



# Fire detection

Overview



**CACCIALANZA & C.** 

Fire fighting security systems



Original photographs: **Renzo Chiesa**  
Detectors photographs: **Detectomat**  
Thermal camera photographs: **Dias Infrared**  
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# COMPANY PROFILE

Caccialanza & C. has been a leading name in fire prevention and safety for over 60 years.

This unique experience combined with continuing R&D allows Caccialanza to offer the most advanced solutions, materials and systems currently available for fire detection and extinguishing.

Caccialanza wide range of equipment includes fixed and mobile extinguishing systems using foam, powder, water, CO<sub>2</sub>, halon and other agents in a choice of models to suit all civil and industrial requirements.

Caccialanza also manufactures manually and remote controlled electric, hydraulic and pneumatic water and foam/water fire monitors in a wide range of models with flowrate of up to 30.000 lt/min.

The company production also covers fire detection equipment and systems with technical specifications designed to satisfy those businesses and industries who demand the best in reliability and safety. Caccialanza range also includes fire detection sensors of all types and a range of control panels which are quite unique for their modular design, versatility and inter-faceability.

The FMZ-Detect system is the most advanced expression of multifunctional control technology and can satisfy virtually any conceivable need in terms of security, fire detection, access control, personnel movement control and alarm and evacuation procedures.

Caccialanza latest technological development is represented by the Automatic Fire Extinguishing Systems for Tunnel Protection with Remote Controlled Monitors and by the Signalization and Visual Guide Interactive System for Evacuation Routes for both motorway and railway tunnels.

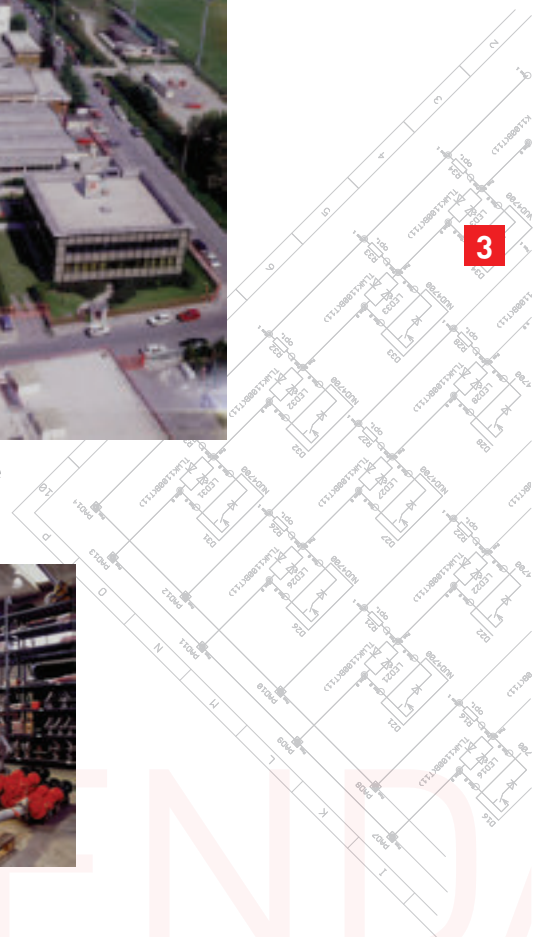
Nowadays Caccialanza means expertise and reliability in the difficult area of tailored systems developed specially to suit particular customer requirements.



Company site in Segrate



Products warehouse



# THE FMZ-DETECT SYSTEM

FMZ-Detect control panels are based on the concepts of modularity and distributed processing.

They are capable of handling signals from all types of fire, alarm, and control field sensors, as well as supervising and controlling the status of field devices and logging local and remote signals.

FMZ-Detect control panels use a multi-level architecture in which each function board has its own dedicated processor. Function board processors dialogue with a master processor on the control panel's main processor board. On higher levels, a number of sub-panels can be networked to a main control panel and even to a Host computer.

The hardware is completely modular. Function boards are simply plugged in to the motherboard, so that the system can be expanded whenever required.

FMZ-Detect control systems are specifically designed to provide integrated security, cover

ring all function of fire detection and automatic extinguishing, the control of intruder alarm systems and plant alarm systems. FMZ-Detect control panels use VDS standard current controlled lines to link up with field sensors and actuators dedicated to fire extinguishing and all other remote controlled functions.

The possibility of FMZ-Detect panels interconnection also allows a significant reduction of the need of distributing system cabling.

One simple connection (on serial bus or ethernet) is enough to exchange data and control all the lines.

Great care has been taken in designing the FMZ-Detect range of control panels to ensure the security of data and control signals and the immunity of the entire security system to external tampering. The success with which this objective has been achieved makes FMZ-Detect panels ideal for use even in the most arduous industrial environments.

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## SYSTEM ARCHITECTURE

The system architecture is usually based on a number of sub-panels used as concentrators and distributed inside the building. These sub-panels are all connected to and subordinate to the main control panel.

The control centres in which the main panels are installed are normally manned and are located at the strategic nerve centres of the building.

Sub-panels are connected to the main panel in the control centre by means of serial bus. The network thus created may be cabled either in star configuration, with each sub-panel connected to the main panel by a separate cable, or in a loop configuration. Even mixed star-loop configurations are possible to make the most rational use of particular building layouts. Loop size is virtually limitless provided an adequate number of amplifiers is installed.

