FMZ 5000
Fire detection and extinguishing control panel
Fire alarm panels like safety belts in the centre of the FMZ 5000 fire detection and extinguishing control panel is based on the redundant structure of all important components in order to ensure maximum levels of safety and reliability.

Seat belts have been compulsory for the past 30 years and led to many innovations, such as the airbag and sidebag.

At first, the seat belt was a relatively uncomfortable safety device. But the development of height-adjustable belts with automatic tighteners resulted in a very flexible and effective restraint system featuring high comfort and safety. What began as an obligation was refined and widely accepted. Ensuring health, future compliance and comfort comes first. The same development from simple to complex also applies to fire detection and alarm systems from Minimax.

Minimax has been designing and building fire alarm panels for over 50 years. Their FMZ 5000 control panel is a prime example of their commitment to safety and reliability. Of course, the FMZ 5000 has been approved by VdS in accordance with current standards.
are mandatory for many construction projects — both protect life and existence.

With FMZ 5000, you can have fire detection systems that meet EN 54-2, EN 54-4, and EN 12094-1 for all fire protection tasks, including the operation of spark extinguishing systems. The FMZ 5000 can easily be adapted to a variety of project requirements. Of course, this process is not yet fully automatic — but it is very fast and easy. Never before have complex structures been able to be so rapidly created or changed simply through configuration and with only a handful of function modules.
Hardware structure of the fire alarm panel
Two standard basic structures are on offer, the small mod 4 and the mid-sized mod 12. In addition to this, versions in 19" free-standing cabinets in 21 U, 31 U and 40 U are available as mod XL basic structures. Only the outer shell size is permanent, while the interior workings remain fully flexible. The basic hardware is strikingly well designed, with high functionality. The housing of the mod 4 is also suitable for installation in a console or wall mounting.

FMZ 5000 – one model for all tasks
Identical function modules used for all versions to implement a wide variety of projects. Before the fire alarm panel can process the special tasks of a particular project, it is configured via the computer with the necessary information for the project. All fire alarm panels, small and large, consist of the same modules. Maintenance and service is also extremely cost-effective for the operator. More is less. All function modules are powerful and highly flexible. As a result of this, single fire detection or combined fire detecting and extinguishing control panels can be created, in addition to spark detector control panels and controls for practically immediate fire detection and extinguishing, for devices such as machine tools or paint booths.

The user purchases only what he needs since expansion to any size is possible at any time without additional wiring. Space should be reserved, however, for modules to be added at a later time. This saves both money and space.

In the event of changes in processes or use, or in case retrofitting becomes necessary, the new function can be adapted directly on-site without long operational downtimes.
The FMZ 5000 fire alarm panel

Functions

► All Minimax conventional detectors can be operated on the conventional detection lines which activate an alarm through an increase of line current. These include smoke and heat detectors for normal conditions and all industrial fire detectors. Including the unbeatably robust and flexible UniVario industrial detector. Fire detectors are available for the detection of heat, smoke, flames, sparks and CO fire gases, in addition to manual call points designs for various uses.

► Due to the configurable line voltage of 9 V to 20 V, detectors from other manufacturers can also be used.

► Up to 126 addressable points can be connected and operated on the detector loops: fire detectors for smoke, heat and flames, in addition to manual call points and UniVario industrial detectors. But they can also be input or output modules for monitoring, in addition to being an acoustic and optical signaller.

► Any number of stop lines can be set up in each detector loop. This enables detectors in ex-areas with the protection class EEx i, for instance, to be operated.

► Every detector loop can be up to 2000 m long and can be installed with standard fire detection cable J-Y(ST)Y 0.8.

► Acoustic signaller on the loop are either independent units or they are located in the base of a detector; they are supplied by the loop and need no separate power supply.

► All acoustic signallers on a loop can be addressed and can be controlled individually or synchronised as a group for a uniform alarm tone.

► Loop couplers enable connection to all conventional detectors, including industrial alarms.

► Input modules on the loop can be used for monitoring; e.g. extinguishing systems.

► Output modules on the loop can be used for controls and activations (including monitoring the supply line to the connected device).

► Directly from the control panel, monitored controls for extinguishing control, e.g., can be activated.

► Two monitored outputs for the control of transmission equipment for calling the fire brigade and faults for informing the service department are provided.

► Non-monitored controls and fault reports can be implemented by means of relay modules.

► Up to 32 fire alarm panels and control units can be networked in a ring. This enables all reports to also be displayed on central control panels. All control points can also be managed from various positions or control centres.

► Standardised interfaces and data protocols such as OPC and MODBus are available for transmission to control centres and external operation.
Customer advantages

► Easy, menu-controlled user interface with soft keys. Maximum information at a glance – due to the large, clear layout of the full-graphic display.

► Low training requirements due to ease of operation.

► If rooms or buildings are reallocated for new uses, the fire alarm panel can easily be adapted without rewiring, due to the flexibility of the function modules. Many of the changes can be implemented by adapting the configuration.

► The same applies to extensions in the customer’s building. The fire alarm panel can largely be adapted to the growing requirements by means of SNAP AND GO technology.

