FC330A-ECO
Auto-addressing analogue 1-Loop fire detection panel

- Commissioning in no time – thanks to automatic address allocation
- Auto-addressing makes setting dip switches unnecessary
- Automatic localizing of interruptions & shorts
- Unshielded cables prevent irksome ground-returns
- Periodic self-test facility
- Serial interface for third-party building management systems, repeaters, printer, etc.
- Additional cards may be retrofitted at anytime for customized solutions
- Maintenance can be tailored to customer needs
Features

The FC330A-ECO has all the requirements for intelligent systems. Addressing is automatic and address allocation takes only seconds. To improve security and increase speed, distributed intelligence enables detectors to verify danger signals independently.

128 addressable Synova fire detectors, regardless of type, may be connected to the FC330A-ECO fire detection panel.

Commissioning, which comprises auto-addressing of all connected elements, is executed by the intelligent SynoLOOP transmission protocol. Time-consuming preparatory work such as setting dip switches etc., is no longer necessary, providing reliable on-time commissioning.

Siemens equips all auto-addressable elements with isolating links so they do not require individual resetting. If a short circuit occurs, the panel localizes and isolates the defective cable section. The loop system permits data flow in both directions up to the error source, with optimum safety. Thanks to automatic isolation, planning or adapting detector groups or fire sections to changing needs is more convenient.

Expansion with various additional cards opens the door to almost unlimited customized solutions.

System overview

![System overview diagram](image-url)
FC330A-ECO and its expansions

[1] FC330A-ECO
Control panel, 1 loop

[2] Z3S030
Z3S020

Master board
One RS232 port
(up to 4 x Z3B171)

[4] Z3G280
Mounting plate
(up to 2 cards)

RS232/LON-Bus converter
Relay card

VdS interface card

[8] Z3B171
Relay module
Building Technologies  
Fire Safety & Security Products

**FC330A-ECO and its expansions (continued)**

1. **Fire detection panel FC330A-ECO**
   - The FC330A-ECO fire detection panel accommodates:
     - Smoke, heat and multi-sensor detectors and manual call points from different series
     - Special detectors (flame detectors, highly sensitive detectors) for special applications
     - Input and output modules
     - Siren outputs
   - Fire detection panel FC330A-ECO is equipped with state-of-the-art software; virtually unlimited range of applications may be programmed easily.
     - Intuitive, menu-driven operation
     - 128 free definable detector groups
     - Dual-detector independence
     - Chronological storage and retrieval of up to 200 events
     - Windows-based software tool for parameter programming, etc.

2. **Access with key Z3S030/Z3S020**
   - The system operator may access the fire detection system in three ways: by password, without a password, or with a key. Two kinds of key switches are available:
     - Module Z3S030 is integrated in an existing like-key concept
     - Module Z3S020 follows the Nordic fire brigade concept

3. **SynoLOOP master board K3X030**
   - The master board is the basic control panel module and is part of its basic equipment. Switched on, the master board recognizes all connected elements and is ready to transmit fire alarms.
     - One auto-addressable loop with 128 devices (or one stub line with 32 addressable detectors). The master board has in addition the built in:
       - 8 programmable control outputs
       - 2 supervised horn outputs
       - 2 Alarm and fault relays
       - 4 programmable inputs
       - 4 LEDs activated via external inputs
   - The RS232 interface accommodate alternatively various applications:
     - System programming
     - Printer connection for event protocol printouts
     - LON-bus connection
     - Incorporation in a building management system (BMS)
   - Connection of the Visualizer training tool, to operate the FC330A-ECO via your PC.

4. **Mounting plate Z3G280**
   - The mounting plate is needed to connect up to two expansion cards, to be mounted over the master board K3X030. The cards may be mounted either vertical or horizontal.

5. **Relay card K3G050**
   - The relay card K3G050 triggers fire controls such as activation of fire doors or air vents. It offers additionally the following outputs:
     - 8 relay switch contacts (max. 30 VDC / 2 A)
     - 4 programmable outputs (24 VDC, 48 mA)
     - 2 supervised outputs (sirens, 24 VDC, 500 mA)
   - One plug is provided for the K3G050 or for the K3L070.

6. **VdS Interface Card K3L070**
   - This card is only needed, when VdS peripherals are specified.
     - The card contains the fire service key box adapter. It also permits the connection to a fire brigade operating panel or a transmission device. A standard extinguishing interface is provided.
     - One plug is provided for the K3L070 or for the K3G050.

7. **LON-bus converter card K3I080**
   - The K3I080 LON-bus converter card is used to connect to the control panel with various LON-bus applications:
     - Floor repeater panels
     - Mimic panels
     - LED parallel indications
     - Various signal in and output possibilities
   - Converter cards on the LON-bus make numerous user-oriented solutions possible. For instance, up to 16 floor repeater panels may be connected to the LON bus and up to 256 addresses can be managed for max. 9216 LED displays.
   - The LON-bus converter card is built directly into the control panel and connected to the RS232 serial output.
   - For more information consult the data sheet 007349.

