

Sinteso™

Fire control panel (modular)

FC2060



Modular, pre-assembled fire control panel with integrated, user-friendly operating unit for gradual migration to Sinteso.

- Fire control panel for max. 1512 addresses
- Can be used as a standalone version or networked with up to 64 stations, such as control panels and terminals
- Redundant network node with degraded mode operation according to EN 54
- Option to connect to Siemens 'Cloud for Buildings'
- Emergency power supply for emergency operating time of up to 72 hours
- Recognition, automatic read-in and immediate operational readiness of all FDnet devices with auto-configuration
- Flexible configuration of complex applications and controls
- Configuration data can be uploaded/downloaded via remote access
- Time and situation-dependent changeover of detector parameter sets
- Card cage for additional module bus cards (line and I/O cards)
- Hot plug system: Module bus cards can be changed during operation
- Extensions: Printer, key switches, LED indicators

System



The diagrams have been simplified and do not include additional network hardware or security components. Permissible applications are described in the A6V101039125 Network Security Guidelines document. Contact your Siemens IT security expert for more information.

System overview

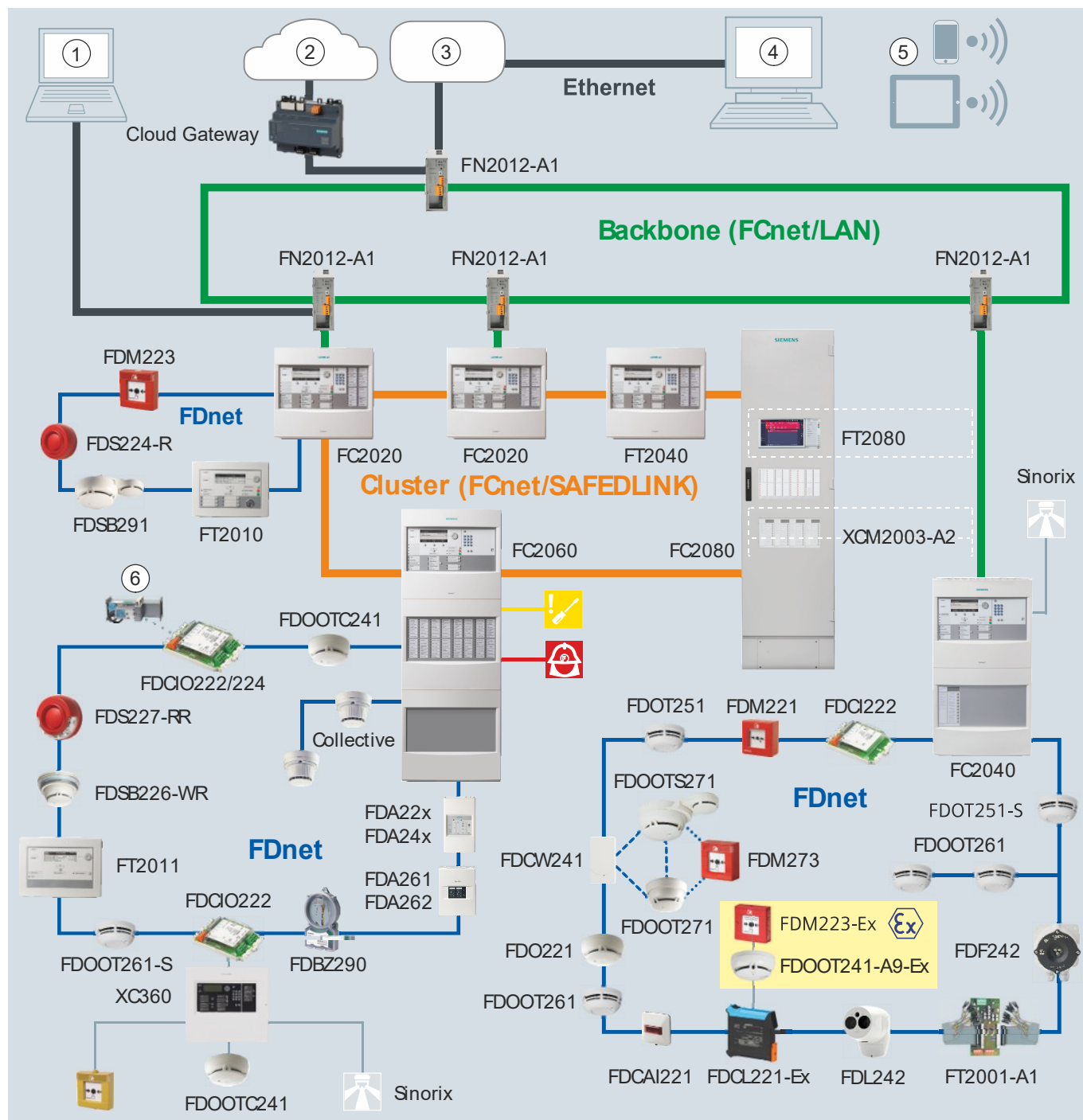


Fig. 1: System overview

1	Remote access with SintesoView
2	'Cloud for Buildings'
3	Customer network
4	Management platform
5	Remote access to management platform
6	Fire damper with actuator
	Transmission of a fault signal
	Transmission of an alarm signal

You will find a detailed labeled version of the diagram above along with further information in the A6V10906627 planning guide, see chapter 'Product documentation'.

