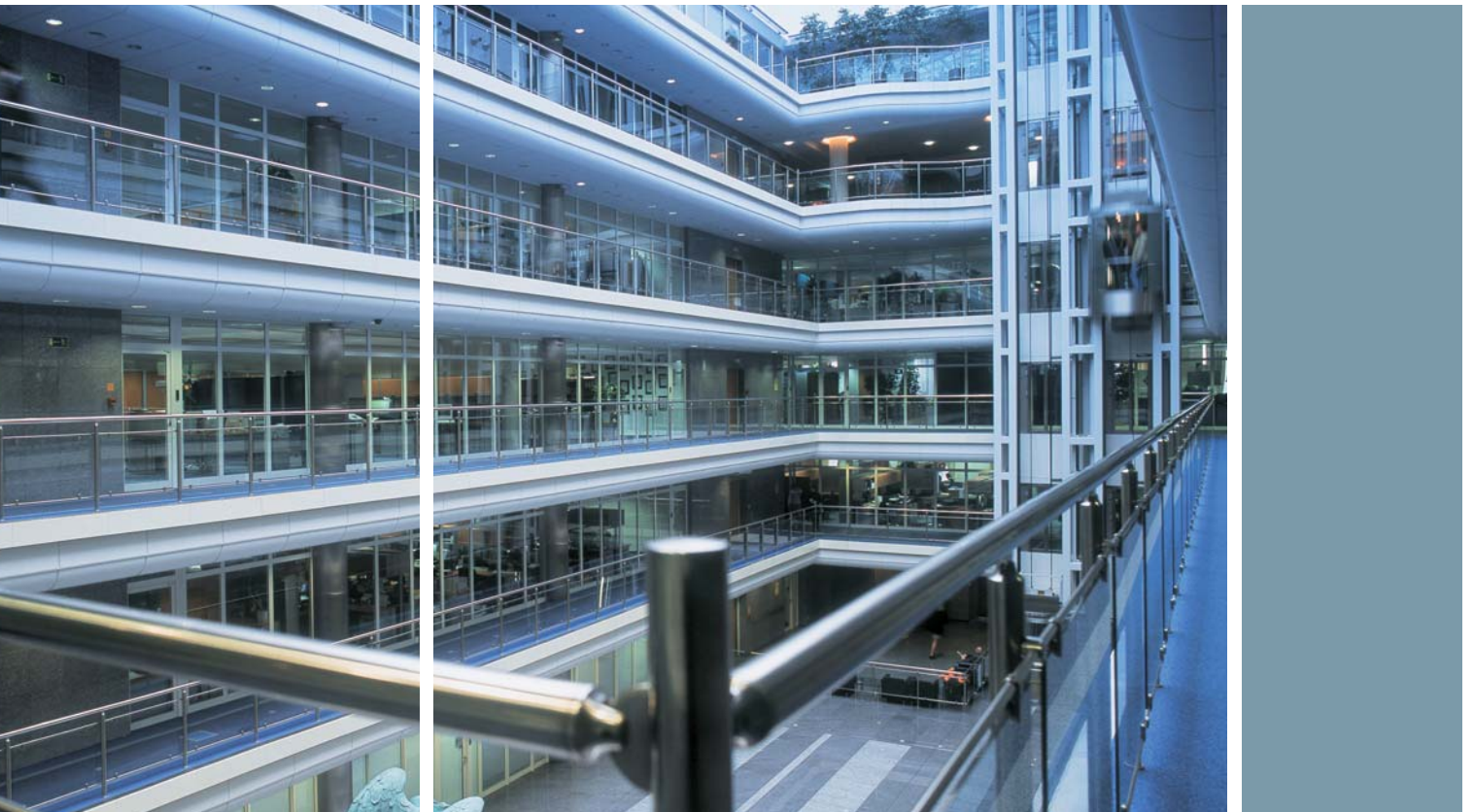# Sinteso peripheral devices – a choice of specialists for every task

SIEMENS

Sinteso: innovation based on experience – from Siemens

Sinteso™ is a comprehensive system for fast, reliable fire detection, alarm signaling and control. It is designed to protect lives and assets and prevent production losses, thereby safeguarding your company's buildings and very survival. Sinteso not only defines the technological state of the art, but also offers almost unlimited scalability, network capability, and further development in harmony with existing products.

