



FC330A

Synova™

Auto-addressing analogue fire detection panel

CE

-
- Two-loop addressable panel, expandable to 4 loops
 - Optional 4 or 12 conventional lines (e.g. for retrofit, modernization)
 - Commissioning in record time by auto-addressing localization
 - Auto-addressing eliminates the setting of dip switches, etc.
 - Automatic localization of interruptions and short circuits
 - 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 matched to customer needs

Product features

The FC330A 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.

512 addressable and 384 conventional fire detectors, regardless of type, may be connected to the FC330A fire control 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 isolators. No separate isolator has to be planned nor installed. 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, until short-circuit is fixed. This kind of automatic isolation facilitates fire section planning, as well as adaptation to changing needs.

Expansion with various additional cards permits almost unlimited customized solutions.

The fire control panel models



FC330A-1/-6
The FC330A-1/-6 standard fire control panel features the SynoLOOP K3X020 master board, an LCD unit, and the operator keypad.



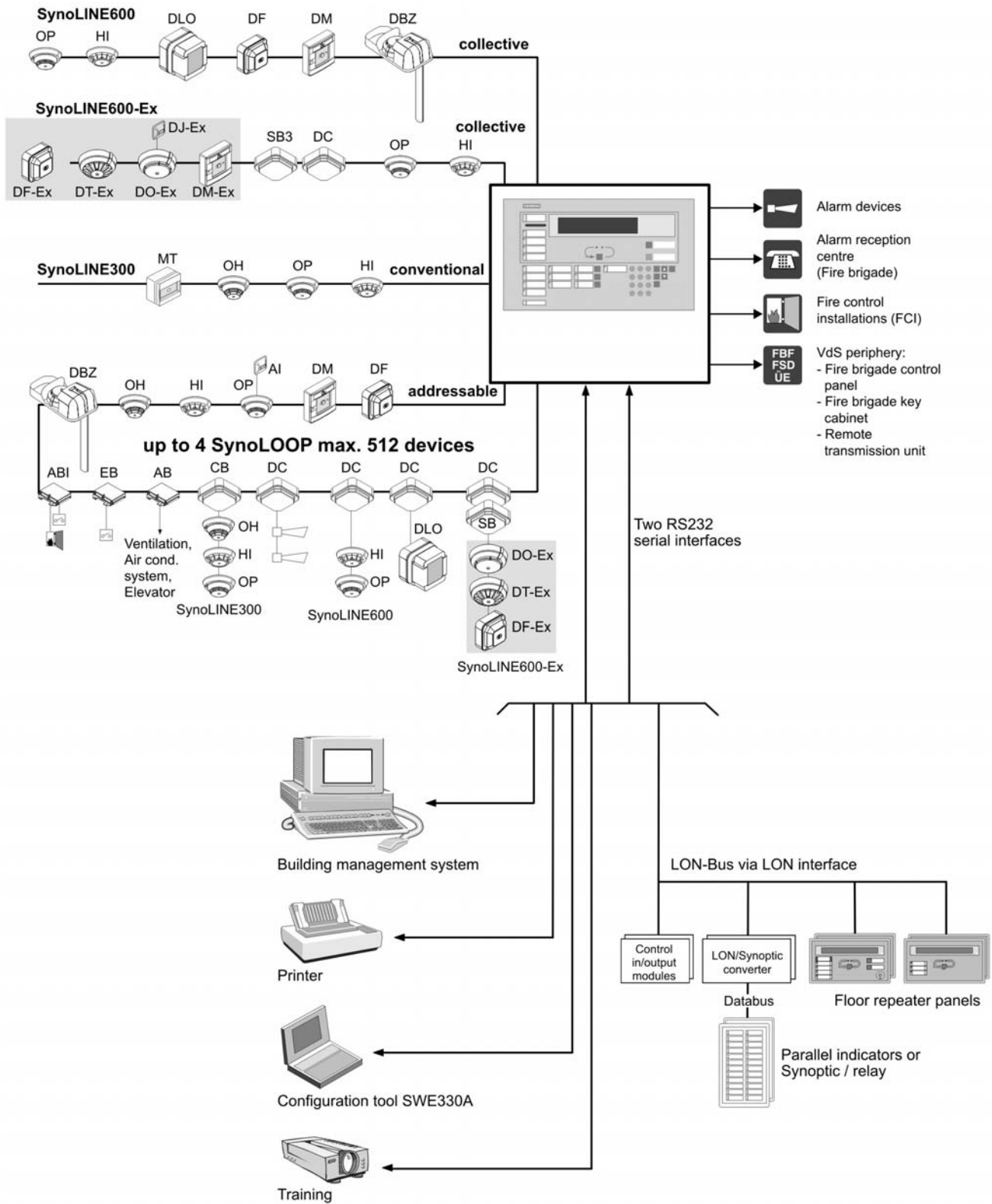
FC330A-4
The FC330A-4 control panel can accommodate A4 and even A3 documents. The panel door accessible with a key protects against unauthorized access. A second inner door provides easy access for installation and maintenance access.



