



Cerberus PRO – C-NET devices

Planning Tool

Answers for infrastructure.

www.siemens.com/cerberus

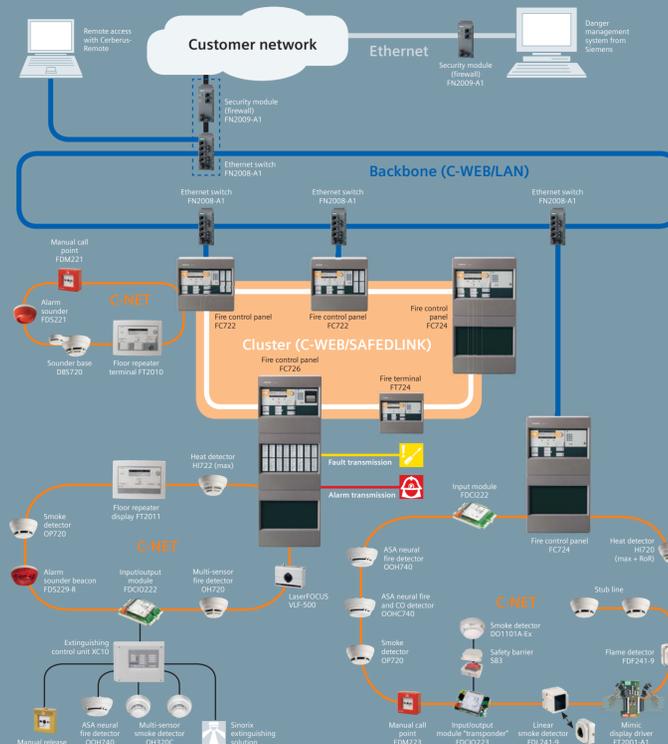
Panel overview

	FC721-ZZ1-YZ	FC722-ZZ1-YZ	FC722-ZAI-ZE	FC724-ZAI-ZE	FC726-ZA	FT724-ZZ
Housing	Eco	Standard	Comfort	Comfort	Comfort	Eco
Mains voltage	AC 85... 265 V	AC 85... 265 V	AC 230 V	AC 230 V	AC 230 V	–
Power supply	70 W	70 W	150 W	150 W	150 W	option PSU 70 W
Operating voltage	DC 21... 28.6 V	DC 21... 28.6 V	DC 21... 28.4 V			
Operating current	max. 2.5 A	max. 2.5 A	max. 5 A	max. 5 A	max. 5 A	125 mA
Battery capacity	2x12 V, 7 Ah	2x12 V, 7... 12 Ah	2x12 V, 26 Ah	2x12 V, 26 Ah	2x12 V, 45 Ah	option 2x12 V, 7 Ah
Emergency power supply	up to 72 h ¹⁾	up to 72 h ¹⁾	up to 72 h	up to 72 h	up to 72 h	up to 72 h
Connectable detector series	Cerberus PRO FD720 (C-NET)	–				
Number of lines	–	–	–	–	–	–
– Loops (with loop extension)	1	2 (4)	2 (4)	4 (8)	4 (8)	–
– Stub lines	2	4 (8)	4 (8)	8 (16)	8 (16)	–
– C-NET (4 per line card)	–	–	–	–	max. 20	–
Number of addresses	max. 126	max. 252	max. 252	max. 504	max. 1,512	–
Networkable	–	✓	✓	✓	✓	✓
Integrated inputs/outputs	–	–	–	–	–	–
– Relay outputs	–	–	–	–	–	–
• RT alarm	1	1	1	1	1	–
• RT Fault	1	1	1	1	1	–
– Monitored outputs	–	–	–	–	–	–
• Alarm	1	1	1	1	1	–
• Fault	1	1	1	1	1	–
• Horn	1	1	1	2	2	–
– Freely programmable inputs/outputs	4	8	8	12	12 (72) ²⁾	–
Operating unit	integrated	integrated	integrated	integrated	integrated	integrated
Display groups integrated, each with one red & yellow LED	–/up to 24	–/up to 24	–/up to 48	–/up to 48	–	–
Display groups optional, each with one red & yellow LED	Up to 96 ³⁾	Up to 96 ³⁾	Up to 96/up to 96	Up to 96/up to 96	Up to 96	Up to 96 ³⁾
Plug-in position for RS232, RS485 serial ports	1	2	2	2	2	2
Ethernet connection RJ45	1	1	1	1	1	1
Dimensions (WxHxD)	430x398x80 mm	430x398x160 mm	430x796x160 mm	430x796x160 mm	430x796x260 mm	430x398x80 mm
Approvals	–	–	–	–	–	–
– CPD	0786-CPD-20767	0786-CPD-20721	0786-CPD-20721	0786-CPD-20722	0786-CPD-20983	...
– VdS	G209076	G209076	G209077	G210084	G209078	...
– LPCB	126aw-(cl-2)	126aw-(cl-2)	126aw-(cl-2)	126aw-(cl-2)	126aw-(cl-2)	...

