0% to 100% RH

The instrument will function outside of these temperature ranges, however best accuracy of measurement is achieved within this range.

Transport and Storage Range		
	Temperature:	-20°C to +55°C (0F to +130F)
	Humidity:	5% to 90% RH (Non-condensing)

The instrument can be transported and stored outside these ranges for short periods without affecting performance.

Certification and Compliance

This device complies with Part 15 of the FCC Rules

This device contains FCC ID VPYCMABZ

The device complies with

EN 300 220-2 V3.1.1

EN 300 220-1 V3.1.1

EN 301 489-1 V2.2.3

EN 301 489-3 V2.1.1

IEC 61010-1 2010 A1:2016



**Supplier's Declaration of Conformity
47 CFR § 2.1077 Compliance Information**

Unique Identifier: ApisProtect Monitor, Version 3.0

Responsible Party – U.S. Contact Information

ApisProtect

Contact Dennis Kautz

46533 270th St,

Tea,

SD 57064,

USA

Tel. [605-370-7792](tel:605-370-7792)

Email dkautz@apisprotect.com

FCC Compliance Statement (*e.g.*, products subject to Part 15)

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Cleaning and Maintenance

It is recommended to check the holes in the silicon insert are clear of wax and/propolis when opening the hive. If they are blocked, they can be cleared using a toothpick. If the insert is damaged or too coated in debris a replacement can be ordered by contacting ApisProtect.

The silicon insert can be removed using a hive tool or similar.

Should you need to restart the ApisProtect Monitor please remove the batteries and reinstall them. The ApisProtect Monitor requires four AAA batteries to function correctly.

Disposal

Please respect the environment.

Dispose of the packaging according to the local recycling regulations.

Dispose of batteries in accordance with national local regulation.

Dispose of the appliance at the end of its life span according to environmental considerations. Please contact your local authority for details on safe disposal.

Packaging parts, and especially plastic bags, may represent a suffocation hazard.



ApisProtect Contact

Cork Office Address:

ApisProtect,
The Rubicon Centre,
Bishopstown,
Co. Cork, Ireland,
T12 Y275

Email:

General enquires: enquiries@apisprotect.com

Support: support@apisprotect.com

Website:

General: www.apisprotect.com

Dashboard: <https://dashboard.apisprotect.com/>