Sub-panels handle the building security functions. Each sub-panel can therefore have its own analog and digital inputs and outputs, its own local display and control devices (operator interface) and its own synoptic function monitoring displays.

On top of these functions, the main panel in the control centre can also be connected to one or more host computers for display and management of alarm systems.

The host computers connected to the main control panel are kept permanently updated with all system status information, and can send the main panel all the commands needed to perform any permitted operation.

Host computers are usually equipped with colour graphic monitors capable of displaying maps of the building complex and showing the status of all controlled alarms and functions.

Host computers are equipped with backing store and can also be connected to printers to provide hard copy listings of events and operator actions. All panels are powered at 220 V 50 Hz. Power supply functions are performed by dedicated boards installed in the panels, which incorporate backup batteries to provide unin-

terrupted power in case of mains failure. All panels are powered at 220 V 50 Hz. Power supply functions are performed by dedicated boards installed in the panels, which incorporate backup batteries to provide uninterrupted power in case of mains failure.

## INNOVATIVE TECHNOLOGY

Caccialanza FMZ-Detect control panels are absolutely innovative in the technology they use. Hierarchical, multi-level microprocessor architecture and distributed processing are the most outstanding examples of leading edge technology. The application of these concepts means that each function board has its own dedicated processor which dialogues with the

the sub-panel's main processor. This in turn dialogues with the main processors of higher level control panels, and so on. As operator interfaces, FMZ-Detect control boards can use alphanumeric displays and keyboards or function push-buttons and dedicated LEDs, or a mixture of both types of interface together.

## APPLICATIONS

FMZ-Detect control systems can perform a virtually limitless range of applications in medium to large building complexes. They can provide any function from simple personnel movement control, alarm and plant control and other security linked functions right down to total, integrated security.

## RELIABILITY

All the boards designed for use in the FMZ-Detect series guarantee the highest levels of reliability possible from today's advanced technology. Only top quality electronic components from leading brand manufacturers are used and all boards are subjected to the rigorous and prolonged testing of all their functions by dedicated test equipment as part of Caccialanza strict quality control procedure. On top of this, all FMZ-Detect boards and sensors have integrated hardware and software self-test functions to diagnose and warn of even the smallest malfunction in real time.



# HOST COMPUTER

The Host computer is the “brain” of the entire system and controls all the connected service and security devices.

The main functions of the host computer are:

- to display the status of devices in an intelligible, user-friendly manner;
- to provide a user-friendly interface for operator instructions;
- to run the system automatically;
- to handle more than one parameter at the same time.

The computer used as host needs a hard disk and a high resolution graphic colour monitor. A printer can be added to the configuration if required. The monitor automatically displays alarm activity on any field line in the system. The software can be customised during installation to display maps of the building and its security system, showing all the alarm and control lines involved.

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These graphic can be used to enable and disable (connect and disconnect) individual field lines and, if necessary, even enable and disable local functions in sections of the field. Line alarm status is displayed automatically. One of the functions of the main program screen is to show in real time the total number of alarms and malfunctions detected in the system. Individual alarms are displayed in greater detail at cyclical intervals. Individual lines (in normal or alarm condition) can be selected either by keying in their identification code on the keyboard or by highlighting them with the mouse on the screen. Both methods automatically load the definitions and specifications of the line selected so that the dialogue box displayed contains the right commands for that particular type of line. In addition, it is possible to call up a list of lines in alarm status and to select from this list an individual line on which to perform an operation.

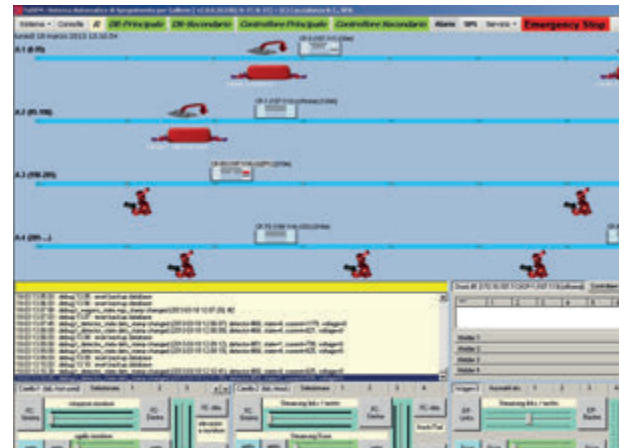
For alarm condition the function of alarm acknowledgement by the operator is foreseen. The operator can also be asked to key in his identity code to associate with alarm conditions. The code keyed in is then saved together with alarm data and acknowledge time in a log.

Besides acknowledgement it is also possible to reset line in alarm status (obviously once the physical event which triggered the alarm has been eliminated).

After the reset, the operator can cancel the alarm and further notes on it can be added to the log.

All system events are printed out on paper as well as recorded on hard disk.

Special software is available to evaluate alarm conditions per period, per type of alarm and per line.



# FIRE CONTROL PANEL DETECT 3004<sup>PLUS</sup> AND ACCESSORIES

The modular fire alarm panel detect 3004<sup>plus</sup> is the basic version of a broad product portfolio of the system detect 3000. Up to 20 fire control panels can be configured in a network. Up to 4 loops with up to 126 devices can be connected per panel which enables system solutions with up to 10.080 addressable loop3000 -components. A modern configuration and diagnostic tool ensures highest program stabilities and easy operation. All parameters and selectable options are described with help functions to ensure an easy operation of the detect 3004<sup>plus</sup>.

