

**ACTIVATION THRESHOLDS**

The default gas threshold setting is 900ppm .  
The installer can change this threshold to 700ppm, 900ppm, 1100ppm or 1500ppm.  
**N.B.** This task must be done with the mains power off.  
To set the required threshold, unscrew the screw on the right side of the gas regulator, and remove the front panel. Set the 2 switches (SW1 and SW2) on the electronic board, to suit the required threshold:

SW1	SW2	Activation threshold
■	■	700ppm
■	□	900ppm
□	■	1100ppm
□	□	1500ppm

Having selected the required threshold, close the front panel again, tighten the fixing screw, and switch the mains power on again.

**INSTALLATION**

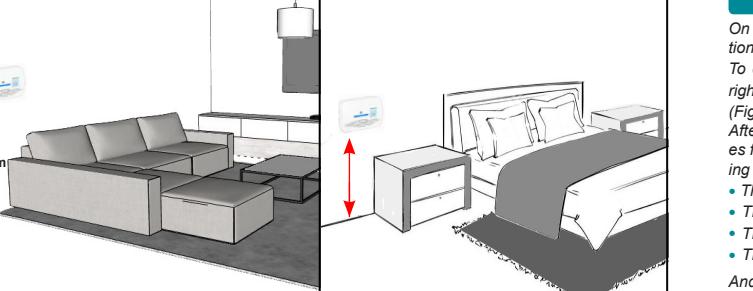
**WARNING:** Installing and taking this unit out of service must be done by specialist technical personnel. Installation of the device must conform to current national legal regulations.  
Do not pure gas directly on the sensor.  
Before installation, make sure that the power supply to the plant is off.  
Remember that the presence of plants inside the space during the night, can cause an increase in the level of CO<sub>2</sub>.

**WARNING:** Immediately after installation, we recommend launching the sensor self-calibration procedure (Paragraph: Sensor self-calibration)

**POSITIONING THE DEVICE**

The device **MUST BE INSTALLED**:

- At a height of 1.5 m above the floor or in line with the height at which the people in the space breathe, in a dry place, without draughts, and away from heat sources.

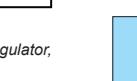


**OPERATING CHECK - TEST**

On completion of installation, it is possible to check correct functioning of the Yukon mod. 860 CO<sub>2</sub> device.  
To check correct functioning, hold down the "A" in the bottom right corner (as shown in the figure) until the display shows TEST (Fig. 4). After that, the display's backlighting switches on, the relay switches for a period of five seconds, and the display shows the following information:

- The minimum CO<sub>2</sub> value measured since the last time the device was switched on. (Fig. 5),
- The maximum CO<sub>2</sub> value measured since the last time the device was switched on. (Fig. 6).
- The threshold for activation of ventilation (Fig. 7).
- The current time and date (Fig. 8).

And finally it shows the "Main Screen" (Fig. 9).







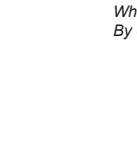
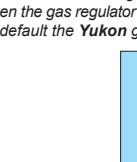

**INSTALLATION PROCEDURE**

- Disconnect the power supply to the plant.
- Secure the Fixing support (with the arrow pointing up) to the wall or a 3-place embedded electrical box, using the screws and anchors provided. To fix the anchors, drill holes in the wall using a 5 mm diameter drill bit.
- Insert the hooks for the Base into the holes in the Fixing support and shift the Base to the right until it clicks into place (Fig. 1).



**ON-OFF**

To switch the Yukon gas regulator on/off, push and release key "A".  
When the gas regulator is switched off, the top left area of the display shows OFF (Fig. 10). By default the Yukon gas controller switches on in Manual mode (Fig. 11).

**WARNING:** Switching the gas regulator on and off only affects regulation of the concentration of CO<sub>2</sub> but does not inhibit the device's Wi-Fi function, and measuring of the concentration of CO<sub>2</sub>, temperature and humidity.  
• Reinstate the mains power supply.

