

Answers for infrastructure.

Megatrends driving the future
The megatrends – demographic change, urbanization, climate change, and globalization – are shaping the world today. These have an unprecedented impact on our lives and on vital sectors of our economy.

Innovative technologies to answer the associated toughest questions
Throughout a 160-year history of proven research and engineering talent, with more than 50,000 active patents, Siemens has continuously provided its customers with innovations in the areas of healthcare, energy, industry, and infrastructure – globally and locally.

Increase productivity and efficiency through complete building life cycle management
Building Technologies offers intelligent integrated solutions for industry, commercial and residential buildings, and public infrastructure. Over the entire facility's life cycle, our comprehensive and environmentally conscious portfolio of products, systems, solutions, and services for low-voltage power distribution and electrical installation technology, building automation, fire safety and security ensures the: – optimum comfort and highest energy efficiency in buildings, – safety and security for people, processes, and assets, – increased business productivity.



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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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XC10 – combined fire detection and extinguishing control

Planning Tool for single-sector applications

XC10 Planning Tool – single sector

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Compatibility chart for fire detection

Fire detectors	Conventional line SynoLINE800	Collective line SynoLINE600	Detector base						Alarm indicators				
			SO320 BFZ-5085990001	DB1101A BFZ-4863650001	FDB221 ASQ00001664	FDB222 554319-F1-A1	FDB291 ASQ00003310	FDLB291 ASQ00003941	AP91C (frame mounting) 554370-F9-A1 AP92C (surface mounting) 554370-F9-A1	FDA91 (frame mounting) 554370-F9-A1	FDA92 (surface mounting) 554370-F3-A1	FDA93 (flush mounting) 554370-F5-A1	
Multi-sensor detectors													
OH252C BFZ-5364190001	Yes	Yes	Yes	–	–	–	–	–	–	–	Yes	Yes	–
FD007241-9 ASQ00004813	Yes	Yes	–	–	Yes	Yes	–	–	–	–	Yes	Yes	Yes
Optical detectors													
OP320C BFZ-5081460001	Yes	–	Yes	–	–	–	–	–	–	Yes	–	–	–
DO1101A BFZ-48630010001	–	Yes	–	Yes	–	–	–	–	–	–	Yes	Yes	Yes
DO1104A BFZ-5090640001	–	Yes	–	Yes	–	–	–	–	–	–	Yes	Yes	Yes
Heat detectors													
H320C (rate of rise and maximum) BFZ-5081590001	Yes	–	Yes	–	–	–	–	–	–	Yes	–	–	–
H322C (maximum) BFZ-5316470001	Yes	–	Yes	–	–	–	–	–	–	Yes	–	–	–
DT1101A (rate of rise) BFZ-4863170001	–	Yes	–	Yes	–	–	–	–	–	–	Yes	Yes	Yes
DT1102A (rate of rise and maximum) BFZ-4863180001	–	Yes	–	Yes	–	–	–	–	–	–	Yes	Yes	Yes
Special detectors													
Flame detector FDZ21-9/FDZ241-9 ASQ00003002 ASQ00003006	Yes	Yes	–	–	–	–	–	Yes	–	–	Yes	Yes	Yes
Linear smoke detector FDL241-9 ASQ00002298	Yes	Yes	–	–	–	–	–	–	Yes	–	Yes	Yes	Yes

