



FS720

Cerberus™ PRO

Fire detection system



IP6

- **Control panel range with 4 types of station**
 - Microprocessor-controlled fire detection system
 - Compact fire control panels for between 252 and 1512 addresses
 - PC-based operation (Cerberus-Remote) via Fast Ethernet
 - Free control logic
 - Phased evacuation
- **Networking via clusters (C-WEB/SAFEDLINK)**
 - Redundant network node
 - Increased safety (degraded mode)
 - Up to 16000 addresses and 32 stations (control panels, operating units)
 - Fast data transmission speeds of up to 312 kbps
- **Extended networks via Ethernet backbone (C-WEB/LAN)**
 - Multi-cluster networks via Industrial Ethernet (fiber-optic)
 - Conforms to EN 54
 - Redundant data transmission
 - Up to 14 clusters (with up to 16 stations per cluster)
 - Up to 64 stations in entire network

- **Powerful peripherals**
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 - Acoustic alarm sounders, floor repeater displays/terminals supplied via bus
 - All Cerberus PRO FD720 devices supported
- **Time-saving functions for mounting, commissioning, and service**
 - Ergonomic Cerberus-Engineering-Tool featuring familiar Windows mechanisms
 - Auto-configuration (self-addressing)
 - Zones and customer texts can be assigned without hardware read-in
 - Remote upload of configuration data and installation topology
 - Remote transmission of diagnosis data (e.g., firmware versions)

General functional principle

The FD720 devices detect signals and then compare and evaluate them on the basis of stored patterns. If a fire is detected, the data is transmitted to the fire control panel and fire controls are actuated accordingly. The system remains just as effective regardless of whether the network is loop-shaped to make it failsafe, whether it takes the form of an Ethernet network, or whether it consists of a combination of the two. In the event of faults, degraded mode safeguards the operation of those parts of the site that are detrimentally affected by the fault. All signals are automatically displayed on the operating unit according to where they originate from or can be dealt with by means of operating functions. The messages are always entered in the event memory together with a time stamp so that the source of the fire can be determined at a later point.

System overview of FS720

The FS720 fire detection system represents the latest generation of global Cerberus PRO fire control panels. It combines the highest standards of safety with international product innovations and state-of-the-art technology.

The fire control panels and fire terminals plus the shared network (C-WEB/SAFEDLINK) and backbone (C-WEB/LAN) have all been designed in accordance with EN 54-2, EN 54-4, and other requirements that are applicable in Switzerland. When used in conjunction with the FD720 peripheral devices (C-NET), the system offers a high level of detection reliability and can adapt perfectly to the conditions at the customer's site.



● **FC722 fire control panels**

The size of this fire control panel makes it ideal for smaller applications, e.g. for use in workshops and hotels.

It allows you to connect a total of 2 (4) loops or 4 (8) stub lines.

Its main strength lies in the compact design, which enables quick and efficient mounting.



● **FC723 fire control panels**

Offering either 2 (4) loops or 4 (8) stub lines, the FC723 fire control panel provides sufficient capacity for medium-sized fire detection installations (e.g., hotels and office complexes).

An integrated card cage with two slots allows the use of

- C-NET line cards FCL2001-A1 (for extra lines)
- I/O card FCI2008-A1 (with 12 programmable inputs/outputs)
- SynoLOOP line cards
- Interactive and interactive Ex line cards

The FC723 can handle up to 756 addresses.



● **FC724 fire control panels**

Offering either 4 (8) loops or 8 (16) stub lines, the FC724 fire control panel provides sufficient capacity for medium-sized fire detection installations (e.g., regional banks and office complexes).



● **FC726 fire control panels**

The FC726 is a modular fire control panel with integrated operating unit for processing signals from Cerberus PRO FD720 devices.

An integrated card cage with 5 slots allows the use of

- C-NET line cards FCL2001-A1 (for extra lines)
- I/O card FCI2008-A1 (with 12 programmable inputs/outputs)
- SynoLOOP line cards
- Interactive and interactive Ex line cards

The FC726 can handle up to 1512 addresses.



- **FT724 fire terminal**

All fire control panels feature an integrated operating unit.

If you want to use remote operating units, the FT724 fire terminal is available for this purpose.

The visibility of this compact Person Machine Interface can be freely assigned to include particular fire control panels. Up to five fire terminals are allowed to have system-wide visibility.



