

**+** *INGENIOUSLY SIMPLE  
ULTRA-COMPACT DESIGN*



Fully modular and digital smoke vent control panel  
CPS Series revolutionises safety and security technology

- » Integrated ACB technology creates new communication between drive and control panel
- » Nothing is easier than installing and retrofitting with the wireless rail-mounted plug-&-play system
- » User-friendly operating concept thanks to the large colour touch display

# SAVING LIVES + PROTECTING PROPERTY:

## *SHEV helps faster than the fire brigade*

### **Hollywood is a fire hazard for viewers.**

A typical scene from an action film: Flames are everywhere. The hero is battling through fire and smoke. He will rescue the damsel in distress, who has already endured half an eternity in the flames. In real life people almost never experience a fire, so these images from the film industry shape their perceptions. Or better yet: their false perceptions. When scared by fire in a film you may lose your breath for a moment. When caught in a real fire, you are three breaths away from losing consciousness. That is because the smoke can contain carbon monoxide, hydrochloric acid or even cyanide compounds. Only three breaths of this highly toxic gas are enough to cause you to lose consciousness. The only chance for a real happy ending is to have effective smoke and heat exhaust ventilation (SHEV). These systems channel toxic combustion gases away in case of fire. This creates escape routes with little smoke, and clears your airways.

The customised solutions from D+H provide a variety of tested drives, control systems and components. When these work together, they enable smoke and heat exhaust ventilation that is cost-effective and reliable. The innovative CPS-M SHEV control panel heralds a new dimension in safety and security technology. It ensures that the hot, rising air from the fire escapes. Escape and emergency routes are cleared of the majority of smoke within seconds, which creates escape routes. The fire brigade can advance toward the source of fire. In addition, extracting the heat prevents thermal stress on the building structure. That can prevent the building from collapsing.

### **How smoke and heat exhaust ventilation works**

As soon as smoke appears in a closed room, our fire detectors detect this. They send the fire signal to the digital CPS-M smoke vent control panel. This evaluates the signal in a fraction of a second and gives the window drives the command to open. That means that this system is truly faster than the fire brigade. Depending on the fire compartment, openings for exhaust air and supply air are opened in a fully automatic process. This includes skylights, flaps and windows. In situations like this, a chain drive or rack and pinion drive quickly and reliably handles difficult movements.

However, the smart properties of the CPS-M go a step further. In case of fire, the windows can adapt to the individual architecture of your building. To give one example: When the smoke escapes and rises through the air, it is prevented from re-entering the building through an open window. The corresponding scenario can be easily programmed just like other complex functions.



Reliable team: Thanks to ACB technology and high-speed function, the CPS-M can open the new CDC-0252 within just 60 seconds.

### **A new time calculation begins after about 17,000 development hours**

Since September 2015, 15 D+H developers have worked on the new digital smoke vent control panel on a daily basis. The result is setting standards in the areas of cost-effectiveness and networking. This has initiated a new era for system solutions in the field of smoke and heat exhaust ventilation.

Thanks to the compact, uniform design of the individual modules, powerful control panels can be integrated into small control cabinets. The fully modular design can be expanded at will.

The virtually wireless, rail-mounted connector system is easy to install and expand. Just one click expands the system by one module, introducing many new functions. This principle has the advantage of ensuring significantly less wiring and an improved power supply. The control panel provides a nearly unlimited output current in 20 A increments. Moreover, the CPS-M can be integrated into the building automation infrastructure. Thus, it can work together with the heating, ventilation, burglar alarm or fire alarm systems.

### **Smart and innovative: communication and controller**

D+H is introducing a new, user-oriented innovation to the market with the Advanced Communication Bus (ACB). It enables bidirectional communication between the control panel and drive. This means that the control panel also receives information about the position and condition of the windows. It also enables triggering of the drives with perfect positioning.

Yet another advantage of CPS-M: Functions and dependencies can be integrated into the controller quite easily using the SCS software. This may be a switch-on module for sun shades or a fire detection module.

AdComNet (Advanced Communication Network) is the internal bus communication system that CPS-M uses. It combines communication data into a single, comprehensive system and enables communication between additional CPS-M control panels or controllers of the RZN-M Series. A special highlight is the autonomous communication of the system. In addition, having VdS approval makes AdComNet the only certified SHEV bus system on the market.

In short, with the intelligent CPS-M you have a flexible and cost-effective system solution that already fulfils all requirements concerning norm prEN 12101-9. In future, you will see that only one thing in your building will take your breath away: our innovation.

# DYNAMIC INTERACTION:

*The CPS-M features a fully modular design*

## CM control module



The control module forwards all received signals, ensuring that the windows in the corresponding parts of the building open and escape routes are made accessible in emergencies.