The ideal solution for every requirement

■ **Safe, precise, and reliable –
from detection to monitoring**
Reliable detection, fast notification, quick response – Sinteso sets the standard in all three areas. At the field level, for example, with everything from state-of-the-art fire detectors to immunity from false alarms thanks to **ASA**technology™. Fast, fault-tolerant network technology ensures maximum reliability in communication between FDnet devices and the control panel. And the control panels allow simple, intuitive operation, plain text displays and unambiguous instructions – and let security personnel concentrate on the event.

■ **Scalable and versatile – to meet every need from "standard" to "special"**
The Sinteso fire detection system was developed using decades of our experience in fire protection. In combination with the Sinteso fire detectors, the Sinteso control panels FC2020, FC2040 and the modular control panel FC2060 offer a comprehensive and homogeneous system.

The characteristic feature of the Sinteso family is its flexibility to meet any requirement. In a standard configuration, for example, two loops can be connected to a FC2020 control panel, and four loops to a FC2040, expandable to 4 or 8 loops while using same number of addresses. A comprehensive range of FDnet devices is available for every task.

The result is a comprehensive fire detection system on a shared technology platform with provision for simple, open-ended expansion in the future.

■ **Homogeneous and expandable – for greater efficiency throughout the entire life cycle**
Economic efficiency is a key factor in the installation phase. For example, the FDnet-powered devices require no additional cabling for power feeding or data transport or for connection to the control panel.

Moreover, Sinteso can be expanded or modernized at any time: Additional devices and lines can be simply connected to the system network (FDnet, FCnet) when a building is expanded. The FCnet is expandable by connecting additional panels via Ethernet.

Efficiency is also ensured whenever you upgrade – because new generations of devices and software versions are "members of the family". And if you ever want to use rooms for new functions, newly developed parameter sets can be downloaded.

■ **Increased fire safety – thanks to communication with other security systems**
For comprehensive safety, Sinteso can be quickly and easily integrated into a Siemens Danger Management System via BACnet. The benefit: Security personnel can operate the fire detection system centrally – together with other systems such as video surveillance or access control. This offers increased security because a danger area can be easily monitored with video cameras. The recorded film footage can also be used later to help analyze the cause of an event. With access control, escape routes can be monitored and doors opened or closed quickly.

■ **All-around safety – due to reliable detection, high availability, and transparent operation**
Innovative functions, such as degrade mode and standby functionality with the control panels, further optimize safety. For example, the video fire controller allows visual verification of an event. Redundant sensors increase the availability of the detectors – and turbo isolators as well as loop installation increase the availability of the floor repeater terminals even in case of an open or short circuit.

Highlights

■ Comprehensive fire safety system

■ Usability for systems of any size or complexity

■ Flexible, efficient system networks (FCnet and FDnet)

■ Considerable reduction in the number of false alarms

■ High system flexibility and expandability

■ Networking across all building services via BACnet/IP

■ Easy integration into a Siemens Danger Management System

■ Communication with other security systems

FDnet:
the network that supplies everything

The FDnet is a multifunctional bus system for fast, reliable communication between the FDnet devices and the Sinteso fire control panel. A special advantage is its use of the communication circuit to simultaneously supply the devices with power. It is also possible to incorporate existing installations and cables.

■ "Loop-powered" – the key to efficiency

The figures speak for themselves. Supplying power to the peripheral devices directly via the bus saves up to 50 meters of cable for each floor repeater display or terminal.

■ Reliable alarming

In addition, the FDnet increases safety because it is installed as a ring line: Both the display of messages and operation are still possible even in case of an open or short circuit. For example, if the line is interrupted at one point, information is redirected the other end to the control panel and floor repeater terminals thanks to the loop. Communication between devices and thus alarming is always ensured.

■ Select the performance and size you need

The FDnet can be scaled to meet the requirements of your particular building. In the basic configuration, the following can be set up:
– from 2 to 4 loops or up to 8 stubs at one Sinteso FC2020 fire control panel
– from 4 to 8 loops or up to 16 stubs at one Sinteso FC2040 fire control panel
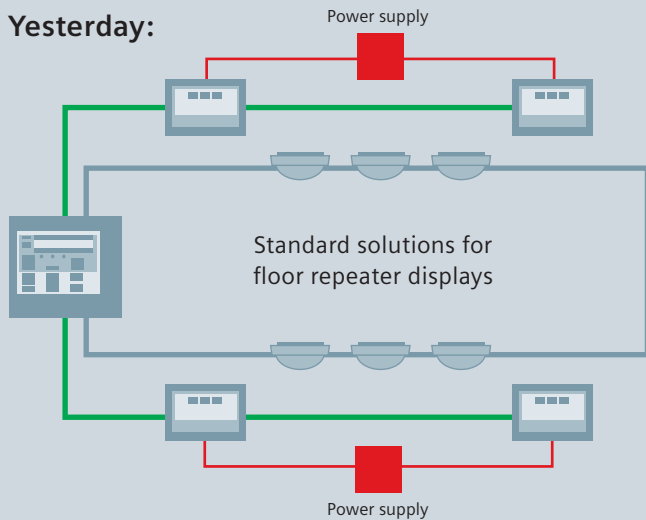– from 4 to 28 loops or up to 56 stubs at one Sinteso FC2060 fire control panel

