

# Controlant CO 14.01 Wireless Logger

## User's Guide

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Type	Description
CO 14.01	Wireless temperature logger

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## General Information

### About this guide

This guide describes the features and functions of a Controlant industrial wireless logger product.

### Scope

This guide covers Controlant wireless logger CO 14.01.

### Warranty exception for batteries

Controlant's CO 14.01 logger ships with battery included. Battery must be replaced by qualified service personnel approved by Controlant. No warranty is on the behavior of Controlant's equipment in case of wrong battery installation by non-qualified personnel or in case of usage of batteries which Controlant does not approve of.

### Ratings

The CO 14.01 wireless logger has IP 54 rating – dust protected and protected against spraying water. It is capable of operating in humidity levels of up to 99%. Note that long term exposure to water in varying temperature environment can affect enclosure.

Absolute maximum operating range is from -35°C to 80°C. Recommended operating range is -30°C to 40°C. Operation outside recommended range may affect the function of the device, such as battery capacity and wireless communications.

### Additional reference material

Additional information on the features and functions of Controlant logger products can be found online at [www.controlant.com](http://www.controlant.com)

### Questions and Technical Support

For technical assistance with your product, contact Controlant Technical Support at +354-517-0630 or [support@controlant.com](mailto:support@controlant.com).

## Controlant Industrial Wireless Logger - CO 14.01

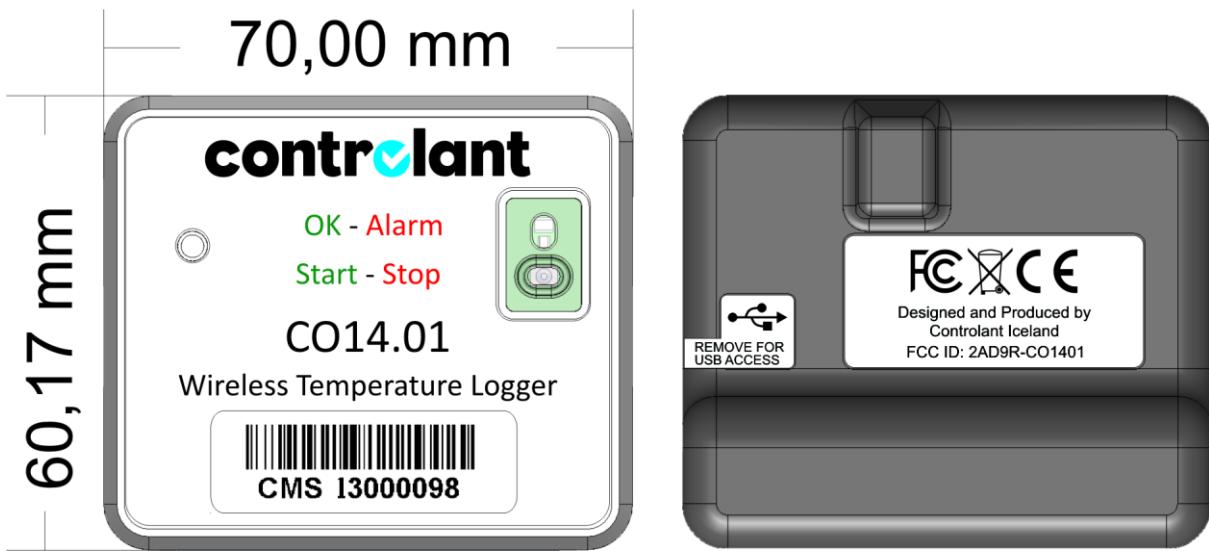


Figure 1: Mechanical drawing of the CO 14.01 wireless logger

## Overview

The CO 14.01 wireless logger has a built in ambient temperature sensor, accelerometer, light sensor and optionally a humidity sensor. The logger transmits its data to a local transceiver. The transceiver then transmits collected data to an on-line central database. The logger logs data into memory when not in the vicinity of a transceiver and automatically transmits all logged data ones it has established a connection with a transceiver.

The logger is built to be easy to set-up and maintain, thus reducing installation and operation cost. The logger is able to run with full functionality for up to 5 years while operating within recommended conditions.

## Enclosure

The logger is sealed in a water protective plastic enclosure.

## Battery

Each logger has a built in battery which is capable of running the logger with full functionality for up to 5 years in normal conditions. The battery should never be replaced.

## Turning the logger off

The logger is delivered active and pre-configured. In the event that users need to disable the unit please contact Controlant for further instructions.

## Specifications and Measurement Characteristics

### Environment range

The wireless logger's working range is the following

1. Humidity
  - a. 0-99% non-condensing humidity for normal operation.
  - b. During exposure to high levels of humidity, wireless communication can be affected.
2. Temperature
  - a. Operating range: -35°C to 80°C
  - b. Recommended range -30°C to 40°C
3. Enclosure rating
  - a. IP54 – Dust protected and protected against splashing water.

### Measurement Specifications

The maximal error for temperature measurements for the recommended operating range is normally 0.5°C.

### Handling and Installation

The logger's enclosure ensures a good protection against wet environment and dust. The enclosure has limited protection against impacts and should be used with that in mind.

Cleaning of logger should be done with neutral soap, in case of a need to sanitize or sterilize use alcohol based compounds and wipe with a cloth.

### Wireless Connectivity

Controlant wireless devices have up to 200m range in open air. The communication frequency channels are placed around 868MHz for Europe and 915 MHz in North America.

The range in open air depends on various factors, including:

1. Antenna orientation
2. Disturbance on communication frequencies caused by electronic devices, both low and high current.
3. Disturbance on communication frequencies caused by other wireless devices which are using the same or similar communication frequency.

Wireless range is significantly affected by occluding objects. The range in occluded environment depends on various factors, including:

1. The building materials used in walls and ceilings.
2. Metal objects which occlude the path of the signal
3. Disturbance on communication frequencies caused by electronic devices, low and high current.
4. Disturbance on communication frequencies caused by other wireless devices which are using the same or similar communication frequency.

For further information on how to set up the wireless monitoring system for best wireless connectivity please refer to the wireless setup guide. For best results in setting up and using the wireless system, please refer to our selection of solutions and accessories.

## FCC Regulatory notices

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. 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:

- 1) Re-orientate or relocate the receiving antenna,
- 2) Increase the separation between the equipment and the radiator,
- 3) Connect the equipment into an outlet on a circuit different from that to which the receiver is connected,
- 4) Consult the dealer or an experienced radio/TV technician for help.

### FCC Antenna Gain Restriction:

The CO 14.01 has been designed to operate with a built in antenna, ANT-916-JJB-RA. Using any other antennas is prohibited. The antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter.

### Warning:

Changes or modifications to this product which are not expressly approved by the manufacturer may void the user's authority to operate it.