

## FC1861/FC1862/FC1863 Controller (Interlocking) Product Manual

- FC1861 controller with 2 line card, max. 504 points
- FC1862 controller with 4 line card, max. 1008 points
- FC1863 controller with 6 line card, max. 1512 points

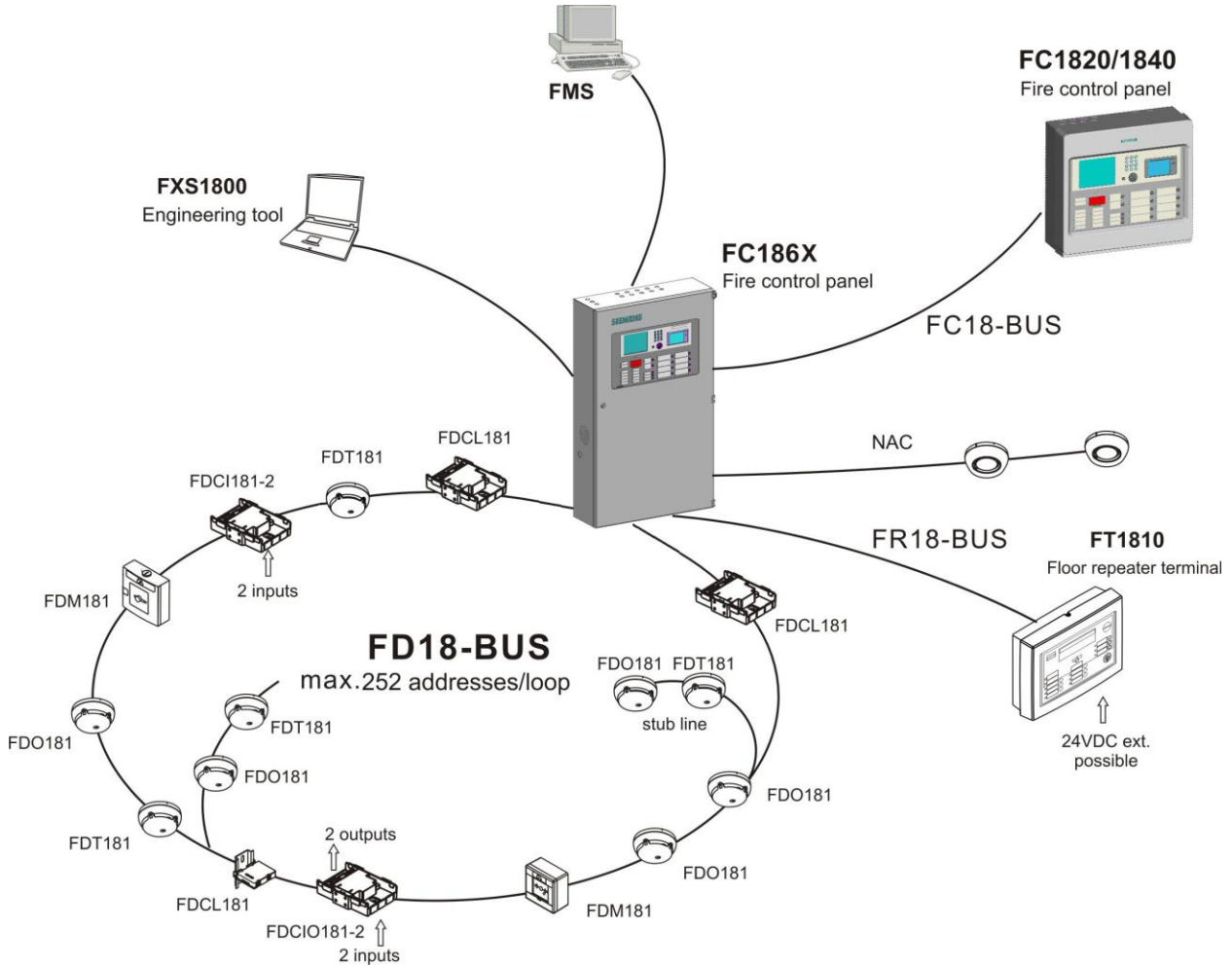
### Characteristic

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- Multi-language operation menu with windows style, easy and fast operation.
- Shortcut key (right key) for popping out operation items of device/event.
- Large memory space for up to 10000 history records, first in first out order, all events can be recorded during the operation period.
- LCD backlight Auto-off mode. When no operation or event to display within preset time, LCD backlight will be automatically turn off. When there are events / operations, LCD will light up automatically to display events and/or interlocking devices.
- 2 channels of programmable input/output (output: 40mA@24VDC, it can be programmed as general alarm output or general trouble output; input: dry contact).
- 1 channel of NAC for audible and visible device (0.5A@24VDC).
- 8 channels of interlocking function (output: 40mA @ 24VDC ) for automatic control and manual operations of control equipments.
- Efficient group programming according to different using.
- A FC186x controller can connect up to 2016 points by adding line card.
