

Claims

1. An elevator test unit for testing the operation of an elevator system, the test unit including:
a first input configured to receive a command input instructing the performance of a test
5 operation in relation to an elevator car associated with the test unit;
a first output configured, in response to receipt of the command input at the first input, to
output a signal to cause the generation of a first level request signal or a first simulated level request
signal to be sent to a main elevator controller to cause the test operation;
a second input configured to receive an indication of whether the test operation occurred
10 successfully; and
a second output configured to output a report based on the received indication,
wherein the test unit is configured to be mounted to the elevator car.
2. An elevator test unit according to claim 1, wherein the first output is communicatively coupled
15 to a car operating panel of the elevator car and the signal is configured to cause the generation of the
first level request signal from the car operating panel.
3. An elevator test unit according to claim 1 or 2, wherein the first output is communicatively
coupled to the main elevator controller and the signal is the first simulated level request signal.
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4. An elevator test unit according to any preceding claim, wherein the second output is
communicatively coupled to a caller unit associated with the elevator car, and the caller unit is
configured to handle one or more emergency communication functions.
- 25 5. An elevator test unit according to any preceding claim, further including an operation
determining sub-system which is communicatively coupled to the second input and which is configured
to output the indication of whether the test operation occurred successfully.
6. An elevator test unit according to claim 5, wherein the operation determining sub-system
30 includes one or more of an acceleration sensor, an air pressure sensor, an encoded position indicator
reader, and a door switch.
7. An elevator test unit according to claim 5 or 6, wherein the indication of whether the test
operation occurred successfully includes an indication of a movement of the elevator car and/or the
35 operation of an elevator door of the elevator car.
8. An elevator test unit according to any preceding claim, wherein the first output is configured to
cause the generation of a second level request signal to be sent to a main elevator controller, wherein
the first level request signal is different to the second level request signal.

9. An elevator test unit according to any preceding claim, wherein the first output is configured to cause the generation of a second simulated level request signal to be sent to a main elevator controller, wherein the first simulated level request signal is different to the second simulated level request signal.

10. An elevator test unit according to any preceding claim, wherein the test unit is configured to generate the input command after a predetermined period has passed since an event detected by the test unit.

11. An elevator test unit according to claim 10, wherein the test unit is configured to detect a plurality of events, to determine a peak period based on the detected events, and to set the predetermined period based on the determined peak period.

12. An elevator test system including:
an elevator test unit according to any preceding claim; and
a call handler system located remotely from the elevator system.

13. An elevator test system according to claim 12, wherein the call handler system is configured to output the command input to the first input.

14. An elevator test system according to claim 13, wherein the call handler system is configured to output the command input in response to an emergency call made using an emergency intercom system associated with the elevator car.

15. An elevator test method for testing the operation of an elevator system, the test method including:

a receiving, at a first input of a test unit, a command input instructing the performance of a test operation in relation to an elevator car associated with the test unit;

causing, in response to receipt of the command input at the first input, the outputting of a signal, from a first output of the test unit, to generate a first level request signal or a first simulated level request signal to be sent to a main elevator controller to cause the test operation;

receiving, at a second input, an indication of whether the test operation occurred successfully;
and

outputting, from a second output, a report based on the received indication, wherein the test unit is configured to be mounted to the elevator car.

16. A method of operating a caller unit configured to be mounted with respect to an elevator car, the caller unit being configured to be communicatively coupled to an emergency intercom button and an emergency intercom system of the elevator car, wherein the method includes:

detecting actuation of the emergency intercom button;

5 triggering a test operation of the elevator car based at least in part on the detection of the actuation of the emergency intercom button;

receiving an indication of whether the test operation completed successfully; and

initiating a call to a remote call handler system selectively based on the received indication.

10 17. A method according to claim 16, wherein the test operation includes opening an elevator door of the elevator car.

18. A method according to claim 16 or 17, wherein the test operation includes movement of the elevator car to another level.

15 19. A method according to any of claims 16 to 18, wherein the initiation of the call is triggered when the test operation fails.

20. A caller unit configured to be mounted with respect to an elevator car, the caller unit being configured to be communicatively coupled to an emergency intercom button and an emergency intercom system of the elevator car, wherein the caller unit is further configured to:

detect actuation of the emergency intercom button;

trigger a test operation of the elevator car based at least in part on the detection of the actuation of the emergency intercom button;

25 receive an indication of whether the test operation completed successfully; and

initiate a call to a remote call handler system selectively based on the received indication.

21. A caller unit according to claim 20, wherein the test operation includes opening an elevator door of the elevator car.

30 22. A caller unit according to claim 20 or 21, wherein the test operation includes movement of the elevator car to another level.

23. A caller unit according to any of claims 20 to 22, wherein the initiation of the call is triggered when the test operation fails.