Optional module bus cards for card cage with 5 slots

Type	Designation	Properties
FCL2008-A1	Line card (FDnet/C-NET, P)	4x loops of 1.5 A and max. 252 addresses per loop and max. 252 addresses per line card
FCL2002-A1	Line card (collective)	8x lines each with a maximum of 32 devices
FCL2005-A1	Line card (AnalogPLUS)	4x loops each with a maximum of 128 addresses, max. of 512 addresses per line card
FCL2006-A1	Line card (interactive)	1x loop with max. 128 devices or 1 stub with 32 devices
FCL2007-A1	Line card (interactive, Ex)	1x stub with max. 32 devices
FCI2007-A1	I/O card (RT)	Outputs for alarm, fault, local alarm
FCI2008-A1	I/O card (programmable)	12x freely programmable inputs/outputs per I/O card
FCI2009-A1	I/O card (horn/monitored)	8x monitored horn outputs or monitored outputs

Networking of fire control panels



The diagrams have been simplified and do not include additional network hardware or security components. Permissible applications are described in the A6V101039125 Network Security Guidelines document. Contact your Siemens IT security expert for more information.

Up to 32 control panels and terminals can be linked to form one FCnet network. If the FCnet network is connected to a danger management system via BACnet, up to 16 control panels and terminals can be networked.

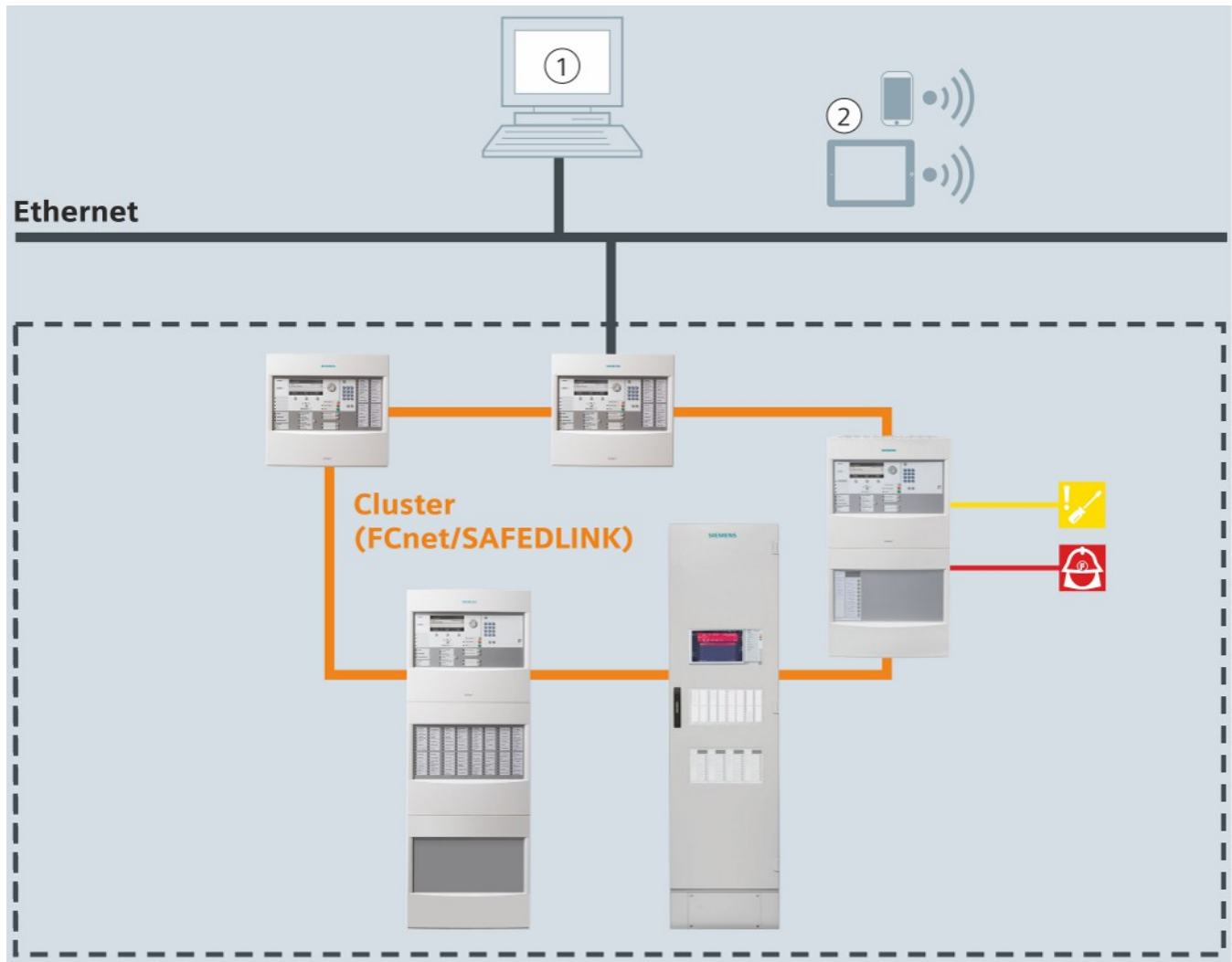


Fig. 2: Sub-net

1	Management platform
2	Remote access to management platform
	Transmission of a fault signal
	Transmission of an alarm signal

An optical FCnet/LAN network (without sub-networks) allows operation of a maximum of 64 stations in a single network.