¹⁾ with additional housing and power supply
²⁾ with additional input/output cards FC1208-A1
³⁾ with extra housing

Cerberus PRO – enjoy protecting

Powerful control panels, clever fire detectors, and smart peripheral devices. This is what our comprehensive Cerberus® PRO family offers. The brief overview below demonstrates the most important system components.



Alarm sounder tones

No.	Tonality	Frequency pattern Sweep from – to	Pulse pattern	Adjustable FDS221 and FDS229 sound intensity level (typ. values in [dBA/Tm]) [*]		Norm
				at 12 V	at 32 V	
1	Continuous	970 Hz		98 88 81	101 92 82	"evacuate" BS 5839 Part 1 1988
2	Intermittent	950 Hz		96 87 79	100 91 81	"alert" BS 5839 Part 1 1988
3	Sweep-down	1200 Hz – 500 Hz		96 87 79	100 91 80	DIN-Tone DIN33404 Part 3
4	Slow-whoop Sweep-up, linear	500 Hz – 1200 Hz		97 88 81	101 92 82	NEN2575 (Netherlands)
5	Pulse tone	500 Hz		94 85 75	97 88 75	Swedish Standard SS 03 17 11, No. 1 "Imminent Danger"
6	Intermittent	500 Hz		93 84 75	96 87 75	Swedish Standard SS 03 17 11, No. 6 "Local Warning"
7	Continuous	500 Hz		94 85 76	97 88 76	Swedish Standard SS 03 17 11, No. 4 "All clear"
8	Alternating	560 Hz 440 Hz		94 85 75	98 89 76	"French fire sound" NF S 32-001-1975
9	Intermittent	420 Hz		94 85 76	98 89 77	Australia "alert" AS 2220-1978
10	Slow-whoop Sweep-up, linear	500 Hz – 1200 Hz		96 89 81	100 93 82	Australia "Action" AS 2220-1978
11	Intermittent	970 Hz		99 89 82	102 92 83	ISO 8201 US Temporal Tone LF

^{*} Sound intensity ±2 dBA
^{*} Sound intensity depending on the angle, see "Operating instruction 008109"

Robust or sensitive? The solution often lies somewhere in between.