## FEATURES:

- Up to 20 fire control panels in one network
- Redundant version of the fire alarm system for highest reliability
- Optional modules allowing extinguishing control according to EN 12094
- Operation and programming via software tool dpt and diagnostic tool I-Check
- EN 54 conform, easy and clear display of all messages

## FIRE CONTROL PANEL DETECT 3004 VDS APPROVAL G 203068

Microprocessor controlled modular fire control panel for the use with the loop3000 fire detection system components. Approved according to EN 54-2 A1 2006, EN 54-4 A1 2002, A2 2006 and VdS for the use according to VdE 0833.

- Large LCD, 160 x 80 points with backlight
- Integrated interface of foreign extinguishing systems using standard interface delete according to VdS
- Monitoring of the power supply and the battery according to EN 54-4 2002 A1/A2 2006 on monitoring card MC 3004
- Complies with EN 61000-6-3 class B for broadcast and is therefore suitable for use in sensitive areas
- Easy menu structure according to EN 54-2 A1 2006
- Integrated one-man-audit mode with clear logging and auditing counter
- Integrated display and control panel according to EN 54-2 A1 2006
- 2 slots for 2 loop - interfaces for the connection of up to 4 loops with a maximum of 126 loop3000 devices per loop and a maximum loop length of up to 3500 m



- Integrated interface connection for up to 63 additional network components
- Integrated RS 232-interface for the DPT programming software and the connection of printers and other peripheral equipment
- Integrated power supply 72 W according to EN 54 with 1 output for external devices rated at 24V DC/800mA
- 1 external output 24 V/400 mA monitored for sounding/signalling devices
- 3 potential free relays for fire and fault
- 3 inputs for collective signals
- Emergency power supply via 2 batteries 12 V up to 26 Ah
- Integrated ground fault monitoring
- Segmented front door allowing the quick assembly of LED indicator modules and printers
- Possibility for complete system redundancy with the CPU and loop interfaces
- Up to 128 programmable detector zones
- Additional up to 42 T-branches per loop possible
- Event log memory of up to 500 messages
- Integrated alarm buffer and 2 detector/zone dependencies
- Time controlled changeovers of sensitivity levels of loop3000 detectors by day/night modes
- Programming options for different alarm modes
- Different access levels with password protection
- Visual diagnostics and remote-control operations via the visualization software „Visual detect“
- Commissioning and service tool for analyzing and fault finding functions with „I-check“ software

## TECHNICAL DATA

Supply voltage	230 V AC (-15%/+10%)
Power supply	24 V DC/72 W/3,5 A
Auxiliary supply	24 V DC/800 mA
Emergency supply	2 12 V/26 Ah
Interfaces	RS-232 Bitbus RS-485 Fire brigade interface
Display	LC-display 160 x 80 points Backlight
Ambient temperature	-5 °C bis +40 °C
Outputs	up to 4 loop up to 126 Loop3000 elements up to 3500 m pro loop 3 x 250 V/5 A 8 x 30 V DC/90 mA
Inputs	3 inputs for collective signal
Colour	Light grey (RAL 7035)
Protection class	IP 30
Material	Sheet steel
Dimensions (H x W x D)	490 mm x 420 mm x 210 mm
Weight	12,0 kg without batteries
Standards	EN 54-2: 1997 A1:2006 EN 54-4: 1997 A1:2002 A2:2006
System approval	S 295054 e S 210001
CE-CPD Number	0786-CPD-20817
Further approvals	EN 12094 for 1 area extinguishing systems International approvals on request
General remarks	Utilization of integrated standard extinguishing interface requires 1 optional LED indicator module in the front to ensure the indication according to EN 54-2

## 1 LOOP INTERFACE ACTIVE- 140 MA

VDS APPROVAL (related to the panel)



Microprocessor controlled loop interface for the uninterrupted and short-circuit-proof use with the loop3000 fire detection system components. For the connection of 126 fire detection system components

on one loop or 2 spurs

- Connection of loop3000 components in loop structure or spur-structure
- Easy and flexible installation and initialization via automatic and manual addressing
- Integrated RS-232 interface for an easy analysis of the loop components, the preadjustment of functions and commissioning of loop3000

- 8 integrated freely programmable open-collector-alarm outputs
- 2 integrated open-collector-alarm outputs for the programming of collecting functions
- Integrated short circuit isolators on all loop outputs
- Up to 42 T-branches per loop possible

## TECHNICAL DATA

Supply voltage	20 to 32 V DC via detect 3004 supply
Emergency supply	Via detect 3004plus
Interfaces	1 x RS-232
Dimensions (H x W x D)	140 mm x 140 mm x 30 mm
Standards	EN 54-2 and EN 54-17
System approval	S 295054 and S 210001



## 2 LOOP ACTIVE INTERFACE 2 X 140 MA

VDS APPROVAL (related to the panel)

Microprocessor controlled loop interface for the uninterruptible and short-circuit-proof use with the loop3000 fire detection system components  
For the connection of 2 x 126 fire detection system components on two loops or 4 spurs.

