

Combi Network Controller

Net Hub

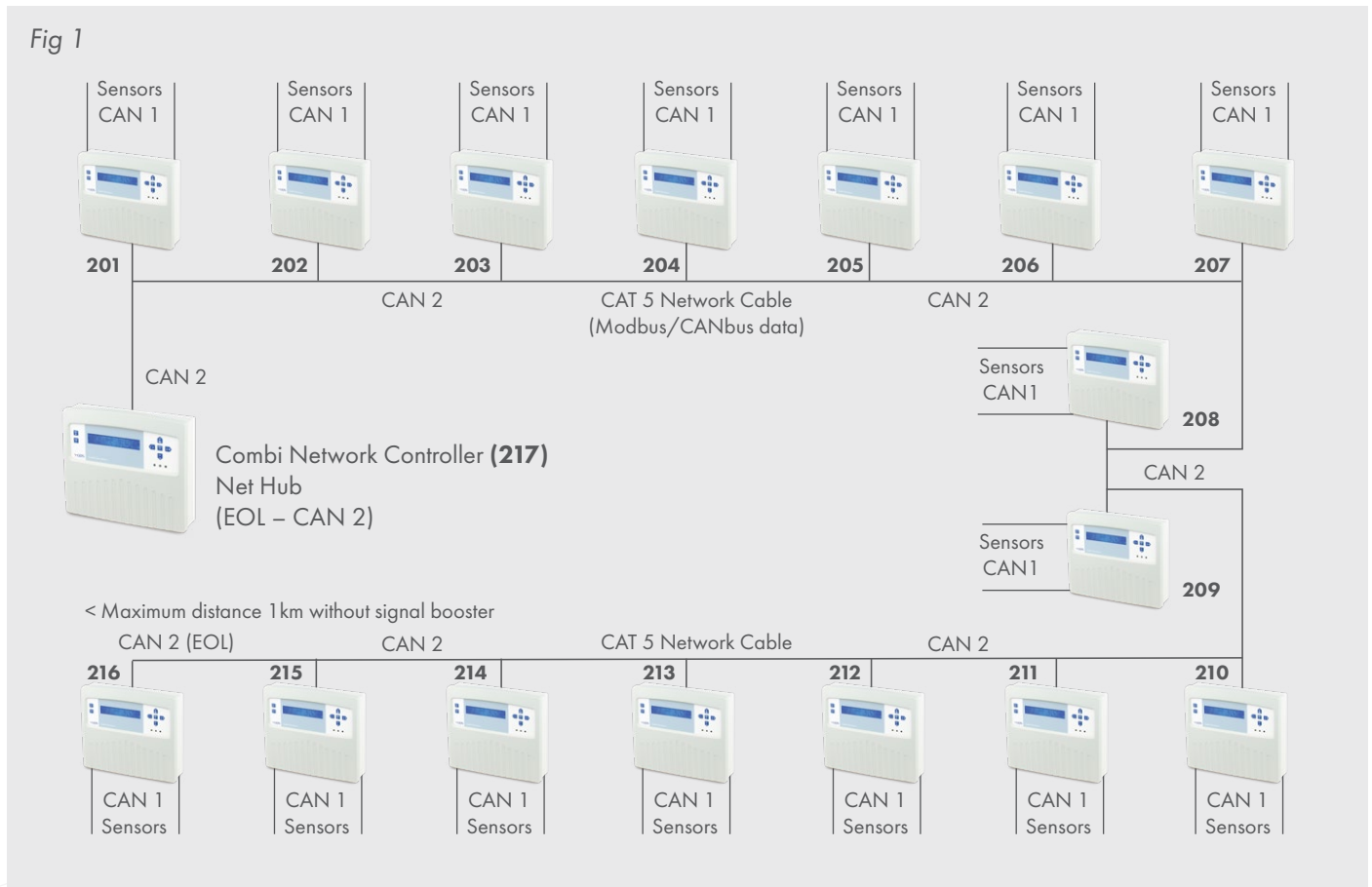
Please refer to the Combi Operating Manual C925 and Network Configuration C1148/C1930