High Suppression (PS8)	Suppression (PS5)	Suppression CO (PS12)	High Compensation (PS7)	Robust (PS2)	Balanced (PS4)	Balanced CO (PS10)	Fast Response (PS6)	High Sensitive Fast (PS9)
<p>Application area For operating conditions susceptible to heavy optical deceptive phenomena. Examples include dance floors in discotheques (deceptive phenomena: dry ice) or churches during special services (deceptive phenomena: frankincense).</p> <p>Description In this parameter set, the sensor will not be allowed to create a fire alarm signal until a simultaneous increase in the thermal signal is also detected. In the event of dry ice, there is no temperature increase and the detector will not create an unwanted alarm. With a rise in temperature of only 8K (open fire), the optical sensors will be further analyzed and if the signal corresponds to a fire, an alarm will be triggered. In addition, the detector will also trigger an alarm as a rate of rise heat detector or if its static temperature limit is exceeded.</p> <p>Expert advice "High Suppression" has clear advantages over traditional concepts where smoke detection is turned off completely and replaced by thermal detection during events where dry ice is used. This parameter set allows much faster detection than switching to purely thermal detection. This enhances safety at critical times where visibility is reduced and large numbers of people are in attendance. Further options include the ability to switch between parameter sets so that a more sensitive detection mode can be used when no dry ice is likely. The detector complies with the norm EN 54-5 and in some jurisdictions heat detector spacing may be applicable.</p>	<p>Application area Difficult environments subject to heavy deceptive phenomena. Application examples include canteen kitchens or manufacturing areas with operational-related deceptive aerosols.</p> <p>Description Highly robust behavior, therefore very suitable for applications with deceptive phenomena such as steam, heavy cigarette smoke or exhaust gases. At the same time, the detector reacts with the ASA parameter set quickly and reliably in case of a real fire due to the dynamic influencing of the parameters.</p>	<p>Application area Difficult environments subject to heavy deceptive phenomena. Application examples include manufacturing areas with operational-related aerosols. Additional separate CO toxic gas detection and environmental monitoring.</p> <p>Description Highly robust behavior, therefore very suitable for applications with deceptive phenomena such as steam, cigarette smoke etc. At the same time, the detector reacts with the ASA parameter set quickly and reliably in case of a real fire due to the dynamic influencing of the parameters. Sensitivity is also influenced by the CO concentration. Separate CO alarming and control for the detection of unhealthy or dangerous carbon monoxide build-up. Separate signaling of environmental thermal thresholds.</p>	<p>Application area Applications with deposits resulting from excessive dust or dirt over a long time period. Here, optical detectors usually reach their limit quickly, resulting in a reduced operational lifetime.</p> <p>Description This parameter set is identical to the Robust setting except that the drift compensation is extended. This parameter set is therefore especially suited for rooms in which a lot of dust and other deposits can be expected to build up over a period of time. The detector maintains the set detector sensitivity and resistance to deceptive phenomena. The detector reacts quickly and reliably in case of a real fire.</p>	<p>Application area Difficult environmental conditions. Examples are event locations or underground garages with moderate deceptive phenomena and risks to individuals.</p> <p>Description Designed for robust behavior. This ASA parameter set is particularly suitable for applications with deceptive phenomena such as cigarette smoke, dust, and exhaust gases. At the same time, the detector reacts very quickly and reliably in case of a real fire. Compared to the "Suppression (PS5)" parameter set, the "Robust (PS2)" parameter set may be used to improve detection speed on higher ceilings while still retaining sufficient resistance to false alarms.