## 2 LOOP ACTIVE INTERFACE 2 X 140 MA REDUNDANT

VDS APPROVAL (related to the panel)

Microprocessor controlled loop interface for the uninterruptible and short-circuit-proof use with the loop3000 fire detection system components. For the connection of 2 x 126 fire detection system components on two loops or 4 spurs. With a second processor for increased reliability in the loop (redundancy).

## CONVENTIONAL INTERFACE FOR 8 FIRE ZONES

VDS APPROVAL (related to the panel)



Microprocessor controlled conventional interface for the uninterruptible and short-circuit-proof use with conventional detectors of the series CT 3000.

- Connection of up to 25 automatic conventional detectors of the series CT 3000 (10 manual call points) per detector zone
- 8 integrated freely programmable open-collector-alarm outputs

- 2 integrated open-collector-alarm outputs for the programming of collecting functions
- Supply via fire control panel detect 3004

### TECHNICAL DATA

Supply voltage	20 to 32 V DC via detect 3004 supply
Emergency supply	Via detect 3004plus
Dimensions (H x W x D)	140 mm x 140 mm x 30 mm
Standards	EN 54-2, EN 54-17
System approval	S 295054 and S 210001

## EXTINGUISHING CONTROL CARD ETB X1

VDS APPROVAL (related to the panel)



Microprocessor controlled extinguishing control card for the connection of an extinguishing area to the fire control panel detect 3004 approved as extinguishing control accord to EN 12094.

- 3 controllable monitored outputs for the control of the main- and area valve and the re-flooding of the extinguishing area Integrated additional signal device lines for the connection of signalling devices in the extinguishing area (evacuation of the area) 2 lines for the activation of emergency stop and re-flooding function
- 4 integrated relay contacts for pre-alarm, extinguishing activation, emergency stop and re-flooding function

- Adjustment possibilities of the pre alarm time of 0 ÷ 60 sec via DIP - switch
- Adjustment possibility for the flooding time of 0 ÷ 1.270 sec via DIP - switch

### TECHNICAL DATA

Supply voltage	20 a 32 V DC via detect 3004plus
Emergency supply	Via detect 3004plus
Dimensions (H x W x D)	140 mm x 140 mm x 30 mm
Ambient temperature	-10°C to +60°C
Standards	EN 54-2, EN 54-17
System approval	S 295054 and 210001

## LED INDICATOR MODULE FOR 8 ZONE ZM 8

VDS APPROVAL (related to the panel)



LED indicator module for the status indication of 8 detector zones with yellow LEDs for fault and red LEDs for alarm for the mounting into the front door of the fire control panel detect

- Direct connection to the CPU via a 10 pole ribbon cable (included in delivery)
- Possibility for the labelling of each detector zone in the front of the panel (not included in the basic version)

### TECHNICAL DATA

Supply voltage	20 to 32 V DC via detect 3004 supply
Emergency supply	Via detect 3004plus
Dimensions (H x W x D)	80 mm x 43 mm x 12 mm
Standards	EN 54-2, EN 54-17
System approval	S 295054 and S 210001

## ALARM CONTROL MODULE WITH 32 OPEN COLLECTOR OUTPUTS AM

VDS APPROVAL (related to the panel)



Microprocessor controlled extension module for 32 additional programmable alarm outputs (OC-outputs) for the extension of the output matrix of the fire control panels detect.

- Extension for 32 programmable alarm output areas

### TECHNICAL DATA

Supply voltage	21 up to 28 V DC
Outputs	32 open collector
Dimensions (H x W x D)	140 mm x 140 mm x 25 mm

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## CONNECTION BOARD FOR ALARM MODULE AM AP

VDS APPROVAL (related to the panel)



Adapter module for the external use or remote mounting of the alarm module AM outside of the fire control panels detect 3004/3016

- Module housing for easy mounting on DIN-rail
- Remote mounting by connectors possible

### TECHNICAL DATA

Material	ABS
Dimensions (H x W x D)	88 mm x 175 mm x 70 mm

## OUTPUT CARD SOUNDER 4 OUTPUTS MONITORED

VDS APPROVAL (related to the panel)



Output card for a monitored connection of up to 4 additional shortcircuit-proof signal lines to the fire control panels of series detect 3004/3016

- Module-housing for the easy mounting onto a DIN rail
- Adjustment possibility for individual or collective control of all signal lines via jumper

### DATI TECNICI

Material	ABS
Dimensions (H x W x D)	125 mm x 130 mm x 70 mm

## FIRE CONTROL PANEL DC3400

VDS APPROVAL 208123

Microprocessor controlled compact fire control panel for use with the loop3000 fire detection system components approved according to EN 54-2 A1 2006 and EN 54-4 A1 2003 and A2 2006.

- Clear display 320 x 240 pixel with backlight
- Integrated USB-interface for the easy programming via DCT-software
- Integrated primary switched power supply 150 W according to EN 54-4 A2 2006
- 1 Loop 200 m up to 126 mA/3500 loop3000-elements
- 2 freely programmable monitored inputs
- Emergency backup via 2 batteries 12 V up to 12 Ah
- Integrated alarm buffer and 2 detector/2 zone dependencies
- Programmable alarm modes



### TECHNICAL DATA

Input voltage	84 up to 264V AC/47 up to 63 Hz 120 fino a 300V DC
Power supply	32 V DC/150 W/3,5 A
Emergency supply	2x12 V/12Ah
Interfaces	USB
Dimensions (H x W x D)	300mm x 400mm x 135mm
Standards	EN 54-2: 1997/A1:2006 EN 54-4: 1997/A1:2002 A2:2006
System approval	S 208123
CE-CPD-number	CE 0786-CPD-20770

## DIAGNOSTIC AND PROGRAMMING TOOL EC3000



Programming tool for the easy manual addressing and programming of the loop3000 components.