For further products please see Cerberus PRO and Sinteso planning poster

Fire detectors	Sinteso FDiNet	Cerberus PRO (NET)	Detector base						Alarm indicators			
			DB721 554319-F11-A1	FDB221 ASQ00001664	FDB222 554319-F1-A1	FDB291 ASQ00003310	FDLB291 ASQ00003941	FDCAI221 (addressable) 554370-F10-A1	FDA91 (frame mounting) 554370-F9-A1	FDA92 (surface mounting) 554370-F3-A1	FDA93 (flush mounting) 554370-F5-A1	
Multi-sensor detectors												
FD007241-9 ASQ00004813	Yes	–	–	Yes	Yes	–	–	–	Yes	Yes	Yes	Yes
FD007241-9 ASQ00016442	Yes	–	–	Yes	Yes	–	–	–	Yes	Yes	Yes	Yes
OH720554310-F1-A1	–	Yes	–	Yes	–	–	–	–	Yes	Yes	Yes	Yes
Optical detectors												
OP720554310-F1-A1	–	Yes	–	Yes	–	–	–	–	Yes	Yes	Yes	Yes
FD0221/ASQ00016440	Yes	–	–	Yes	Yes	–	–	–	Yes	Yes	Yes	Yes
FD0341/ASQ00016441	Yes	–	–	Yes	Yes	–	–	–	Yes	Yes	Yes	Yes
Heat detectors												
H722554310-F3-A1	–	Yes	Yes	–	–	–	–	–	Yes	Yes	Yes	Yes
H720554310-F4-A1	–	Yes	Yes	–	–	–	–	–	Yes	Yes	Yes	Yes
FD7221/ASQ00016444	Yes	–	–	Yes	Yes	–	–	–	Yes	Yes	Yes	Yes
FD7241/ASQ00016445	Yes	–	–	Yes	Yes	–	–	–	Yes	Yes	Yes	Yes
Special detectors												
Flame detector FDZ21-9/FDZ241-9 ASQ00003002 ASQ00003006	Yes	Yes	–	–	–	–	Yes	–	Yes	Yes	Yes	Yes
Linear smoke detector FDL241-9 ASQ00002298	Yes	Yes	–	–	–	–	–	Yes	Yes	Yes	Yes	Yes
Aspirating smoke detection LaserFDCL VLF-250VLF-500VLF- 250-SIE/VLF-500-SIE	Yes	Yes	–	–	–	–	–	–	Yes	Yes	Yes	Yes

For further products please see Cerberus PRO and Sinteso planning poster

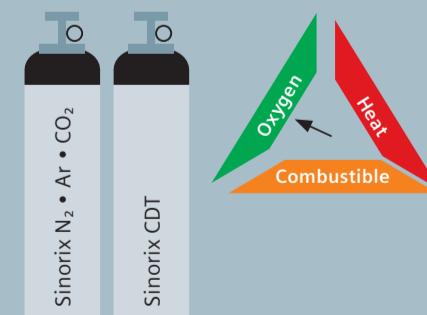
Sinorix extinguishing systems from Siemens

Automated extinguishing systems are designed on the basis of the following principle: Every fire needs three elements – oxygen, heat, and a combustible. If only one of these elements is removed, a fire cannot spread and will inevitably go out.

Siemens offers Sinorix – a comprehensive range of automated extinguishing systems based on natural and chemical agents as well as gas/water-combined and water mist systems. They can all be tailored to individual customer requirements.

Systems with natural agents

Systems with inert gases work principally by displacing the oxygen, inerting the protected area, they thus extinguish the fire.

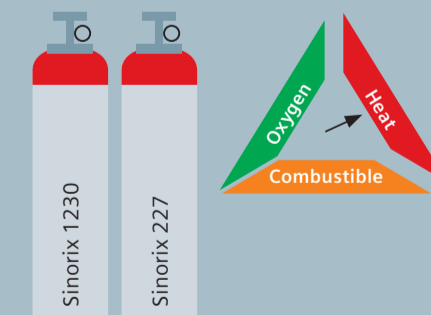


Sinorix N₂ + Ar + CO₂
Extinguishing systems with natural agents for maximum flexibility in system design and engineering.

Sinorix CDT
Innovation based on extinguishing with natural agents to provide constant gas discharge that allows a reduction of overpressure flaps by up to 70%.

Systems with chemical agents

Systems with chemical gases absorb heat from a fire, leaving it without energy, they thus extinguish the fire.

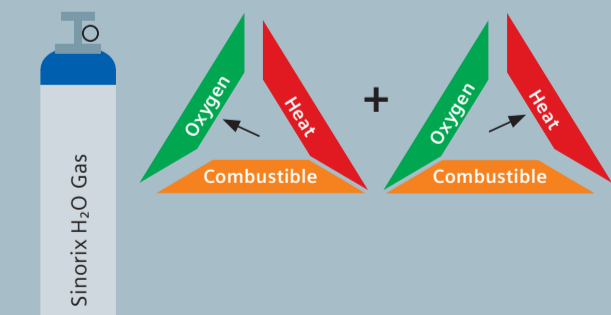


Sinorix 1230
System based on the environmentally friendly extinguishing agent 3M™ Novoc™ 1230 Fire Protection Fluid with 42-bar technology that enables highest extinguishing efficiency and flexibility in engineering.