Up to 126 FDnet devices can be connected per loop. With a maximum circuit length of 3.3 km, it is thus possible to provide reliable protection for extensive and widely distributed buildings and plants.

A further advantage is the ease with which existing cable networks can be integrated. There is also considerable flexibility for using different cable types: twisted, non-twisted, shielded or unshielded.
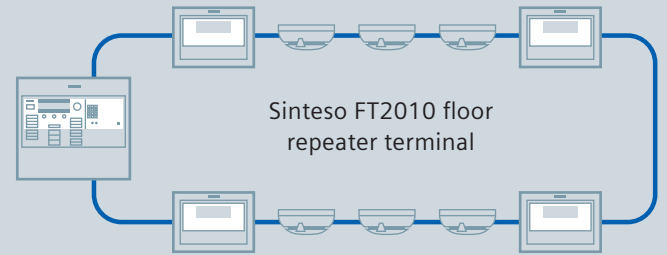
Highlights

■ Saves installation time as well as material – for example, up to 50 meters of cabling per connected floor repeater terminal or display

■ Efficient reutilization – practically all existing cable networks can be reused

■ High level of adaptability – FDnet devices can be combined in any constellation

■ Flexible expandability – connection of additional devices possible at any time, also without additional components for stubs

■ Integrated line separators in all FDnet devices

Yesterday:

Power supply

Standard solutions for floor repeater displays

Power supply

Today:

Sinteso FT2010 floor repeater terminal

Floor repeater display and terminal: keeping you informed remotely, too

With the FT2010 floor repeater terminal and FT2011 floor repeater display, Sinteso also delivers information simply and clearly on-site, for example, directly on a hospital floor. A common feature of both devices is the simple transfer of event texts from the relevant control panel.

■ **Quick reaction: the FT2010 floor repeater terminal**
On the FDnet loop, the FT2010 allows local display of alarms, faults and shutdowns, and also allows events to be acknowledged and reset. At the same time, the same event text on a control panel, or on the FT2040 remote terminal is also displayed on the floor repeater terminal. For easy integration into existing key concepts, operation is possible with a security key.

■ **Everything clear and simple: the FT2011 floor repeater display**
You can clearly read alarms, faults and shutdowns via this display. And the scroll key lets you scroll easily through all listed events.

■ **Optimally supplied and versatile**
Since both devices are fed via the FDnet, there's no need for an additional power supply and wiring. Thus, the FT2010 and the FT2011 can be used in a flexible way.

■ **Easy communication, safe reaction – at low cost**
The highest level of safety in operation and availability: Messages can be individually created, displayed, and made available in real time wherever they are needed most. Since the display can be configured to show only relevant information, security personnel can react faster to provide enhanced safety. The floor repeater display shows alarms and messages of all networked FDnet devices, while the floor repeater terminal provides almost the same display and operation as the control panel. Both can be programmed to also show alarms from other control panels – and thus also from other loops.

Thanks to a turbo isolator and loop installation, both devices offer secure operation even in case of an open or short circuit.

Highlights

■ Display and operation even in case of an open or short circuit thanks to turbo isolator and loop installation

■ Display of the same event texts as on the control panel

■ Individually programmable display of all events per floor or per control panel

■ No additional cabling required for power supply

■ Direct communication via FDnet without separate cabling to the fire control panel

FDnet devices: versatile specialists to ensure comprehensive safety

Video recording, alarming, and monitoring of current status or local fire control: Thanks to versatile specialists, Sinteso offers a broad range of fire alarm functions on the field level. With one communication and power supply via the FDnet.

■ **Highest safety anytime: video fire controller**

Secure verification, identification, and reaction: The video fire controller offers highest safety in case of fire as well as vandalism. For this, the FDnet connected video fire controller can be easily connected to a surveillance system via Ethernet. In case a fire alarm is activated, live images allow for direct verification and evaluation of the situation. In case of a fire, for example, both fire and rescue services will receive detailed information beforehand to help them plan further action and determine the size of their teams – without actually having to send people into the danger area.