- Battery powered Stand- Alone tool with up and download function for an easy manual addressing and programming of the loop3000 components

- Update option of the device software via integrated RS-232-interface
- Acoustic alert at low battery
- The programming of the automatic detectors can be done directly via the integrated detector base
- Four line LC Display with backlight and adjustable brightness for a clear display of all values and data
- Easy assignment of customer specific detector data via integrated copy and paste function

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## LOOP TESTER LT 3000



Programming tool for an easy automatic or manual (scanfunction) addressing and programming of the components of the loop3000 via a personal computer.

- Stand-Alone device with up- and download function for an easy automatic and manual (scanfunction) addressing and programming of the components of the loop3000 via a personal computer without the installation of a fire

control panel

- 1 loop or 2 spurs suitable for connection for the complete test of the detectors/modules installation or for the test of subareas (e.g. difficult to access areas)
- Including 230 V-voltage supply for the diagnostic tool
- Including reset key for the reset of the loop tester to a defined basic status
- Easy programming and diagnostic and input of customer specific data via diagnostic software I-Check 3000

# ADDRESSABLE AUTOMATIC DETECTORS FOR LOOP3000 E ACCESSORIES

To detect fires in the earliest stage was one of the main targets within the development of the detectors of the loop3000 system. The elements are based on the EN 54 standards and meet the demands and requirements of the international markets. Extensive analyzing methods and combinations of different sensor criteria and complex algorithms guarantee an easy operation and comprehensive maintenance and diagnostic features. The detectomat-protocol allows a detailed analysis and an adoption to the ambient conditions of the according application.

The system parameters allow an easy operation and maintenance. Special integrated software features can control all measurements and analyze accordingly to adjust the system performance to the application.

## FEATURES AT A GLANCE:

- The addressable detectors are manufactured according to EN 54-5, -7, -17\* and -29
- High variety in design
- Patented measurement methods
- Verification and elimination of disturbance values
- Controlled quality and retraceability
- Fast and reliable fire detection
- High operation reliability – low operation costs
- Automatic and manual addressable options

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- Exact pollution recognition by an additional independent measuring chamber
- All detectors with thermal function: Integrated temperature measurement as rate of rise procedure and maximum value in accordance to EN 54-5 A1 and A2
- Detector sensitivities automatically calibrated and freely programmable
- Fault monitoring of the measurement chamber signal and loop3000-electronics
- Automatic and manual addressing on the loop3000
- Integrated Isolator and T-branch option of types PL 3300
- Alarm output for the triggering of LED indicators
- Functions completely integrated via loop3000-protocol
- Periodic sensor test
- Storage of last maintenance date
- Self learning modes for the ambient conditions
- Display of the temperature environments of the fire detection system by a second temperature measurement
- Multicolour LED for alarm (red) and fault (yellow)
- Delivery including protective cover for installation phase

## TECHNICAL DATA

Input voltage	15 to 30 V DC loop powered
OC outputs	Max. 10 mA for LED-indicator or piezo buzzer
Sensitivity	5 levels adjustable
Ambient temperature	-10°C to +60°C
Humidity	max. 95%
Air speed	< 20 m/s
Protection class	IP 40
Colour housing*	White (similar to RAL 9003)
Material*	ABS
Dimension (H x Ø)	ca 52 mm x 100 mm

\*design detectors different

## MULTISENSOR OPTICAL-HEAT-INTELLIGENT, FUSION TECHNOLOGY

VDS APPROVAL G 208095



Intelligent optical and thermal multi sensor detector for loop3000 with 2 optical and 2 thermal sensors and a bidirectional isolator for earliest fire detection and indication in all environments with difficult

ambient conditions, according to EN 54-5, EN 54-7, EN 54-17 and EN 54-29.

- Fusion® - Technology for the detection of the smallest smoke particles and fires in the early stage by using the wavelengths of the wide-band white light spectrum
- Integrated measurement-system and algorithm for condensation recognition (Humitec®)
- Intelligent analysis and disruption mode for the elimination of false alarms (e.g. cigarette smoke)

### TECHNICAL DATA

Standards	EN 54-5, EN 54-7, EN 54-17, EN 54-29
System approval	S 295054, S 208123 and S 210001
CE-CPD-number	CE-CPD 0786-CPD-20580

## MULTISENSOR DETECTOR OPTICAL-HEAT - INTELLIGENT

VDS APPROVAL G 208096



Intelligent optical and thermal multi sensor detector for loop3000 with 2 optical and 2 thermal sensors and a bidirectional Isolator for earliest fire detection and indication in all environments with difficult

ambient conditions, according to EN 54-5, EN 54-7, EN 54-17 and EN 54-29.