- Network bus (FC18-BUS), the max. distance is 1000m (the twist wiring capacity is 1.0 to 1.5 mm<sup>2</sup> ). Up to 32 controllers can be networked.
- FRT bus (FR18-BUS), the max. distance is 1000m (the twist wiring capacity is 1.0 to 1.5 mm<sup>2</sup> ). Up to 32 floor repeater displays can be networked.
- Detection bus (FD18-BUS), 2-wire polarity-free, the max. loop distance is 2500m, the max. stub distance is 1500m. (the twist wiring capacity is 1.0 to 1.5 mm<sup>2</sup> )
- Three user levels for different operation authority. Each user level is accessed by a pre-defined and changeable password.
- Convenient pluggable terminals with clear marks for field wiring.

- Auto-mapping function to support on commissioning task.
- Detection algorithm can be adjusted by controller according to environment, to provide high reliability of alarm and reduce false alarm.
- Programming can be done either directly on controller or through computer.
- “Sticker Method” easy for commissioning on site.

## Structure

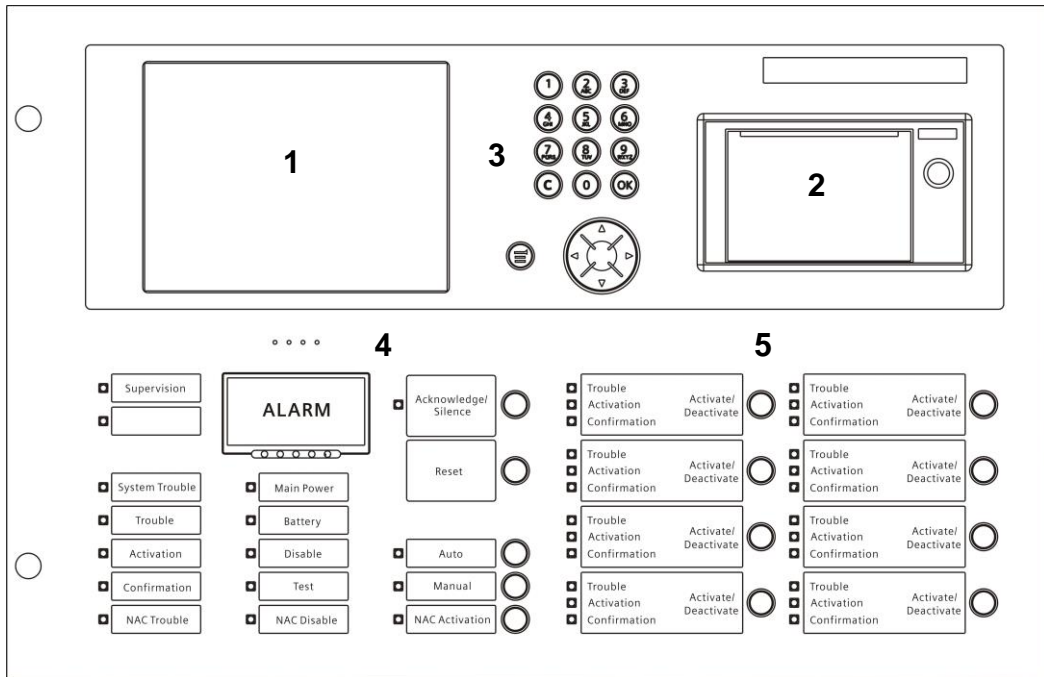


**Fig. 1 System structure**

## COMPATIBLE EQUIPMENT LIST

No.	Type	Description
1.	FDT181	Heat detector
2.	FDO181	Smoke detector
3.	FDM181	Manual call point
4.	FDCI181-2	Input module
5.	FDCIO181-2	Input/output module
6.	FT1810	Floor repeater display
7.	FDCL181	Isolator
8.	FDCI183	Transponder(released next year)
9.	FT1811	Addressable Mimic Driver