Image recording with pre- and post-alarm recording allows for subsequent analysis of an event such as vandalism, e.g. malicious activation of a fire alarm or arson. Thanks to the high quality of the pictures, the cause of an event can be verified and a potential offender can be identified quickly and reliably. This facilitates clarification of cases and discourages potential offenders.

■ **For large areas: alarm sounder FDS221**

With a volume of up to 99 dBA – settable to three levels – the FDS221 is recommended wherever alarms need to be heard loudly and clearly as a danger signal. Some possible uses:
– along escape routes
– in corridors
– in stair wells

■ **For specific areas: signal base FDSB291**

The signal base is compatible with the Sinteso FDOOT, FDOOTC, FDT, and FDO fire detectors. In the event of a fire alarm, it triggers an acoustic signal. Volume can be set at two levels, up to a maximum of 88 dBA. Examples of locations where the device is used:
– hotel rooms
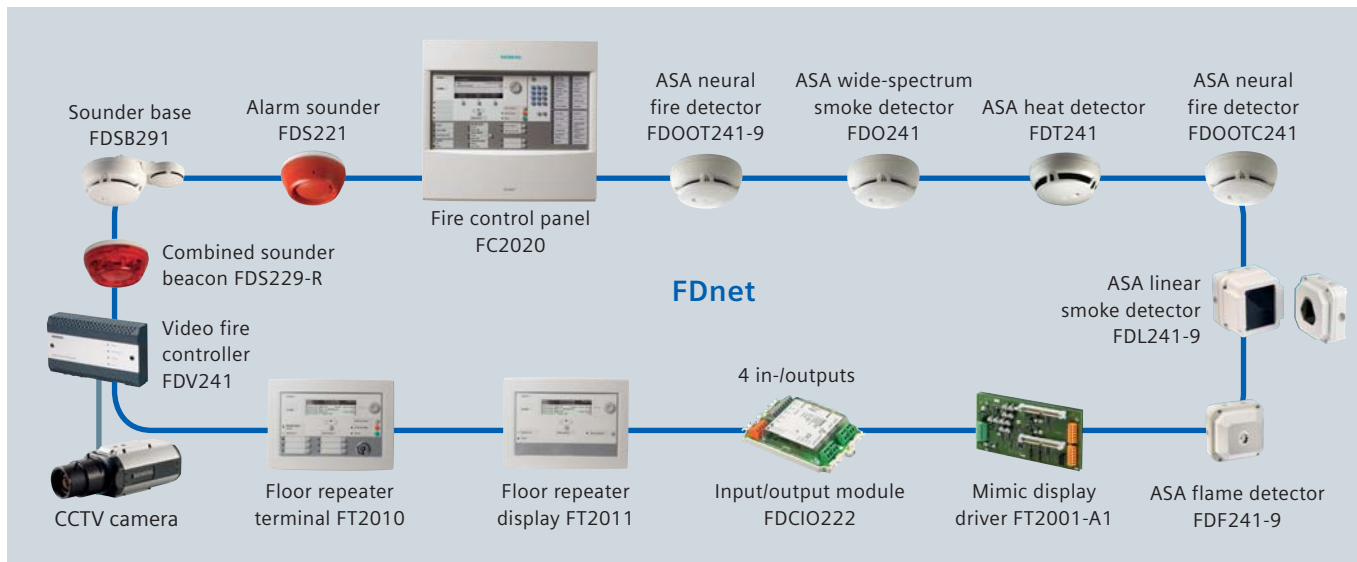– hospitals
– senior citizen homes and nursing homes

■ **Combined alarm: the combined sounder beacon FDS229**

If optical (red or yellow) as well as acoustic signaling is required in the event of an emergency – for example, for people with impaired hearing – a combined visual alarm device and alarm sounder is the right solution. Examples of locations where the device is used:
– senior citizen homes, nursing homes, and hotel rooms
– buildings with loud ambient noise

■ **Simple installation is a clear advantage**

Plug-in connection terminals provide quick and simple installation with reliable contact guaranteed even under conditions of severe vibration. The FDS221 alarm sounder is inserted in the same way as used by the detector while the FDSB291 signal base forms a single unit with the detector. Since the fire detector and alarm sounder both use the same base, they can be easily exchanged without any additional installation effort.