**ELECTRICAL CONNECTION: POWER SUPPLY**

**Warning:** The electrical connections must be formed using embedded cables.  
The gas controllers can be powered at 100Vac to 240Vac-50/60Hz via the "N" and "L" terminals, or at 12Vdc using the (+) and (-) terminals, as shown in Figure 2.  
A device must be installed for disconnecting the detector from the mains power supply, with a contact opening of at least 3 mm, in accordance with the requirements contained in "European Regulation IEC EN 60335-1".

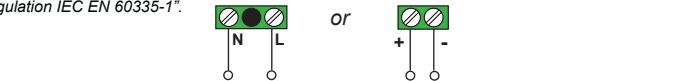


Fig.2

When switched on for the first time or after the "B" key has been held down for 15 seconds, the Yukon gas regulator goes to "Wi-Fi Configuration" mode for 15 minutes (Par. Wi-Fi Configuration).

**OUTPUT SIGNAL CHARACTERISTICS**

The Yukon mod. 860 CO<sub>2</sub> series of gas detectors are fitted with a relay at the output free of live contacts. Contact capacity 10A 250Vac / 30Vdc.

**ELECTRICAL LOAD CONNECTION**

The diagram in figure 3 shows an example of the connection for a Yukon mod. 860 CO<sub>2</sub> device to a 240Vac-50/60Hz power supply, with a wall-mounted helical extractor.

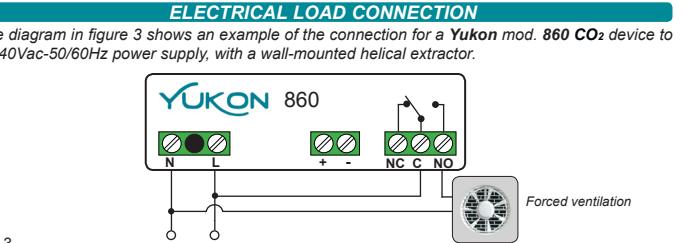


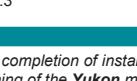
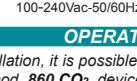
Fig.3

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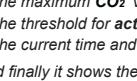
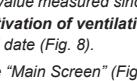
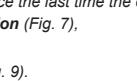
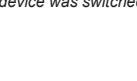
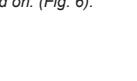
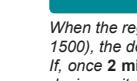







**FUNCTIONING: LOAD ACTIVATION**

When the regulator is on (ON) and the preset alarm threshold for CO<sub>2</sub> is exceeded, (700-900-1100-1500), the device goes into mode **Acceptable air quality**. If, once 2 minutes have passed, the air quality is still above the present CO<sub>2</sub> alarm threshold, the device switches the relay and activates ventilation, while the display flashes 5 times, and an ON message is displayed in the top right area (Fig. 15). If, after 5 minutes from ventilation being activated the air quality is still above the alarm threshold, the device switches to mode: **Poor air quality**. On your Smartphone/Tablet you will receive a message: **Poor air quality**. When the device exits a **Poor air quality** state, the electrical charge is deactivated, and the display shows OFF in the top right area (Fig. 16).

Air Quality notifications arrive even if the regulator is set to OFF mode.

**HYSTERESIS: RELAY activation/deactivation**

Regardless of the ALARM threshold set, the hysteresis is 25% only in descent.  
The relay is deactivated when the air quality is 25% lower than the alarm threshold set.

ALARM THRESHOLD (ppm)	RELAY ACTIVATION (ppm)	RELAY DEACTIVATION (ppm)
700	700	525
900	900	675
1100	1100	825
1500	1500	1125

**AUTOMATIC / MANUAL PROGRAM**

When the gas regulator is switched on (ON) it can be operated in two modes:

- Automatic Program.
- Manual Program (default).

Both these modes can only be set using the application.

In Automatic Program mode, "CO<sub>2</sub>" controller only takes place according to the weekly programme set by the user using the application. The top left of the display shows the letter "A" (Fig. 12). To the left the "Segments" are shown that correspond to the HOURS during which regulation is active. Each "Segment" corresponds to 60 minutes. The relay switches only when the "CO<sub>2</sub>" threshold is exceeded, during the HOURS indicated by the "Segments".

In Manual Program mode "CO<sub>2</sub>" regulation is carried out every time the set threshold is exceeded.