- Integrated measurement-system and algorithm for condensation recognition (Humitec®)
- Intelligent analysis and disruption mode for the elimination of false alarms (e.g. cigarette smoke)

### TECHNICAL DATA

Standards	EN 54-5, EN 54-7, EN 54-17, EN 54-29
System approval	S 295054, S 208123 and S 210001
CE-CPD-number	CE-CPD 0786-CPD-20580

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## MULTISENSOR CARBON MONOXIDE GAS & HEAT

VDS APPROVAL G 207005



Intelligent multi sensor detector for the loop3000 series featuring sensor technology for carbon monoxide detection in combination with two thermal detectors and an integrated Isolator for

earliest detection and indication for all environments with difficult ambient conditions, in accordance to EN 54-5 and EN 54-17 For the earliest detection of smouldering fires of all kinds including electrical. The PL 3300 COBT continuously monitors the temperature and the CO-concentration.

- Misurazione automatica del monossido di carbonio con 2 soglie di allarme: preallarme: 15 ppm in 15 min, Allarme: 30 ppm in 60 min
- Segnale acustico integrato per il preallarme e l'allarme CO
- Massima affidabilità di funzionamento grazie alla interconnessione intelligente con apposito algoritmo, dei segnali dei sensori ottici e termici.

### TECHNICAL DATA

Standards	EN 54-5, EN 54-7, EN 54-17, EN 54-29
System approval	S 295054, S 208123 and S 210001
CE-CPD-number	CE-CPD 0786-CPD-20580

## OPTICAL SMOKE DETECTOR, WITH ISOLATOR

VDS APPROVAL G 202002



Optical smoke detector for loop3000 with 2 optical and 1 thermal sensor for earliest fire detection and indication and with bidirectional isolator according to

EN 54-7 and EN 54-17.

### TECHNICAL DATA

Dimension (H x Ø)	(H x Ø) 44 mm x 100 mm
Standards	EN 54-7, EN 54-17
System approval	a S 295054, S 208123 and S 210001
CE-CPD-number	0786-CPD-20035

## OPTICAL SMOKE DETECTOR, WITHOUT ISOLATOR

VDS APPROVAL G 203037



Optical smoke detector for loop3000 with 2 optical and 1 thermal sensor for earliest fire detection and indication and with bidirectional isolator

according to EN 54-7 and EN 54-17.

### TECHNICAL DATA

Standards	EN 54-7, EN 54-17
System approval	S 295054, S 208123 and S 210001
CE-CPD-number	0786-CPD-20044

## DETECTOR STANDARD BASE WITH BRIDGE, WHITE

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Detector Base with integrated bridge suitable for all detectors of loop3000, white.

- Integrated wire link between minus contacts for ensurance of a closed loop at removal of detector
- Bridge opens automatically at installation of the detector in the base

- Space for additional connectors Type WAGO 243
- Integrated connectors for the connection of one branch for the loop extension (T-branch)
- Mounting space for the piezo buzzer (Art.-No. 32091) and the detector labelling clip Art.-No. 30479
- Including transparent seal cover to protect the base against contaminants

### TECHNICAL DATA

Colour housing	White (similar to RAL 9003)
Material	ABS
Dimension (H x Ø)	(H x Ø) 21 mm x 95 mm

## IN-/OUTPUT MODULE, WITH ISOLATOR IOM 3311



Intelligent Input/Output module for the loop3000 with bidirectional isolator according to EN 54-18.

- Connecting module with one freely programmable input and one freely programmable output
- Programming of different switching variants of input and output also with time control

- Integrated isolator and T-branch option

### TECHNICAL DATA

Outputs	Low active monitored
Inputs	Low active monitored
Colour housing	Grey (similar to RAL 7035) IP 54
Dimensions (H x W x D)	93 mm x 93 mm x 55 mm
Standards	EN 54-18, EN 54-17
System approval	S 295054, S 208123 and S 210001
CE-CPD number	0786-CPD-20459

# ADDRESSABLE MANUAL CALL POINTS FOR LOOP3000 AND ACCESSORIES

## FEATURES AT A GLANCE:

- The addressable manual call points correspond to EN 54-11 and 17
- Integrated Isolator according to EN 54-17
- Automatic and manual addressing mode

## TECHNICAL DATA

Operation voltage	15 to 30 V DC loop powered
OC outputs	Max. 10 mA for LED-indicator or piezo buzzer
Ambient temperature	-10°C a + 60°C
Humidity	max. 95%
Protection class	IP 42

## MANUAL CALL POINT, WITH ISOLATOR, WITH LED, ABS, RED VDS APPROVAL G 203021



imprint „burning house“

Manual Call Point for loop3000 for the manual activation of an alarm with bidirectional Isolator and status display via LED according to EN 54-11 and EN 54-17.

Red plastic housing with

- Push Button mechanics for the activation of a manual alarm

- Activation after smash of the front glass
- Integrated reset mechanics
- Integrated red alarm-LED

## TECHNICAL DATA

Weight	270 g. ca
Colour housing	Rosso (RAL 3000)
Material	ABS
Dimensions (H x W x D)	135 mm x 135 mm x 33mm
Standards	EN 54-11, EN 54-17
System approval	S 295054, S 208123 e S 210001
CE-CPD-number	0786-CPD-20382

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## MANUAL CALL POINT, WITH ISOLATOR, WITH LED, ABS, YELLOW VDS APPROVAL G 203021

## MANUAL CALL POINT, WITH ISOLATOR, WITH LED, ABS, BLUE VDS APPROVAL G 203021

## MANUAL CALL POINT, WITH ISOLATOR, LED, IP66, RED VDS APPROVAL G 203021



imprint „burning house“

Manual Call Point for loop3000 for the manual activation of an alarm with bidirectional Isolator and status display via LED according to EN 54-11 and EN 54-17.