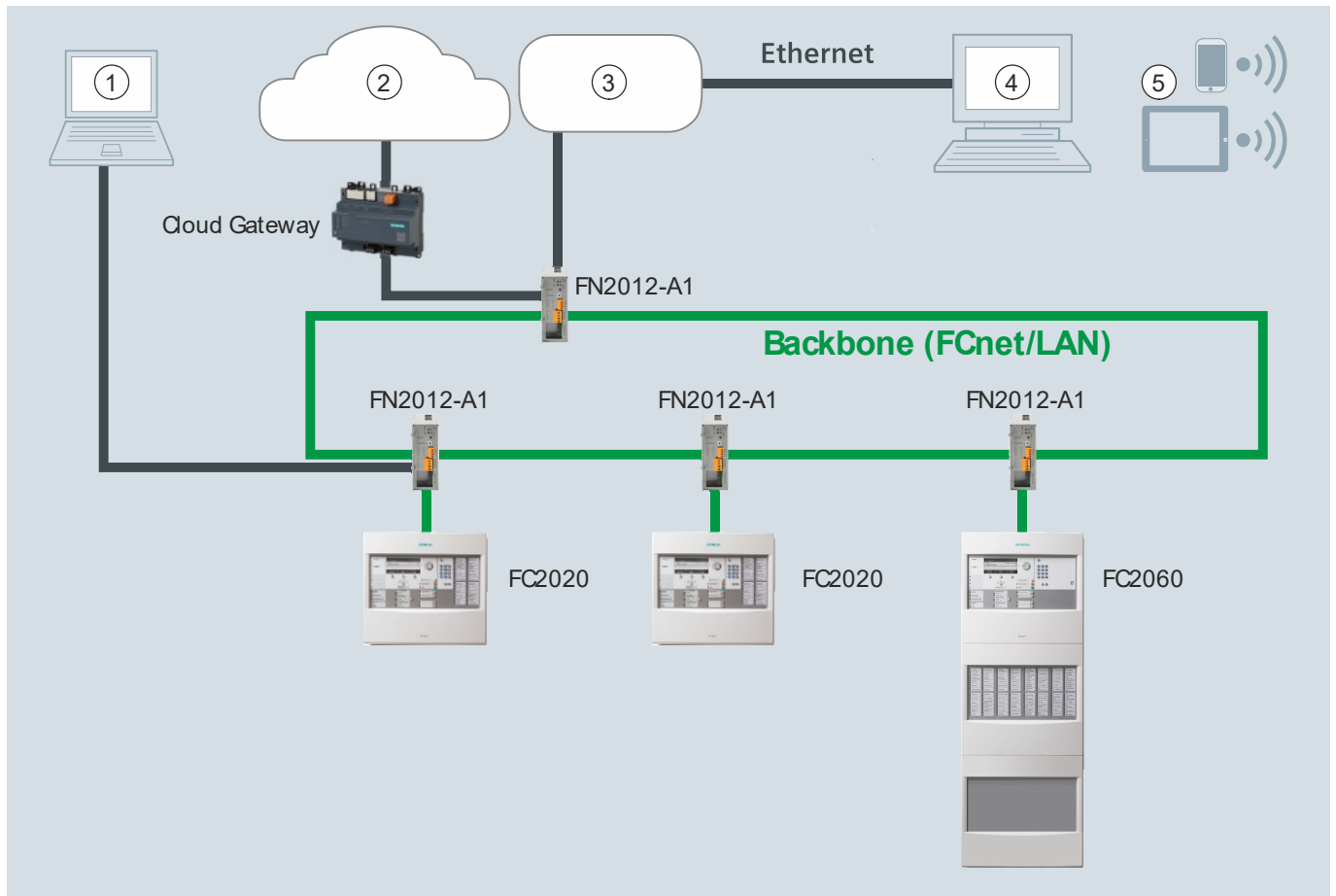


Fig. 3: Networking via 'FCnet/LAN' without a 'subnet'

1	Remote access with SintesoView
2	'Cloud for Buildings'
3	Customer network
4	Management platform
5	Remote access to management platform

You will find a detailed labeled version of the diagram above along with further information in the A6V10906627 planning guide, see chapter 'Product documentation'.

An extended redundant network via 'FCnet/LAN' without a sub-net is a glass fiber Ethernet network without 'SAFEDLINK sub-net'. This type of networking meets the requirements for communication in 'Degraded mode' and is EN-54-compliant.

The following preconditions/restrictions are applicable:

- To ensure EN-54 conformity, the following setting must be activated in the 'SintesoWorks': 'Degraded signal forwarding enabled'.
- The network must be implemented via one connection module (MoNet) FCA2031-A1 and one Ethernet switch (modular) FN2012 per 'Station' in each case.
- A maximum of 64 'Stations' can be networked via the 'FCnet/LAN' without a sub-net.

