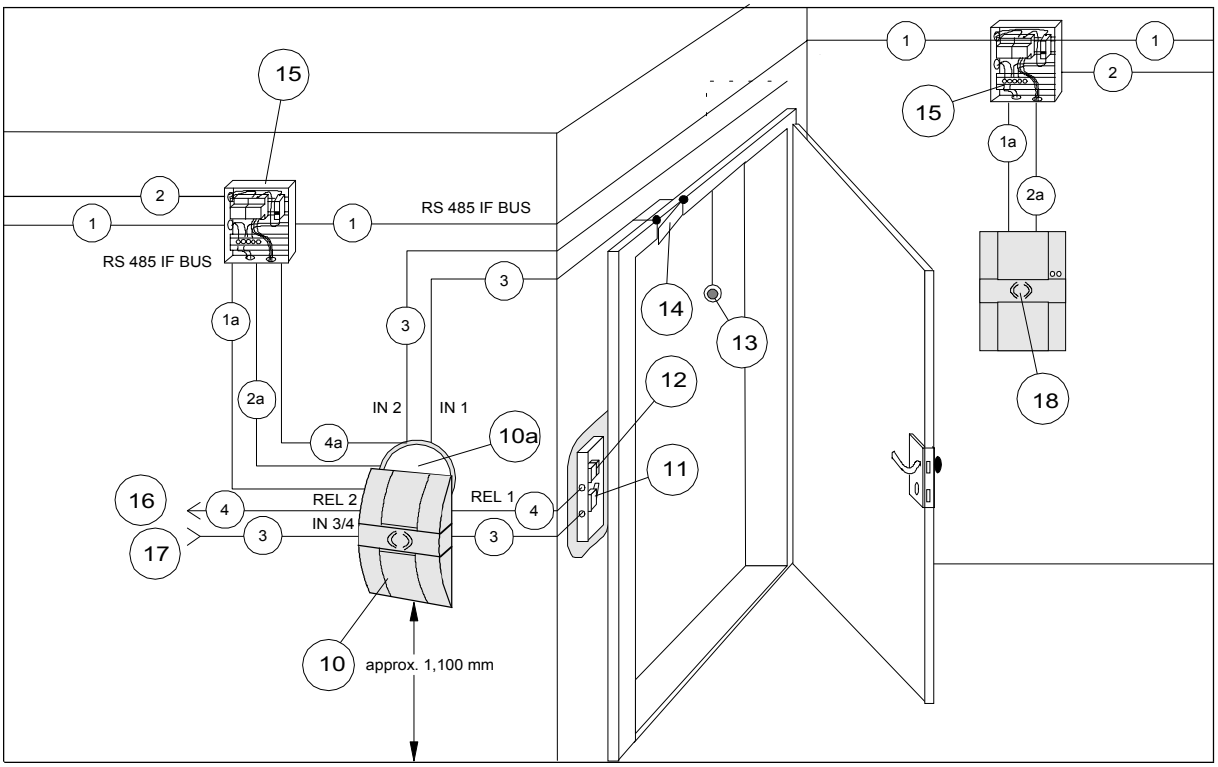
95-0056 / December 2000

Installation/ Connection of Recording Terminals of the Series IF 61X (68HC12)

Please also refer to the technical manual for further information on initial operation.

Possible Connections

10 Recording terminal, exit
12 Electric control element
15 Junction box with power supply [1]
18 Recording terminal, entrance
10a Flush box (see page 2)
13 External door opening button
16 Relay output 2 for triggering external systems
11 Handle contact
14 Surveillance contact
17 Inputs IN 3 and 4 for the connection of floating contacts



Pos.	Connection	Max. Length	Recommended Cable Type
1	RS 485 BUS cable	1,200 m	J-Y(ST) Y 2x 2x 0.6 mm [2]
1a	RS 485 branch cable	100 m	J-Y(ST) Y 2x 2x 0.6 mm [2]
2	Mains cable for power supply		NYM 3x 1.5 mm
2a	Low-voltage cable for recording terminal		J-Y(ST) Y 2x 2x 0.6 mm [2]
	Low-voltage cable from USV 600	up to 45 m	J-Y(ST) Y 4x 2x 0.6 mm [2]
3	Signaling cable from sensors[2]	25 m	J-Y(ST) Y 2x 2x 0.6 mm [2]
4	Control cable to control elements		J-Y(ST) Y 2x 2x 0.6 mm [2]
4a	Cable to power supply of control element		J-Y(ST) Y 2x 2x 0.6 mm [2]