The top left of the display shows the symbol (Fig. 13). The "Segments" for the HOURS and the DAY are not displayed. The relay switches when the "CO<sub>2</sub>" threshold is exceeded, at any time.



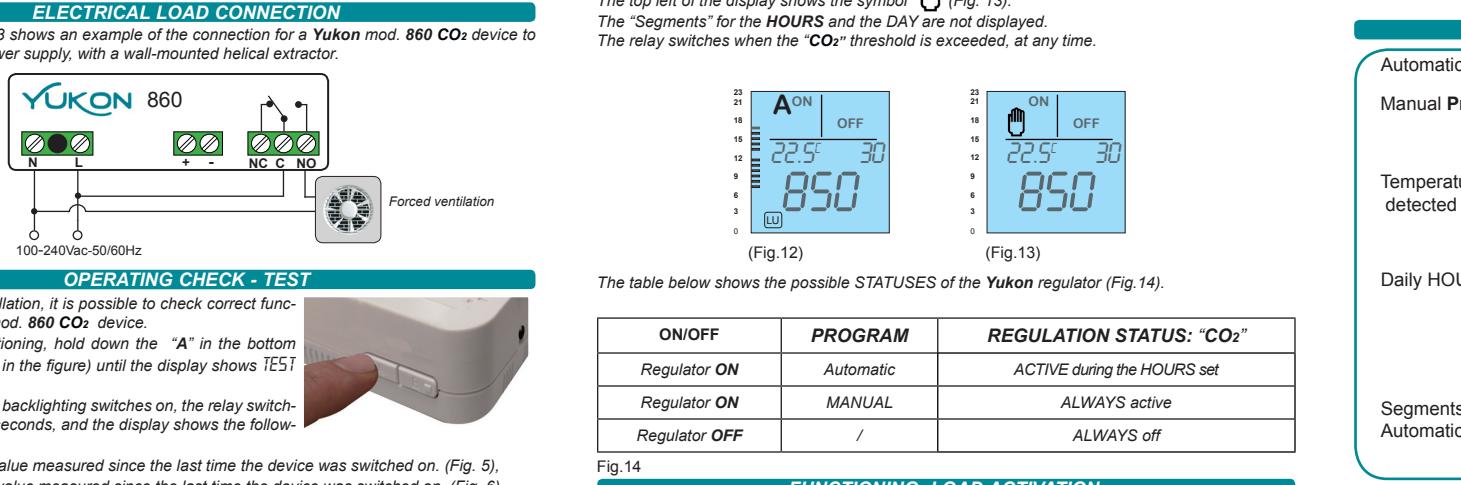

Fig.12

Fig.13

**ROUTINE CHECKS**

We recommend getting your installer to perform a detector function check at least once a year.

**DISPLAY**



Automatic Program  
Manual Program  
Regulator active  
Regulator off  
Relay active Load (ON)  
Relay off Load (OFF)  
Percentage humidity (%RH)  
Temperature detected (°C)  
Daily HOURS  
Segments  
Automatic Program  
Day of the week  
Concentration of CO<sub>2</sub> (ppm)  
Stamp:  
Signature

**TO BE COMPLETED BY THE INSTALLER:**

Date installed \_\_\_\_\_  
Date replaced \_\_\_\_\_  
Installation space \_\_\_\_\_  
Device's serial number \_\_\_\_\_  
(To be read on the inside of the plastic casing)  
Stamp:  
Signature

**SENSOR SELF-CALIBRATION**

Self-calibration must be done immediately after installation.  
It is also recommended in case of anomalous readings for the CO<sub>2</sub> values.

To launch self-calibration of the sensor, hold the "A" key down until the display reads "CALIB ON". While the key is held down, the TEST function will start up.

While calibrating the sensor, ventilate the space adequately for at least a few hours a day for a week. During the calibration period the Yukon 860 CO<sub>2</sub> regulator works normally.

**GENERAL GUARANTEE CONDITIONS**

**THIS CERTIFICATE IS THE ONLY DOCUMENT THAT GIVES THE RIGHT TO HAVE THE CO<sub>2</sub> GAS CONTROLLER REPAIRED UNDER GUARANTEE**

The detector is GUARANTEED for a period of 24 months from the date of purchase.  
The GUARANTEE does not cover any damage caused by tampering or incorrect and improper use and installation.  
The GUARANTEE is only valid if duly completed.