An optical FCnet/LAN network allows up to 14 sub-nets with up to 16 stations to be operated in one network. A maximum of 64 stations is supported in total.

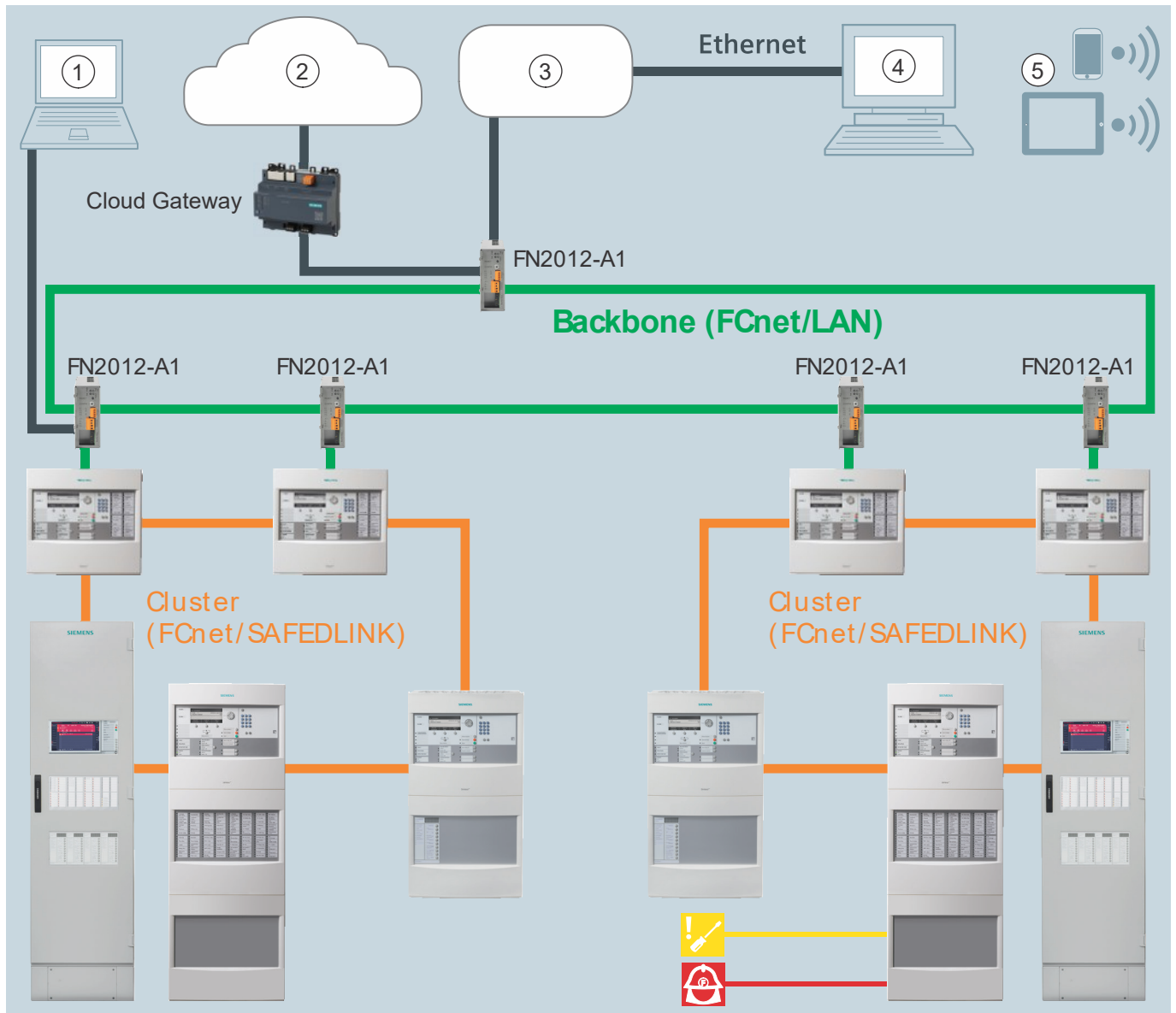


Fig. 4: Backbone

1	Remote access with SintesoView
2	'Cloud for Buildings'
3	Customer network
4	Management platform
5	Remote access to management platform
	Transmission of a fault signal
	Transmission of an alarm signal

You will find a detailed labeled version of the diagram above along with further information in the A6V10906627 planning guide, see chapter 'Product documentation'.