</p>	<p>Application area Standard applications. Rooms with moderate deceptive phenomena.</p> <p>Description For use in normal environments. This parameter set has a balanced response characteristic: sensitive in case of a fire but still tolerant of transient deceptive phenomena. Due to its distinct dynamic, the detector reacts quickly to open fires as well as smoldering fires. This ASA parameter set reacts robustly to deceptive phenomena such as cigarette smoke or small amounts of steam.</p> <p>Additional information This parameter set is often used when the system is set in unattended mode (e.g. at night).</p>	<p>Application area Rooms where an increased CO concentration in the event of a fire is possible. Moderate deceptive phenomena.</p> <p>Description Using the three criteria: smoke, heat, and CO the device is more sensitive to fires creating CO than the parameter set "Balanced (PS4)" without the CO signal. The device is robust with deceptive phenomena such as cigarette smoke or a small amount of steam. This parameter also offers early alarming in the event of fires generating a large amount of CO, e.g. mattress fires.</p>	<p>Application area Rooms in which sensitive and quick detection is essential such as rooms with high ceilings, warehouses with flammable material (increased risk of fire), and application areas where adequate life protection can only be ensured by the fastest possible detection. Due to special thermal algorithms, usage at low temperatures is also possible.</p> <p>Description This parameter set reacts in a fast and highly sensitive manner. It is thus especially suited for rooms without deceptive phenomena, where the priority is on detecting fires as early as possible.</p> <p>Expert advice The high thermal influence from open fires transports the dark smoke particles that are typical for this kind of fire quickly to the ceiling. Due to the backward scattering and the "Fast Response" setting, the detector is highly sensitive. This makes the detector a perfect replacement in situations where ionization detectors would normally have been considered optimal.</p>	<p>Application area Rooms in which an especially high sensitivity to smoldering and open fires is required. Examples include museums with high ceilings, clean production halls or applications where adequate life protection can only be ensured by the fastest possible detection. Due to special thermal algorithms, usage at low temperatures is also possible.</p> <p>Description This parameter set allows for the fastest possible detection for both open and smoldering fires. It is therefore intended for use in clean environments with no deceptive phenomena.</p>
Complies with the norm EN 54-5	Complies with the norm EN 54-5, EN 54-7	Complies with the norm EN 54-5, EN 54-7	Complies with the norm EN 54-5, EN 54-7	Complies with the norm EN 54-5, EN 54-7	Complies with the norm EN 54-5, EN 54-7	Complies with the norm EN 54-5, EN 54-7	Complies with the norm EN 54-5, EN 54-7	Complies with the norm EN 54-5, EN 54-7
<p>Application examples Multi-purpose halls, theater stages, churches, dance floors in discotheques</p>	<p>Application examples Canteen kitchens, production areas with operational-related deceptive phenomena</p>	<p>Application examples Production areas with operational-related deceptive phenomena</p>	<p>Application examples Paper mills, carpenters workshops, textile production, recycling plants</p>	<p>Application examples Event locations, conference rooms, smoking rooms, gastronomy, industry, production, underground garages</p>	<p>Application examples Offices, open-plan offices, hallways, hotel rooms, out of hours use in harsh environment areas</p>	<p>Application examples Same as for "Balanced (PS4)", but with higher robustness against deceptive phenomena</p>	<p>Application examples High-ceilinged rooms, storage rooms/warehouses with flammable material, IT rooms, and control of extinguishing systems</p>	<p>Application examples Hospital rooms, museums, operating rooms, cold storage, high-ceilinged rooms, when highly sensitive detection is of great importance</p>