Technical Sheet C1731 Issue E
Doc No. 194D18C

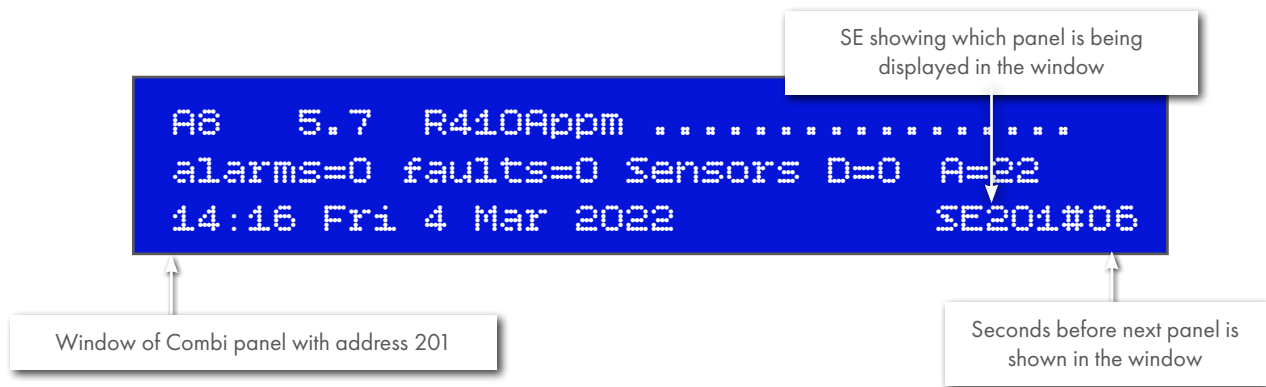
- A.** A Combi Network Controller provides means of viewing and controlling up to 16 Combi panels from one single location. Planning of Networked Combi's is different to standard standalone Combi's as the CAN2 port is dedicated for communication between the Network Controller and the Combi panels in the field. This puts a restriction on the number of radial circuits which can be used for connecting the sensors and other field devices to 2 circuits per Combi.

For Modbus Network Controller system output data – [see Combi Operating manual C925](#).

Fig 1



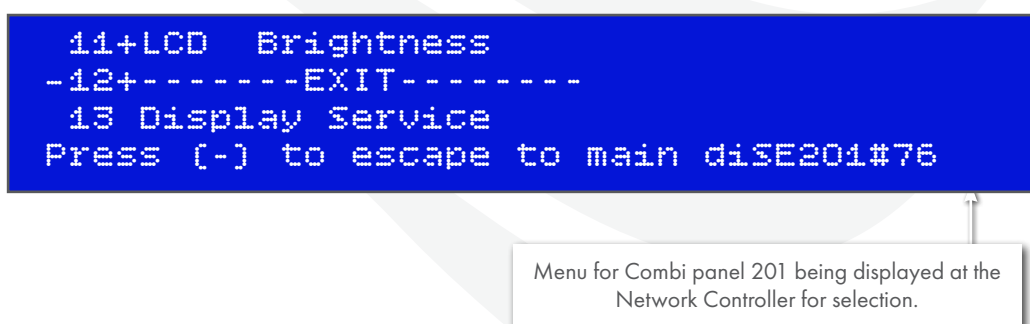
- B.** Since a network can have a maximum of 16 Combi panels connected to a single Controller it is recommended that the Network Controller address is set to 217. Leaving addresses 201 to 216 for the local Combi panels. Please refer to the Setup Network section in the manual. Please also note that the Network Controller will appear as a repeater on all of the local Combi panels. Its presence on the network is indicated by the letter 'R' followed by 'Y' or 'N' to indicate if the Combi panel and the Network Controllers are connected or not. This connection process must be performed from each of the networked Combi panels.
- C.** The current time indication used on all panels is synchronised to the lowest numbered panel i.e.201. The Network Controller stores data from each Combi panel and displays this data in sequence, giving a window to view all the panels on the network. In normal operating mode the Network Controller will show the data from each of the networked Combi panel as a window for five seconds. A count down timer on the bottom right hand corner of the LCD screen shows the Combi panel being displayed and time before the next panel will be shown. This process is repeated continuously unless interrupted by the operator for a detailed look at a particular Combi.



- D.** If a networked Combi panel is to be controlled from the Network Controller or viewed in detail, it first must be selected. Selection is performed by moving the screen to the required Combi panel by pressing the **Up** or **Down** Button. Once the desired Combi is being displayed release the button. This action causes the countdown timer to be set to 30 seconds allowing the operator more time to view the window or to select it for control actions. The Combi can be selected by pressing the **select** button. Once the select button is pressed a message will be displayed on the screen for 10 seconds stating which combi you have connected to and the countdown timer will be set to 90 seconds, the **SC** next to the panel number will change to **SE** to indicate that the buttons are now active.
- E.** Entering the password and making adjustments to settings will be just as if working at the Combi panel itself. Please allow extra time between button activation as communication between the Network Controller and the Combi panels is slower than when standing directly at the Combi panel, the speed of the response between the network controller and the Combi panels will be dependent on the number of panels, sensors and total CAN2 cable distance (maximum 1 km) – see section G. In this mode all “button” functions can be performed except the ‘Diming’ function. If when in control mode no buttons are pressed for 30 seconds, the network controller will disconnect from the selected Combi, the screen of the Network Controller will return to normal scrolling of the network. The time duration will also return to 10 seconds for each window. The **SE** sign will be replaced by the **SC** to indicate the push buttons are no longer active.



- F.** When in control mode all functions can be accessed by entering the engineers password and by scrolling through the engineers menu. Inhibiting of sensors muting of panel sounder resetting of alarms all can be done without having to go to the actual Cambi panel itself. Once the required work has been completed exiting can be done by pressing the **Dim** button on the network controller. The network controller will return to scrolling though the combi panels, every 10 seconds.