## PSM power supply module



The power supply module ensures that the system is properly supplied with power. In case of a power cut, it switches from the power supply unit to the battery, ensuring optimum operation even in emergency situations.

## AM actuator module



The actuator module provides clever triggering of the drives with perfect positioning. The windows open so that the toxic smoke can escape quickly and, above all, cannot blow right back in.

## TMA trigger module

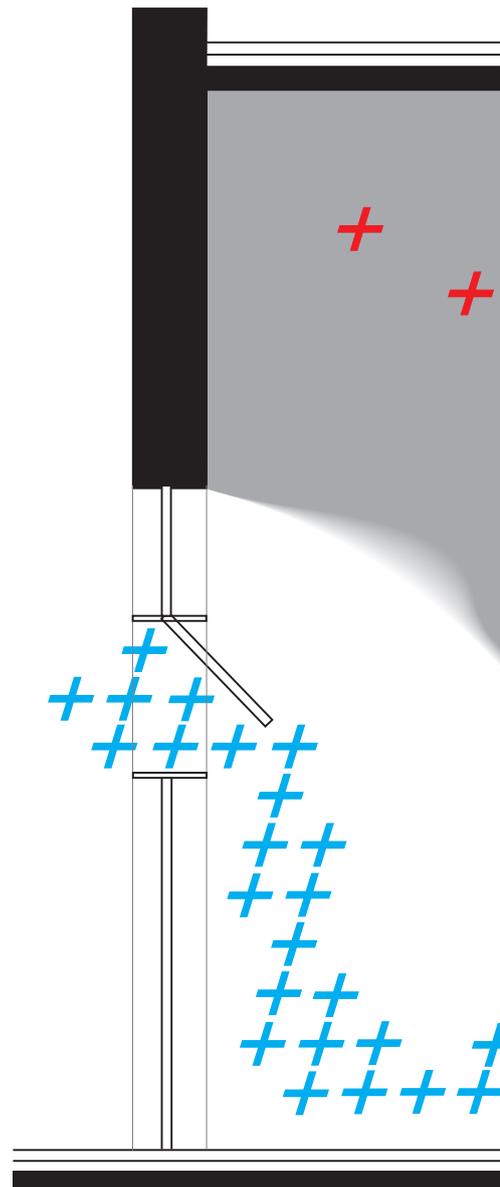


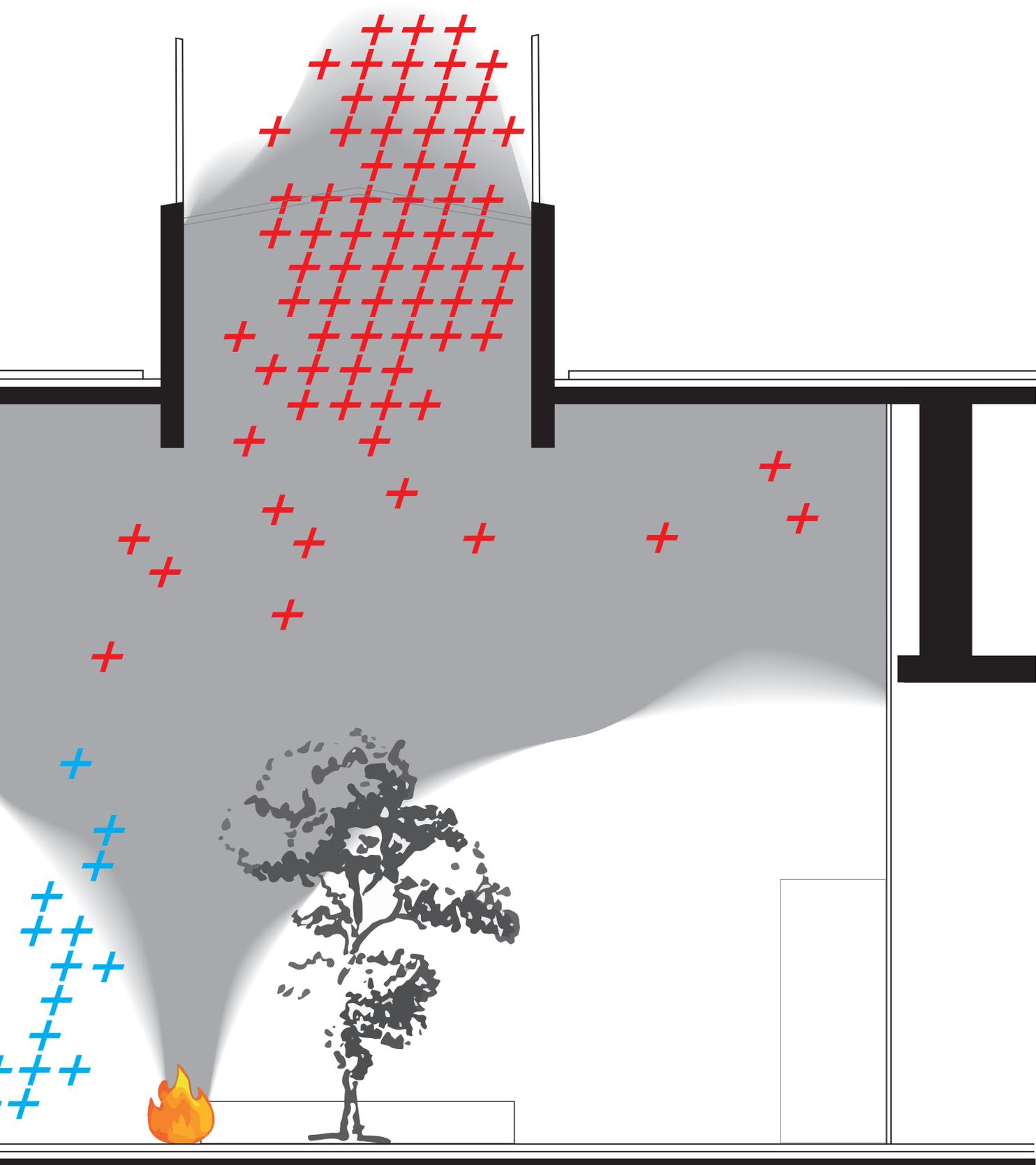
Ensures fast opening of the windows: The trigger module evaluates the signal from the smoke detector and forwards it to the control module.