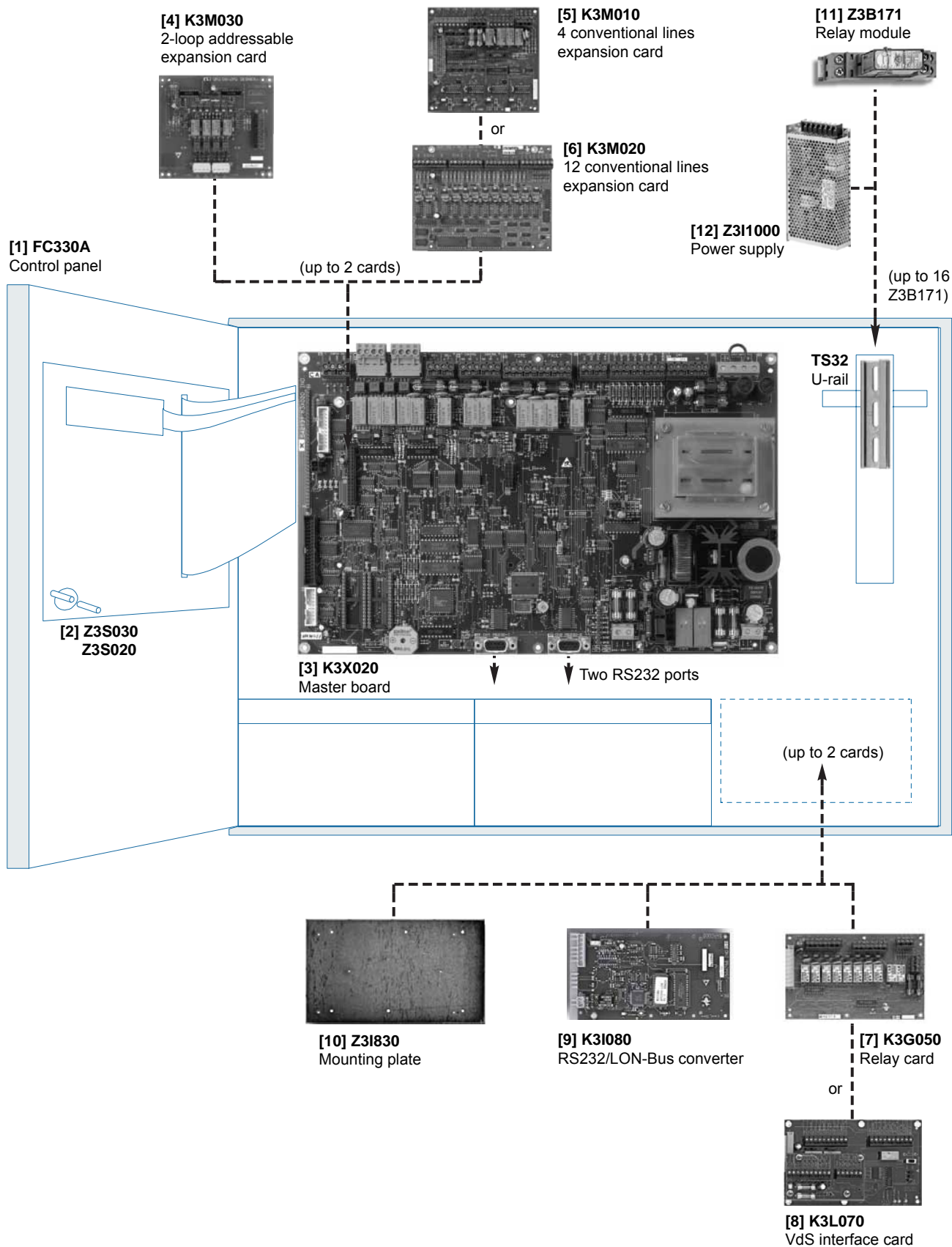
FC330A-2/-2-CH/-5
The FC330A-2/-5 model consists of the standard control panel, the FC330A-2-CH model with 'FBA', expandable with parallel indicator panel B3R080.



System overview



FC330A and its expansions





[1] Fire control panel FC330A-...