Answers for infrastructure. Our world is undergoing changes that force us to think in new ways: demographic changes, urbanization, global growth. For our customers, success is defined by how well they manage these challenges. Siemens has the answers. We are the preferred partner for energy-efficient, safe and secure buildings and infrastructure.™

© Siemens Switzerland Ltd, 2017 • Order no. 0-92255-6n • 11202

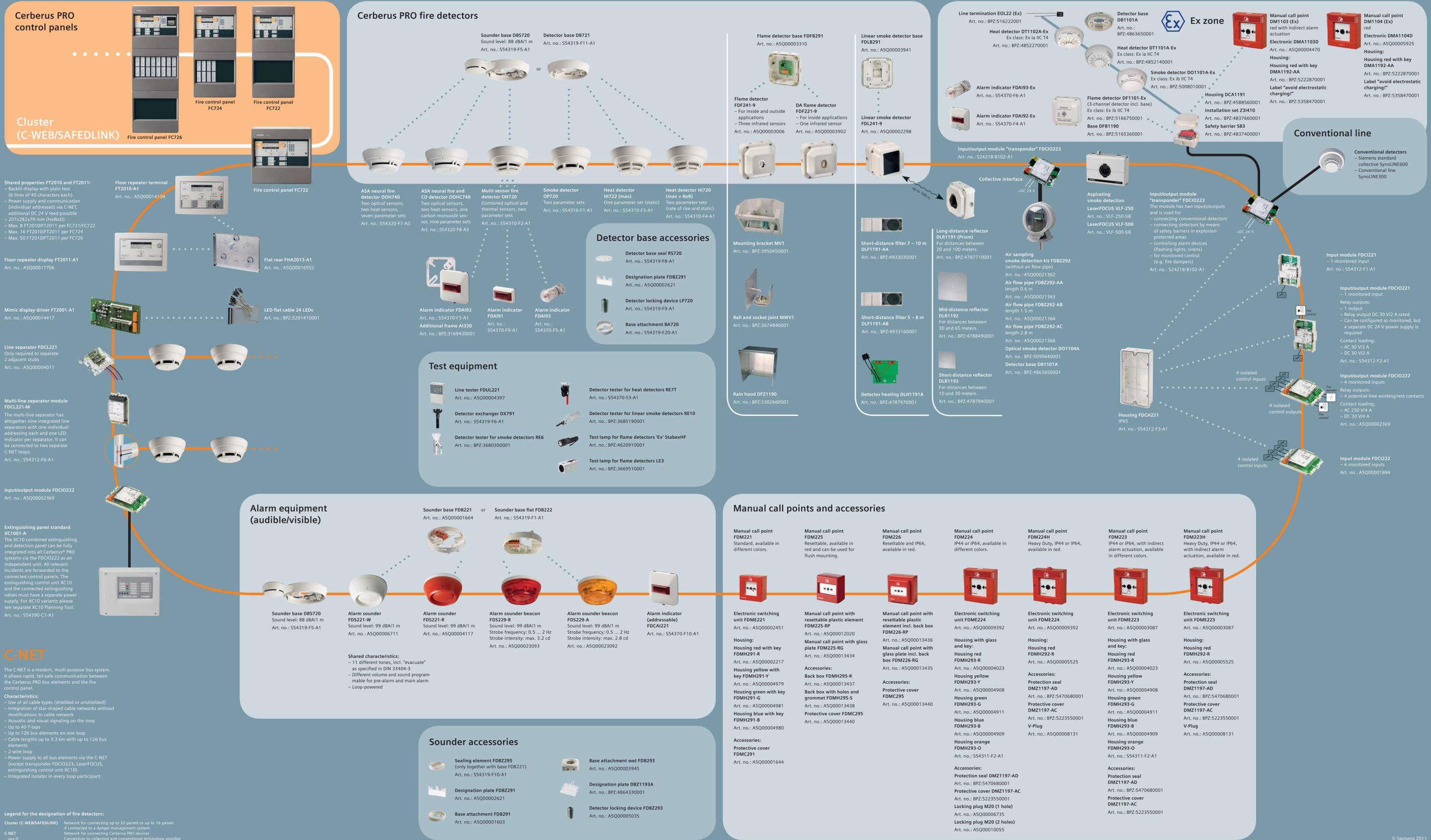
The information in this document contains general descriptions of technical options available. Which of our devices have to be present in individual cases, the required features should therefore be specified in each individual case at the time of closing the contract.

Siemens Switzerland Ltd
 Global Services 22
 Gubelstrasse 22
 6301 Zug
 Switzerland
 Tel: +41 41 724 24 24

Siemens Switzerland Ltd
 Infrastructure & Cities Sector
 International Headquarters
 Building Technologies Division

Cerberus PRO Planning Tool – C-NET devices

Answers for infrastructure.



Cerberus PRO control panels

Cluster (C-WEB/SAFEDLINK)

- Fire control panel FC726
- Fire control panel FC724
- Fire control panel FC722

Shared properties FT2010 and FT2011:

- Backlit display with plain text (6 lines of 70 characters each)
- Power supply and communication (individual addressed) via C-NET, additional DC 24 V feed possible
- 207x282x79 mm (HxWxD)
- Max. 8 FT2010/FT2011 per FC721/FC722
- Max. 16 FT2010/FT2011 per FC724
- Max. 50 FT2010/FT2011 per FC726

Floor repeater terminal FT2010-A1
Art. no.: ASQ00014104

Fire control panel FC722
Art. no.: ASQ00017706

Mimic display driver FT2001-A1
Art. no.: ASQ00014417

LED flat cable 24 LEDs
Art. no.: BPZ:5291410001

Line separator FDL221
Only required to separate 2 adjacent status
Art. no.: ASQ00004011

Multi-line separator module FDL221-M

The multi-line separator has altogether nine integrated line separators with one individual addressing each and one LED indicator per separator. It can be connected to two separate C-NET loops.

Art. no.: S54312-F6-A1

Input/output module FDCIO222
Art. no.: ASQ00002369

Extinguishing panel standard XC1001-A1

The XC10 combined extinguishing and detection panel can be fully integrated into all Cerberus PRO systems via the FDCIO222 as an independent unit. All relevant incidents are forwarded to the connected control panels. The extinguishing control unit XC10 and the connected extinguishing valves must have a separate power supply. For XC10 variants please see separate XC10 Planning Tool.

