Abriox
Remote monitoring & control for pipelines

SUNBIRD CUBE
MINI CP MONITOR

Quick Start Guide
&
Safety Information

www.abriox.com

ABOUT THIS DOCUMENT

This document has been issued as a guide only; in all instances please refer to the full SUNBIRD CUBE Mini CP Monitor Installation Instructions for further information.

HOW TO OBTAIN FULL INSTALLATION INSTRUCTIONS

1) Go to www.abriox.com and click the Customer Portal link under the Support menu located at the top of the page.
2) Enter the Username and Password as shown on your Licence Certificate.
3) Click the link for the SUNBIRD CUBE Mini CP Monitor and download the required files for viewing online or for printing at your own convenience.

Note

To enter the Customer Portal you will need your Abriox-issued Username and Password, if you do not know these or require assistance, please contact our technical support team. Contact details can be found on our website www.abriox.com.

DISCLAIMER

If this equipment is used in a manner not specified by Abriox, the protection provided by the equipment may be impaired. Please ensure you follow all guidance for safe and correct use of your equipment.

SAFETY INFORMATION

Please ensure you are familiar with the safety regulations of your company and observe them at all times.

General Safety Summary

This document contains information and warnings that must be observed to keep the unit in a safe condition and ensure safe operation.

To use the unit correctly and safely, read and follow all precautions given.

Please ensure you fully understand all instructions throughout this document that relate to specific measurement functions.

In addition, please follow all generally accepted safety practices and procedures required when working with and around electricity.

Safety Symbols

The table below lists safety symbols that appear on the SUNBIRD CUBE Mini CP Monitor and within this document.

Symbol	Description
CAT IV	Installation Category (Overvoltage Category) IV
⚠	Risk of danger. Important information. See Installation Instructions.
⚠	Hazardous voltage. Voltage > 30V AC (42.4V peak) or 60V DC may be present

Maximum Input Voltage for Channels 1 and 2 ⚠

Channels 1 and 2 of the SUNBIRD CUBE Mini CP Monitor have a maximum input voltage of 35V AC (RMS) and 50V DC without damage.

Maximum Input Voltage for Shunt Channel 3 ⚠

The Shunt channel of the SUNBIRD CUBE Mini CP Monitor provides readings up to 100mV AC and ±100mV DC. The channel itself should not be exposed to voltages greater than ±1V peak. Voltages greater than this will cause the channel input protection to activate which can only protect the unit for a limited period of time.

Danger of Electric Shock ⚠

If there are voltages greater than 30V AC (42.4V peak) or 60V DC present, care should be taken as there is a danger of electric shock.

Channel Input Protection ⚠

Channels 1, 2 and 3 have CAT IV surge protection at their rated input voltage ranges.

WEEE Directive

This symbol indicates that this product is not to be disposed of with your household waste, according to the WEEE Directive (2002/96/EC) and your national law. This product should be handed over to a designated collection point, e.g., on an authorised one-for-one basis when you buy a new similar product or to an authorised collection site for recycling waste electrical and electronic equipment (EEE).

Improper handling of this type of waste could have a possible negative impact on the environment and human health due to potentially hazardous substances that are generally associated with EEE. At the same time, your cooperation in the correct disposal of this product will contribute to the effective usage of natural resources. For more information about where you can drop off your waste equipment for recycling, please contact your local city office, waste authority, approved WEEE scheme or your household waste disposal service.

Batteries Directive—Information for Users

In the European Union (EU) this symbol indicates that the batteries in this product should be collected separately and not be disposed of with household waste. Substances in batteries can have a potential negative impact on health and environment and you have a role in recycling waste batteries thus contributing to the protection, preservation and improvement of the quality of the environment.

COMPLIANCE

Declaration of Conformity CE

This product is CE marked which means that Abriox declares that the product or equipment complies with all applicable European Directives. A copy of the Certificate of Conformity can be obtained from Abriox.

FCC Rules FC

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.

Note

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

i) Reorient or relocate the receiving antenna

ii) Increase the separation between the equipment and receiver

Do not make any changes or modifications to the equipment unless otherwise specified in the manual. If such changes or modifications should be made, you could be required to stop operation of the equipment.

UK Declaration of Conformity UKCA

This product is UKCA marked which means that Abriox declares that the product or equipment complies with all applicable UK Directives. A copy of the Declaration of Conformity can be obtained from Abriox.

INSTALLATION INSTRUCTIONS

This document has been issued as a guide only; in all instances please refer to the full SUNBIRD CUBE Mini CP Monitor Installation Instructions for further information.

Step 1 - Software Check

iCPSM4* users, please ensure you have received your Licence Certificate which details your HQ number, username and password.

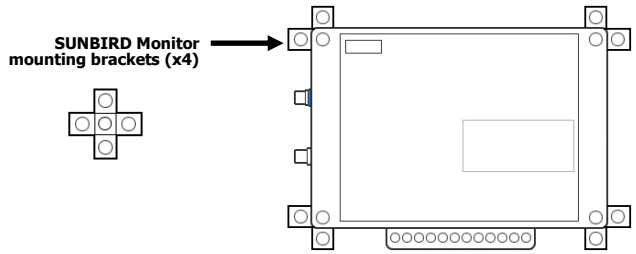
*Please note, SUNBIRD CUBE Mini CP Monitor is only compatible with **iCPSM4**.