Control panels

General features and functions

- Fast Ethernet interface for a heterogeneous network
- Processes the signals from the Sinteso FD20 detector series, Sinteso Nova detector series, and the signals from earlier detector series
- Interface to Siemens danger management system
- Slots for RS232 and RS485 serial interfaces
- Floor repeater displays, terminals and alarm devices on the FDnet detector line with power supply via FDnet
- All detector lines are monitored for ground faults.
- Mixed use of all module bus cards (line and I/O cards) possible.
- Integrated degraded mode function
- Freely configurable, time-dependent controls with optional weekly, monthly, and yearly switching programs
- Time and situation-dependent changeover of detector parameter sets
- Controls for synchronous activation of sounder bases/sounders (acoustic, optical, language)
- The control panel and the fire detection system are custom-configured using the 'SintesoWorks' software
- Firmware for all processor-controlled control panel components can be updated
- Customer texts can be adapted directly on the operating unit of the control panel or with the 'SintesoWorks' software
- Up to 13000 events can be called up from the event memory and filtered based on various criteria
- Automatic summer/normal time changeover

Control panel-specific features

FC2060-AA	Housing (Large)
	FDnet detector line: • Max. 1512 addresses • 4 loops/8 stubs • Can be extended up to 28 loops/56 stubs Extra module bus cards (option): • Line card (FDnet/C-NET, P) FCL2008-A1 • Line card (collective) FCL2002-A1 • Line card (AnalogPLUS) FCL2005-A1 • Line card (interactive) FCL2006-A1 • Line card (interactive Ex) FCL2007-A1 • I/O card (programmable) FCI2008-A1 • I/O card (horn/monitored) FCI2009A1 • I/O card (remote transmission) FCI2007-A1 Features: • Operating unit • Operating add-on (empty) • Card cage (5 slots) • 250-W power supply • Max. battery capacity 45 Ah Operating unit options: • Event printer FTO2001-A1 • Key switch (Kaba) FTO2005-C1 • Key switch (nordic) FTO2006-B1 • Operating add-on (2xLED indicator) FCM2038-A2 • Operating add-on (4xLED indicator) FCM2036-A2

Extensions

FCM2036-A2	Operating add-on (4xLED indicator)
	• Optional operating add-ons with 96 indicator groups and two LEDs each: 1x red/green LED and 1x yellow LED
FCM2038-A2	Operating add-on (2xLED indicator)
	• Optional operating add-ons with 48 indicator groups and two LEDs each: 1x red/green LED and 1x yellow LED

FH2004-A1 	Housing (Large Extension) • Empty housing for free use • 443 x 404 x 288 mm • E.g., for extra batteries, operating add-ons, or event printer • Space for the following battery configurations: – 2x FA2007-A1 (45 Ah) or – 2x FA2008-A1 (65 Ah) • The mounting kit for the batteries FHA2061-A1 must be ordered separately.
FH2005-A1 	Housing (Large) • Empty housing for free use • 443 x 802 x 288 mm • E.g., for extra batteries, operating add-ons, or event printers • Space for the following battery configurations: – 2x BAT12-25 (25 Ah) or – 2x FA2007-A1 (45 Ah) or – 2x FA2008-A1 (65 Ah) • The mounting kit for the batteries FHA2061-A1 must be ordered separately.
FTO2001-A1 	Event printer • Thermal printer for installation in operating units or operating add-ons • Can be controlled via the RS232 module FCA2001-A1 (order separately) • Logs all important events, such as alarms, faults, isolations, and test functions

Use

For large applications, e.g., for industrial plants, office complexes, or production halls.

As part of a modernization process, for a gradual and seamless transition from older systems to Sinteso.

Design

Function elements

Operating unit

The following elements are available on the operating unit:

- CPU module and electronics
- Ethernet connection
- Slots for RS232 and RS485 modules and network modules (SAFEDLINK)
- Space for 'Kaba' or 'nordic' key switch
- Space for event printer (depending on version)
- Peripheral data bus connection for optional LED modules

Periphery board

The following elements are available on the periphery board:

- Connection terminals for:
 - FDnet lines
 - Remote transmission (alarm, fault)
 - Horn output
 - Configurable control inputs and outputs
 - Monitored alarm and fault output
 - Power supply and emergency supply
- 2x slot for loop extension (FDnet)

Card cage

There is a card cage mounted on the rear housing panel for inserting a maximum of five module bus cards.

Power supply 250 W, emergency power supply

The power supply feeds the hardware and charges the batteries.

In the event of a power cut, the batteries provide emergency current.

Housing

An FHA2007-A1 pivoting mounting plate can be fitted for the following elements above the periphery board on the rear housing panel:

- 1x fire brigade periphery module (for Germany)
- 2x sounder modules (as an alternative to mounting on U-rail TS35)
- 1x Connect X200 Gateway

Configuration

The following software allows the system to be customized:

- SintesoWorks

Operation

Each control unit has an integrated operating unit. The control panel can also be operated via a separate FT2040 or FT2080 (Touch) fire terminal.

You will find details and more information in the product data sheet 009386 or A6V10378271.

