Claims

1. Human-machine interface device (4) having a housing (28) configured to be arranged on a floor or wall of a building, wherein the following is arranged in the housing (28):

a communication device (24), which is configured to transmit data signals via a communication network (10) to a building access control system and/or to an elevator system and to receive data signals via a communication network (10) from the building access control system and/or the elevator system;

a recording device (12), which is configured to record data relating to a user (2), wherein the recording device (12) is configured to record credentials of the user (2);

an optical projection module (14), which is configured to project routing information (18) relating to the user (2) and visible to the user (2) onto the floor or onto a projection surface (22) on the wall; and

a control device (6) which is communicatively connected to the recording device (12), the communication device (24) and the optical projection module (14), wherein the control device (6) is configured to transmit user data recorded by the recording device (12) to a control system (8) of the building access control system and/or the elevator system ~~a building system (1)~~ by means of the communication device (24) and to control the optical projection module (14) by means of routing information received from the control system (8).

2. Human-machine interface device (4) according to claim 1, wherein the optical projection module (14) comprises a laser device which emits visible light.

3. Human-machine interface device (4) according to either claim 1 or claim 2, wherein the optical projection module (14) is configured to project individual letters, text, symbols and/or pictograms as routing information (18).

4. Human-machine interface device (4) according to any of the preceding claims, wherein the optical projection module (14) is configured to statically project the routing information (18) for a fixed period of time.

5. Human-machine interface device (4) according to any of claims 1-3, wherein the

optical projection module (14) is configured to dynamically project the routing information (18) for a fixed period of time, wherein the routing information is configured to be projected in pulses via repeated light on and light off, pulsating via increased or decreased brightness and/or via a running light.

~~6. Human-machine interface device (4) according to any of the preceding claims, wherein the recording device (12) is configured to record credentials of the user (2).~~

~~7.~~6. Human-machine interface device (4) according to claim 1~~6~~, wherein the recording device (12) comprises a keypad (30) to allow the user (2) to enter a PIN code.

~~8.~~7. Human-machine interface device (4) according to claim 1~~6~~, wherein the recording device (12) comprises a keypad (30) to allow the user (2) to enter a PIN code, wherein the keypad (30) comprises electromechanical keys or can be displayed on a touch-sensitive screen arranged in the human-machine interface device (4).

~~9.~~8. Human-machine interface device (4) according to claim 1~~6~~, wherein the recording device (12) comprises an optical camera system which is configured to record a fingerprint of the user (2), an iris pattern of the user (2), a face of the user (2), an optical code and/or a photo ID of the user (2).

~~10.~~9. Human-machine interface device (4) according to claim 1~~6~~, wherein the recording device (12) comprises a magnetic card reader, a chip card reader and/or an RFID card reader in order to record the credentials.

~~11.~~10. Human-machine interface device (4) according to claim 1~~6~~, wherein the recording device (12) comprises a radio receiving device in order to receive a radio signal emitted by a mobile device carried by the user (2).

~~12.~~11. Building system (1) comprising a human-machine interface device (4) according to any of claims 1-10~~11~~.

~~13.~~12. Building system (1) according to claim 11~~12~~, comprising a control system (8) which

is configured to carry out a building access control function and/or an elevator control function.

~~14.~~13. Building system (1) according to claim 12~~13~~, wherein the human-machine interface device (4) is integrated into a gate (26) of a building access control system, wherein the optical projection module (14) projects the routing information (18) onto the floor.

~~15.~~14. Building system (1) according to claim 13~~13~~, wherein the human-machine interface device (4) is integrated into an elevator operating device of an elevator system (16).