

# Fire Detection Control Panel

## BC216/BCnet216: 19" Compact Version

- **Compact control panel with display and operating field for small and mid-sized systems**
- **BCnet sectional control panel without display and operating field**
- **Low profile 19" cabinet installation**
- **Analogue ringbus technology with unshielded detector cabling**
- **Addressable conventional technology**
- **EN 54/VdS-certified**



Fire is a permanent threat to life and property. Therefore, immediate response to a fire is imperative. The main objective of the fire detection control panel Series BC216 is to alarm and to react in time and, consequently, save lives and protect property. For decades LST have focused their aims to undertaking unrivaled efforts in order to realize new innovations in the security area. Research, development and production are loca-

ted within LST premises, thus guaranteeing flexible and reliable individual solutions.

Using a 32-bit multiprocessor system, the fire detection control panel Series BC216 ensures topmost efficiency and speed – prerequisites for saving lives and minimizing damage to property.

## Description

The Fire Detection Control Panel BC216-1CE is a modularly designed compact control panel in 19" slide-in technology for small and mid-sized fire detection systems. The extensive functions and features correspond to the Fire Detection Control Panel BC216-1 to the full extent.

By installing a Network Interface Module NIF5-1M, the BC216-1CE can be expanded to form a BCnet sectional control panel.

The BCnet Sectional Control Panel BC216-3CE is a modularly designed sectional control panel in 19" slide-in technology without display and operating field („Black Box“ control panel) for the application in a Fire Detection Control Panel BCnet216.

All BCnet sectional control panels are connected with each other via a redundant high-security network (the Global Security System network GSSnet). Due to the decentralized structure, the failure safety of the entire system is significantly improved compared to conventionally designed fire detection control panels.

Both versions provide two slots for the connection of function modules (Conventional Detector Interface GIF8-1 or Loop Interface LIF64-1) to which a total of 16 detector lines in addressable conventional technology or a total of two ADM loops or a combination of the both can be connected.

The ADM loop principle offers intelligent analogue ringbus technology with bi-directional data transfer. Each loop provides for the software-aided administration of up to 198 physical address points in a maximum of 128 detector zones. Addressable conventional technology allows for the connection of automatic and non-automatic fire detectors as well as the unambiguous identification of the activated detector in the event of an alarm.

Easy parameterisation on the control panel's display and operating unit (BC216-1CE) or by means of a PC software enables you to tailor the control panel to your individual requirements.



*Building Safety. Building Security.*

## Clear Concept

The compact control panel BC216-1CE and the BCnet sectional control panel BC216-3CE are modularly designed control panels in 19" slide-in technology. Depending on their configuration, they provide the following features:

- The Conventional Detector Interface GIF8-1 permits the connection of automatic detectors and manual call points in conventional technology as well as special detectors with contact output. Individual detector identification can be achieved by means of an optional address module.
- Detectors and modules in ADM loop technology can be connected to the Loop Interface LIF64-1. Depending on the parameterisation, either the Apollo/Discovery protocol or the System Sensor/200 protocol is used to achieve bi-directional data transfer.
- Since the BCnet216 is compatible to LST fire detection control panels of previous generations, the exchange or expansion of existing systems in conventional technology or ADM loop technology is possible. The existing detector installation can be used without changes.
- The optional Fire Brigade Interface FWI2-1 serves for the connection of two independent transmitting devices for a direct interconnection to a designated alarm respondent (e.g., the fire brigade) as well as for the connection of a country-specific fire brigade control unit. By using the Fire Brigade Interface Additional Board FWZ2-1, a line supervision for both of the transmitting devices is accomplished.
- Customizable outputs and logical combinations of detectors and detector zones for the activation of external controls and alarming devices facilitate maximum flexibility. Thus, no additional expenses arise for external relays, logic gates or timers. Thanks to the wide range of parameterisation possibilities, individual requirements even under the most difficult ambient conditions can be combined into a reasonable fire protection strategy.
- A monitored siren output and dry relay contacts for alarm and fault are available by default.
- By integrating input and output modules on any position in the loop you can realize enablements or disablements as well as control tasks in your system without having to care for additional wires.
- The free combination of detectors and modules into logic sectors allows for the joint operation of defined parts of the system even beyond the limits of loops or sectional control panels.
- The use of unshielded loop cables allows for cost-saving and uncomplicated installation as well as for the possibility of reusing the existing cabling.
- The LC text display (BC216-1CE) shows events with the full information such as floor, room identification as well as date and time. This allows for quick and targeted reaction in the event of a fire as well as for easy maintenance.
- An event memory allows for the display of the latest 500 events at any time (in the BCnet216 on the main operating unit) with all required information. Thus, all system conditions and user operations that occurred are documented in a clearly laid out way.
- At a central processing board failure, the diversified redundancy concept ensures secure alarm recognition.
- The processor-monitored power supply ensures permanent surveillance and charging of the batteries. This way, even during a mains power failure the untroubled and uninterrupted operation (for more than 72 hours depending on the design) is guaranteed.
- Three hierarchized authorization levels for operation and parameterisation facilitate a high degree of security against unauthorized access.
- The BC216-1CE control panel is easily operated menu-driven via the display and operating field. Clear instructions on the display guide the user during commissioning, operation and maintenance.
- The parameter data of the BC216-1CE can be entered either via the display and operating field or, in a more comfortable way, can be created by means of PC software PARSOFT and loaded into the control panel. The parameters of a BC216-3CE sectional control panel are categorically set by means of PC software PARSOFT. Thus, a quick and efficient transfer of the system configuration into the control panel is guaranteed.
- AUTO setup facilitates parameterisation when the control panel is commissioned or expanded and thus helps to save time.

