Fire Alarm Control Panels

"Solution N1"



S SYNCOLN





The Concept

The "Solution N1"Fire Control Panel range is a new generation, modular and ultra-modern Fire Control Panels.These have been developed to meet international standards and to satisfy specific international requirements at the highest level.

These panels contain numerous new features several are unique in the security business and they convince by their comprehensive equipment. Many optional (at extra cost) features in other panels are included in the "Solution N1" standard configuration.

This range has been designed to be a universal and flexible product in terms of both the different configuration possibilities as well as the front fascia design. It thus meets the requirements for all possible applications. By the outstanding modularity of this panel it can be perfectly adapted to all anticipated user requirements. Flexibility especially for connecting different detectors was one of the most important aims during the development of this new Fire Control Panel. Obviously, it is a standard for this panel to connect nearly all conventional detectors of the market but very remarkable:

The "Solution N1" panels are compatible to the newest analogue addressable detectors of Syncoln and Apollo .







- Modular, intelligent Hybrid Fire Control Panel Range
- Supports Syncoln, Apollo XP95 / Discovery detectors
- 2 18 loops in one standard housing
- Brand new touch control panel
- Graphics LCD module 240 x 64 as standard included on basic model
- Integral Power supply 24 V DC with max.
 6.7 A or 4.2 A as standard included
- 32 bit high performance CPU
- Flash memory up to 8 MB and RAM memory up to 8 MB
- Many powerful features included
- Configuration software operated via Modem or USB interface
- Full redundant main board and full redundant loop cards as options

The Reliability

If for certain applications a higher reliability as EN-54 and VdS standards is required that will be no problem for the "Solution N1" control panel: The Control Processing Unit can be doubled as well as the system boards which are responsible for the communication with the sensors and which passes the information from the detectors to the CPU. So, the end user gets a 100 % redundancy of the whole system.

But the R&D people did not stop the ambitious aims for reliability there: They created a brand-new control panel technology with absolutely no mechanical parts any longer which is unique in the security business and which has a lot of advantages for the installer as well as for the end user. It contains a pressure sensitive piezo lacquer and doesn't have to be adjusted. The surface makes a worth while impression because of it's glass like design.

This material is resistant against cleansing, there is absolutely no attrition over years and moreover it is very stable against EMC influences.



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Solution N1: So many ways to extend



Solution N1-18 in B2 enclosure



Solution N1-6 in B2 in A1 enclosure

The product range

The "Solution N1-6" panel has as standard a 24 V DC power supply with max. current of 4.2 A. The user can connect up to 6 loops each with 127 loop devices can organize a max. of 512 zones. There are three standard housings which should be chosen depending on battery backup requirements.

The bigger model "Solution N1-18" has a 24 V DC power supply with max. current of 6.7 A fitted as standard. This panel can control 18 loops as its maximum. Again, there are 3 standard housings available. The selection is dependent on battery space and number of loops needed. This "Solution N1-18" has several more standard features compared with the smaller panel: 1,024 programmable zones, USB host interface, metal rack for 2nd assembly level, interface for optional TFT display, slot for SD card memory and interface for audio codec module.

Both models can be supplied in a 19" rack mounting version instead of a standard housing. There are no special adapters or frames necessary because the "Solution N1" is generally compatible to 19"housings. The pluggable wiring terminals will be greatly appreciated because the installation will be done very quickly and effectively.

For software configuration or data analysis by telephone line the technician can connect the panels via modem (analogue or ISDN) with his PC. Therefore, you will find a slot at the main board which not only handles the data communication but it provides the power supply for these modems too.

Alternatively, the Solution N1 control panels can be equipped by a Web server.



Standard Configurations

The standard configuration is impressively equipped, unlike almost all other models on the market. Some of the standard features included are:

- Graphics LCD module with 240 x 64 dots
- Integral power supply with 4.2 A or alternative 6.7 A
- Steel housing with brand new touch control panel
- Interface for German Fire Brigade Control Panel
- 3 separate power outputs for transmission device / sounders / strobes
- USB interface for configuration by PC
- Up to 8 programmable push buttons
- Redundant RS-485 interface
- 3 x RS-232 interfaces
- 2 monitored conventional zones
- 16 digital outputs, programmable
- 8 digital inputs, monitored for "open-circuit"
- 4 relay change over contacts, programmable
- Earth fault detection
- Event log with max. 10,000 messages

These standard features are included at no extra cost.

