Cerberus™ PRO

Fire detection system with integrated extinguishing

Integrated, modular single-sector extinguishing for FS720 fire control panels in Comfort and Large housing.

- Single-sector extinguishing extension for FS720 fire detection system
- Combined fire detection and extinguishing
- Compliant with EN 12094-1 and VdS 2496
- Standalone extinguishing control panel possible
- Integrated or remote extinguishing terminal
- Configuration of fire detection and extinguishing extension in a joint application
- Integration in C-WEB/SAFEDLINK network
- An integrated primary extinguishing terminal and a maximum of 5 remote extinguishing terminals
Properties

- Scalable, modular structure
- High-pressure extinguishing compatible with the entire Sinorix portfolio
- Configurable valve and actuator outputs
- Blockable standard outputs, emergency hold/abort
- Configurable activation and delay time
- Monitored 'Loss of agent' inputs and pressure switch
- Monitored inputs and outputs
- Monitoring for short-circuit, open line, and ground fault
- Extensive EMC protection
- Valve outputs can be calibrated without end-of-line (EOL) element
- All control panel functions, such as event log and text display, are supported
- Simple maintenance due to deactivation functions
- Test functions
- Optional key switch for access restriction
- Complete support of the addressed detector lines

The FS720 extinguishing extension is a single-sector extinguishing application, which can be integrated into the following control panels and housings:

- FC722 and FC724 fire control panels in the Comfort or Large housing with power supply (150 W)
- The FS720 extinguishing extension is perfect for replacing existing applications with XC10 systems.
Integrated single-sector extinguishing

The single-sector extinguishing function with an FS720 fire control panel can be integrated into FC722 and FC724 with a 150 W power supply in the Comfort and Large housing, provided there is enough space for the extinguishing components to be installed.

The following variants are possible:
- Standalone control panel with one flooding zone
- Networked control panels with one flooding zone each

Example: Single-sector extinguishing with monitoring and control from one fire control panel
**XCI2005-A1 extinguishing card**

The extinguishing card XCI2005 is a module bus card for single-sector extinguishing for installation in FC722 and FC724 in the Comfort housing.

**Properties**

- For single-sector extinguishing
- 10 monitored outputs, can be configured as follows:
  - Valve output
  - Alarm output (acoustic or optical alarm devices)
  - Inverse output (e.g., for door magnets)
- The following peripheral devices can be connected:
  - Group valves, reserve group valves
  - Control valves, reserve control valves
  - Reserve emergency stop valve
  - Extended discharge extinguishing valve
  - Isolated zone valve
- 4 monitored collective inputs for up to 8 devices
- All collective inputs can be configured as monitored inputs
- 6 monitored inputs
- Inputs for 5 different circuits can be configured (normally open, normally closed, simple switchable, complex switchable, loss of agent)
- 6 open drain outputs
- 1x supply output DC 24 V for 'open drain' outputs
- Connection for 1x primary terminal
- Connection for max. 5 secondary terminals

**FCA2046-A1 card cage (1 sector exting.)**

The card cage (1 sector exting.) FCA2046 is a carrier for an extinguishing card with plug-in contacts for internal and external signal transmission to the extinguishing terminals.

The FCA2046 is designed for mounting in FC722 and FC724 fire control panels in the Comfort housing. The scope of delivery includes a metal container for securing the cables.
**XT2001-A2 extinguish. terminal (remote)**

Remote extinguishing terminal for one sector.
- Required as a primary extinguishing terminal for fire control panels if no space is available for installation of a primary extinguishing terminal.
- Can be connected as a secondary extinguishing terminal in addition to the primary extinguishing terminal. A maximum of five secondary extinguishing terminals can be connected per flooding zone.

**XCM2002-A2 exting. terminal (1 sector)**

Operating add-on with extinguishing terminal for one sector.
For installation in one FS720 fire control panel with extinguishing for one sector.

**XTO2002-C1 key switch (Kaba)**

The key switch (Kaba) XTO2002 is a country-specific option for installation in an extinguishing terminal.

**XTO2003-B1 key switch (nordic)**

The key switch (nordic) XTO2003 is a country-specific option for installation in an extinguishing terminal for the Nordic countries.