In the case of defect covered by the GUARANTEE, the manufacturer will repair or replace the product free of charge.

**SERVICES NOT UNDER GUARANTEE:**

Once the CO<sub>2</sub> terms or duration have lapsed, any repairs will be charged for in relation to the parts replaced and cost of labour.

**WARNING: Incorrect calibration could compromise the controller's performance.**

**IMPORTANT:**  
Calibration cannot be interrupted.  
If there is a power failure during calibration, when power is restored the regulator resets the operation and begins calibrating again.

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We recommend getting your installer to perform a detector function check at least once a year.

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Manual Program  
Regulator active  
Regulator off  
Relay active Load (ON)  
Relay off Load (OFF)  
Percentage humidity (%RH)  
Temperature detected (°C)  
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Segments  
Automatic Program  
Day of the week  
Concentration of CO<sub>2</sub> (ppm)  
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Signature

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Signature

**REGOLATORE DI GAS CO<sub>2</sub> PER USO DOMESTICO**

**serie YUKON mod. 860 CO<sub>2</sub>**

**Italiano**

**Wi-Fi**

**MADE IN ITALY**

**Serie** **Gas rilevato** **Alimentazione**

**Yukon 860 CO<sub>2</sub>** **CO<sub>2</sub> (Anidride carbonica)** **100+240Vac - 50/60Hz / 12Vdc**

**INTRODUZIONE**

Il monitoraggio ed il controllo della temperatura, dell'umidità e della concentrazione di anidride carbonica negli ambienti chiusi è fondamentale per il benessere del nostro corpo ed influisce in modo positivo sulla nostra salute.  
La CO<sub>2</sub> (anidride carbonica o biossido di carbonio) è un gas inerte, inodore ed incolore, naturalmente presente in atmosfera in concentrazioni limitate. Un'elevata concentrazione di CO<sub>2</sub> provoca il calo della concentrazione, sonnolenza, nausea e l'aumento della frequenza respiratoria.

**Effetti sulla salute**

350ppm normale livello di fondo outdoor.  
600-800ppm livello tipico degli ambienti abitati con buon ricambio d'aria.  
1000-2000ppm livello associato a disturbi di sonnolenza ed aria scadente.  
2000-5000ppm mal di testa, sonnolenza, nausea, calo della concentrazione.  
> 5000 ppm potenziale tossicità dopo 1 giorno di esposizione.

**DESCRIZIONE GENERALE**

I dispositivi Yukon 860 CO<sub>2</sub> sono regolatori gas di Anidride carbonica (CO<sub>2</sub>) dotati di un relè per azionare un impianto di ventilazione e di connessioni Wi-Fi Grazie alla presenza di un display retroilluminato i monitoraggio e il controllo della temperatura, dell'umidità e della concentrazione di Anidride Carbonica (ppm), la percentuale di Umidità e la Temperatura presenti in ambiente.

I regolatori gas modello Yukon dispongono di un'App per Smartphone/Tablet compatibile con i sistemi iOS (9.0 in su) ed Android (6.0 in su) in grado di interfacciarsi in maniera semplice ed intuitiva ai propri dispositivi. In ogni momento si può controllare lo stato dei propri regolatori, modificarne i parametri e ricevere notifiche.

I regolatori della serie Yukon CO<sub>2</sub> sono impostati di default per mantenere la concentrazione di CO<sub>2</sub> al di sotto della soglia massima di 900ppm, ma tale soglia può essere modificata dall'installatore.

I dispositivi Yukon hanno una durata stimata di 15 anni. Dopo tale periodo o alla comparsa della scritta "REPLACE" sul display retroilluminato, l'apparecchio deve essere messo fuori servizio.

**SEGNALAZIONI LUMINOSE**

I dispositivi Yukon sono dotati, sulla parete frontale, di una barra LED e di un display retroilluminato. La barra LED, di colore BLU, indica lo stato della connessione di rete Wi-Fi.