The flat case allows for easy mounting in virtually all 19" pivoting frames, racks and housings. The case can accommodate the function modules and the auxiliary modules, apart from the central processing board. The batteries can be placed either into the cabinet rack or (up to 22Ah) into the optional battery bracket. Series BC216 thus stands for modularity and easy expansion.

These products comply with all relevant standards of EN 54 and are VdS-certified. In addition, the products also hold several country-specific approvals and certificates. LST's high quality level is secured by a permanently monitored quality management system certified by ISO 9001.

## Distributed Intelligence in the GSSnet

The fire detection control panel BCnet216 opens up manifold possibilities for the realization of specific requests of fire detection, especially in spacious buildings, high-rise buildings or wide-stretched areas.

The decentralized security network that has been created by BCnet216 offers increased security and reduces the total expenses due to a much lower cabling volume. The consistent ring-shaped cabling guarantees communication between the sectional control panels even in the event of a line fault.

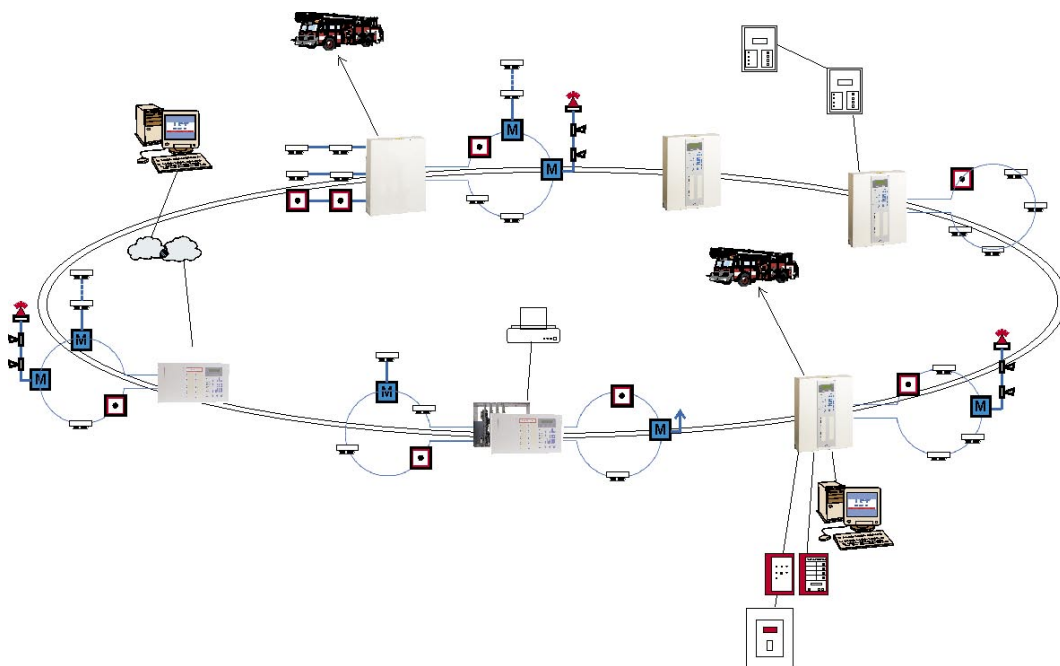
A sectional control panel of the BCnet216 is parameterised as main operating unit for the administration of the GSSnet, all other members can be equipped with or without a display and operating unit.