- **Floor repeater terminal and floor repeater display**

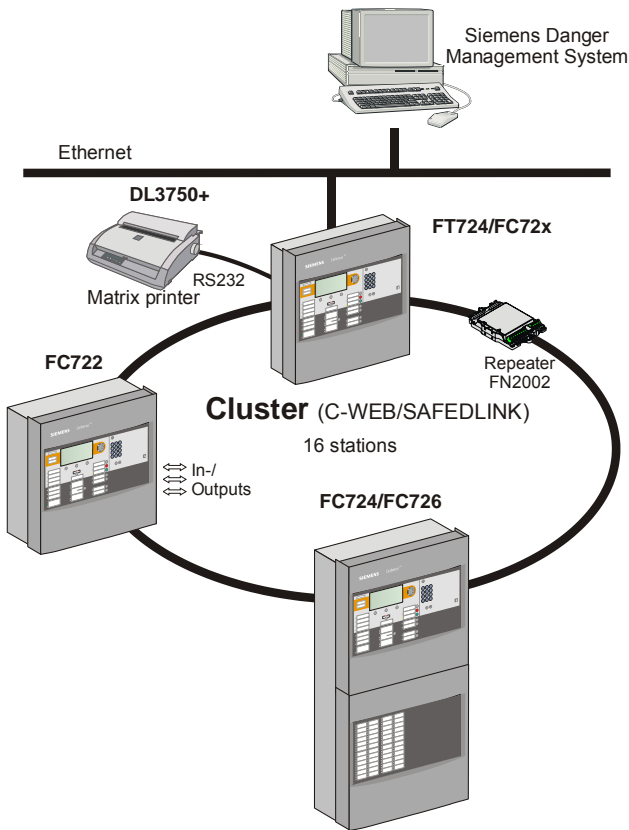
The messages from smaller coverage areas (e.g., hospital wards) can be detected by means of FT2011 floor repeater displays and can also be handled using FT2010 floor repeater terminals. These devices are operated on the C-NET.

National extensions

- Fire brigade operating panels ● Germany
- Evacuation operating panels ● France
- Netherlands

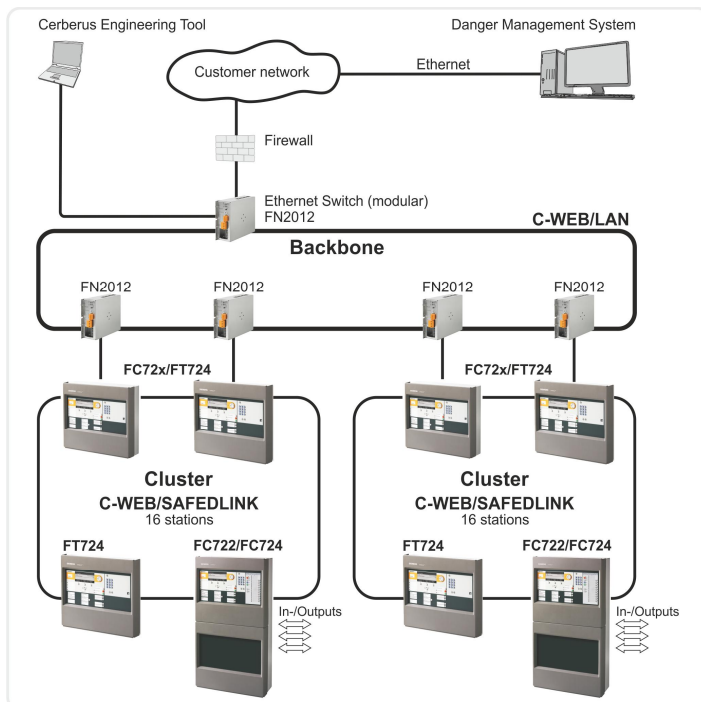
Interfaces

C-NET	Network for connecting Cerberus PRO FD720 devices
Cluster (C-WEB/SAFEDLINK)	Network for connecting stations (max. 32, without connection to a danger management system)
Backbone (C-WEB/LAN)	Network for connecting multiple clusters via fiber-optic Industrial Ethernet (max. 64 stations)
Ethernet	Connection to Siemens danger management system.



● **Cluster (C-WEB/SAFEDLINK)**

Up to 32 control panels and terminals can be connected to form a single cluster (C-WEB/SAFEDLINK network) or – if the cluster is connected to a danger management system – up to 16 stations. The innovative redundant network node not only sets new standards in terms of failsafe characteristics but also for high-speed data transmission. In addition, you have the option of connecting a repeater between neighboring stations to increase the length of the system bus.