Sinorix 227
Extinguishing system based on the globally known HFC 227ea with 25- and 42-bar technology for fast and reliable extinguishing.

Gas/water-combined system

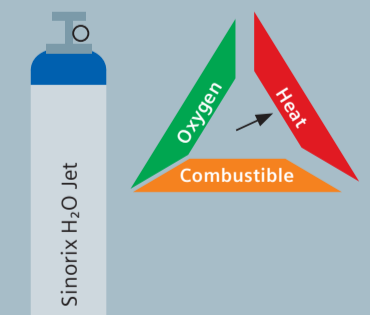
Gas/water-combined systems basically combine the displacing of oxygen with the positive cooling effect of water.



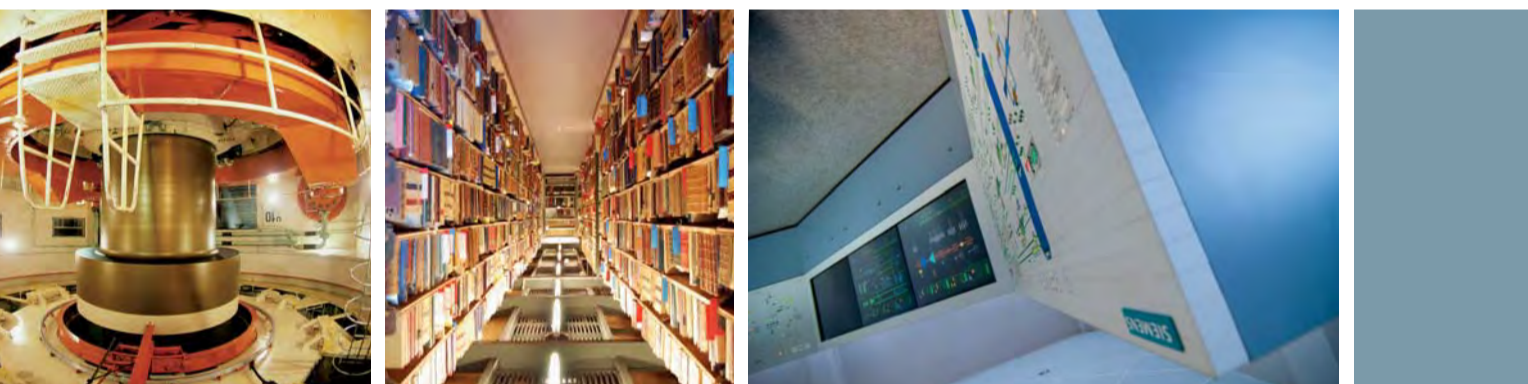
Sinorix H₂O Gas
Highly efficient combination of nitrogen and water extinguishing technology with an additional positive cooling effect – for secure extinguishing and reliable room protection.

Water mist system

Water mist systems absorb heat from a fire. Leaving it without energy, they thus control or extinguish the fire.



Sinorix H₂O Jet
Unique two-phase flow technology that generates fine water droplets at low hydraulic pressure – for efficient control of open fires as well as for effective object protection thanks to accurate extinguishing.



- **Easy combination of fire detection and extinguishing systems**
People, assets, and business processes need to be optimally protected in case of a fire incident. Fast fire detection, alarm- ing, and activation of an extinguishing system thus are essential and can ensure business continuity. XC10 – with a new family of control panels – enables rapid, and automated interventions. The XC10 control panels immediately trigger intelligent extinguishing systems that offer the latest technologies in extinguishing and can be tailored to individual needs, an IT room or a turbine. It can also be used for multi-sector applications, for example, with the wide fire safety portfolio from Siemens, you receive state-of-the-art products and systems that provide ideal choice for large applications with several extinguishing sectors. Another advantage: only one extinguishing system business continuity – all from one source.
- **A comprehensive portfolio based on expertise**
The high-quality products and systems from Siemens are based on in-depth application know-how and experience. New products are continuously developed in cooperation with the departments and scientific institutes. This includes testing in Siemens' own test laboratories. And it's a matter of course that all products comply with the latest international standards.
- **XC10 control panels comply with international standards**
and experience from Siemens
- **Backed by decades of know-how**
and experience from Siemens
- **Single- and multi-sectors, stand-alone or integrated into a larger fire safety system**
- **Wide range of installations possible** – larger applications that save space
- **New multi-sector control panel** for extinguishing systems
- **Functions with different types** of detectors and automated extinguishing systems
- **Advanced control panels** for detection and alarming as well as for the activation of the extinguishing process

