Installation manual

CF3-W-US-Disp-FLI

CO_2 transmitter and alarm

CF3-W-US-Disp-FLI

General

The alarm product *CF3-W-US-Disp-FLI* is designed to measure carbon dioxide (CO_2) in rooms. Option - Disp displays the measured CO_2 value in ppm (parts-per-million) on the LCD. LEDs are lit to give an overview of the CO_2 value.

An acoustic alarm sounds when the CO_2 value is above 1400ppm. The acoustic alarm can be silenced with a push button on the side of the instrument.

The units are designed for connecting to Direct Digital Control (DDC) with 0-10V signal inputs.

To open the wall mounted housing

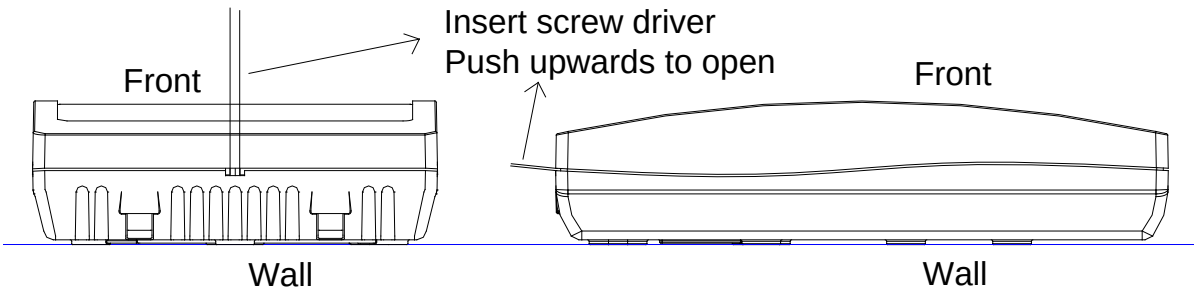

Figure 1. Closed housing seen from the top and the side. The housing is opened by inserting a screw driver and pushing to the front side of the housing. The locking hooks will then be released.

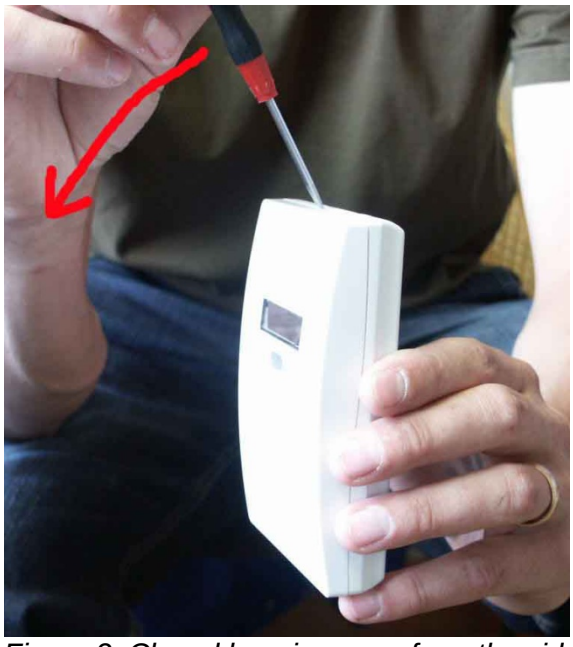

Figure 2. Closed housing seen from the side. The housing is opened by inserting a screw driver and pushing left (to the front side). The locking hooks will then be released.

Figure 3. Closed housing seen from the side. Never push to the right. The locking hooks may break and the housing is damaged