Setup

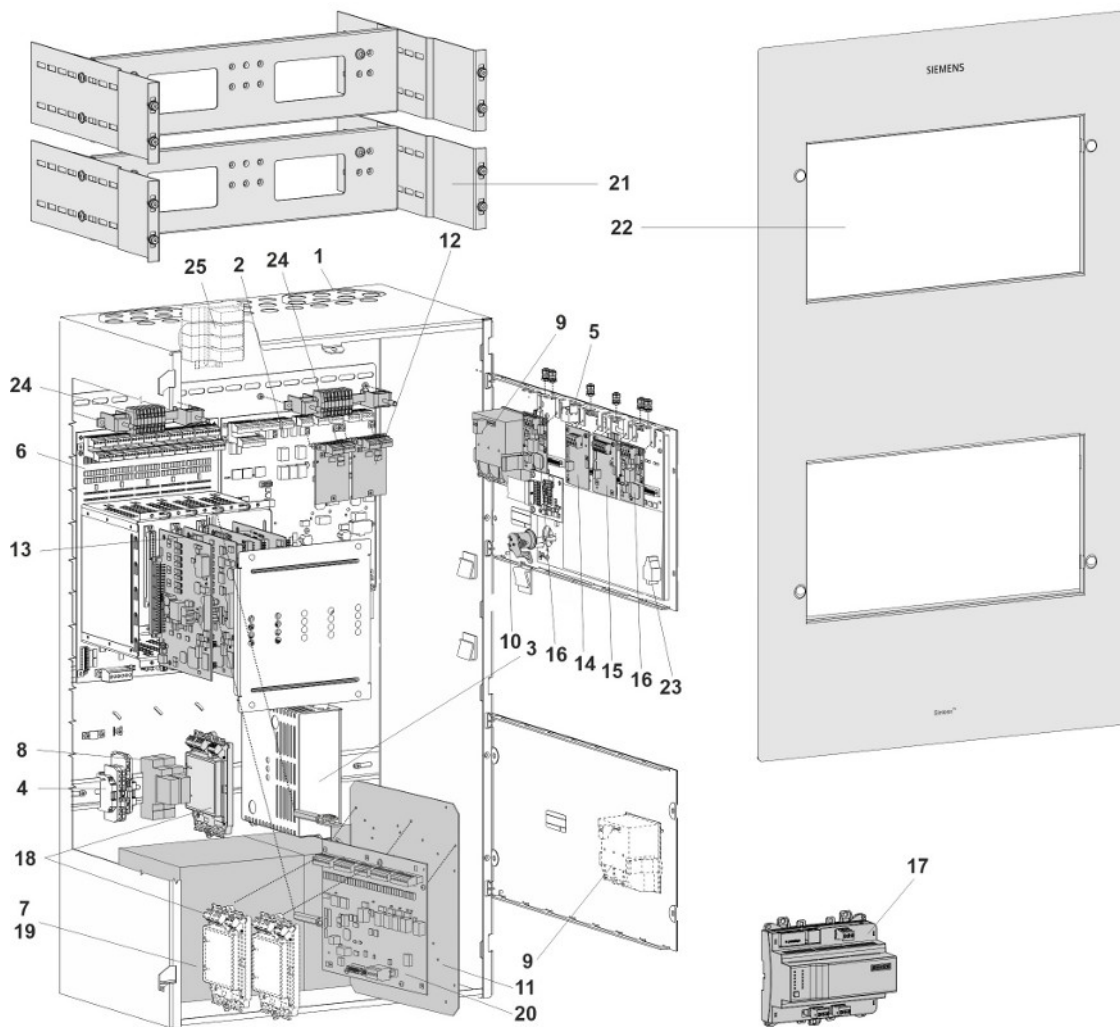


Fig. 5: Layout of FC2060

Position	Designation	Type	Note
Basic equipment			
1	Housing (Large)	FHA2005-A1	Items 1-6: Basic equipment.
2	Periphery board (4-loop, P)	FCI2024-A1	
3	Power supply (250 W)	FP2017-A1	
4	Mains terminals on TS35 DIN rail	-	Space for socket, relay modules, etc.
5	Operating unit	FCM20xx-xx	Operating unit with CPU
6	Card cage (5 slots)	FCA2008-A1	For five module bus cards
7	Space for batteries	-	2x 12 V / 17...45 Ah
Extensions			
8	Relay module	Z3B171	Relay for fire controls
9	Event printer	FTO2001-A1	For logging events
10	Key switch (Kaba)	FTO2005-C1	For operating access authorization
	Key switch (nordic)	FTO2006-B1	
11	Mounting plate	FHA2007-A1	e.g., for fire brigade periphery module or Connect X200 Gateway
12	Loop extension (FDnet/C-NET, P)	FCI2025-A1	For the loop extension of the periphery board (4-loop, P) FCI2024-A1 from two to four loops. The number of addresses remains the same.