## Operation Panel



**Fig. 2 Front overview**

No.	Name
1.	LCD
2.	Printer
3.	Keyboard
4.	Indicators and keys
5.	Interlocking

## Installation

### Installation must comply with the local regulation!

#### Procedure:

1. Ensure the wall is dry, clean, flat and firm in which the controller is installed.
2. Chose a proper installation location to make sure the front door can be opened smoothly.
3. Mark the drillings for 4 installation holes on the wall. (Fig. 3)
4. Drill the holes, put expansion bolts in and insert the M6 screws.
5. Break the cable entries on the controller.
6. Hang the controller over those screws.
7. Insert cables into the controller.
8. Open the front panel and tighten the screws to fix the controller on the wall.
9. Connect cables to the terminals according to Fig. 4, 5, 6, 7, 8, 9.
10. Install and secure the batteries properly.
11. Close the front panel. Lock it with special tools and store the tools in safe place.

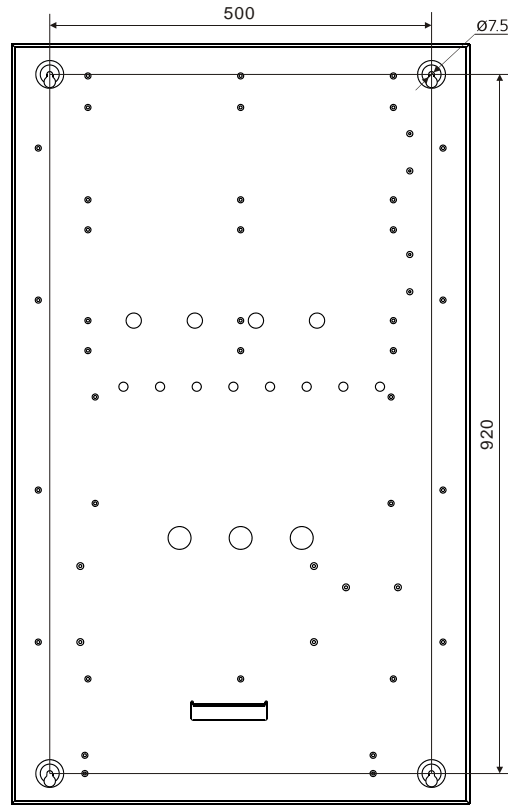
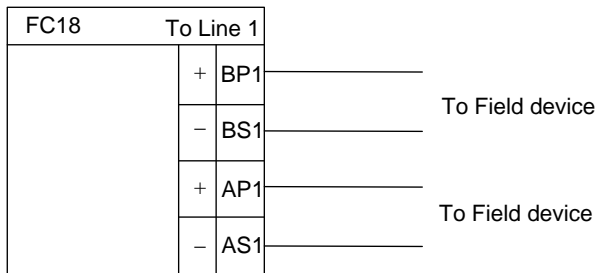


Fig.3 Installation size (in:mm)

## Connection



**Note: In loop mode, wires from BP1 must end at AP1; wires from BS1 must end at AS1. The connection of field devices (except FDCL181 isolator) is polarity free.**

Fig. 4 Line card connection diagram (Line 2 is same as above.)

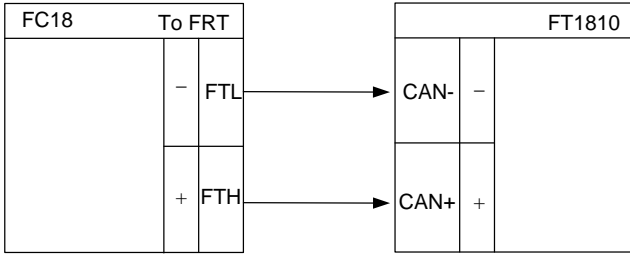
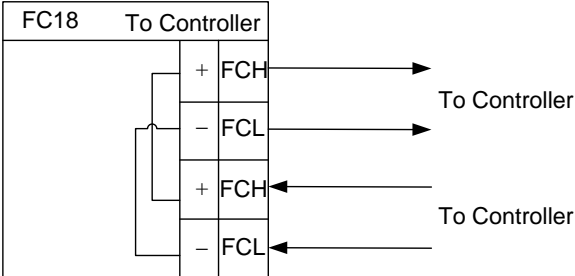


Fig. 5 FRT connection diagram



**Note: Ensure positive and negative connections are properly in place, FC18-Bus is polarity sensitive. Connect a 120Ω resistor as monitoring resistor. It must be connected to the end of the line. ( It can be set by the two-digit Dip-switch on the main board, see “Dip-switch connection configuration” )**