Most important features

- 2 to 18 loops are possible in one standard wall-mounted housing. Analogue addressable detectors and conventional detectors can be mixed in one Fire Control Panel.
- User-friendly housings because of hinged frames which gives easy access for the technician to the wiring terminals.
- 32 Bit advanced CPU core supplied as an upgradeable PCB module! This gives the possibility for smart software solutions and the possibility to change the microprocessor very easily in the event of a new-higher performed-model in future or if one model become obsolete. In such a case the main board PCB of the "Solution N1" panel need not be exchanged or upgraded.
- Generous memory space with 8MB-Flash and 8MB-RAM to allow convenient programming of links and customer specified texts.
- Numerous running modes and detection algorithms are programmable at this new panel. In combination with analogue addressable detectors it can be perfectly adapted to every application of the market.
- Multi-protocol loop cards are available, which means that different analogue addressable detectors can be easily connected. These PCBs are able to check the loop for short circuit and wire break and detect a possible earth fault of the shielding.
- Guaranteed 100% compatibility to Syncoln protocol as well as to Apollo XP95/Discovery protocol.
- Network by ARCNET. This BUS system distinguishes by multi master ability which leads to a continuously running network even if the master node fails.
- 8 programmable push buttons allow a user-friendly handling of certain user defined operations. The user can store several operating steps into the memory and then he can program them on one of the push button S1 to S8.
- Auto dynamic operating mode by the graphics display with assigned functional push buttons.
- The texts on front fascia are easy to change for international versions of the "Solution N1".



Solution N1-18 in C1 enclosure

The main components for N1





Loop card for "Solution N1" with 2 loops / 4 stub lines

- 2 loops each maximum 254 detectors / modules (Syncoln: 2 x 126) – or alternative 4 stub lines
- cable length max. 3,500 m (2 x 2 x 0.8)
- 8 user programmable open collector outputs
- cable shielding monitored for open and short circuit
- Earth fault detection

Redundant Loop card for "Solution N1" with 2 loops / 8 stub lines

 As Loop card for "Solution N1" with 2 loops / 8 stub lines but additionally with 100 % redundancy. This means the microprocessor, the RAM and the operating system memory are doubled on this card. So, there will be no failure in case of microprocessor fault.

Conventional detector card for 8 stub lines

- compatible to almost all conventional detectors on the market
- 32 detectors per line according German standards
- 8 programmable open collector alarm outputs
- Earth fault detection
- Failure mode in case of micro-processor fault

Conventional detector card with 100% redundancy for 8 stub lines

 as Conventional detector card for 8 stub lines but with 100 %. That means the microprocessor, the Ram and the operating system memory are doubled on this card. So there will be no failure in case of microprocessor fault.

Relay card with 8 change over contacts

 compatible to N1 fire detection system but usable as a universal device in other systems to 8 programmable change over contacts, each 250 V AC / 5 A



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Analogue or ISDN modem for operating the configuration software via telephone line

• The modules can be plugged into a slot in the" Solution N1" Fire Control Panel. Data speed up to 64,000 bps and they use the Fire Control Panel battery backup in case of mains failure.

Full Redundant CPU Module

- Additional plugin module to achieve a full redundant main board
- According to EN54 standard necessary if more than 512 detectors are connected

VdS approval G 205 024



- For configuration of detectors, zones, inputs, outputs, loops and spurs
- For analyzing of analogue values / cable resistors / statistics / event memory
- Drag- and drop functionalities
- For use with analogue or ISDN modem as well



Networking technology

ARCNET Interface card

- To plug into a slot of the FCP main board
- Connecting to the multi master communications system with a maximum of 128 panels
- Can be plugged into the FCP twice to realize a full redundant network
- Very high reliability

Technical specifications:

Operating voltage: 24 V DC Current consumption: 30 mA ARCNET Interface: up to

128 nodes Cable length: max. 1,200 m

Weight: 0.1 kg Dimensions:

80 x 48 x 20 mm



SYNCOLN Webserver Module

- Permits the access to SYNCOLN Fire Control Panels via the Internet without special software
- Use of the www infrastructure => e.g. by means of Internet Explorer, Firefox, Safari etc.
- User administration for 30 users
- Access by user name and password
- 9 different access authorizations
- Indicates all messages/status of the FCP
- Shows the complete event log
- Online control of the Fire Alarm Panel front facia
- Complete operation of the FCP Plug-in module

Technical specifications:

Quiescent current: 38 mA (24 V DC) Linux O/S Software with 2.6.24 kernel 10/100 Mbps Ethernet LAN interface ARM9 CPU 192 MH

32 MB SDRAM

32 MB NOR Flash

3.3 V/ 300 mA Dimensions:

56 x 56 x 20 mm





Full operational Remote Control Panel for the Solution N1 system

- Remote Control Panel for the ARCNET communications system
- Full operation and indication of all Solution N1 Fire Control Panels in the network
- Connecting to the multi master communications system with a maximum of 128 nodes
- Including touch technology and graphics LC module
- including ARCNET network card
- Event log 10.000 messages
- Access codes for operating this panel according EN54, part 2
- 3 separate and monitored outputs, each 24 V / 500 mA (fused)
- including 3 x RS-232 / RS-485 interfaces
- 16 programmable inputs & outputs
- 8 programmable push buttons
- supplied in surface mounted housing
- Interface for optional remote control modem (I-Module); data transfer via analogue modem, ISDN modem or new Webserver!

Technical specifications: Operating voltage: 24 V DC Current consumption: 80 mA ARCNET interface: up to 128 devices in one network Cable length: max. 1,200 m Weight: 4.9 kg

Dimensions (W x H x D): 495 x 176 x 75 mm