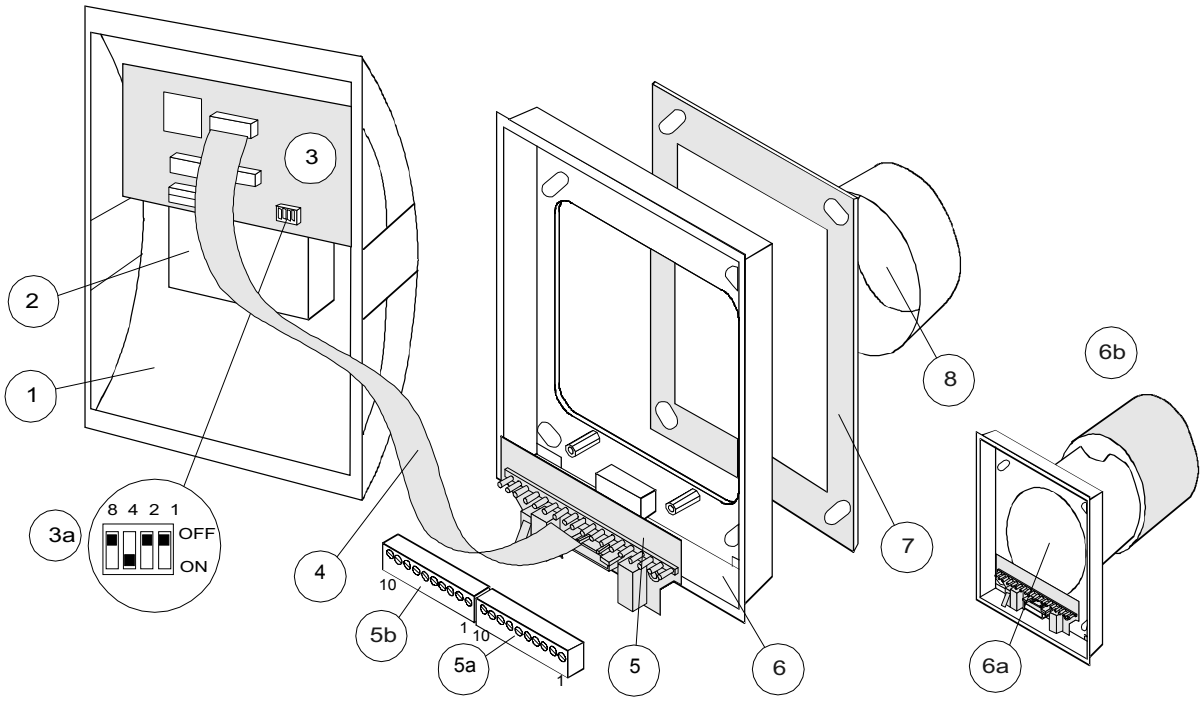
We recommend the following:

- Recording terminals with proximity/ swipe card readers: Insert the connecting cable into an appliance case which is centered at the installation site of the recording terminal when concealed.
- A distance of 10 cm between cables and power lines.
- For access control with entrance/exit terminals, always connect the control elements and sensors to the exit terminals in a secured area and relocate the door management of the entrance terminals to the exit terminals.

Note:
Recording terminals with proximity card readers must be installed in a distance of 5 cm from conducting surfaces (door frames, etc.), as otherwise the read range to the cards will be reduced.

[1] Power supply for recording terminal and access control element (e.g. Interflex USV, transformers or DC power packs).
[2] Common cable routing for surveillance contact, opening push-button or handle contact in 4x2x0.6 mm cable possible.