- The fire control panel accommodates
- Smoke, heat and multi-sensor detectors and manual call points from different series
 - Special detectors (flame detectors, Ex-detectors, highly sensitive detectors) for special applications
 - Input and output modules
 - Conventional line modules and siren outputs

The fire control panel is equipped with state-of-the-art software; virtually unlimited range of applications may be programmed easily. It provides

- Intuitive, menu-driven operation
- Definable detector groups or fire zones
- Dual-detector independence
- Chronological storage and retrieval of up to 200 events
- Windows-based software tool for parameter programming, etc.



[1] Specific country version FC330A-NL

Same as FC330A-2 but with option for integration of the evacuation module for Netherlands.

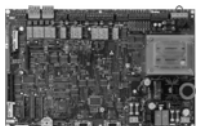
Already implemented are the power supply Z3I1000, 1 relay card K3G050 and 2 relay modules Z3B171.



[2] Access with key Z3S030/Z3S020

The system operator may access the fire detection system in three ways: by passwords, without any password, or with access keys. Two kinds of key switches are available:

- Module Z3S030 is integrated in an existing like-keyed concept
- Module Z3S020 follows the Nordic fire brigade concept



[3] SynoLOOP master board K3X020

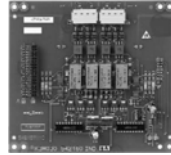
The master board is the basic control panel module and is part of its basic equipment. Switched on, the master board recognizes all connected elements and is ready to transmit fire alarms.

Two auto-addressing SynoLOOP ring cabling (with 128 detectors each) or two stub lines (with 32 addressable detectors each) may be connected to the master board. The master board has in addition the built-in:

- 8 Programmable control outputs
- 2 Monitored output (Sirens)
- 2 Control line relays
- Alarm and fault relays (to long distance transmission devices)

Two RS232 interfaces accommodate 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 via your PC



[4] Addressable 2-loop expansion card K3M030

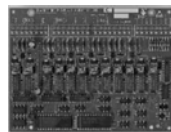
The K3M030 allows expanding the FC330A by 2 addressable loops with up to 256 detectors or 2 stub lines with up to 32 detectors per stub.



[5] Conventional line expansion card K3M010 (4 lines)

The K3M010 allows expansion of the control panel by:

- 4 conv./coll. lines (SynoLINE300/600)
- 4 programmable driver outputs
- 2 monitored outputs (sirens)
- 2 relay switch contacts



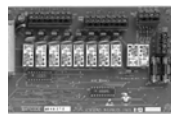
[6] Conventional line expansion card K3M020 (12 lines)

The K3M020 allows expansion of the control panel by up to:

- 12 conv./coll. lines (SynoLINE300/600)
- 8 programmable driver outputs

Conventional line expansion cards

Existing, conventional detectors may be integrated in the new, auto-addressing system by means of a conventional line expansion card. The K3M010/020 cards have two line specifications for conventional line (SynoLINE300) or collective line (SynoLINE600). The conventional line expansion cards also make special applications, such as connection of linear smoke detectors, possible.

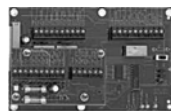


[7] Relay card K3G050

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 (30 VDC/2 A)
- 4 programmable outputs (24 VDC/48 mA)
- 2 monitored outputs (Sirens) (24 VDC/500 mA)

One plug is available for the relay card K3G050.



[8] 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.

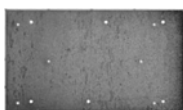
One plug is provided for the VdS card K3L070.



[9] 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
- Floor or situational plans
- LED parallel indications
- Various input and output signal 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 one of the two RS232 serial outputs. For more information consult the datasheet 007349



[10] Mounting plate Z3I830
 Mounting plate Z3I830 allows integration of electronic accessories when no other expansion cards have been installed.

Other control panel-interior options
 Various modules, for instance up to sixteen Z3B171 relay modules, may be installed quickly and easily on U rails.



[11] Relay module Z3B171
 The relay module (250 VAC/10 A) is an additional fire event control module, activated by the control panel's control outputs. Up to 16 relay modules may be connected to the fire control panel.



[13] Optional power supply Z3I1000
 The additional power supply Z3I1000 consists of a power supply – monitoring card M3P140 and the power supply B2F040. This set is needed if the current calculation exceeds the power supply output of the main board. Power supply output of the Z3I1000 max. 3.5 A / 29.6 VDC.

Further options for the front of the fire control panel
 Optional components support simple event visualization on the fire control panel.



Parallel indicator panel B3R080 with 32 displays (LEDs) for panel FC330A-2/-2-CH/-5
 The parallel indicator module visualizes important events, it contains 32 LED displays. One or more fire zones can be allocated to each of these 32 LEDs. The parallel indicator panel, built into the front of the control panel is connected directly to master board K3X020. This is used together with control panel type FC330A-2/-2-CH/-5.



Programmable key
 A key on the key pad may 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 K3X020.