Highlights

- **Ensuring business continuity**
People, assets, and business processes need to be optimally protected in case of a fire incident. Fast fire detection, alarm- ing, and activation of an extinguishing system thus are essential and can ensure business continuity. XC10 – with a new family of control panels – enables rapid, and automated interventions. The XC10 control panels immediately trigger intelligent extinguishing systems that offer the latest technologies in extinguishing and can be tailored to individual needs, an IT room or a turbine. It can also be used for multi-sector applications, for example, with the wide fire safety portfolio from Siemens, you receive state-of-the-art products and systems that provide ideal choice for large applications with several extinguishing sectors. Another advantage: only one extinguishing system business continuity – all from one source.

Covering sophisticated requirements with advanced control panels

XC10 panels are the ideal choice for protecting valuable objects, a single sector (one room) or multiple rooms with sophisticated requirements. XC10 can be installed as an independent control panel or be integrated into a larger fire safety system.

Protecting people and assets, business processes and continuity are core aspects of fire safety. With XC10, Siemens offers a family of control panels for comprehensive fire safety: the panel family combines both fire detection and extinguishing control. After receiving a fire alarm from the connected fire detectors, the combined XC10 panels trigger the extinguishing process.

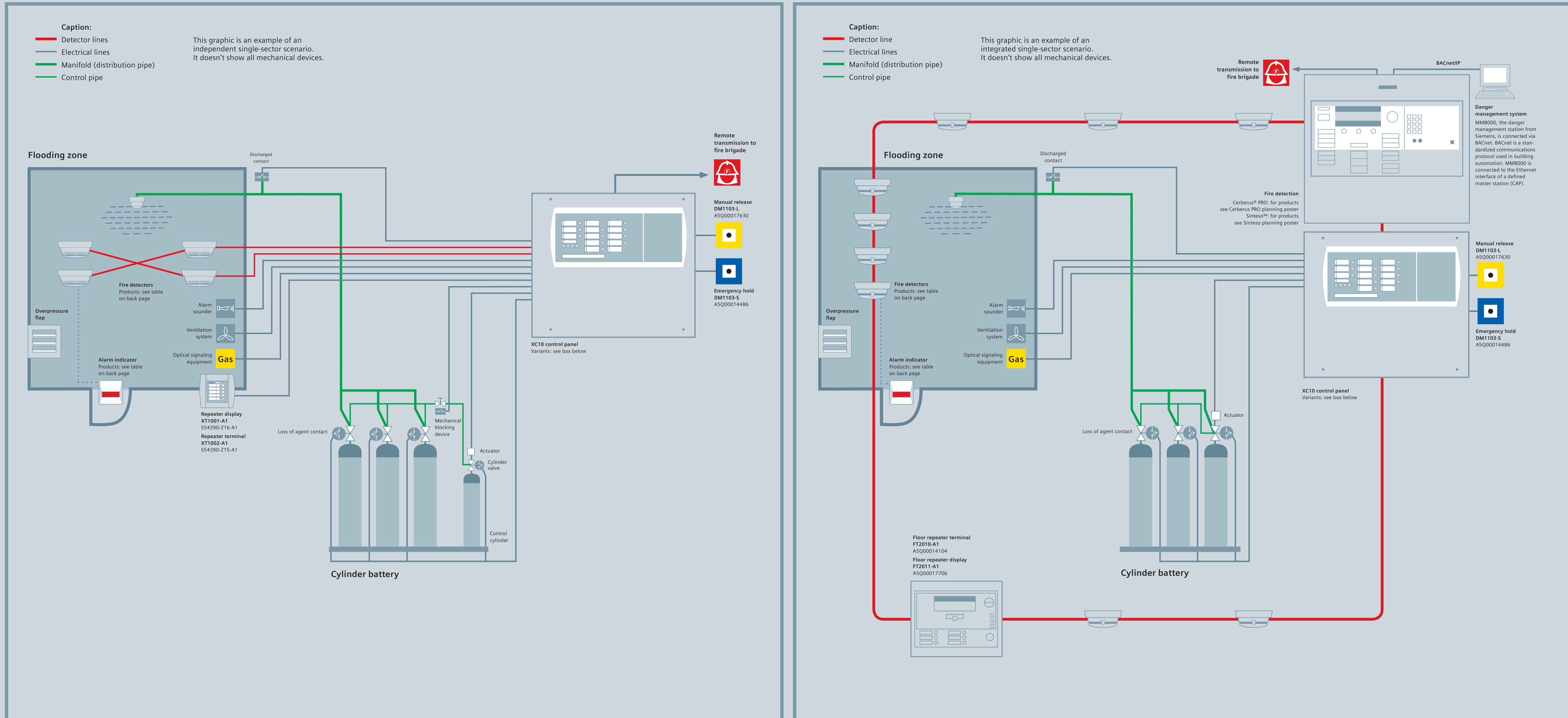
Compact panels for fire detection and extinguishing control