Recording Terminals IF 61X (Component Parts)



1 Front part of housing	4 Connecting cable	6 Wall part of housing for Proxif/ swipe readers
2 Card reader	5 Connector board for the connection of the cables	6a Wall part of housing with back panel for insert reader
		6b Flush box replaces no. 8
3 MPU board HC12	5a Connecting terminal Kl. 1	7 Wall sealing
3a Address switch	5b Connecting terminal Kl. 2	8 Flush box (not enclosed in delivery)

Open / Close Housing of Recording Terminal

The front part of the housing (1) is hooked to the wall part (6/6a). Both parts are then latched together and secured by a mortise lock.

Open: Unfasten the mortise lock. Use the unlocking lever (article no. 50-0034) to loosen[1] the holding devices. Turn the front part of the housing upwards.

Close: Place the front part of the housing on to the wall part in a slant angle and turn it downwards. Secure housing parts with mortise lock.

Address Setting

The 4 switches (3a) on the MPU board (3) are used to set the address of the recording terminal. When doing so, please set an address that has not already been assigned to another recording terminal connected to the same RS 485 data line and that lies in the BUS address section of the higher-ranking master terminal or terminal controller.

☞ Set the switches to ON or OFF, depending on the address.

Switch	1	2	4	8	
Address 1	**OFF**	**OFF**	**OFF**	**OFF**	(can be omitted for the connection to master terminals)
Address 2	ON	OFF	OFF	OFF	
Address 3	OFF	ON	OFF	OFF	
Address 4	ON	ON	OFF	OFF	
Address 5	OFF	OFF	ON	OFF	(address shown in the graph (3a))
Address 6	ON	OFF	ON	OFF	
Address 7	OFF	ON	ON	OFF	
Address 8	ON	ON	ON	OFF	

[1] Openings for loosening the locking devices can be found on the bottom of the wall part of the housing.

Power Supply

Transformers, DC power packs (3) or also USVs (uninterrupted power supply) from Interflex which supply 4 VA and the voltages listed below can be used for the power supply of the recording terminals:

AC voltage	10.5 V to max. 27 V or
DC voltage	10.5 V to max. 38 V

Connection of the Power Supply

☞ Connect the low-voltage cable (3) to terminal strip Kl. 1 (1a).

VAC or VDC+	Terminal 1
VAC or VDC-	Terminal 2
BAT from USV	Terminal 3 (required for USV operation only)
Protective ground wire	Terminal 5 **(connection required!)**

Connection of Surveillance Sensors and Door Opening Buttons

The status (open, closed, open without permission) of the locking device (4) can be monitored by the use of floating sensors which are to be mounted to the lock in such a way that they switch every time the locking device is opened or closed.

☞ Connect the surveillance sensor (5, sensor) to terminal strip Kl. 2 (1b).

Sensor IN 1	Terminal 5
Sensor IN 1	Terminal 10

☞ Connect the door opening button or the handle contact (5, button) to terminal strip Kl. 2 (1b).

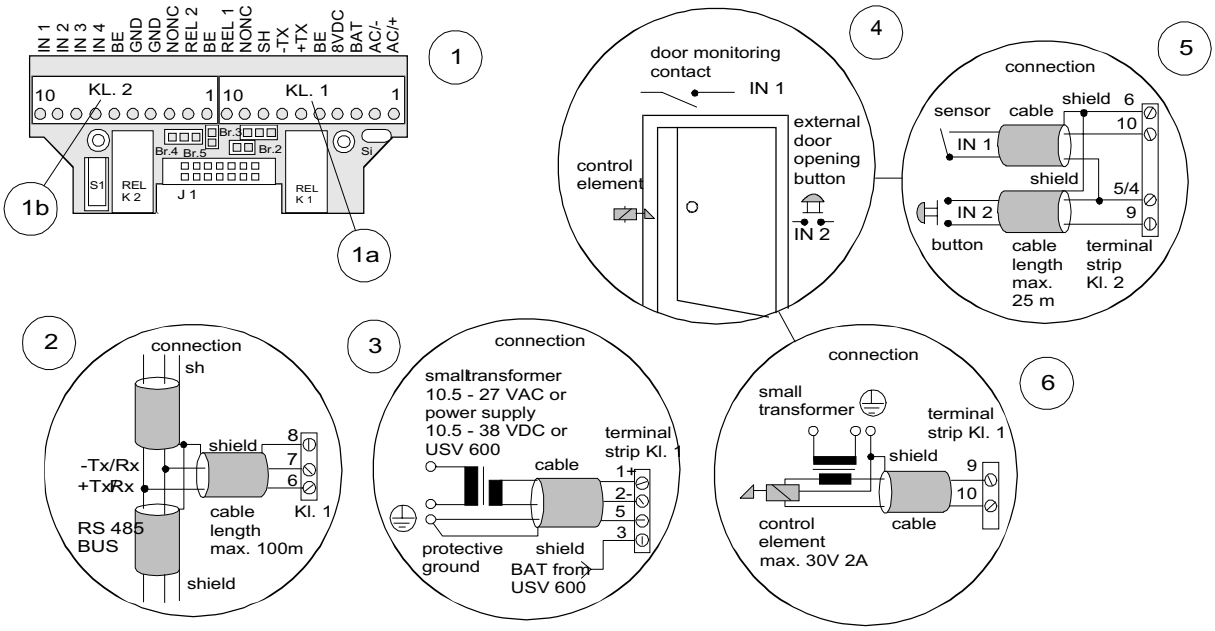
Button/contact IN 2	Terminal 5
Button/contact IN 2	Terminal 9
Line shield	Terminal 6 (connection required !)