- LED BLU (Wi-Fi) **sempre acceso**: Indica che l'apparecchio è connesso alla rete Wi-Fi.  
- LED BLU che lampeggi 2 VOLTE ogni 2 SECONDI: Indica che il dispositivo è in modalità configurazione Wi-Fi.  
- LED BLU lampeggiante: Indica che il dispositivo sta cercando di connettersi alla rete Wi-Fi.

**DIRECTIVE 2012/19/EU (Waste Electrical and Electronic Equipment - WEEE):**

Information for users:  
The label with the crossed out bin on this product indicates that the product must not be disposed of using the normal disposal procedure for domestic waste. To avoid possible damage to the environment and human health, separate this product from other domestic waste, so that it can be recycled according to the procedures for respecting the environment. For further details on the collection centres available, contact your local government office or dealer for the product.

**WEEE**

**MADE IN ITALY**

**geca**  
geca Srl  
Tecnocontrol Srl  
Via Miglioli, n°47 20090 Segrate (MI)  
Italy Tel. +39 02 26922890  
www.tecnocontrol.it

The manufacturer reserves the right to make any cosmetic or functional change without notice and at any time.

**RITARDO ALL'ACCENSIONE**

Il sensore ad infrarossi presente nel regolatore serie Yukon mod. 860 CO<sub>2</sub> necessita di un periodo di riscaldamento di circa 30 secondi prima di funzionare correttamente, per questo motivo all'accensione del dispositivo sul display appare la scritta "HEAT". Durante tale periodo le funzioni di rivelazione saranno inibite.

SOGLIE DI INTERVENTO		
La soglia del gas è impostata di default a 900ppm ( <b>PREIMPOSTATA</b> suggerita dai Professori dell'Istituto Superiore Sanità).		
Tale soglia può essere modificata dall'installatore a 700ppm, 900ppm, 1100ppm o 1500ppm.		
<b>N.B. Questa operazione va effettuata senza alimentazione di rete.</b>		
Per impostare la soglia desiderata, svitare la vite posta sul lato destro del regolatore gas e togliere il frontale. Impostare i 2 switch (SW1 e SW2) posizionati sulla scheda elettronica a seconda della soglia desiderata:		
<b>SW1</b>	<b>SW2</b>	<b>Soglia di intervento</b>
[ ]	[ ]	700ppm
[ ]	[ ]	900ppm
[ ]	[ ]	1100ppm
[ ]	[ ]	1500ppm

Dopo aver selezionato la soglia desiderata richiedere il frontale, avvitare la vite di fissaggio e ripristinare la tensione di rete.

#### INSTALLAZIONE

**ATTENZIONE: l'installazione e la messa fuori servizio dell'apparecchio devono essere eseguiti da personale tecnico specializzato. L'installazione del dispositivo deve essere conforme alle prescrizioni di legge nazionali vigenti.**

Non utilizzare gas puro direttamente sul sensore.

Prima di eseguire l'installazione, assicurarsi di togliere tensione all'impianto.

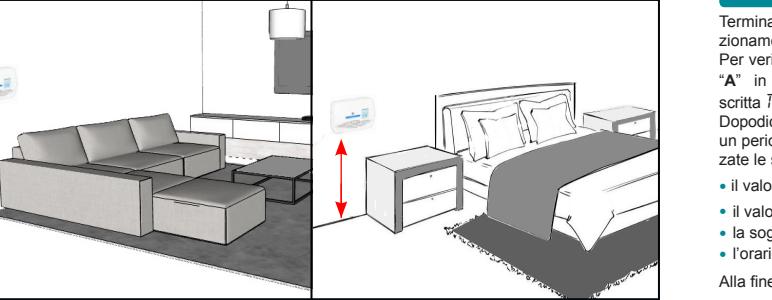
Ricordiamo che la presenza delle piante all'interno del locale, durante le ore notturne, può causare un aumento del livello di CO<sub>2</sub>.