Fig. 6 Network connection diagram

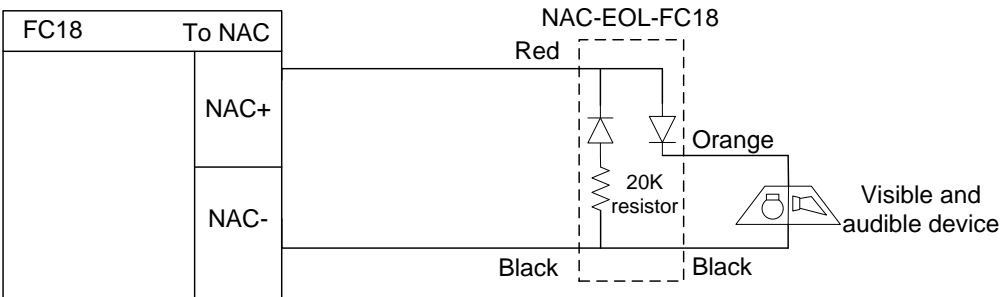


Fig. 7 NAC connection diagram

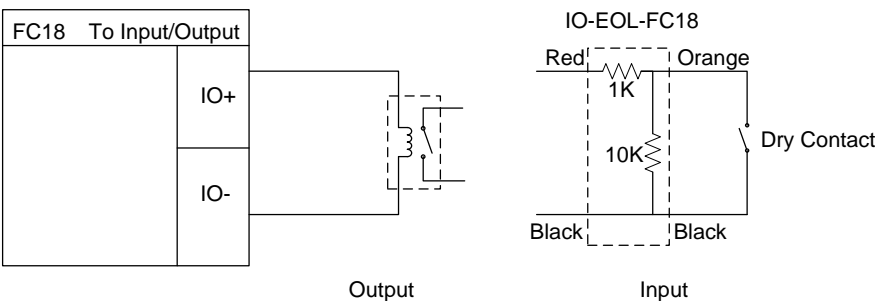


Fig. 8 Main board input/output connection diagram

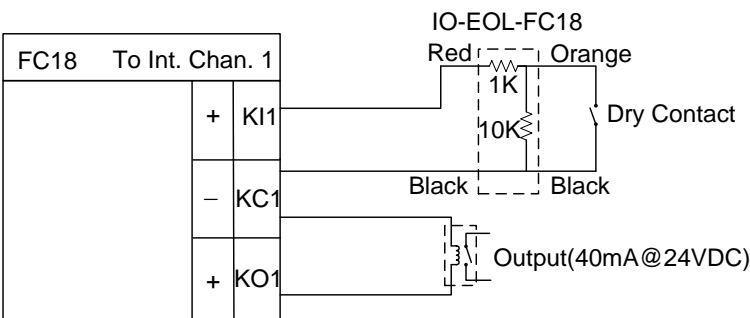
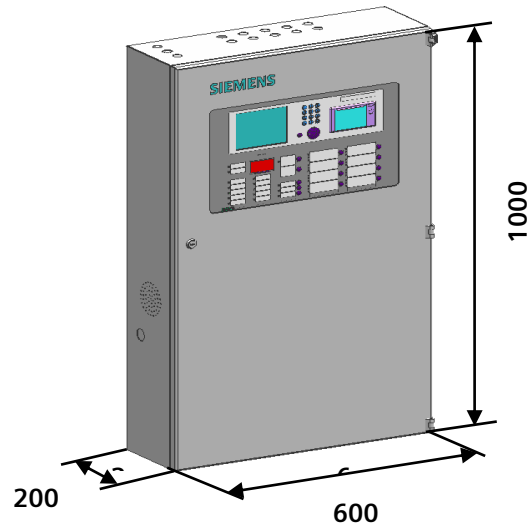


Fig. 9 Interlocking panel connection diagram (the same for other channels)

**Note: the load range of each input is 24VDC, 600 Ω – 1.2k Ω**

## Dimension

In: mm



## Specification

Operating voltage	110 VAC (-15 %...+10 %) / 60 Hz (-10 Hz...+6 Hz) 220 VAC (-15 %...+10 %) / 50 Hz (-5 Hz...+5 Hz)
Operating temperature	0 ... +40 °C
Storage temperature	-10 ... +50 °C
Relative humidity	≤95 % rel.
Battery(not included)	Depends on local regulation
Terminals	1.0 ... 1.5 mm <sup>2</sup>
Environment requirement	Indoor

## Order Information

Type	Part No.	Designation	Weight
FC1861-A2	100931682	Controller (Interlocking)-504points	34Kg
FC1862-A2	100931683	Controller (Interlocking)-1008points	34Kg
FC1863-A2	100931684	Controller (Interlocking)-1512points	34Kg

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