Position	Designation	Type	Note
13	Module bus cards:		
	Line card (FDnet/C-NET, P)	FCL2008-A1	For four extra FDnet lines of 1.5 A each
	Line card (collective)	FCL2002-A1	For eight collective detector lines
	Line card (AnalogPLUS)	FCL2005-A1	For four addressed AnalogPLUS lines
	Line card (interactive)	FCL2006-A1	For one addressed interactive line
	Line card (interactive Ex)	FCL2007-A1	For one addressed interactive Ex line
	I/O card (programmable)	FCI2008-A1	For twelve configurable inputs/outputs
	I/O card (horn/monitored)	FCI2009-A1	For eight monitored horn outputs
	I/O card (RT)	FCI2007-A1	For extra alarm and fault outputs
14	RS485 module (isolated)	FCA2002-A1	For peripheral devices with RS485 interface
15	RS232 module (isolated)	FCA2001-A1	For devices with an RS232 interface
16	Network module (SAFEDLINK)	FN2001-A1	For networking several stations
17	Connect X200 Gateway	CXG3.X200	For connecting an FS20 station to Cloud for Buildings The mounting plate FHA2007-A1 and the accessory set + ACDC (X200) FCA2056-A1 or the mounting plate (X200) FHA2063-A1 and the accessory set + ACDC (X200) FCA2056-A1 must be ordered separately.
18	Sounder module	FCA2005-A1	For splitting one conventional sounder into four
19	Battery (12 V, 25 Ah, VdS)	BAT12-251	For the emergency power supply
	Battery (12 V, 45 Ah, VdS)	FA2007-A1	
20	Fire brigade periphery module	FCI2001-D1	For Germany (FBF, FSD, ÜE, FSE, ÖA, KL)
21	19" mounting kit	FHA2016-A1	For installation in 19" third-party housing
22	FM blind 2HE	FHA2015-A1	For recessed mounting of housing
23	License key Sx	FCA20xx	For special functions
24	Cable kit (communication)	FCA2014-A1	For flexible connections running to the modules on the operating unit
25	Relay module/U-rail	Z3B171	Space for U-rail TS35 L=70 mm with max. four relay modules
	Repeater (SAFEDLINK)	FN2002-A1	Not in overview, as not an installation part. For extending the system bus FCnet from 1000 m to 2000 m between two stations. Maximum 1x repeater (SAFEDLINK) between two stations).

Type Overview

	Housing (Large)
	
Type	FC2060
Number of FDnet addresses	1512
Loops (with loop extension) or	4 (8)
Stubs (with loop extension)	8 (16)
Power supply	250 W
Max. battery capacity	45 Ah
Max. number of module bus cards in the card cage	5

Details for ordering

Control panels

Type	Designation	Weight	Order number
FC2060-AA	Fire control panel (modular, P)	21.123 kg	S54400-C36-A1

Extensions

Type	Designation	Weight	Order number
FCA2001-A1	RS232 module (isolated)	0.033 kg	A5Q00005327
FCA2002-A1	RS485 module (isolated)	0.027 kg	A5Q00009923
FCA2005-A1	Sounder module	0.100 kg	A5Q00014866
FCA2014-A1	Cable kit (communication)	0.126 kg	A5Q00023027
FCI2001-D1	Fire brigade periphery module	0.207 kg	A5Q00013100
FCI2025-A1	Loop extension (FDnet/C-NET, P)	0.030 kg	S54400-A185-A1
FCI2007-A1	I/O card (RT)	0.111 kg	S54400-A20-A1
FCI2008-A1	I/O card (programmable)	0.097 kg	S54400-A6-A1
FCI2009-A1	I/O card (horn, monitored)	0.109 kg	S54400-A21-A1
FCL2008-A1	Line card (FDnet/C-NET, P)	0.119 kg	S54400-A182-A1
FCL2002-A1	Line card (collective)	0.117 kg	A5Q00010502
FCL2005-A1	Line card (AnalogPLUS)	0.120 kg	S54400-A107-A1
FCL2006-A1	Line card (interactive)	0.117 kg	S54400-A108-A1
FCL2007-A1	Line card (interactive, Ex)	0.117 kg	S54400-A134-A1
FCM2036-A2	Operating add-on (4xLED indicator)	3.905 kg	S54400-B147-A1
FCM2038-A2	Operating add-on (2xLED indicator)	2.516 kg	S54400-B146-A1
FH2004-A1	Housing (Large Extension)	11.367 kg	A5Q00018778
FH2005-A1	Housing (Large)	17.900 kg	A5Q00019543
FHA2007-A1	Mounting plate	0.800 kg	A5Q00010151
FHA2015-A1	FM blind 2HE	5.050 kg	A5Q00024621
FHA2016-A1	19" mounting kit	3.000 kg	A5Q00020179
FN2001-A1	Network module (SAFEDLINK)	0.022 kg	A5Q00012851
FN2002-A1	Repeater (SAFEDLINK)	0.105 kg	S24236-B2502-A1
FN2006-A1	Fiber network module (SM)	0.792 kg	S54400-A109-A1
FN2007-A1	Fiber network module (MM)	0.792 kg	S54400-A110-A1
FTO2001-A1	Event printer	0.141 kg	A5Q00010126
-	Spare printer reels (10 reels)	0.090 kg	A5Q00017619
FTO2005-C1	Key switch (Kaba)	0.083 kg	A5Q00010113
FTO2006-B1	Key switch (nordic)	0.046 kg	A5Q00010129
Z3B171	Relay module 250 V AC / 10 A (1 relay)	0.042 kg	4843830001

Network (backbone)

Type	Designation	Weight	Order number
FCA2031-A1	Connection module (MoNet)	0.081 kg incl. cable	S54400-A153-A1
FHA2029-A1	Mounting kit (switch)	1.261 kg	S54400-B79-A1
FN2012-A1	Ethernet switch (modular)	0.600 kg	S54400-B152-A1
VN2002-A1	Ethernet module (MM)	0.026 kg	S54400-A43-A1
VN2003-A1	Ethernet module (SM)	0.026 kg	S54400-A44-A1