**FCA2047 accessories kit (FCA2046)**

Accessories kit for the card cage (1 sector exting.) FCA2046 for single-sector extinguishing control panels with 400 mm power supply cable, 5x spacers M3 x 6.5, and cable ties.
Fire control panel for single-sector extinguishing

The components for single-sector extinguishing can be integrated in all fire control panels FC722 and FC724 in the Comfort and Large housing with 150 W power supply, provided there is enough space for installation.

The card cage for the extinguishing card can only be installed in fire control panels from IP7 onward.

The following fire control panel FC724-ZA provides an example of the installation situation.

1. Fire control panel FC724-ZA in the Comfort housing
2. FCA2046 card cage (1 sector exting.)
3. XCI2005 extinguishing card
4. Metal bracket for cable attachment (FCA2046 scope of supply)
5. Power supply (150 W)
6. XCM2002-A2 exting. terminal (1 sector)
7. Operating unit
## Type Overview

### Extinguishing components

<table>
<thead>
<tr>
<th>Type</th>
<th>Item number</th>
<th>Designation</th>
</tr>
</thead>
<tbody>
<tr>
<td>XCI2005-A1</td>
<td>S54392-A7-A1</td>
<td>Exting. card</td>
</tr>
<tr>
<td>FCA2046-A1</td>
<td>S54392-B8-A1</td>
<td>Card cage (1 sector exting.)</td>
</tr>
<tr>
<td>XCM2002-A2</td>
<td>S54392-B3-A1</td>
<td>Exting. terminal (1 sector), including 1 pre-assembled connection cable L=1400 mm</td>
</tr>
<tr>
<td>XT2001-A2</td>
<td>S54392-F2-A1</td>
<td>Extinguish. terminal (remote), customer connection cable</td>
</tr>
</tbody>
</table>

### Accessories

#### Accessories for extinguishing control panels

<table>
<thead>
<tr>
<th>Type</th>
<th>Item number</th>
<th>Name/comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>XTO2002-C1</td>
<td>S54392-B12-A1</td>
<td>Key switch (Kaba)</td>
</tr>
<tr>
<td>XTO2003-B1</td>
<td>S54392-B11-A1</td>
<td>Key switch (nordic)</td>
</tr>
<tr>
<td>FCA2047-A1</td>
<td>S54292-S17-A1</td>
<td>Accessories kit (FCA2046) Power supply cable, spacers, and attachment material for 1-sector extinguishing control panel</td>
</tr>
</tbody>
</table>

### Device combinations

#### FS720 fire control panels with single-sector extinguishing

<table>
<thead>
<tr>
<th>FCP</th>
<th>Housing</th>
<th>Design</th>
<th>Flooding zones</th>
<th>XCM2002</th>
<th>XCM2003</th>
<th>XT2001 remote</th>
</tr>
</thead>
<tbody>
<tr>
<td>FC722 Standard All</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Comfort With power supply (70 W) and plan compartment</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td></td>
<td></td>
</tr>
<tr>
<td>With power supply (150 W)</td>
<td>1</td>
<td>With free operating add-on</td>
<td>--</td>
<td>Possible</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FC723 Comfort All</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FC724 Comfort All</td>
<td>1</td>
<td>With free operating add-on</td>
<td>--</td>
<td>Possible</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FC726 Large All</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1 If an XCM2002 cannot be installed, an XT2001 must be used.
### Product documentation

<table>
<thead>
<tr>
<th>Title</th>
<th>Document ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>System description</td>
<td>A6V10210355</td>
</tr>
<tr>
<td>Product data</td>
<td>A6V10210368</td>
</tr>
<tr>
<td>Planning</td>
<td>A6V10210362</td>
</tr>
<tr>
<td>Mounting/Installation</td>
<td>A6V10210390</td>
</tr>
</tbody>
</table>

Related documents such as the environmental declarations, CE declarations, etc., can be downloaded from the following Internet address:

[https://siemens.com/bt/download](https://siemens.com/bt/download)
Card cage (1 sector exting.) FCA2046