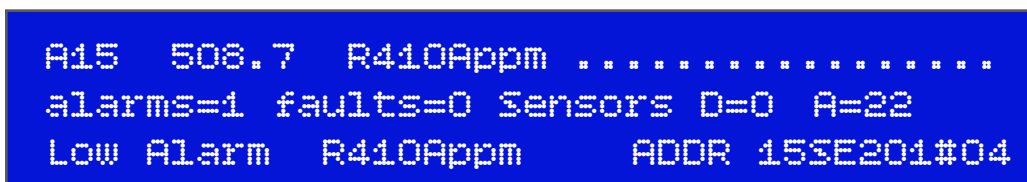
In order to make identification of the Combi panel easier the third line of the text file, showing supplier information, could be used to describe the location of the panel i.e. **Main reception**. This will help to identify which panel is being displayed or controlled.

- G.** Please note the following functions cannot be performed from the Network Controller. These function can only be carried out directly from the Combi panel as the laptop has to be connected to the RS232 connector on the back of the display board of that Combi panel. Functions not available are:

- a) Event Log to PC
- b) Data PC to Panel
- c) Data panel to PC

The above three functions together with others (text files) which may require lengthy pressing of buttons are best performed at the Combi panel itself and not from the Network Controller. (See section E).

- H.** Under normal conditions i.e. none of the combi panels connected to the network controller showing alarm or fault condition, the Network Controller will scroll through all panels with a 5 second window on each. If during this period one of the Combi panels goes into alarm condition it will not be indicated automatically. Only when the Network Controller displays the window of the Combi as a routine that the Alarm condition will appear on the Network Controller. The Network Controller will lock on to this window automatically even though the countdown timer will still be counting down to zero, the Combi in alarm condition will remain in the window. If more than one Combi panel was in alarm condition the Network Controller will scroll through these as normal but will not show the Combi panels which are not in alarm condition.



A15 508.7 R410Appm
alarms=1 faults=0 Sensors D=0 A=22
Low Alarm R410Appm ADDR 153E201#04

Above screen show low alarm condition from Combi panel 201. The Network Controller is locked on to this Combi unless manually moved to next or previous panel by pressing up or down button.

- I.** Using the same process as mentioned above, the desired Combi panel can be selected to view the alarm conditions and if required silence the panel sounder and reset the alarm condition if the gas reading from the sensor in alarm had gone to normal ambient reading.

Only when all Combi panels in the network have been cleared of alarms or fault will the normal scrolling of the network resume. Until then the Network controller will show the Combi panels which are in alarm only as a priority.

It is possible to move the window to a Combi in normal condition by pressing the **Up** or **Down** button, but unless selected for extended view or for control function the normal scrolling will bring the alarm window back and the Network Controller will again lock on to this Combi and ignore the countdown timer.

It is possible to connect a single 32, 8 or 4 way relay board to the network controller. The relays are pre assigned to activate from the first and second alarm (Low and High alarm) from each Combi panel. If a sensor on Combi panel with address 201 was to activate a first alarm condition it would activate relay number 1 on the relay board connected to the Network controller. If the same Combi then activated a second stage alarm relay number 2 on the relay board will be activated. These relays are in addition to any other relay which may be programmed for operation at each of the Combi panel.

The relays are assigned as follows;

Relay 1 and 2 for Combi 201, Rly 3 and 4 for Combi 202, Rly 5 and 6 for Combi 203 and so on with relays 31 and 32 assigned to Combi panel with address 216. These relays will reset automatically once the Combi panel they are assigned to is cleared of all alarm conditions.

The network relay board communication is unmonitored by the network controller and should only be used for beacons and sounders.

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KEY POINTS

- **When one or more Combi panels are in alarm**, the Network Controller will automatically prioritise those panels. If, for example, two panels are in alarm, the controller will display those two panels only while continuing to monitor the full system. Scrolling between the two panels and any further alarm events happens automatically on a timed cycle (approximately 10 seconds per panel) without any user input, times are displayed on a countdown basis.
- If you manually select one of the panels (by pressing the **Select** button), the controller will then “lock” onto that panel to allow you time to view events on that panel. At this point, the timer is extended to 90 seconds, this is simply to give sufficient time to enter menus, input passwords, or carry out actions such as muting or resetting alarms.
- It’s important to note that if any button is pressed during this period, the 90-second timer will reset. This can give the impression that the panel is staying locked if buttons are being pressed repeatedly.
- If no buttons are pressed, once the 90 second timeout is reached the controller will exit the selected Combi panel and return to the main screen. It will then resume its normal behaviour, scrolling between any panels in alarm on the standard ~10 second cycle.
- Additionally, if you want to exit a selected panel immediately, pressing the **DIM** button will disconnect from that panel and return the controller to the automatic scrolling mode i.e. cycling between any panels currently in alarm.