Cloud Gateway

Type	Designation	Weight	Order number
CXG3.X200	Connect X200 Gateway	0.300 kg	S55842-Z131-A100
FCA2056-A1	Accessory kit + ACDC (X200)	0.200 kg	S54400-S115-A1
FHA2063-A1	Mounting plate (X200)	0.269 kg	S54400-B116-A1

Batteries

Type	Designation	Weight	Order number
FA2005-A1	Battery (12 V, 17 Ah, VdS)	5.700 kg	A5Q00019677
BAT12-25	Battery (12 V, 25 Ah, VdS)	7.8 kg	S54302-Z102-A1
FA2007-A1	Battery (12 V, 45 Ah, VdS)	14.500 kg	A5Q00022897
FA2008-A1	Battery (12 V, 65 Ah, VdS)	21.300 kg	A5Q00019357
FHA2061-A1	Mounting kit for batteries	–	S54400-B91-A1

License keys

Type	Designation	Weight	Order number
FCA2033-A1	License key (S1)	0.010 kg	S54400-P154-A1
FCA2034-A1	License key (S2)	0.010 kg	S54400-P155-A1
FCA2035-A1	License key (S3)	0.010 kg	S54400-P156-A1
FCA2036-A1	License key (S4)	0.010 kg	S54400-P157-A1

Product documentation

Title	Document ID
System documentation	
System description	008836
Product data	008837
Planning	008843
Mounting/Installation	008851
System data sheet	
FS20 – Fire detection system	008955
Data sheets	
FC2020 - fire control panel	009383
FC2030 - fire control panel for modernization	A6V10087532
FC2040 - fire control panel	009384
FC2060 - fire control panel (modular)	A6V10087844
FC2080 - fire control panel (19", modular)	A6V10275515
FT2040 - fire terminal	009386
FT2080 - fire terminal (Touch)	A6V10378271
Fire detection system with integrated single or multi-sector extinguishing	A6V10880701
Network Security Guidelines	A6V101039125
Planning overview	A6V10906627

Related documents such as the environmental declarations, declarations of conformity, etc., can be downloaded from the following Internet address:

www.siemens.com/bt/download



Guarantee

Technical data on specific applications are only valid together with Siemens products listed under "Equipment combinations". Siemens rejects any and all warranties in the event that third-party products are used.

Technical data

Fire control panel (modular, P) FC2060 in the housing (large)		
Supply	Mains voltage	AC 115 / 230 V +10/-15 %
	Power supply	250 W
	Operating voltage	DC 21...28.4 V
	Operating current	Max. 5 A
	Battery capacity	2x 12 V, max. 45 Ah
	Battery monitoring	Yes
	Network monitoring	Yes
Inputs / outputs	Connectible detector series	Sinteso FD20, Sinteso Nova
	Collective detectors which can be connected	MS7/9/24, DS11, Synova 600, SIGMACON
	Other addressable detectors which can be connected	Interactive, AnalogPLUS
	Number of addresses	Max. 1512
	Number of integrated line cards	2
	Number of integrated lines:	
	• Loops (with loop extension) or	4 (8)
	• Stubs	8 (16)
	Number of additional lines:	
	• FDnet (4 loops per line card)	Max. 20 loops
	• Collective (8 stubs per line card)	Max. 40 stubs
	• Interactive (1 loop or stub per line card)	Max. 5 loops/stubs
	• Interactive Ex (1 stub per line card)	Max. 5 stubs
	• AnalogPLUS (4 loops or stubs per line card)	Max. 20 loops/stubs
	Integrated inputs/outputs:	
	• Alarm RT relay output	1
	• Fault RT relay output	1
	• Monitored alarm outputs	1
	• Monitored fault outputs	1
	• Monitored horn outputs	2
	• Freely programmable inputs/outputs	12
	Additional I/O cards:	
	• Programmable	12x configurable inputs/outputs 2x supply outputs 24 V
	• Horn/monitored	8x horn output monitored
	• RT	1x alarm relay output 1x fault relay output 1x voltage output 24 V 2x GPIO (General Purpose Input/Output) 1x fault output monitored 2x configurable output monitored

Fire control panel (modular, P) FC2060 in the housing (large)		
Interfaces	Operating unit	Integrated
	Slots for serial interfaces RS232, RS485	2
	Slots for network modules	2
	Slots for loop extension	2
	Slots for module bus cards (on integrated card cage)	5
	Mounting spaces for cable kit (communication)	2
	Sounder module	Max. 2
	Ethernet port RJ45	1
Ambient conditions	Operating temperature	-8...+42 °C
	Storage temperature	-20...+60 °C
	Air humidity (no condensation permitted)	≤95 % rel.
	Maximum height above sea level	3,700 m
Mechanical data	Dimensions (W x H x D):	
	• Without cover cap	430 x 796 x 265 mm
	• With cover cap	443 x 802 x 288 mm
	Protection category (IEC 60529)	IP30
	Color:	
	• Housing	~RAL 7035 light gray
Approvals	• Cover cap	~RAL 9010
	VdS	G208202
	LPCB	126bn/04
	FM	3048514