XC10 Planning Tool – single sector

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Stand-alone scenario

This graphic shows the combined fire detection and extinguishing control panel XC10 operating as an independent (stand-alone) system. The fire detectors as well as the peripheral devices are directly connected to XC10. You can choose from a wide range of conventional and collective fire detectors as well as special detectors. The detectors are mounted in a cross-zoning. XC10 works with most types of extinguishing systems for room or object protection.

A single-sector installation consists of a single set of cylinders placed in a storage area. In case of a fire, the extinguishing agent flows through the manifolds to the protected room and is distributed there by the nozzles.

A single actuator (electromagnetic or pyrotechnical) triggers a pilot cylinder which then activates the main cylinders pneumatically. In some countries, cylinders can be individually installed next to the protected zone. In such cases, there is no need for manifolds as the nozzle is directly connected to the top of each cylinder.

Advantages of this kind of application:
 – Simple planning as few cabling is needed
 – XC10 control panel monitors and controls all functions
 – Especially suitable for small installations

XC10 panels

XC10 single-sector extinguishing panels for one flooding zone to control small- and medium-sized extinguishing installations. Self-contained control unit including fire detection and extinguishing control.

Two valve control lines, both compatible for activation of solenoids and pyrotechnical actuators.

Shared properties:
 – 2 detector lines for automated activation
 – 1 line for manual activation
 – 1 additional detector line
 – 4 monitored inputs
 – 4 control inputs
 – 2 monitored valve controls 24 V/2 A
 – 3 monitored outputs 24 V/500 mA
 – 5 outputs dry contact 30 V/1 A
 – 8 open collector outputs 24 V/40 mA

Extinguishing panel standard XC1001-A
 Order no. 554390-C1-A1
 For small to medium installations
 – Power supply: 3.5 A/105 W
 – Max. battery back-up time: 12 h
 – Max. battery capacity: 2x 4.5 Ah
 – Housing: 370x286x90 mm (WxHxD)
 – Up to 2x relays modules Z38171 (BPZ:4843830001)

Extinguishing panel rack XC1003-A
 Order no. 554390-C2-A1
 For medium to large installations
 – Power supply: 3.5 A/105 W
 – Max. battery back-up time: 72 h
 – Max. battery capacity: 2x 17 Ah
 – Housing: 482.6 (19")x177.8 (4 U)x187 mm (WxHxD)

Extinguishing panel comfort XC1005-A
 Order no. 554390-C3-A1
 For medium to large installations
 – Power supply: 3.5 A/105 W
 – Max. battery back-up time: 72 h
 – Max. battery capacity: 2x 17 Ah
 – Housing: 505x375x125 mm (WxHxD)
 – Up to 6x relays modules Z38171 (BPZ:4843830001)

Fire safety system integration scenario

XC10 control panels can be easily integrated into a fire safety system as shown in the graphic. The fire detectors are part of the fire detection loop. You can choose from a wide range of addressable fire detectors as well as special detectors. Other commands from the fire detection control unit can also be transmitted to the extinguishing control panel (reset, acknowledge, etc.). In this application, the status of the extinguishing control panel is forwarded to the fire detection control unit.

Advantages of this kind of application:
 – You can use XC10 together with existing fire safety systems
 – Flexible integration ensures minimal cabling for a wide application range
 – Connection of Cerberus PRO/Sinteso control panel to a danger management system possible. It provides remote status indication and allows to receive remote control operation
 – Increased reliability due to advanced safety features, addressable fire control panels and fire detectors