Connection of the Data Line

The RS 485 interface is used for the connection of master terminals and terminal controllers.

☞ Connect the data cable (2) to terminal strip Kl. 1 (1a).

+Tx/Rx	Terminal 6
-Tx/Rx	Terminal 7
Line shield	Terminal 8



1 Connector board
2 Connection of the data line
3 Connection of the power supply
4 Door management with door opening button
5 Connection of the sensors
6 Connection of the access control element

Connection of Control Elements with External Power Supply

AC or DC control elements (3) with an external power supply and a switching power of max. 30 V 2A can be activated on a floating basis (1 and 2) by relay 1.

- ☞ Connect the pilot wire, which runs to the control element (3), to terminal strip Kl. 1.
  External power supply Terminal 9 NO/NC
  Control element Terminal 10 C REL 1
- ☞ Set the short-circuit clip on jumper Br. 3 (1a) to the following position:
  - NO (1b) if an open-circuit control element is connected.
  - NO (1c) if a closed-circuit control element is connected.
- ☞ Remove the short-circuit clip from jumper Br. 2 (1d).

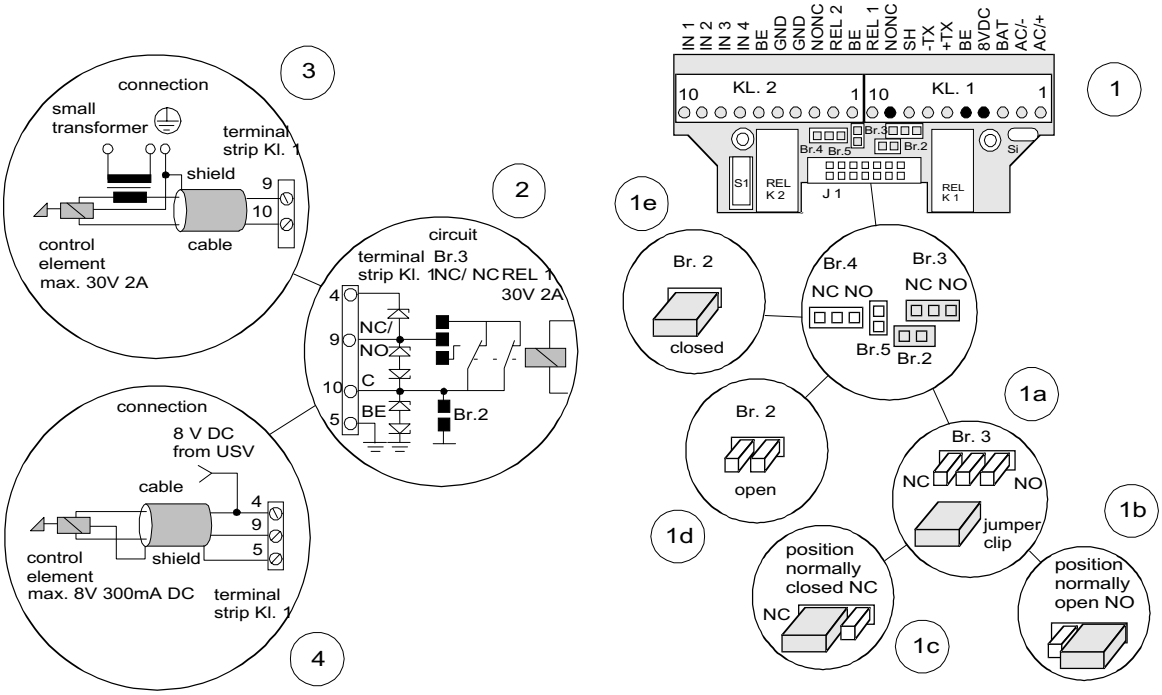
Note: System failures caused by static discharges can be avoided if the housing of the control element is grounded directly to the protective ground wire of the transformer.