## Power supply unit



The performance of the power supply unit mounted on the top hat rail can be summarised in a few words: The low ripple, the short-circuit resistance, the high reverse voltage protection and the high efficiency make it a reliable element of the system.





## Components



### CM control module

The CPS-M control module is primarily responsible for communication of the control panel via AdComNet (Advanced Communication Network). Each system needs only one control module to ensure comprehensive communication with the control panel and to configure the connected modules, operation elements and drives. In addition, the control module can use the corresponding interface to establish a connection with other AdComNet capable products and thereby create a large, unique network.

- » Top hat rail installation
- » Four configurable digital inputs
- » Two isolated changeover contacts for functions such as fault and alarm notifications
- » Touch panel connection
- » USB maintenance port
- » AdComNet master / slave connection
- » Integrated signal lights for operation, faults and alarms



### PSM power supply module

The CPS-M power supply module is responsible for properly supplying power to the control panel system. For each PSM module that is used, up to 40 A can be fed into the control panel system. Automatic switching from the power pack to the battery ensures a reliable emergency power supply in the event of a mains outage.

- » Top hat rail installation
- » Connection for emergency power batteries
- » Integrated protection against excessive discharge
- » Reliable switching from the mains supply to battery voltage
- » Temperature sensor connection for a temperature-controlled charging voltage
- » Integrated signal lights for faults and alarms



### AM actuator module

The CPS-M actuator module is used to connect motorised 24 V DC drives to the control panel system. Each actuator module has two motor connections on it, each of which generates an output current of 10 A. Thanks to the monitoring system being used, the drives can be monitored for a wire break, short circuit and overload.

- » Top hat rail installation
- » Two separately monitored motor connections
- » Each motor connection has an available load current of 10 A
- » Two separate connections for ventilation buttons
- » Integrated signal lights for faults and alarms
- » 24 V DC output voltage
- » Can be used with 24 V DC pole-changing drives and ACB drives

## Components



### TMA trigger module

The CPS-M trigger module acts as a connection from the trigger peripheral devices to the control panel system. These can be connected to the four monitored trigger inputs without additional hardware. The freely configurable digital inputs and outputs make it possible to connect smoke detectors or smoke sensors to the line connections. Up to 30 smoke detectors or ten smoke vent buttons can be connected to each of the four trigger inputs without additional hardware.

- » Top hat rail installation
- » Four connection options for the variable use of smoke detectors, smoke vent buttons, fire detector or central fire alarm systems
- » Up to 30 fire detectors or 10 smoke vent buttons per connection are possible
- » Integrated signal lights for faults and alarms



### Power supply unit

A freely scalable mains power supply can be built up with the power pack of the PS Series. The standardised installation on a 35 mm top hat rail ensures that it will be easy to add to existing control panels. The wide range of the input voltage enables worldwide use without the need to specially select components.

An essential element for reliable and efficient supply is also seen in the low ripple, the short-circuit resistance, the high reverse voltage protection and the high level of efficiency. Multiple power packs can be integrated into a control panel via the PSM-1-24-40 power supply module.

- » 230 V AC supply
- » Output: 24 V DC, 20 A / 40 A
- » Top hat rail installation
- » Reverse-voltage protected and short-circuit resistant



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