**ATTENZIONE: Subito dopo l'installazione, si raccomanda di avviare la procedura di autocalibrazione del sensore (Parag.: Autocalibrazione del sensore)**

#### POSIZIONAMENTO DELL'APPARECCHIO

L'apparecchio **DEVE ESSERE INSTALLATO:**

- Ad un'altezza di 1,5m dal pavimento o in linea con l'altezza della respirazione delle persone presenti nel locale, in luogo asciutto, esente da correnti d'aria e lontano da fonti di calore.

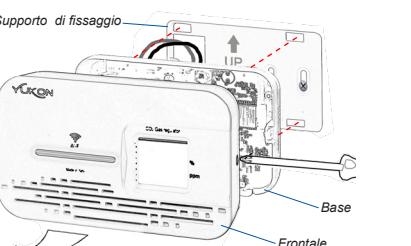


L'apparecchio **NON DEVE ESSERE INSTALLATO:**

- Vicino a pareti o altri ostacoli che possano ostruire il flusso del gas dall'utilizzatore al regolatore gas, o ad aspiratori e ventole che possano accentuare o deviare il flusso dell'aria.
- In ambienti dove la temperatura possa portarsi al di sopra di 50°C o al di sotto di 0°C.

#### PROCEDURA PER L'INSTALLAZIONE

- Togliere tensione all'impianto.
- Fissare il **Supporto di fissaggio** (con la freccia verso l'alto) alla parete o su scatola da incasso 3 moduli utilizzando viti e tasselli in dotazione. Per il fissaggio dei tasselli forare la parete con una punta di diametro 5mm.
- Inserire i ganci della **Base** nei fori del **Supporto di fissaggio** e trascinare verso destra la **Base** fino ad incastro avvenuto (Fig. 1).



• Effettuare i collegamenti elettrici (Par. Collegamento elettrico), dopodiché montare il **Frontale** e con l'ausilio di un cacciavite avvitare la vite posta sul lato destro dell'apparecchio.

• Ripristinare la tensione di rete.

2

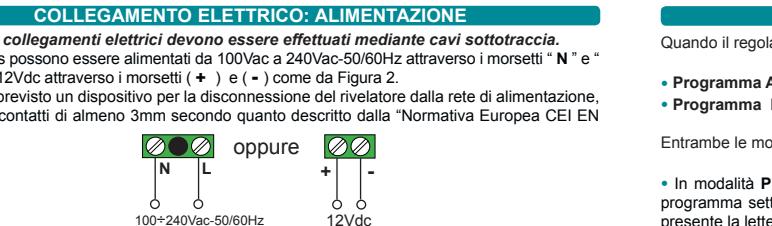


Fig.2

100+240Vac-50/60Hz      12Vdc

oppure

N      L      +      -

700ppm      900ppm      1100ppm      1500ppm

SW1      SW2

Soglia di intervento

700ppm

900ppm

1100ppm

1500ppm

Fig.2

100+240Vac-50/60Hz

12Vdc

oppure

N      L      +      -

700ppm

900ppm

1100ppm

1500ppm

Fig.2

100+240Vac-50/60Hz

12Vdc

oppure

N      L      +      -

700ppm

900ppm

1100ppm

1500ppm

Fig.2

100+240Vac-50/60Hz

12Vdc

oppure

N      L      +      -

700ppm

900ppm

1100ppm

1500ppm

Fig.2

100+240Vac-50/60Hz

12Vdc

oppure

N      L      +      -

700ppm

900ppm

1100ppm

1500ppm

Fig.2

100+240Vac-50/60Hz

12Vdc

oppure

N      L      +      -

700ppm

900ppm

1100ppm

1500ppm

Fig.2

100+240Vac-50/60Hz

12Vdc

oppure

N      L      +      -

700ppm

900ppm

1100ppm

1500ppm

Fig.2

100+240Vac-50/60Hz

12Vdc

oppure

N      L      +      -

700ppm

900ppm

1100ppm

1500ppm

Fig.2

100+240Vac-50/60Hz

12Vdc

oppure

N      L      +      -

700ppm

900ppm

1100ppm

1500ppm

Fig.2

100+240Vac-50/60Hz

12Vdc

oppure

N      L      +      -

700ppm

900ppm

1100ppm

1500ppm

Fig.2

100+240Vac-50/60Hz

12Vdc

oppure

N      L      +      -

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