Art. no.: S54390-C1-A1

C-NET

The C-NET is a modern, multi-purpose bus system. It allows rapid, fail-safe communication between the Cerberus PRO bus elements and the fire control panel.

Characteristics:

- Use of all cable types (shielded or unshielded)
- Integration of star-shaped cable networks without modifications to cable network
- Acoustic and visual signaling on the loop
- Up to 40 T-taps
- Up to 126 bus elements on one loop
- Cable lengths up to 3.3 km with up to 126 bus elements
- 2-wire loop
- Power supply to all bus elements via the C-NET (except transponder FDCIO223, LaserFOCUS, extinguishing control unit XC10)
- Integrated isolator in every loop participant

Legend for the designation of fire detectors:

- Cluster (C-WEB/SAFEDLINK) Network for connecting up to 32 panels or up to 16 panels if connected to a danger management system
- C-NET Network for connecting Cerberus PRO devices
- ...xxx-9 Connection to collective and conventional technology possible

Cerberus PRO fire detectors

- Sounder base DBS720
Sound level: 88 dBA/1 m
Art. no.: S54319-F5-A1
- Detector base DB721
Art. no.: S54319-F11-A1
- Flame detector base FDFB291
Art. no.: ASQ00003310
- Linear smoke detector base FDLB291
Art. no.: ASQ00003941
- Flame detector FDF241-9
For inside and outside applications
- Three infrared sensors
Art. no.: ASQ00003006
- DA flame detector FDF221-9
- For inside applications
- One infrared sensor
Art. no.: ASQ00003902
- Linear smoke detector FDL241-9
Art. no.: ASQ00002298

Detector base accessories

- Detector base seal RS720
Art. no.: S54319-F8-A1
- Designation plate FDBZ291
Art. no.: ASQ00002621
- Detector locking device LP720
Art. no.: S54319-F9-A1
- Base attachment BA720
Art. no.: S54319-F20-A1
- Mounting bracket MV1
Art. no.: BPZ:3950450001
- Ball and socket joint MWV1
Art. no.: BPZ:3674840001
- Rain hood DFZ1190
Art. no.: BPZ:5302660001

Test equipment

- Line tester FDUL221
Art. no.: ASQ00004397
- Detector tester for heat detectors RE7T
Art. no.: S54370-S3-A1
- Detector tester for linear smoke detectors RE10
Art. no.: BPZ:3685190001
- Detector tester for smoke detectors RE6
Art. no.: BPZ:3680300001
- Test lamp for flame detectors 'Ex' StabexHF
Art. no.: BPZ:4620910001
- Test lamp for flame detectors LE3
Art. no.: BPZ:3669510001

Alarm equipment (audible/visible)

- Sounder base FDB221
Art. no.: ASQ0001664
- Sounder base flat FDB222
Art. no.: S54319-F1-A1
- Alarm sounder FDS221-W
Sound level: 99 dBA/1 m
Art. no.: ASQ00006711
- Alarm sounder FDS221-R
Sound level: 99 dBA/1 m
Art. no.: ASQ00004117
- Alarm sounder beacon FDS229-R
Sound level: 99 dBA/1 m
Strobe frequency: 0.5 ... 2 Hz
Strobe intensity: max. 3.2 cd
Art. no.: ASQ00023093
- Alarm sounder beacon FDS229-A
Sound level: 99 dBA/1 m
Strobe frequency: 0.5 ... 2 Hz
Strobe intensity: max. 2.8 cd
Art. no.: ASQ00023092
- Alarm indicator (addressable) FDCAI221
Art. no.: S54370-F10-A1