Step 2 - Gather Equipment for Installation

To install the SUNBIRD CUBE Mini CP Monitor you will need:

- Shunt - of correct value
- A magnet - to activate the SUNBIRD CUBE Mini CP Monitor
- Consumables - for making the connections at the test post
- Multimeter - for confirming the voltage and current readings
- Cell/tablet - for configuring and installing the SUNBIRD CUBE Mini CP Monitor on iCPSM4
- SUNBIRD CUBE Mini CP Monitor Installation Instructions
- Any accessories - mounting brackets, external antennas, lightning arrestor, relay, surge filter

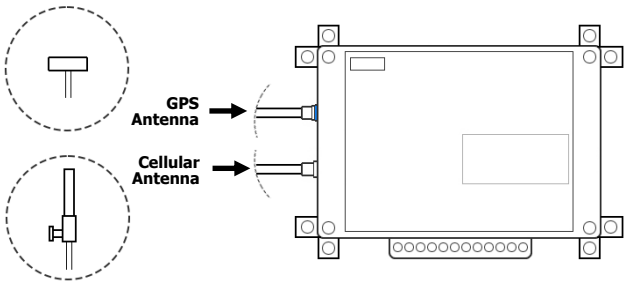
Step 3 - Mount the SUNBIRD CUBE MINI CP



Locate a suitable position at the test post for the SUNBIRD CUBE MINI CP Monitor and any accessories to be installed.

To mount the SUNBIRD CUBE MINI CP Monitor to a chipboard, use the supplied brackets and fix in place using No.6/3.5mm screws.

Step 4 - Fit Antennas and Accessories

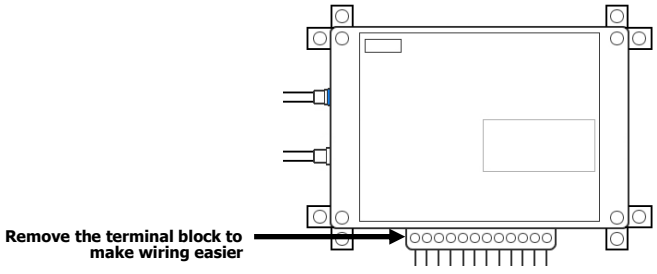


Connect both the GPS and Cellular antennas as shown (GPS is colour coded blue). When fitting the external antennas, ensure they are mounted outside any metal enclosures and ideally as high up as possible in order to gain the best GPS/Cellular signal.

Fit any other additional accessories as required.

Please refer to the full Monitor Installation Instructions for further information.

Step 5 - Make Connections



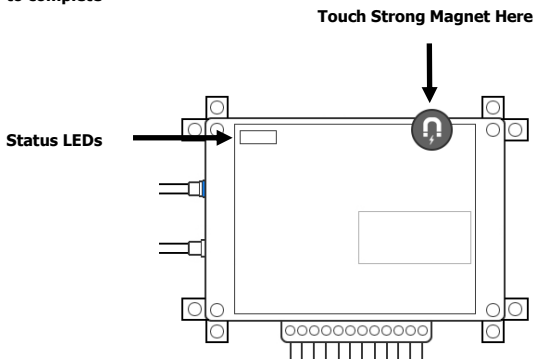
To aid installation, the terminal block may be removed by gently pulling from the SUNBIRD CUBE MINI CP Monitor.

Make the connections to the SUNBIRD CUBE MINI CP Monitor as required. The unit has up to 12 connections (labelled A to L) and are briefly described on the front label.

Please refer to the full Installation Instructions for further information.

Step 6 - Activation

It can take up to 20 minutes for installation to complete

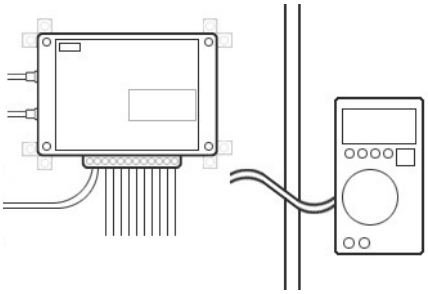


Activate the SUNBIRD CUBE MINI CP Monitor by touching a strong magnet on top of the Reset switch where indicated on the label, all 3 LEDs (Green, Amber and Red) will illuminate whilst the magnet is held in place. Once the LEDs have illuminated, remove the magnet to start the installation process.

The **Status LEDs** on the SUNBIRD CUBE MINI CP Monitor will flash to indicate the installation status. The LEDs will flash between Amber and Green to show installation/communications are taking place. Once the unit is flashing green (1 green flash every 2 seconds), communications have been established and installation has been completed.

The Status LEDs can indicate various statuses, please refer to the full Installation Instructions for further information on the LED Status.

Step 7 - Take a Reading (Optional)



Take a reading on the terminals using a multimeter and compare the measurements against the readings given by the SUNBIRD CUBE MINI CP Monitor in the iCPSM4 software.

To check the measurements taken by the SUNBIRD CUBE MINI CP Monitor, open iCPSM4 via a browser on your phone/tablet/laptop etc. Once you are logged in, click on "New Installations" from the menu on the left and locate your unit by matching the serial number on the front of the unit.

Check the reading values match those given by the multimeter.

If any of the readings are inconsistent with the multimeter, check the wiring.

Step 8 - Post Site Configuration and Installation

iCPSM
INTERNET-BASED CATHODIC PROTECTION SYSTEM MANAGER

Once installed you will need to assign the SUNBIRD CUBE MINI CP Monitor to a Pipeline and Location, you will also need enter the shunt value in the iCPSM4 software.

The software also allows you to specify the alert thresholds, measurement time and time zone.

Further configuration and operational features can be carried out directly via the software. Please refer to the full SUNBIRD CUBE MINI CP Monitor Installation Instructions for further information.