► Since industrial detectors can also be connected to detector loops via loop couplers, all industrial requirements can be fulfilled.

► The FMZ 5000 is a combined fire detection and extinguishing control panel, meaning all fire alarm and extinguishing tasks can be controlled from a single fire alarm panel.

► All tasks and all requirements can be implemented.

Future

The fire alarm panels and function modules from FMZ 5000 mod 4, mod 12 and mod XL are designed as future-oriented platforms and can be adapted to new developments and changes in regulations, in addition to expanded functions.

Configuration

All reports from detectors, monitoring devices or via controls, etc. can be freely defined: what should be reported, the message text, group number, and corresponding single/collective LEDs. All logical and time-dependent links between the messages and the related actions can as well as be freely defined. For functions such as blocking, revision and shutdown, can generally be configured with the membrane key on the front panel in switch or button function.

No matter what the requirements of a project, the FMZ 5000 can provide the solution. This is made possible by the high modularity of the hardware and the flexibility of the software PLC, together with the graphic configuration.

The clear structure of the new technology facilitates planning and set-up of the project configuration. Instead of having to choose from many options, specific project tasks can be solved with only one fire alarm panel and the combination of selected modules.

SNAP AND GO! All you have to do is plug in the function modules, with no wiring in the alarm panel, then connect the external devices!
TECHNICAL DATA SHEETS MISSING?
PLEASE CALL

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Fax: +49 4531 803-248

FMZ 5000
Relay module

- The relay module provides 8 relays, each with one potential-free change-over contact.
- Each relay can be used with 4 different function modes:
  - continuous activation
  - pulsed activation
  - output activation
  - timer activation
- Activation is possible either without a message or with a freely definable message on LCD and a single LED.
- A power relay card can easily be connected via a ribbon cable.
- The configuration software MxSysCon allows the extensive configuration options of the switching and delay times and the ability to combine all times offer maximum flexibility for use in any project.
- Use to activate a shutdown in the case of fire enables deactivation from the fire brigade control center.
- Relays are activated via door contact and vice versa.
ADVANTAGES of our flexible FMZ 5000

- Modular principle
- One panel for all eventualities
- Few different types of modules
- Easy to operate
- Low replacement part requirement
- Can easily be expanded
- Redundant safety technology
- Fire detection and extinguishing control panel in one unit

Technical data for the FMZ 5000

<table>
<thead>
<tr>
<th>System-specific data</th>
<th>mod 4</th>
<th>mod 12</th>
<th>mod XL 21 HE / 31 HE / 40 HE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input voltage</td>
<td>115 V AC/230 V AC +10%−15 %, 50/60 HZ</td>
<td>115 V AC/230 V AC +10%−15 %, 50/60 HZ</td>
<td>115 V AC/230 V AC +10%−15 %, 50/60 HZ</td>
</tr>
<tr>
<td>Operating voltage</td>
<td>24 Vdc</td>
<td>24 Vdc</td>
<td>24 Vdc</td>
</tr>
<tr>
<td>Power packs</td>
<td>24 V 1,5 A, 2,7 A</td>
<td>24 V 2,7 A , 5 A, 15 A</td>
<td>24 V 2,7 A , 5 A, 15 A</td>
</tr>
<tr>
<td>Emergency power supply</td>
<td>2 x 12 V, 12 Ah internal, up to 24 Ah external</td>
<td>2 x 12 V, 24 Ah internal, up to 110 Ah internal</td>
<td>2 x 12 V, to 110 Ah internal</td>
</tr>
<tr>
<td>Protection class</td>
<td>IP 54</td>
<td>IP 54</td>
<td>IP 54/IP 55</td>
</tr>
<tr>
<td>Approved ambient temperature</td>
<td>−5 °C to +40 °C</td>
<td>−5 °C to +40 °C</td>
<td>−5 °C to +40 °C</td>
</tr>
<tr>
<td>Approved relative humidity</td>
<td>&lt; 95 %, without dew</td>
<td>&lt; 95 %, without dew</td>
<td>&lt; 95 %, without dew</td>
</tr>
<tr>
<td>Max. number of modules*</td>
<td>8</td>
<td>44</td>
<td>127</td>
</tr>
<tr>
<td>Group/area displays</td>
<td>16 LED pairs red/yellow</td>
<td>192 LED pairs red/yellow</td>
<td>432 LED pairs red/yellow</td>
</tr>
<tr>
<td>Serial ports</td>
<td>RS432, RS422, RS485</td>
<td>RS432, RS422, RS485</td>
<td>RS432, RS422, RS485</td>
</tr>
<tr>
<td>Total weight</td>
<td>ca. 18 kg</td>
<td>ca. 26 kg</td>
<td>ca. 70 kg / 160 kg / 190 kg</td>
</tr>
<tr>
<td>Dimensions</td>
<td>475 x 340 x 200 mm</td>
<td>600 x 604 x 225 mm</td>
<td>21 HE 600 x 1012 x 373 mm</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>31 HE 800 x 1600 x 600 mm</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>40 HE 800 x 2000 x 600 mm</td>
</tr>
</tbody>
</table>

*Depending on the type of module used.