Connection of 8 V 300 mA DC Control Elements

8 V 300 mA DC control elements (4) can be directly connected and activated without an additional power supply if the recording terminal is operated by an internal or an external USV (uninterrupted power supply) from interflex.

- ☞ Connect the pilot wire, which runs to the control element, to terminal strip Kl. 1.
  8 VDC from USV, control element Terminal 4
  Control element Terminal 9
- ☞ Set the short-circuit clip on jumper Br. 3 (1a) to position NO (1b) if an open-circuit control element is connected.
- ☞ Close jumper Br. 2 (1e) with the short-circuit clip.

Note: System failures due to static discharges can be avoided if the housing of the control element is grounded via the line shield and terminal 5.



1 Connector board with jumpers Br. 2, 3, 4, 5 and short-circuit jumper

2 Details on the wiring of the connector

3 Connection of a control element with an external power supply

4 Connection of an 8V 300 mA DC control element with USV operation

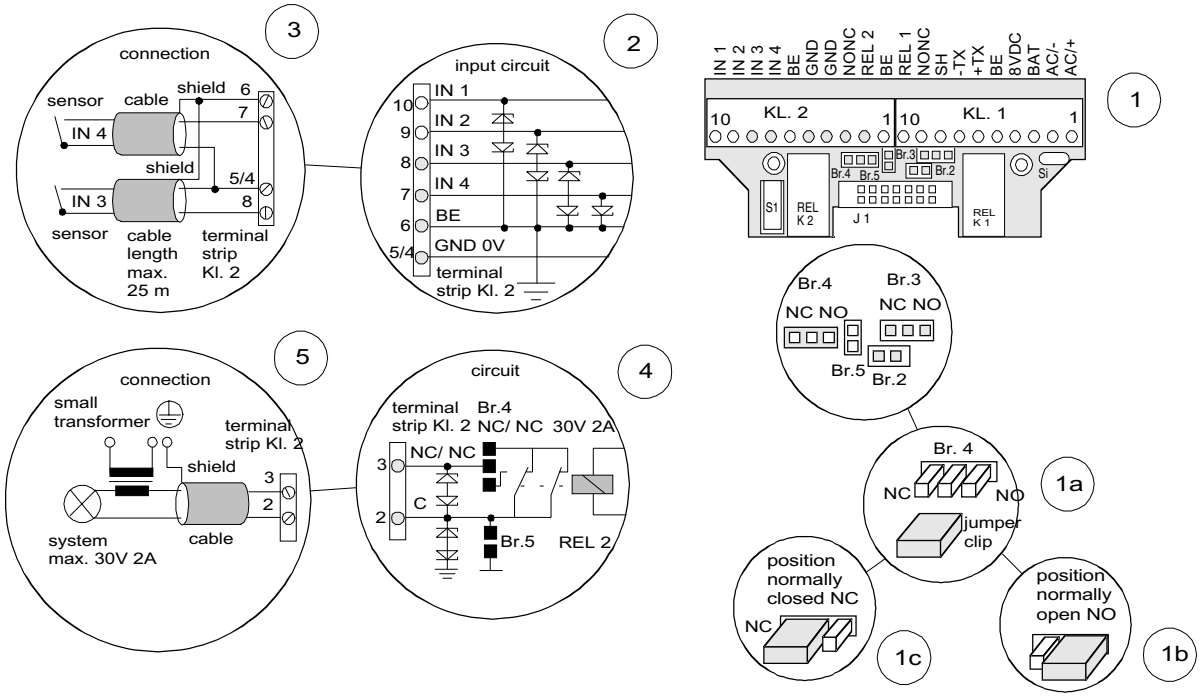
Connection of Further Sensors and Control Elements