● **Backbone (C-WEB/LAN)**

The use of a fiber-optic backbone (C-WEB/LAN) allows up to 14 clusters with up to 16 control panels to be operated on one network. With anything up to 64 control panels and terminals, this topology conforms to EN 54.

● **Management system**

A danger management system can be connected directly to each network: standalone control panel, cluster (C-WEB/SAFEDLINK), or hierarchical network (C-WEB/LAN). If a customer network is used for networking purposes, a firewall is required (and a VPN connection, if the danger management system is not located within the user network).







Easy handling

- Easy and time-saving operation thanks to user-friendly and self-explanatory menu structure
- Efficient mounting thanks to pre-assembled control panels
- All system devices can be accessed remotely via a network device
- Topology (peripherals and installation) can be uploaded to tool
- Minimal training overheads thanks to integrated operating and hardware concept and one engineering tool (Cerberus-Engineering-Tool) for the entire system

High speed

- Fast data transmission rate of 312 kbps in failsafe network and 100 Mbps in Ethernet network
- Short download and upload times
- Logical configuration data created prior to site installation

Types of station in C-WEB

Housing with integrated Operating unit	FC722 	FC722 	FC723 	FC724 	FC726 	FT724 
Housing type	Standard	Comfort	Comfort	Comfort	Modular	Eco
Dimensions (W x H x D) mm	430 x 398 x 160	430 x 796 x 160	430 x 796 x 160	430 x 796 x 160	430 x 796 x 260	430 x 398 x 80
Number of loops (with loop extension) or Number of stub lines	2 (4)	4 (8)	2 (4)	4 (8)	4 (8)	–
Number of slots for extra cards (C-NET and I/O cards)	–	–	2	–	5	–
Max. number of addresses	252	252	756	504	1512	–
Alarm outputs						
– Monitored control output	1	1	1	1	1	–
– Potential-free changeover contact	1	1	1	1	1	–
Fault outputs						
– Monitored control output	1	1	1	1	1	–
– Potential-free changeover contact	1	1	1	1	1	–
Outputs for conv. sounders, monitored (with sounder module)	1 (4)	1 (4)	1 (4)	2 (8)	2 (8)	–
Freely programmable inputs/outputs 24 V	8	8	12	12	12	–
Freely programmable inputs/outputs with max. 5 extra I/O cards	–	–	–	–	60	–
Battery capacity (internal)	2 x 12 V, 12 Ah	2 x 12 V, 26 Ah	2 x 12 V, 26 Ah	2 x 12 V, 26 Ah	2 x 12 V, 45 Ah	2 x 12 V, 7 Ah (optional)
Ethernet connection	✓	✓	✓	✓	✓	✓
Degraded mode and emergency supply	✓	✓	✓	✓	✓	✓
Emergency power supply	Emergency operation in degraded mode for up to 72 h (depending on configuration)					
Organizational logic	The alarm verification concept (AVC) allows the control panels to be organized in accordance with customer requirements.					
Time functions	In the event of site testing or if detector zones are isolated, timeout functions ensure that these detector zones get reactivated.					
Event memory	Up to 2000 events can be retrieved for each station based on various criteria.					
Ground fault monitoring	All the outgoing detector lines running out from the control panels are monitored for ground faults.					

Hardware extensions

Station	FC722	FC723	FC724	FC726	FT724
Network module (SAFEDLINK)	✓	✓	✓	✓	✓
Redundancy module for networking	✓	✓	✓	✓	✓
Repeater (SAFEDLINK)	✓	✓	✓	✓	✓
Loop extension (C-NET)	✓	✓	✓	✓	–
Line cards (FDnet/C-NET)	–	✓	–	✓	–
Line cards (SynoLOOP)	–	✓	–	✓	–
I/O cards (programmable)	–	✓	–	✓	–
Sounder module	✓	✓	✓	✓	–
RS232 module (isolated)	✓	✓	✓	✓	✓
RS485 module (isolated)	✓	✓	✓	✓	✓
Fire brigade periphery module (DE)	✓	✓	✓	✓	–
Event printer	✓	✓	✓	✓	✓
LED indicators	✓	✓	✓	✓	✓

You will find details of the following C-WEB stations in the following product data sheets:

FC722-xx	A6V10206525
FC723-xx	A6V10379246
FC724-xx	A6V10207176
FC726-xx	A6V1263277
FT724-xx	A6V10207898

You will find details of various C-NET devices, such as the floor repeater terminal, floor repeater display, collective fire control panel, and extinguishing control panel, in the following data sheets:

FT2010-A1, FT2011-A1	009393
FT2001-A1	A6V10082691
FC10	A6V10277145, A6V10277147
XC10	008496

Please refer to the relevant product data sheets for details of the other peripheral devices.

