## **Door locking devices**

### Certified locking device landing door opened and unlocked

With the landing door in open condition and the locking device's cam in released condition, the locking bolt (2) is pulled back by pulling the pull strap (5) in direction A or by swinging the roller lever in direction B against the force of the pressure spring (7). The locking device switch (10) is open. The locking piece (11) is mounted in the enclosure (1) and is moveable in axial direction; it is positioned with the rigidly connected permanent magnet (12) as illustrated. The positive actuation is obtained through the combined action of the roller (15), mounted on the angled lever (3) across the cam (14) on the locking piece (11). When the door is unlocked, the roller (15) pushes the locking piece (11) across the cam positively actuated (positively linked) into the locked position. The locking piece (11) is retained in locked position by the retaining plate (13) as a result of the adhesive magnetic force, whereby the locking catch (9) and the locking pin (8) face each other. The auxiliary contact (4) is closed.



### Landing door closed and locked

When the landing door (16) is closed, the unlocking magnet (12) and the door magnet (17) face each other with the same magnetic poles, thus repelling each other. The roller lever or the pull strap (5) is released, when the locking device cam is activated. The locking bolt (2) is pushed by the pressure spring (7), whereby the roller (15) releases the locking device (11) across the cam (14). This is pushed by the magnetic force, so that the locking pin (8) and the locking catch (9) are no longer engaged. The locking bolt (2) now engages unhindered the landing door (18). The locking bolt engagement depth is 16 to 21 mm. The locking device switch (10) is closed; the auxiliary contact (4) is open.



### Landing door opened and certified locking device operational

If the locking device cam is activated before the landing door has been closed, the certified locking device becomes operational. Through the force of the pressure spring (7), the locking bolt (2) will be pushed forward, however only so far that the locking catch (9) meets the locking pin (8). The magnet (12) adheres to the retaining plate (13). In this position, the locking device switch (10) and the auxiliary contact (4) are opened. Through the inclined section (18) of the locking bolt (2), the landing door (16) can be closed so far until the locked condition is reached.

#### Door locking device actuated with the landing door closed and locked

With the landing door (16) in closed condition and the locking device cam in released condition, the roller (15), located on the angled lever (3), is positively actuated and led across the cam (14), so that the locking piece (11) with the locking pin (8), functioning with the locking catch (9), reaches the illustrated 'positively actuated locking stand-by". The locking bolt engagement depth is 3 to 8 mm.





# **Door locking devices**

### Definition "right" and "left"

When looking at the switch from inside the lift cage, the unlocking side defines the arrangement. In the left-hand version, the release is located to the left, in the right-hand version to the right.

### Definition of "Inclined section"

Put the component in front of you, the bolt facing down, so that you can read the identification label. In this way, you can define the arrangement of the inclined section, i.e. the direction from which the door is coming.

Usually, bottom-side (U) inclined sections are used; right-hand side (R), left-hand side (L) and cover-side (D) versions are rather rarely used.



## Auxiliary contact K

The auxiliary contact K shows the top position of the switch. This enables detecting which guard is unlocked. It is always the top contact. Door locking devices AV 20 and AV 21 are equipped with an auxiliary contact by default; for the AV 25, AV 28, AV 15 and AV 18 versions, it is available as an option.



### Closing ability of the door according to DIN EN 81 / X dimension

The inclined section of the locking bolt allows the required closing ability of the door as required by DIN EN 81, paragraph 7.7.2.2. Corresponding to the chosen engagement depth (12 or 21 mm), the door edge must be rounded off to an edge length of 30 mm in the area of the locking bolt or provided with a fender or inclined section, if necessary.

The corresponding "X"- or "Z"- dimensions are to be determined when ordering.



Engagement depth

• larger penetration depth for balancing the tolerance of dimension "X", for example, through lowering the door.