Contact inputs IN 3 and IN 4 are used for the connection of further floating sensors (3); relay 2[1] for the activation of external systems (5).

Note: The evaluation of the connected sensors and the activation of external systems usually require special software.

Connections to terminal strip Kl. 2:

IN 3	terminal 8
IN 3	terminal 5
IN 4	terminal 7
IN 4	terminal 5
Line shield	terminal 6
NO/NC	terminal 3
REL 2	terminal 2



1 Connector board
2 Wiring of inputs IN 1-4
3 Connection of the sensors
4 Connection of relay 2
5 Connection of external systems

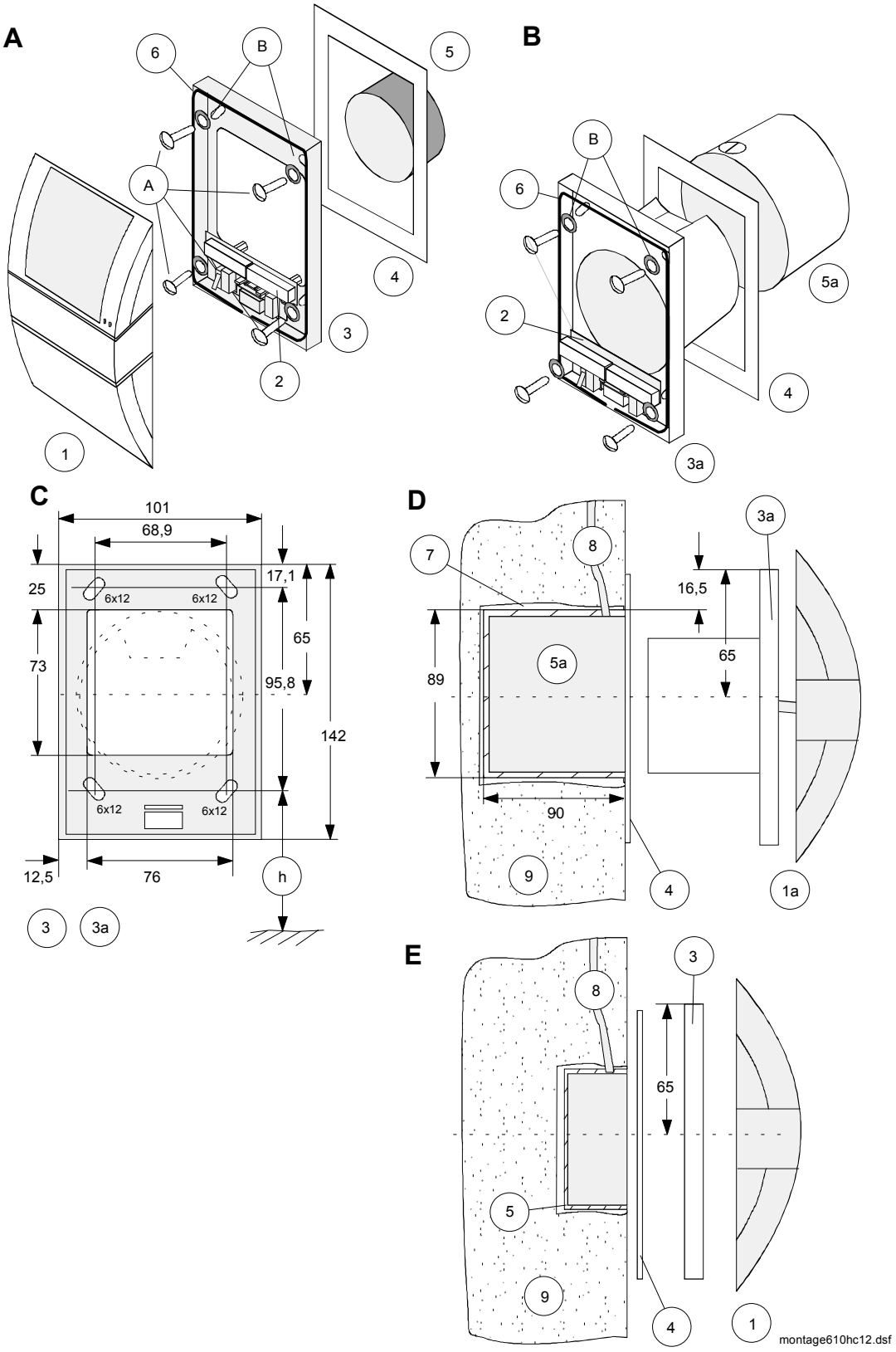
Note on the Skinning of the Cable

To avoid short-circuits, the cable shield must be skinned completely and the additional wire must be insulated up to the terminal with an insulating tube.

[1] Switches 0.5 seconds before relay 1 with standard parameterization. The switching time corresponds to the door relay time.

Installation of IF 61X Terminals

A IF 61X with proximity or swipe reader
B IF 61X with insert reader
C Wall part including dimensions
D Installation dimensions of IF 61X with insert reader
E Installation dimensions of IF 61X with proximity or swipe reader



1	Front part of IF 61X with proximity or swipe reader	
1a	Front part of IF 61X with insert reader	
2	Connector board with terminal strips:	
	- 10-pin terminal strip Kl.1 with coding pin on the right	25-0103
	- 10-pin terminal strip Kl.2 with coding pin on the left	25-0102
3	Wall part for IF 61X with proximity or swipe reader	
3a	Wall part with back panel for IF 61X with insert reader	
4	Wall sealing	87-0102
5	Appliance case, not required with direct cable feeding	
5a	Case, 89∅ x 90 mm, for wall part 3a Drilling dimensions: see 7	87-0138
6	Sealing ring for front part	87-0129
7	Recommended drilling for housing (5a): 92∅ x 90 mm	
8	Feeding of the supply cables from the top	