Sounder base FDSB291
Alarm sounder FDS221
Fire control panel FC2020
ASA neural fire detector FDOOT241-9
ASA wide-spectrum smoke detector FDO241
ASA heat detector FDT241
ASA neural fire detector FDOOTC241
Combined sounder beacon FDS229-R
FDnet
ASA linear smoke detector FDL241-9
Video fire controller FDV241
4 in-/outputs
CCTV camera
Floor repeater terminal FT2010
Floor repeater display FT2011
Input/output module FDCIO222
Mimic display driver FT2001-A1
ASA flame detector FDF241-9

With its scalability and network capability, Sinteso is designed to accommodate all of your future requirements, regardless of whether you plan to expand a building or change the function of a room.

■ **For fast alarming: manual call points**
Manual call points are available in different designs and for different application areas: from the FDM221 standard manual call point available in different colors for normal use to the FDM223H manual call point with a robust housing for special industrial applications.

■ **Mimic display driver FT2001-A1**
The mimic display driver controls 48 LEDs, which can display any event system-wide. The LEDs can, for example, be positioned on a customer-specific floor plan display.

■ **Input/output module "transponder" FDCIO223**
This module offers two in-/outputs and, for example, connects point-type detectors or special detectors, connects detectors by means of safety barriers in explosion-protected zones, controls alarm signaling devices (flashing lights, sirens) or monitors fire doors or flaps.

■ **Input/output module FDCIO222**
This module provides control input and control output at the same time; it has four inputs and four outputs that can be used independently. The main function of this module is local fire control. This means that in case of a fire, machines, elevators or ventilation are switched off. Successful deactivations are confirmed over acknowledgment contacts. The FDCIO222 also offers 4 potential-free closed/open circuit contacts.

Highlights

■ Meets highest safety requirements even for nonstandard applications such as monitoring for vandalism, arson etc.

■ Individual setting of alarm signaling devices – choice of 11 tones and two programmable triggering levels (such as preliminary alarm or evacuation)

■ Simple installation and retrofitting through plug-in connection terminals

■ Economical installation and operation – through power supply via FDnet

Floor repeater display and terminals

Messages from clearly defined monitoring zones, such as hospital floors, can be displayed via the FT2011 floor repeater display with the same event text as at the control panel and can even be handled by means of the FT2010 floor repeater terminal. They meet highest safety standards, since the floor repeater terminals can be placed directly on the FDnet – and will function without interruption even in case of an open or short circuit.

Fire detectors

The Sinteso product family consists of two series of detectors: the S-LINE, with **ASA**technology for sophisticated applications, and the C-LINE, with detection algorithms for standard applications. Special FDnet-powered detectors such as a multisensor fire detector with **ASA**technology for smoke, heat, and carbon monoxide, a flame detector, a beam detector, a wireless smoke detector and devices for explosion-protected zones complete the product range.

Input/output modules

The FDCI222 input modules are used for status monitoring (such as door status). However, the FDCIO222 input/output modules permit decentralized control of fire doors and flaps. In addition, the transponder FDCIO223 permits the monitored connection of conventional detector lines, alarm signaling devices and devices in explosion-protected zones.

Alarming devices

Alarm sounders support alarming with acoustic and optical alarm signaling. All can produce 11 different tones, including "evacuation" according to DIN 33404-3, in different volumes and tones for preliminary and main alarms or integrated isolator.

Video fire controller

In case of an alarm, the video fire controller enables direct assessment of the situation on the basis of live images from a connected surveillance camera – and supports a later analysis of the event with recorded film footage with pre- and post-alarm sequences.

Mimic display driver

The FDnet-powered mimic display driver controls LEDs on a customer-specific floor plan display.

Welcome to the world of innovative thinking

■ Innovation

Siemens invests a great deal in both manpower and research and development. This results in a steady stream of new insights, technologies and inventions that enable us to improve the reliability of our products, systems and solutions for the protection of people and assets.

Relying on the highest standard of automatic production processes contributes a great deal to the environment protection. Siemens is at the leading edge of progress in this field and continues to redefine both current and future technologies.

■ Reliability

With Siemens, you are in the very best of hands: Backed by a history of over a hundred years, Siemens is an established and reliable partner. System expansions, migrations and upgrades can be continuously made over a period of years, which ensures your investment for the future.

■ Safety

Innovative products, systems, intelligent solutions and value-added services from Siemens offer you complete fire protection – for everything that is valuable to you, no matter which type of building or how high the risks. Today, tomorrow and for decades to come. That's why countless customers around the world place their trust in Siemens.

The information in this document contains general descriptions of technical options available,
which do not always have to be present in individual cases. The required features should therefore
be specified in each individual case at the time of closing the contract.

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