Manual call points and accessories

- Manual call point FDM221
Standard, available in different colors.
- Manual call point FDM225
Resettable, available in red and can be used for flush mounting.
- Manual call point FDM226
Resettable and IP66, available in red.
- Manual call point FDM224
IP44 or IP64, available in different colors.
- Manual call point FDM224H
Heavy Duty, IP44 or IP64, available in red.
- Manual call point FDM223
IP44 or IP64, with indirect alarm actuation, available in different colors.
- Manual call point FDM223H
Heavy Duty, IP44 or IP64, with indirect alarm actuation, available in red.
- Electronic switching unit FDM221
Art. no.: ASQ00002451
- Manual call point with resettable plastic element FDM225-RP
Art. no.: ASQ00012020
- Manual call point with resettable plastic element incl. back box FDM226-RP
Art. no.: ASQ00013436
- Electronic switching unit FDM224
Art. no.: ASQ00009392
- Electronic switching unit FDM224H
Art. no.: ASQ00009392
- Electronic switching unit FDM223
Art. no.: ASQ00003087
- Electronic switching unit FDM223H
Art. no.: ASQ00003087

Sounder accessories

- Sealing element FDBZ295
(only together with base FDB221)
Art. no.: S54319-F10-A1
- Designation plate FDBZ291
Art. no.: ASQ00002621
- Base attachment FDBZ91
Art. no.: ASQ00001603
- Base attachment wet FDBZ93
Art. no.: ASQ00003945
- Designation plate DBZ1193A
Art. no.: BPZ:4864330001
- Detector locking device FDBZ293
Art. no.: ASQ00005035

Ex zone

- Line termination EOL22 (Ex)
Art. no.: BPZ:516222001
- Heat detector DT1102A-Ex
Ex class: Ex ia IIC T4
Art. no.: BPZ:4852270001
- Heat detector DT1101A-Ex
Ex class: Ex ia IIC T4
Art. no.: BPZ:4852140001
- Smoke detector DO1101A-Ex
Ex class: Ex ib IIC T4
Art. no.: BPZ:5008010001
- Flame detector DF1101-Ex
Ex class: Ex ib IIC T4
Art. no.: BPZ:5166750001
- Base FDB1190
Art. no.: BPZ:5165360001
- Alarm indicator FDAI93-Ex
Art. no.: S54370-F6-A1
- Alarm indicator FDAI92-Ex
Art. no.: S54370-F4-A1
- Input/output module "transponder" FDCIO223
Art. no.: S24218-B102-A1
- Collective interface
Art. no.: S24218-B102-A1
- Aspirating smoke detection LaserFOCUS VLF-250
Art. no.: VLF-250-SIE
- Aspirating smoke detection LaserFOCUS VLF-500
Art. no.: VLF-500-SIE
- Input/output module "transponder" FDCIO223
The module has two inputs/outputs and is used for:
- connecting conventional detectors
- connecting detectors by means of safety barriers in explosion-protected areas
- controlling alarm devices (flashing lights, sirens)
- for monitored control (e.g. fire dampers)
- Art. no.: S24218-B102-A1
- Input module FDCI221
- 1 monitored input
Art. no.: S54312-F1-A1
- Input/output module FDCIO221
- 1 monitored input
Relay outputs:
- 1 output
- Relay output DC 30 V/2 A rated
- Can be configured as monitored, but a separate DC 24 V power supply is required
Contact loading:
- AC 30 V/2 A
- DC 30 V/2 A
Art. no.: S54312-F2-A1
- Input/output module FDCIO222
- 4 monitored inputs
Relay outputs:
- 4 potential-free working/rest contacts
Contact loading:
- AC 250 V/4 A
- DC 30 V/4 A
Art. no.: ASQ00002369
- Input module FDCI222
- 4 monitored inputs
Art. no.: ASQ00001984

Conventional line

- Conventional detectors
- Siemens standard
- collective SynoLINE600
- Conventional line
- SynoLINE300
- Input module FDCI221
- 1 monitored input
Art. no.: S54312-F1-A1
- Input/output module FDCIO221
- 1 monitored input
Relay outputs:
- 1 output
- Relay output DC 30 V/2 A rated
- Can be configured as monitored, but a separate DC 24 V power supply is required
Contact loading:
- AC 30 V/2 A
- DC 30 V/2 A
Art. no.: S54312-F2-A1
- Input/output module FDCIO222
- 4 monitored inputs
Relay outputs:
- 4 potential-free working/rest contacts
Contact loading:
- AC 250 V/4 A
- DC 30 V/4 A
Art. no.: ASQ00002369
- Input module FDCI222
- 4 monitored inputs
Art. no.: ASQ00001984