8. **Relay module Z3B171**
   - The relay module (250 VDC, 10 A) is an additional control module, activated by the control panel's control outputs. Up to 4 relay modules may be connected to the FC330A-ECO.
   - **Programmable key**
     - A key on the key pad can serve as additional input. The key may be programmed for various functions (e.g. lamp test). It can be easily connected via the F02F290 to the master board K3X030.
Detailed system overview

Building Technologies
Fire Safety & Security Products

VdS periphery:
- Fire brigade control panel
- Fire brigade key cabinet
- Remote transmission unit

Alarm devices
Alarm reception centre (Fire brigade)
Fire control installations (FCI)

One RS232 serial interface

Building management system
Printer
Configuration tool SWE330A
Training

Alarm devices
Alarm reception centre (Fire brigade)
Fire control installations (FCI)

VDI FBF FSD UE

1 SynoLOOP max. 128 devices

DBZ OH HI NI DM DF addressable

Ventilation, Air cond., system, Elevator

SynoLINE300 SynoLINE600

SynoLINE600-Ex

One RS232 serial interface

LON-Bus via LON interface

Control in/output modules
LON/Modbus converter
Databus
Floor repeater panels
Parallel indicators or Synoptic / relay
Dimensions

19" housing

19"

400

400

110

Z3G290 (needs 10 rack units)

1 rack unit = 44.45 mm
## Technical data

<table>
<thead>
<tr>
<th>Type</th>
<th>K3X030</th>
<th>K3G050</th>
<th>K3I080</th>
<th>K3L070</th>
<th>Z3B171</th>
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<tbody>
<tr>
<td>Current consumption for FC330A-ECO and expansions</td>
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<tr>
<td>Operation current</td>
<td>100 mA 1)</td>
<td>20 mA 2)</td>
<td>10 mA 3)</td>
<td>12 mA 4)</td>
<td>0 mA 5)</td>
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<td>Alarm current</td>
<td>+9 mA 6)</td>
<td>+9 mA 7)</td>
<td>0 mA 8)</td>
<td>+40 mA 9)</td>
<td>+27 mA 10)</td>
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</table>

1) 0.2 mA normal operation current consumption per addressable device connected
2) Per activated contact/control line/buzzer, without external load (sounders, etc.)
3) LON-devices see document 007349

### Detector loop (SynoLOOP)
1

### Programmable outputs
8 x 24 VDC / 48 mA + 4 optional

### Relay output for transmission
2 x 30 VDC / 1 A

### Supervised outputs
2 x 24 VDC / 500 mA + 2 optional

### Programmable inputs
4

### Programmable key input
1

### Programmable fire zones
128

### Programmable control zones
128

### Line resistance addressable loop
150 Ohm / 300 nF

### Supply voltage
115/230 VAC ±15 % (VdS: +10 %) 50... 60 Hz

### Power consumption
max. 50 VA

### Battery
2 x 12 V / 12 Ah

### Standards
EN54-2, EN54-4

### Color
light grey, RAL 7035

### Operating temperature
0... +50 °C

### Humidity
≤95 % rel.

### Protection category
IP40

### Approvals
- VdS
  G298015
- LPCB
  126h/03

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## Reference documents

<table>
<thead>
<tr>
<th>Doc. no.</th>
<th>Synova™ FC330A</th>
<th>Description</th>
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<tbody>
<tr>
<td>1583</td>
<td>Fire detection system (Planning, Installation, Commissioning, System operating, User application settings, Background information, Trouble shooting, Maintenance, Appendix)</td>
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<td>007349</td>
<td>Data Sheet</td>
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## Details for ordering

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<th>Type</th>
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<tr>
<td>Control unit</td>
<td>FC330A-ECO</td>
<td>Control panel 1 Loop analogue auto-addressing</td>
<td>8.000 kg</td>
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<td></td>
<td>FC330A-ECO-CH</td>
<td>Control panel 1 Loop analogue auto-addressing including accessories for 'CH' incl. inscription stripes</td>
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<tr>
<td>Accessories</td>
<td>FCA...</td>
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<td>Z3S020</td>
<td>Key switch module 'Nordic access key'</td>
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<td>Z3S030</td>
<td>Key switch module 'like-keyed'</td>
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<td>Z3B171</td>
<td>Relay module with 1 contact 250 VAC, 10 A</td>
<td>0.040 kg</td>
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<td>F02F290</td>
<td>Connecting ribbon cable for optional key</td>
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<td>TKU2</td>
<td>Surveillance contact</td>
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<td>Expansion</td>
<td>Z3G290</td>
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