Red aluminium housing with

- Push Button mechanics for the activation of a manual alarm

- Activation after smash of the front glass
- Integrated reset mechanics
- Integrated red alarm-LED

## TECHNICAL DATA

Weight	495g. ca
Colour housing	Rosso (RAL 3000)
Material	ABS
Dimensions (H x W x D)	[A x L x PJ] 125 mm x 125 mm x 34 mm
Standards	EN 54-11, EN 54-17
System approval	S 295054, S 208123 e S 210001
CE-CPD-number	0786-CPD-20382

# ADDRESSABLE OPTICAL/ACOUSTIC SIGNALLING FOR LOOP3000 AND ACCESSORIES

## FEATURES AT A GLANCE:

- The addressable input / output elements correspond to EN 54-3, 17, 18 and 23
- Different housings and signalling options
- Integrated Isolator according to EN 54-17
- Automatic and manual addressing mode
- Flexibility with programming and connection variances in the system 3000

## TECHNICAL DATA

Operation voltage	15 a 30 V DC loop powered
Ambient temperature	-10°C to + 60°C
Humidity	max. 95%

## LOOP3000 - LOOPSOUNDER RED, WITH ISOLATOR VDS APPROVAL G 208103



Intelligent acoustic signalling device for the loop3000 for the external acoustic alarm with bidirectional isolator according to EN 54-3.

- Aesthetical robust wall mounted housing according with IP 54

## TECHNICAL DATA

Operation voltage	15 to 30 V DC loop powered
Quiescent current	280 µA
Alarm current	5 mA
Sound level	max 97 dB
Ambient temperature	-10 °C to + 60 °C
Protection class	IP 54
Colour housing	Red
Material	ABS
Dimensions (H x W x D)	[A x Ø] 100 mm x 101 mm
Weight	340 g
Standards	EN 54-3, EN 54-17

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- Activation, monitoring and supply via loop3000-protocol
- 4 different tones adjustable via DIP-switch (including DIN tone)
- Integrated dual tone alarm function via separate activation possible

## LOOP3000 - SOUNDER, WITH ISOLATOR, WHITE VDS APPROVAL G 20810 3

## LOOP3000 - LOOPSOUNDER BASE, WITH ISOLATOR VDS APPROVAL G 208144



Intelligent acoustic signalling device for the loop3000 with bidirectional isolator according to EN 54-3. Suitable as wall mounted sounder version or as sounder base for the

detector fixed to the ceiling.

- Activation, monitoring and supply via loop3000-protocol
- Integrated automatic reset function at signal „external signal line on/off“ by the fire control panel
- 32 different tones adjustable via DIP-switch (including DIN tone)

## TECHNICAL DATA

Operation voltage	15 to 30 V DC su bus a 2 conduttori
Quiescent current	400 µA
Alarm current	6 mA
Sound level	max. 85 dB
Ambient temperature	-10 °C to + 60 °C
Protection class	IP 54
Colour housing	Base sounder in white, covers in red or white
Material	ABS
Dimensions (H x W x D)	[A x Ø] 127 mm x 117 mm
Standards	EN 54-3, EN 54-17
System approval	S 295954, S 208123 and S 210001
CE-CPD number	0786-CPD-20525



## COVER RING BASE SOUNDER, WHITE

## COVER FOR SOUNDER FLAT RED

## COVER FOR SOUNDER FLAT WHITE

## LOOP BEACON, ORANGE, WITH ISOLATOR

## LED INDICATOR, WITH ISOLATOR

VDS APPROVAL G 208141



red colour.

Intelligent detector parallel indicator for the loop3000 for the external optical indication of the installation place of one or more detectors with bidirectional isolator. White wall mounting housing,

- Activation, monitoring and supply via loop3000-protocol
- Functions completely integrated via loop3000-protocol
- Aesthetical robust wall mounted housing according with IP 30

### TECHNICAL DATA

Operation voltage	15 to 30 V D C loop powered
Quiescent current	400 µA
Alarm current	6 mA
Ambient temperature	-10 °C to + 50 °C
Protection class	IP 30
Colour housing	White housing, red calotte
Material	ABS
Dimensions (H x W x D)	84 mm x 84 mm x 35 mm
Weight	65 g. ca
Standards	EN 54-17
System approval	S 295954 and S 208123
CE-CPD number	0786-CPD-20535

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## SOUND UNIT RED, WITH ISOLATOR

VDS APPROVAL G 208141



Intelligent acoustic signalling device for the loop3000 for the external acoustic alarm with bidirectional isolator according to EN 54-3. Wall mounted housing, colour red.