Plug-in units
Slots 1x extinguishing card XCI2005
Supply
Operating voltage DC 20...30 V
Maximum current 9.5 A
Connections
Supply input connector X1, X2
Extinguishing card socket strip X100, X101, X102
Flat cable socket strip for XBUS, blocking, addressing X700, X701
Flat cable socket strip for module bus X500, X501
Input connector strip X11, X12
Output connector strip X14, X15, X16, X11
Connector strip for internal and external terminals X10
Permitted conductor cross-section of the screw terminals 0.5...2.5 mm²
Mechanical data
Dimensions (L x W x H) 296 x 70 x 105 mm
Ambient conditions
Operating temperature Min. -5 °C max. +50 °C
Storage temperature Min. -20 °C max. +60 °C
Air humidity Max. 93 % rel. air humidity (EN 60068-2)

Extinguishing card XCI2005
Supply input
Voltage from card cage FC2046 DC 20...30 V
Operating current 90 mA
Maximum current 6.5 A
Monitored outputs
Valve, standard, and inverse outputs Max. 10
Output voltage Max. DC 25.8 V
Output current Max. 2 A, short-circuit-proof
Load capacitance Max. 470 µF
Line resistance Max. 80 Ω, both conductors
Monitored for Ground fault, leakage current, open line
Cable connection, via card cage 2-pin, max. 2.5 mm²
Pyrotechnic valves
Load resistance
• Min. 2 Ω
• Max. 32 Ω
Solenoid valves
Load resistance
• Min. 14 Ω
• Max. 1000 Ω
<table>
<thead>
<tr>
<th><strong>Single-room solution</strong></th>
<th><strong>Cable length</strong></th>
<th>Max. 30 m or in the same room as extinguishing</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Max. cable resistance: Load-dependent</td>
</tr>
<tr>
<td><strong>Monitoring</strong></td>
<td></td>
<td>Direct monitoring</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Internal 2-way monitoring</td>
</tr>
<tr>
<td><strong>Valves</strong></td>
<td></td>
<td>Max. 10</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Pyrotechnic: serial</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Solenoid: parallel</td>
</tr>
<tr>
<td><strong>Multi-room solution</strong></td>
<td><strong>Cable length</strong></td>
<td>Max. 400 m</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Max. cable resistance: Load-dependent</td>
</tr>
<tr>
<td><strong>Monitoring</strong></td>
<td></td>
<td>Direct monitoring</td>
</tr>
<tr>
<td></td>
<td></td>
<td>External 2-way monitoring</td>
</tr>
<tr>
<td><strong>Valves</strong></td>
<td></td>
<td>Max. 1</td>
</tr>
<tr>
<td><strong>Standard output</strong></td>
<td><strong>Termination resistor</strong></td>
<td>Min. EOL 40 Ω</td>
</tr>
<tr>
<td></td>
<td><strong>Cable length</strong></td>
<td>Max. EOL 4000 Ω</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1000 m or 80 Ω</td>
</tr>
<tr>
<td><strong>Inverse output</strong></td>
<td><strong>Termination resistor</strong></td>
<td>Min. 18 Ω</td>
</tr>
<tr>
<td></td>
<td><strong>Cable length</strong></td>
<td>Max. 1300 Ω</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1000 m or 80 Ω</td>
</tr>
<tr>
<td><strong>Collective inputs,</strong></td>
<td><strong>Collective inputs</strong></td>
<td>Max. 4, can be configured as monitored inputs</td>
</tr>
<tr>
<td><strong>monitored (GPIO)</strong></td>
<td><strong>Open-circuit voltage</strong></td>
<td>DC 17.1…19.3 V</td>
</tr>
<tr>
<td></td>
<td><strong>Alarm voltage</strong></td>
<td>DC 5.5…16.5 V</td>
</tr>
<tr>
<td></td>
<td><strong>Quiescent current</strong></td>
<td>5.3 mA, typical</td>
</tr>
<tr>
<td></td>
<td><strong>Alarm current</strong></td>
<td>44 mA</td>
</tr>
<tr>
<td></td>
<td><strong>Number of devices per input:</strong></td>
<td>Max. 8, collective</td>
</tr>
<tr>
<td></td>
<td><strong>'Manual release'</strong></td>
<td>Max. 8 DM1103-S</td>
</tr>
<tr>
<td></td>
<td><strong>'Emergency hold'</strong></td>
<td>Max. 8 DM1103-L</td>
</tr>
<tr>
<td></td>
<td><strong>End-of-line</strong></td>
<td>18 V voltage reference EOL</td>
</tr>
<tr>
<td></td>
<td><strong>Line protocol</strong></td>
<td>Collective</td>
</tr>
<tr>
<td></td>
<td><strong>Line resistance</strong></td>
<td>Max. 80 Ω, both conductors</td>
</tr>
<tr>
<td></td>
<td><strong>Load capacitance</strong></td>
<td>Max. 300 nF</td>
</tr>
<tr>
<td></td>
<td><strong>Monitored for</strong></td>
<td>Ground fault, leakage current, open line</td>
</tr>
<tr>
<td></td>
<td><strong>Cable connection, via card cage</strong></td>
<td>2-pin, max. 0.65 mm²</td>
</tr>
</tbody>
</table>
Monitored inputs