The system is designed modularly and can be gradually expanded according to future demands. The maximum size of a BCnet216 comprises 127 network members, 9700 detector zones, 9700 actuations, 999 alarming devices, 99 transmitting devices as well as 199 logic sectors. Different interfaces are available for the connection of external information devices, e.g., a facility management system or a remote maintenance system.

As you can see in the figure below, cabling of the detectors is required only between two neighboring sectional control panels. This clear and flexible arrangement of the sectional control panel creates a powerful network. In this way, most economical cabling and thus efficient use of the installation expenses is guaranteed. Larger distances between individual sectional control panels can be bridged through the use of optical fiber modems or long distance modems.

The entire virtual control panel BCnet216 provides for the monitoring in mid-sized and large systems, applying the same technology and the same software tools as with the single control panel BC216-1. This guarantees a minimum of training and expansion costs as well as expenses of the user and thus guarantees the optimal use of resources during the usable life of the building.

BCnet sectional control panels are available in wall mount cabinets, as 19" compact version and in 19" slide-in technology.



## Permanent Connection

A variety of peripheral devices can be connected to the fire detection control panel Series BC216-1CE and to the BCnet sectional control panel BC216-3CE:

- Fire brigade key safe
- Fire brigade control unit
- Acoustic and optical signaling devices
- External protocol printer
- Remote display and operating panels
- Remote indication unit
- Actuators
- Electronic monitoring system
- Transmitting device for the actuation of pagers via ESPA protocol
- Modules for remote parameterisation and remote maintenance via computer network, modem or GSM connection
- Transmitter module for the transmission of messages via SMS or e-mail
- and much more.

## Network Expansion of BC216-1CE

By installing a Network Interface Module NIF5-1M in the Fire Detection Control Panel BC216-1CE, the latter can be integrated as BCnet sectional control panel with display and operating field into a Fire Detection Control

Panel BCnet216. All sectional control panels are connected with each other via a redundant high-security network (the Global Security System network GSSnet).

## Extinguishing Control System

If required, the BC216-1CE or the BCnet216 can be easily expanded to an extinguishing control panel according to EN 12094-1. The extinguishing control panel LC216-1 controls up to 8 flooding zones in one extinguishing system, without hardware redundancy. The networked extinguishing control panel LCnet216 can control up to 127 flooding zones in a maximum of 127 extinguishing systems. The function of the extinguishing control panel is fully

integrated into the fire detection control panels Series BC216, a combined operation is therefore possible. The LC216-1 and LCnet216 are certified to EN 54-2, EN 54-4, EN 12094-1 and VdS as a pure extinguishing control panel and as a combined fire detection and extinguishing control panel. The networked extinguishing control panel LCnet216 can be optionally implemented with full hardware redundancy.

## Specifications

Mains voltage	230VAC +10/-15%, 50Hz
Connection power	60VA
Output voltage	typ. 28VDC
Output peak current	max. 1.8A
Connection of external devices	typ. 0.8A, site-specific
Own current consumption at 24V	typ. 90mA (without optional componentries)
Ambient temperature	-5°C to +50°C
Dimensions W × H × D	478 × 266 (6 height units) × 95 (mm)
Colour	gray-white, RAL 9002
Weight without accumulator	approx. 6kg
Approvals (EN 54-2, EN 54-4)	VdS G201017 FT 14/147/3/99 (Austria)

#### Control panel with display and operating unit

Order name Fire detection control panel BC216-1CE

#### Control panel without display and operating unit

Part No. 214105

Order name BCnet sectional control panel/n. op. BCnet216-3CE

#### Network Interface Module for the integration of the BC216-1CE into the GSSnet

Part No. 214033

Order name Network Interface Module NIF5-1M

#### Battery bracket

Dimensions of the complete control panel with battery bracket 478 × 266 (6 height units) × 181 (mm)

Part No. 214128

Order name Battery Bracket BK216-1CE