Technical data

Type	K3X020	K3M010	K3M020	K3M030	K3G050
Current consumption for FC330A					
Operation current	128 mA 1) 2)	<25 mA	<72 mA	2 mA 1) 2)	20 mA
Alarm current	+9 mA 3)	+40 mA 4) +9 mA 3)	+40 mA 4)	0 mA	+9 mA 3)
Type	K3L070	K3I080	Z3B171	B3R080	
Current consumption for FC330A					
Operation current	12 mA	10 mA	0 mA	2 mA	
Alarm current	+40 mA	0 mA 7)	+27 mA	+6 mA 6)	
1) Each loop without any devices consumes additional 14 mA 2) 0.2 mA normal operation current consumption per addressable device connected 3) Per activated contact/control line/buzzer, without external load (sounders, etc.) 4) Per line in alarm 5) Per activated driver output 6) Per activated LED 7) LON devices see document no. 007349					
Detector loop (SynoLOOP)	2 + 2				
Programmable output	8 x 24 VDC / 40 mA				
Relay output	2 x 30 VDC / 1 A				
Transmission output	2 x 30 VDC / 1 A				
Supervised outputs	2 x 24 VDC / 500 mA				
Programmable input	4				
Programmable key input	1				
Programmable fire zones	512				
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					
– Standard	max. 100 VA				
– with optional power supply	max. 120 VA				
Battery	2 x 12 V, 12 Ah or 2 x 12 V, 15 Ah				
Standards	EN54-2, EN54-4				
Color	light grey, RAL 7035				
Operating temperature	0... +50 °C				
Humidity	≤95 % rel.				
Protection category	IP40				
Dimensions (W x H x D)					
– FC330A-1/-2/-2-CH/-5/-6/-NL	580 x 480 x 120 mm				
– FC330A-4	510 x 540 x 200 mm				
Approvals					
– VdS	G298015				
– LPCB	126h/03				

Reference documents

Doc. no.1583	Synova™ FC330A	Planning, Installation, Commissioning, Operating Programming, Trouble Shooting, Maintenance
Doc. no. 1973	Synova™ FC330A	Operating Manual, System Operation for User
Doc. no. 1923	Synova™ FC330A	Remote indicating & Control devices, Logging Printer (Installation & Commissioning)
Doc. no. 007349	LON-Bus	Data Sheet

Details for ordering

	Type	Part no	Designation	Weight
	FC330A-1	5665570001	Fire control panel, 2 LOOP analogue	12.380 kg
	FC330A-2	5665600001	Fire control panel, 2 LOOP with mounting facility	12.160 kg
	FC330A-2-CH	5775880001	Fire control panel, 2 LOOP with mounting facility as FC330A-2 but with 'FBA-CH' incl. inscription stripes	12.230 kg
	FC330A-4	5665860001	Fire control panel 2 LOOP in special housing	22.600 kg
	FC330A-5	5665590001	Fire control panel 2 LOOP as FC330A-2 but with LCD 'Hebrew'	12.160 kg
	FC330A-6	6289900001	Fire control panel 2 LOOP as FC330A-1 but with LCD 'Cyrillic'	12.160 kg
	FC330A-NL	A5Q00013021	Fire control panel 2 LOOP, Version NL	14.375 kg
	FCA...	Accessory set (EPROM, inscription stripes) available languages see document 1583	0.040 kg
Options for FC330A-2	B3R080	5238460001	Parallel indicator panel (32 LEDs)	0.420 kg
	H23B030	5238620001	Cover plate	0.203 kg
Accessories	Z3S020	4840820001	Key switch module 'Nordic access key'	0.075 kg
	Z3S030	4840950001	Key switch module 'like-keyed'	0.137 kg
	Z3I830	5136650001	Mounting plate for accessories	0.590 kg
	Z3B171	4843830001	Relay module with 1 contact 250 VAC/10 A	0.043 kg
	F02F290	5137620001	Connecting ribbon cable for optional key	0.002 kg
	TS35	5644780001	U-rail TS35/7.5/122	0.040 kg
Expansion	TKU2	2305080001	Door contact	0.019 kg
	K3M010	5238170001	Line extension card 'conventional' (4 conventional lines)	0.285 kg
	K3M020	4984180001	Line extension card 'conventional' (12 conventional lines)	0.300 kg
	K3M030	5421600001	Loop extension card 'addressable' (2 loops or 2 stub lines)	0.245 kg
	K3G050	5129700001	Relay card	0.294 kg
	K3I080	5047680001	RS232/LON-bus Converter	0.305 kg
	K3L070	5238200001	VdS-interface card 'D'	0.357 kg
	Z3I1000	5593440001	Additional power supply	1.050 kg
	Z3I1020	5760000001	Battery extension set (for 2nd battery pack)	1.143 kg

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