Dimensions

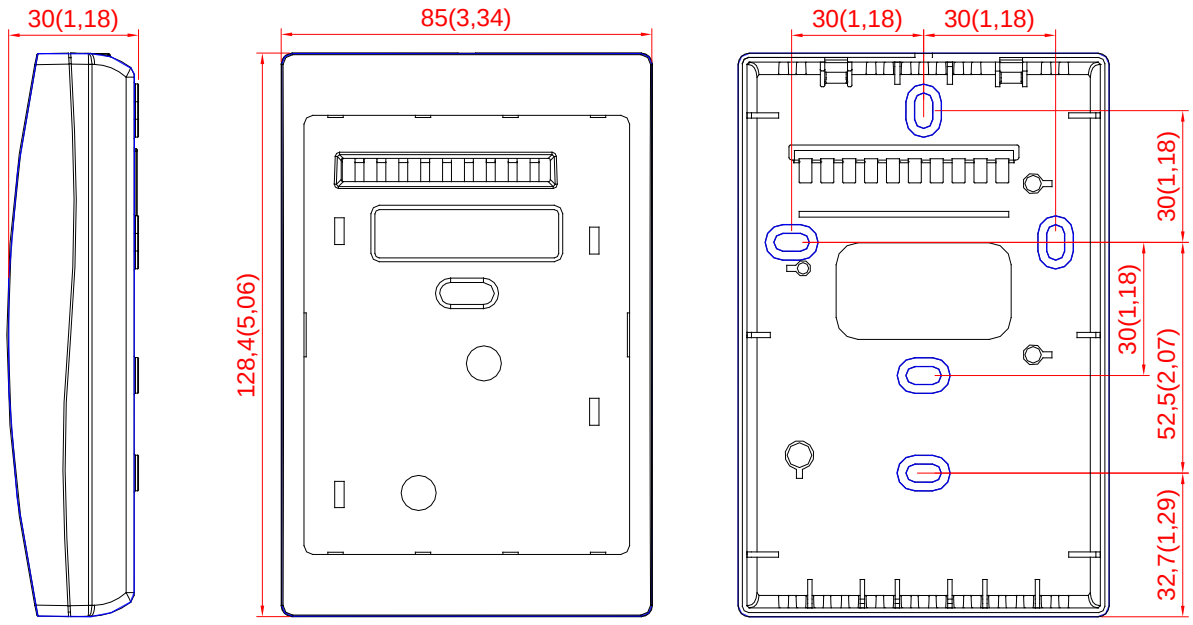

Figure 3. The dimensions of the sensor in mm and (inches)

Electrical connections

The power supply has to be connected to +~ and ⏚. ⏚ is considered as system ground. *The same ground reference has to be used for the CF3-W-US-Disp-FLI unit and for the DDC/signal receiver.*

PLEASE NOTE! The same ground reference has to be used for the *CF3-W-US-Disp-FLI* unit and for the control system!

Terminal	Function	Electrical data	Remarks
+~	Power (+)	24 VAC/DC+ (+-20%), 2W	
⏚	Power ground (-)	24 VAC/DC-	System voltage reference
OUT1	Analogue output 1 (+)	0-10 VDC	0-2000 ppm CO_2
OUT2	Silences the acoustic alarm		A push on the push button silences the acoustic alarm for 30 minutes.

Table I. Connections of the main terminal of CF3-W-US-Disp-FLI

LED Colour	Electrical data	Remarks
Green	0VDC 10VDC	Lit between 0-800 ppm CO_2
Yellow	0VDC 10VDC	Lit between 800-1400 ppm CO_2
Red	0VDC 10VDC	Lit above 1400 ppm CO_2. Buzzer sounds.

Table II. The LEDs

Self-diagnostics

The system contains complete self-diagnostic procedures that are executed automatically when the sensor is in operation. Sensors with display show a *wrench* if an error is found. The wrench is shown during the first seconds after power up and if the measuring range is exceeded.

Maintenance

The *CF3-W-US-Disp-FLI* is basically maintenance free in normal environments thanks to the built-in self-correcting *ABC* algorithm.

PLEASE NOTE! The sensor accuracy is defined at continuous operation (at least 3 weeks after installation)

Electronic products should be disposed of via a suitable recycling centre.

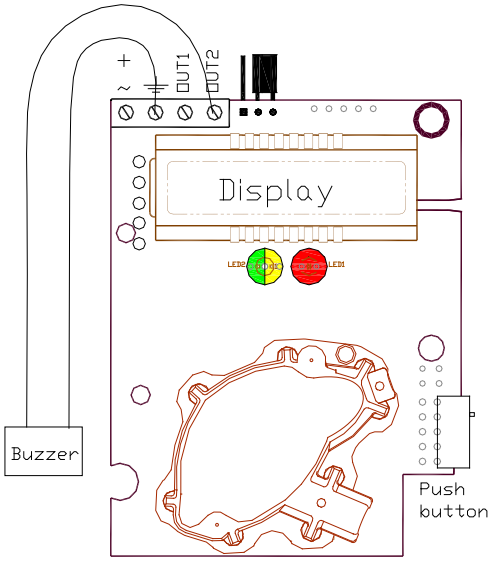

Figure 3. The CF3-W-US-Disp-FLI PCB

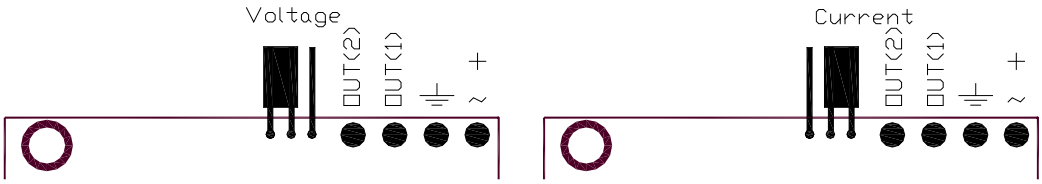

Figure 4. The upper part of the CF3-W-US-Disp-FLI PCB seen from the back with the jumper in voltage (default) and current position