- Activation, monitoring and supply via loop3000-protocol
- Integrated Isolator and T-branch option
- 32 different tones via DIP-switch, including DIN-Tone
- Integrated dual tone alarm function via separate activation possible

- Aesthetical robust wall mounted housing according with IP 54

### TECHNICAL DATA

Operation voltage	15 to 30 V DC loop powered
Quiescent current	280 µA
Alarm current	128 mA; via extern supply: 9 a 29 mA
Sound level	max. 112 dB
Ambient temperature	-10 °C to +60 °C
Protection class	IP 54
Colour housing	Red
Material	ABS
Dimensions (H x W x D)	93 mm x 93 mm
Weight	340 g
Standards	EN 54-3, EN 54-17

# PYROVIEW INFRARED DIRECT DETECTION SYSTEM



The use of high resolution infrared cameras enable to detect fire as soon as it starts and to monitor its time development very precisely. This system is usually used in waste

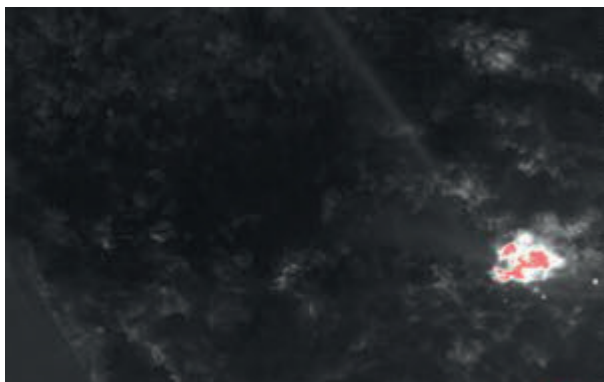
depots for incineration plants and in solid fuel (wood or coal) depots for heating plants, both outdoor (with or without covering) and in indoor bunkers. High resolution infrared cameras are mounted in protective case, if required even in Ex-proof execution, equipped with a special compressed air device that keeps the protective glass and lens of the system perfectly clean. In most cases cameras and their cases are equipped with an automatic remote controlled special support with horizontal and vertical movement in order to monitor large areas by means of a very limited number of cameras.



The control panel is equipped with a dedicated software for automatic fire detection (right from its beginning) and localization (space coordinates of the fire are automatically determined).

The control panel can also drive (automatically or after operator's authorization) an automatic fire extinguishing system, for the above applications usually consisting of remote controlled water/foam monitors.

Besides the automatic operation, cameras can be manually driven by an operator that has one or more high resolution colour LCD screens displaying automatic and manual procedures. It is thus possible to monitor fire development, despite thick smoke usually caused by the above mentioned materials, and optimize rescue and extinguishing procedures.



# SYSTEM COMPONENTS

All types of fire detection and anti-intruder sensors can be connected to the FMZ-Detect control panel.

Likewise the FMZ-Detect control panel can drive any type of actuator for automatic extinguishing and auxiliary control, as well as the various types of local or central warning panels.

The FMZ-Detect control panel can also support (directly or by means of dedicated sub-panels) systems like closed circuit television, badge reader networks with or without personnel timekeeping functions and remote, microprocessor controlled fire monitor systems.

As already stated, FMZ-Detect control panels can be connected to one or more host computers to provide a graphic user interface for alarm management, log generation and operations control from a central control room. For fire detection purposes FMZ-Detect control panels can be connected to the following types of sensor:

- optical smoke detectors;
- multisensor carbon monoxide and temperature detectors;
- differential temperature and/or temperature threshold detectors;
- modulated infrared flame detectors;
- ultraviolet flame detectors;
- combined ultraviolet-modulated infrared flame detectors;
- standard, wall mounted or recessed manual fire alarm push-buttons;
- sealed manual fire alarm push-buttons;
- linear smoke detectors (consisting of transmitter and receiver).

All the above types of sensor can be supplied in special versions for use in areas where there is risk of explosion.

In particular, many sensors without a separate power supply can (and should) be protected with Zener safety barriers. These protection systems can be installed in a section of the control panel or in special cabinets located near the danger areas.

FMZ-Detect control panels can drive all sorts of automatic extinguishing devices and systems, including environment saturation systems and specific object protection systems and can control extinguishing devices either independently or in strategic groups. Larger extinguishing systems can be built up using multiple cylinder batteries, in which extinguishing zones can be selected and operated autonomously by means of flow control valves. Extinguishing systems must operate a pre-alarm function which can be provided by a dedicated board.

A range of foam extinguishing techniques can also be applied. High expansion foam can be used for environment saturation systems and medium expansion foam can be applied through local object protection nozzles.

FMZ-Detect control panels can control both the foam generators and foam distribution and delivery devices.

FMZ-Detect control panels can also handle open sprinkler water extinguishing systems and indoor and outdoor object protection powder extinguishing systems.

# A WORLD REFERENCE FOR FIRE FIGHTING AND SAFETY IN INDUSTRIAL HIGH RISK ENVIRONMENTS

## Products 2013

- Fire Fighting Monitors;
- Foam Systems;
- Mobile Foam Component;
- Mobile Foam Units;
- Fire Hydrants;
- Water Spray Nozzles;
- Dry powder unit;
- Powder and Twin Agent Monitors;
- Extinguishing Systems for Mobile Units and Vehicles.
- Water Wall System for mitigation and dispersion of HF and toxic gas;
- Systems for Tunnel Protection;
- Protection Systems for Large Sites;
- Electronic Fire Detection and Security Systems;
- Access Control Systems;
- Multifunctional Foam Control System.



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