- Possible input circuits, configurable
  - 'Normally open'
  - 'Normally closed'
  - 'Simple switchable' (sector valve)
  - 'Complex switchable' ('Automatic blocked', 'Manual blocked', 'Automatic blocked' and 'Manual blocked')
  - Loss of agent

Line resistance
Max. 80 Ω, both conductors

Monitored for
Leakage current, open line, ground fault

Termination resistor
3.3 kΩ

Cable connection, via card cage
2-pin, max. 0.65 mm²

'Loss of agent' outputs, not monitored

- Driver outputs

Circuit
Open drain, short-circuit-proof

Current limiting
40 mA

Monitored for
Ground fault

Supply output
DC 25.8 V

Output current
Max. 1 A, short-circuit-proof

Cable connection, via card cage
1x per output
2x for supply output
Max. 0.65 mm²

Extinguishing terminal output

- Protocol
RS485, half-duplex

Number of participants per sector
- Primary 1
- Secondary max. 5

Cable length
- Primary max. 10 m
- Secondary max. 1200 m

Data rate
57.6 kbit/s, twisted, unshielded

Monitored for
Ground fault

Supply output
- Primary: Vsys, max. 1 A, short-circuit-proof
- Secondary: Vsys, max. 2 A, short-circuit-proof

Cable connection, via card cage
2x 2-pin bus connection
2x 2-pin bus supply output
Min. 1.5 mm²

XBUS connection

- Protocol
XBUS, half-duplex

Number of participants
Max. 16

Cable length
Max. 6.5 m, ribbon cable

Data rate
57.6 kbit/s

Cable connection, via card cage
2x flat cable, 0.08 mm² (28 AWG)
LEDs

Number: 29
H1…H30,
2x status LED
10x output, monitored
10x input, monitored
6x output, not monitored

Addressing

Automatic via card cage

Connections

Connector strip for card cage
X100, X101, X102

Mechanical data

Dimensions (L x W x H)
260 x 114 x 28 mm

Extinguishing terminal XTO2001
The extinguishing terminal XTO2001 is installed in the following components:

- XT2001 extingu. terminal (remote)
- XCM2002 exting. terminal (1 sector)

Supply input

System supply
Via card cage FC2046
Remote for XT2001:
Via power supply FP120 or FP2015
- Monitoring signals
Mains, Batt
- Ground fault monitoring (via switch S102)
- 3rd source [FR]
DC 8…30 V
Voltage
DC 12…30 V
Operating current
18 mA typical @ DC 24 V
Maximum current
250 mA @ DC 12 V

Data transmission

Addressing via DIP switch S201
Address 1…7
Cable length
Max. 1200 m
Cable cross-section
Min. 1.5 mm²
Data rate
57.6 kbit/s with cable unshielded and twisted at 1200 m
Monitored for
Ground fault, via PMI
Number of participants
Max. 6 per extinguishing card
Termination resistor
120 Ω EOL, on the last (most distant) extinguishing terminal

LEDs

Number
34 LEDs RGB
4x 5 x 7 dot matrix LED, red

Connections

RS485, terminal
X1, 4 pin
Supply, terminal
X2, 8 pin