9	Wall	

A	Screws for fastening the wall part (3/3a)	
	- Tallow-drop screws 4x12	84-0066
	- Wood screws 4x40	84-0006
	- Dowels S6	84-3684
B	Plain washers 4.3 mm	85-0006
h	Recommended installation height: approximately 1,100 mm	

☞Please note:

- **Intended use:** Recording terminals of the series IF 61X are used for access control and/or time and attendance recording. Any other use is not in accordance with the intended purpose and is therefore not permitted.
- **Interflex systems** comply with the regulations made by the Association of German Electrical Engineers (VDE) and valid at the time of printing. They are produced according to DIN VDE 0805 (IEC 74 CO 64, EN 60950), protection category 1. The electrical connection may only be carried out in consideration of the valid technical regulations (VDE standards, DIN standards). Constructional changes are not permitted.

Technical Data

CPU, memory:	68 HC 12, 60 K Flash PROM, 2 K RAM, 1 K EE-PROM
Software:	In Flash, downloadable.
Power supply:	10.5 - 27 VAC or 10.5 - 38 VDC, fuse protection via PTC resistor
- Power consumption:	Max. 4 VA
Interfaces:	
- Data interface:	RS 485, 9,600 or 19,200 baud, automatic setting
- Output:	2 relays with "normally open" and "normally closed" floating contacts
Switching power:	Up to max. 30V 2A
- Input:	4 inputs for the connection of floating sensors
Feed frequency:	Up to max. 20 Hz
Temperature range:	-25° C to +55° C (IF MD 61X: -10° C to +55° C)
Protection category:	At least IP 32
Card reader:	Proximity, insert or swipe reader – depending on the order
Dimensions:	115x 150x 50 mm (recording terminal with insert reader: 115x 150x 125mm)
Weight:	0.5 kg
Housing material:	PBT Pocan KL1-7503
Installation:	Wall-mounted. Recording terminals with insert readers require an installation space (depth) of 92∅ x 90 mm (see page 6).