Peripheral devices in the C-NET

OP, OH, HI, FDF, FDL, FDM



- Devices with the latest generation of evaluation algorithms.
- Signals processed using detection algorithms and *ASAtechnology™*.
- Address automatically issued during commissioning.

DBS, FDS



- Instead of having to go through the laborious process of installing additional cabling, the FD720 technology allows you to operate sounder bases, alarm sounders, and/or alarm sounders with a beacon on the detector bus, i.e., power is supplied and communication takes place via the C-NET.

LaserFocus VLF-250/-500



- This aspirating smoke detector is designed to detect smoke at a very early stage and is intended for protecting small areas that are classed as operationally critical.
- The detector works by continually sucking in air samples through extraction openings in a network of pipes.
- The air is filtered and then fed into a detection chamber, where laser technology is used to detect the presence of smoke in minuscule quantities.

SWING



- Radio fire detection system for full integration into C-NET
- The wireless coupling (mesh technology) does away with the need for costly or visible cable installations, making this solution particularly attractive to museums, churches, and so on. Another advantage is that installation work can be carried out without interrupting operation.
- Radio gateway FDCW241 communicates with up to 30 radio detectors (smoke detectors and manual call points), with up to 16 overlapping radio cells supported at each point.

FDA241, FDA221



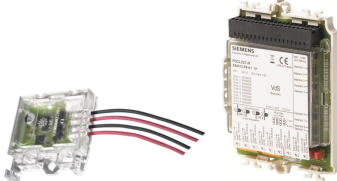
- The FDA241 and FDA221 are aspirating smoke detectors that use dual-wavelength technology to trigger an alarm at the earliest possible moment. They are designed to protect small and medium-sized business-critical environments of up to 800 m² (FDA241) or 500 m² (FDA221).
- The detector continually sucks in air through a network of pipes via its aspirating holes. The air is fed into a uniquely designed detection chamber, in which tiny smoke particles are detected by scattered light.

FDCI, FDCIO



- Statuses can be monitored using the input module. (E.g., door monitors, fan controls, or for the activation of sprinkler alarms).
- Input/output modules are used for the decentralized control of fire doors, fans, etc. The inputs can be used for confirmation purposes or for monitoring statuses, or for controlling the standard extinguishing interface (SST) in accordance with VdS.
- The transponder has two inputs/outputs, which can be configured as follows:
 - For connecting Siemens collective limit value detectors or a Synova 300/600 (GMT line, GMT line with safety barrier (SB3) for areas at risk of explosion)
 - For monitored control of alarm devices

FDCL221, FDCL221-M



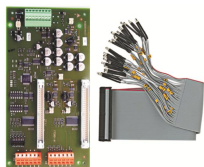
- Line separators can be interconnected to ensure that several stub lines do not fail in the event of a short-circuit.
- The line separator should be inserted at the point where multiple stubs connect to the C-NET, provided that no other device is required between the branches.

FT2011-A1, FT2010-A1



- The FT2010 floor repeater terminals and FT2011 floor repeater displays on the C-NET can also be used to operate/display certain areas of the fire detection system.
- The responsible customer personnel (e.g., ward nurses) have access to a clear and well laid-out user interface. This displays customer-specific plain text messages to enable pinpointing of events.
- The display is of the same type as fire terminal FT724.

FT2001-A1



- The mimic display driver, which is operated via the C-NET, has 2x 24 outputs for controlling mimic display LEDs
- Two control outputs for 'Local buzzer' and 'LED operation'
- Two inputs for 'Silence buzzer' and 'LED test'
- The LEDs are connected via flat cable F50F410 (50-pin, 24 red LEDs, cable length 1 m).

FC10, XC10



- Collective fire control panel FC10 and extinguishing control panel XC10 can be integrated into the C-NET as autonomous control panels (via FDCIO input/output modules).
- Relevant events are transmitted to the connected fire control panel.
- Each line can be configured as either an AlgoRex or Synova collective line. This makes it possible to connect collective AlgoRex DS11 and Synova detectors as well as special detectors such as flame detector DF1191 and linear smoke detector DLO1191.

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